
Sentry Ambassador Update & Manual Addendum

The Sentry Ambassador has been updated since the writing of the User's Manual. This document explains the updates and consequent changes to the manual. **Please read this addendum first!**

New Enclosure-II

The Sentry Ambassador enclosure has been improved; it can now accommodate up-to 16 external Intelligent Power Modules (4 Sentry RPM boards), and it's clear button shield has been redesigned for improved strength. As a result of the new enclosure, the silk-screened labeling of the blue pass-through ports (present only on units equipped with "Option1") now varies versus the labeling described on pages 3 and 12 of the Sentry Ambassador Remote Power Manager User's Manual. Specifically, Pass-through Ports 1 through 4 – previously labeled as P1-P4 – are now labeled as E1-E4. In addition, Pass-through Ports 5 through 8 – previously labeled as P5-P8 – are now labeled as D1-D4. The new labeling does not affect the use of the Pass-through ports; the ports are still addressed from the Sentry command prompt as 1 through 8 (left to right, when viewing the unit from the rear).

Default Modem Initialization Data Rate

The default modem initialization data rate has changed from 1200 to 9600. The default data rate is mentioned on pages 14, 23, and 28 of the User's Manual.

Modem Initialization String Changes

A choice for the modem to answer on ring number 1 or ring number 3 has been added. This was done by changing Initialization String 2 (INIT2) and adding an Initialization String 3 (INIT3) (see page 14 of the User's Manual). In Initialization String 2, "S0=1" was changed to "S0=3". The added Initialization String 3 is "AT S0=1<CR>". Like the other initialization strings, Initialization String 3 defaults to being enabled, and is sent after Initialization String 2. These defaults result in the modem answering on ring number 1. To have the modem instead answer on ring number 3, disable Initialization String 3 with the command "SET MODEM INIT3 NONE".

Maximum Chain Length Increased

The maximum supported number of IPM signal ports (both internal and external) and Shutdown signal ports in a single chain has been increased to a total of 104, which is 26 pages of Power Control Screens (1 for each power controller board, each with four ports). This increase is up from 60 total ports (15 pages), which is mentioned on pages 1 and 11 of the User's Manual.

Adding a New Sentry to a Chain

When adding a new Sentry Ambassador to an existing Sentry Ambassador chain, attach the link cable between the new Sentry Ambassador and the existing chain before powering on the new Sentry Ambassador. This will allow an automatic resynchronization to occur. Otherwise, the "RESYNC" command must be issued before the new Sentry Ambassador will be recognized as part of the chain.

After a resynchronization by either method, the passwords need to be set for the new Sentry Ambassador. This is done by logging in with the current administrative password, and then issuing the commands "SET

PASSWORD ADMN”, “SET PASSWORD GEN1”, and “SET PASSWORD GEN2”, using the current value for each of the password levels.

Resetting a Chain to Factory Defaults

Completely resetting a Sentry Ambassador or chain of Sentry Ambassadors no longer requires that the “button-push-during-power-on” be done for each row of buttons on each Sentry in a chain (as instructed on page 32 of the User’s Manual). Instead, the “button-push-during-power-on” now only needs to be done on the top button row of the first Sentry Ambassador at the head of the chain. This will allow a user to log in to the Sentry with the factory default administrative password, after which the command “SET CNFG ALL FACTORY” can be used to reset the rest of the Sentry Ambassador or chain of Sentry Ambassadors.

Switches Removed from Always-On IPMs

The “Always-On” IPMs described on pages 4 and 5 of the User’s Manual are now manufactured without the power toggle switch. This is in response to customer confusion about the purpose of the switch, which only provided a way to force the power Off, which is not generally useful.

Color-coded Modular Connectors

Except for the “RS-232C” and “10BASE-T” ports, the modular connectors on the rear panel are now color-coded to indicate their function, regardless of the position on the rear panel. “External IPM Signal Ports” are BLACK, “Shutdown Signal Ports” are RED, and “Eight-Port Communication Pass-Through Ports” are BLUE. The “RS-232C” and “10BASE-T” ports remain BLACK.

Scripting a Connection through the Arbitration Board

Due to improvements in the arbitration board, the instructions in the note “STARTING A SESSION BY AN AUTOMATED SCRIPT” near the bottom of page 23 in the User’s Manual are now incorrect – a connection will not be made by the “@” character. The correct procedure is now:

Send three carriage returns, pause ½ second, and then send a single carriage return.

Front-Panel Pushbutton Operation

The “LOCK” and “NOLOCK” options for the operational behavior of the front-panel pushbuttons have been removed. The “SET PANEL” command (User’s Manual page 28) now only supports two modes:

```
SET PANEL {NONE|DEFAULT}
```

where NONE disables the front-panel pushbuttons.

DEFAULT sets the front-panel pushbuttons to cycle through 2-states (ON and OFF) for non-Shutdown ports, and three states (ON, Shutdown, and OFF) for Shutdown ports. This is the default operating mode from the factory.

