

WY-50 DISPLAY TERMINAL QUICK-REFERENCE GUIDE

SAFETY WARNING

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

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

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

DISCLAIMER

No representations or warranties are made regarding the contents of this document, and any implied warranties or fitness for any particular application are disclaimed.

The specification and information are subject to change without prior notification. The right to revise this document without obligation to notify any person or organization is also reserved.

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 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.

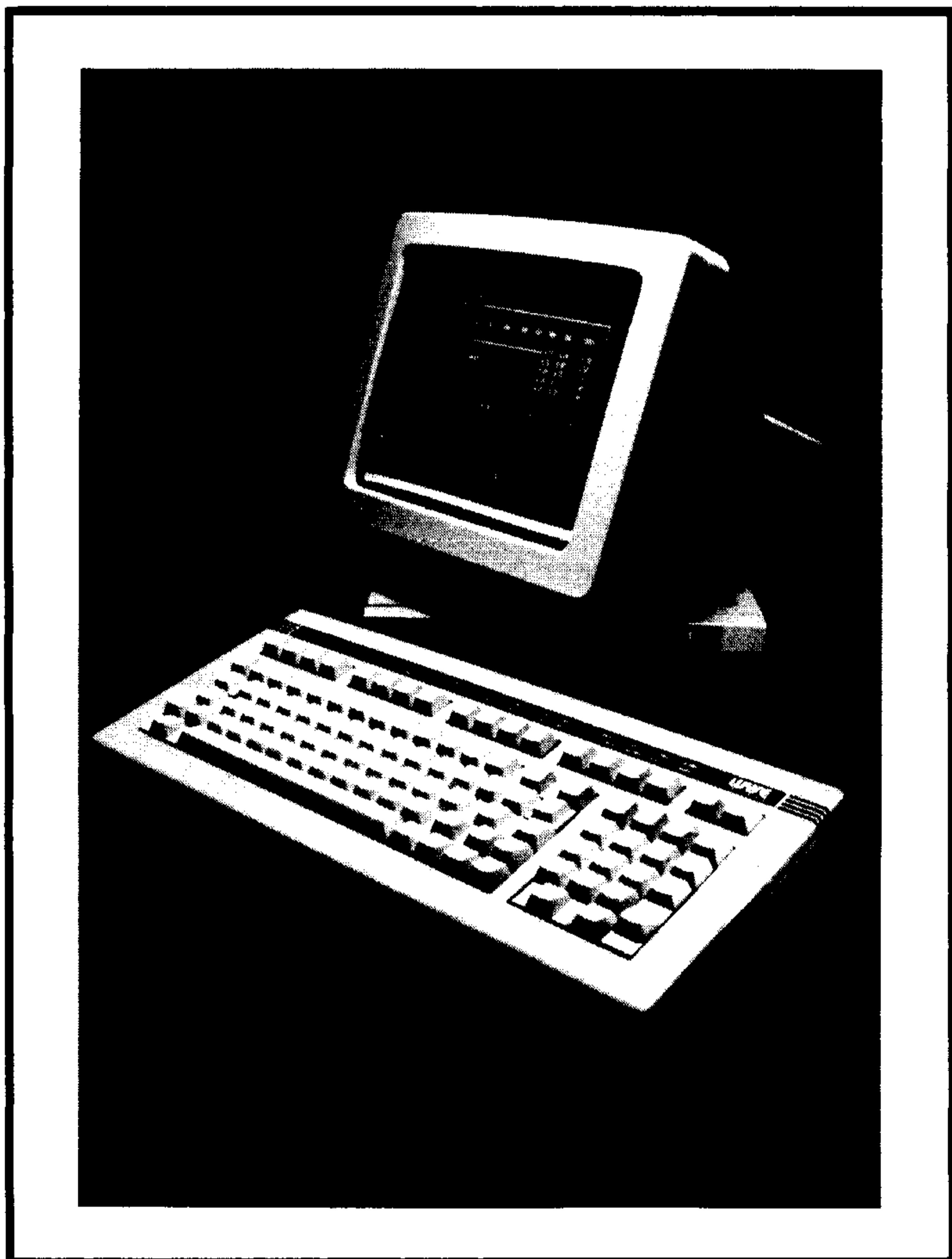
The use of shielded I/O cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may violate FCC rules.

CONTENTS

Reference	Page
Introduction	1
Installation	2
Power On/Off	3
Setup Parameters	4
Screen Feature Codes	8
Cursor Addressing	9
Row/Column Codes	10
Display Attributes	13
Attribute Codes	14
Control Codes	15
Escape Codes	17
Function Key Sequences	23
Function Key Field Codes/Default Value Codes	24
Graphic Characters	25
Mode Display Labels	26
Command Guide	27
Key Codes	34
Connector Pin Assignments	36

INTRODUCTION

This quick-reference guide is a condensation of the WY-50 Display Terminal Reference Manual (Wyse No. 88-011-01). To use this guide effectively, you should already have a basic working knowledge of ASCII alphanumeric terminals.



WY-50 VIDEO DISPLAY TERMINAL

INSTALLATION

Please read the following procedures and precautions before turning on the terminal. Then experience the pleasure of operating it.

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 again.

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 correctly.

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 lefthand 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 intensity control on the front lower righthand side 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 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.

1. Press **SHIFT** with **SET UP** to display the configuration fields.
2. Press **SPACE** to display the next selection for a parameter.
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 **SHIFT** with **SET UP**.

Save changes for power-on? flashes on and off.

8. Press **Y** or **A** to save changes in the setup, or go to instruction 9.
 - A. If you press **Y**, all changes except those made to the function key definitions are saved for the next power-on.
 - B. If you press **A**, all changes are saved.
9. Press any other key instead of pressing **A** or **Y** to operate the terminal with the current parameter changes, but without saving them.

The next time the terminal is powered on the setup returns to the configuration as it was before these changes were made.
10. Press **ESC**, with any of the levels of setup parameters displayed, to call the default setup.

FIELD LEVEL 1

HANDSHAKE=NONE **SCREEN=80** **CURSOR=BLOCK** **BLINK?=ON** **MODE=FDX**

Parameter	Selections	Explanation
HANDSHAKE	NONE (default) XONXOFF DTR BOTH	Handshake protocol.

