Extron PVCA 452 PlenumVault Direct View System User Guide

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Contents

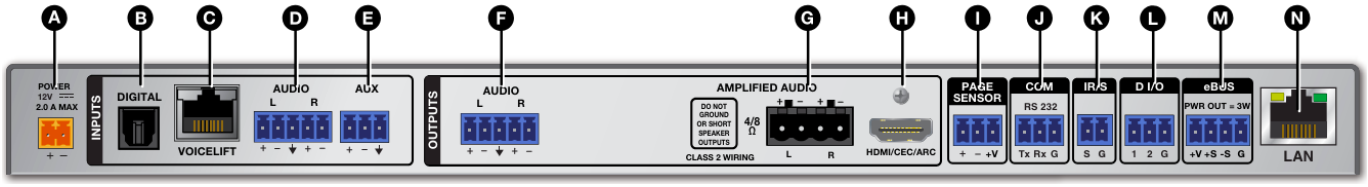
IMPORTANT NOTE:

Go to www.extron.com for the complete user guide, installation instructions, and specifications before connecting the product to the power source.

The PVCA 452 is an audio and Voice Lift amplifier designed for classroom applications. It features an integrated high performance control processor for centralized AV control and a powerful 2-channel 50W amplifier. The PVCA 452 accepts analog and digital audio signals, and includes dedicated ports for connecting the Voice lift Pro system and optional Page Sensor unit for facility communications

NOTE: For full installation and operation details, see the PVCA 452 User Guide, available at www.extron.com.

Rear Panel Features and Cabling



A Power input
B TOSLINK fiber optic port
◉ Voice Lift microphone port
D Stereo analog audio input
E Aux mono audio input
F Line audio output
G Amplified audio output
H HDMI/CEC/ARC
I Page sensor port
J RS-232 COM port
K IR/Serial port
L Digital Input/output port
M rebus port
N LAN port

Inputs

NOTE: The audio input sources (TOSLINK or analog stereo input) are mixed with Voice Lift and aux audio inputs. The TOSLINK and stereo analog audio inputs are selectable (not simultaneously mixed). The default mode is “Autos itch” which automatically switches between the two inputs upon signal detection. The 5-pole analog stereo input has priority over TOSLINK

Power input — Connect the provided power supply to this 2-pole captive screw connector. Wire the connector as shown at right.

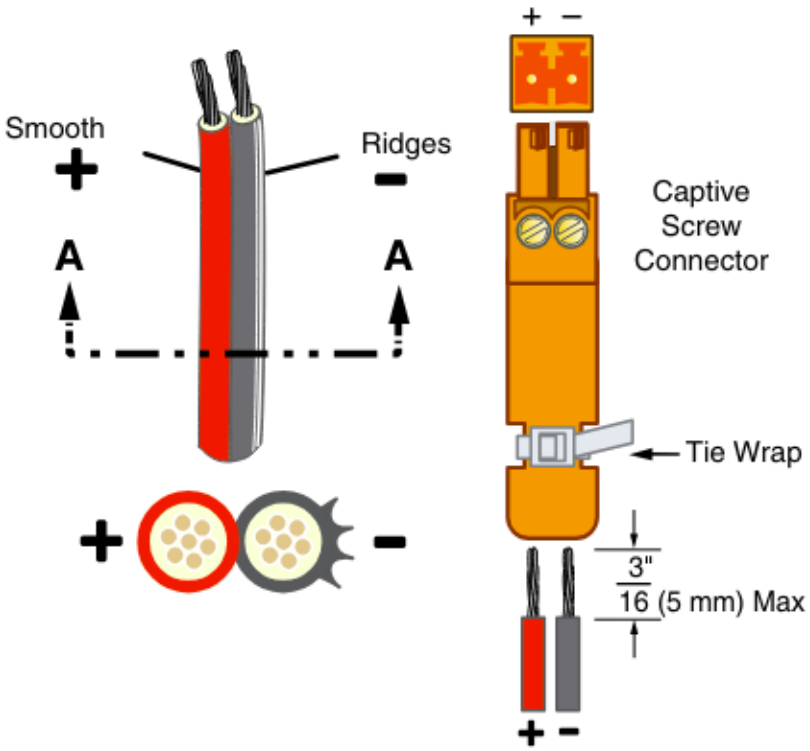
ATTENTION:

- Do not connect the power supply before reading the Attention in the Power Supply section of the PVCA 452 User Guide.
- Ne branches pas la source alimentation externs Avant d’avoir lug les misses eon grade dams la section « Power Supply » du PVCA 452 User Guide.

NOTE: Use only the 12 V, 4.2 A power supply supplied with this amplifier. The PVCA 452 power supply can support a typical system (for example, a PVCA 452, 2 or 4 speakers, an EBP 100, and a Voice Lift Pro Microphone system).

SECTION A–A

Power Supply Output Cord



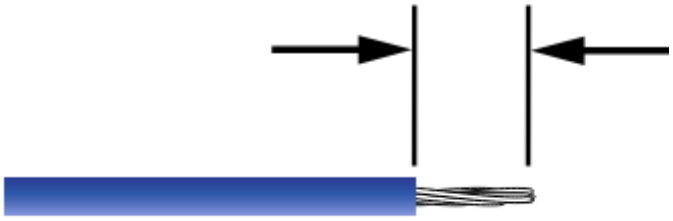
TOSLINK fiber optic port — Connect a PCM/LPCM 2-Channel audio source to this TOSLINK connector using a fiber optic digital audio cable.**Voice Lift microphone port** — This RJ45 jack is dedicated for use with the optional VLR 302 receiver for integration of a Voice Lift Pro Microphone system (see the Voice Lift Pro Installation Guide supplied with the device to install the Voice Lift Pro system).

