Crestron **CNX-ASBK**
Audio Switcher Bussing Kit
Operations & Installation Guide

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Audio Switcher Bussing Kit: CNX-ASBK

Description

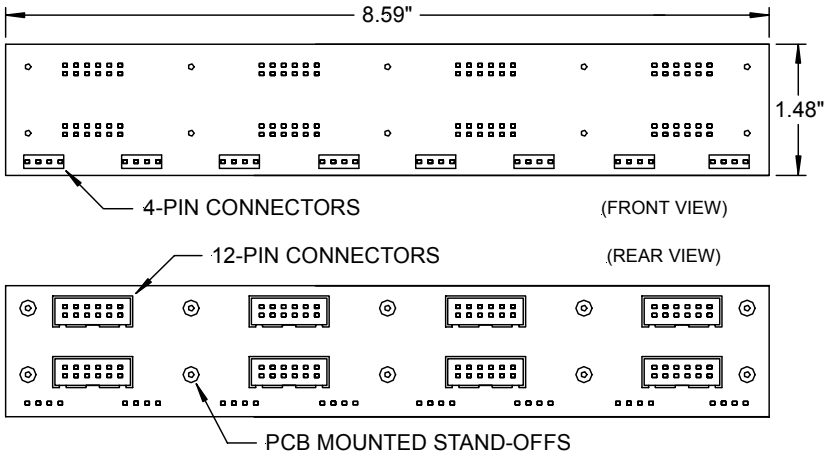
Functional Description

The Audio Switcher Bussing Kit, CNX-ASBK, is used to daisy-chain CNX-PAD8s to expand the number of room outputs. Each CNX-PAD8 controls up to eight audio sources and distributes the audio to up to eight room amplifiers (not supplied). A maximum of four CNX-PAD8s may be daisy-chained together to provide up to 32 room outputs. The CNX-ASBK provides for the additional outputs by bussing up to eight inputs while preventing extreme impedance loading. One kit is needed for each CNX-PAD8 that is to be daisy-chained.

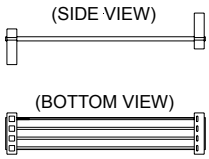
Physical Description

Each CNX-ASBK consists of one Point Cross Loop Printed Circuit Board (PCB) Assembly, eight 4-conductor Cross Point PCB to Processor PCB Cable Assemblies, and four 12-conductor Bussing Cable Assemblies. Refer to the physical views shown after this paragraph.

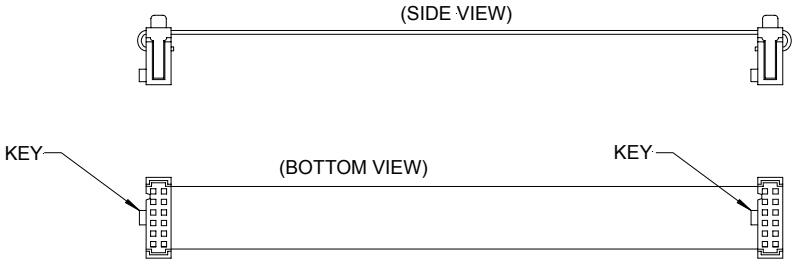
PCB Assembly (Front and Rear View)



PCB to PCB Cable (2-inch, 4-conductor)



Bussing Cable (6-inch, 12-conductor)



Identity Codes of the CNX-PAD8s

Every equipment and user interface within the network requires a unique identity code (Net ID). These codes are recognized by a two-digit hexadecimal number from 03 to FE. The Net ID of the unit must match an ID code specified in the SIMPL Windows program. The Net ID of CNX-PAD8s is factory set to 44. The Net IDs of each of the daisy-chained CNX-PAD8s must be unique and changed from a PC via VisionTools™ Pro-e (VT Pro-e) or SIMPL Windows.

