Crestron **TPS-XTXRF**
Two-Way RF Transceiver Module
Operations & Installation Guide

CRESTRON

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Contents

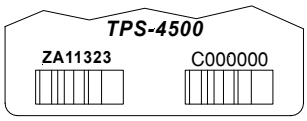
Two-Way RF Transceiver Module: TPS-XTXRF

Description

Functional Description

The TPS-XTXRF Two-Way radio frequency (RF) Transceiver Module is an optional feature designed for use with certain Crestron Isys™ tilt touchpanels (TPS-5000, TPS-6000, and TPS-4500 – refer to note on this page for this unit). Equipped with the TPS-XTXRF, the touchpanel is converted to an RF two-way wireless transceiver that communicates through an RF gateway/transceiver, TPS-RFGWX (sold separately) to the Crestron remote control system (herein referred to as the Cresnet system). The two-way communications provide the control of Crestron-controlled devices and provide dynamic onscreen feedback for real-time confirmation of commands. Up to 15 touchpanels can communicate with one TPS-RFGWX. The RF signals can travel from a minimum of three feet up to a maximum of 150 feet. The location and the antenna position of the TPS-RFGWX are important factors in the RF performance. The range of the touchpanel is also dependent on its placement and the construction of the building in which it is used.

Crestron Identification Label



NOTE: The TPS-XTXRF can be installed onto most TPS-4500 tilt touchpanels. There is one version that cannot accept the two-way RF transceiver module. Refer to the barcode label on the underside of the touchpanel base for identification. TPS-4500 tilt touchpanels marked with number **ZA11323** in the lower-left section of the label are not compatible with the TPS-XTXRF.

Functional Summary

- Converts an Isys tilt touchpanel to an RF two-way wireless transceiver
- RF range is 3 to 150 feet depending on location and the surroundings
- Up to 15 RF-enabled touchpanels can communicate with a single TPS-RFGWX
- Maintains sleek, ergonomic design and unique configuration capabilities of the Isys panel (i.e., video, graphics, and Ethernet)

Included with the TPS-XTXRF are a Crestron TPS-XBTP Battery Pack and a TPS-XDS Docking Station. The TPS-XDS provides operating power for the docked RF-enabled touchpanel and charges the TPS-XBTP when the battery pack is installed in the touchpanel. An external power pack PW-2420RU is also supplied to power the docking station/touchpanel and simultaneously charge the TPS-XBTP. Refer to the table after this paragraph for the documentation supplied with these items.

Related Documentation

ITEM	NOMENCLATURE	DOCUMENT NUMBER *
Battery Pack	TPS-XBTP	5845
Docking Station	TPS-XDS	5846
External Power Pack	PW-2420RU	5892
Battery Pack Charger	TPS-XBC	6017

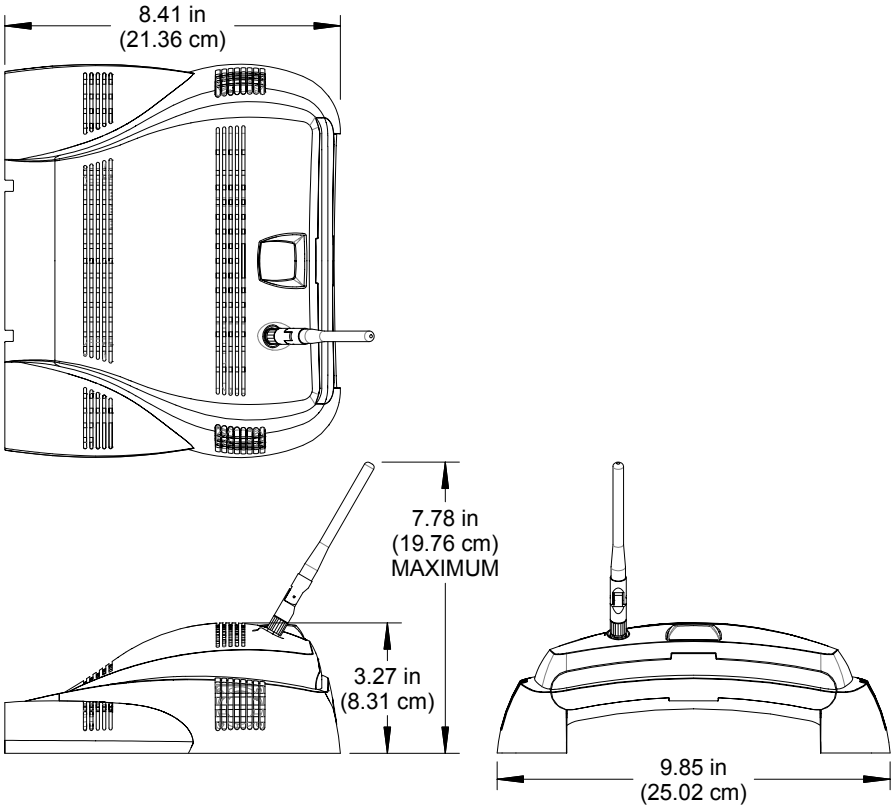
* The latest revision may have a revision letter after the document number (i.e., 5845A).

The latest versions of the guides can be obtained from the Downloads | Product Manuals section of the Crestron website (www.crestron.com).

