



50-Watt Impedance Matching Rotary Speaker Volume Control

P/N 38170

Quick Install Guide

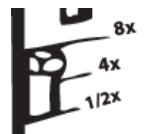
INTRODUCTION

This Impedance Matching Volume Control allows you to connect multiple speaker pairs to a single power amplifier or receiver. It increases (or decreases) the impedance of the connected speaker pair to ensure that the overall impedance level presented to the amplifier is high enough to prevent damage to the amplifier. It can support amplifiers with up to 50 watts of output power and fits into standard single-gang low-voltage junction boxes or mounting brackets.

INSTALLATION

Perform the following steps to install one or more volume controls to your stereo system. These instructions assume that you have already installed all speaker pairs and low-voltage mounting brackets at the desired locations.

1. Refer to your amplifier's manual to determine the minimum impedance level that can be safely connected. In most cases, the minimum impedance is 4, 6, or 8 ohms, though some amplifiers are stable down to 2 ohms.
2. Determine how many speaker pairs are to be connected and the nominal impedance of each pair. Note that only a single pair of speakers should be connected to each volume control.
3. Refer to the following tables to determine the switch settings for each volume control, depending on the minimum impedance load of your amplifier, then set the switches on all volume controls to the indicated value.



8-Ohm Capable Amplifier	
Number of 8-Ohm Speaker Pairs	Switch Position
1-4 pairs	4x
5-8 pairs	8x
More than 8 pairs	Not Recommended

8-Ohm Capable Amplifier	
Number of 4-Ohm Speaker Pairs	Switch Position
1-4 pairs	8x
More than 4 pairs	Not Recommended

6-Ohm Capable Amplifier	
Number of 8-Ohm Speaker Pairs	Switch Position
1-5 pairs	4x
6-10 pairs	8x
More than 10 pairs	Not Recommended

6-Ohm Capable Amplifier	
Number of 4-Ohm Speaker Pairs	Switch Position
1-2 pairs	4x
3-5 pairs	8x
More than 5 pairs	Not Recommended

4-Ohm Capable Amplifier	
Number of 8-Ohm Speaker Pairs	Switch Position
1 pair	1/2x
2-8 pairs	4x
9-16 pairs	8x
More than 16 pairs	Not Recommended

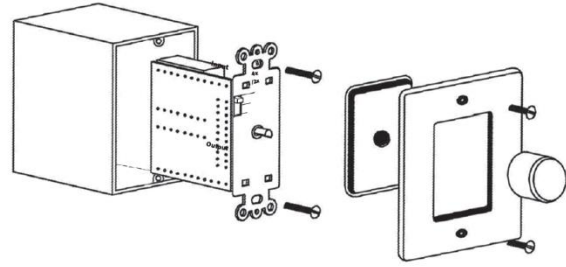
4-Ohm Capable Amplifier	
Number of 4-Ohm Speaker Pairs	Switch Position
1-4 pairs	4x
5-8 pairs	8x
More than 8 pairs	Not Recommended

4. Run an in-wall rated speaker wire from the left-channel speaker to the low-voltage mounting bracket intended for use with this speaker pair.
5. Connect the wire to the left channel speaker, taking note of the wire colors or markings used for the **positive (+)** and **negative (-)** connections.

