

Installation Guide for the AV Bridge 2x1 Presentation Switcher

Overview

This guide provides information about the AV Bridge 2x1 presentation switcher:

- 999-8250-000 – North America
- 999-8250-001 – Europe/UK
- 999-8250-009 – Australia/New Zealand



About this Guide

This guide covers:

- Tips for a successful installation
- Connection diagram
- Equipment power-on

Complete product information is available in the **Complete Manual for the AV Bridge 2x1 Presentation Switcher**.

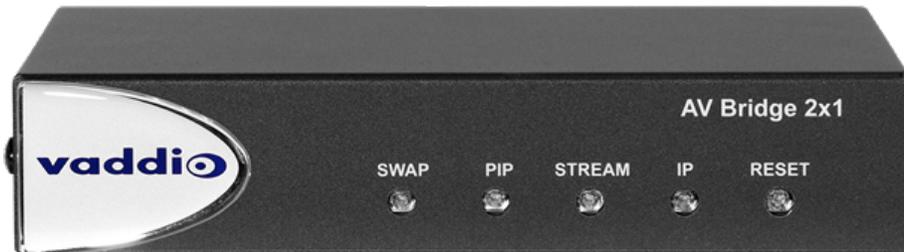
Features

- The perfect solution for rooms where you only need two cameras: 2x1 video switcher bridges two HDMI cameras or other video sources into a soft-client conferencing or IP streaming environment
- Simultaneous USB 3.0 and IP streaming (RTSP or RTMP), video and audio
- Delivers IP stream resolution up to 1080p/30 and USB stream resolution up to 1080p/60
- Supports HDCP
- Multiple audio formats: USB and IP stream, analog, HDMI, Dante® networked audio
- Phantom power to microphones
- Connections for up to five external trigger devices

A Quick Look at the AV Bridge Mini

Physical features of the device – controls, status lights, and connectors.

Front Panel



- **Swap** button – Changes the selected input. If the PIP is turned on, this also exchanges the PIP and main image on the HDMI output.
- **PIP** button – Toggles the PIP on or off. Illuminated when the PIP is on.
- **Stream** button – Toggles the IP stream on or off. Illuminated when the stream is available.
- **IP** button – Press to display the device's IP address in the streams and video output, or to clear the information display. Illuminated when the IP address information is displayed. When the device is in standby, press to return to operation.
- **Reset** button – Press to reboot the device. Illuminated during normal operation. Blinks to indicate an error.
- Dimensionally enhanced puffy badge – We have spared no expense to provide a lovely, dimensionally enhanced logo badge to elevate your visual experience. It's quite shiny. We hope you'll enjoy it.

Connector Panel



- **Network/PoE+** – Power, control via web interface, Dante audio, and IP streaming.
- **USB 3.0** – Uncompressed video output with PCM audio for conferencing applications.
- **RS-232** – Connect to an optional third-party control system.
- **Trigger** – Connect up to five trigger devices.
- **HDMI In 1** and **HDMI In 2** – HDMI video (and audio, if available) from the connected camera or other HDMI source.
- **HDMI Out** – Output video (and audio, if available) from the selected input.
- **Audio In Mic/Line 1** and **Mic/Line 2** – Microphone or other audio inputs. Can be configured to supply phantom power.
- **Audio Out Line 1** and **Line 2** – Far-end audio from conferencing application or as configured in the audio matrix.

Installation

This section covers how to install and connect the product. It also provides safety information and other guidance related to installing the product.

Note

This product is intended for installation and use only in environments where all RS-232 and PoE/PoE+ connections originate within the building.

Or in UL's preferred phrasing...

PoE-type networks connected to this equipment are for intra-building use only and should not be connected to lines that run outside the building in which this product is located.

Don't Void Your Warranty!

Caution

This product is for indoor use. Do not install it outdoors or in a humid environment without the appropriate protective enclosure. Do not allow it to come into contact with any liquid.

Do not install or operate this product if it has been dropped, damaged, or exposed to liquids. If any of these things happen, return it to Vaddio for safety and functional testing.

