

Crestron **TST-600**

5.7" Wireless Touch Screen

Configuration Guide



The specific patents that cover Crestron products are listed at patents.crestron.com.

Crestron, the Crestron logo, and Rava are either trademarks or registered trademarks of Crestron Electronics, Inc. in the United States and/or other countries. Other trademarks, registered trademarks, and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Crestron disclaims any proprietary interest in the marks and names of others. *Crestron is not responsible for errors in typography or photography.*

This document was written by the Technical Publications department at Crestron.
©2013 Crestron Electronics, Inc.

Contents

5.7" Wireless Touch Screen: TST-600	1
Access the Setup Screens.....	1
Configure the TST-600.....	3
RF Setup.....	3
Audio Setup.....	5
Display Setup.....	5
Standby Timeout.....	6
Networking Setup.....	7
Diagnostics.....	13
About.....	14
Save & Exit.....	14
Appendix A: The RF Spectrum.....	15
Appendix B: Optimum RF Reception Guidelines.....	16
Minimize Interference.....	16
Gateway Placement.....	16
Antenna Orientation.....	16

5.7" Wireless Touch Screen: TST-600

Access the Setup Screens

The main menu is the starting point for configuring the TST-600 from Crestron®.

NOTE: If no project has been loaded or if an invalid project has been loaded, the TST-600 defaults to the main menu.

The setup screens enable basic configuration procedures prior to regular operation of the TST-600.

If a project is running, the main menu can be accessed using one of three methods: via the trigger keys on the top of the touch screen, via front panel buttons on the left side of the touch screen or via Crestron Toolbox™.

Via the Trigger Keys

1. Press and hold the left trigger key on the top of the touch screen until the unit resets (approximately 5 seconds).
2. When the display turns black, then displays a “3”, release the trigger key.
3. When “Loading Crestron Applications...” appears on the display, touch the screen.
4. Release the touch screen when “Preparing to enter setup” appears.

Via Front Panel Buttons

The main menu can also be accessed by pressing **HOME**, **MEDIA**, **▲** and **▼**, on the left side of the touch screen display, in sequence twice (press **HOME**, **MEDIA**, **▲**, **▼**, **HOME**, **MEDIA**, **▲**, **▼**) within a 5 second period.

Via Crestron Toolbox

1. Establish communication with the touch screen.
2. Right-click on the device and select **Functions | Setup Mode...**
3. Select **Enter Setup Mode**. The main menu is displayed, as shown in the illustration below.

NOTE: Select **Exit Setup Mode** to exit the setup menu.

TST-600 Main Menu

The main menu displays the current *RF ID*, *RF Channel* and battery status and is also comprised of buttons for **RF Setup**, **Audio Setup**, **Display Setup**, **Standby Timeout**, **Networking Setup**, and **Diagnostics**. In addition, there are buttons that provide information about the touch screen and a **Save & Exit** button. The functions of each are detailed in the next section of this guide.

Configure the TST-600

RF Setup

From the main menu, touch **RF Setup** to display the “RF Setup” screen.

