

Russound

a sound relationship

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WALTx-2 - Weatherproof Volume Control Instruction Manual:

Product Overview

The WALTx-2 Weatherproof Volume Control is designed to provide volume control for outdoor or wet locations and can be mounted on an exterior wall or hard, flat surface, as well as directly on a section of 3/4" PVC conduit. The WALTx-2 provides superior protection against moisture from rain, splash or sauna.

The WALTx-2 connects between the speaker outputs of an amplifier or receiver and a pair of speakers. The 1X setting allows the volume control to be used as a standard control. The 2X, 4X, and 8X settings allow it to be used when more than one pair of speakers is connected to the same amplifier.

The impedance matching of the WALTx-2 volume control provides a method of matching the minimum output impedance of the amplifier or receiver, in addition to adjusting volume. It eliminates the need for a speaker selector or impedance matching equipment. The WALTx-2 adjusts volume level by attenuating the amplifier signal output of the WALTx-2 to the speakers.

All Russound Volume Controls are manufactured using a high-quality autoformer design which provides long life, excellent frequency response, no heat build-up, and maximum power transfer from the amplifier to the speakers.

All Russound WALTx-2 volume controls conform to UL Standard 1492 First Edition, and for Canada Certified to CSA Standard 22.2 No. 1-M94. This certification assures that your WALTx volume control has been designed and tested for safety.

Determining the Proper Impedance Switch Settings

The impedance switch must be set in a position that correctly multiplies the impedance of the system to a level that is equal to or greater than the impedance of the amplifier. The impedance switch settings can be determined using the following simple steps:

1. Determine the amplifier's minimum impedance. The amplifier's minimum impedance is usually found following Wattage and Frequency Response in the amplifier's specification page of the manual. It may also be listed on the back panel of the amplifier near the speaker terminals. Impedance is measured in ohms.
2. From Fig. 1, identify the correct impedance-matching chart according to your amplifier's minimum impedance. There are two impedance matching charts, one for 8-ohm amplifiers and one for 4-ohm amplifiers. Choose the chart that describes your amplifier. If your amplifier is 6-ohm stable, use the 8 ohm chart.
3. Determine the impedance for each pair of speakers connected to the amplifier by referring to its manual.
4. Determine the total number of 4-ohm pairs of speakers. (Rows on charts)
5. Determine the total number of 8-ohm pairs of speakers. (Columns on charts)
6. Follow the appropriate row and column to determine the impedance switch setting.

Figure 1 Impedance Matching Charts for Ultramatch™

4 Ohm Pairs

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	-	1X	1X	2X	2X	4X	4X	4X	4X	8X	8X	8X	8X	8X	8X	8X	8X
1	1X	2X	2X	4X	4X	4X	4X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X
2	2X	4X	4X	4X	4X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X
3	4X	4X	4X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X
4	4X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X
5	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X
6	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X
7	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X
8	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X	8X

4 Ohm Pairs

	0	1	2	3	4	5	6	7	8
0	-	1X	2X	4X	4X	8X	8X	8X	8X
1	2X	4X	4X	8X	8X	8X	8X	8X	8X
2	4X	8X	8X	8X	8X	8X	8X	8X	8X
3	8X	8X	8X	8X	8X	8X	8X	8X	8X
4	8X	8X	8X	8X	8X	8X	8X	8X	8X

Impedance Matching For 4 Ohm Amplifiers

8 Ohm Pairs

Example: The table to the right shows an 8-ohm minimum impedance amplifier with 1 pair of 4-ohm speakers and 3 pairs of 8-ohm speakers. The chart indicates the impedance switch should be set at 8X.

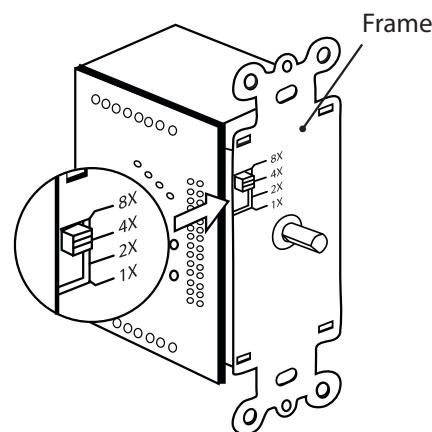
Impedance Matching For 8 Ohm Amplifiers

8 Ohm Pairs

The chart indicates the impedance switch should be set at 8X.

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Once the impedance setting has been determined, set the impedance switch to the appropriate positions, either 2X, 4X, or 8X, as shown in the diagram below.



Considerations

1. Make sure that your amplifier has adequate wattage for the number of speakers. Watts per channel divided by the number of pairs should equal or exceed the individual speaker's minimum wattage requirements.
2. You must use impedance matching volume control for each pair of speakers.
3. Every impedance switch must be set on the same setting throughout the system.
4. A minimum speaker load of 4-ohms can be connected to the output of each volume control.

