# Crestron IM/IMI-FTCCV-B iMedia FlipTop Computer & Video Center Operations & Installation Guide





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# iMedia FlipTop Computer & Video Center: IM/IMI-FTCCV-B

### Introduction

#### **Features and Functions**

- Flush-mount tabletop multimedia interface
- Streamlined user controls for simple operation
- iMedia transport for fast and easy single-cable installation
- Supports XGA resolution up to 84 feet (25.6 meters), UXGA maximum up to 34 feet (10.37 meters)
- Supports composite video signals
- Complete system setup in minutes using iMedia Wizard Software
- Easy pull-out cables and AC power outlet

The Crestron® iMedia products provide an extremely simple and affordable multimedia presentation solution for small conference rooms and training rooms. No comparable solution comes close to matching iMedia's speed and ease of installation, intuitive operation, and incredibly low cost.

The IM-FTCCV-B is designed for 120 VAC systems; the IMI-FTCCV-B is designed for 230VAC systems. The units are functionally identical. References throughout the manual to the IM-FTCCV-B apply equally to both units unless specified otherwise.

#### The iMedia Transport

The iMedia transport utilizes a single CresCAT<sup>™</sup> CAT5e type cable, CresCAT-IM, to transmit computer RGB, video, and stereo audio signals to a single projector or plasma display. A typical XGA signal (1024 X 768 pixels at 60Hz) can be transmitted up to 84 feet (25.6 meters) using iMedia, while higher resolutions up to 1600 x 1200 can be handled over shorter distances. Audio is transmitted digitally at 20-bit, 48 kHz resolution. Control and power signals are also contained on the same wire, eliminating the need for separate control or power cables.

#### FlipTop Multimedia Interface

The IM-FTCCV-B is an iMedia (IM) transmitter designed to install flush in a tabletop surface, to provide a convenient and low-profile interface solution. Beneath the "FlipTop" lid, a recessed compartment contains easy pullout RGB, composite video, and stereo audio cables to facilitate the connection of a computer or AV source. The cables stow neatly within the compartment when not in use. Excess cable simply drops out-of-sight below the box through grommeted holes provided in the bottom plate. An additional hole is available to accommodate a third-party LAN cable, if needed.

The IM-FTCCV-B also includes an AC power receptacle. Installing wiring for the unit is extremely simple requiring just a single CresCAT-IM cable. Up to three IM-FTCCV-Bs, or other IM transmitters, may be installed as part of a complete system to provide multiple input locations within the room.

#### AC Power Outlet

For the IMI-FTCCV-B, a choice of AC outlet types is available (sold separately) to accommodate virtually any country or region including UK, Europe (Schuko), Italy, France, Australia, and China.

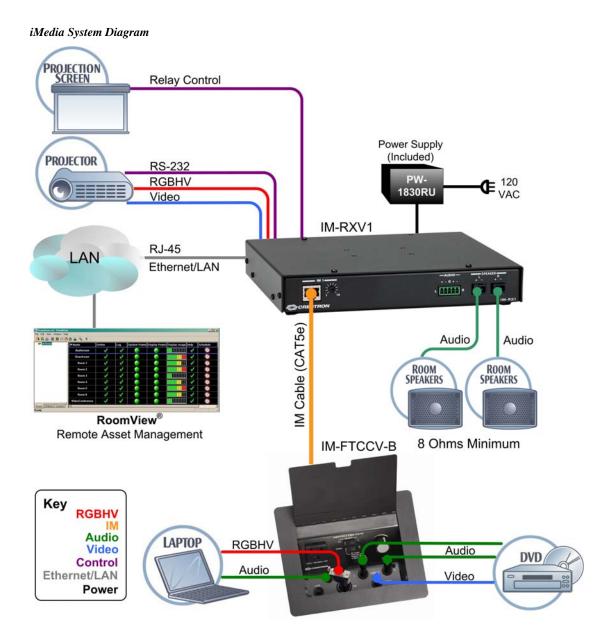
#### Simple Operation

Every iMedia system is easy and intuitive to use. A simple press of the **VIDEO** or **PC** buttons on the face of the IM-FTCCV-B selects the appropriate input, turns on the projector (or plasma, etc.), activates the screen or lift, and routes all the signals where they need to go. The volume control affords easy adjustment of the audio level, and the entire system can be turned off at any time by simply holding down either button for five seconds.