“RF Setup” Screen

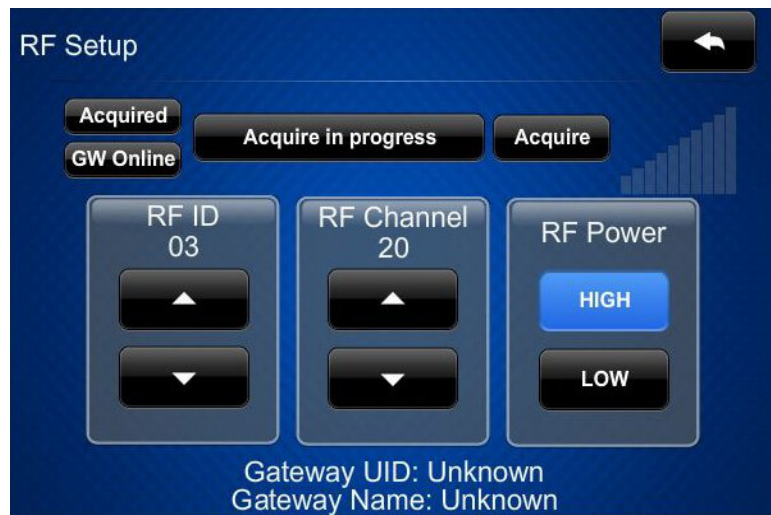


The “RF Setup” screen has *Acquired* and *GW Online* indicators to show the status of the TST-600 and associated gateway. To the right of these is a message display area used to show the status of acquire processes, an **Acquire** button used to initiate acquires and a bar graph showing RF signal strength. Below these are controls for setting the *RF ID*, *RF Channel*, and *RF Power*. At the bottom of the screen, the *Gateway UID* and *Gateway Name* are displayed.

Before a TST-600 can be used with a Crestron control system, it must first be acquired by a CEN(I)-ERFGW-POE Extended Range RF Wireless Gateway (sold separately).

To acquire a TST-600:

1. Use a stylus or other thin tipped object to press **ACQUIRE** on the CEN(I)-ERFGW-POE gateway to enter *Acquire* mode. The accompanying LED illuminates, indicating the unit is ready to link with the touch screen.
2. Place the TST-600 in *Acquire* mode by touching **Acquire** on the “RF Setup” screen. The screen displays an *Acquire in progress* message and the TST-600 is automatically acquired by the gateway within 2 minutes.

“RF Setup” (Acquire in progress) Screen

- When the process is complete, the screen displays an *Acquire OK* message. Press **ACQUIRE** on the gateway to exist *Acquire* mode. The LED turns off.

“RF Setup” (Acquire OK) Screen

NOTE: Select an RF channel between 12 and 23 for maximum range. Channels 11, 24-26 will result in less range but are available if RF interference requires moving the RF channel.

NOTE: The RF ID of the unit must match the RF ID specified in the SIMPL Windows program.

For details, refer to “Appendix A: The RF Spectrum” on page 15 and “Appendix B: Optimum RF Reception Guidelines” on page 16.

From any of the setup menus, touch  to go back to the previous menu.

Audio Setup

From the main menu, touch **Audio Setup** to display the “Audio Setup” screen.

“Audio Setup” Screen



The “Audio Setup” screen provides controls for muting (or unmuting) the audio, adjusting level for both *Master Volume* and *Media Volume*, as well as a control for playing a test audio file. The *Media Volume* controls adjust H.264 streaming media level in relation to the *Master Volume* controls.

Touch  to return to the main menu.

Display Setup

From the main menu, touch **Display Setup** to enter the “Display Setup” menu.

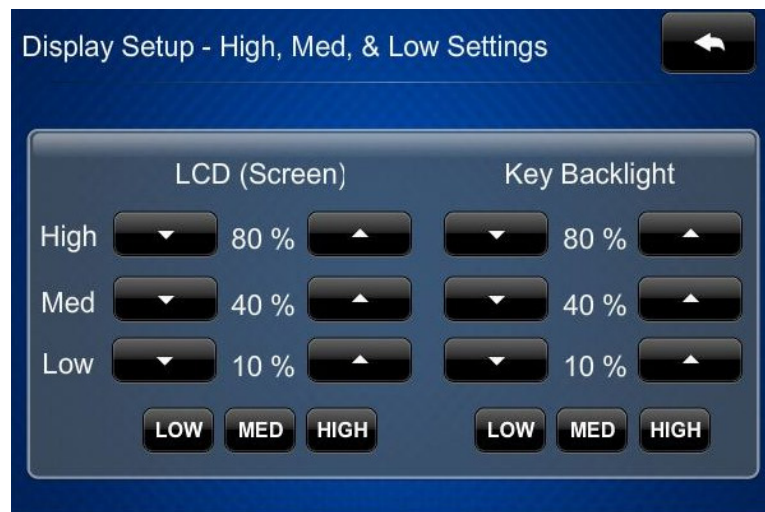
“Display Setup” Menu



The “Display Setup” menu provides controls for *LCD (Screen) Brightness*, *Key Backlight Brightness*, and **On** and **Off** controls for *Hard Key Wakes LCD*.

