

Crestron **ST-DS**  
Docking Station/Charger

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Operations Guide



**CRESTRON**

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# Contents

<b>Docking Station/Charger: ST-DS</b>	<b>1</b>
Description .....	1
Functional Description .....	1
Physical Description .....	2
Setup.....	4
Power Source.....	4
Using the ST-DS to Charge the ST-BTP (Rechargeable Power Pack).....	4
Fully Discharging the ST-BTP .....	6
Problem Solving.....	6
Troubleshooting .....	6
Further Inquiries .....	7
Future Updates .....	7
Return and Warranty Policies.....	8
Merchandise Returns / Repair Service .....	8
CRESTRON Limited Warranty .....	8
 <b>Glossary of Terms</b>	 <b>9</b>



# Docking Station/Charger: ST-DS

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## Description

### Functional Description

The ST-DS is a microprocessor-based docking station designed to fast charge the ST-BTP (rechargeable power pack). A fast charge occurs in one of three possible configurations and can take between two and three hours (depending on whether the ST-BTP is fully discharged and the amount of current drawn during the charging process). Each situation is detailed in “Using the ST-DS to Charge the ST-BTP (Rechargeable Power Pack)” on page 4.

1. The ST-DS charges the ST-BTP alone.
2. The ST-DS charges the ST-BTP while the rechargeable power pack is installed in a touchpanel and the touchpanel is not in use.
3. The ST-DS charges the ST-BTP while the rechargeable power pack is installed in a SmarTouch STS touchpanel and the touchpanel is in use.

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**NOTE:** Configuration 2 and 3 depend on the type of Crestron wireless touchpanel in use.

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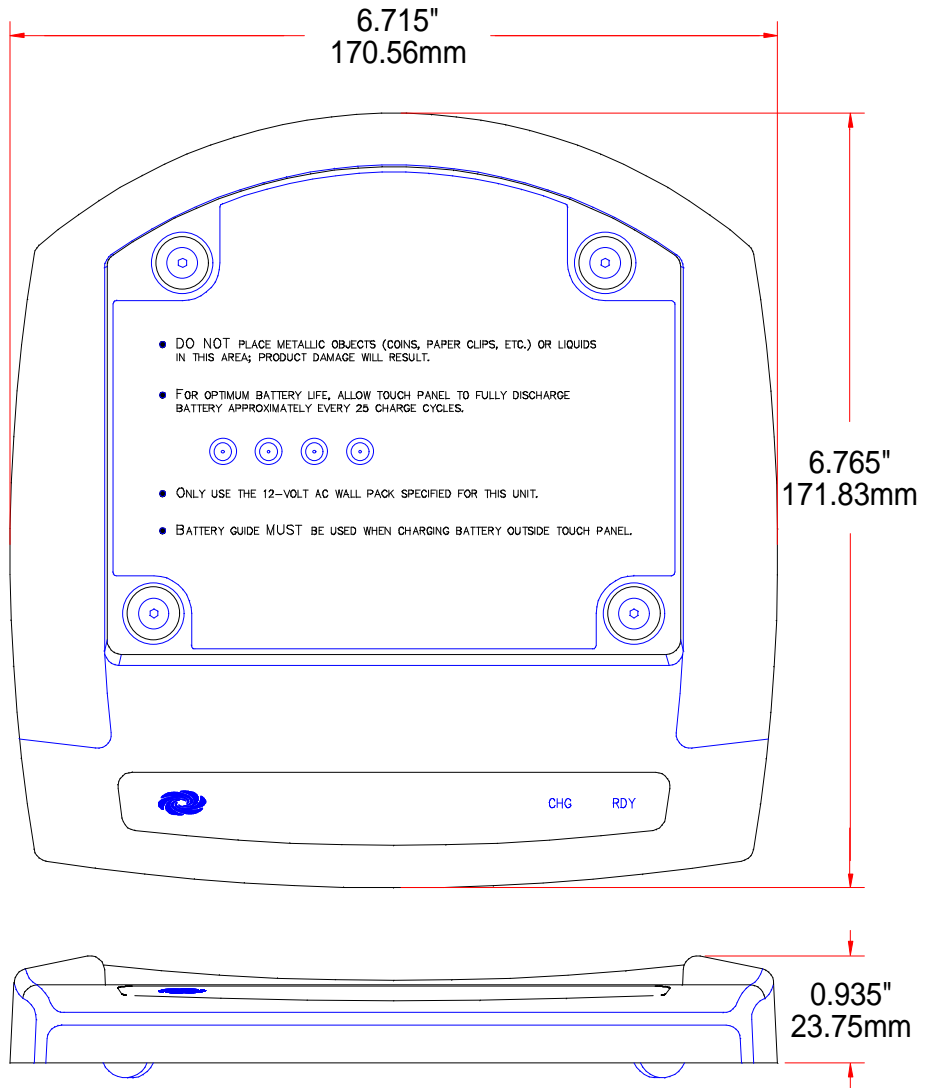
A second function of the ST-DS is to preserve the charge of the ST-BTP. As long as the contacts of the ST-BTP and the ST-DS remain together, the ST-DS “trickle charges” the ST-BTP in an attempt to maintain the ST-BTP for optimum performance. The duration of a “trickle charge” is continuous as long as the ST-BTP is not fully charged.