For systems having more than one IM transmitter, selecting an input at a given input location overrides the previously selected input at any other location. The audio level for each input location is controlled individually by its respective volume control.

# **Application**

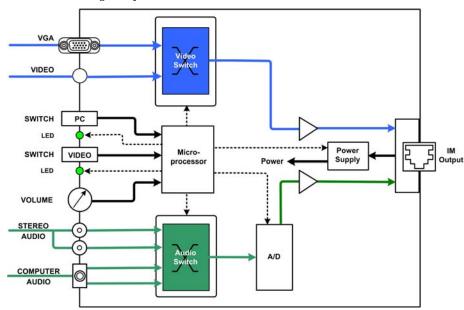
The IM-FTCCV-B is an IM transmitter. As shown in the following diagram, IM transmitters provide input points for video and PC sources on an IM receiver.



# **Internal Block Diagram**

The following diagram represents the signal routing and functions of the IM-FTCCV-B.

Internal Block Diagram of the IM-FTCCV-B



# **Specifications**

Specifications for the IM-FTCCV-B are listed in the following table.

IM-FTCCV-B Specifications

SPECIFICATION	DETAILS
RGB	
Gain	0dB (75 ohm termination)
Formats	RGBHV, RGBS, RG₅B
Resolution	1024 x 768 @ 60Hz with maximum cable length of 84 feet (25.6 meters), 1600 x 1200 @ 60Hz with maximum cable length of 34 feet (10.37 meters). Refer to "IM Wiring" on page 11 for other resolutions.
Video	
Gain	0dB (75 ohm termination)
Formats	480i (NTSC), 576i (PAL)
Audio	
A-D Conversion	20-bit, 48kHz
Frequency Response	20Hz to 20kHz ±1dB
Power Requirements	Power is provided by the IM receiver via the IM transport.

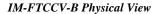
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IM-FTCCV-B Specifications (Continued)

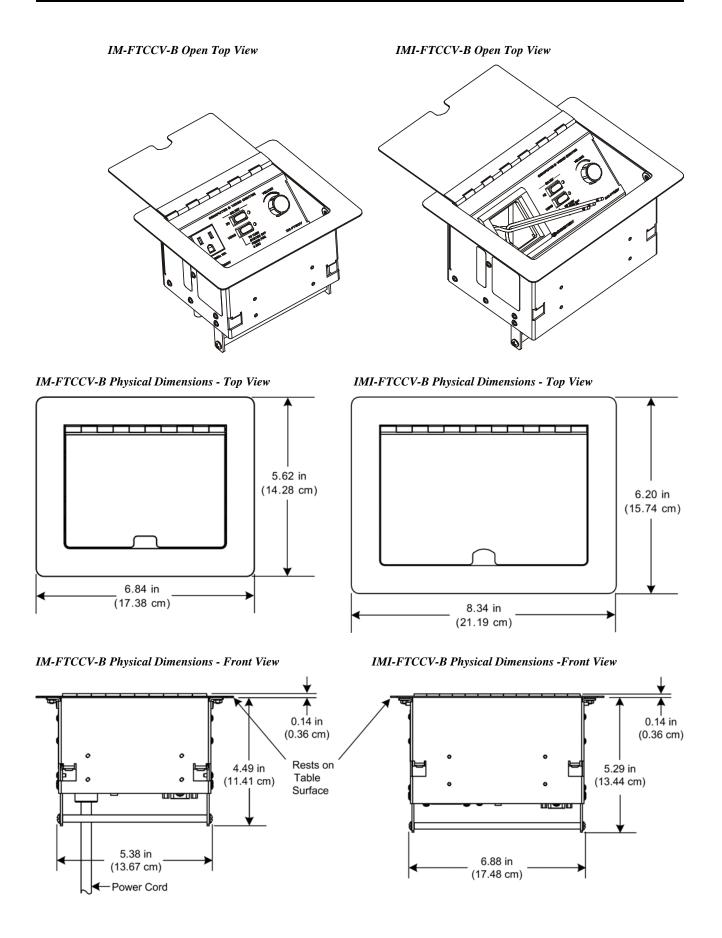
SPECIFICATION	DETAILS
Environmental	
Temperature	41° to 104°F (5° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Enclosure	Black metal; flush tabletop mountable
Dimensions IM-FTCCV-B	
Height	4.63 in (11.76 cm) — with lid closed
Width	6.84 in (17.38 cm)
Depth	5.62 in (14.28 cm) — without mounting bracket
IMI-FTCCV-B	
Height	5.43 in (13.79 cm) — with lid closed
Width	8.34 in (21.19 cm)
Depth	6.20 in (15.74 cm) — without mounting bracket
Weight	
IM-FTCCV-B	4.4 lbs (1.98 kg)
IMI-FTCCV-B	5.17 lbs (2.33 kg)