The method for changing the unit's Net ID is identical regardless of the software chosen. Verify that the control system software is running and complete the following steps to change the Net ID:

1. Disconnect all network devices from the control system.
2. Attach one of the CNX-PAD8s that needs to have its Net ID changed to the control system.
3. Select **Tools | Viewport** to open "Crestron Viewport" dialog box.
4. Select **Functions | Set Network ID**. The software checks the baud rate and then opens the "Set Network ID" dialog box.
5. The list of current network devices is normally shown in the dialog box. Highlight the CNX-PAD8.
6. The Net ID of the CNX-PAD8 (default is 44) appears in the box below the list. Use the scroll arrow to assign another Net ID.
7. When the newly assigned Net ID appears, select the **Set ID** button to initiate the change.
8. The software responds with a successful message to confirm the new Net ID.
9. To verify this procedure, select **Diagnostics | Report Network Devices**. Confirm that the CNX-PAD8 has a new Net ID code.
10. Repeat steps 2 - 10 of this procedure for each CNX-PAD8 that needs its Net ID changed.
11. Reconnect other network devices that were disconnected in step 1.

Installing CNX-ASBKs into CNX-PAD8s

One CNX-ASBK is required for each CNX-PAD8 that is to be daisy-chained. The only tools required are a Phillips tip screwdriver and a grounding strap. Follow the assembly procedure and illustrations that begin after this paragraph.

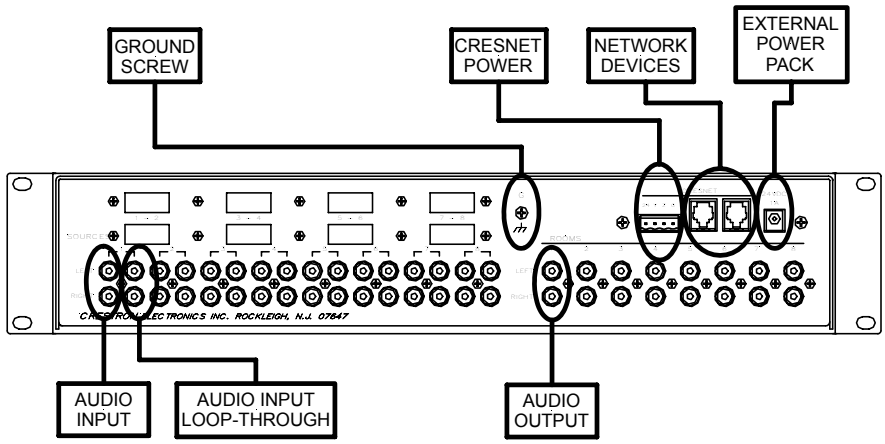
CAUTION: The CNX-PAD8s must be opened to install the CNX-ASBK. Observe precautions for handling electrostatic sensitive devices (ESDs).

NOTE: To daisy-chain CNX-PAD8s, all of the units must be stacked directly above the other.

NOTE: This procedure assumes that one CNX-PAD8 is already rack mounted in a network system. If this is a totally new installation, start on step 7 of this procedure.

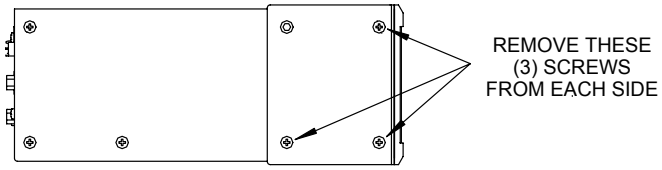
1. If the back panel of the CNX-PAD8 is accessible, remove the rack mounting screws. If the back panel is NOT accessible, remove the screws and pull CNX-PAD8 partially out of the rack to gain access.
2. At the rear of the CNX-PAD8, disconnect the electrical power (4-pin Cresnet® power connector and/or the external power pack).
3. Note (or label) the position of each 6-pin RJ-11 network device cable and disconnect.
4. Note (or label) the position of audio output, audio input loop-through, and audio input RCA cables and disconnect each cable.
5. Remove the ground wire from the CNX-PAD8 ground screw.