VLR 302 Receiver **PVCA 452**

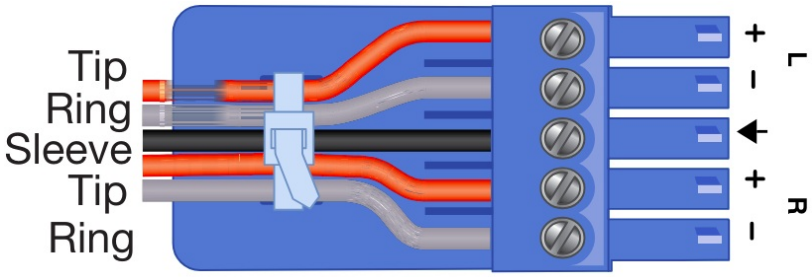
Stereo Analog Audio Input — Connect a cable from the source, such as the audio output from a display, switcher, or MP3 player, to this 5-pole captive screw connector. It can be wired as balanced or unbalanced as shown below.

Audio Input

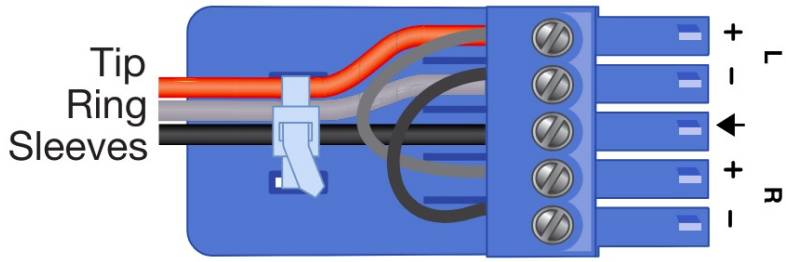
Do not tin the wires!



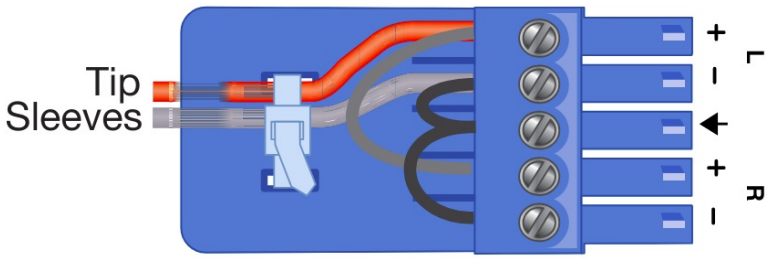
Balanced Audio Input



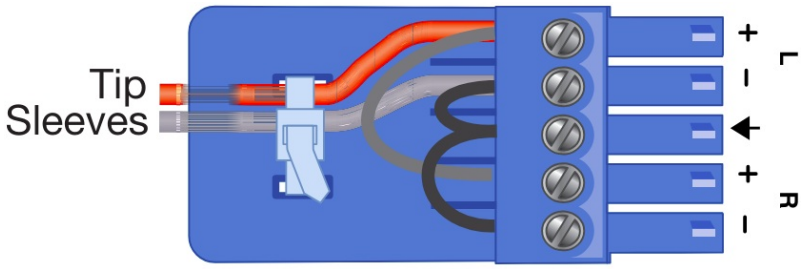
Balanced Mono Input
high impedance)



