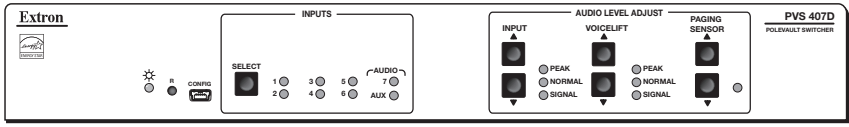


IMPORTANT:
Refer to www.extron.com for the complete user guide and installation instructions before connecting the product to the power source.

PVS 407D • Setup Guide

The Extron® PVS 407D is a seven input, one HDMI output switcher with a built-in audio amplifier and a 4-port Ethernet switch. The PVS 407D is part of the PoleVault®, PlenumVault®, and WallVault® Digital Systems, and is used in conjunction with the Extron PVT digital series of transmitters and Extron speakers. The PVS 407D accepts HDMI and high resolution (RGB) video and audio signals. The RGB input is digitized at the PVT input wallplate. In addition, the switcher has dedicated ports for connecting the optional VoiceLift® system and a Page Sensor unit for facility communications.



NOTE: For full installation, configuration, connector wiring, and operation details, see the *PVS 407D User Guide*, available at www.extron.com.

Installing and Cabling the PVS 407D Switcher

The PVS 407D may come already pre-mounted within the Extron PMK 560 Projector Mount Kit and the PVM 220 PlenumVault Mount Kit.

However, if the switcher is not pre-mounted, follow the steps in the system installation guide, supplied with the complete PoleVault, PlenumVault, or WallVault System. Alternatively, follow the steps in the relevant setup guide for the mounting kit (PMK 560, PVM 220, WMK 160, or USFM 100). Connect the cables to the switcher as shown in figure 1 and detailed on [page 2](#).

ATTENTION: The PoleVault signal transmission method is specific for PVS 407D switchers working with PVT digital wallplates. **DO NOT** connect the input ports to an MTP or XTP system, or to an Ethernet/LAN or data transmission system.

NOTES:

- The PVS 407D can receive signals from PVT wallplates located up to 150 feet (45 meters) away.
- RJ-45 termination must comply with the TIA/EIA T 568A or 568B wiring standards for all connectors. The same standard **MUST** be used at both ends of all cables (see the *PoleVault System Installation Manual* for details). The cables supplied with the Extron PoleVault system are terminated to the TIA 568B standard.
- The use of shielded cable, such as Extron XTP DTP 24 cable, is strongly recommended.