### Physical Description

The ST-DS, shown on the next page, is housed in a black enclosure with silk-screened labels on the front panel and cavity (docking area) of the unit. On the front panel there are three LEDs for indicating the unit's current status. The cavity accommodates either the ST-BTP with optional ST-DS charging guide or, in some cases, a Crestron wireless touchpanel with ST-BTP installed. The only wired connection is made to the bottom of the unit. There are four rubber feet on the base of the ST-DS for stability and to prevent slippage.

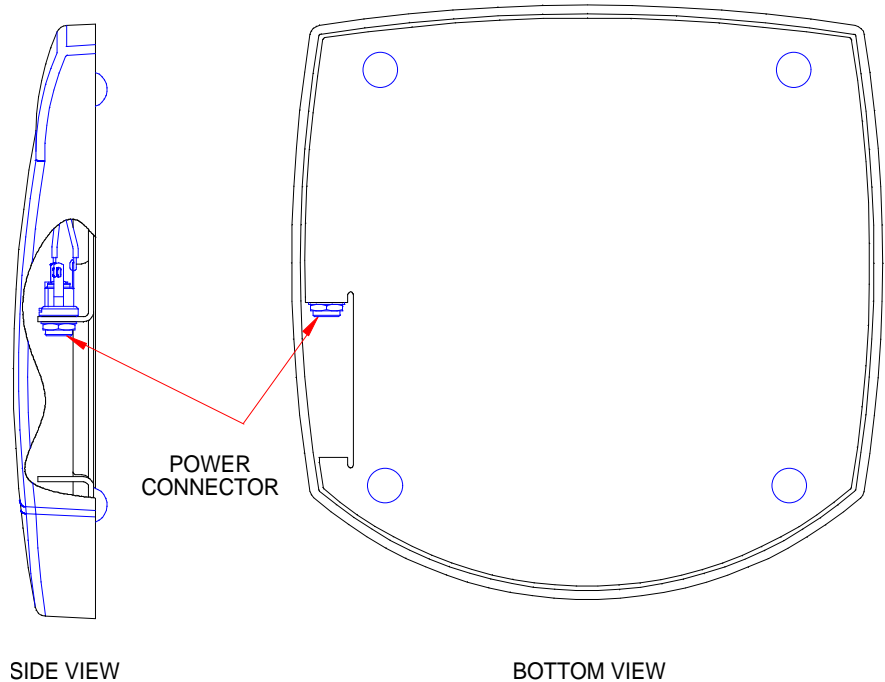
#### ST-DS Physical Views

SHOWN WITHOUT OPTIONAL CHARGING GUIDE



**ST-DS Port**

The only port is provided on the bottom of the ST-DS. This DC power socket connector is used to supply power via the external power pack.

**ST-DS Power Port****ST-DS Indicators**

There are three LED indicators located on the front panel of the ST-DS. Refer to the illustration and descriptions after this paragraph.

**ST-DS Indicators**** (External Power)**

This green LED illuminates when power is provided to the ST-DS via the specified external power pack.

**CHG (Charge)**

This red LED illuminates when a ST-BTP is inserted into the ST-DS cavity and the contacts of each touch. The LED remains ON while the rechargeable power pack is charging.

If the CHG LED blinks every second, it is in a "charge pending" state. This state indicates that the rechargeable power pack may be too hot or cold, or that it has extremely low voltage and a "trickle charge" is necessary before a fast charge can be applied. In either case, the ST-DS monitors the ST-BTP status and waits for the correct conditions to start a fast charge. The LED remains ON during a fast charge.

**RDY (Ready)**

This red LED illuminates when the ST-BTP in the ST-DS cavity is fully charged.

# Setup

## Power Source

The ST-DS has a DC power socket connector on the bottom of the unit. This power connector is used to supply power via an external power pack. Crestron recommends a power pack for the ST-DS. It is available under Crestron part number **PW-1215** (110v USA and Canada) or **PWI-1215** (220v International). If an external power pack other than these Crestron models is obtained, verify that it meets the required specifications and polarity as shown below.