Cabling Notes

Best practices for making cables:

- Use Cat-5e or better cable. We recommend shielded cabling if the cables will be coiled, run tightly with other cables, or placed close to sources of electromagnetic interference such as power lines or fluorescent light fixtures.
- Use high-quality standard RJ-45 connectors; 568B termination recommended.
- Use a high-quality crimping tool.

Caution

When building cables for Vaddio products, do not use pass-through RJ-45 connectors. If they are crimped incorrectly, they can cause intermittent connections and degrade signal quality. Incorrectly crimped pass-through connectors can also damage the connectors on the product, which will void your warranty.



Intact – will make reliable contact with cable connector



Damaged – Bent contact fingers will NOT make reliable contact with cable connector

Caution

Check your cables. Connecting a cable to the wrong port or using the wrong pin-out can result in equipment damage and will void the warranty.



Pro Tip

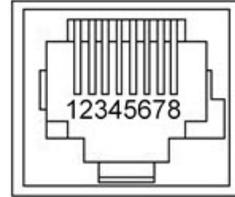
To prevent tragic mishaps, label both ends of every cable.

RS-232 Serial Communication Settings and Port Pin-outs

The RS-232 serial port (color-coded blue) on the back panel connects to a third-party controller.

RS-232 connector pin-out:

- Pin 1: Not used
- Pin 2: Not used
- Pin 3: Not used
- Pin 4: Not used
- Pin 5: Not used
- Pin 6: GND
- Pin 7: RXD
- Pin 8: TXD



Communication parameters:

Parameter	Value
Communication Speed	38400 bps
Start bits	1
Stop bits	1
Data bits	8
Parity	None
Flow control	None

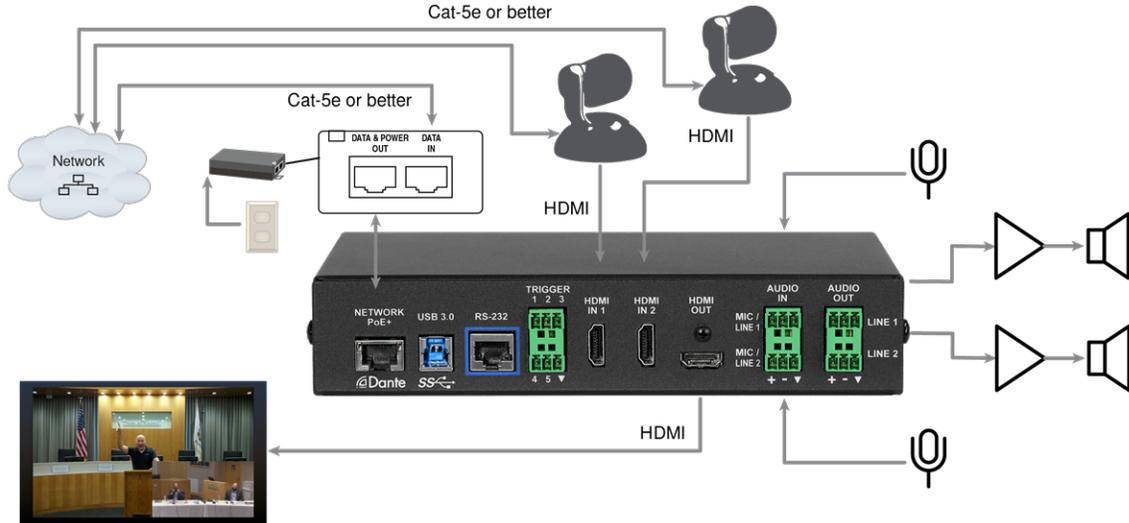
Caution

Check your cables. Connecting a cable to the wrong port or using the wrong pin-out can result in equipment damage and will void the warranty.

Depending on the equipment connected to the RS-232 port, you may need a null-modem (crossover) cable.

Basic Connections

This diagram shows a basic installation. Cameras or other HDMI sources may be used for both HDMI inputs. The AV Bridge 2x1 does not power the speaker(s). The HDMI output displays video from the selected source; the picture-in-picture (PIP) is from the video source not currently selected – a camera, laptop, or other video source.