Parameter	Selections	Explanation
SCREEN	80 (default) 132 80 REV 132 REV	Screen column width.
CURSOR	BLOCK (default) LINE	Cursor type.
BLINK?	ON (default) OFF	Cursor display attribute.
MODE	FDX (default) BLOCK HDX H-BLK	Communication mode.

FIELD LEVEL 2

[DATA BIT=8] [STOP BIT=1] [PARITY BIT=NONE] [MODEM PORT BAUD RATE=9600]

Parameter	Selections	Explanation
DATA BIT	8 (default) 7	Character code length.
STOP BIT	1 (default) 2	Character stop bits.
PARITY BIT	NONE (default) ODD EVEN MARK	Parity bit type.
MODEM PORT BAUD RATE	9600 (default) 19200 38400 50 75 110 134.5 150 300 600 1200 1800 2000 2400 4800	MODEM port baud rate.

FIELD LEVEL 3

BLK END=US / CR	AUTO NL=ON	CR=CR	AUTO SCRL=ON	AUX BAUD R=9600
-----------------	------------	-------	--------------	-----------------

Parameter	Selections	Explanation
BLK END	US / CR (default) CRLF/ETX	End-of-block coding.
AUTO NL	ON (default) OFF	Automatic new line.
CR	CR (default) CR,LF	RETURN action.
AUTO SCRL	ON (default) OFF	Automatic scrolling.
AUX BAUD R	9600 (default) 19200 110 134.5 150 300 600 1200 1800 2000 2400 3600 4800 7200	AUX port baud rate.

FIELD LEVEL 4

SCRL=JUMP	STATUS=ON	S.SAVER=OFF	PROT=DIM	TEST=OFF
-----------	-----------	-------------	----------	----------

Parameter	Selections	Explanation
SCRL	JUMP (default) SM-1 SM-2 SM-4 SM-8	Scrolling type.
STATUS	ON (default) OFF	Message field display.
S.SAVER	OFF (default) ON	Screen saver feature.

Parameter	Selections		Explanation
PROT	DIM REV NORM	(default)	Protect attribute.
TEST	OFF ON	(default)	Diagnostic self test. (requires jumpers)

FIELD LEVEL 5

KEYS?=US/UK **RET/ENTER=CR/CR** **COMPATIBLE MODE=WY50** **ENHANCE=OFF**

Parameter	Selections		Explanation
KEYS ?	US / UK (default) GERMAN FRENCH SPANISH DANISH		Language keyboard codes. (require special ROMs; US and UK are separate)
RET/ENTER	CR / CR (default) CRLF/TAB		RETURN/ENTER action.
COMPATIBLE MODE	WY50 (default) TVI910 TVI920 TVI925 ADDSVP HZ1500		Compatible terminal mode.
ENHANCE	OFF (default) ON		WY-50 code enhancement. (HZ-1500 and ADDS-VP)

SCREEN FEATURE CODES

Send **ESC ` n** to set an option for a screen feature.

where

n = screen feature code (see below)

n	Screen Feature	
0	Cursor display off	
1	Cursor display on	(default)
2	Steady block cursor	
3	Blinking line cursor	
4	Steady line cursor	
5	Blinking block cursor	(default)
A	Normal protect character	
6	Reverse protect character	
7	Dim protect character	(default)
8	Screen display off	
9	Screen display on	(default)
:	80-column screen	(default)
;	132-column screen	
<	Smooth scroll @ 1 row per second	
=	Smooth scroll @ 2 rows per second	
>	Smooth scroll @ 4 rows per second	
?	Smooth scroll @ 8 rows per second	
@	Jump scroll	(default)

Note: When switching from an 80- to a 132-column screen or vice versa, a delay of 100 milliseconds is required. Blank the shifted and unshifted function key labeling lines when making the change and then reestablish the function key labels. After the change, you must move the cursor to the location desired.

CURSOR ADDRESSING

The following instructions apply only to cursor addressing in the WY-50; TVI-910/920/925. See "Command Guide" for the HZ-1500 and ADDS-VP cursor addressing commands.

1. Send **ESC = rc** to move the cursor to a specific row and column of an 80-column screen.

where

r = row code (see Row/Column Codes)
c = column code (see Row/Column Codes)

2. Send **ESC a rr R ccc C** to move the cursor to a specific row and column of either an 80- or 132-column screen.

where

rr = ASCII encoded decimal value of row relative to home, one or two digits
R = ASCII R
ccc = ASCII encoded decimal value of column relative to home, up to three digits
C = ASCII C

For example: **ESC a 1 R 1 C** positions the cursor at true home.
ESC a 10 R 10 C positions the cursor at row 10 column 10.

ROW/COLUMN CODES

The HZ-1500 and ADDS-VP row and column codes are listed here for easy reference only.

Row	WY-50 TVI-910/920/925 Row Code	HZ-1500 Row Code	ADDS-VP Row Code
1	(space)	CTRL @	CTRL @
2	!	CTRL A	CTRL A
3	"	CTRL B	CTRL B
4	#	CTRL C	CTRL C
5	\$	CTRL D	CTRL D
6	%	CTRL E	CTRL E
7	&	CTRL F	CTRL F
8	,	CTRL G	CTRL G
9	(	CTRL H	CTRL H
10	)	CTRL I	CTRL I
11	*	CTRL J	CTRL J
12	+	CTRL K	CTRL K
13	,	CTRL L	CTRL L
14	-	CTRL M	CTRL M
15	.	CTRL N	CTRL N
16	/	CTRL O	CTRL O
17	0	CTRL P	CTRL P
18	1	CTRL Q	CTRL Q
19	2	CTRL R	CTRL R
20	3	CTRL S	CTRL S
21	4	CTRL T	CTRL T
22	5	CTRL U	CTRL U
23	6	CTRL V	CTRL V
24	7	CTRL W	CTRL W

Column	WY-50 TVI-910/920/925 Column Code	HZ-1500 Column Code	ADDS-VP Column Code
1	(space)	CTRL @	CTRL @
2	!	CTRL A	CTRL A
3	"	CTRL B	CTRL B
4	#	CTRL C	CTRL C
5	\$	CTRL D	CTRL D
6	%	CTRL E	CTRL E
7	&	CTRL F	CTRL F
8	,	CTRL G	CTRL G

