

Crestron **TPS-VID**
Video Card for TPS/Tilt Panel

Operations & Installation Guide



CRESTRON

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Video Card for TPS/Tilt Panel: TPS-VID

Description

Functional Description

The TPS-VID video card is an optional feature designed for Crestron's Isys™ tilt touchpanels. The card is a video digitizer that allows television (TV) National Television System Committee (NTSC) or Phase Alternating Line (PAL) video to be displayed on the touchpanel. The TV video is displayed through a video window on a page within the uploaded VisionTools™ Pro-e (VT Pro-e) touchpanel project. Composite or S-Video formats are supported and the video can be displayed in a window or full screen.

Video to the touchpanel is supplied through a Crestron TPS interface module (IMC) that is provided with the touchpanel or optional TPS wall-mounted interface module (IMW). Refer to the table below for touchpanel and interface modules that are used with the TPS-VID.

ISYS™ TOUCHPANEL	INTERFACE MODULE	MODULE AVAILABILITY	MODULE DOC. #
TPS-4500	TPS-4500IMC	Supplied w/touchpanel	5890
	TPS-4500IMW	Sold Separately	5913
TPS-5000 and/or TPS-6000	TPS-IMC	Supplied w/touchpanel	5856
	TPS-IMC-BV	Sold Separately *	5921
	TPS-IMW	Sold Separately	5857

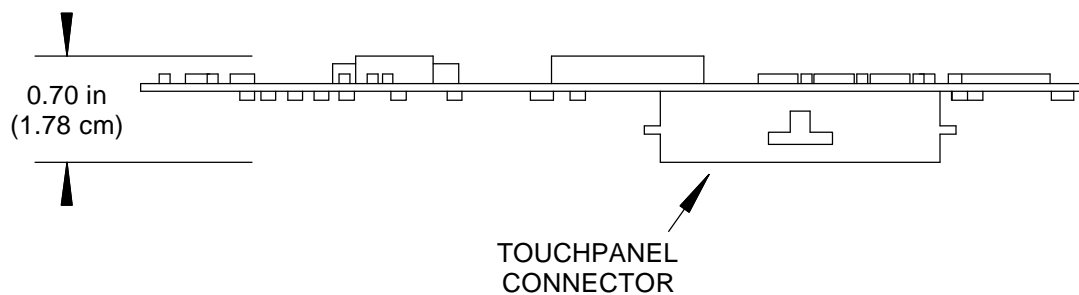
* The TPS-IMC-BV is supplied with the optional TPS-XVGA-BV card that can only be installed into specific touchpanels. Refer to the TPS-XVGA-BV Operations & Installation Guide for further information.

NOTE: For more information about the Crestron TPS interface or wall-mounted interface module(s), refer to the latest revision of the appropriate operations guide. The latest version can be obtained from the Products page (PRODUCT MANUALS, Hardware section) or Downloads page (MANUAL Library) of Crestron's website (www.crestron.com). New users are required to register in order to obtain access to the FTP site.