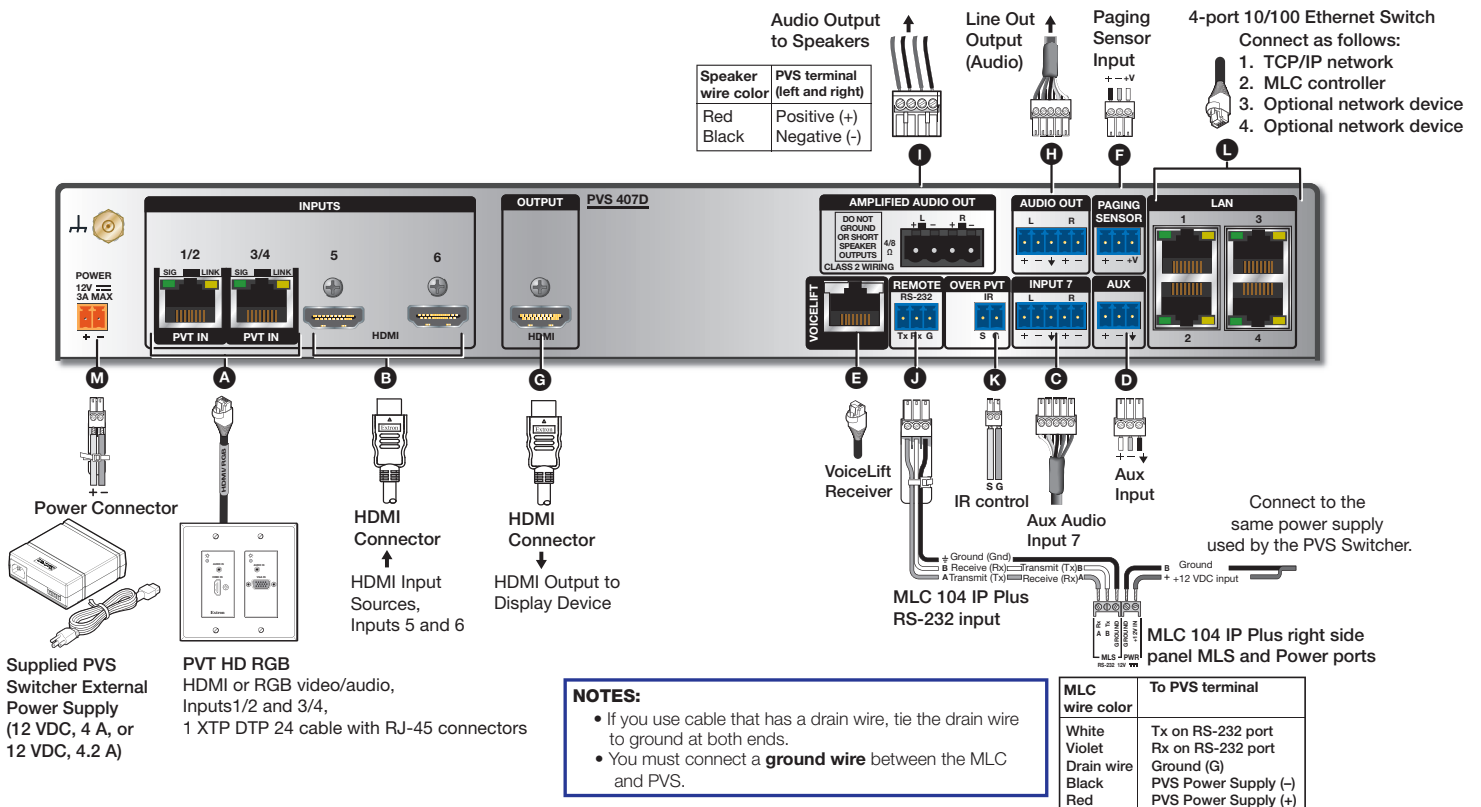


Figure 1. PVS 407D Switcher Connections

PVS 407D • Setup Guide (Continued)

Step 1 – Connect A/V inputs

- A HDMI or RGB video and audio inputs** — Using recommended XTP DTP cables (see the cable [Notes](#) on page 1), connect the PVT HD RGB or PVT HDMI input wallplates to these two RJ-45 female connectors (inputs 1 through 4). Input sources can be four HDMI with embedded or analog audio, or two HDMI and two high resolution computer video and audio sources, or a combination. The front panel input selection button cycles the inputs 1 through 4 as required.

NOTE: Each PVT input wallplate supports two input sources. A maximum of two PVT input wallplates can be connected to the PVS 407D.

- B HDMI inputs** — Connect up to two HDMI inputs (such as Apple TV or an Extron ShareLink Collaboration Router) to these two female HDMI connectors (inputs 5 and 6). The front panel input selection button selects inputs 5 and 6 as required.
- C Audio input** — Input 7 is a dedicated, audio-only input for an auxiliary, stereo, line-level analog audio signal from an output source such as an iPod device or an MP3 player. Connect the cable from the source to this 5-pole captive screw connector. The connector can be wired as balanced or unbalanced (see the *PVS 407D User Guide* for the method).

NOTE: Input 7 is audio only. No video signals are supported on this input.

- D Aux input** — Connect an auxiliary, line level, audio device to this 3-pole captive screw connector. It can be wired for balanced or unbalanced mono audio. Aux audio can be configured to duck program audio or to be mixed with program audio (inputs 1 through 7).
- E VoiceLift receiver connection** — Connect an optional Extron VoiceLift Microphone Kit to this RJ-45 connector for the integration of a VoiceLift Microphone system.
- F Paging sensor input** — Connect an optional Extron Priority Page Sensor Kit (part numbers **70-1064-01** or **70-619-01**) to this port, to enable program audio interruptions during paging system broadcasts.

Step 2 – Connect A/V Outputs

- G HDMI output** — Connect an HDMI capable display to this female HDMI connector.
- H Audio Out (line level)** — Connect an external Extron audio amplifier, a recording/podcasting device, or an assistive listening system to this port. It can be configured via RS-232, front panel USB, or TCP/IP for fixed or variable audio output (default is variable). It can be wired for balanced or unbalanced signals (see the *PVS 407D User Guide* for method).
- I Amplified Audio Out** — Connect speakers to each channel marked “L” and “R” (left and right) using the supplied black 4-pin, 5 mm connector. Wire red to positive, black to negative. Each channel is rated for 25 W at 4 or 8 ohm loads. If using more than one 8 ohm speaker per channel, connect them in parallel.

ATTENTION: DO NOT tie L and R outputs to each other or to ground as it will short the outputs and damage the amplifier.