### Power Pack Specifications

CRESTRON POWER PACK	INPUT SPECS	OUTPUT SPECS
PW-1215	120VAC 60Hz 35W	12VDC 1500mA
PWI-1215	230V~50Hz 35W	12V - - - 1500mA 18VA

### Power Pack Polarity



## Using the ST-DS to Charge the ST-BTP (Rechargeable Power Pack)

**WARNING:** The ST-BTP is shipped in a discharged condition. Charge the ST-BTP in a well ventilated area away from sparks and open flame. Do not smoke while the ST-BTP is being charged.

**WARNING:** Avoid damage to the ST-BTP and possible physical harm, use only the specified external power pack PW-1215 (110v) or PWI-1215 (220v) or equivalent when charging with the ST-DS.

There are three possible methods of charging the ST-BTP with the ST-DS. All methods are considered fast charging and take between two and three hours for a fully discharged ST-BTP. Using the touchpanel during charging may take up to three hours and is only permissible with certain Crestron wireless touchpanel models.

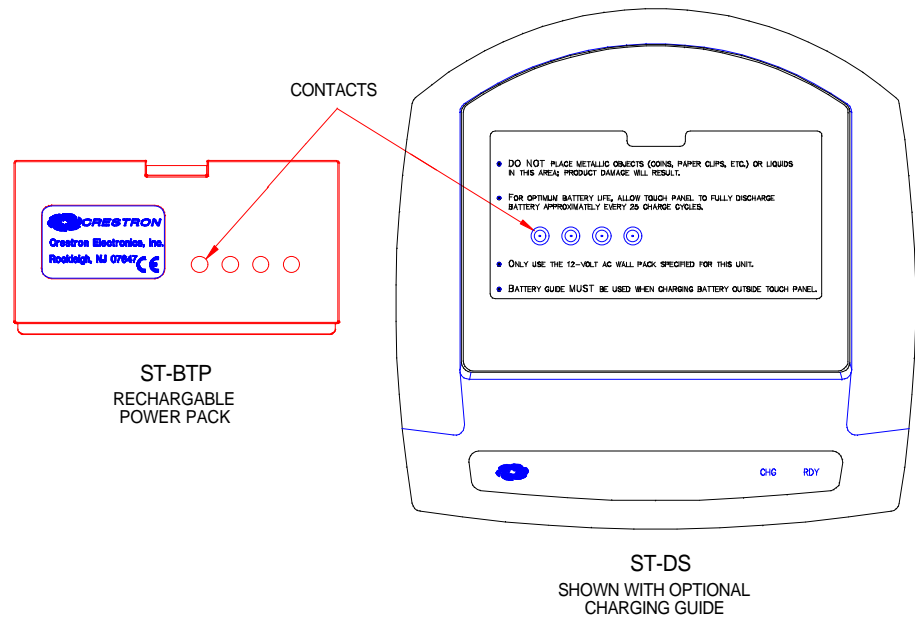
### Method 1: ST-BTP Alone

**NOTE:** Use the optional charging guide when charging the ST-BTP alone (while it is not installed in the touchpanel).

Position the charging guide into the ST-DS cavity. Position the ST-BTP, by itself, into the ST-DS cavity to automatically initiate charging. Be sure that the contacts of the ST-DS and ST-BTP touch. Refer to the illustration on the next page to confirm positioning. The CHG LED illuminates while the ST-BTP is charging. When the ST-BTP is fully charged, the CHG LED extinguishes and the RDY LED illuminates.



*Charging the ST-BTP (Alone)*



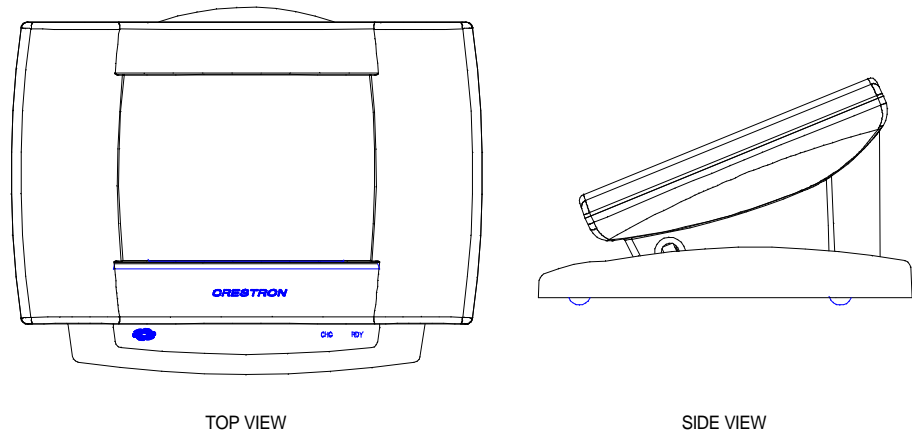
**Method 2: ST-BTP Installed in an Inactive Touchpanel**

**NOTE:** Do not use the optional charging guide when charging the ST-BTP while installed in the touchpanel.

**NOTE:** This method only applies to certain Crestron wireless touchpanels.

In this method, the ST-BTP is properly installed into the touchpanel. Position the touchpanel into the ST-DS cavity, as shown on the next page. Be sure that the contacts of the ST-DS and ST-BTP touch. The CHG LED illuminates while the ST-BTP is charging. When the ST-BTP is fully charged, the CHG LED extinguishes and the RDY LED illuminates. As long as the touchpanel remains inactive (OFF), a fully discharged ST-BTP fully charges in two hours.