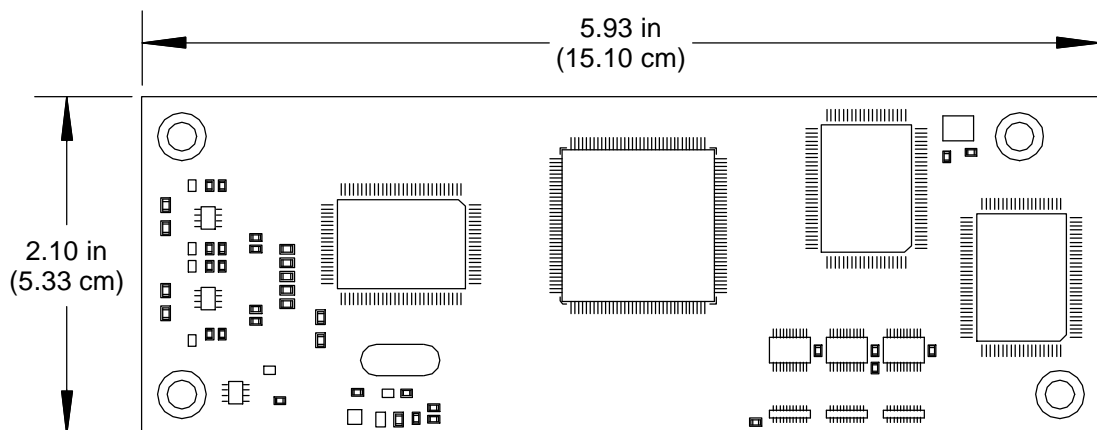
Physical Description

The TPS-VID card, shown in the two diagrams below, is a printed circuit board (PCB) designed to be installed into a specific expansion slot on the touchpanel motherboard. The card contains a 60-pin connector that attaches directly to the motherboard and the card is secured with four mounting screws (supplied with TPS-VID). A 10-position RJ45 port (labeled **NET/VIDEO** on the touchpanel) is permanently attached to the motherboard and is accessible through the connector panel at the rear of the touchpanel base.

TPS-VID Side View



TPS-VID Top View



Leading Specifications

The table below provides a summary of leading specifications for the TPS-VID. Dimensions and weight are rounded to the nearest hundredth unit.

Leading Specifications of the TPS-VID

SPECIFICATION	DETAILS
Power Requirements	8 Watts (0.333 Amps @ 24 VDC)
SIMPL™ Windows®	Version 1.50.05 or later ¹
VisionTools™ Pro-e	Version 2.2.0.0 or later ¹
Isys Touchpanel Firmware	Version 1.008.0 or later ²
2-Series Control System Update File ³	Version 1.000.CUZ or later ⁴
CEN/CN-TVAV Update File	Version 51233V.UPZ or later ⁵
CNMSX-AV/Pro Update File	Version 51125X.UPZ or later ⁵
CNRACKX/-DP Update File	Version 51125W.UPZ or later ⁵
CNMS, CNRACK, CNLCOMP Operating System	Version 3.18.09 m, l, c or later ⁵
ST-CP Update File	Version 40104S or later ^{5 & 6}
Video Types	NTSC or PAL
Video Formats	Composite or S-Video
Video Format Detection	Within 2-seconds
Dimensions & Weight	Height: 0.70 in (1.78 cm) Width: 2.10 in (5.33 cm) Depth: 5.93 in (15.10 cm) Weight: 1.60 oz (0.05 kg)

- 1 The latest software versions can be obtained from the Downloads page (SIMPLWIN, VTPRO-E, and TOUCHPNL Libraries) of Crestron's website (www.crestron.com). New users are required to register in order to obtain access to the FTP site.
- 2 Touchpanels with later versions of firmware may include features not mentioned in this guide. Newer versions of this guide can be obtained from the Products page (PRODUCT MANUALS section) or Downloads page (MANUAL Library) of Crestron's website or contact Crestron customer service. Firmware upgrade files can be obtained from the What's New page (Touchpanels section) or Downloads page (TOUCHPNL Library) of Crestron's website.
- 3 Crestron 2-Series control systems consist of the AV2, AV2 with Card Cage, CP2, CP2E, PAC2, PAC2M, PRO2, and RACK2.
- 4 Filenames for 2-Series control system update files have a CUZ extension and can be obtained from the What's New page (Control Systems Update Files section) or Downloads page (OPSYS Library) of Crestron's website.
- 5 CNX update files are required for either CNMSX-AV/Pro or CNRACKX/-DP. Filenames for CNX update files have a UPZ extension and ST-CP files are in one EXE or zipped UPZ file. All can be obtained from the What's New page (Control Systems Update Files section) or Downloads page (OPSYS Library) of Crestron's website. Update files are specifically designed for certain control systems. If an update file is loaded into a control system other

than the device for which it was intended, it may lockup the control system which would then have to be returned to Crestron. Update files with an “S” designator are for the ST-CP, “V” designator for CEN/CN-TVAV, “W” for CNRACKX/-DP, and “X” for CNMSX-AV/Pro control systems. Control systems are able to recognize and reject incorrect update files. However, when updating control systems, do not ignore any Crestron Viewport warning prompts or messages.

- 6 These control systems do not support loading of firmware or VT Pro-e files to the TPS-series touchpanels through the RS-232 port of the control system. In order to load these files to the TPS touchpanel when using these control systems, either use the RS-232 port on the TPS touchpanel or use Ethernet direct to the panel (assuming the TPS-ENET Ethernet Card is installed).

