

MDA 3 Series • User Guide

This guide describes the installation and operation of the Extron MDA 3 Series Mini Distribution Amplifiers (MDA).

FCC Class A Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. The Class A limits provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference. This interference must be corrected at the expense of the user.

NOTE: For more 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.

Specifications Availability

Product specifications are available on the Extron website, www.extron.com.

Introduction

The Extron MDA 3 Series are a family of eight one-input, three-output, video and audio distribution amplifiers. The MDA series distribution amplifiers (DAs) split one composite video or S-video input and/or audio input for output to multiple destinations with no loss of signal quality. The MDA are members of the Extron line of basic distribution amplifiers, switchers, and associated video accessories.

The MDAs distribute composite video, S-video (luminance (Y) and chrominance (C)), and/or balanced or unbalanced audio on captive screw connectors, or unbalanced audio on RCA connectors, in the following combinations:

Distribution Amplifier	S-Video	Composite Video	Audio (Captive Screw Connectors)	Audio (RCA Connectors)
MDA 3SV	•			
MDA 3SVA	•		•	
MDA 3SV Dual	•2			
MDA 3V		•		
MDA 3AV		•	•	
MDA 3V Dual		•2		
MDA 3A			•	
MDA 3A RCA				•

The MDAs ship with external desktop 12 V power supplies that accept 100 to 240 VAC, 50 Hz or 60 Hz input.

Connections, Controls, and Indicator

Figure 1 show all of the combinations of connectors that you may encounter with your MDA.

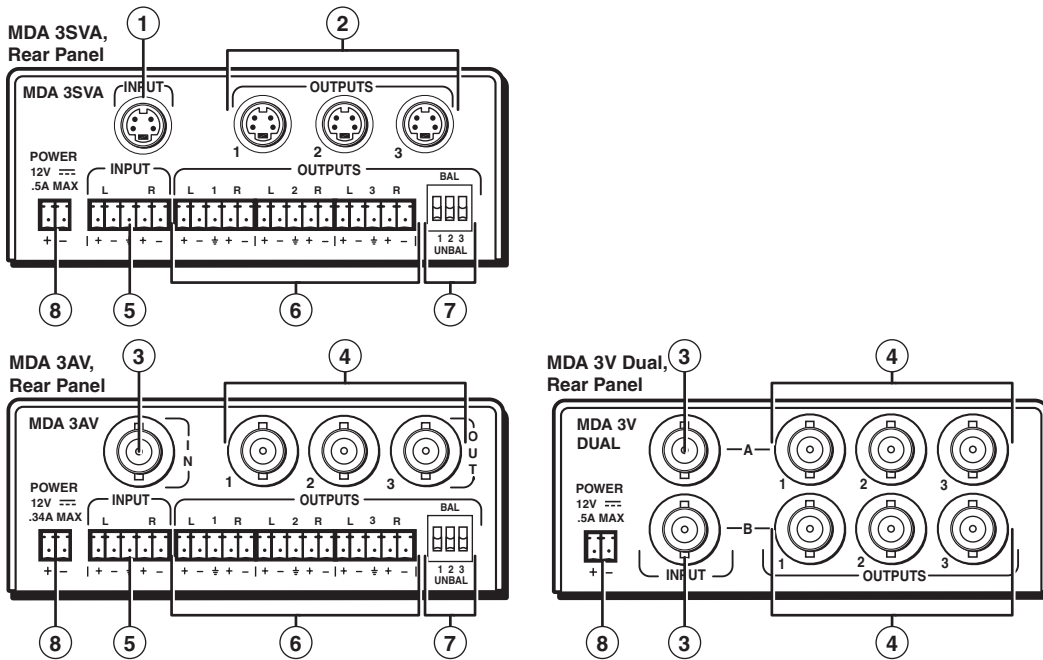


Figure 1. MDA 3 Series Front and Rear Panels

S-video (MDA 3SV and MDA 3SVA)

- ① **Input connectors** — Connect an S-video input to this four-pin mini DIN connector.
- ② **Out connector or Outputs (1 through 3) connectors** — Connect up to three S-video devices to these four-pin mini DIN connectors.

Composite Video (MDA 3V, MDA 3AV, and MDA 3V Dual)

- ③ **In connector or Input connector** — Connect a composite video input to this BNC connector. On the Dual model, Input A and Input B are completely separate inputs to two separate distribution amplifiers.
- ④ **Out connector or Outputs (1 through 3) connectors** — Connect up to three composite video devices to these BNC connectors. On the Dual model, the A output signals are identical to the A input, and the B output signals are identical to the B input.

Audio on captive screw connectors (MDA 3AV, MDA 3SVA, MDA 3A)

- ⑤ **Audio Input connector** — Connect a balanced or unbalanced audio input to this 3.5 mm, five-pole captive screw connector. Connectors are included, but you must supply the audio cable. See figure 2 to wire a connector for the appropriate input type and impedance level. High impedance is generally over 800 ohms.