Touch **High, Med, & Low Settings** to enter the “Display Setup - High, Med, & Low Settings” screen.

“Display Setup – High, Med, & Low Settings” Screen



The “Display Setup - High, Med, & Low Settings” screen allows setting custom values for the rapid access **Low**, **Med** and **High** buttons, used to control screen brightness or key backlight brightness.

Touch  to return to the “Display Setup” menu and touch it again to return to the main menu.

Standby Timeout


From the main menu, touch **Standby Timeout** to display the “Standby Timeout” screen.

“Standby Timeout” Screen



The “Standby Timeout” screen provides controls to adjust *Standby* timeout (from 0 to 120 seconds) and the *Power Down* timeout (from 0 to 240 seconds), both for when

the TST-600 is undocked. There is also a *Standby* timeout control (0 to 120 seconds) for when the TST-600 is docked.

Touch  to return to the main menu.

Networking Setup

From the main menu, touch **Networking Setup** to display the “Networking Setup – Choose WiFi or LAN” menu.

“Networking Setup – Choose WiFi or LAN” Menu



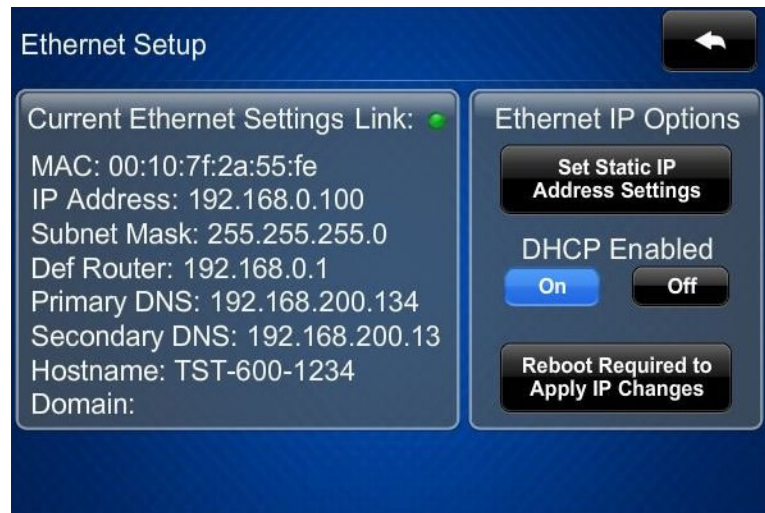
The “Networking Setup – Choose WiFi or LAN” menu provides controls for selecting whether the network is accessed via Wi-Fi or via the LAN (turning one on will automatically turn the other off if the TST-600 is rebooted to apply the changes). There are also controls which provide access to other menus for **WiFi Setup** and **LAN Setup** as well as indicators for Wi-Fi and LAN IP Addresses, *Link* “LEDs” and Wi-Fi signal strength. At the bottom of the menu is a **Reboot Required to Apply Networking Changes** button, used to save changes to settings and initiate a reboot of the TST-600.

Out of the box, LAN access is turned on. To switch to Wi-Fi access, touch **On** under *WiFi Access*, then touch **Reboot Required to Apply Networking Changes** to reboot the TST-600.

To set up Wi-Fi, proceed to page 9.