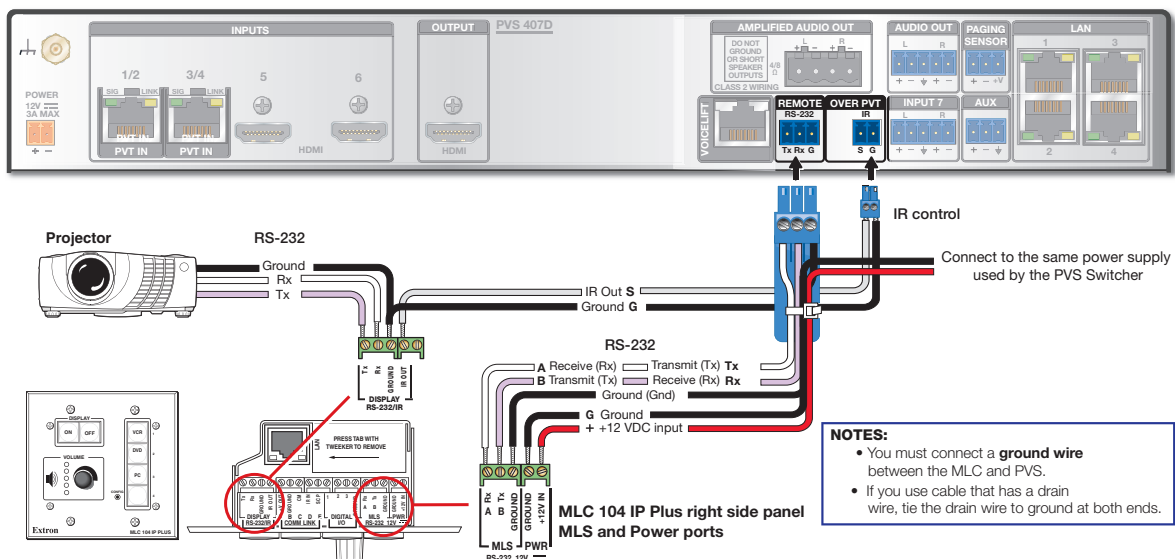


Figure 2. MLC 104 IP Plus to PVS 407D Connection

Step 3 — Connect Remote Control, IR, and LAN Connectors

- J Remote (RS-232/MLC) control port** — Connect a cable between this port and an MLC MediaLink Controller (see figure 2 on the previous page). The PVS switcher can be controlled via an RS-232 connection directly from a host computer, a control system, or a MediaLink® Controller (MLC). The MLC provides remote control of input switching and volume. The RS-232 protocol is 9600 baud, 8-bit, 1-stop bit, no parity, and no flow control. See the *MLC 104 IP Plus User Manual* for full details.

NOTE: To power the MLC 104 IP Plus, wire it directly into the same power supply the switcher uses (see figures 2 and 3).

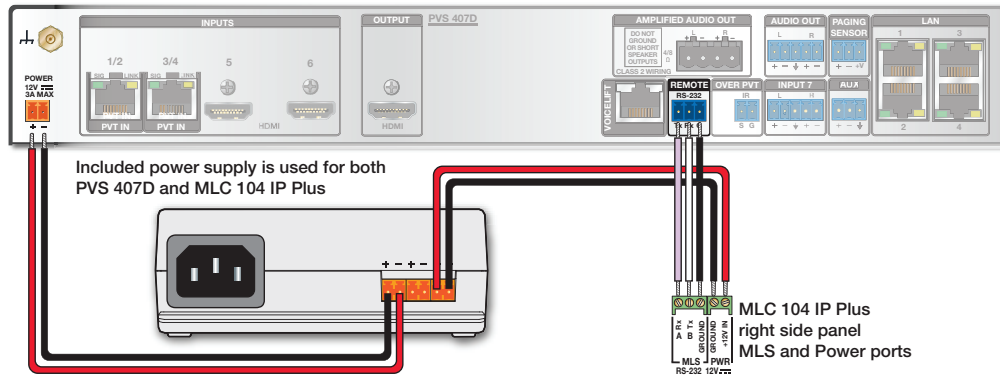


Figure 3. Power Supply Connections to PVS 407D and MLC 104 IP Plus

- K IR control port** — Connect the wiring from the IR Out port on rear of the MLC to this connector. IR signals on this connector are passed to the connected PVT wallplate for control of devices, such as Blu-ray or DVD players.

NOTE: The IR control feature is only applicable for PVT wallplates that support IR pass through, such as the PVT HDMI and PVT HDMI RGB.

- L Ethernet connectors** — Connect LAN cables to these four ports for 10/100 Ethernet connectivity as follows:
 1. TCP/IP network (owner furnished), 2. MLC MediaLink controller, 3-4. Optional network devices.

Step 4 — Connect power

- M DC power connector** — When all other cables have been connected, plug the cable with the orange captive screw connector (provided with the power supply) from the 12 VDC power source into this receptacle (see figure 3) and apply power. The front panel power LED and an input LED illuminates when the switcher is receiving power.

NOTE: Use only the supplied 12 V, 4 A or 12 V, 4.2 A power supply for this switcher. The PVS 407D power supply can support a typical system: for example, a PVS 407D, 2 PVT Wallplates, 2 or 4 speakers, an MLC 104 IP Plus with an IRCM DV+, and a VoiceLift Microphone system. If an additional SCP 104 is used, the MLC 104 IP Plus MUST have its own power supply.