Rear View of CNX-PAD8



6. Remove the mounting ears from each side of the CNX-PAD8.

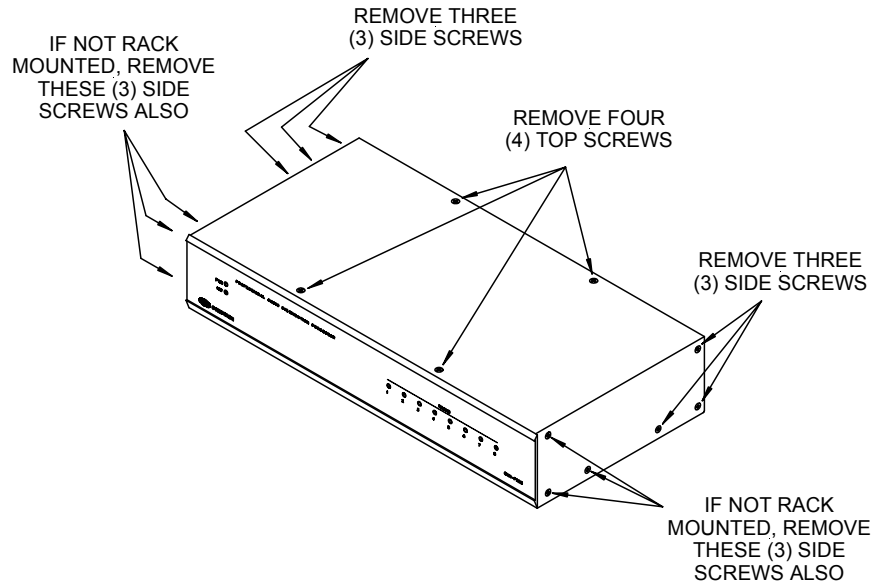
Remove the Mounting Ears



NOTE: The remaining steps of this procedure describe the installation of one CNX-ASBK into one CNX-PAD8. The steps apply to all of the CNX-PAD8s to be daisy-chained and may be performed in an "assembly line" fashion on all of the CNX-PAD8s at the same time.

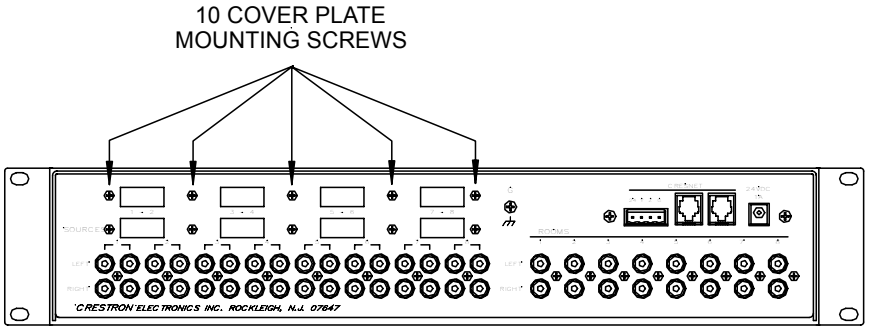
7. Place the CNX-PAD8 right-side-up on a flat surface.
8. Remove the cover screws from the top and sides of the CNX-PAD8.

Remove the Cover Screws



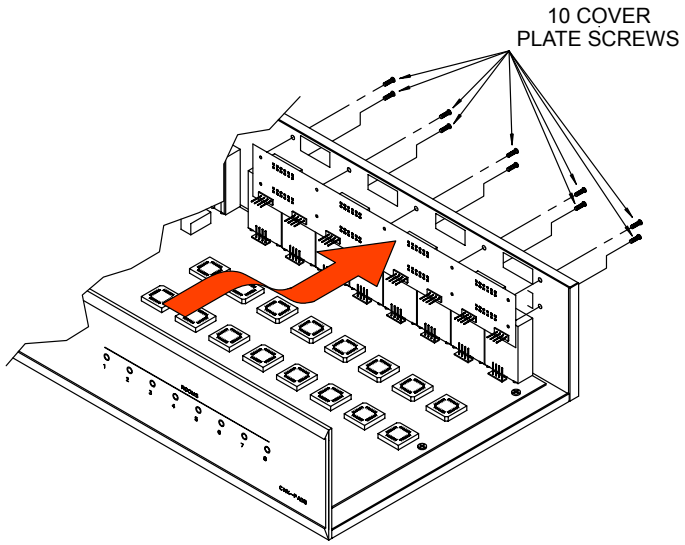
9. Lift and remove the CNX-PAD8 top cover.
10. From the rear of the CNX-PAD8, remove the 10 back panel cover plate mounting screws and remove the cover plate.