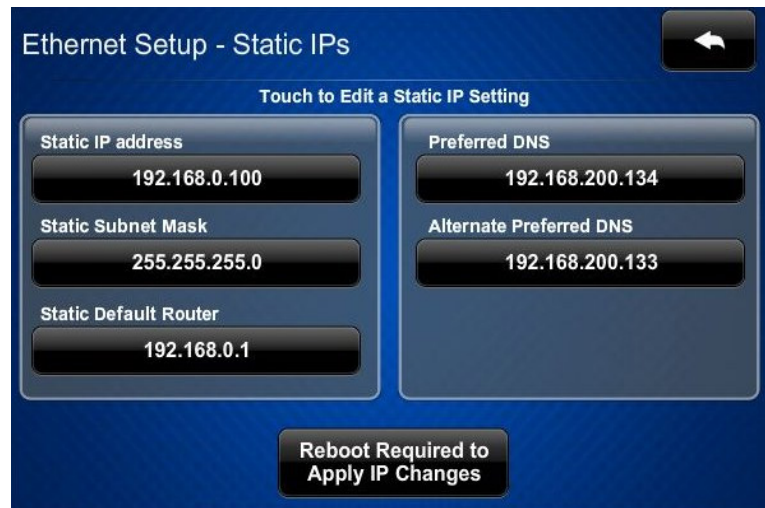
The TST-600 ships with DHCP enabled by default. To enter static IP settings, touch **LAN Setup** to display the “Ethernet Setup” menu.

“Ethernet Setup” Menu



From the “Ethernet Setup” menu, touch **Set Static IP Address Settings** to display the “Ethernet Setup – Static IPs” menu.

“Ethernet Setup – Static IPs” Menu

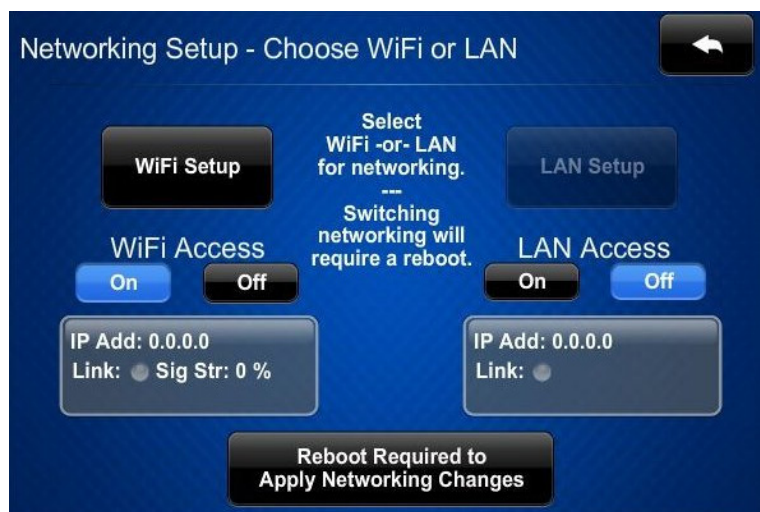


The “Ethernet Setup – Static IPs” menu is used to edit *Static IP address*, *Static Subnet Mask*, *Static Default Router*, *Preferred DNS*, and *Alternate Preferred DNS* settings. Touch each to display a keypad for entering the new setting.

Touch **Reboot Required to Apply IP Changes** to save the new settings and reboot the TST-600.

To enter Wi-Fi settings, start from the “Networking Setup – Choose WiFi or LAN” menu.