# **Physical Description**

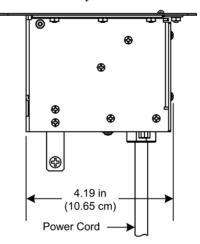
This section provides information on the connections, controls, and indicators available on your IM-FTCCV-B.



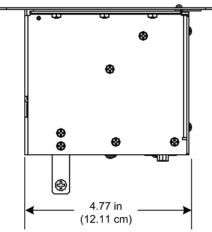




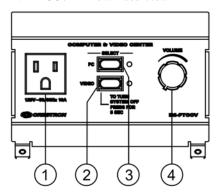
IM-FTCCV-B Physical Dimensions - Side View



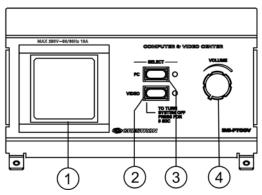
 ${\it IMI-FTCCV-B~Physical~Dimensions-Side~View}$ 



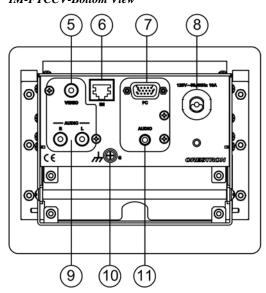
IM-FTCCV-B Front Face View



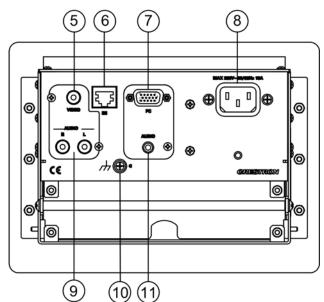
IMI-FTCCV-B Front Face View



IM-FTCCV-Bottom View



IMI-FTCCV-B Bottom View



Connectors, Controls & Indicators

#	CONNECTORS, CONTROLS & INDICATORS	DESCRIPTION
1	AC Receptacle	The 3-prong grounded AC input socket is rated at 125 VAC @ 10 Amps, 50 – 60 Hz. This outlet is connected to a line cord located on the bottom side.
		250 V max, 50 to 60 Hz, 10 amperes European, Australian, Italian, United Kingdom and French versions available on order. Refer to "Appendix: International Receptacles" on page 21.
2	VIDEO Button	(1) Momentary pushbutton with green LED; Momentary press initiates "system power on" command and selects local <b>VIDEO</b> input; press and hold for five seconds or more initiates "system power off."
3	PC Button	(1) Momentary pushbutton with green LED; Momentary press initiates "system power on" command and selects local <b>PC</b> input; press and hold for five seconds or more initiates "system power off."
4	Volume Control	Turn clockwise to raise the volume of the selected input; turn counterclockwise to lower the volume of the selected input.
5	VIDEO	(1) RCA female, composite video input; Input Impedance: 75 ohms; Maximum Input: 1 V <sub>p-p</sub> ; Connects to 6 foot RCA video patch cable (included).