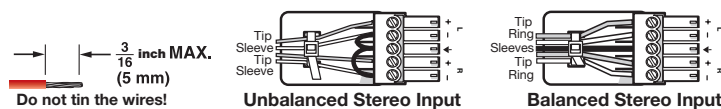
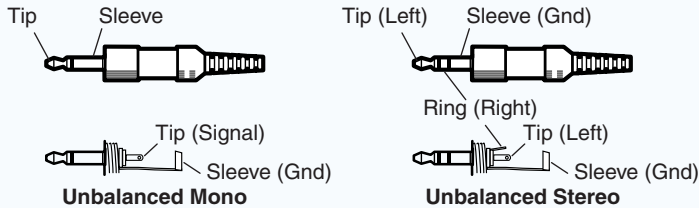


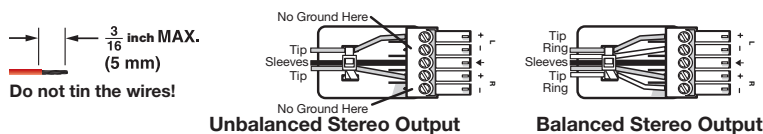
Figure 2. Captive Screw Input Connector Wiring

NOTES:

- The length of exposed wires is critical. The ideal length is 3/16 inch (5 mm).
- If the stripped section of wire is longer than 3/16 inch, the exposed wires may touch, causing a short circuit.
- If the stripped section of wire is shorter than 3/16 inch, wires can be easily pulled out even if tightly fastened by the captive screws.
- Do not tin the power supply leads before installing them in the connector. Tinned wires are not as secure in the connector and could be pulled out.
- When making connections for the MDA from existing audio cables, see figure 3. A mono audio connector consists of the tip and sleeve. A stereo audio connector consists of the tip, ring and sleeve. The ring, tip, and sleeve wires are also shown on the captive screw audio connector diagrams, figure 2 and figure 4.

**Figure 3. Phono Audio Connectors**

- ⑥ **Audio Outputs (1 through 3) connectors** — Connect up to three balanced or unbalanced audio devices to these 3.5 mm, five-pole captive screw connectors. Connect audio devices, such as an audio amplifier or powered speakers. See figure 4 to properly wire an output connector.

**Figure 4. Captive Screw Connector Wiring for Audio Output**

ATTENTION: For unbalanced audio, connect the sleeves to the ground contact. DO NOT connect the sleeves to the negative (-) contacts.

NOTE: The length of exposed wires is important. The ideal length is 3/16 inch (5 mm) (see the **NOTES** above for details).

- ⑦ **Bal(anced)/Unbal(anced) DIP switches** — For each balanced audio output, set the associated DIP switch to the Balanced (up) position. For each unbalanced audio output, set the associated DIP switch to the Unbalanced (down) position. The balanced or unbalanced nature of the audio output is determined by the output connector wiring, not the audio input. Each output can be balanced or unbalanced independently of the other two outputs.

Power (All Models)

ATTENTION: Power supply voltage polarity is extremely important. Applying power with incorrect voltage polarity could damage the power supply and the MDA. Identify the power cord negative lead by the ridges on the side of the cord.

- ⑧ **Power connector** — Plug the external 12 VDC power supply into this two-pole captive screw connector. The power supply is included with the unit. Figure 5 shows how to wire the connector.

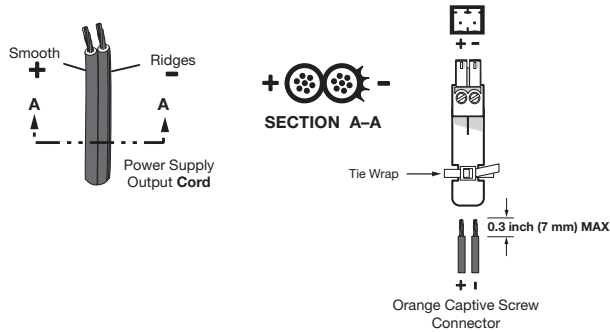


Figure 5. Power Connector Wiring

ATTENTION:

- Always use a power supply supplied by or specified by Extron for use with the MDA. Use of an unauthorized power supply voids all regulatory compliance certification and may cause damage to the supply and the MDA.
- Unless otherwise stated, the AC/DC adapters are not suitable for use in air handling spaces or in wall cavities. The power supply is to be located within the same vicinity as the Extron AV processing equipment in an ordinary location, Pollution Degree 2, secured to the equipment rack within the dedicated closet, podium or desk.
- The installation must always be in accordance with applicable provisions of National Electrical Code ANSI/NFPA 70, article 75 and the Canadian Electrical Code part 1, section 16. The power supply shall not be permanently fixed to building structure or similar structure.
- The length of exposed wires is important. The ideal length is 3/16 inch (5 mm) (see the **NOTES** on page 3 for details).
- To verify the polarity before connection, plug in the power supply with no load and check the output with a voltmeter.
- The two power cord wires must be kept separate while the power supply is plugged in. Remove power before wiring.

As an alternative, an Extron P/S 100 Universal 12 VDC Power Supply can power multiple MDAs or other Extron 12 VDC devices using only one AC power connector.

- ⑨ **Power LED** — When lit, this LED indicates power is applied to the MDA.

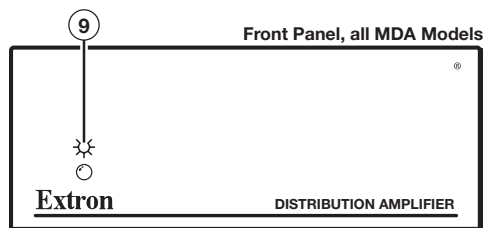


Figure 6. MDA 3 Series Front Panel (All Models)

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