Wiring Instructions

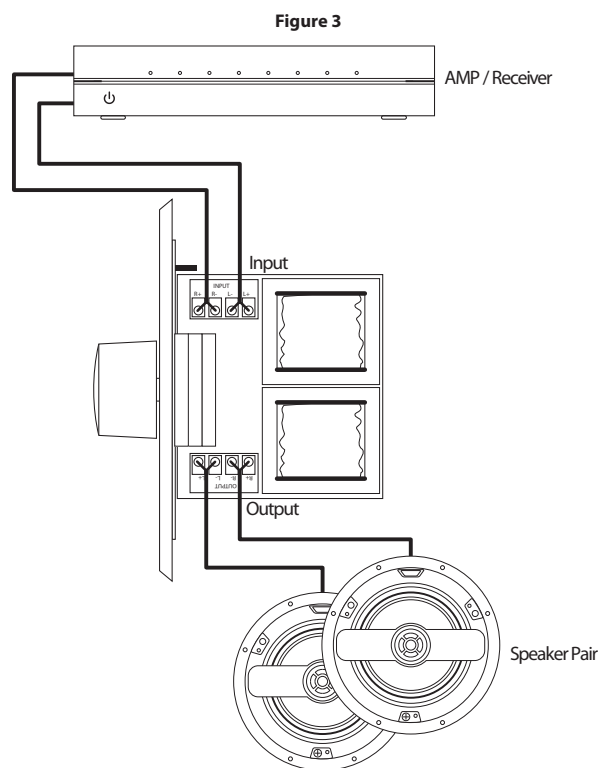
(Refer to Figure 3 below)

1. Connect the leads from the amplifier's outputs to the connector labeled input. The wires should stay consistent, left + of the amplifier to left + input of the volume control, observing polarity and identification.

CAUTION: Do not reverse the input and output connections!

CAUTION: A majority of receivers are designed to operate at a rating of 8 ohms. On receivers that offer A and B speaker outputs, both A and B connections share the same amplifier. It is important to note, due to the way many receivers are wired, that when using impedance matching devices, such as WALTx-2 volume controls, it is recommended to wire only to the A output. If you have any questions, contact Russound directly.

2. As outlined in step #1, connect the speaker wires to the connector labeled output.
3. Install the completed assembly in the included outdoor single-gang junction box. Insert carefully to avoid excessive strain on the connector.



WALTx-2 Specifications:

Power rating /channel: 126 watts power handling, 42 watts RMS continuous

Frequency Response: 20Hz - 20kHz, +1 / -0.5 dB at rated power

Attenuation: 12 steps, including "Off" / 43dB total attenuation

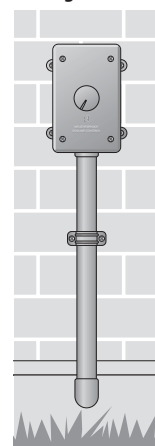
Wire Size: Maximum wire size of 12 AWG

Case: Weatherproof PVC plastic sealed case

Installation Instructions

1. Select a suitable location for the WALTx-2. The WALTx-2 can be mounted to a hard surface (Fig. 4) or can be placed directly onto 3/4" PVC conduit (Fig. 5). Do not permanently mount the WALTx-2 until you have completed installation steps 2 - 6. Make sure that the WALTx-2 can be accessed easily with the intended mounting position.

Figure 4

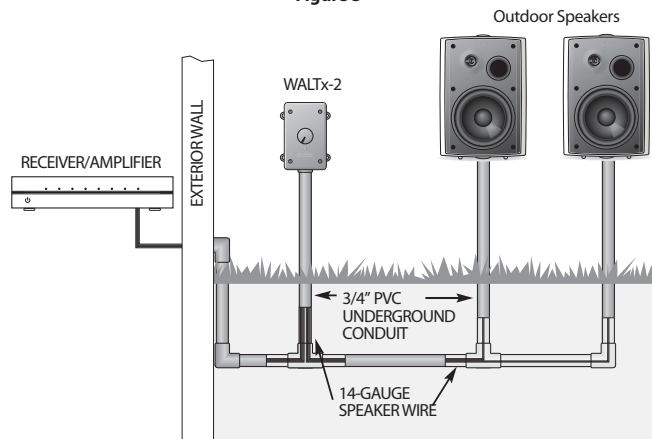


2. Run all outdoor wires through 3/4" PVC conduit. Wiring to the speakers can be made by branching off the volume control's conduit using T-junctions, or by running a separate line of conduit from the interior of the home. See Fig. 5 for typical system wiring.
3. Wire the WALTx-2 as described in the **Wiring Instructions section**.
4. Be sure to test the WALTx-2 and speaker operation before attempting to secure the PVC junctions (see **Operation Instructions**). Also be sure to test the integrity of your wire connections since all of the connections will be permanently sealed in the conduit.
5. Once the system has been tested and you are sure that the connections are secure, seal the conduit using PVC adhesive. Blowing into the open end of the conduit is one way to help find possible leaks. If the conduit loses pressure, there is probably a leak.

NOTE: Insufficient sealing at any point of the conduit network may cause moisture to build up inside the WALTx-2 Volume Control. This may cause malfunction if corrosion occurs.

6. If the WALTx-2 is to be mounted to a hard surface, such as an exterior wall, use four screws and appropriate mounting anchors to permanently mount it.

Figure 5



Operation Instructions

1. Make sure the amplifier/receiver is turned OFF and the volume is set to minimum.
 2. If you are using a Russound speaker selector system, locate the ON/OFF button which corresponds to the speaker pair you wish to play. Set the button to the ON position.
 3. Set the WALTx-2 volume to maximum (fully clockwise).
 4. Turn on the amplifier or receiver and select a music source, such as tuner or CD player.
 5. Slowly turn up the amplifier or receiver volume and set it to a comfortable (not maximum) listening level. Be careful not to overdrive your amplifier. If the sound becomes distorted, you have reached the limit of your amplifier's volume capability and should quickly reduce the volume to avoid damaging your speakers.
- NOTE: If the volume control's autoformers get warm or vibrate, turn the amplifier/receiver down. If the amplifier is driven to this "clipping" state, it and/or the volume control may become damaged.**
6. You can turn OFF the speakers by turning the knob on the WALTx-2 fully counterclockwise, or by pressing the corresponding ON/OFF button on your speaker selector.