As of the date of manufacture, this unit has been tested and found to comply with specifications for CE marking.



NOTE: This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Installation and Hookup

The TPS-VID is designed to be installed into a specific expansion slot in the TPS touchpanel. The only tools required for installation are a #1 Phillips screwdriver and a grounding strap (or grounded workstation).

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

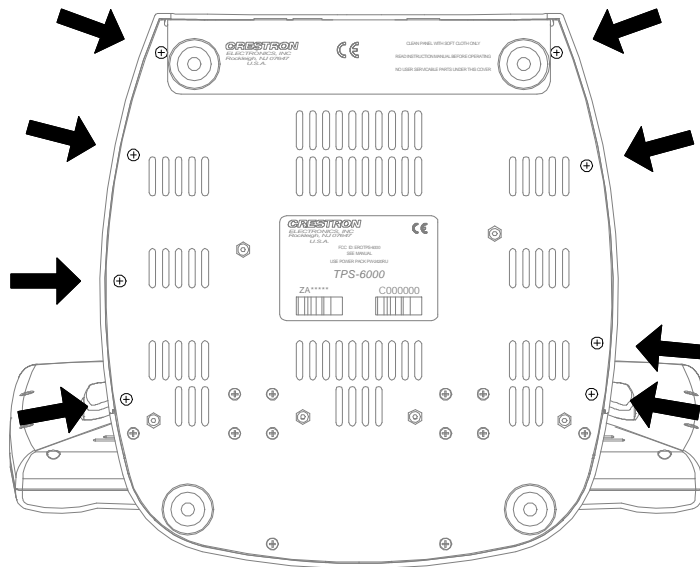
CAUTION: To prevent stripping of screw heads, threads, or mounting holes, do **not** overtighten screws. Tighten only to the specification listed in the individual step(s).

NOTE: If the angle of the touchscreen needs to be adjusted, consult latest revision of the appropriate 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 Products page (PRODUCT MANUALS, Hardware section) or Downloads page (MANUAL Library) of Crestron’s website (www.crestron.com). New users are required to register to obtain access to the FTP site.

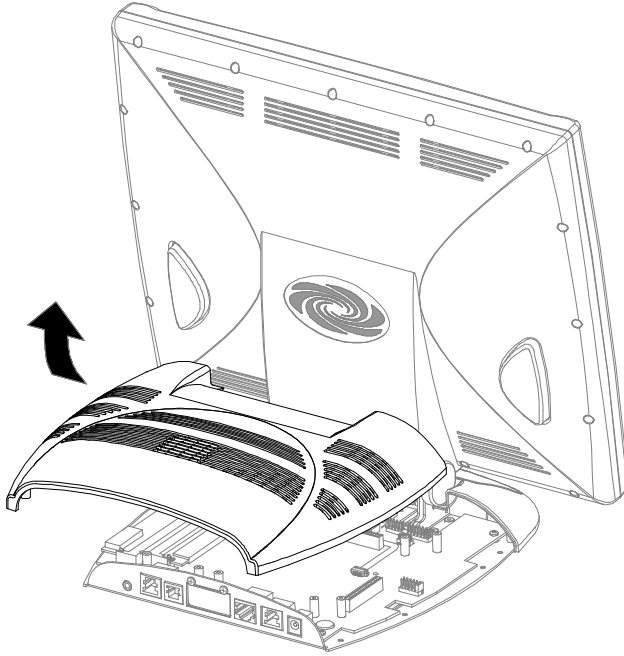
NOTE: The diagrams in this procedure show a TPS-6000 touchpanel but the steps for installation into all Isys™ tilt touchpanels is identical.

1. To prevent errors when re-connecting, label and disconnect all cables attached to the touchpanel rear panel ports.
2. If necessary, use the touchpanel position lock buttons to adjust the touchscreen to the maximum (most vertical/upright) angle.
3. To prevent scratching of the screen, place the touchpanel face-down onto a padded surface.
4. With one hand, hold the touchpanel base cover in place.
5. Refer to the diagram below. Using a #1 Phillips screwdriver, loosen and remove the **eight** screws that secure the touchpanel base cover.