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Connectors, Controls & Indicators (Continued)

#	CONNECTORS, CONTROLS & INDICATORS	DESCRIPTION
6	TO IM-RXV RECEIVER	(1) 8-wire female RJ-45 connector for iMedia connection to IM-RXV1 or IM-RXV3 receiver over CresCAT-IM cable <sup>1</sup> .
7	PC PG	(1) DB15HD female, RGB (VGA) input; Formats: RGBHV, RGBS, RG <sub>s</sub> B; Input Impedance: 75 ohms; Sync Impedance: 1k ohms; Maximum Input Level: 1 V <sub>p-p</sub> ; Maximum Sync Level: 5 V <sub>p-p</sub> <sup>2</sup> Connects to 6 foot VGA patch cable (included).
8	125V~50/60Hz 10A	125 VAC at 60 Hz. Connect the six-foot (183 cm) grounded AC line cord to supply AC power to the outlet on the topside of the IM-FTCCV-B.
	MAX 250V~50/30Hz 10A	250 V, 50-60 Hz at 10 A max. The international version (IMI-FTCCV-B) is equipped with a standard IEC-320 electrical appliance coupler.
9	AUDIO (R-L)  R L	(1) Pair of RCA-type female connectors for audio feed of composite video input.  Unbalanced stereo line-level audio input (linked with video);  Maximum Input Level: 2 V <sub>rms</sub> ;  Input Impedance: 10k ohms;  Connects to 6 ft RCA stereo audio patch cable (included).
10	/ <del>//</del> @•	Lug for grounding your equipment.
11	AUDIO (PC)  AUDIO	(1) 3.5mm female mini-jack connects to audio output of PC.  Unbalanced stereo line-level audio input (linked with PC);  Maximum Input Level: 2 V <sub>rms</sub> ; Input Impedance: 10k ohms;  Connects to 6 ft mini-TRS audio patch cable (included).

 The eight-pin RJ-45 iMedia port accepts CresCAT-IM or CAT5E/CAT6 carrying video, audio, power and control signals. Refer to the following table for connector pinouts. Power is supplied to pins 4 and 5 from the IM receivers.

PIN	WIRE COLORS (EIA 568B)	iMEDIA ASSIGNMENT: RGB, COMPOSITE AND AUDIO
1	WHITE/ORANGE	- RGB RED
2	ORANGE	+ RGB RED
3	WHITE/GREEN	- RGB GREEN
4	BLUE	+ AUDIO / POWER
5	WHITE/BLUE	- AUDIO / POWER
6	GREEN	+ RGB GREEN
7	WHITE/BROWN	- RGB BLUE / COMPOSITE
8	BROWN	+ RGB BLUE / COMPOSITE

This female DB15HD connector is used for connecting a computer's RGB video output to the display device. Refer to the following table for pin assignments:

PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION
1	Red Video	6	Red Ground	11	No Connect
2	Green Video	7	Green Ground	12	Monitor Sense 1
3	Blue Video	8	Blue Ground	13	Horizontal Sync
4	Reserved	9	No Connect	14	Vertical Sync
5	Ground	10	Ground	15	Monitor Sense 2

# **Industry Compliance**

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



**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.

# Setup

#### **Network Wiring**

When wiring the network, consider the following:

- Use Crestron Certified Wire.
- Use Crestron power supplies for Crestron equipment.

# **IM Wiring**

Using a proprietary signal routing solution, RGBHV, audio, power, and control signals are all transported using a single cable solution called iMedia.

The iMedia transport system port is capable of managing computer RGB and audio signals simultaneously through one CresCAT-IM cable, simplifying installations.

