Crestron **TPS-XBTP**
Battery Pack for TPS-XTXRF
Operations & Installation Guide

CRESTRON®

This document was prepared and written by the Technical Documentation department at:

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Battery Pack for TPS-XTXRF: TPS-XBTP

Description

Functional Description

The TPS-XBTP Battery Pack for TPS-XTXRF supplies operating power to a Crestron Isys® tilt touchpanel equipped with the optional TPS-XTXRF Two-Way Radio Frequency (RF) Transceiver Module. Installation of the module and battery pack into the touchpanel offers freedom to roam without being confined to a stationary power source. The TPS-XBTP can be charged when it is mounted on the TPS-XBC battery charger or installed in a TPS-XTXRF equipped touchpanel that is docked to the TPS-XDS docking station.

NOTE: An external power pack or Cresnet® power connected directly to the TPS-XTXRF equipped touchpanel does NOT charge the TPS-XBTP.
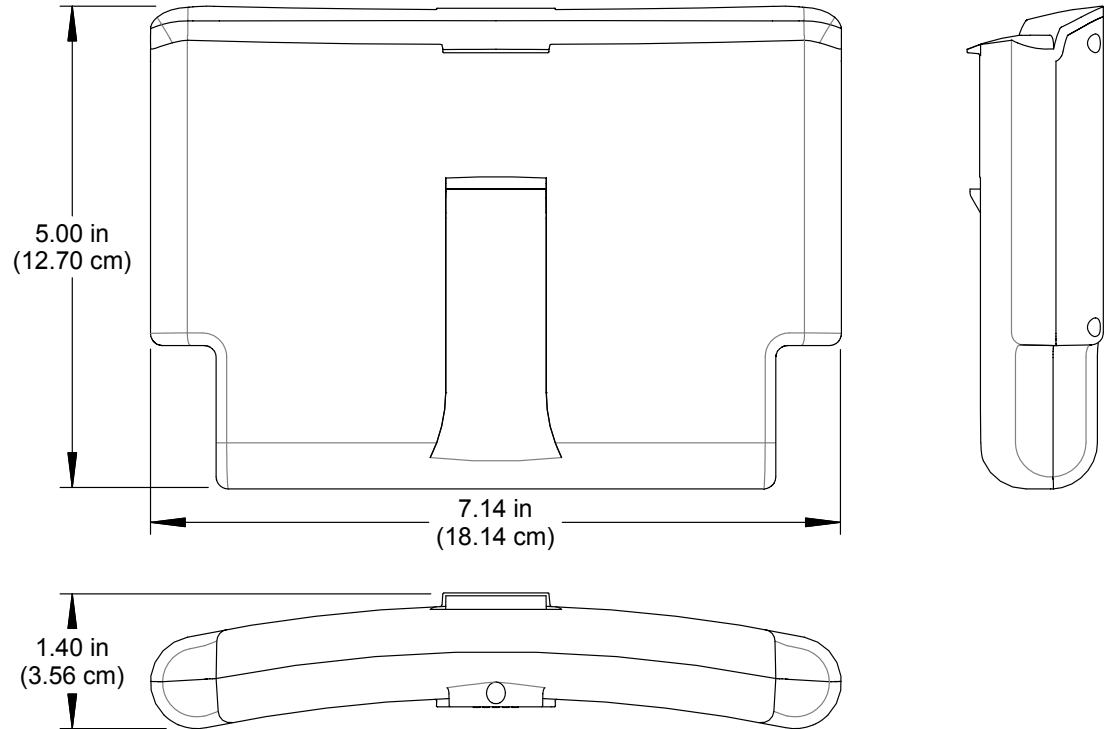
NOTE: For related information, consult the TPS-XBC (Doc. 6017) and TPS-XDS (Doc. 5846) Operations Guides. The latest versions of the guides can be obtained from the Downloads | Product Manuals section of the Crestron website (**www.crestron.com**).

NOTE: Throughout this operations guide, an Isys tilt touchpanel equipped with the optional TPS-XTXRF Two-Way RF Transceiver Module is referred to as "touchpanel" except where noted. For related information, consult the TPS-XTXRF Operations & Installation Guide (Doc. 5844). The latest versions of the guides are available from the Downloads | Product Manuals section of the Crestron® website (**www.crestron.com**).

Physical Description

The TPS-XBTP is housed in a black enclosure with its electrical contacts located on the bottom (see views below).