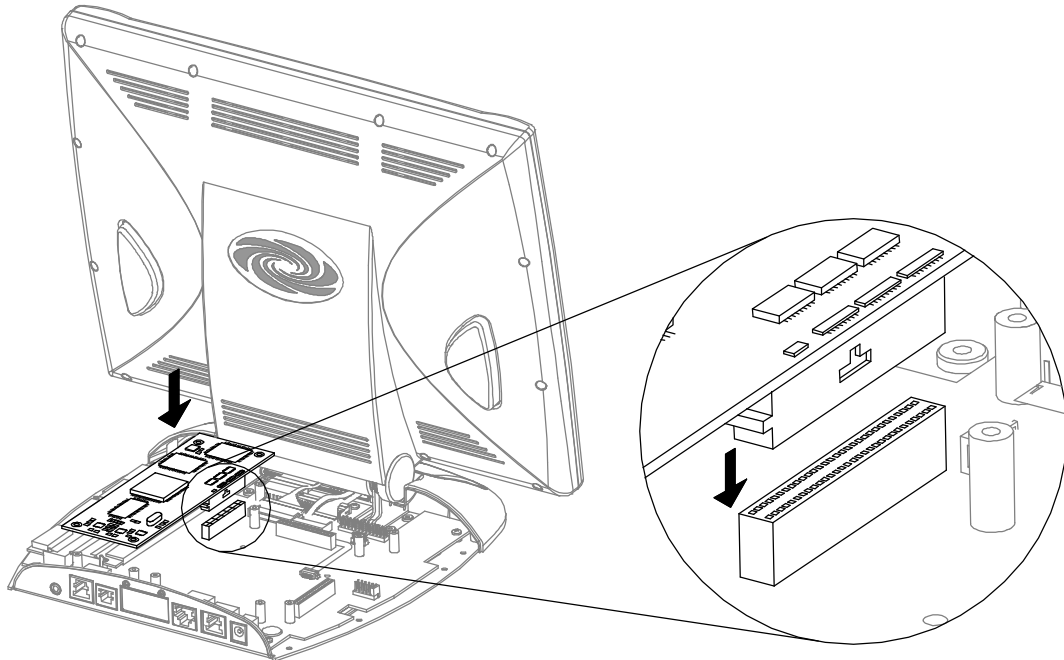
TPS-VID Installation (1 of 6) - Remove Touchpanel Base Cover Screws



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

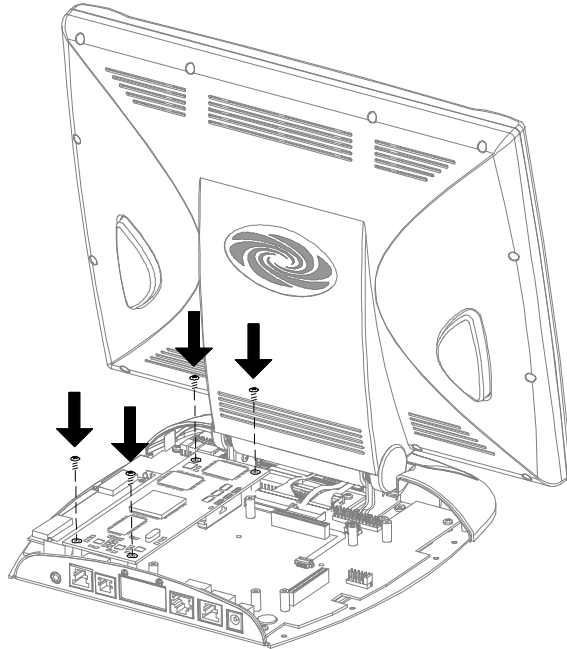
TPS-VID Installation (2 of 6) - Remove Touchpanel Base Cover

8. As shown below, align the pins on the touchpanel interface connector of the TPS-VID with the touchpanel motherboard connector. **DO NOT** force pins into connector. Press TPS-VID until pins are fully seated. Make sure that the screw holes of the card align with the mounting posts on the motherboard.