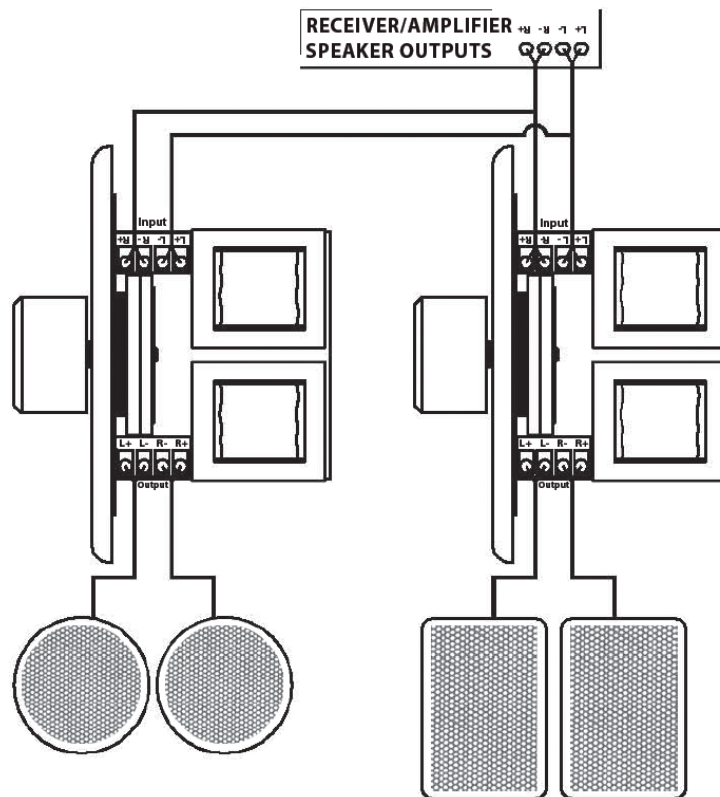
For best results, always use the same wire colors or markings for the positive and negative connections.

6. Connect the other end of the left-channel speaker wire to the **L+** and **L- Output** terminals on the volume control, taking care to match the polarity.
7. Run an in-wall rated speaker wire from the right-channel speaker to the low-voltage mounting bracket intended for use with this speaker pair.
8. Connect the wire to the right channel speaker, taking note of the wire colors or markings used for the **positive (+)** and **negative (-)** connections.
9. Connect the other end of the right-channel speaker wire to the **R+** and **R- Output** terminals on the volume control, taking care to match the polarity.
10. Run an in-wall rated speaker wire from the low-voltage mounting bracket intended for use with this speaker pair to the amplifier. Mark the wire as the left-channel wire at the amplifier end.
11. Connect the left-channel amplifier wire to the **L+** and **L- Input** terminals on the volume control, taking note of the wire colors or markings used for the **positive (+)** and **negative (-)** connections.
12. Run a second in-wall rated speaker wire from the low-voltage mounting bracket intended for use with this speaker pair to the amplifier. Mark the wire as the right-channel wire at the amplifier end.
13. Connect the right-channel amplifier wire to the **R+** and **R- Input** terminals on the volume control, taking note of the wire colors or markings used for the **positive (+)** and **negative (-)** connections.

14. Install the volume control into the low-voltage mounting bracket, taking care to ensure that the wires do not come loose from their connections or become pinched or shorted.



15. Repeat **steps 4-14** for each additional speaker pair, low-voltage mounting bracket, and volume control.
16. Ensure that the amplifier is powered off and unplugged from the power source.
17. At the amplifier, use a terminal block or wire nut to connect all the **left-channel negative (-)** wires and a short length of speaker wire together.
18. Connect the negative lead on the short length of speaker wire to the **left-channel negative (-)** terminal on the amplifier.
19. Repeat **steps 17-18** for the **left-channel positive (+)** lead.
20. Repeat **steps 17-19** for the **right-channel negative (-)** and **positive (+)** leads. The image below illustrates a proper connection for two volume controls.



21. Determine which room or speaker pair you want to be the loudest, then turn the volume control fully clockwise to the maximum position. If all zones are to be the same volume level, set all volume controls to the maximum level.
22. Set the volume control on the amplifier to the minimum level.
23. Plug in and power on the amplifier.
24. Start audio playback, then slowly increase the volume control on the amplifier until the volume level in the selected room(s) are at the maximum level you will want with no distortion. If distortion can be heard, reduce the volume level until distortion can no longer be heard.
25. Leave the volume control on the amplifier at the set position, then use the individual zone volume controls to set the volume in each zone to a comfortable listening level.

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