TPS-XBTP Top, Side & Rear Views

5.00 in
(12.70 cm)

7.14 in
(18.14 cm)

1.40 in
(3.56 cm)

TPS-XBTP Bottom View

ELECTRICAL
CONTACTS

NICKEL-MH BATTERY:
MUST BE RECYCLED OR
DISPOSED OF PROPERLY.

CAUTION DO NOT BURN OR PUNCTURE
BATTERY. DOING SO COULD RELEASE
TOXIC MATERIALS WHICH COULD CAUSE
INJURY. DO NOT SHORT CIRCUIT.
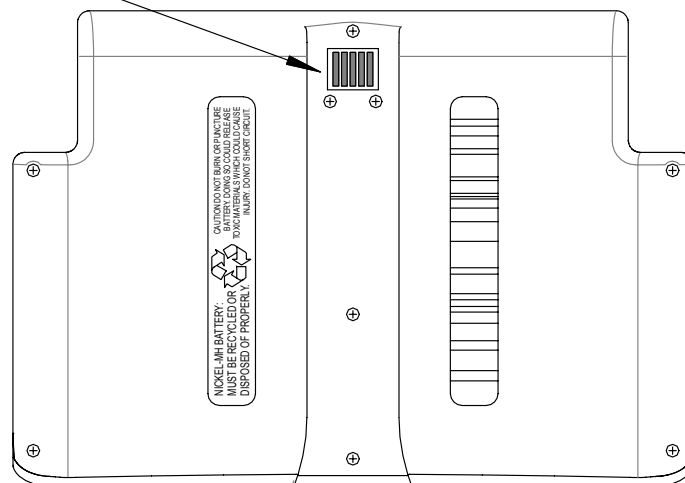
Leading Specifications

The following table provides a summary of leading specifications for the TPS-XBTP.

Leading Specifications for the TPS-XBTP

SPECIFICATION	DETAILS
Output Voltage	20 VDC (4.5 Ah), nominal
Composition	Nickel-metal hydride (Ni-MH)
Estimated Operating Time, (new unit with full charge)	Approximately 2-hours with typical use, (8 -10 hours in touchpanel stand-by) *
Estimated Life	500 charging/discharging cycles
Optimal Operating Temperature	Approximately 32°F to 104°F (0°C to +40°C)
Optimal Storage Temperature	Approximately -4°F to 113°F (-20°C to +45°C)
Charging Temperature	Approximately 50°F to 95°F (10°C to 35°C)
Weight	2.20 lb (1.00 kg)

* Approximate battery life and charge times for Battery pack in touchpanels:
  Worst case battery life - TPS-6000 with all 3 cards installed is 2 hours at full backlight

  Best case battery life - TPS-4500 with no cards installed is 3.5 hours at full backlight

  Worst case charge time - TPS-6000 with all 3 cards installed is 12 hours

  Best case charge time - All units with power off is 3.5 hours

NOTE: The battery will not charge when hot. To cool the battery, either turn off power to the Touchpanel by pressing the power down button on the touchscreen (or use the power down timeout), or remove the battery from the touchpanel. The battery can also be mounted on the stand-alone charger to cool and then charge. The charger begins charging the battery once the battery has cooled.

As of the date of manufacture, the TPS-XBTP has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.

Handling

> **WARNING:** To prevent short-circuiting, use care when handling the TPS-XBTP. NiMH cells have extremely low internal resistance and discharge at high current levels when shorted. As a result, high temperatures can damage the battery pack and may cause personal injury. Avoid accidental shorting of the TPS-XBTP electrical contacts from uninsulated workbenches, tools, bracelets, rings and coins.

> **WARNING:** Because the TPS-XBTP contains toxic material (nickel-metal hydride electrolyte), do not incinerate or damage it. In the event that the battery electrolyte contacts skin or eyes, immediately flush with water and consult a doctor.

> **NOTE:** The TPS-XBTP contains NiMH cells. When the battery pack can no longer retain a charge, it must be recycled or disposed of properly. Refer to the recycle label on the unit for disposal information.

Storage

The TPS-XBTP can be stored in a temperate dry place indefinitely without any significant irreversible degradation of its performance. The self-discharge rate is a function of temperature and internal resistance (approximately 20% per month). High temperature storage reduces charge retention. Best results occur if the TPS-XBTP is stored within a temperature range of -4°F to 113°F (-20°C to +45°C). After an extended storage, allow the battery pack to obtain room temperature, discharge fully, and charge to restore full capacity. When storing battery pack for more than 1-year, charge at least once a year to prevent leakage and deterioration in performance due to self-discharging.