Column	WY-50 TVI-910/920/925	HZ-1500	ADDS-VP
	Column Code	Column Code	Column Code
9	(	CTRL H	CTRL H
10	)	CTRL I	CTRL I
11	*	CTRL J	CTRL P
12	+	CTRL K	CTRL Q
13	,	CTRL L	CTRL R
14	-	CTRL M	CTRL S
15	.	CTRL N	CTRL T
16	/	CTRL O	CTRL U
17	0	CTRL P	CTRL V
18	1	CTRL Q	CTRL W
19	2	CTRL R	CTRL X
20	3	CTRL S	CTRL Y
21	4	CTRL T	(space)
22	5	CTRL U	!
23	6	CTRL V	"
24	7	CTRL W	#
25	8	CTRL X	\$
26	9	CTRL Y	%
27	:	(space)	&
28	;	!	,
29	<	"	(
30	=	#)
31	>	\$	0
32	?	%	1
33	@	&	2
34	A	,	3
35	B	(	4
36	C	)	5
37	D	*	6
38	E	+	7
39	F	,	8
40	G	-	9
41	H	.	@
42	I	/	A
43	J	0	B
44	K	1	C
45	L	2	D
46	M	3	E
47	N	4	F
48	O	5	G
49	P	6	H
50	Q	7	I
51	R	8	P
52	S	9	Q

Column	WY-50 TVI-910/920/925 Column Code	HZ-1500 Column Code	ADDS-VP Column Code
53	T	:	R
54	U	;	S
55	V	<	T
56	W	=	U
57	X	>	V
58	Y	?	W
59	Z	@	X
60	[	A	Y
61	\	B	/
62	]	C	a
63	^	D	b
64	-	E	c
65		F	d
66	a	G	e
67	b	H	f
68	c	I	g
69	d	J	h
70	e	K	i
71	f	L	p
72	g	M	q
73	h	N	r
74	i	O	s
75	j	P	t
76	k	Q	u
77	l	R	v
78	m	S	w
79	n	T	x
80	o	U	y

DISPLAY ATTRIBUTES

An attribute is written into the current cursor location and occupies a space.

Send **ESC A n ATTR** to set a display attribute for a special WY-50 message field, and send **ESC G ATTR** to set a display attribute for individual data.

where

n = display field code (see below)
ATTR = attribute code (see Attribute Codes)

WY-50 Display Field	n
Application Display Area	0
Function Key Labeling Line	1
Local Message Field	2
Host Message Field	3

Following, in alphabetical order, are the main attributes and their codes:

Display Attribute	ATTR
Blank	1
Blink	2
Dim	p
Normal	0
Reverse	4
Underscore	8

ATTRIBUTE CODES

The complete attribute codes are as follows:

ATTR	Display Attributes
(space)	Space code (20H)
0	Normal
1	Blank (no display)
2	Blink
3	Blank
4	Reverse
5	Reverse and blank
6	Reverse and blink
7	Reverse and blank
8	Underscore
9	Underscore and blank
:	Underscore and blink
;	Underscore, blink, and blank
<	Underscore and reverse
=	Underscore, reverse, and blank
>	Underscore, reverse, and blink
?	Underscore, reverse, blink, and blank
p	Dim
q	Dim and blank
r	Dim and blink
s	Dim and blank
t	Dim and reverse
u	Dim, reverse, and blank
v	Dim, reverse, and blink
w	Dim, reverse, and blank
x	Dim and underscore
y	Dim, underscore, and blank
z	Dim, underscore, and blink
{	Dim, underscore, blink, and blank
|	Dim, underscore, and reverse
}	Dim, underscore, reverse, and blank
-	Dim, underscore, reverse, and blink

CONTROL CODES

Press **CTRL** with **control key** to enter the control code through the keyboard.

where

control key = the associated alphanumeric key (see below)

Control Code	ASCII Hex Code	Display Symbol	Control Key	WY-50 Action
NULL	00	(blank)	@ or `	No action.
SOH	01	<i>S_H</i>	A or a	No action.
STX	02	<i>S_X</i>	B or b	No action.
ETX	03	<i>E_X</i>	C or c	No action.
EOT	04	<i>E_T</i>	D or d	No action.
ENQ	05	<i>E_Q</i>	E or e	Returns ACK, if not busy.
ACK	06	<i>A_K</i>	F or f	No action.
BEL	07	<i>B_L</i>	G or g	Sounds the beeper.
BS	08	<i>B_S</i>	H or h	Backspaces the cursor.
HT	09	<i>H_T</i>	I or i	Tabs the cursor.
LF	0A	<i>L_F</i>	J or j	Moves the cursor down.
VT	0B	<i>V_T</i>	K or k	Moves the cursor up.
FF	0C	<i>F_F</i>	L or l	Moves the cursor right.
CR	0D	<i>C_R</i>	M or m	Moves the cursor to the far left position of the row.
SO	0E	<i>S_O</i>	N or n	Unlocks the keyboard.
SI	0F	<i>S_I</i>	O or o	Locks the keyboard.
DLE	10	†	P or p	No action.
DC1 (XON)	11	‡	Q or q	Enables the transmitter.
DC2	12	§	R or r	Turns on auxiliary print; data displays.
DC3 (XOFF)	13	¶	s	Stops transmission to the host computer.
DC4	14	¤	T or t	Turns off auxiliary print.

Control Code	ASCII Hex Code	Display Symbol	Control Key	WY-50 Action
NAK	15	█	U or u	No action.
SYN	16	█	V or v	No action.
ETB	17	█	W or w	No action.
CAN	18	+	X or x	No action.
EM	19	+	Y or y	No action.
SUB	1A	—	Z or z	Clears all unprotected characters to spaces.
ESC	1B	█	{ or [	Initiates an escape sequence.
FS	1C	—	| or \	No action.
GS	1D	—	} or]	No action.
RS	1E	||	^ or ~	Moves the cursor to the home position.
US	1F	█	_ or DEL	Moves the cursor down one row to the far left position.

