# OVC100 100-Watt Impedance Matching Outdoor Volume Control

P/N 38177

## Quick Install Guide

## INTRODUCTION

This Impedance Matching Outdoor 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 100 watts of output power and has a waterproof enclosure, allowing it to be used in outdoor applications.

## 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 |

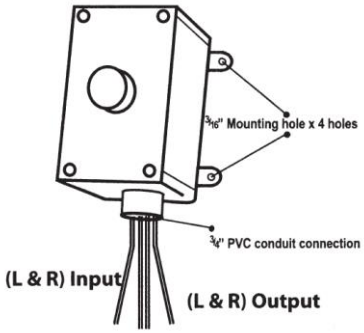
| 6-Ohm Capable Amplifier | |
|---|---|
| **Number of 8-Ohm Speaker Pairs** | **Switch Position** |
| 1-5 pairs | 4x |
| 6-10 pairs | 8x |
| More than 10 pairs | Not Recommended |

| 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 |

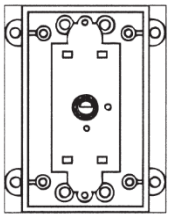
4. If conduit is to be used, run four 2-conductor wires from each of the two speakers and the amplifier, up through the conduit and into the enclosure. If conduit is not to be used, run one outdoor rated speaker wire from each speaker and two from the amplifier. Mark each end of the two speaker wires from the amplifier as left-channel and right-channel.



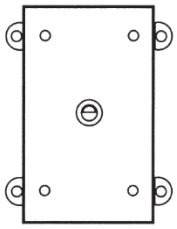

5. If conduit is used, mount the enclosure onto the conduit using the appropriate adhesive.
6. Use the four holes on the back of the enclosure to mount it to a stationary object or wall.
7. Connect the left-channel speaker wire to the left-channel speaker, taking note of the wire colors or markings used for the **positive (+)** and **negative (-)** connections.

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

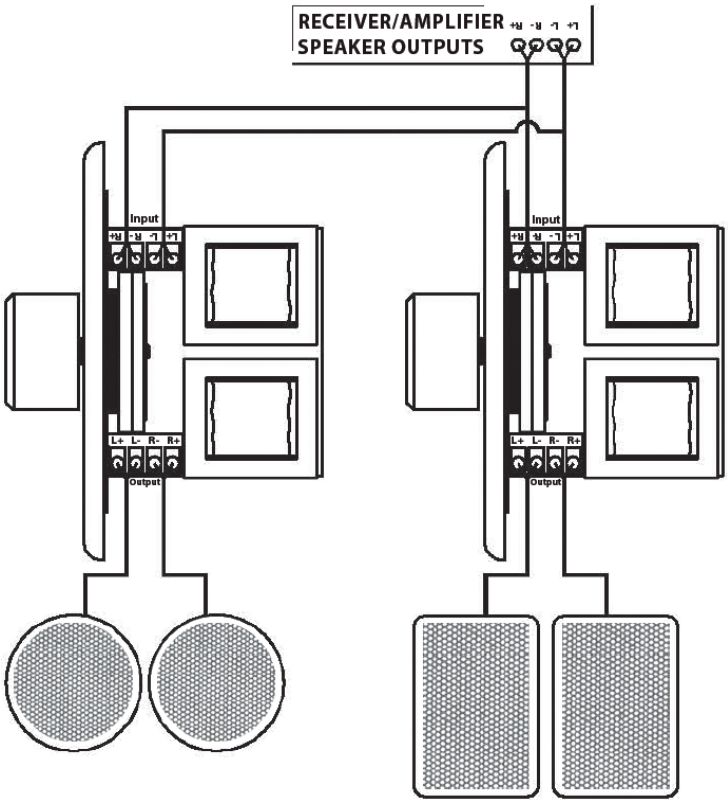
8. Connect the other end of the left-channel speaker wire to the **L+** and **L- Output** terminals on the volume control, taking care to match the polarity.
9. Connect the right-channel speaker wire to the right-channel speaker, taking note of the wire colors or markings used for the **positive (+)** and **negative (-)** connections.
10. 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.
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. 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.
13. Insert the volume control into the enclosure, taking care to ensure that the wires do not come loose from their connections or become pinched or shorted.



14. Ensure that the rubber gasket is in place behind the cover plate, place it over the enclosure and secure it in place with the screws provided.



15. Place the volume knob onto the volume control post.
16. Repeat **steps 4-15** for each additional speaker pair, enclosure, and volume control.
17. Ensure that the amplifier is powered off and unplugged from the power source.
18. 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.
19. Connect the negative lead on the short length of speaker wire to the **left-channel negative (-)** terminal on the amplifier.
20. Repeat **steps 18-19** for the **left-channel positive (+)** lead.
21. Repeat **steps 18-20** for the **right-channel negative (-)** and **positive (+)** leads. The image below illustrates a proper connection for two volume controls.



22. Determine which 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.
23. Set the volume control on the amplifier to the minimum level.
24. Plug in and power on the amplifier.
25. 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.
26. 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.

# ONLINE SUPPORT

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Check the website for support times and links.

# SPECIFICATIONS

| | |
|---|---|
| Model | 38177 |
| Maximum Power Capacity (RMS) | 100 watts |
| Frequency Response | 20Hz ~ 20kHz |
| Total Maximum Attenuation | 42dB |
| Supported Wire Gauges | 14-16 AWG |
| Impedance Matching Multipliers | 1/2x, 4x, and 8x |
| Dimensions | 3.0" x 5.1" x 4.0" |