

MiniTerm “909” Boot Menu

Boot Menu Map

7 – Barcode Scanner On/Off	8 – Red LED Function	9 – Green LED Function
4 – PIN Masking On/Off	5 – USB Connection Type	6 – USB CDC Serial No.
1 – Run Bootloader	2 – Key Beep Time	3 – Operating Mode
CLEAR – Cancel (Quit)	0 – Restore Defaults	ENTER –

Entry to Boot Menu

Press and hold the CLEAR and ENTER on the bottom row and power up the keypad (plug it in). Release the two keys. You will be presented with the message

```
BOOT MENU
Choose Menu Item
```

You have 15 seconds to make your selection or the keypad will revert to normal operation. You may also press CLEAR from this menu to exit. The menu choices and settings are detailed on the following pages. There are seven programmable settings that you can customize and in addition two utility items.

The 2 utility menu items are:

- Launch Bootloader for firmware upgrade.
- Restore all default programmable settings.

The 7 programmable settings available and the default values for them are:

- Keypress Beep Time – 33ms (range is 0 to 255ms).
- Operating Mode – Line Edit (choices are Line Edit or True Terminal).
- PIN Masking – OFF (choices are ON or OFF).
- USB Connection Type – MiniTermPro LS Virtual Serial 1 (see table on page 3 for options).
- USB CDC Serial Number – 0001 (4-decimal digits 0000 to 9999).
- Barcode Scanner – ON (choices are ON or OFF).
- Reg and Green LED functions (on, off, num, caps, scroll or host controlled).

Each configuration setting requires entering 1 or more decimal numbers followed by the ENTER Key. The process must be repeated if multiple changes are required. In addition to the number keys and ENTER, the CLEAR key can be used to edit the number you are entering. If the number entry field is blank and you press CLEAR, the Boot Menu will “escape” (abandon the current operation).

Utility Boot Options

0 – Restore Defaults

From the Boot Menu, press the 0 key. You should see the message:

```
Restore DEFAULTS
?> 0:No, 1:Yes
```

Pressing CLEAR will escape out of the menu. Pressing 0 and then ENTER will abandon the operation and escape out the menu. Press 1 and then ENTER will erase all of the programmable settings and reboot the keypad.

1 – Run Bootloader

This menu item will allow you to launch the Bootloader so that you can upgrade the MiniTerm firmware using the 9xxLoad.exe Windows application. From the Boot Menu, press the 1 key. You should see the message:

```
Run Bootloader?
> 0:No, 1:Yes
```

Pressing CLEAR will escape out of the menu. Pressing 0 and then ENTER will abandon the operation and escape out the menu. Press 1 and then ENTER will run the Bootloader. (To exit the actual Bootloader mode, replug the MiniTerm.)

Programmable Settings

2 – Key Beep (Default is 33ms)

This menu item allows you to configure the key “click” noise emitted when the buttons are pressed. After Boot Menu entry, press 2. You should see the message:

```
Key Beep = ###ms
Enter 0-255>
```

The ### value shown above will actually indicate the current Key Beep setting in milliseconds on the LCD. Enter a value from 1 (very short) to 255 (very long) for the keypress “click”. If you use 0 then the key beep is turned off.

You must test your key beep value in normal operating mode (the Boot Menu itself uses only a medium value or off).

3 – Operating Mode *(Default is Line Edit)*

This menu item allows you to configure whether the MiniTerm operates in True Terminal mode or Line Edit Mode. After Boot Menu entry, press 3. You should see the message:

```
OpMode=##### >_  
0:Term, 1:Line
```

The ##### indicated above will show the current setting and this will appear as either TTERM or LEDIT. Select 0 for True Terminal or 1 for Line Edit.

4 – PIN Masking On/Off *(Default is Off)*

For Line Edit Mode (only) the user’s keypad entry will either be displayed as numbers, or hidden (masked) by an ASCII character of your choosing. This menu item allows you to turn the masking (hiding) on or off. See the next menu for the Mask character setting. After Boot Menu entry, press 4. You should see the message:

```
PIN Masking= ###  
>_ 0:Off, 1:On
```

The ### indicated above will show the current setting and this will appear as either OFF or ON. Select 0 for OFF or 1 for ON.

5 – USB Connection Type *(Default is MiniTermPro Virtual Serial 1)*

The MiniTerm 9xx family connects to a host PC over USB using one of several possible USB device types. This menu item lets you select which type of USB connection the MiniTerm presents to the host PC. After Boot Menu entry, press 6. You should see the message:

```
USB Type=#####  
Choose 1-5>_
```

The ##### will show which type is currently selected. Refer to the table below to choose the appropriate USB connection type for your environment. Be aware that as you change USB connection type, the PC your MiniTerm is connected to may take some time to load new drivers.