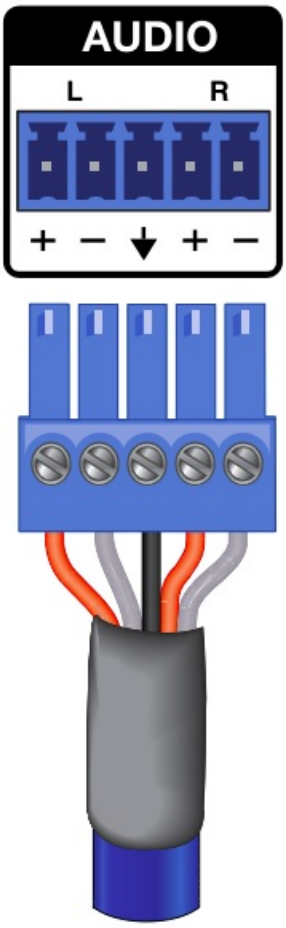
Unbalanced Stereo Input



Unbalanced Mono Input

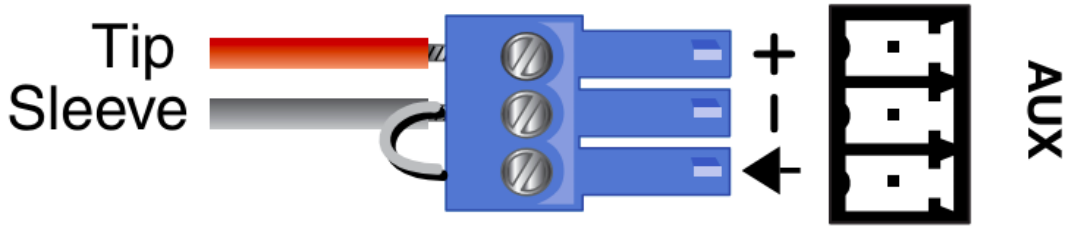


Audio Input

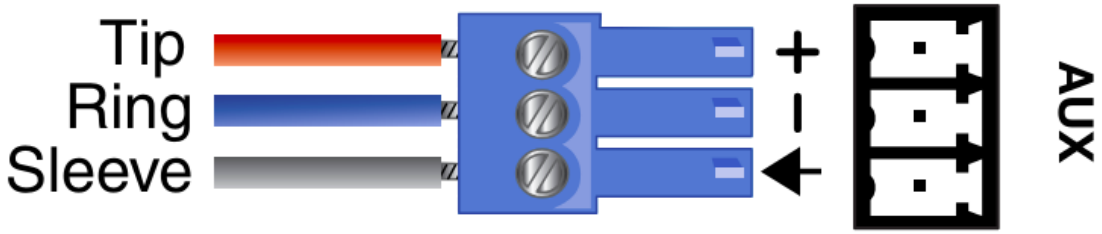


Aux mono audio input — Connect an auxiliary audio device to this 3.5 mm captive screw 3-pole connector for dedicated mono audio only input. It can be wired as balanced or unbalanced (see wiring diagram below).

Aux Unbalanced Input Wiring



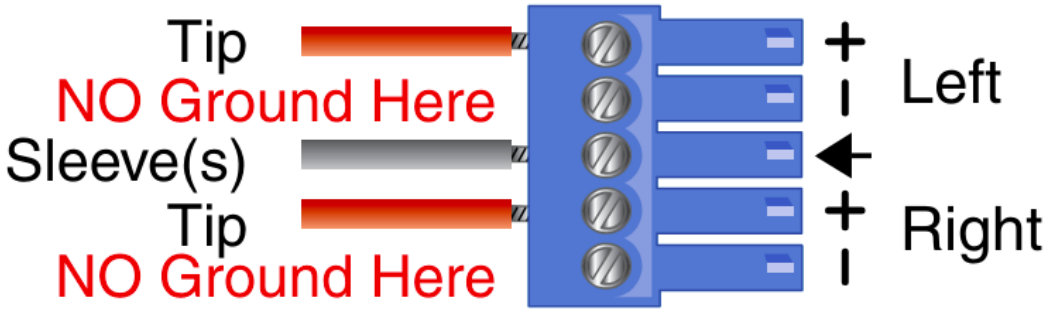
Aux Balanced Input Wiring



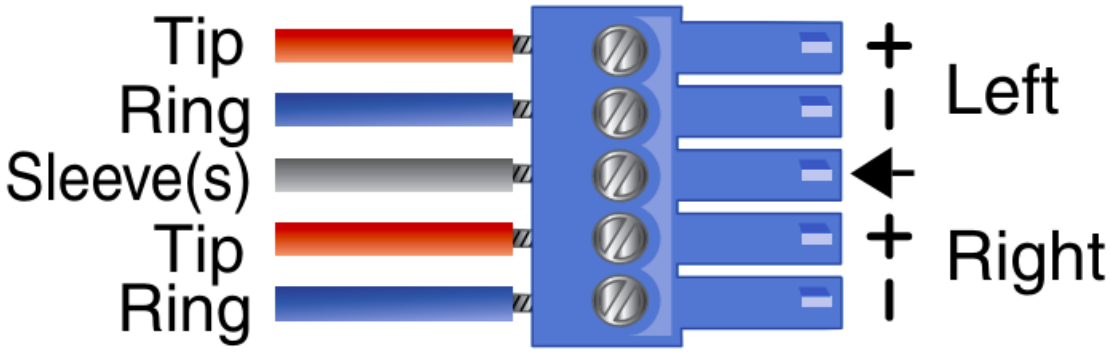
Outputs

Line audio output — Connect a downstream audio device, such as an external amplifier, unified communication platforms, recording or assistive listening device to this 3.5 mm captive screw 5-pole connector. It can be wired as balanced or unbalanced.