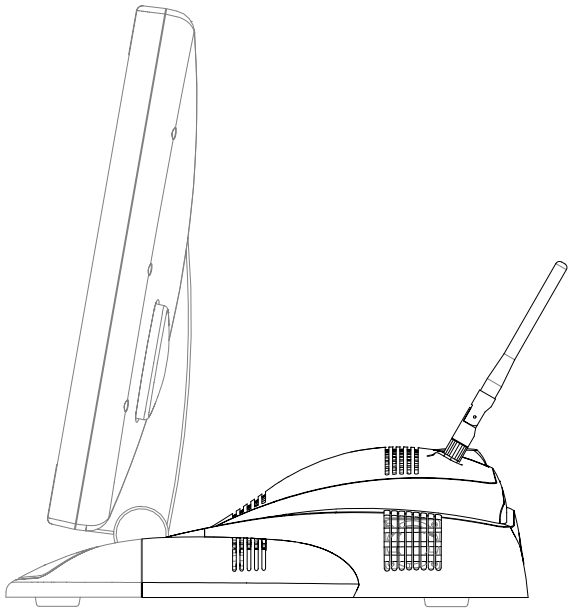
Physical Description

The TPS-XTXRF, shown below, is housed in a black plastic enclosure. It replaces the original touchpanel base cover on the panel enclosure.

TPS-XTXRF Physical Views



TPS-XTXRF Installed on Touchpanel (Side View)



Leading Specifications

The table below and continued on the next two pages provides a summary of leading specifications for the TPS-XTXRF.

Leading Specifications of the TPS- XTXRF

SPECIFICATION	DETAILS
Compatible Touchpanels	Use with TPS-4500 (except ZA11323), TPS-5000, and TPS-6000
Power Requirements	TPS-XBTP battery pack[1]
RF Transmitting Power	100 mW
Communications	Bidirectional Spread Spectrum 2.4 GHz (2400 to 2483 MHz)

1 The ability of a TPS-XBTP to charge and hold a charge depends on a number of variables such as which Isys panel is used and the number of expansion cards installed in the touchpanel. The data provided here are worst and best-case scenarios to provide an idea of what can be expected.

Charge Time (worst case): 12 hours for the TPS-6000 (all three cards installed)
Charge Time (best case): 3.5 hours for all units (power is off)
Battery Life (worst case): 2 hours (full brightness) for the TPS-6000 (all 3 cards installed)
Battery Life (best case): 3.5 hours (full brightness) for the TPS-4500 (no cards installed)

In conclusion, the best condition for charging a battery is with the panel powered down. Furthermore, the optimum operating conditions for extending battery charge requires that the brightness be kept to a minimum, minimizing the standby and power down timeouts, and avoid overheating/freezing.

Leading Specifications of the TPS- XTXRF (continued)

SPECIFICATION	DETAILS
Operating Ranges (line of sight)	
Minimum Distance	3 ft [2]
Maximum Distance Indoor	150 ft [2]
Maximum Distance Outdoor	1000 ft
Operating Temperature	Approximately +32° to +104°F (0° to 40°C)
Charging Temperature	Approximately +50° to +95°F (10° to 35°C)
Storage Temperature	Approximately -4° to +113°F (-20° to 45°C)
SIMPL™ Windows®	Version 2.00.28 or later [3]
Crestron Database	Version 15.7.3 or later [3]
Isys™ Touchpanel Firmware	Version 1.012.0 or later [4 & 5]
2-Series Control System Update File [6]	Version C2-1008.CUZ or later [7 & 8]

2 The location of the TPS-RFGWX and the orientation of the antenna are important factors in the RF performance. With the unit located outside of any metal enclosures, the antenna is adjusted to achieve the best range. The range is dependent on its placement and the building in which it is used. The construction of the building, obstructions and RF interference from other devices are factors determining the effective range of the unit. To prevent unit-to-unit RF interference, multiple gateway/transceivers operating at the same frequencies (TPS-RFGWXs and/or Crestron CNRFGWXs) should not be installed within 3-5 feet of each other.

NOTE: Implementing multiple gateways (TPS-RFGWXs) to extend the range is not permitted (i.e., no roaming).

3 The latest software version can be obtained from the Downloads | Software Updates section of the Crestron website (www.crestron.com). Refer to NOTE after last footnote on page 5.

4 The TPS-RFGWX and touchpanels with later versions of firmware may include features not mentioned in this guide. Newer versions of this guide can be obtained from the Downloads | Product Manuals section of the Crestron website (www.crestron.com).

5 The firmware upgrade files can be obtained from the Downloads | Software Updates section of the Crestron website. Refer to NOTE after last footnote on page 5. Crestron recommends that the latest firmware be loaded into the TPS-RFGWX and associated touchpanel(s). When the firmware is upgraded, the touchpanel(s) firmware must be upgraded at the same time.

6 Crestron 2-Series control systems consist of the AV2, AV2 with Card Cage, CP2, CP2E, PAC2, PRO2, and RACK2

7 Filenames for 2-Series control system update files have a CUZ extension and can be obtained from the Downloads | Software Updates section of the Crestron website (www.crestron.com). New users are required to register in order to obtain access to the FTP site.

8 When loading VT Pro-e files or firmware through the RS-232 port of the control system, be sure that the baud rate is 57600 or lower. Otherwise, the Viewport may post the "Transfer Failed" message. Higher baud rates (i.e., 115,000) can be selected, but hardware handshaking (RTS/CTS) must be used.

Leading Specifications of the TPS- XTXRF (continued)

SPECIFICATION	DETAILS
CNMSX-AV/Pro Update File	Version 51020X.UPZ or later [8 & 9]
CNRACKX/-DP Update File	Version 51020W.UPZ or later [8 & 9]
CEN/CN-TVAV Update File	Version 51205V.UPZ or later [8 & 9]
ST-CP Update File	Version 40104S.UPZ or later [9 & 10]
Weight of TPS-XTXRF (no touchpanel)	Weight: 15.40 oz (0.44 kg) [11]

9 CNX update files are required for either CNMSX-AV/Pro or CNRACKX/-DP. Filenames for CNX update files have a UPZ extension and SmarTouch files are in one EXE or zipped UPZ file. All can be obtained from the Downloads | Software Updates section of the Crestron website. Refer to NOTE after last footnote.

10 Currently, the ST-CP does not support loading of firmware or VT Pro-e files to the TPS-series panels through the RS-232 port of the control system.
Until there is a new ST-CP firmware release, these files can be loaded to the touchpanel by either using the RS-232 port on the touchpanel or using Ethernet direct to the panel (assuming the TPS-ENET is installed).