The following rules apply in control code generated actions that involve cursor movement:

1. The cursor movement applies only to the active text segment.
2. If the protect submode is on, the cursor skips protected characters.
3. Except when the no scroll submode is on, if the cursor movement would result in the cursor leaving the active text segment, then the text automatically scrolls up.

ESCAPE CODES

The following escape codes apply to the WY-50 only. See "Command Guide" for a list by function of escape codes for compatible terminal modes.

Escape Code	Action
ESC (space)	Reports the terminal identification to the host computer. Sends 50 CR.
ESC !	Writes all unprotected character positions with a specified attribute code. This has a format of: ESC ! ATTR where ATTR = attribute code (see Attribute Codes)
ESC "	Unlocks the keyboard.
ESC #	Locks the keyboard.
ESC &	Turns the protect submode on and prevents the auto scroll operation.
ESC '	Turns the protect submode off and allows the auto scroll operation.
ESC (	Turns the write protect submode off.
ESC)	Turns the write protect submode on.
ESC *	Clears the screen to nulls. The protect submode is turned off.
ESC +	Clears the screen to spaces. The protect submode is turned off.
ESC ,	Clears the screen to protected spaces. The protect submode is turned off.
ESC -	Moves the cursor to a specified text segment. This has a multiple code sequence of: ESC - nrc where n = the text segment number, 0 or 1 r = the row code (see Row/Column Codes) c = the column code (see Row/Column Codes)
ESC .	Clears all unprotected character positions with a specified character code. This has a format of: ESC . CODE where CODE = the character hex value
ESC \	Transmits the active text segment number and cursor address.

Escape Code	Action
ESC 0	Clears all tab settings.
ESC 1	Sets a tab stop.
ESC 2	Clears a tab stop.
ESC 4	Sends all unprotected characters from the start-of-row to the host computer.
ESC 5	Sends all unprotected characters from the start-of-text to the host computer.
ESC 6	Sends all characters from the start-of-row to the host computer.
ESC 7	Sends all characters from the start-of-text to the host computer.
ESC 8	Enters a start-of-message character (STX).
ESC 9	Enters an end-of-message character (ETX).
ESC :	Clears all unprotected characters to nulls.
ESC ;	Clears all unprotected characters to spaces.
ESC =	Moves the cursor to a specified row and column for an 80-column screen. This has a format of: ESC = rc where r = the row code (see Row/Column Codes) c = the column code (see Row/Column Codes)
ESC ?	Transmits the cursor address for the active text segment of an 80-column screen only. The format is: rc CR where r = the row code (see Row/Column Codes) c = the column code (see Row/Column Codes)
ESC @	Sends all unprotected characters from the start-of-text to the auxiliary port. Each row is terminated with: CR LF NULL
ESC A	Sets a video attribute for a specific message field or the entire application display area. This has a multiple code sequence of: ESC A n ATTR where n = field code (see Display Attributes) ATTR = attribute code (see Attribute Codes)
ESC B	Places the terminal in the block mode.
ESC C	Places the terminal in a conversation mode.

Escape Code	Action
ESC D	Selects the full duplex or half duplex conversation modes. This has the multiple code sequence: ESC D x where x = F full duplex mode H half duplex mode
ESC E	Inserts a row of spaces.
ESC F	Enters a message in the host message field. This has a format of: ESC F aaaa CR where aaaa = a character string of up to 46 characters for an 80-column screen or up to 100 characters for a 132-column screen
ESC G	Sets a video attribute within the application display area. The attribute occupies a space. This has a multiple code sequence of: ESC G ATTR where ATTR = attribute code (see Attribute Codes)
ESC H	Enters a graphic character at the cursor location. This has a multiple code sequence of: ESC H x where x = the graphic character code (see Graphic Characters) ESC H STX (CTRL B) turns on the graphic submode. ESC H ETX (CTRL C) turns off the graphic submode.
ESC I	Moves the cursor left to the previous tab stop.
ESC J	Activates the alternate text segment.
ESC K	Activates the alternate text segment. See ESC J .
ESC L	Sends all characters unformatted to the auxiliary port. Attribute codes are sent as spaces. Row-end sequences are not sent.
ESC M	Causes the terminal to send the character at the cursor position to the host computer.
ESC N	Turns the no scroll submode on.
ESC O	Turns the no scroll submode off.
ESC P	Sends all protected and unprotected characters to the auxiliary port, regardless of the mode setting.

Escape Code	Action
ESC Q	Inserts a character.
ESC R	Deletes a row.
ESC S	Sends a message unprotected.
ESC T	Erases all characters.
ESC U	Turns the monitor submode on.
ESC V	Sets a protected column.
ESC W	Deletes a character.
ESC X	Turns the monitor submode off.
ESC Y	Erases all characters to the end of the active text segment and replaces them with spaces.
ESC]	Activates text segment 0.
ESC `	Sets the screen features. This has the following multiple code sequence: ESC ` n where n = screen feature code (see Screen Feature Codes)
ESC a	Moves the cursor to a specified row and column for an 80- or a 132-column screen. This has a format of: ESC a rr R ccc C where rr = the ASCII encoded decimal value of the row R = ASCII R ccc = the ASCII encoded decimal value of the column C = ASCII C For example: ESC a 1 R 1 C positions the cursor at true home.
ESC b	Transmits the cursor address to the host computer for the active text segment. The format is: rr R ccc C where rr = the ASCII encoded decimal value of the row R = ASCII R ccc = the ASCII encoded decimal value of the column C = ASCII C
ESC i	Moves the cursor to the next tab stop on the right.
ESC j	Moves the cursor up one row and begins scrolling at top row.
ESC k	Turns the local edit submode on.
ESC l	Turns the duplex edit submode on.