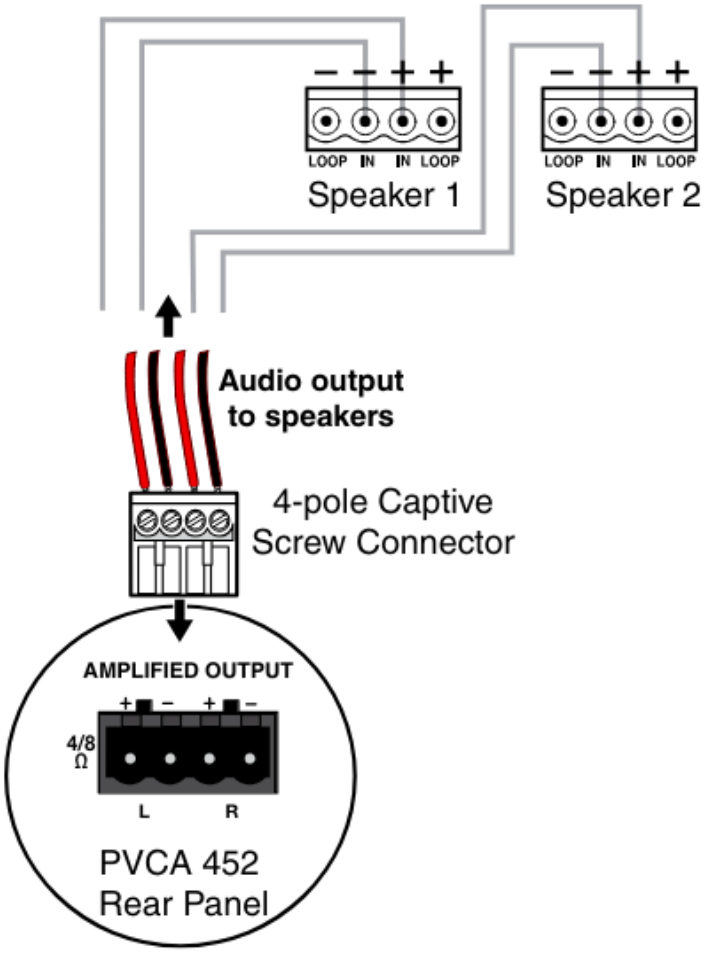
Unbalanced Output Wiring



Balanced Output Wiring



Amplified audio output — Connect speakers to this 5 mm captive screw 4-pole connector (shown below). The amplified audio is capable of outputting 50 watts (2 x 25 watts RMS) for 4 and 8 ohm speakers.
To terminate the cable, strip the end of the cable 0.2 inch (5 mm) and secure the wires into the supplied 4-pole captive screw connector as shown below.

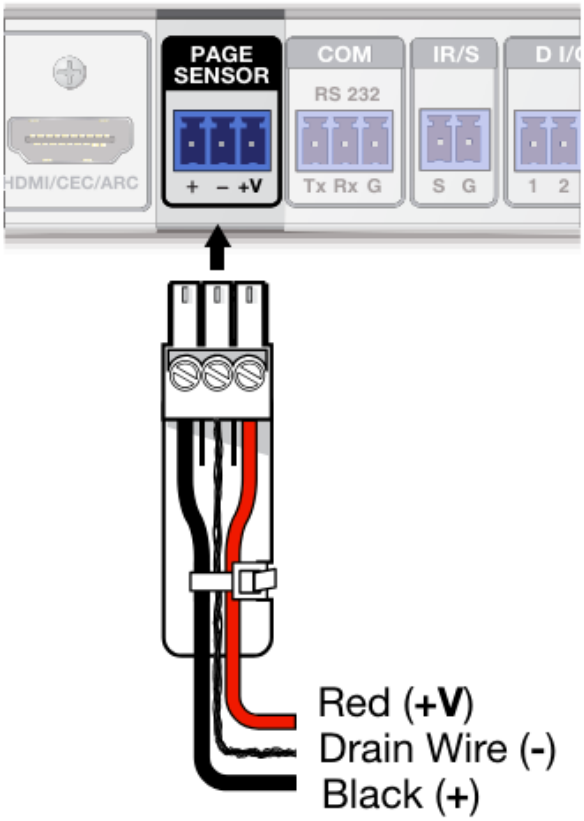


Speaker Wire Color	To PVCA 452 Terminal(Left and Right)
Red	Positive (+)
Black	Negative (-)

HDMI/CEC/ARC — Supports HDMI ARC (Audio Return Channel) audio and CEC (Consumer Electronics Control) over a HDMI cable when connected to a display that supports these features. When configured, this allows the display to send it audio, over the HDMI cable, to the PVCA 452

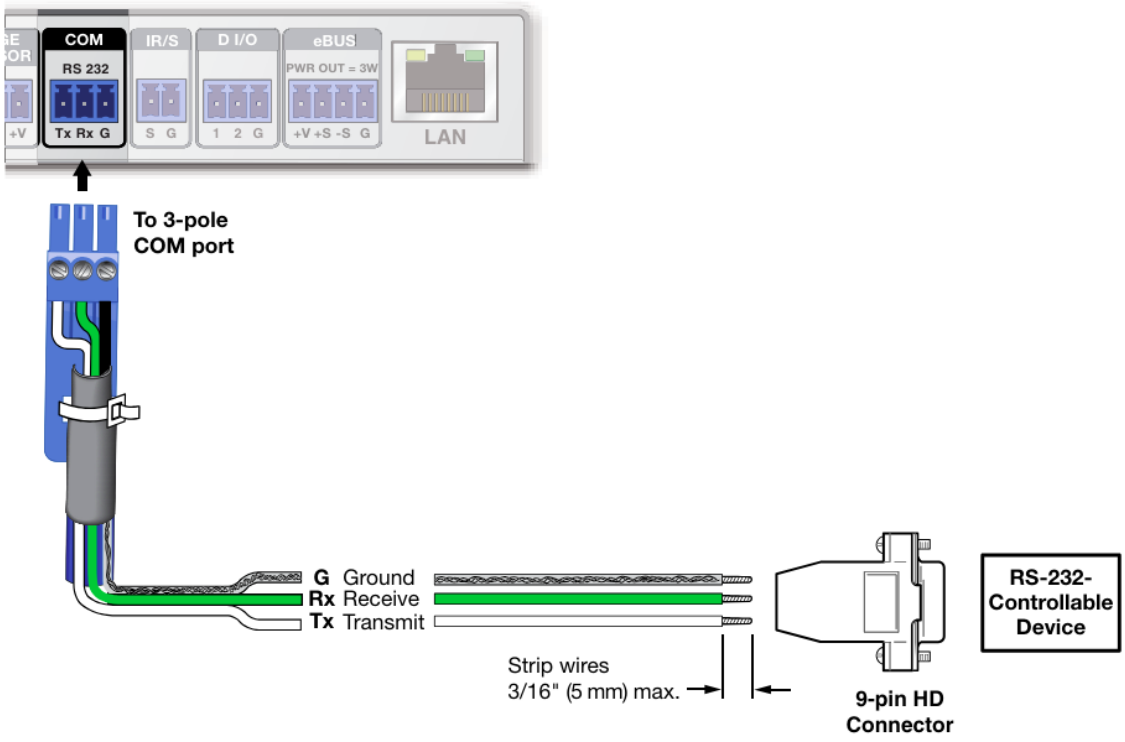
Control Ports

Paging sensor port — Connect the optional Priority Page Sensor (PPS 35 or PPS 25) to this port, to enable program audio ducking during paging system broadcasts.