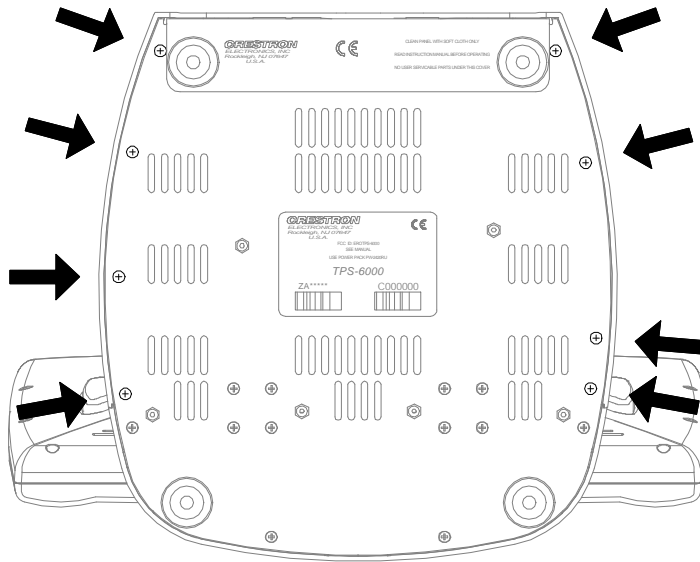
TPS-VID Installation (3 of 6) - Install TPS-VID

9. Refer to the diagram below. Install the **four** card mounting screws (supplied), tighten to **finger-tight** then, using a Philips screwdriver, tighten an additional **1/8-turn**.

TPS-VID Installation (4 of 6) - Install TPS-VID Mounting Screws



10. Position the touchpanel base cover onto the base by tilting the front of the cover downward under the touchpanel pivot and lowering.
11. Hold the touchpanel base cover in place and position the touchpanel face-down onto a padded surface to prevent scratching of the screen.
12. Refer to the diagram on the next page. Re-install the **eight** base cover screws to **finger-tight** then, using a Philips screwdriver, tighten an additional **1/8-turn**.

TPS-VID Installation (5 of 6) - Re-install Touchpanel Base Cover Screws

NOTE: The table below is provided as reference information about the pinouts of the NET/VIDEO connector.

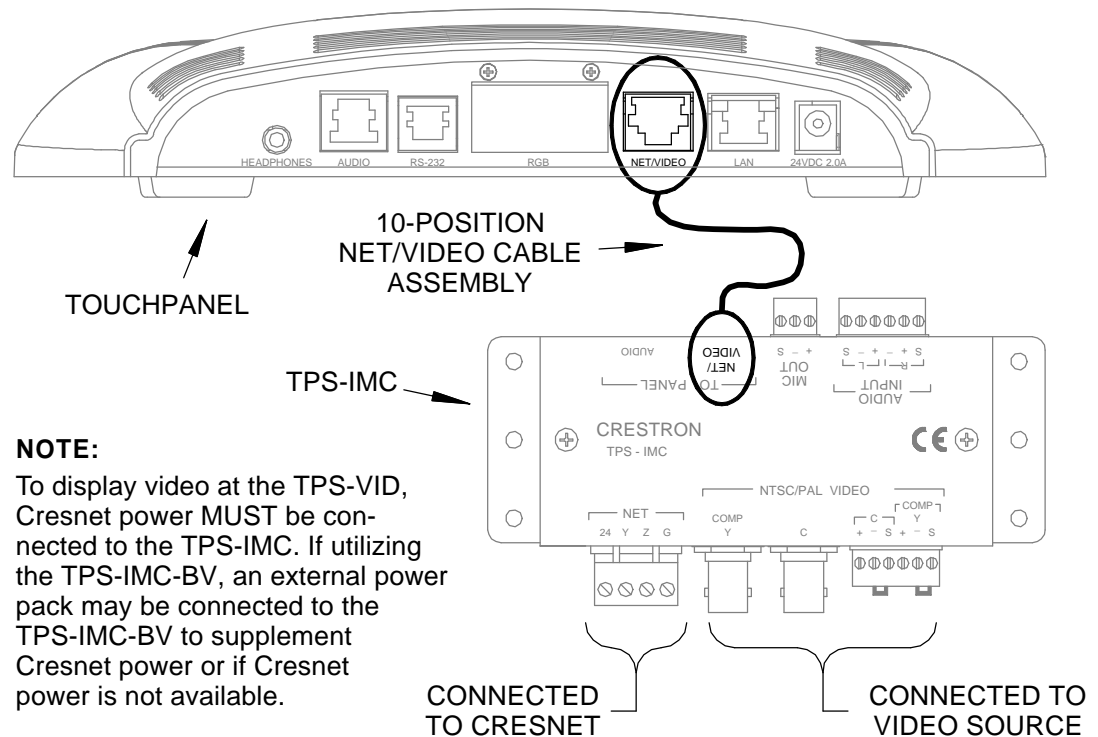
TYPE	PIN	DESIGNATION	DESCRIPTION
10-position RJ45	1 *	+24V	Power (Network)
	2	GND	Ground (Network)
	3	C+	Chrominance (Positive)
	4	C-	Chrominance (Negative)
	5	Y	Data (Network)
	6	Z	Data (Network)
	7	Y+	Luminance (Positive)/Composite
	8	Y-	Luminance (Negative)/Composite
	9	GND	Ground (Network)
	10	+24V	Power (Network)