Escape Code	Action
ESC p	Sends all characters unformatted to the auxiliary port. Attribute codes are sent as spaces. Row-end sequences are not sent. The action is the same as ESC L .
ESC q	Turns the insert submode on.
ESC r	Turns the insert submode off.
ESC s	Sends a message.
ESC t	Erases all characters from the current cursor location to the end of the row and replaces them with nulls.
ESC u	Turns the monitor submode off. See ESC X .
ESC x	Changes the screen display format. The sequences are: ESC x 0 for a full screen, 24 rows by 80 or 132 columns ESC x 1 HSR for a horizontal split screen where HSR = row code for the row number 2 to 24 on which the lower text segment starts (see Row/Column Codes)
ESC y	Erases all characters from the current cursor location to the end of the active text segment and replaces them with nulls.
ESC z	Enters a message into a selected function key label field or programs a user-defined sequence for a function key (maximum of eight label fields, shiftable to 16 for an 80-column screen; maximum of 16 label fields, shiftable to 32 for a 132-column screen) The message format is: ESC z n aaaa CR where n = field code (see Function Key Field Codes/Default Value Codes) aaaa = a character string of up to eight characters for an 80-column screen or up to seven characters for a 132-column screen ESC z n CR clears a particular function key label field. ESC z DEL turns off the shifted function key labeling line.
	The function key program format is: ESC z value SEQ DEL where value = the default value code (see Function Key Field Codes/Default Value Codes) SEQ = the program sequence up to eight bytes (256 byte maximum for all function keys)

Escape Code	Action
ESC {	Moves the cursor to the home position of the text segment.
ESC }	Activates text segment 1.

FUNCTION KEY SEQUENCES

An unprogrammed function key transmits a default value code with the format:

SOH value CR

where

value = the default value code (see Function Key Field Codes/
Default Value Codes)

To program a function key:

1. Press **SHIFT** with **SET UP**, if necessary, to display the setup parameters.
2. Press **FUNCT.**
3. Enter up to eight characters for a function key program sequence.

Note: To enter the carriage return code (CR) as part of the sequence, press **CTRL M** instead of **RETURN**.

Caution: Only four characters are saved for the next power-on.

To correct errors, press the function key corresponding with the field and enter the sequence again.

4. Press **RETURN** to enter the new sequence.

The next function key field in numerical sequence displays.

5. Press the actual function key, shifted or unshifted, to go directly to a specific function key sequence field at random.
6. Press **FUNCT** again to return to the setup parameters.
7. Press **SHIFT** with **SET UP**.

Save changes for power-on? flashes on and off.

8. Press **A** to save any changes.

In a normal operating mode, press **FUNCT** with any alphanumeric key to generate additional function key code sequences.

The following sequence is transmitted:

SOH X CR

where

X = the alphanumeric key code

FUNCTION KEY FIELD CODES/ DEFAULT VALUE CODES

Function Key	Field Code	Default Value Code	Function Key	Field Code	Default Value Code
F1	0	@	F9	8	H
Shift F1	P	'	Shift F9	X	h
F2	1	A	F10	9	I
Shift F2	Q	a	Shift F10	Y	i
F3	2	B	F11	:	J
Shift F3	R	b	Shift F11	Z	j
F4	3	C	F12	;	K
Shift F4	S	c	Shift F12	[	k
F5	4	D	F13	<	L
Shift F5	T	d	Shift F13	\	l
F6	5	E	F14	=	M
Shift F6	U	e	Shift F14	]	m
F7	6	F	F15	>	N
Shift F7	V	f	Shift F15	^	n
F8	7	G	F16	?	O
Shift F8	W	g	Shift F16	_	o

Note: Field codes ((unshifted message) and) (shifted message) specify the entire function keys labeling line as one message field of up to 78 characters for an 80-column screen or up to 130 characters for a 132-column screen.

80-column screen = eight function key label fields, shiftable to 16
 132-column screen = 16 function key label fields, shiftable to 32

GRAPHIC CHARACTERS

Send **ESC H x** to display a graphic character.

where

x = the graphic character code (see below)

Send **ESC H STX (CTRL B)** to enter the graphic submode.

In the graphic submode, only the keys corresponding with the graphic character code are active.

Send **ESC H ETX (CTRL C)** to exit the graphic submode.

Graphic Character	x	Graphic Character	x
T	0	+	8
L	1	+	9
F	2	---	:
J	3	██████	;
H	4	=====	<
J	5	||	=
I	6	||	>
█	7	██████	?

MODE DISPLAY LABELS

Unless the STATUS parameter of the setup is set to OFF, the mode display labels display in the local message field of the top row when the corresponding mode or submode is on.

Note: The display label for the write protect submode displays only when both the write protect submode and the protect submode are on together.

Mode	Display Label
COMMUNICATION MODES	
Block	<i>BLK</i>
Half duplex	<i>HDX</i>
Half-duplex block	<i>BLK</i>
Full duplex	<i>FDX</i>
SUBMODES	
Caps Lock	<i>CAPS</i>
Duplex Edit	(none)
Graphic	(none)
Insert	<i>INS</i>
Keyboard Lock	<i>LOCK</i>
Local Edit	(none)
Monitor	*
Protect	<i>PROT</i>
No Scroll	(none)
Write Protect	<i>WPRT</i>

COMMAND GUIDE

The command guide is a comparative listing by function of the control codes, escape codes, and keys that can generate those actions. The complete sequence formats for escape codes are not included. See "Escape Codes" for the exact escape sequences.

When ON has been chosen for the ENHANCE parameter in the setup, the generated codes for the Hazeltine 1500 and the ADDS Viewpoint terminals (when selected in the COMPATIBLE MODE parameter) are complemented by a majority of the WY-50 commands normally unavailable for those terminals. These commands appear below within a special box to indicate their availability. When the Hazeltine 1500 is enhanced, ESC can be interchanged with ~ in command sequences.