The “DEFAULT” option now supports locking a port in the on or off state by pressing and holding the port’s pushbutton for two seconds, at which point the LED above will flicker rapidly. If the port is on, this action will lock the port on. If the port is off, this action will lock the port off. To unlock a port, again press and hold the port’s pushbutton for two seconds – the port will stay in the same on or off state, it will just be unlocked again.

When a port is locked, the power state of the port can not be changed remotely by a user logged in with either of the two “General User” level passwords. A user logged in with the “Administrative” level password, however, can lock or unlock a port remotely from the Power Control Screen by positioning the cursor in the column of the target port, and then pressing “L” to lock or “U” to unlock the port.

Front-Panel LED Operation

Because of customer requests and the new pushbutton behavior described above, the LED states described on page 2 of the User’s Manual have changed. The “Status” and “Port” LEDs now flash as follows:

<u>Status LED Flash Pattern</u>	<u>Meaning</u>
On 1 second, Off 1 second, repeat	Power-up / Synchronization, or in a Session
On 1 second, Dim 1 second, repeat	Normal operation
 <u>Port LED Flash Pattern</u>	 <u>Meaning</u>
On	Port is On
Off	Port is Off
On 3¼ seconds, Off ¼ second, On ¼ second, Off ¼, repeat	Port is Locked On
Off 3¼ seconds, On ¼ second, Off ¼ second, On ¼, repeat	Port is Locked Off
On ½ second, Dim ½ second, repeat	Port is Shutting Down
Off 3¾ seconds, On ¼ second, repeat	Port is Rebooting

Communication Pass-Through Enhancements

An administrative “SET CONNECT” command has been added to the Sentry command prompt. This command allows the user to enable or disable the requirement that DSR and/or CTS be active on the target port to successfully connect. You may need to turn off these requirements if the device attached to the pass-through port does not support DSR and/or CTS signals. The new “SET CONNECT” syntax is:

```
SET CONNECT {DSRCHECK | NODSRCHECK | CTSCHECK | NOCTSCHECK }
```

where DSRCHECK enables the requirement that DSR be active to connect.
 NODSRCHECK disables the requirement that DSR be active to connect.
 CTSCHECK enables the requirement that CTS be active to connect.
 NOCTSCHECK disables the requirement that CTS be active to connect.

An optional “FLOW” parameter has been added to the “CONNECT” command (User’s Manual page 27). This only affects a Sentry Ambassador that has the Eight-Port Communication Pass-Through option. The new “CONNECT” syntax is:

```
CONNECT [ [FLOW] {Number} ]
```

When the “FLOW” parameter is used with the “CONNECT” command, the modem’s RTS and CTS hardware handshake pins are connected to RJ pins 2 and 5 (User’s Manual page 12) on the target pass-through port,

instead of the modem's DTR and DSR pins. Custom cable adapters are required to make use of this feature because the standard F2O and M2I adapters just loop RTS back to CTS.

Disconnecting from a Communication Pass-Through Port

The character sequence “!*LOGIN<CR>” is now recognized for disconnecting from a communication pass-through port. This new method for disconnecting does not require a Sentry password as part of the character sequence, and thus avoids the problem of a password being seen by an unauthorized user if the connected serial device echoes characters. The new character sequence disconnects from the communication pass-through port and displays the “Enter Password:” prompt (which echoes asterisks) to allow the user to log back into the Sentry. The keyword “LOGIN” is not case sensitive and “<CR>” is a carriage return (Enter).

Lantronix MSS1 Installation Guide and CD-ROM are No Longer Included

The Lantronix MSS1 Installation Guide and support CD-ROM that are referred to at the bottom of page 15 of the User's Manual are no longer included. This manual and CD-ROM are not necessary for the installation and configuration of the Sentry Ambassador. They were only previously included for users that may have been interested in the advanced features of the MSS1. The Lantronix MSS1 manuals and CD-ROM files are now available on-line at Lantronix's WWW page:

<http://www.lantronix.com>

Network Connection No Longer Required at Boot

It is no longer a requirement that the network be connected to the Sentry Ambassador when it is turned on. The network access device will now continue to boot even if the network is not seen during its power-up diagnostics. Thus, the “IMPORTANT” note on pages 11 and 16 of the User's Manual can be ignored.

Network Access Device Defaults

A custom firmware version of the Lantronix MSS1 is now being used. This version has configuration option defaults that are appropriate and optimal for use with the Sentry Ambassador. Thus, in the “Network Access Device Configuration” section of the User's Manual, the “Required Configuration” steps on page 19 are no longer necessary.