Routing CresCAT-IM cable (low-skew CAT5e) is less expensive and a much simpler solution for wiring iMedia systems than routing multi-colored, multi-conductor coax cable. All Crestron products using the iMedia transport system are capable of sending and receiving iMedia signals via CresCAT-IM cable. Installation of any iMedia device is as simple as installing one iMedia cable from output to input. Installations are affordable and fast.

The receiver can accomplish frequency compensation on each input to achieve correct operation. This compensation scheme is effective for CresCAT-IM cables as long as the maximum skew of 15 ns per 100 meters is not exceeded.

**NOTE:** For proper operation and performance of every iMedia system, always use CresCAT-IM cable.

Maximum Resolution and Cable Lengt	<i>laximum</i>	ı Resolutioi	ı and	Cable	Lengti	h
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RESOLUTION	REFRESH RATE (HZ)	PIXEL RATE (MHZ)	PIXEL TIME (NS)	MAX LENGTH (FEET)
VGA	60	25.18	39.7	218.5
(640 X 480)	72	31.50	31.7	174.6
	85	36.00	27.8	152.8
SVGA	56	36.00	27.8	152.8
(800 X 600)	72	50.00	20.0	110.0
	85	56.25	17.8	97.8
XGA	60	65.00	15.4	84.6
(1024 X 768)	70	75.00	13.3	73.3
	85	94.50	10.6	58.2
SXGA	60	108.00	9.3	50.9
(1280 X 1024)	75	135.00	7.4	40.7
	85	157.50	6.3	34.9

(Continued on following page)

RESOLUTION	REFRESH RATE (HZ)	PIXEL RATE (MHZ)	PIXEL TIME (NS)	MAX LENGTH (FEET)
UXGA	60	162.00	6.2	34.0
(1600 X 1200)	70	189.00	5.3	29.1
	85	229.50	4.4	24.0
COMPOSITE VIDEO				218.5

For more information on CresCAT and other wire products, visit the Crestron website (<a href="http://www.crestron.com/downloads/pdf/product line overviews/overview-wire\_and\_cable.pdf">http://www.crestron.com/downloads/pdf/product line overviews/overview-wire\_and\_cable.pdf</a>).

#### Installation

#### Cable Management Assembly

The IM-FTCCV-B is shipped with a cable management assembly that includes a cable management plate, five 6-foot cables, and associated hardware as listed in the following table.

#### Tools Required

- Phillips screwdriver
- Small flat-blade screwdriver (for connecting the VGA cable)

#### Parts Supplied with Cable Management Kit

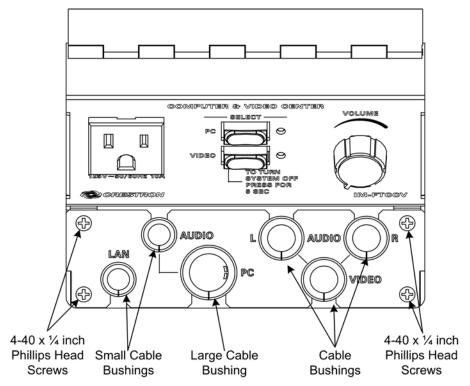
PART DESCRIPTION	QUANTITY
Small Cable Bushing, 5/16 inch ID, 0.5 inch OD	2
Large Cable Bushing, 0.55 inch ID, 0.80 inch OD	1
Cable Bushing, 0.39 inch ID, 0.64 inch OD	3
Cable Support Plate	1
4-40 ¼ inch Phillips Head Screws	4
Computer RGB Cable, VGA to VGA, 6 ft long	1
Computer Audio Cable, 3.5 mm Stereo, 6 ft long	1
Audio Cable, RCA to RCA, 6 ft long	2
Video Cable, RCA to RCA, 6 ft long	1
Tie Wraps	6

The cable support plate must be installed before mounting the IM-FTCCV-B to a surface. The cables are looped through the cable support plate.