NOTE: The Extron Priority Page Sensor is an optional accessory, purchased separately (see the Extron website for details about the Priority Page Sensors). For page sensor installation and operation details, see the PVCA 452 User Guide available at www.extron.com

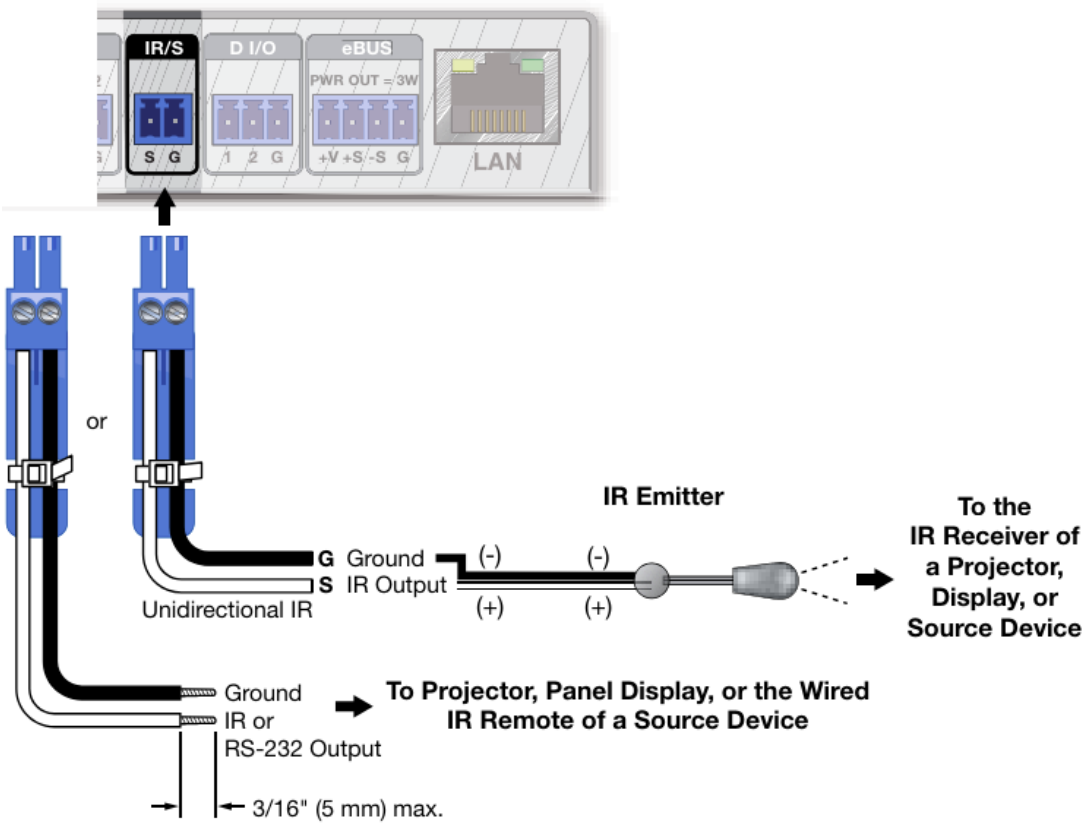
COM RS-232 port — Use this port to control external devices, such as the display device.



NOTE: If you use cable that has a drain wire, tie the drain wire to ground at both ends.