“Networking Setup – Choose WiFi or LAN” Menu



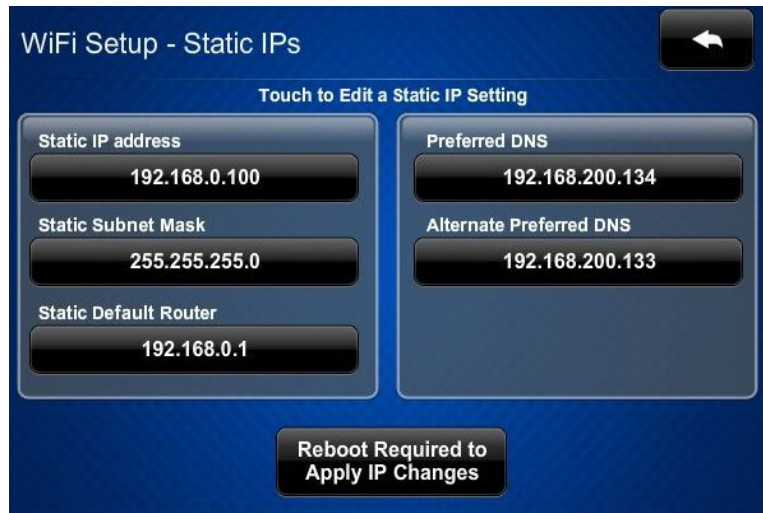
Touch **WiFi Setup** to display the “WiFi Setup” menu.

“WiFi Setup” Menu




If a static IP address is preferred, from the “WiFi Setup” menu, touch **Set Static IP Address Settings** to display the “WiFi Setup – Static IPs” menu.

To stay with DHCP, skip ahead to the bottom of the following page to connect to a Wi-Fi access point.

“WiFi Setup – Static IPs” Menu

The “WiFi Setup – Static IPs” menu is used to edit *Static IP address*, *Static Subnet Mask*, *Static Default Router*, *Preferred DNS*, and *Alternate Preferred DNS* settings. Touch each to display a keypad for entering the new setting.

Touch  to return to the “WiFi Setup” menu.

“WiFi Setup” Menu (Showing Static IP Address Settings)

From the “WiFi Setup” menu, touch **Select a WiFi Access Point** to display the “Connect to a WiFi Access Point: 1-2-3” menu.

“Connect to a WiFi Access Point: 1-2-3” Menu

The left side of the “Connect to a WiFi Access Point: 1-2-3” menu displays a list of available access points. Touch the name of the desired access point.

“Connect to a WiFi Access Point: 1-2-3” Menu (After Selecting WAP)

The name and security type for the selected access point are displayed on the right side of the screen.

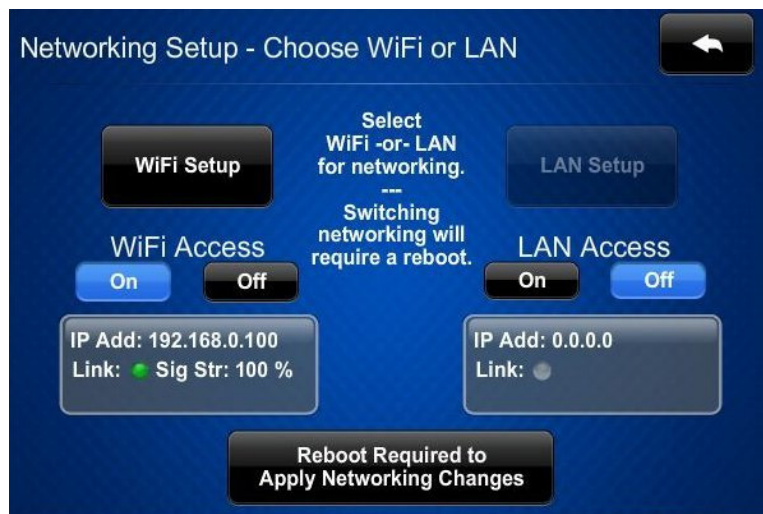
Touch the area below the word *Password* to display a keyboard for password entry.

“Access Point Password” Keyboard

Enter the password for the access point and touch **Save**.

The password will appear below the *WAP Name* and *Security* entries on the right side of the screen.

On the “Connect to a WiFi Access Point: 1-2-3” menu, touch **Step 3- Make this my Access Point**.