Charging & Discharging

> **NOTE:** Typically, the battery pack is good for 500 charge/discharge cycles.

Charging

To charge the TPS-XBTP:

- Use the TPS-XBC Battery Charger; or

- Install the TPS-XBTP in a TPS-XTXRF equipped touchpanel that is docked to a powered TPS-XDS Docking Station.

> **NOTE:** An external power pack or Cresnet power connected directly to the TPS-XTXRF equipped touchpanel does NOT charge the TPS-XBTP.

For further information, consult the TPS-XBC Operations Guide (Doc. 6017) and TPS-XDS Operations Guide and (Doc. 5846). The latest versions of the guides are available from the Downloads | Product Manuals section of the Crestron website (**www.crestron.com**).

Discharging

Over time, the battery pack may not accept a full charge. If you think that the touchpanel's level indicator is inaccurate, you may need to discharge the battery. For example, the level indicator may read 80%, even though the charge LED on the TPS-XDS goes out (indicating a full charge). If this occurs, you need to fully discharge the battery pack. To discharge, insert the battery pack in an undocked TPS-XTXRF equipped touchpanel, and allow the touchpanel to remain ON until it no longer operates and/or the control system power/battery gauge indicates minimum. This also establishes the gauge minimum level.

> **NOTE:** After fully discharging the battery, fully charge the battery (see *Charging* instructions above).

> **NOTE:** The battery pack discharges at a rate of 25% per month when not used, which may cause an inaccurate reading on the level indicator.

Installation

The TPS-XBTP is designed to prevent improper installation. The unit fits only one way in the battery compartment of a touchpanel equipped with the TPS-XTXRF. To install the TPS-XBTP, refer to the following diagram. Note the bottom-center slot of the TPS-XTXRF and insert the battery pack in the touchpanel until it snaps in place.
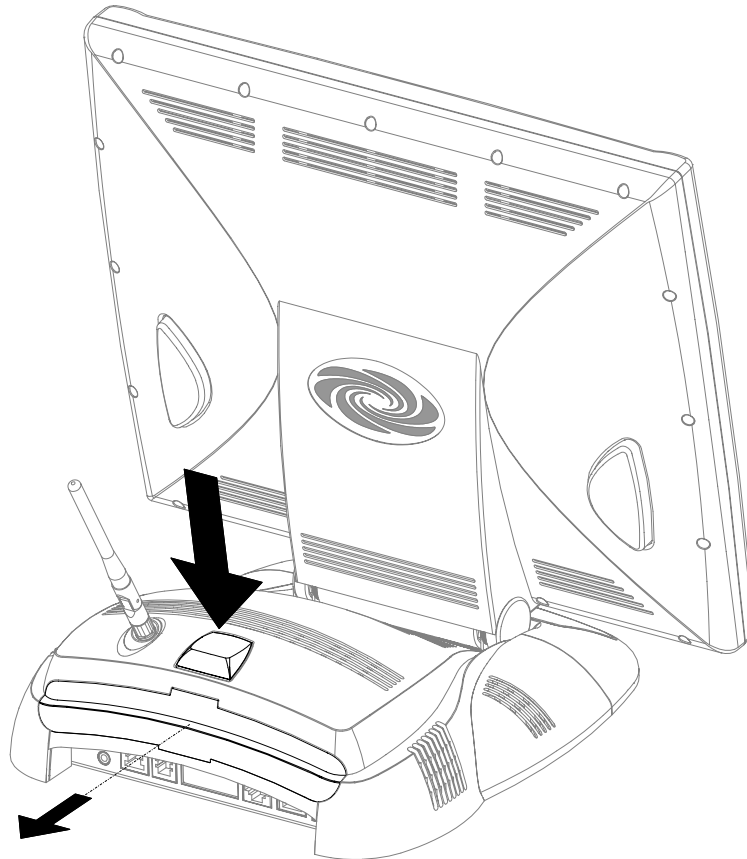
Insert TPS-XBTP into Touchpanel
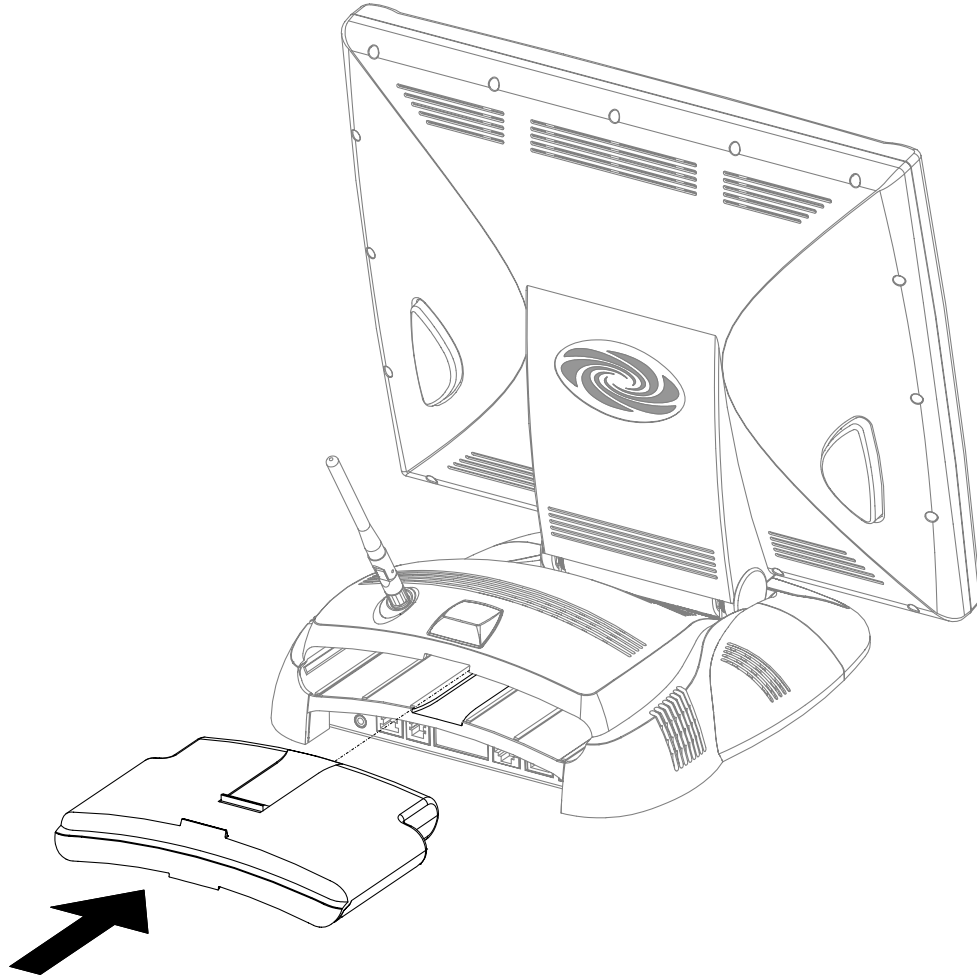
Removal