11 The weight listed DOES NOT include the TPS-XBTP Battery Pack, which weighs 2.2 lbs. (1.0 kg).

NOTE: Crestron software and any files on the FTP site are for Authorized Crestron dealers only. New users may be required to register in order to obtain access to certain areas of the FTP site.

NOTE: Equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

As of the date of manufacture, the unit has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling (N11785).

Installation

The only tools required for installation of the TPS-XTXRF onto an Isys™ tilt touchpanel are a #1 Phillips screwdriver and a grounding strap (or grounded workstation).

CAUTION: The TPS-XTXRF and the touchpanel contain ESD sensitive devices. Perform the following procedure while wearing a grounding strap that is properly grounded or on a grounded work station to avoid damaging the card and/or the touchpanel.

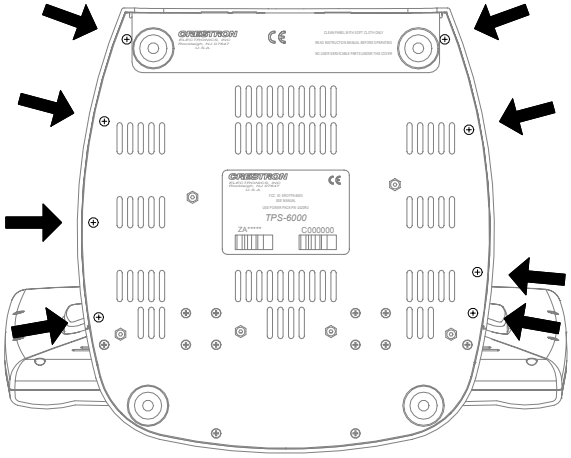
NOTE: If the angle of the touchscreen needs to be adjusted, consult latest revision of the appropriate Isys™ tilt touchpanel operations guide for instructions of how to use the touchpanel position lock buttons. The latest version of the operations guide can be obtained from the Downloads | Product Manuals section of the Crestron website (www.crestron.com).

NOTE: The diagrams in this procedure show a TPS-6000 but the steps for installation of the previously listed TPS touchpanels are identical.

NOTE: If the TPS touchpanel is equipped with an optional TPS-XVGA or TPS-XVGA-BV expansion card, temporarily removing the card makes installation of the TPS-XTXRF cable connectors easier. However, re-installation of the card requires a #1 Phillips screwdriver (1.5" length).

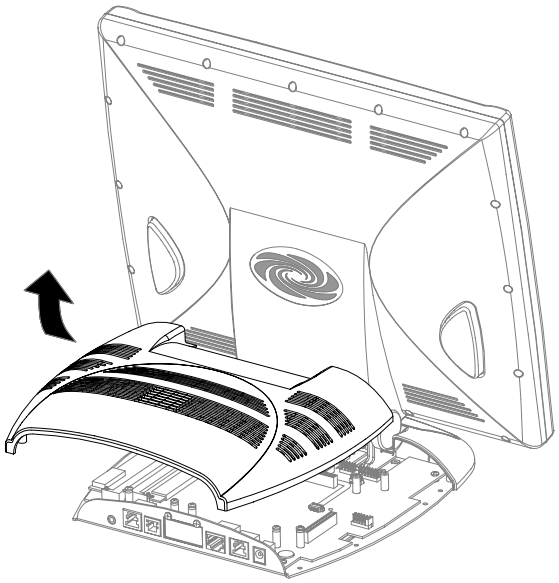
1. If the optional external power pack is utilized with the touchpanel, disconnect the power pack from the 24VDC 2.0A port on the rear of the touchpanel base.
2. Label and disconnect any cables attached to the ports on the rear of the touchpanel base.
3. If necessary, use the touchpanel position lock buttons to adjust the touchscreen to the maximum (most vertical/upright) angle.
4. To prevent scratching of the screen, place the touchpanel face-down onto a padded surface.
5. To prevent the touchpanel base cover from falling when the screws are removed, hold the cover in place by hand.
6. Refer to the diagram on the next page. Using a #1 Phillips screwdriver, loosen, remove and retain the **eight** screws that secure the touchpanel base cover.

Installation Diagram 1 of 12 - Remove Touchpanel Base Cover Screws



7. Place the touchpanel upright on the work surface.
8. As shown below, remove the touchpanel base cover by raising it upwards and rearward.

Installation Diagram 2 of 12 - Remove Touchpanel Base Cover



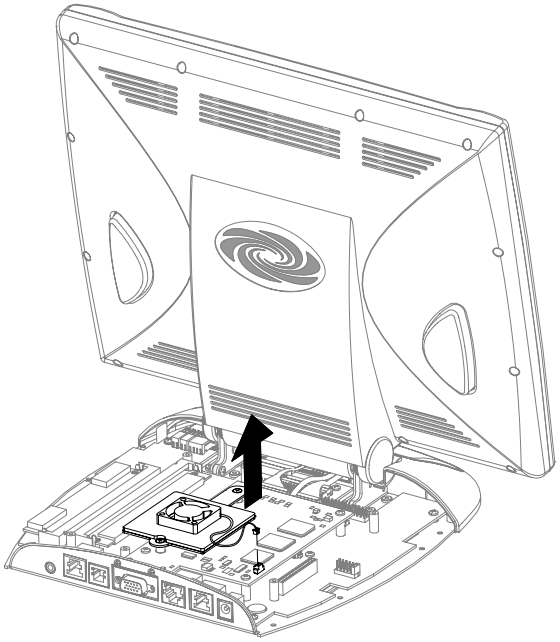
NOTE: If the TPS touchpanel is equipped with an optional TPS-XVGA or TPS-XVGA-BV expansion card, the fan assembly on the card must be removed because it interferes with the placement of the TPS-XTXRF. Removal will not introduce cooling problems because the TPS-XTXRF has fans for adequate air circulation. Therefore, there is no need to re-install the fan. Continue to the next step.