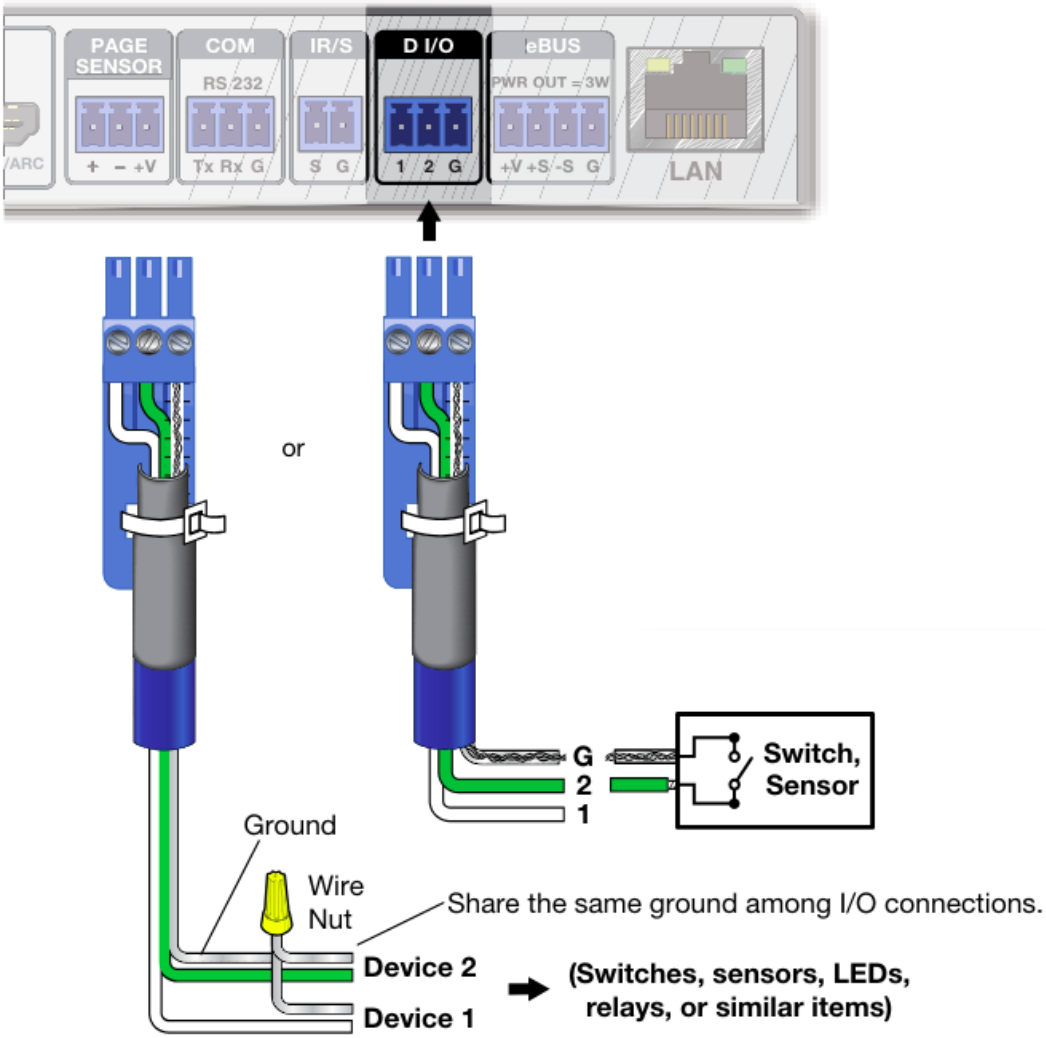
COM 1 Terminal	RS-232 Cable Color	Pin
Ground	Shield	5
Rx	Green	3
Tx	White	2

IR serial port — For IR control of a source device, connect an IR emitter to this 3.5 mm captive screw 2-pole connector (see figure 2). Adhere the IR emitter to the IR receive location of the source device (supports 30 kHz to 300 kHz, with or without carrier signal)



NOTE: For unidirectional RS-232 control, wire the transmit (TX) wire to the “S” port, and ground to the “G” port. Then, wire the appropriate connection to the device being controlled.

Digital I/O port — Connect two digital inputs or outputs, such as sensors or contact closure buttons, to this captive screw connector

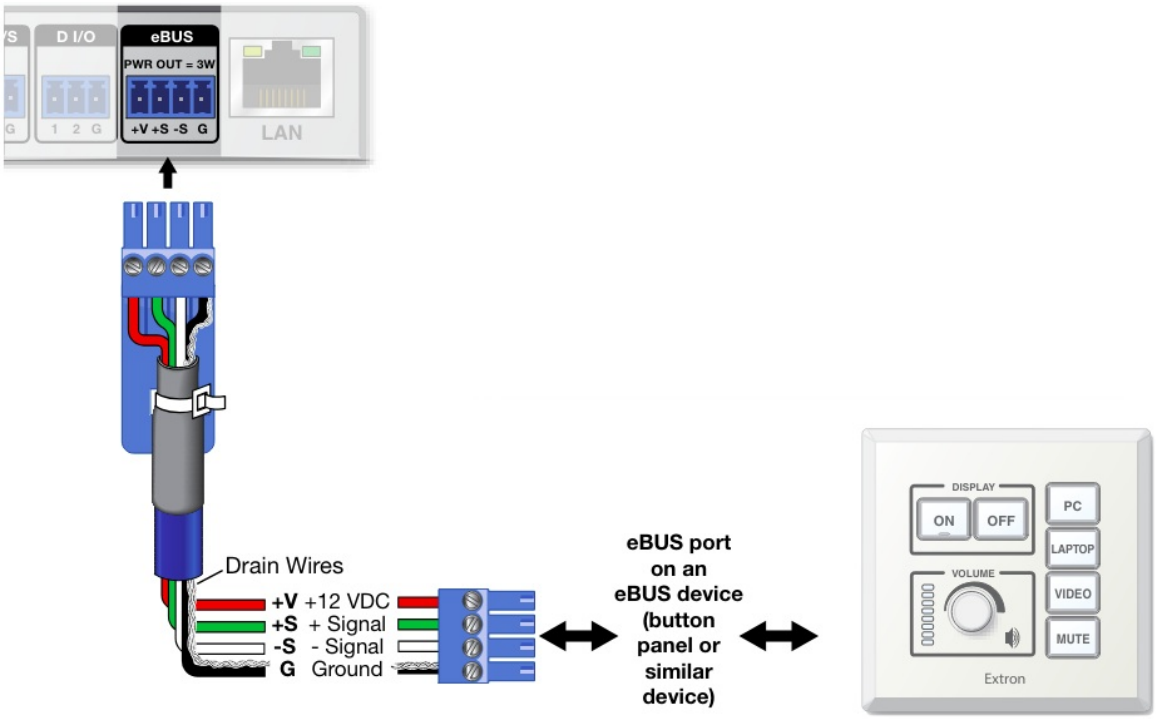


Digital I/O (digital input/output)
Conguero each port as a digital input or output, with or without +5 VDC pull-up.

Use these ports to:

- Monitor or trigger events and functions (toggle relays, issue commands, send e-mail), once congaed.
- Power LEDs or other devices that accept a TTL signal.