The following list shows the custom default settings that vary from the defaults that are documented in the on-line Lantronix MSS1 Installation Guide. These custom defaults have also changed slightly from those listed in step 4 on page 19 of the User's Manual, which, again, is now unnecessary.

```
DTRWAIT ENABLED
MODEM CONTROL ENABLED
SIGNAL CHECK ENABLED
AUTOBAUD ENABLED
INACTIVE TIMER 5
INACTIVE LOGOUT ENABLED
INCOMING PASSWORD
PASSWORD PROTECT ENABLED
```

For proper operation of the MSS1 with the Sentry Ambassador, these options should not be changed. However, the MSS1 serial port speed may still need to be changed for the reasons noted at the top of page 20 of the User's Manual.

Network Access Device Passwords

For additional security, the Lantronix MSS1 now requires a password to login to the MSS1 when starting a Telnet session to port 23 or when starting a serial console session (described below). This "Login password" will be asked for before being asked for the "Username" in step 5 on page 17 of the User's Manual.

The default login password is "access". This password can be changed with the privileged "CHANGE LOGINPASS" command.

Network Access Device Serial Console Support

Whenever the Sentry Ambassador is turned on, or whenever the Lantronix MSS1 is rebooted by a command, the Lantronix MSS1 boot messages are now transmitted out the RS-232C port. These messages can be viewed by a terminal device connected to the RS-232C port. These messages are displayed at the MSS1's current data rate, as set by the MSS1's "CHANGE SPEED" command, which defaults to 9600 from the factory. The MSS1 boot process takes about 30 seconds. During this period, a session can not be established with the Sentry from the RS-232C port.

The Sentry Ambassador also now has the ability to connect to and configure the Lantronix MSS1 network access device via the RS-232C or MODEM connections. This feature has been added to give users a non-network means of assigning an IP address prior to deployment or remotely after deployment.

After the Sentry Ambassador and MSS1 are completely booted (about 30 seconds), a connection to the MSS1 can be attempted from either the RS-232C port or the MODEM port by sending the character sequence "! * <CR>" (exclamation mark, asterisk, carriage return). This sequence should be sent with no parity, eight data bits, 1 stop bit, and DTR active (CD must also be active when using the MODEM port).

The MSS1 will attempt to autobaud to the actual data rate used. The autobaud feature will always succeed when the actual data rate is the same as the MSS1's data rate, which is set by the "CHANGE SPEED" command at the MSS1's privileged "Local>>" prompt, and which defaults to 9600 from the factory. However, it will fail to autobaud properly at data rates that are two-or-more steps below the MSS1's data rate, as well as five-or-more steps above the MSS1's data rate. The following table shows the actual data rates that are supported for the various MSS1 data rates (x = supported):

MSS1 Data Rate

	1200	2400	4800	9600	19200	38400
Actual Data Rate	x	x				
1200	x	x	x			
2400	x	x	x	x		
4800	x	x	x	x	x	
9600	x	x	x	x	x	x
19200						
38400						

When "! * <CR>" is sent, a "Connecting to LAN port" message will be displayed while the connection is attempted. If the connection is successful, a Lantronix MSS1 version message, followed by a

“Login password>” prompt, will be displayed. After entering the login password, a “Username>” prompt will be displayed. After entering a user name, a “Local_1>” prompt will be displayed. From this prompt, the Lantronix MSS1 configuration can be performed, as described in steps 6 to 10 on pages 17 and 18 of the User’s Manual.

A connection to the MSS1 from the RS-232C or MODEM port will break when DTR or CD is lowered (this is usually automatic when a communication program is exited or when a modem is hung-up). A connection will also break when the MSS1 lowers it's DTR (this occurs with a “LOGOUT” or “INITIALIZE” command to the MSS1).

Sentry SNMP Support

The Sentry Ambassador (with the network option) now supports the Simple Network Management Protocol (SNMP). This will allow a network management system to use SNMP “get” and “set” requests to retrieve information about, and control power to, the individual ports on the Sentry Ambassador. Properly implemented and integrated, this feature could allow a network management system to automatically reboot a network device that it has detected to be down or locked-up.

The Lantronix MSS1 includes an SNMP v1 agent that supports the standard MIB I, MIB II, and RS-232 MIB objects. Additionally, the Lantronix MSS1 and the Sentry Ambassador together support a private enterprise MIB extension that provides remote power control via SNMP. This collection of private enterprise MIB objects is called the Sentry MIB.

The Sentry MIB defines objects that allow a network manager to check the value of Sentry Ambassador configuration items, to check the power status of individual ports on the Sentry Ambassador, and to control power to the individual ports on the Sentry Ambassador. Power to a port can be turned on, turned off, or rebooted. Ports with shutdown support will automatically signal a shut down to the operating system of the attached device prior to turning off or rebooting the device.

For security reasons, the Sentry MIB extensions default to being disabled.

Instructions for enabling and using the Sentry MIB extensions, as well as the MIB file that defines the Sentry MIB objects, are available over the internet via anonymous FTP at:

<ftp://ftp.servertech.com/pub/SNMP/>

SNMP related email should be directed to: mibmaster@servertech.com

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