If a TPS-XVGA or TPS-XVGA-BV **IS NOT** installed, proceed to step **11** of this procedure.

9. Refer to the diagram below. At the TPS-XVGA or TPS-XVGA-BV, disconnect the fan electrical connector from the PCB connector of the card.

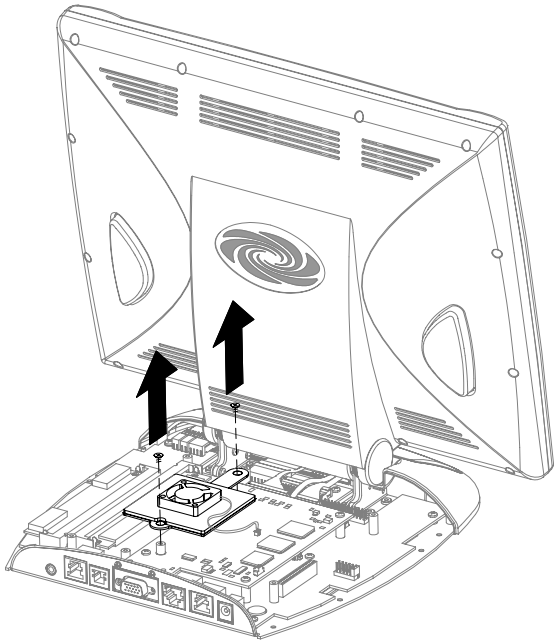
CAUTION: An early generation the TPS-XVGA or TPS-XVGA-BV did not have a connector between the fan assembly and the card. If a connector is not present, the fan electrical wires must be cut flush to the PCB to avoid introducing a short, which can damage the unit.

Installation Diagram 3 of 12 - Remove Fan Assembly Electrical Connector



10. Refer to the diagram on the next page. Using a #1 Phillips screwdriver, loosen and remove the **two** screws that secure the fan assembly (fan on metal plate) to the TPS-XVGA or TPS-XVGA-BV. Remove the fan assembly from the card.

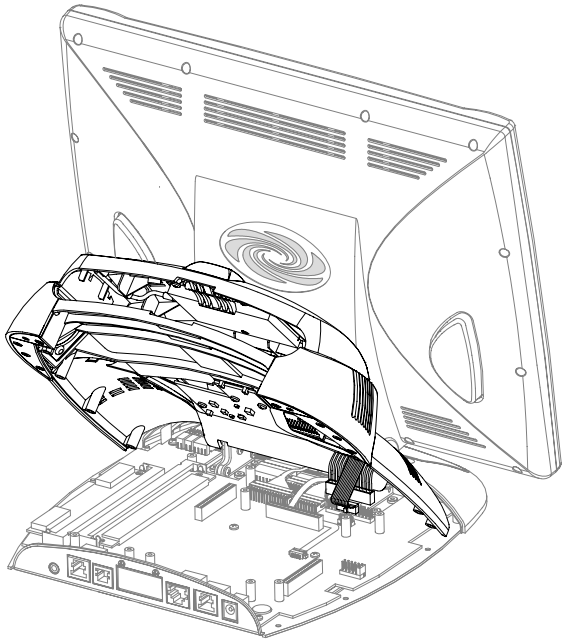
Installation Diagram 4 of 12 - Remove Mounting Screws & Fan Assembly



NOTE: If the TPS touchpanel is equipped with an optional TPS-XVGA or TPS-XVGA-BV expansion card, temporarily removing the card makes installation of the TPS-XTXRF cable connectors easier. However, re-installation of the card requires a #1 Phillips screwdriver (1.5" length).

11. Refer to the diagram below. Position the TPS-XTXRF onto the touchpanel as shown.

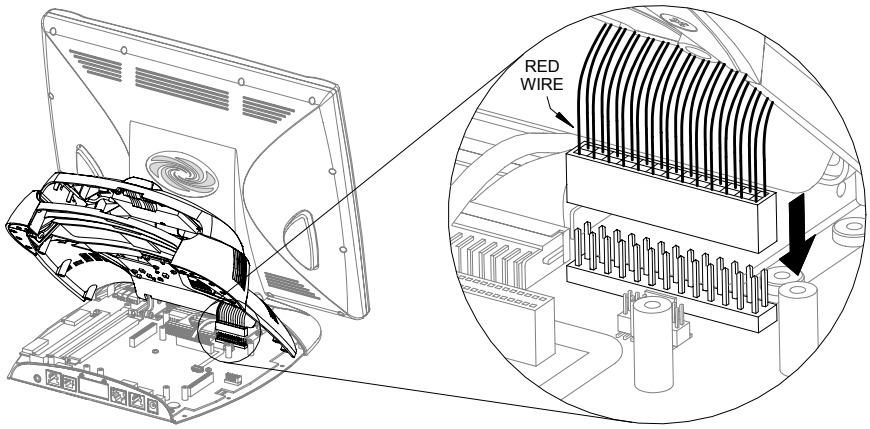
Installation Diagram 5 of 12 - Position TPS-XTXRF onto Touchpanel



12. Refer to the diagram below. Making sure that the **RED** wire at one end of the large TPS-XTXRF connector faces in toward the center of the unit, attach the TPS-XTXRF **large** connector to **P11** (connector on the touchpanel) so that all pins mate.