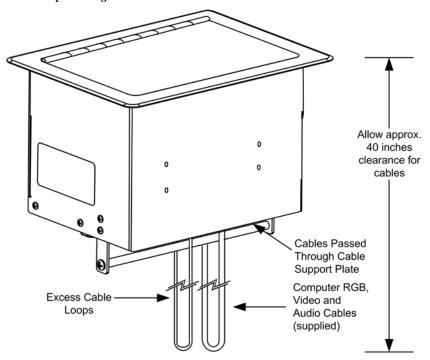
- 1. Place the bushings on the cables (bushings supplied). Use the large bushing for the VGA cable. Use a small bushing for a LAN cable (not supplied).
- 2. Thread the cables through the appropriate slot on the plate.
- 3. Snap the bushings into the plate slots.
- 4. Feed all the excess cable through the opening.
- 5. Attach the plate using the four  $\#4-40 \times 1/4$  black screws.
- Connect the cables to the appropriate connector on the bottom of the IM-FTCCV-B.

7. The cables may be secured to the bottom bar using tie wraps.

#### Cable Plate Installation (IM-FTCCV-B Shown)



#### Cable Loops Through the Cable Plate

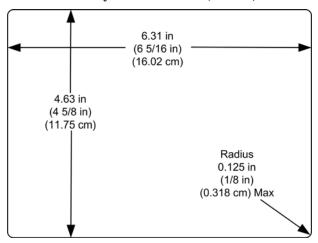


**NOTE:** Ensure that the cables have sufficient clearance to enable smooth movement. Allow approximately 40 inches (102 cm) from the top surface of the FlipTop box mounting to surface.

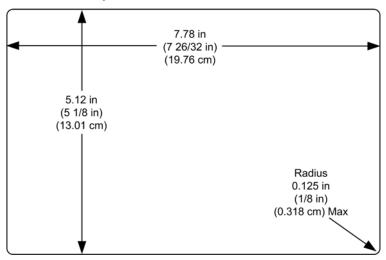
#### **Mounting to Surface**

The IM-FTCCV-B is designed to mount in a horizontal surface, such as a desk top, lectern, or podium. The following diagram illustrates the required opening size to accommodate the IM-FTCCV-B. Use the supplied template to make the cutout.

#### Cutout Dimensions for North American (4010753)



#### Cutout Dimensions for International Model (4010754)



**NOTE**: Before inserting the IM-FTCCV-B in the mounting hole, ensure that all required cables have been installed.

#### Mounting Parts Supplied with the IM-FTCCV-B

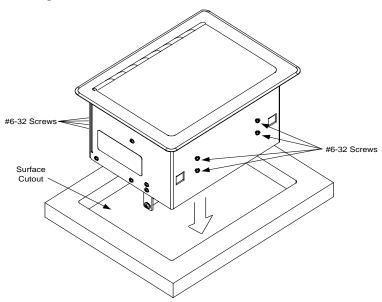
PART DESCRIPTION	QUANTITY
Screw #6-32, Pan Head, Phillips	4
Screw #10-32, Pan Head, Phillips	4
Mounting Bracket	2

1. Install the four supplied #6-32 screws on the front of the unit, but do not tighten (four screws on the rear may already be installed). All eight screws are used to secure the front and rear mounting brackets.

**NOTE:** Some units may not have screws pre-installed in the rear locations, and will instead include a total of eight (rather than four)  $\#6-32 \times 3/16$ " pan head Phillips screws with the other supplied parts. In these instances, be certain to install the 3/16" screws on the rear of the unit.

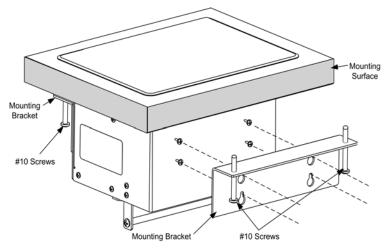
2. Position the IM-FTCCV-B in the mounting hole.