DEC	Abbreviation	USB Type Description
1	VS1-LS	Low Speed MiniTermPro Virtual Serial
2	KB1-LS	Low Speed HID Keyboard
3	CDC ACM	Communication Device Class (CDC) Virtual COM Port
4	VS2-FS	Full Speed MiniTermPro Virtual Serial
5	KB2-FS	Full Speed HID Multimedia Keyboard

6 – USB CDC Serial Number *(Default is 0001)*

USB CDC uses a serial number to assign COM port numbers to a specific device. This is different from how MiniTermPro works. MiniTermPro assigns COM port numbers to the specific USB jack on the PC. To give your CDC-connected MiniTerm a unique identity, use this menu to assign a 4-digit serial number. After Boot Menu entry, press 7. You should see the message:

```
CDC S/N = ####  
4 Digits>
```

The #### will show which type is currently serial number. Enter a value from 0 to 9999 and press ENTER. Be aware that as you change CDC serial number, the PC your MiniTerm is connected to may take some time to reload drivers.

7 – Barcode Scanner On/Off *(Default is On)*

If your MiniTerm is outfitted with an optional Barcode/1D or QRcode/2D scanner, it can be enabled or disabled using this menu item. After Boot Menu entry, press 8. You should see the message:

```
Scanner = ###  
> 0:Off, 1:On
```

The ### indicated above will show the current setting and this will appear as either OFF or ON. Select 0 for scanner OFF or 1 for scanner ON.

NOTE: Barcode **type** (manufacturer) is set by internal hardware.

8 – Red LED Function *(Default is Host Controlled)*

Each of the two LEDs can be configured in one of 6 modes. Two of the modes (Off and On) are valid for any host connection type. Three of the modes (Num, Caps, Scroll) are valid only for HID keyboard host connections. Finally, one is for a Virtual Serial/CDC host connections and the LED state is controlled by the PC host. After Boot Menu entry, press 8. You should see the message:

```
RLED Mode = ####  
Choose 0-5>
```

The #### indicated above will show the current setting (see table below).

DEC	Mode	Description
0	OFF	Always extinguished
1	ON	Always illuminated
2	NUM	For HID KB1/KB2, shows the PC Num Lock LED state
3	CAPS	For HID KB1/KB2, shows the PC Caps Lock LED state
4	SCROLL	For HID KB1/KB2, shows the PC Scroll Lock LED state
5	HOST	For Virtual Serial/CDC, can be controlled by the host (off/on/flashing)

Choose one of the values (0 to 5) from the table to change the Red LED operation.

9 – Green LED Function *(Default is ON – power indicator)*

Each of the two LEDs can be configured in one of 6 modes. Two of the modes (Off and On) are valid for any host connection type. Three of the modes (Num, Caps, Scroll) are valid only for HID keyboard host connections. Finally, one is for a Virtual Serial/CDC host connections and the LED state is controlled by the PC host. After Boot Menu entry, press 9. You should see the message:

```
GLEED Mode = ####  
Choose 0-5>
```

The #### indicated above will show the current setting (see table below).

DEC	Mode	Description
0	OFF	Always dark
1	ON	Always lit (power indicator)
2	NUM	For HID KB1/KB2, shows the PC Num Lock LED state
3	CAPS	For HID KB1/KB2, shows the PC Caps Lock LED state
4	SCROLL	For HID KB1/KB2, shows the PC Scroll Lock LED state
5	HOST	For Virtual Serial/CDC, can be controlled by the host (off/on/flashing)

Choose one of the values (0 to 5) from the table to change the Green LED operation.

5—PIN Masking Character (Default is asterisk)

For Line Edit Mode with PIN Masking enabled, the character used to hide (mask) the user’s keypad entry can be set using this menu. After Boot Menu entry, press 5. You should see the message:

```
MaskChar= ## (#)
Enter 33-127>
```

The ## and # indicated above will show the current setting in decimal and ASCII, respectively. To choose a new value, enter up to 3 decimal digits and press ENTER. Use the table below as a guide.

ASCII	DEC	ASCII	DEC	ASCII	DEC	ASCII	DEC	ASCII	DEC	ASCII	DEC	ASCII	DEC
!	33	/	47	=	61	K	75	Y	89	g	103	u	117
"	34	0	48	>	62	L	76	Z	90	h	104	v	118
#	35	1	49	?	63	M	77	[	91	i	105	w	119
\$	36	2	50	@	64	N	78	¥	92	J	106	x	120
%	37	3	51	A	65	O	79	]	93	k	107	y	121
&	38	4	52	B	66	P	80	^	94	l	108	z	122
'	39	5	53	C	67	Q	81	_	95	m	109	{	123
(	40	6	54	D	68	R	82	`	96	n	110	|	124
)	41	7	55	E	69	S	83	a	97	o	111	}	125
*	42	8	56	F	70	T	84	b	98	p	112	→	126
+	43	9	57	G	71	U	85	c	99	q	113	←	127
,	44	:	58	H	72	V	86	d	100	r	114		
-	45	;	59	I	73	W	87	e	101	s	115		
.	46	<	60	J	74	X	88	f	102	t	116		