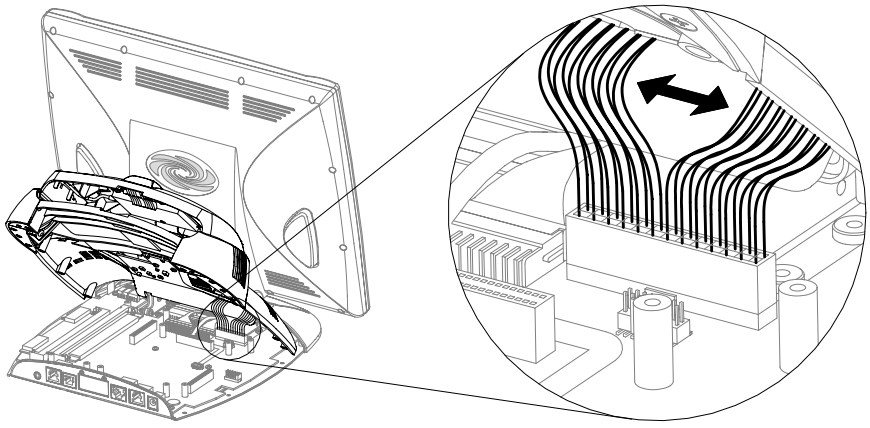
CAUTION: The touchpanel can be damaged when power is applied, if the large TPS-XTXRF connector is mated incorrectly (any pin is exposed).

Installation Diagram 6 of 12 - Attach Large TPS-XTXRF Connector



13. Refer to the diagram below. To make final installation easier, spread the wires of the large connector slightly apart.

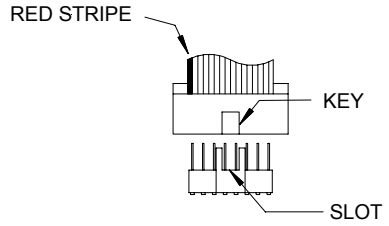
Installation Diagram 7 of 12 - Spread Large Connector Wires



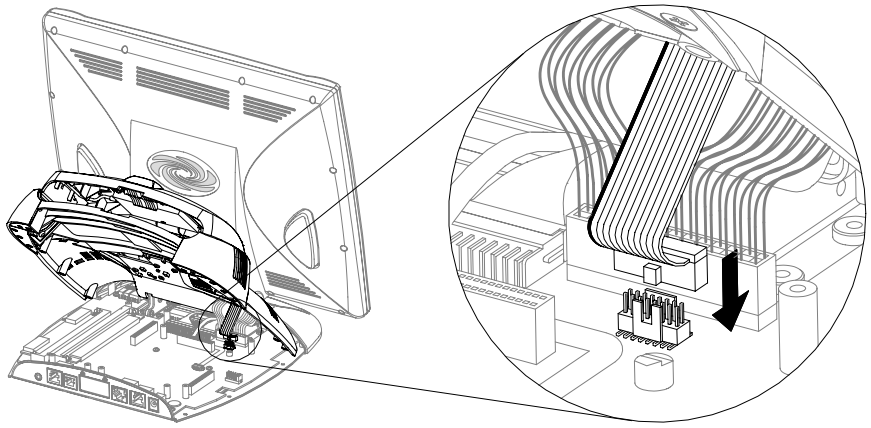
14. Refer to two diagrams on the next page. Making sure that the **RED STRIPE** end of the ribbon cable faces in toward the center of the unit, attach the TPS-XTXRF **ribbon cable** connector to **P8** (connector on the touchpanel).

NOTE: The TPS-XTXRF ribbon cable connector has a key to ensure a proper fit with the small connector of the touchpanel. When installing the ribbon cable connector, verify that the key slides into the slot of the mating connector.

Installation Diagram 8 of 12 - TPS-XTXRF Ribbon Cable Connector Detail



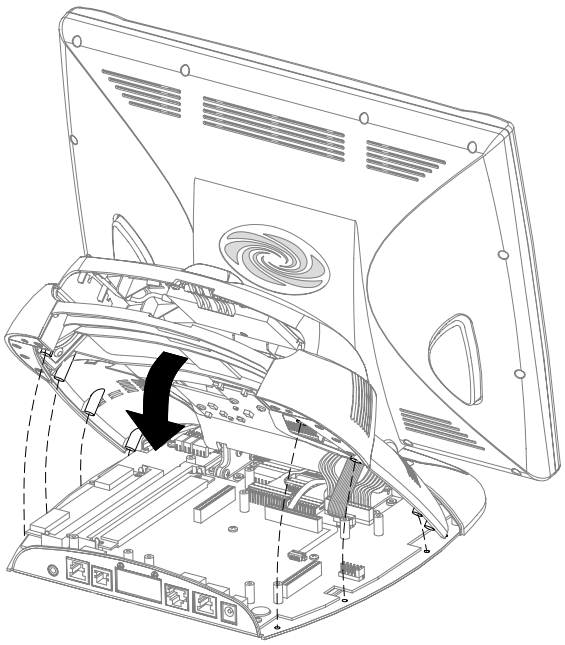
Installation Diagram 9 of 12 - Attach TPS-XTXRF Ribbon Cable Connector



NOTE: If an optional TPS-XVGA or TPS-XVGA-BV expansion card was temporarily removed to make installation of the TPS-XTXRF cable connectors easier, re-install the card. Tighten the card mounting screws to **finger-tight** then using a #1 Phillips screwdriver (1.5" length), tighten an additional **1/8-turn**.

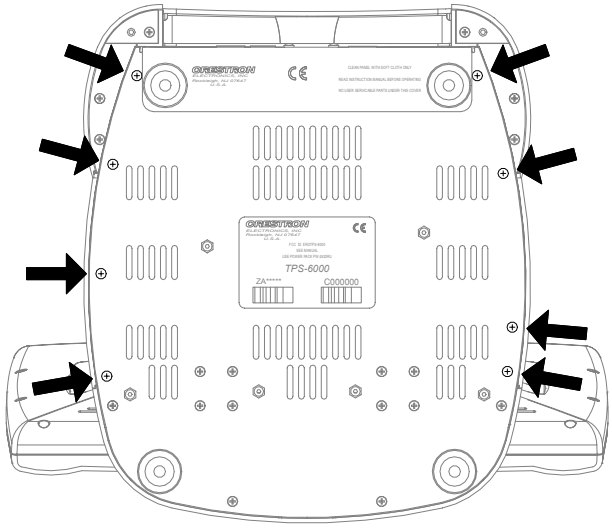
15. Refer to the diagram on the next page. Align the TPS-XTXRF threaded screw inserts with the holes of the touchpanel base plate and lower the TPS-XTXRF onto the touchpanel base.