Back Panel Cover Plate Mounting Screws



11. Making sure that the rear of the PCB assembly faces the rear of the CNX-PAD8, insert the PCB into the position that was occupied by the back panel cover plate as shown after this step. Install the PCB with the 10 cover plate screws that were removed.

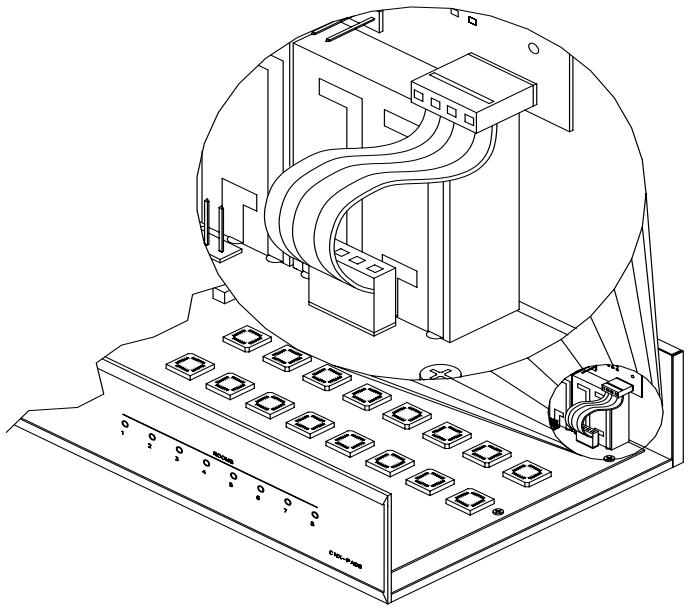
Install the PCB Assembly



NOTE: DO NOT twist the cables during installation. The cables are custom designed and will fit perfectly. If the cable does not fit correctly, switch the cable ends from the PCB to the CNX-PAD8 processor PCB. DO NOT force the connector onto pins.

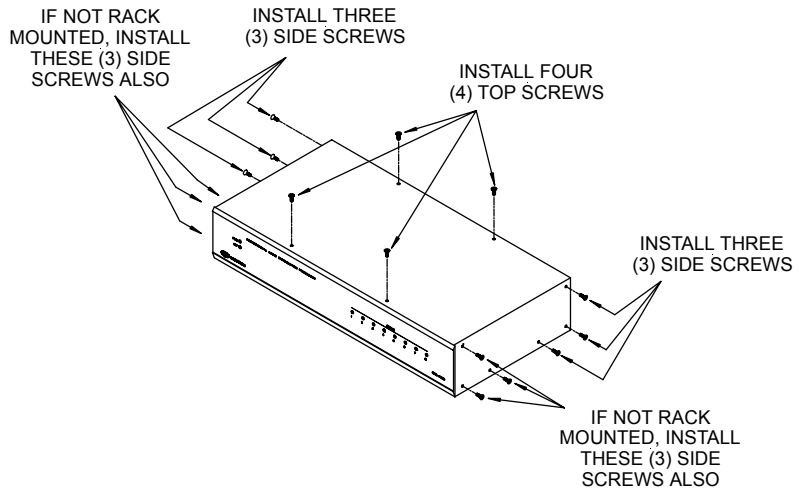
12. Hold one end of the PCB to PCB cable (2-inch, 4-pin) toward the front of the CNX-PAD8. Carefully align and insert the other connector onto the connector on CNX-PAD8 processor PCB.
13. Curl the cable directly above and insert the other connector onto the pins of the PCB as shown.

Install the PCB to PCB Cables



14. Repeat the previous two steps for all of the remaining PCB to PCB cables.
15. Install the rack mounting ears and then the remaining cover screws to 11-inch/pounds.