Function	Command					
CURSOR CONTROL	WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP
Back tab	ESC I Shift TAB	ESC I Shift TAB	ESC I Shift TAB	ESC I Shift TAB	ESC I	ESC I Shift TAB
Home	CTRL ^ ESC { HOME	CTRL ^ ESC { HOME	CTRL ^ ESC { HOME	CTRL ^ ESC { HOME	~ CTRL R ESC { HOME	CTRL A ESC { HOME
Move down; no scroll				CTRL V ▼	~ CTRL K ▼	
Move down; scroll	CTRL J ▼	CTRL J ▼	CTRL J ▼	CTRL J Shift ▼	CTRL J Shift ▼	CTRL J ▼
Move left	CTRL H ◀ BACK- SPACE	CTRL U ◀ BACK- SPACE				
Move right	CTRL L ▶	CTRL L ▶	CTRL L ▶	CTRL L ▶	CTRL P ▶	CTRL F ▶
Move up; no scroll	CTRL K ▲	CTRL K ▲	CTRL K ▲	CTRL K ▲	~CTRL L ▲	CTRL Z ▲
Move up; scroll	ESC j	ESC j		ESC j		
Return (selectable)	CTRL M ENTER RETURN					

Function	Command					
	WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP
Return new line (selectable)	CTRL _ RETURN	CTRL _ RETURN	CTRL _ RETURN	CTRL _ RETURN	RETURN	CTRL _ RETURN
Tab (selectable)	CTRL I ENTER ESC i TAB	CTRL I ENTER ESC i TAB	CTRL I ENTER ESC i TAB	CTRL I ENTER ESC i TAB	CTRL I ENTER ESC i TAB	CTRL I ENTER TAB
Skip to alternate text segment	ESC J ESC K PAGE NEXT PAGE PREV	ESC J ESC K PAGE NEXT PAGE PREV	ESC J ESC K PAGE NEXT PAGE PREV	ESC J ESC K PAGE NEXT PAGE PREV	ESC J ESC K	ESC J PAGE NEXT PAGE PREV
Skip to specific text segment	ESC -	ESC -	ESC -	ESC -	ESC -	ESC -
Skip to specific column		ESC]				CTRL P
Skip to specific row		ESC [				CTRL K
Skip to specific row and column (80-col.)	ESC =	ESC =	ESC =	ESC =	~ CTRL Q	ESC Y
Skip to specific row and column	ESC a	ESC d	ESC d	ESC d	ESC a	ESC a
DISPLAY CONTROL	WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP
Activate text segment 0	ESC]				ESC]	ESC]
Activate text segment 1	ESC }	ESC }	ESC }	ESC }	ESC }	ESC }
Clear all to nulls	ESC *	ESC *	ESC *	ESC *	ESC *	CTRL L
Clear all to pro- tected spaces	ESC ,	ESC ,	ESC ,	ESC ,	~ CTRL W	ESC ,
Clear all to spaces	ESC +		ESC +		ESC +	ESC +
Clear single tab	ESC 2	ESC 2	ESC 2	ESC 2	ESC 2	ESC 2
Clear tabs	ESC 0	ESC 3	ESC 3	ESC 3	ESC 3	ESC 3

Function	Command					
	WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP
Clear unprotected to nulls	ESC :	ESC :	ESC :	ESC :	~ CTRL / ESC :	ESC :
Clear unprotected to spaces	CTRL Z ESC ;	CTRL Z ESC + ESC ;	CTRL Z ESC ;	CTRL Z ESC + ESC ;	~ CTRL] ESC ;	ESC ;
Clear unprotected with attribute	ESC !	ESC !	ESC !	ESC !	ESC !	ESC !
Clear unprotected with code	ESC .				ESC .	ESC .
Delete character	ESC W DEL CHAR	ESC W DEL CHAR	ESC W DEL CHAR	ESC W DEL CHAR	ESC W	ESC W DEL CHAR
Delete row	ESC R DEL LINE	ESC R DEL LINE	ESC R DEL LINE	ESC R DEL LINE	ESC R	ESC I(L) DEL LINE
Enter end-of-message (ETX)	ESC 9	ESC 9	ESC 9	ESC 9	ESC 9	ESC 9
Enter function key label	ESC z	ESC f	ESC f	ESC f	ESC z	ESC z
Enter graphic character	ESC H	ESC H	ESC H	ESC H	ESC H	ESC H
Enter host message	ESC F	ESC F	ESC F	ESC F	ESC F	ESC F
Enter start-of-message (STX)	ESC 8	ESC 8	ESC 8	ESC 8	ESC 8	ESC 8
Erase to end of page with nulls	ESC y	ESC y	ESC y	ESC y	ESC y	ESC y
Erase to end of page with spaces	ESC Y CLR SCRN	ESC Y CLR SCRN	ESC Y CLR SCRN	ESC Y CLR SCRN	~ CTRL X CLR SCRN	ESC k CLR SCRN
Erase to end of row with nulls	ESC t	ESC t	ESC t	ESC t	ESC t	ESC t
Erase to end of row with spaces	ESC T CLR LINE	ESC T CLR LINE	ESC T CLR LINE	ESC T CLR LINE	~ CTRL O CLR LINE	ESC K CLR LINE

Function		Command					
	WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP	
Insert character	ESC Q INS CHAR	ESC Q INS CHAR	ESC Q INS CHAR	ESC Q INS CHAR	ESC Q	ESC Q INS CHAR	ESC Q INS CHAR
Insert row with spaces	ESC E INS LINE	ESC E INS LINE	ESC E INS LINE	ESC E INS LINE	~ CTRL Z INS LINE	ESC M INS LINE	
Scroll faster	Shift CTRL▲	Shift CTRL▲	Shift CTRL▲	Shift CTRL▲	Shift CTRL▲	Shift CTRL▲	Shift CTRL▲
Scroll slower	Shift CTRL▼	Shift CTRL▼	Shift CTRL▼	Shift CTRL▼	Shift CTRL▼	Shift CTRL▼	Shift CTRL▼
Select screen format	ESC x	ESC |	ESC |	ESC |	ESC |	ESC x	ESC x
Select screen features	ESC `	ESC .	ESC .	ESC .	ESC `	ESC `	ESC `
Set attribute for cursor	ESC `	ESC .	ESC .	ESC .	ESC `	ESC `	ESC `
Set attribute for display field	ESC G	ESC G	ESC G	ESC G	ESC G	ESC G	ESC G
Set attribute for message field/screen	ESC A	ESC \	ESC \	ESC \	ESC A	ESC A	ESC A
Set attribute for protected character							ESC 0
Set blank start			ESC _				
Set blank end			ESC q				
Set blink start			ESC ^				
Set blink end			ESC q				
Set protected column	ESC V	ESC V	ESC V	ESC V	ESC V	ESC V	ESC V
Set reverse start			ESC j				
Set reverse end			ESC k				
Set tab	ESC 1	ESC 1	ESC 1	ESC 1	ESC 1	ESC 1	ESC 1
Set underline start			ESC l(L)				
Set underline end			ESC m				