To remove the TPS-XBTP from a touchpanel equipped with the TPS-XTXRF, press down the battery eject button, allow the battery pack to eject approximately 1/4-inch and remove the pack. See diagram below.

TPS-XBTP removal from rear of touchpanel

Further Inquiries

If you cannot locate specific information or have questions after reviewing this guide, please take advantage of Crestron's award winning customer service team by calling the Crestron corporate headquarters at 1-888-CRESTRON [1-888-273-7876]. For assistance in your local time zone, refer to the Crestron website (**www.crestron.com**) for a listing of Crestron's worldwide offices.

You can also log onto the online help section of the Crestron website (**www.crestron.com**) to ask questions about Crestron products. First-time users will need to establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features, and extends the capabilities of the TPS-XBTP, 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 relevance.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange, or service without prior authorization from CRESTRON. To obtain warranty service for CRESTRON products, contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number, and return address.

2. Products may be returned for credit, exchange, or service with a CRESTRON Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to CRESTRON, 6 Volvo Drive, Rockleigh, N.J., or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. CRESTRON reserves the right in its sole and absolute discretion to charge a 15% restocking fee, plus shipping costs, on any products returned with an RMA.

3. Return freight charges following repair of items under warranty shall be paid by CRESTRON, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

CRESTRON Limited Warranty

CRESTRON ELECTRONICS, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from CRESTRON, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touchscreen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from CRESTRON or an authorized CRESTRON dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

CRESTRON shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended, or if it has been subjected to misuse, accidental damage, modification, or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced, or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall CRESTRON be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. CRESTRON is not liable for any claim made by a third party or made by the purchaser for a third party.

CRESTRON shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, CRESTRON makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supercedes all previous warranties.

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