#### Mounting Bracket Screw Locations



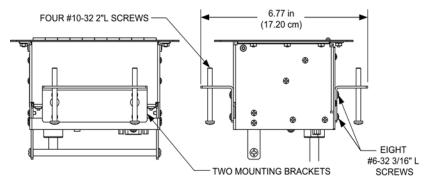
- 3. Install the four #10-32 screws in the mounting brackets (two screws per bracket). Refer to the following diagram.
- 4. Slide the mounting brackets over the #6-32 screws and tighten the #6-32 screws.
- 5. Turn the four #10 screws equally until they contact the underside of the mounting surface.

#### Mounting Bracket Installation

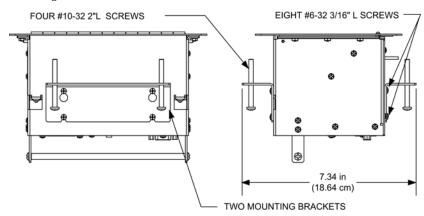


**NOTE:** Do not over-tighten the #10 screws as this may damage the surface and/or the unit.

#### Mounting Brackets Installed – IM-FTCCV-B



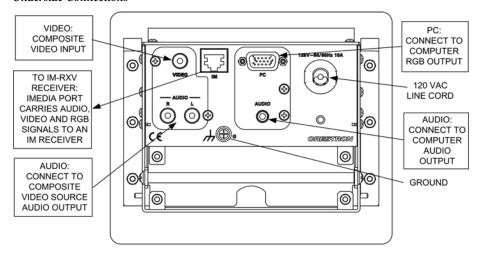
#### Mounting Brackets Installed - IMI-FTCCV-B



# **Hardware Hookup**

Refer to the following hookup diagram and, aside from attaching power last, complete the connections in any order.

#### **Underside Connections**



Shown with North American Model Receptacle. International model installed with IEC-320 Electrical Appliance Coupler.

# **Topside Connections** AUDIO: AUDIO: CONNECT TO CONNECT TO PC COMPOSITE VIDEO AUDIO OUTPUT AUDIO OUTPUT PC: VIDEO: CONNECT TO CONNECT TO COMPOSITE COMPUTER VIDEO SOURCE **RGB OUTPUT**

# **System Configuration**

Refer to the latest version of the IM-RXV1 & IM-RXV3 Operations and Installation Guide (Doc. 6384), available from the Crestron website (http://www.crestron.com/manuals) for detailed IM system configuration instructions.

# **Operation**

The IM-FTCCV-B can be used to turn a system on or off, select a source, or adjust volume.

Turn on the System

Press the **PC** button to turn on the system with the PC signals routed to the IM receiver or press the **VIDEO** button to turn on the system with the video signals routed to the IM receiver. The associated LED will light to indicate the selected source.

Select a Source

Press the **PC** button to route PC signals to the IM receiver or press the **VIDEO** button to route video signals to the IM receiver. The associated LED will light to indicate the selected source.

Adjust Volume

Turn the volume knob clockwise to raise the volume of the selected input; turn counterclockwise to lower the volume of the selected input.

Turn off the System

Press and hold the selected source button for five seconds. The source button LED will flash and then turn off.

# **Problem Solving**

# **Troubleshooting**

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

IM-FTCCV-B Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Source LED does not illuminate.	Not receiving power.	Verify that the IM cable is connected to the IM-FTCCV-B and the IM-FTCCV-B is connected to the IM receiver.
	Incorrect power supply.	Only use Crestron power supplies.
	Source is not selected.	Push a source button to select a source.
No video output displayed.	Incorrect cable	Verify computer cable connection.
	connection.	Verify video cable connection.
		Verify IM output cable connection is secure.
No audio output.	Incorrect cable connection.	Verify computer audio cable connection.
		Verify video input's audio cable connection.
Video from RGB source is garbled or no output.	Incorrect cable connections.	Verify 15-pin computer cable connection. Verify IM output cable connections.
		Verify maximum IM cable length. Adjust delay on IM receiver.
Button does not function when pressed.	Incorrect cable connection.	Verify that the IM output cable connection from the IM-FTCCV-B to the IM receiver is secure.
Other functions operate, but does not control the projector.	Incorrect connections to projector.	Verify cable wiring and connections between receiver and projector.