* While facing the NET/VIDEO port of the touchpanel, pin 1 is located at the upper-left of the port.

- Refer to the diagram on the next page for the video connector signals and attach the **10-position** net/video cable assembly or net/video connector of triamese (three shielded cables within a single jacket) cable assembly supplied with TPS-IMC-BV to the NET/VIDEO port of the touchpanel. Connect the other end of the cable assembly to the NET/VIDEO port of the appropriate interface module (TPS-IMC is shown).

NOTE: When connecting the video from the interface module to the touchpanel, exceeding a video cable length 30-feet will significantly degrade the video signal. To maintain high-quality video, **DO NOT** daisy-chain cables, Crestron TPS-BLOCK devices or fabricate cables longer than 30-feet.

TPS-VID Installation (6 of 6) - Attach 10-Position Net/Video Cable Assembly



NOTE:
To display video at the TPS-VID, Cresnet power **MUST** be connected to the TPS-IMC. If utilizing the TPS-IMC-BV, an external power pack may be connected to the TPS-IMC-BV to supplement Cresnet power or if Cresnet power is not available.

14. Re-connect all cables to the appropriate touchpanel rear panel ports.

Setup

VT Pro-e Setup

A video window object must reside on a page within the uploaded VT Pro-e touchpanel project and the TPS-VID must be installed into the proper expansion slot of the Isys™ tilt touchpanel in order for the TV video to be displayed. If the card is not present, the Crestron Viewport displays a warning message during the upload and the video window remains blank. For details regarding video window objects, refer to the VT Pro-e help file.

Programming and Configuration of Touchpanel

The Isys™ tilt touchpanel does not require special programming in SIMPL Windows to display TV video but must be properly configured. To program and configure the touchpanel for TV video input, refer to the latest revision of the appropriate touchpanel operations guide. The latest version of the operations guide can be obtained from the Products page (PRODUCT MANUALS, Hardware section) or Downloads page (MANUAL Library) of Crestron's website (www.crestron.com). New users are required to register to obtain access to the FTP site.

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.

TPS-VID Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Video window of touchpanel has no display.	Improper video connection.	Verify proper connections at touchpanel NET/VIDEO port.
	Incorrect video cable used.	Verify that the 10-position Net/Video cable assembly is used to connect the NET/VIDEO port of the touchpanel to the TPS-IMC (or equivalent).
	Incorrect video format selected.	Select proper video format or auto-detect in touchpanel configuration setup menu.
	Incorrect firmware/software.	Update firmware/software versions as per "Leading Specifications".
	Incorrect VT Pro-e project file loaded.	Make sure that video window object resides in project, re-compile, and reload.
	TPS-VID improperly installed.	Follow installation procedures in this guide.
	Damaged connector pins.	Inspect connector pins. If bent, carefully re-straighten. If broken, contact Crestron customer service.

Further Inquiries

If after reviewing this Operations & Installations 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 TPS-VID, additional information and programming examples 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) directs the reader to the location and description of each update. Check the site periodically for update availability and its subjective value. New users are required to register in order to obtain access to the FTP site.

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 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 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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Specifications subject to
change without notice.