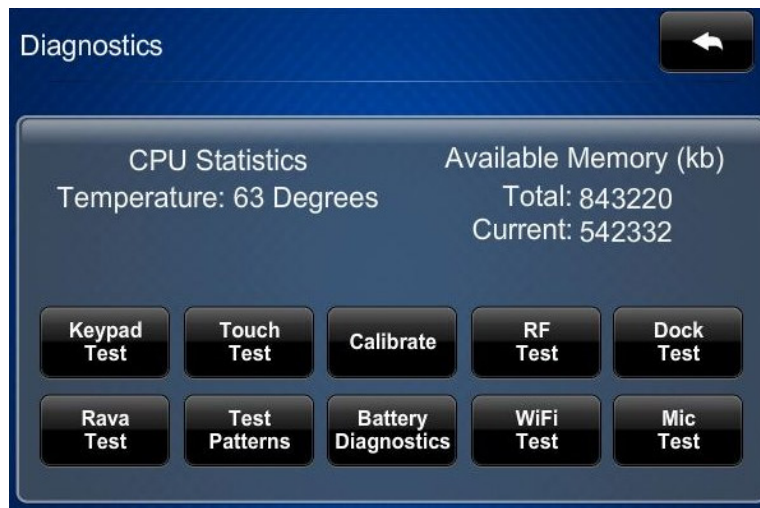
“Networking Setup – Choose WiFi or LAN” Menu

On the “Networking Setup – Choose WiFi or LAN” menu, touch **Reboot Required to Apply IP Changes** to save the new settings and reboot the TST-600.

Diagnostics

From the main menu, touch **Diagnostics** to display the “Diagnostics” menu.

“Diagnostics” Menu



The “Diagnostics” menu displays the CPU temperature and *Available Memory*. It also contains controls to run a **Keypad Test**, **Touch Test**, **RF Test**, **Dock Test**, **Rava Test**, **WiFi Test**, and **Mic Test**. In addition there are controls to open various test pattern screens, examine battery condition and to initiate touch screen calibration.


In most cases, these should only be used under the supervision of a Crestron customer service representative during telephone support. Many options available on the “Diagnostics” menu are numeric in nature and their interpretation is beyond the scope of this manual.

From the “Diagnostics” menu, touch **Rava Test** to display the “Diagnostics – Rava Test” screen.

“Diagnostics - Rava” Screen



The “Diagnostics - Rava” screen provides controls for testing the use of Crestron’s Rava™ SIP Intercom with the TST-600. It can be used to call another Rava-capable touch screen and to test projects and settings. To place a call, dial the extension of the desired touch screen and press **Call**. If the intercom works but the project does not, there is an issue with the project; if the intercom does not work, there is an issue with the settings.

Touch  to return to the “Diagnostics” menu.


About

From the main menu, touch **About** to display the “About” screen.

“About” Screen



The “About” screen displays information about the firmware and operating system versions in your unit.

Touch  to return to the main menu.

Save & Exit

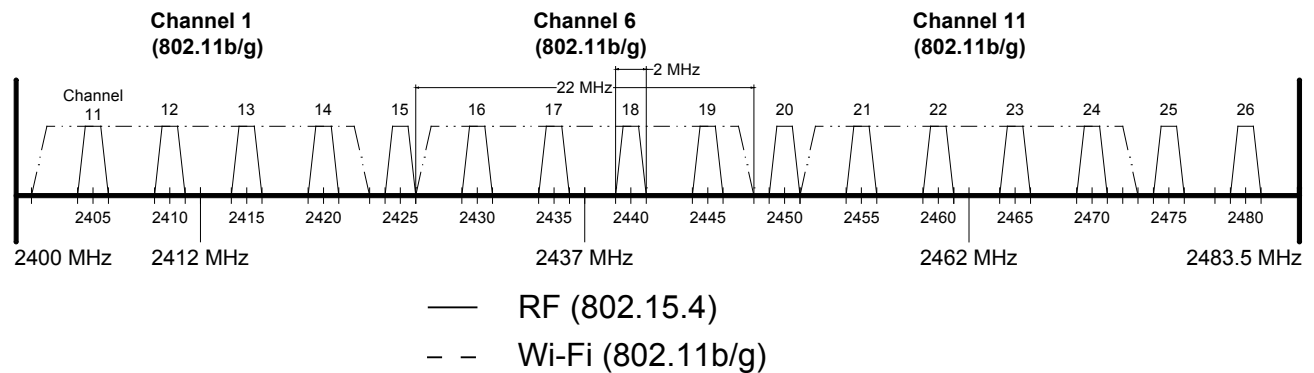
From the main menu, touch **Save & Exit** to save all settings, exit the setup menus and return to the main project.