#### **Reference Documents**

The latest version of all documents mentioned within the guide can be obtained from the Crestron website (<a href="http://www.crestron.com/manuals">http://www.crestron.com/manuals</a>). This link will provide a list of product manuals arranged in alphabetical order by model number.

List of Related Reference Documents

#### **DOCUMENT TITLE**

IM-RXV1 & IM-RXV3 IM Receiver/Processor with Video

### **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 (<a href="www.crestron.com/offices">www.crestron.com/offices</a>) for a listing of Crestron worldwide offices.

You can also log onto the online help section of the Crestron website (<a href="www.crestron.com/onlinehelp">www.crestron.com/onlinehelp</a>) 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 IM-FTCCV-B, 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.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.

# **Appendix: International Receptacles**

PART NUMBER	DESCRIPTION	COUNTRIES
6003287 6501271	PWR-AU-B POWER RECEPTACLE, AUSTRALIA, 250V, 10A, BLK	Australia, Fiji, New Zealand, Papua New Guinea
6003288 6501272	PWR-EU-B POWER RECEPTACLE, EUROPE "SCHUKO", 250V, 16A, BLK	Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Brunei, Bulgaria, Burundi, Cape Verde, Chad, Croatia, Czech Republic, Egypt, Eritrea, Finland, Georgia, Germany, Greece, Greenland, Guinea-Bissau, Hungary, Iceland, Jordan, Kazakhstan, Korea (South), Kyrgyzstan, Liechtenstein, Luxemburg, Macedonia, Monaco, Montserrat, Morocco, Mozambique, Netherlands, Netherlands Antilles, New Caledonia, Norway, Poland, Portugal, Reunion, Romania, Russia, San Marino, Senegal, Serbia and Montenegro, Slovenia, Spain, Suriname, Sweden, Syria, Tunisia, Turkey, Ukraine, Vietnam
6003289 6500643	PWR-IT-B POWER RECEPTACLE, ITALY, 250V, 16A, BLK	Chile, Ethiopia, Italy, Libya
6003290 6501273	PWR-UK- POWER RECEPTACLE, UK, 250V, 13A, BLK	Anguilla, Bahrain, Botswana, Burma (Myanmar), Cyprus, Dominica, Falkland Islands (Malvinas), Gambia, Ghana, Gibraltar, Hong Kong, Iraq, Ireland, Kenya, Kuwait, Liberia, Malawi, Malaysia, Malta, Mauritius, Nigeria, Northern Ireland, Oman, Qatar, St. Kits-Nevis, St. Lucia, St. Vincent, Seychelles, Sierra Leone, Singapore, Sudan, Tanzania, Uganda, United Arab Emirates, United Kingdom, Yemen, Zambia, Zimbabwe
6003291 6501274	PWR-FR-B POWER RECEPTACLE, FRANCE, 250V, 16A, BLK	Algeria, Belgium, Cameroon, Central African Republic, Comoros, Congo Democratic Republic, Djibouti, France, French Guiana, Gabon, Guadeloupe, Guinea, Indonesia, Madagascar, Mali, Martinique, Togo

**NOTE:** Installation instructions are included with all receptacles listed above.

# **Return and Warranty Policies**

#### Merchandise Returns / Repair Service

- No merchandise may be returned for credit, exchange or service without prior authorization
  from CRESTRON. To obtain warranty service for CRESTRON products, contact an
  authorized CRESTRON dealer. Only authorized CRESTRON dealers may 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 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/XP/Vista and WindowsNT/2000 are trademarks of Microsoft Corporation.

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