Function		Command					
MODE CONTROL	WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP	
Block mode on	ESC B Shift BREAK						
Caps lock submode on/off	CAPS LOCK						
Conversation mode on	ESC C Shift BREAK						
Duplex edit submode on	ESC I(L)			ESC I(L)			
Full duplex mode on	ESC D F						
Graphic submode off	ESC H ETX						
Graphic submode on	ESC H STX						
Half-duplex block mode on	ESC D H then ESC B						
Half duplex mode on	ESC D H						
Insert submode off	ESC r REPL						
Insert submode on	ESC q INS						
Local edit submode on	ESC k			ESC k			
Monitor submode off	ESC u ESC X Shift CTRL 1n						
Monitor submode on	ESC U Shift CTRL 1n						
No scroll submode off	ESC O				ESC O	ESC O	
No scroll submode on	ESC N				ESC N	ESC N	

Function		Command					
		WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP
Protect submode off	ESC '	ESC '	ESC '	ESC '	ESC '	ESC '	ESC '
Protect submode on	ESC &	ESC &	ESC &	ESC &	ESC &	ESC &	ESC &
Write protect submode off	ESC (	ESC (	ESC (	ESC (		~ CTRL -	CTRL O
Write protect submode on	ESC)	ESC)	ESC)	ESC)		~ CTRL Y	CTRL N
TERMINAL CONTROL		WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP
Display setup parameters	Shift SET UP	Shift SET UP	Shift SET UP	Shift SET UP	Shift SET UP	Shift SET UP	Shift SET UP
Identify terminal	ESC (SPACE)	ESC (SPACE)	ESC (SPACE)	ESC (SPACE)	ESC (SPACE)	ESC (SPACE)	ESC (SPACE)
Key click on/off	Shift ENTER	Shift ENTER	Shift ENTER	Shift ENTER	Shift ENTER	Shift ENTER	Shift ENTER
Lock keyboard	CTRL O ESC #	ESC #	ESC #	ESC #		~ CTRL U ESC #	CTRL D ESC 5
Sound beeper	CTRL G	CTRL G	CTRL G	CTRL G	CTRL G	CTRL G	CTRL G
Unlock keyboard	CTRL N ESC " SET UP	ESC " SET UP	ESC " SET UP	ESC " SET UP		~ CTRL F ESC " SET UP	CTRL B ESC 6 SET UP
TRANSMISSION TO HOST		WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP
Enable XON/XOFF					CTRL O		
Disable XON/XOFF					CTRL N		
Initiate escape code sequence	CTRL [ESC	CTRL [ESC	CTRL [ESC	CTRL [ESC	CTRL [ESC	CTRL [ESC	CTRL [ESC
Interrupt a transmission	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
Read cursor address and text segment	ESC /	ESC /	ESC /	ESC /	ESC /	ESC /	ESC /
Read cursor row and column (80-col.)	ESC ?	ESC ?	ESC ?	ESC ?	~ CTRL E		ESC ?

Function	Command					
	WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP
Read cursor row and column (132-col.)	ESC b	ESC b	ESC b	ESC b	ESC b	ESC b
Return ACK	CTRL E	CTRL E	CTRL E	CTRL E	CTRL E	CTRL E
Send character	ESC M	ESC M	ESC M	ESC M	ESC M	ESC M
Send message	ESC s	ESC s	ESC s	ESC s	ESC s	ESC s
Send page	ESC 7 SEND	ESC 7 SEND	ESC 7 SEND	ESC 7 SEND	ESC 7 SEND	ESC 7 SEND
Send row	ESC 6	ESC 6	ESC 6	ESC 6	ESC 6	
Send unprotected message	ESC S	ESC S	ESC S	ESC S	ESC S	ESC S
Send unprotected page	ESC 5	ESC 5	ESC 5	ESC 5	ESC 5	
Send unprotected row	ESC 4	ESC 4	ESC 4	ESC 4	ESC 4	
TRANSMISSION TO PRINTER	WY-50	TVI-910	TVI-920	TVI-925	HZ-1500	ADDS-VP
Auxiliary print off	CTRL T Shift CTRL PRINT	CTRL T ESC A Shift CTRL PRINT	CTRL T ESC A Shift CTRL PRINT	CTRL T ESC A Shift CTRL PRINT	CTRL T Shift CTRL PRINT	CTRL T Shift CTRL PRINT
Auxiliary print on	CTRL R Shift CTRL PRINT	CTRL R ESC @ Shift CTRL PRINT	CTRL R ESC @ Shift CTRL PRINT	CTRL R ESC @ Shift CTRL PRINT	CTRL R Shift CTRL PRINT	CTRL R Shift CTRL PRINT
Interrupt a transmission	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
Print all unformatted	ESC L ESC p	ESC L ESC p	ESC L ESC p	ESC L ESC p	ESC L ESC p	ESC L ESC p
Print page	ESC P PRINT	ESC P PRINT	ESC P PRINT	ESC P PRINT	ESC P	ESC P PRINT
Print unprotected	ESC @				ESC @	ESC @
Transparent print off		ESC a	ESC a	ESC a		ESC 4
Transparent print on		ESC `	ESC `	ESC `		ESC 3

KEY CODES

Only those keys which generate codes in the conversation mode are listed below, and unless noted, shifted key positions generate the same code as when unshifted. All alphanumeric keys generate the standard ASCII codes.