Appendix A: The RF Spectrum

Crestron's RF network provides 16 RF channels in the 2.4GHz ISM band, specifically IEEE 802.15.4 channels 11 through 26. The 16 channels define the frequencies at which the RF device communicates.

RF devices on different channels do not communicate or interfere with each other. However, since some of the channels are in the 2.4GHz ISM band (as shown in the following diagram), interference can occur with other devices using this band, such as 802.11b/g Wi-Fi devices, Crestron infiNET™ devices or Zigbee devices, although the differing protocols do not allow a link to be established or data to be transferred. Wireless 2.4GHz telephones and microwave ovens may also cause interference with the network.

IEEE 802.15.4 channel selection (2400 MHz PHY)



Appendix B: Optimum RF Reception Guidelines

Many factors can affect the reliability of RF communication between an RF gateway and an RF touch screen. While an effort has been made to determine operating specifications, some specifications are not constant. RF Communication can be limited by several factors including but not limited to EMI (electromagnetic interference), intervening objects, antenna orientation, and receiver placement. To obtain maximum reliability and performance, some basic rules for installing RF transceivers are listed below.

Minimize Interference

RF reception range can be hindered by spurious EMI noise that may interfere with or mask the desired frequency, thereby reducing useable range. EMI is generated by any electrical device at various RF noise levels depending on the device. Sources of EMI include computers, video equipment, digital processors, lighting dimmers, lighting ballasts, motors, or any large AC source. Every effort should be made to separate any RF transceiver from these sources of RF noise including Audio Visual equipment in racks. If a gateway must be installed in an equipment rack, make sure there is ample separation between the equipment and the gateway.

Gateway Placement

Optimum reception for any RF transceiver is obtained by installing the gateway transceiver in an open area or shelf with a clear line of sight (no obstructions between gateway and receiver). Crestron recommends that the gateway is at least five to six feet high for best results. Avoid placing transceivers or transmitters at a low height or on the ground. Placing RF equipment near metal objects, walls, corners or metal enclosures compromises RF propagation and reception. Try to avoid installing gateways in equipment racks, service rooms, electrical closets or in rooms other than that which the panel is located.

Antenna Orientation

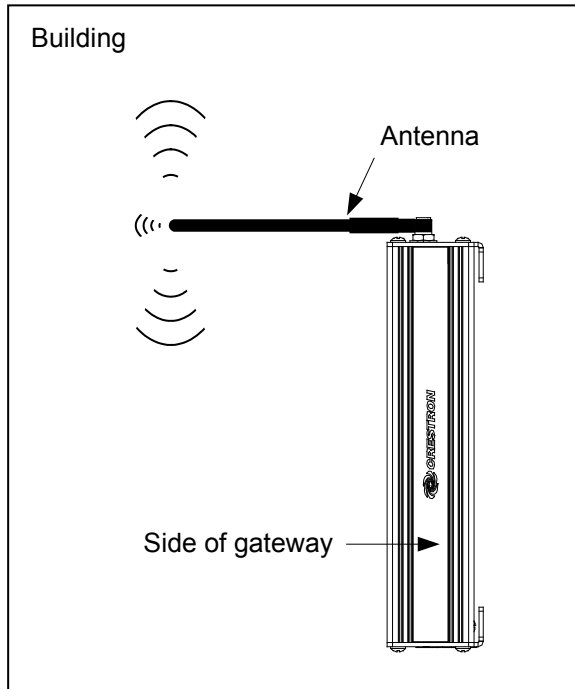
The antenna orientation on Crestron gateways has considerable effect on range and reliability. The best orientation is unique to each installation. There are three possible antenna orientations:

- Point the antenna horizontally (parallel to the ground)
- Point the antenna vertically.
- Point the antenna at a right angle to the gateway.