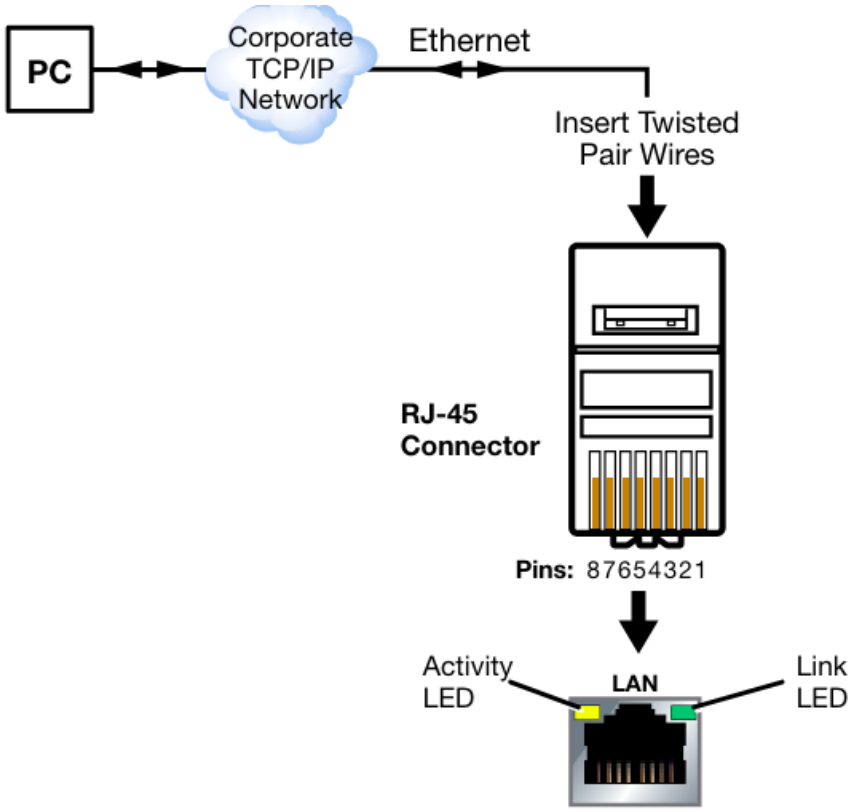
rebus port — Connect an rebus endpoint device to this captive screw connector.



rebus Accessory Port
Connect the rest rebus device to this port, then connect other rebus devices and accessories to that device in the desired topology (daisy chain, star, or combination)

- Wire the connectors the same at both ends for every rebus device.
- See the rebus Technology Reference Guide for the recommended distance from the control processor to the last rebus device and maximum quantity of devices per control processor.
- The PVCA 452 provides 3W of power, which can be used to power rebus button panel devices

LAN port — This port allows communication with the PVCA 452 via TCP/IP for controlling devices over the network, firmware updates over the network, as well as configuration and operation using PCS, Global Configurator, and Campus Communication Suite



NOTE: The factory configured password for this device has been set to the device serial number. Passwords are case sensitive. Performing a Reset to Factory Defaults sets the password to Extron.

Front Panel Features

A Power LED — This LED lights green when the unit is powered up, and amber when it is in power save mode.
B Reset button — Pressing this inset button resets the device to default settings (see the PVCA 452 User Guide for the various reset modes).
C Configuration port — Connect a computer to this USB-C port (cable not supplied) for device configuration, control, and firmware upgrades.
D Page Sensor LED — Lights yellow when paging system broadcasts are detected.
NOTE: For page sensor installation and operation details, see the PVCA 452 User Guide available at [www.extron.com.](http://www.extron.com)
E eBUS status LEDs — These LEDs indicate the following rebus port states:

- Link (L) LED — Lights green when rebus devices are discovered.
- Busy (B) LED — Blinks yellow when rebus device firmware sync is in progress.
- Error (E) LED — Blinks red when BUS ID conflicts are detected.
- Limit LED — Lights yellow if rebus power consumption is within limit load range.
- Over LED — Lights red if rebus power consumption is greater than or equal to the load limit

F COM LED — Lights green when the corresponding serial port is transmitting (Tx) or receiving (Rx) data.
G IR/S LED — Lights green when a signal is transmitting on the rear panel IR/S port.

H Digital I/O LEDs —

- When in digital input mode: LED is on when port input is above the threshold.
- When in digital output mode: LED is on when the port is enabled.

I CEC LED (future use)
J LAN LEDs —

- 1000 LED — Indicates Single 1000Base-T network connection
- LINK LED — Indicates link status
- ACT LED — Indicates network activity

PVCA 452 Configuration

The PVCA 452 amplifier can be controlled and configured using Extron Product Configuration Software (PCS), Global Configurator Pro/Plus (GCP), and Toolbelt via a host computer. Firmware updates can also be made using PCS.

- PCS is used for setup and adjustment of PVCA 452 A/V functions. For information on accessing PCS, see the PVCA 452 User Guide (available at **www.extron.com**). For configuration details, see the embedder help file in PCS.
- For Global Configurator Pro/Plus, see Configuring the PVCA 452 using Global Configurator below

NOTE: The factory configured password for this device has been set to the device serial number. Passwords are case sensitive. Performing a reset to factory defaults sets the password to Extron (see the PVCA 452 User Guide for reset instructions).

Configuring the PVCA 452 using Global Configurator

NOTE: The following are the most basic steps, outlined in the recommended order. For detailed instructions, see the Global Configurator Help File. The help file includes an introduction to the software, and instructions on starting a project.