Installation Diagram 10 of 12 - Lower TPS-XTXRF onto Touchpanel Base



16. Hold the TPS-XTXRF in place and position the touchpanel face-down onto a padded surface to prevent scratching of the screen.
17. Refer to the diagram below. Re-install the **eight** base cover screws to **finger-tight** then, using a #1 Phillips screwdriver, tighten an additional **1/8-turn**.

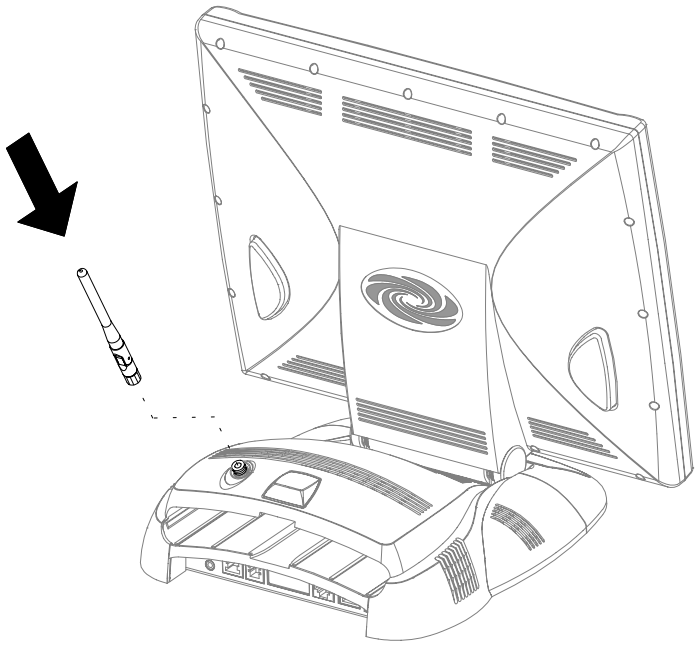
Installation Diagram 11 of 12 - Install TPS-XTXRF Mounting Screws



18. Place the touchpanel upright on the work surface.

19. Refer to the diagram below. By hand, thread the antenna onto the antenna mounting post to **finger-tight**.

Installation Diagram 12 of 12 - Install Antenna



20. Apply power to the touchpanel.

    There are four ways to operate the TPS-XTXRF equipped touchpanel. First, a charged TPS-XBTP Battery Pack can be installed into the touchpanel directly. Secondly, the TPS-XTXRF equipped touchpanel can be properly positioned on the TPS-XDS Docking Station with or without a TPS-XBTP installed. The touchpanel can also be powered directly via the PW-2420RU (without a docking station). Finally, the unit can be powered via a Cresnet connection. However, keep in mind that a Cresnet connection disables the RF communication capabilities of the unit; the panel continues to operate as a wired touchpanel if it is correctly defined in the SIMPL program. Power must be re-applied using one of the first three mentioned methods to take advantage of RF communication.

NOTE: For further information about the TPS-XBTP and TPS-XDS, consult their Operations Guide (Doc. 5845 and 5846, respectively). The latest versions of the guides can be obtained from the Downloads | Product Manuals section of the Crestron website (www.crestron.com).

Setup

Programming with SIMPL Windows

SIMPL (Symbol Intensive Master Programming Language) is an easy-to-use programming language that is completely integrated and compatible with all Crestron system hardware. The objects that are used in SIMPL are called symbols. SIMPL Windows offers drag and drop functionality in a familiar Windows® environment.

SIMPL Windows is Crestron's software for programming Crestron control systems. It provides a well-designed graphical environment with a number of workspaces (i.e., windows) in which a programmer can select, configure, program, test, and monitor a Crestron control system.

The next two sections describe a TPS-XTXRF within SIMPL Windows. The first section provides initial configuration information and the second section provides the location of example programs.

NOTE: The following descriptions assume that the reader has knowledge of SIMPL Windows. If not, refer to the extensive help information provided with the software.

NOTE: To minimize system diagnostics and troubleshooting, Crestron recommends defining the touchpanel as a wired unit in SIMPL Windows, then test functionality as a wired network device prior to testing the TPS-XTXRF transceiver operations. This will help in determining whether there is a programming problem, RF setting conflict or RF interference in the environment.

Configure TPS-XTXRF Equipped Touchpanel

To create a program with a TPS-XTXRF, refer to the table below for initial configuration information.

Configure TPS-XTXRF Program

SYMBOL FOLDER	SYMBOL REQUIRED	DROP WHERE	ADDITIONAL SETUP
Device Library, **Control Systems**	Desired control system	System Views	Refer to the documentation supplied with the specific control system for additional setup information.
Device Library, Wireless Receivers, **Wireless Receivers (RF)**	TPS-RFGWX	System Views, Cresnet Units	CHANGE NET ID (OPTIONAL) - Double-click on TPS-RFGWX (or single-click then right mouse-click). Select Configure. Select NET ID then select desired hexadecimal ID.
Device Library, Touchpanels, **Touchpanels (Wireless Two-Way)**	TPS-4500 w/ TPS-XTXRF, TPS-5000 w/ TPS-XTXRF, or TPS-6000 w/ TPS-XTXRF.	System Views, TPS-RFGWX	CHANGE RF ID (OPTIONAL) - Single-click on TPS-RFGWX. In the System Views Detail Window, double-click (or single-click then right mouse-click, select Configure) on name of touch-panel in TPSRF Address text window. Select Configure. Select RF ID then select desired hexadecimal ID.

NOTE: Commenting out the Cresnet ID of the RF receiver in the SIMPL Windows program will allow only Cresnet (wired touchpanel) use of the TPS-XTXRF equipped touchpanel.