*TouchPanel Properly Positioned (ST-1550C shown)*



**Method 3: ST-BTP Installed in an Active Touchpanel**

This method is identical to method 2, except that the touchpanel is active (ON) while charging. As a result, the time to fully charge a discharged ST-BTP can take up to three hours.

**Fully Discharging the ST-BTP**

Due to the memory effect of nickel-cadmium (NiCad) cells, Crestron recommends that the ST-BTP be fully discharged for every 25 charge/discharge cycles. The ST-BTP can be fully discharged while in the touchpanel. A button to fully discharge the touchpanel should be available within a designated screen design. This button has a special software identity (reserve join number) and can be recreated and programmed onto any page in the touchpanel project. Consult your Crestron dealer if this feature cannot be located.

**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.

*ST-DS Troubleshooting*

<b>TROUBLE</b>	<b>POSSIBLE CAUSE(S)</b>	<b>CORRECTIVE ACTION</b>
Green PWR LED does not illuminate.	ST-DS is not receiving power.	Confirm that power pack securely plugged into outlet and that the connector is properly attached to the ST-DS.
Red CHG LED blinks once per second.	ST-DS is in "charge pending" mode.	The rechargeable power pack is either too hot/cold or has extremely low voltage. No action is necessary. The ST-DS monitors the ST-BTP and begins a fast charge as soon as conditions are favorable. Charging occurs when the ST-BTP temperature is between 59-86 °F (15-30 °C).
Red CHG and RDY LEDs blink four times per second.	ST-DS has intermittent contact with the ST-BTP.	Properly position the ST-BTP in the ST-DS cavity. The four contacts may be dirty. Unplug the external power pack and clean the contacts with a dry, lint-free cloth.
	Incorrect external power pack being used.	Verify that the external power pack is the recommended power supply (i.e., Crestron part no. PW-1215 (110v) or PWI-1215 (210v)).
Red CHG and RDY LEDs oscillate back and forth.	Hardware Error	Stop using the ST-DS. Contact an authorized Crestron Dealer or Crestron Customer Service.

## Further Inquiries

If after reviewing this Operations 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 +525-260-4336.

For local support from exclusive Crestron factory-trained personnel call:

- In Australia, call Soundcorp at +613-9488-1555.
- In New Zealand, call Amber Technologies at +649-410-8382.

## Future Updates

As Crestron improves functions, adds new features, and extends the capabilities of the ST-DS, 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 page of the Crestron website ([www.crestron.com](http://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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## 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, Cresskill, 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 Cresnet products, denoted by a "CN" prefix model number, to be free from manufacturing defects in materials and workmanship for a period of three (3) years from the date of shipment to purchaser. Disk drives and any other moving or rotating mechanical parts are covered for a period of one (1) year. CRESTRON warrants all its other products for a period of one year from the defects mentioned above, excluding touchscreen display components which are covered for 90 days. Incandescent lamps are completely excluded from Crestron's Limited Warranty. 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.

CRESTRON shall not be liable to honor warranty terms 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 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 makes no other warranties nor authorizes any other party to offer any warranty, expressed or implied, including warranties of merchantability for this product. This warranty statement supersedes all previous warranties.

#### Trademark Information

*All brand names, product names, and trademarks are the sole property of their respective owners. Windows is a registered trademark of Microsoft Corporation. Windows95/98/Me and WindowsNT/2000 are trademarks of Microsoft Corporation.*

# Glossary of Terms

## **External 1500 mA Power Pack**

This is the only power supply recommended by Crestron for the ST-DS. Use of other power sources may damage the ST-BTP.

## **Memory Effect**

NiCad batteries develop a memory condition known as the “memory effect”. If the ST-BTP is continually recharged before being fully discharged, the unit learns not to maintain a full charge. This can be avoided by fully discharging the ST-BTP every 25 charging cycles.

## **ST-BTP**

The ST-BTP is a rechargeable power pack included with each Crestron wireless touchpanel that require one.

## **ST-DS**

The ST-DS is a docking station and charger, which allows fast charging and trickle charging of the ST-BTP.

## **ST-DS Optional Charging Guide**

The ST-DS optional charging guide is a template that properly positions a ST-BTP inside the ST-DS cavity. The guide must be used when charging a ST-BTP alone (outside the touchpanel).

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