Front Panel Overview

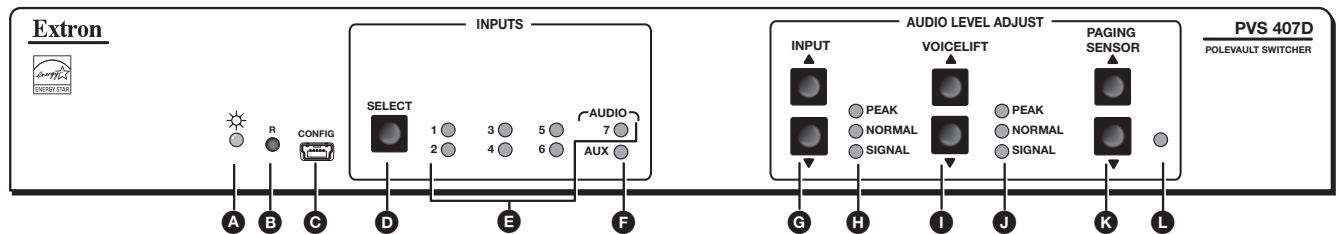


Figure 4. Front Panel Features

- A Power indicator LED** — This LED lights green when power is supplied, and amber when in power save mode.
- B Device Reset button** — Pressing this inset button resets the switcher to default settings (see the *PVS 407D User Guide* for reset mode details).
- C Front panel mini USB configuration port** — Connect a computer to this mini USB port (cable not supplied), for device configuration and upgrading the firmware.

PVS 407D • Setup Guide (Continued)

- D Input selection button and E LEDs (1 through 7)** — The button selects and switches inputs and the LEDs indicate which input is active (current input LED lights green).
- F Aux input LED** — This LED indicates when the aux input is active for input level adjustment.
- G Audio input adjustment buttons and H level LEDs** — The audio input adjustment buttons allow the user to adjust the level of the audio for the selected input. The associated LEDs (peak, normal, and signal) indicate the active audio level.
- I VoiceLift input adjustment buttons and J level LEDs** — The VoiceLift level adjustment buttons allow the user to adjust the VoiceLift (microphone) input level. The associated LEDs (peak, normal, and signal) indicate the active audio level.
- K Paging Sensor sensitivity adjustment buttons and L Status LED** — The adjustment buttons allow the user to adjust the sensitivity of the Page Sensor to interrupt program audio during facility broadcasts. The status LED illuminates when a broadcast is detected.

Front Panel Operation and Configuring the PVS 407D Switcher

For full details of front panel operation and switcher configuration, refer to the *PVS 407D User Guide*, and the *MLC 104 IP Plus User Guide*. For VoiceLift and Page Sensor installation and operation details, refer to the *VoiceLift System User Guide* and the *Priority Page Sensor Kit Installation Instructions*. All these are available online at www.extron.com.

Front Panel Operation

1. **To change inputs**, press the input button **D** to sequentially cycle through inputs 1 through 4 (video and audio), 5 and 6 (HDMI inputs), and input 7 (audio only). The LEDs **E** (inputs 1 through 7) indicate which input is active. The Aux input is selectable for configuration only. To do this, press and hold the **Select** button **D** for 3 seconds until the Aux LED lights.
2. **To adjust audio input levels**, select an input then press the audio input adjustment buttons **G** in 1 dB steps (-18 to +24 dB, default 0). The LEDs **H** indicate the signal level status (not volume).
3. **To adjust VoiceLift microphone level**, use VoiceLift input adjustment buttons **I** to change in 1 dB steps (-18 to +24 dB, default 0). The LEDs **J** indicate mic input signal levels.

NOTE: On initial switcher power-up, the output volume level is automatically adjusted to 80%.

4. **To adjust Paging sensitivity**, press the **Paging Sensor** buttons **K** to increase or decrease sensitivity as desired. The status LED **L** illuminates when an announcement from the paging system is detected.

The Extron Priority Page Sensor Kits (PPS 35 or PPS 25) are optional accessories and can be purchased separately.

Configuration

The switcher can be configured and controlled via a host computer or other device (such as a control system), attached to the front panel USB port, the rear panel LAN port, the rear panel RS-232 remote port, or by a MediaLink Controller (MLC) or an RS-232 device acting through the MLC.

The connected control device (host) can use Extron Simple Instruction Set (SIS™) commands or the Product Configuration Software (PCS) program (see pages 1 through 3 for connection details).

See the *PVS 407D User Guide* for full configuration methods using SIS commands.

See the Product Configuration Software (PCS) program embedded Help file for configuration methods using PCS.

The software and device User Guides and Instructions mentioned in this guide can be found at www.extron.com.

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.