To configure a TPS-RFGWX Two-Way RF Transceiver (sold separately), refer to the latest revision of the TPS-RFGWX Operations & Installation Guide (Doc. 5847). This document can be obtained from the Downloads | Product Manuals section of the Crestron website (www.crestron.com).

Example Program

The TPS-XTXRF equipped touchpanel communicates to a TPS-RFGWX Two-Way RF Transceiver (sold separately) that resides on the Cresnet system. The TPS-XTXRF equipped touchpanel and TPS-RFGWX may be programmed similar to (operating frequencies are not compatible) the STRFGWX Two-Way RF Transceiver and STX-1550C two-way wireless RF touchpanel. For an example program, refer to the program for the STX-1550C which is available from the Crestron FTP site (www.ftp.crestron.com). Select the Examples folder and search for STX1550C_*.SMW.

Configuring the Touchpanel for Operation

The touchpanel with the TPS-XTXRF installed can operate as a Cresnet or RF device. The operation of the touchpanel is determined by the attachment of the NET/VIDEO cable to the touchpanel. To use the touchpanel as a Cresnet wired unit, connect the NET/VIDEO cable to the NET/VIDEO port of the touchpanel. To use the touchpanel as an RF unit, disconnect the cable from the touchpanel. In summary, the RF-enabled touchpanel can only operate in one mode of operation at a time and the mode is determined by whether a connection is made at the NET/VIDEO port.

NOTE: If the intent is to use the touchpanel in both modes, Crestron recommends that the programmer does not comment out the Cresnet ID of the touchpanel in the SIMPL Windows program. If the ID is commented out, the touchpanel will cease to operate when the NET/VIDEO cable is connected. Operation can resume when all power is disconnected and re-applied.

To configure the unit, it may be necessary to access a series of setup screens prior to viewing run-time screens that are loaded into the touchpanel for normal Cresnet or RF operation. The next two sections provide details regarding configuration of the touchpanel for both modes of operation.

Cresnet Configuration

For configuration of the touchpanel with respect to Cresnet mode of operation, consult the appropriate Isys™ tilt touchpanel operations guide. This document can be obtained from the Downloads | Product Manuals section of the Crestron website (www.crestron.com). It provides details about setting the Cresnet ID of the touchpanel as well as setting up the touchpanel for Ethernet or RS-232 communication, displaying computer-generated video format (RGB) and video from up to two different sources, adjusting audio controls, and selecting personal setting for screen brightness and timeouts.

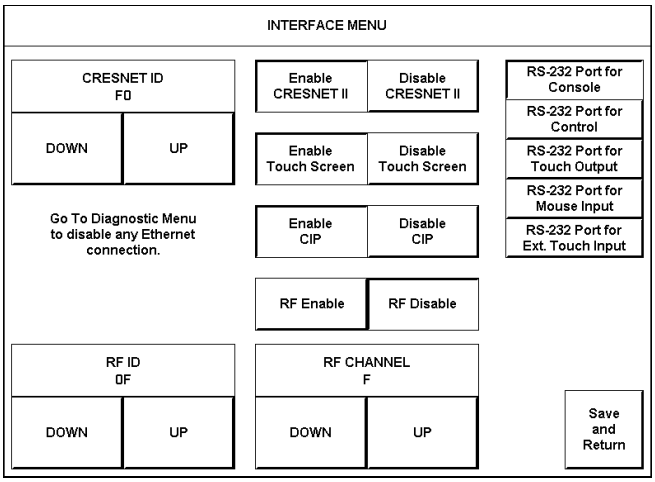
RF Configuration

Crestron Isys™ tilt touchpanel are default configured for Cresnet (wired) operation. To configure the TPS-XTXRF equipped touchpanel for RF communication, it is necessary to access a series of setup screens on the touchpanel.

NOTE: For additional touchpanel configuration information, consult the appropriate Isys™ tilt touchpanel operations guide. This document can be obtained from the Downloads | Product Manuals section of the Crestron website (www.crestron.com).

1. The Main Menu for configuring the touchpanel appears when a finger is held to the touchscreen as power is applied. Remove your finger after approximately 3 to 5 seconds when the message "SETUP MODE" appears on the touchscreen.
2. On Main Menu screen, select the **Setup** button.
3. On Setup Menu, select the **Interface** button.
4. Refer to the diagram below for the next four steps.

Interface Menu



5. On Interface Menu, select the **RF Enable** button.

NOTE: To ensure communication between the TPS-RFGWX and RF-enabled touchpanel, distinct types of identification codes are required. . For additional RF ID and RF CHANNEL information, consult the TPS-RFGWX Operations & Installation Guide (Doc. 5847). This document can be obtained from the Downloads | Product Manuals section of the Crestron website (www.crestron.com).

NOTE: An error occurs if two or more RF-enabled panels share the same RF ID. The first panel with the shared RF ID to successfully transmit to the TPS-RFGWX maintains communication, but locks out the other panels.

6. The RF ID is important because it allows a number (up to 15) of touchpanels to communicate to a Cresnet system/SIMPL program via one TPS-RFGWX. If more than 15 touchpanels are required within the system, additional TPS-RFGWXs with a different RF ID must be added. These codes, which range from 01 to 0F are selected from this menu and must match the ID assigned via Crestron software. Press RF

ID **DOWN** or **UP** button to select the RF ID that was assigned to the touchpanel in "Programming with SIMPL Windows".

7. The RF CHANNEL is important because it allows the radio in a touchpanel to communicate with the radio in the TPS-RFGWX. If the RF CHANNELs match, the RF-enabled panel can communicate to the system via the pre-defined frequency channel. These codes, which range from 0 to F are selected from this menu and must match the ID assigned via Crestron software. Press RF CHANNEL **DOWN** or **UP** button to set the RF CHANNEL. The RF CHANNEL must match the RF CHANNEL of the TPS-RFGWX that was assigned with Viewport.
8. Select the **Save and Return** button to return to Main Menu.
9. On Main Menu, select the **Exit and Run Program** button.