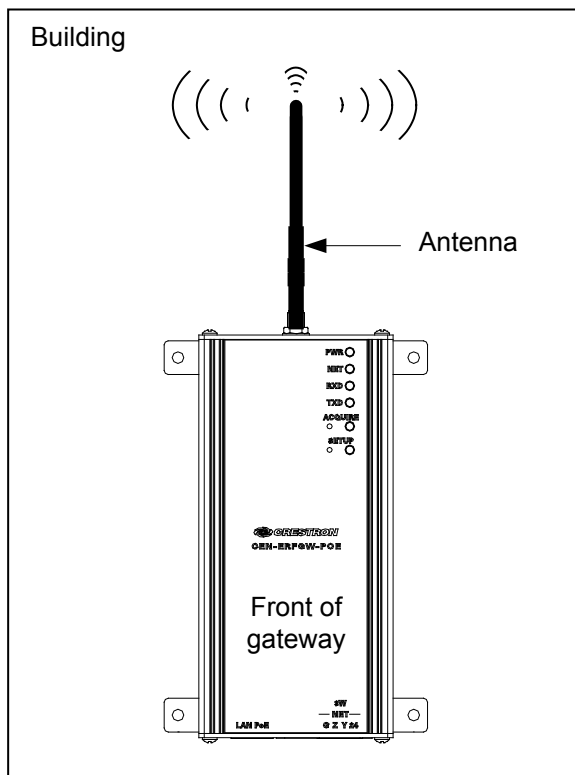
Never point the antenna downward as this decreases range and reliability. Refer to illustrations on the following pages for examples of the different antenna orientations.

NOTE: RF propagation is best from the sides of the antenna.

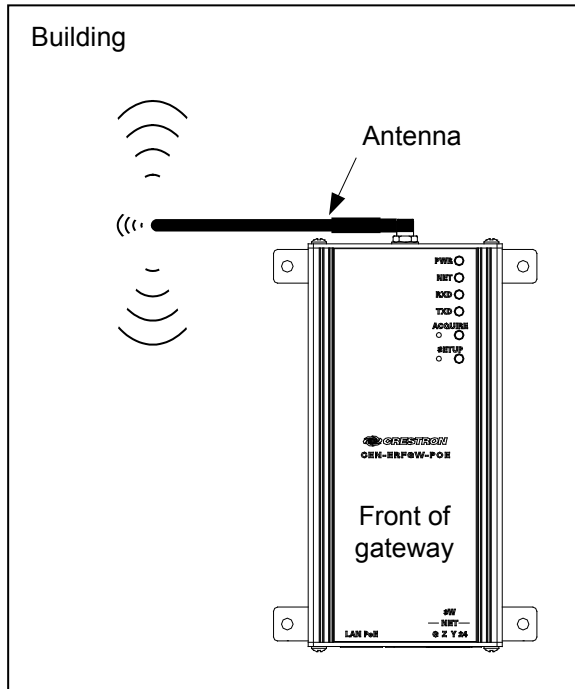
Horizontal Orientation



Vertical Orientation



Right Angle Orientation



This page is intentionally left blank.



Crestron Electronics, Inc.
15 Volvo Drive Rockleigh, NJ 07647
Tel: 888.CRESTRON
Fax: 201.767.7576
www.crestron.com



Configuration Guide – DOC. 7383C
(2034455)

06.13

Specifications subject to
change without notice.