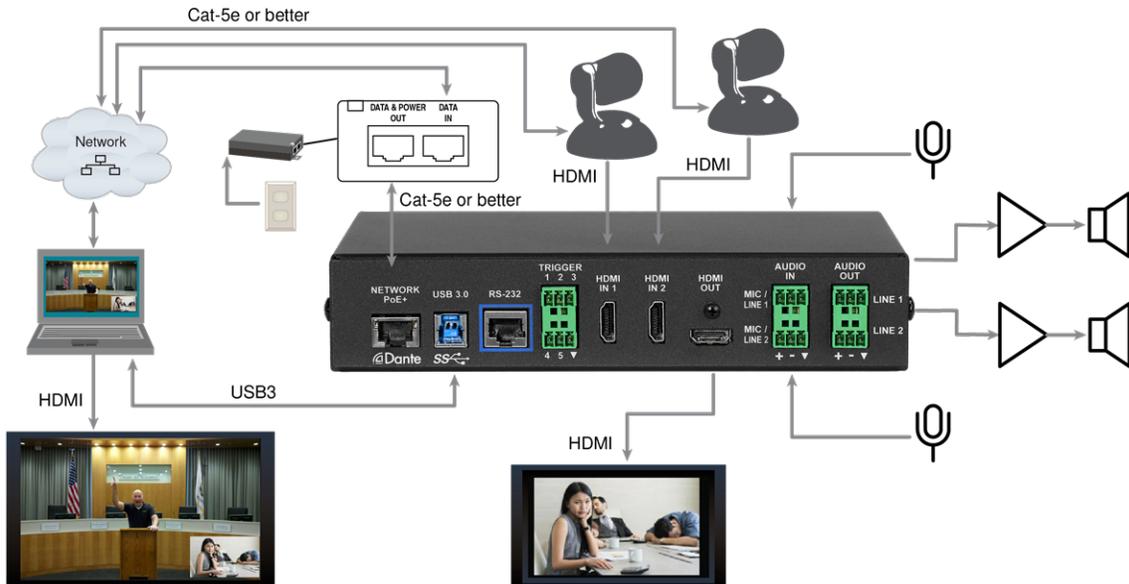


Basic Connections for Conferencing

Add a laptop and a second HDMI display for conferencing.

In this diagram, the laptop connects to the room's main display, which shows the far-end video from the soft conferencing application on the laptop. (In contrast to the previous diagram, our friend at the podium is on the far end of the call.) The soft conferencing application manages the PIP(s) in this image. The display connected to the HDMI output shows near-end video.

The HDMI output from the AV Bridge 2x1 goes to a "confidence display" showing near-end video only. The image on this display is used as the near-end PIP on the main display.



Working with Dante Audio Devices

The AV Bridge 2x1 presentation switcher is compatible with Dante audio products. These products connect to the AV Bridge 2x1 over the network.

To manage Dante devices, you will need to download and install the free Dante Controller application from Audinate Pty. Ltd.:

www.audinate.com/products/software/dante-controller

Things to know about Dante Controller:

- Dante Controller does not work over Wi-Fi or across subnets. Your computer must be on the same subnet as the Dante devices you need to work with.
- Device names and IP addresses shown in Dante Controller do not match the corresponding information shown in Vaddio devices' web interfaces.
- Dante Controller allows you to rename devices, so you can make their identifying labels match what's displayed in the Vaddio web interface.

Audinate provides information, training, and documentation for Dante technology on their website.