VT Pro-e Analog Join Number

A join number is a feature of the VT Pro-e that enables a designer to create a button, slider or gauge on a touchpanel page that completes a predetermined function. For the TPS-XTXRF equipped touchpanel, analog join number **17507** may be used for a TPS-BTP battery gauge. There is also another analog join number **17514** that is used to determine the state of the battery pack. The response is a number that ranges from 0 to 4 and each value is defined as follows.

- **0 – Battery Not Installed:**
  Battery is not installed or seated properly.
- **1 – Battery Discharging**
  Battery is detected, but no charging action is being taken. Battery powers the RF-enabled panel while battery is discharging.
- **2 – Battery Charging:**
  Battery is fast charging at the maximum possible current (up to approximately 1.5 A).
- **3 – Battery Full**
  Battery has finished charging.
- **4 –Battery Slow Charging**
  Battery is charging in slow charging mode.

NOTE: Upon power up, the battery level and battery state gauges that utilize these analog join numbers may take up to one minute to update.

Operation

A TPS-XTXRF equipped touchpanel operates the same as a Cresnet (wired) touchpanel but with the following considerations.

WARNING: To avoid shock hazard and possible damage to the unit, do not use touchpanel in rain or expose it to unnecessary moisture.

CAUTION: The fans located within the sides of the TPS-XTXRF Module provide cooling air for the touchpanel. To prevent excessive internal temperature when operating the touchpanel, do not cover the side fan intakes.

NOTE: Once configured for Cresnet and RF operation, the function of the touchpanel is determined by the attachment of the NET/VIDEO cable to the touchpanel. To use the touchpanel as a Cresnet wired unit, connect the NET/VIDEO cable to the NET/VIDEO port of the touchpanel. To use the touchpanel as an RF unit, disconnect the cable from the touchpanel.

NOTE: Touchpanel wake-up from standby mode may take 2-5 seconds. This slight delay allows the radio transceivers to communicate and enables the program to update.

Problem Solving

Troubleshooting

The table below provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

NOTE: To minimize system diagnostics and troubleshooting, Crestron recommends defining the touchpanel as a wired unit in SIMPL Windows, then test functionality as a wired network device prior to testing the TPS-XTXRF transceiver operations. This will help in determining whether there is a programming problem, RF setting conflict or RF interference in the environment.

TPS-XTXRF Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Touchpanel(s) does not communicate with control system.[1]	TPS-XBTP battery pack has low charge.	Position the touchpanel onto the TPS-XDS docking station to charge the TPS-XBTP battery pack or to "hot swap" battery pack.
	Touchpanel is out of range.	Position the touchpanel to within operating range or relocate TPS-RFGWX. Refer to "Leading Specifications" on page 3 for details.
	Touchpanel is set to wrong RF Channel.	Refer to the "Setup" section of this guide to verify that touchpanel RF Channel is set to match the TPS-RFGWX RF Channel.
	Touchpanel RF ID does not match the RF ID of the SIMPL program.	Verify that the RF ID for the touchpanel then refer to the "Setup" section of this guide to set the touchpanel RF ID to match RF ID in SIMPL program.
	Problem with TPS-RFGWX.	Refer to the "Troubleshooting" section of the Operations & Installation Guide for the TPS-RFGWX.[2]

1 To determine a possible cause, verify that the SIG LED on the TPS-RFGWX illuminates when a button is pressed on the touchscreen. Illumination indicates a power or range related problem. No illumination indicates a programming related problem. If there are multiple RF-enabled toucpanels in the system, each one must be tested separately.

TPS-XTXRF Troubleshooting (continued)

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Intermittent response from TPS-RFGWX during communication with touchpanel.	TPS-XBTP battery pack has low charge.	Position the touchpanel onto the TPS-XDS docking station to charge the TPS-XBTP battery pack or to "hot swap" battery pack.
	Touchpanel is in vicinity of metal.	Verify that large amount of metal is not in vicinity of transmission.
	Touchpanel is too close to TPS-RFGWX.	Position the touchpanel to within operating range. Refer to "Leading Specifications" on page 3 for details.
Multiple touchpanels only operate one at a time. [3]	Multiple touchpanels are set to same RF Channel RF ID.	Refer to the "Setup" section of this guide to verify that touchpanel RF Channel is set to match the TPS-RFGWX RF Channel.
RF-enabled touchpanel 'locks up' or displays a black or white screen.	Various.	Disconnect all power sources and remove battery. Reapply power.

2 The latest revision of the Operations & Installation Guide for the TPS-RFGWX Two-Way RF Transceiver (Doc. 5847) can be obtained from the Downloads | Product Manuals section of the Crestron website (www.crestron.com).

3 Additional symptoms of multiple touchpanels with the same RF Channel & RF ID would be the first touchpanel to transmit & receive is functional. The second or subsequent touchpanel(s) will not function unless the first touchpanel is out of operating range or powered-down.

Further Inquiries

If after reviewing this Operations & Installation Guide, you cannot locate specific information or have questions, please take advantage of Crestron's award winning customer service team by calling:

- In the US and Canada, call Crestron's corporate headquarters at 1-888-CRESTRON [1-888-273-7876] or 1-201-767-3400.
- In Europe, call Crestron International at +32-15-50-99-50.
- In Asia, call Crestron Asia at +852-2341-2016.
- In Latin America, call Crestron Latin America at +5255-5093-2160.
- In Australia and New Zealand, call Crestron Pacific at +613-9480-2999.

Future Updates

As Crestron improves functions, adds new features, and extends the capabilities of the TPS-XTXRF, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

The Downloads section of the Crestron website (www.crestron.com) directs the reader to the location and description of each update. Check the site periodically for update availability and its subjective value.

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