Install the CNX-PAD8 Cover

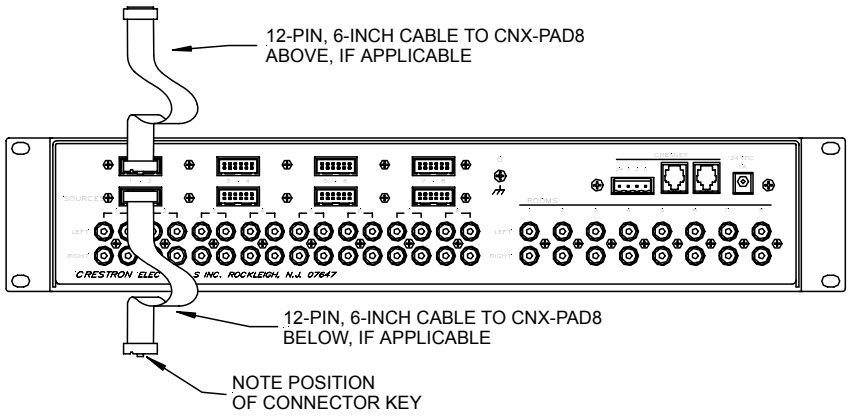


16. If this procedure has been performed on only one CNX-PAD8, repeat this procedure from step 7 for all of the CNX-PAD8s to be daisy-chained.
17. If the back panels of the CNX-PAD8s will be accessible when mounted in the rack, install the CNX-PAD8s. If the back panels will NOT be accessible, hookup all cables before installing into rack.

NOTE: DO NOT twist the cables during installation. The cables are custom designed and will fit perfectly. If the cable does not fit correctly, switch the cable ends from one CNX-PAD8 to another. DO NOT force the connector onto pins.

18. Note the position of the connector keys and install the bussing cables (6-inch, 12-conductor) from CNX-PAD8 to CNX-PAD8. Shown below are the bussing cables for audio sources 1 – 2. Connect the cables as required per custom installation.

Install the Bussing Cables



19. Daisy-chain the ground wire to each CNX-PAD8.

NOTE: Additional audio patch cords are not required. The bussing cables provide parallel audio inputs to all of the CNX-PAD8s.

20. Connect the audio RCA cables to the audio inputs and/or audio input loop-through into their original positions of the original or "primary" CNX-PAD8.
21. If the configuration of the original CNX-PAD room outputs is to be kept, reconnect the audio output cables to their original positions. Connect the audio outputs of the each CNX-PAD8 to their designated room amplifiers.
22. Connect each 6-pin RJ-11 network device cable to its original position.
23. Using network device cables (not supplied), daisy-chain each CNX-PAD8 to each other or the control system.
24. At the rear of the CNX-PAD8s, connect the electrical power (4-pin Cresnet power connectors and/or the external power packs).

Industry Compliance

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

Programming Daisy-Chained CNX-PAD8s

The CNX-PAD8s can be programmed to fit any customized installation. Daisy-chained CNX-PAD8s are programmed individually by using their unique Net IDs. Refer to the CNX-PAD8 Operations Guide (latest revision of Doc. 8137) for further information.

Problem Solving

Troubleshooting

The table below provides corrective action for possible trouble situations of the daisy-chained CNX-PAD8s. If further assistance is required, refer to the CNX-PAD8 Operations Guide or please contact a Crestron customer service representative.

Daisy-Chained CNX-PAD8 Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
No audio at all CNX-PAD8s.	Audio source cables not connected.	Verify that audio source cables plugged into original or "primary" CNX-PAD8 are secure.
One or more (but not all) CNX-PAD8s not distributing audio.	Bussing cable(s) or pin(s) damaged or not connected properly.	Check pins and temporarily swap bussing cable(s). Replace cable(s) if damaged.
	PCB to PCB cable(s) or pin(s) damaged or not connected properly.	Check pins and temporarily swap PCB to PCB cable(s). Replace cable(s) if damaged.
Yellow NET LED on the front panel of a daisy-chained CNX-PAD8 does not illuminate.	Improper NET ID.	Verify that CNX-PAD8 NET ID matches NET ID software program. Refer to "Identity Codes of the CNX-PAD8s".

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 worldwide offices.

You can also log onto the online 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 adds improvements to the CNX-ASBK, 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 (www.crestron.com) periodically for manual update availability and its relevance. Updates are available from the Download | Product Manuals section and are identified as an “Addendum” in the Download column.

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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