1. Connect the host computer and the PVCA 452 to the same Ethernet subnetwork (see LAN port on page 4).
2. Start Global Configurator Pro/Plus (GCP) and open the Toolbelt feature (or use the stand-alone Toolbelt program).
3. Start Device Discovery, and select your PVCA 452 device from the list (use the MAC address to locate the desired device). Enter credentials, if required.
4. Use the Set IP feature in the Toolbelt software, or use the Toolbelt Manage > Network Settings tab to set the IP address or host name, subnet, gateway IP address, and related settings.

   NOTE: If using a host name instead of an IP address, the user must enter a qualified host name (Username.HostName.Domain). For example: somename.somedomain.com
5. Using GC, create a new GC Plus or GC Professional project and configure the PVCA 452:

   a. Configure the control ports.

   b. Select device drivers and link them to each assigned serial, IR, or Ethernet port.

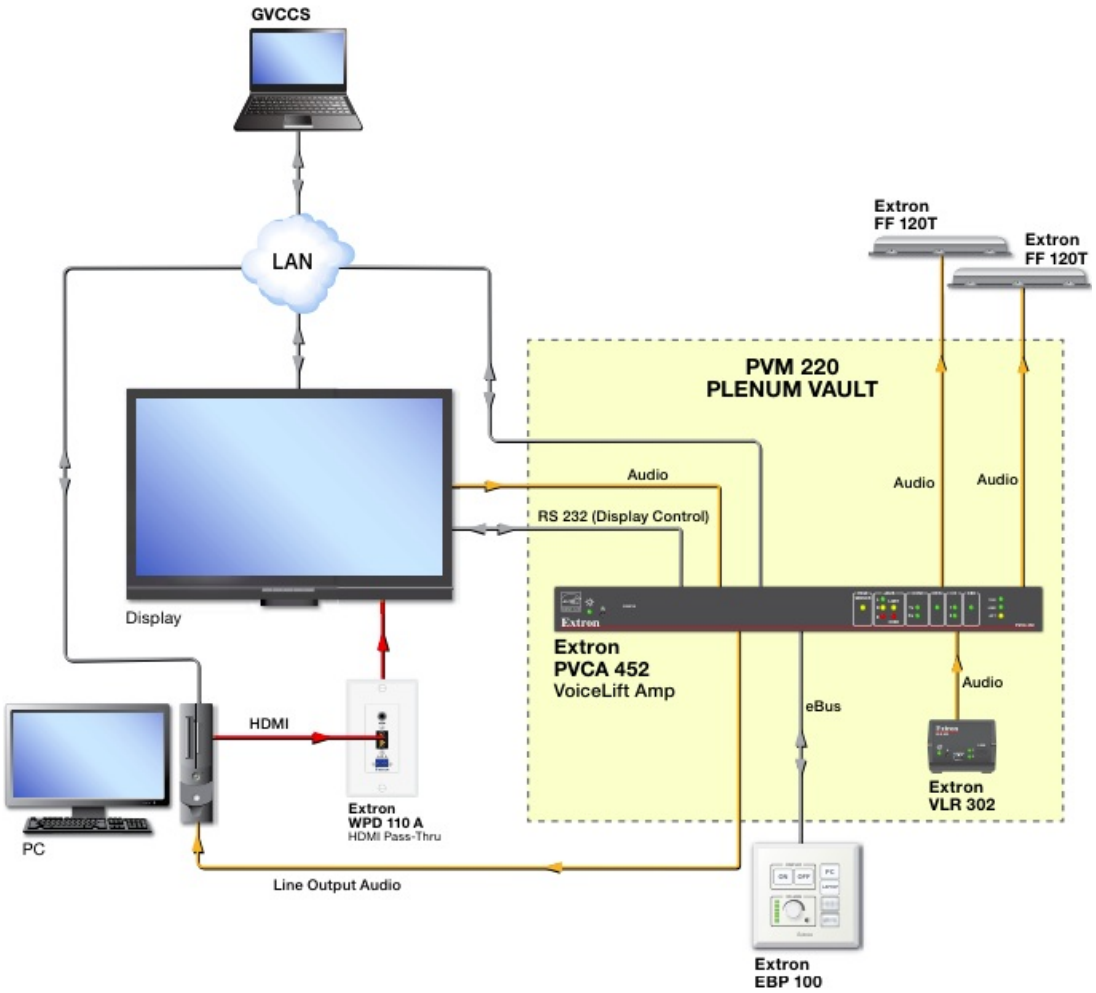
   c. Configure settings (serial protocol, relay behavior, digital input, volume control settings) as needed.

   d. Add and configure control interface (rebus, Touch Link Pro, etc.).

e. Set up monitors, schedules, macros, and local variables.

6. Save the project.
7. Build and upload the system configuration to the controller

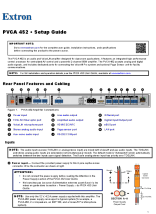
Application Diagram



For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the Extron Safety and Regulatory Compliance Guide on the Extron website.

Worldwide Headquarters: Extron USA West, 1025 E. Ball Road, Anaheim, CA 92805, 800.633.9876

Documents / Resources

	Extron PVCA 452 PlenumVault Direct View System [pdf] User Guide PVCA 452 PlenumVault Direct View System, PVCA 452, PlenumVault Direct View System, Direct View System, View System

References

- somedomain.com
- Extron - The AV Technology Leader
- User Manual