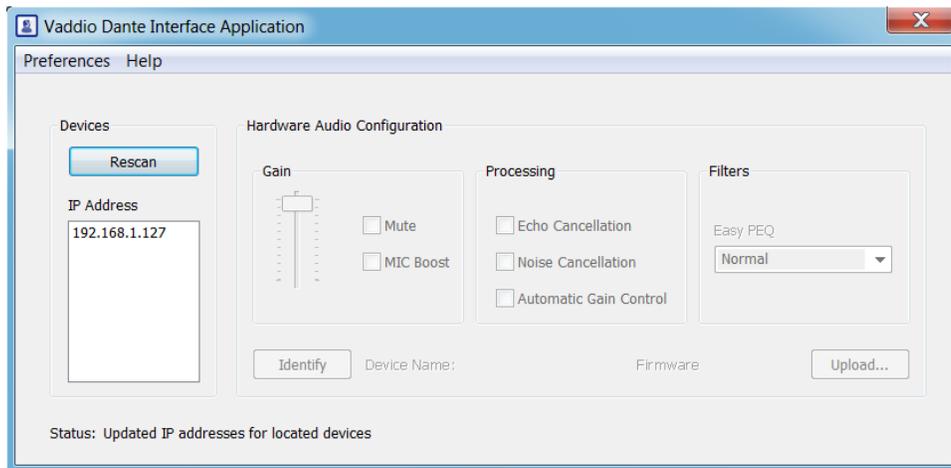
EasyIP and Dante technologies use differing communication protocols. Because of this, Vaddio host devices can provide only limited controls for networked audio peripherals, and the Vaddio Deployment Tool does not recognize them as Vaddio devices. To access the full range of controls for Vaddio's EasyIP microphones and other networked audio devices, use the free Vaddio Dante Interface Application. This tool is available as a free download from the Vaddio tools page:

https://www.legrandav.com/tools_and_training/tools/vaddio_tools.

The Vaddio Dante Interface Application provides access to adjustments that are not available from the host device's web interface. In the event that Vaddio releases an update to the microphone firmware, the Vaddio Dante Interface Application offers firmware update capability.

Things to know about the Vaddio Dante Interface Application:

- The application only detects EasyIP audio peripherals.
- The application does not scan across subnets. Your computer must be on the same subnet as the devices.



Powering Up

Power up the AV Bridge 2x1 and the connected equipment at the same time, or power up the connected equipment before you power up the AV Bridge 2x1.

Troubleshooting and Care

If the equipment does not power up as expected, use this table to determine whether to call Vaddio Technical Support.

Note

If the equipment behaves in a way that suggests even a remote possibility of a bad cable, please try a known good cable with the same pin-out. Factory-made cables can be defective. Cables can appear to be good but only work part of the time. A cable may pass a standard continuity check but be unable to pass enough power to the connected device. Crimping tools can crimp unevenly, contacts can break internally, and individual conductors in the cable can break inside the jacketing material. Any of these can result in a cable that passes a continuity check but does not work reliably.

(The author would like to confess having made more than a few almost-good cables. It happens.)

Power Issues

What is it doing?	Possible causes	Check and correct
Nothing. The buttons do not light up. 	Power is not connected.	Check the connections from the wall outlet to the PoE+ power injector and from the power injector to the device.
	The wall outlet is not active. (Check by finding out if it powers something else, such as a laptop or phone charger.)	Use a different outlet.
	The device or its power injector is bad.	Contact your reseller or Vaddio Technical Support.
A connected microphone is not working.	Phantom power is not enabled.	If the microphone uses phantom power, this needs to be enabled in the administrative web interface.
	The cable is bad.	Check using a known good cable.
	There is a problem with the microphone.	Check using a different microphone.
A connected camera is not working.	Check the camera's power connection. Refer to the camera's manual for detailed troubleshooting information.	

Operation, Storage, and Care

For smears or smudges on the product, wipe with a clean, soft cloth. Do not use any abrasive chemicals.

Keep this device away from food and liquids.

Do not operate or store the device under any of the following conditions:

- Temperatures above 40°C (104°F) or below 0°C (32°F)
- High humidity, condensing or wet environments
- Inclement weather
- Severe vibration
- In any mode of transportation with Tom Hanks
- Dry environments with an excess of static discharge

Do not attempt to take this product apart. There are no user-serviceable components inside.

Vaddio is a brand of Legrand AV Inc. · www.legrandav.com · Phone 800.572.2011 / +1.763.971.4400 · Fax +1.763.971.4464 · Email av.vaddio.support@legrand.com ·

©2021 Legrand AV Inc.

Vaddio is a registered trademark of Legrand AV Inc. All other brand names or marks are used for identification purposes and are trademarks of their respective owners. All patents are protected under existing designations. Other patents pending.

A brand of  legrand®

Commercial AV Brands Chief | Da-Lite | Middle Atlantic | Projecta | Vaddio