Key		Generated Code	
COMMAND KEYS	WY-50 TVI-910/920/925	HZ-1500	ADDS-VP
ENTER	CTRL M (0DH) or CTRL I (09H)	CTRL M (0DH) or CTRL I (09H)	CTRL M (0DH) or CTRL I (09H)
Shift ENTER	(no generated code)		
ESC	CTRL [(1BH)	CTRL [(1BH)	CTRL [(1BH)
PRINT	ESC P	CTRL F (06H)	ESC P
SEND	ESC 7	~ 7	ESC 7
CURSOR POSITION KEYS	WY-50 TVI-910/920/925	HZ-1500	ADDS-VP
▼ (CURSOR DOWN)	CTRL J (0AH) in TVI-925: CTRL V (16H)	~ CTRL K (0BH)	CTRL J (0AH)
Shift ▼ (CURSOR DOWN)	CTRL J (0AH)	CTRL J (0AH)	CTRL J (0AH)
◀ (CURSOR LEFT)	CTRL H (08H)	CTRL H (08H)	CTRL U (15H)
▶ (CURSOR RIGHT)	CTRL L (0CH)	CTRL P (10H)	CTRL F (06H)
▲ (CURSOR UP)	CTRL K (0BH)	~ CTRL L (0CH)	CTRL Z (1AH)
BACKSPACE	CTRL H (08H)	CTRL H (08H)	CTRL H (08H)
HOME	CTRL ^ (1EH)	~ CTRL R (12H)	CTRL A (01H)
Shift HOME	ESC {	~ CTRL R (12H)	CTRL A (01H)
PAGE NEXT	ESC K	CTRL A (01H)	ESC J
PAGE PREV	ESC J	CTRL E (05H)	ESC J

Key	Generated Code		
	WY-50 TVI-910/920/925	HZ-1500	ADDS-VP
RETURN	CTRL M (0DH) or CTRL M (0DH) CTRL J (0AH)	CTRL M (0DH) or CTRL M (0DH) CTRL J (0AH)	CTRL M (0DH) or CTRL M (0DH) CTRL J (0AH)
TAB	CTRL I (09H)	CTRL I (09H)	CTRL I (09H)
Shift TAB	ESC I	~ CTRL I (09H)	ESC I
EDITING KEYS	WY-50 TVI-910/920/925	HZ-1500	ADDS-VP
CLR LINE	ESC T	~ CTRL O (0FH)	ESC K
CLR SCRN	ESC Y	~ CTRL \ (1CH)	ESC k
DEL CHAR	ESC W	CTRL C (03H)	ESC W
DEL LINE	ESC R	~ CTRL s (13H)	ESC l (L)
INS	ESC q	CTRL U (15H)	ESC q
INS CHAR	ESC Q	CTRL B (02H)	ESC Q
INS LINE	ESC E	~ CTRL Z (1AH)	ESC M
REPL	ESC r	CTRL D (04H)	ESC r

CONNECTOR PIN ASSIGNMENTS

The modem and auxiliary port connector pin assignments are listed below. The interface cables must **not** have any wires running to pins 9, 10, 11, 12, 14, 18, 19, 24, and 25 of the modem port.

MODEM RS-232C		AUXILIARY RS-232C	
Pin #	Signal	Pin #	Signal
1	Shield Ground	1	Shield Ground
2	Transmit Data	3	Transmit Data to Printer
3	Receive Data	6	Data Set Ready
4	Request to Send	7	Signal Ground
5	Clear to Send		
7	Signal Ground		
8	Data Carrier Detect		
*9			
*10			
*11			
*12	Leave unconnected		
*14			
*18			
*19			
20	Data Terminal Ready	20	Printer Ready
*24	Leave unconnected		
*25			

* Do not use. If connected, improper video display will result.

Discussed pin 6 on modem
port to make work with
VAX

ERRATA SHEET

effective 02-84

Please note the following errors and operational changes.

Errors

Page 17 (Escape Codes):

Substitute ESC / for ESC .

Page 32 (Command Guide):

On a separate line above “Enable XON/XOFF,” insert: Enable transmission, then under WY-50, TVI-910, TVI-920, TVI-925, and ADDS-VP insert CTRL Q.

On a separate line above “Disable XON/XOFF,” insert: Disable transmission; then under WY-50, TVI-910, TVI-920, TVI-925, and ADDS-VP insert CTRL s.

Operational Changes

Page 15 (Control Codes):

CTRL Q or q Enables transmission from the host computer.

CTRL s Stops transmission from the host computer.

CTRL T or t Turns off auxiliary print; turns off transparent print.

Page 16 (Control Codes):

CTRL X or X Turns on transparent print; data does not display.

Page 27 (Command Guide):

Back tab under ADDS-VP box Shift TAB.

Page 28 (Command Guide):

Skip to alternate text segment under ADDS-VP box PAGE NEXT. under ADDS-VP box PAGE PREV. Clear all to spaces under HZ-1500 insert - CTRL / and CLR SCRN; then box ESC +. Clear tabs under ADDS-VP delete ESC 3.

Page 29 (Command Guide):

Delete character under ADDS-VP box DEL CHAR. Erase to end of page with spaces under HZ-1500 delete CLR SCRN.

Page 30 (Command Guide):

Insert character under ADDS-VP box INS CHAR.

Page 31 (Command Guide):

Insert submode off under TVI-920 delete ESC r and REPL. Insert submode on under TVI-920 delete ESC q and INS.

Page 32 (Command Guide):

Identify terminal

under HZ-1500 and ADDS-VP box ESC (SPACE).

Page 33 (Command Guide):

Send page

under HZ-1500 and ADDS-VP box SEND.

Auxiliary print off under WY-50, TVI-910, TVI-920, TVI-925, HZ-1500, and ADDS-VP insert SET up after Shift CTRL PRINT.

Print page

under HZ-1500 insert and box PRINT. Under ADDS-VP box PRINT.

Transparent print off

under WY-50 insert CTRL T.

under WY-50, TVI-910, TVI-925, and ADDS-VP insert Shift CTRL PRINT.

Transparent print on

under WY-50 insert CTRL X.

under TVI-920 delete ESC.

GENERAL SUMMARY OF CHANGES

1. The transparent print function is operational in the WY-50.
2. The auxiliary print function can also be turned off by pressing SET UP.
3. The insert submode is not functional in the TVI-920 compatible mode.
4. The clear tabs function is not supported in the ADDS-VP enhanced compatible mode.
5. The clear all to spaces function in the HZ-1500 compatible mode can be done with CTRL / or by pressing CLR SCRN.
6. The erase to end of page with spaces function in the HZ-1500 compatible mode cannot be done by pressing CLR SCRN.
7. The identify terminal function for the HZ-1500 and ADDS-VP compatible modes is only supported when enhanced.

NOTE:

The current key click and caps lock submode ON/OFF status are saved whenever the setup configuration is saved.