

WALT_x-2 Instruction Manual

Weatherproof Volume Control



Product Overview

The WALT_x-2 Weather Proof 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 WALT_x-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 as an UltraMatch™ control when more than one pair of speakers is connected to the same amplifier. The UltraMatch™ 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 ALTx volume control has been designed and tested for safety.

Determining the Proper Jumper Setting for Impedance Matching

The jumpers 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 jumper setting 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. AC impedance is measured in ohms.
2. From Fig 1 identify the correct impedance-matching chart according to the 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 jumper settings.

Once the jumper setting has been determined, set the jumpers to the appropriate positions, either 2X, 4X, or 8X, as shown in Fig 2.

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 an UltraMatch™ volume control for each pair of speakers.
3. Every jumper setting 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 UltraMatch™ volume control.

Fig 1 Impedance Matching Charts For UltraMatch™

Impedance Matching For 4 Ohm Amplifiers

8 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		
2	2X	4X	4X	4X	4X	8X	8X	8X	8X	8X	8X	8X	8X				
3	4X	4X	4X	8X	8X	8X	8X	8X	8X	8X							
4	4X	8X	8X	8X	8X	8X	8X	8X	8X								
5	8X	8X	8X	8X	8X	8X	8X										
6	8X	8X	8X	8X	8X												
7	8X	8X	8X														
8	8X																

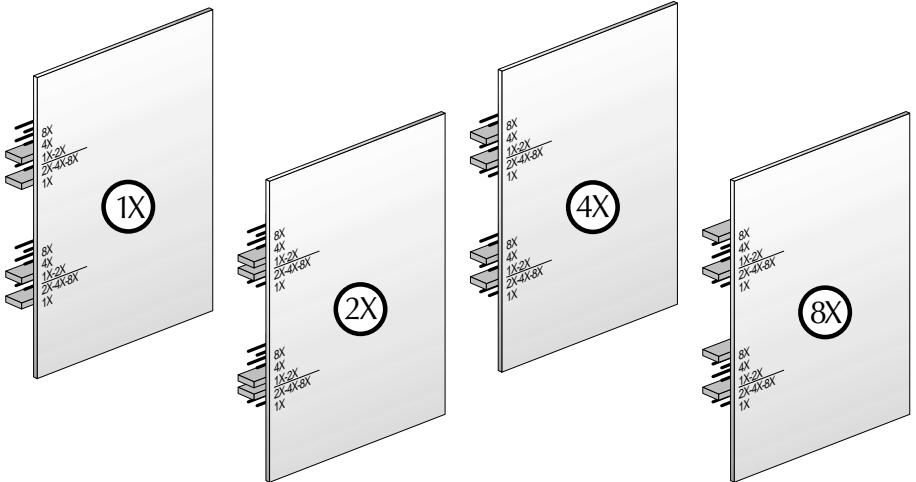
Impedance Matching For 8 Ohm Amplifiers

8 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		
2	4X	8X	8X	8X	8X				
3	8X	8X	8X						
4	8X								

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

Fig 2 Jumper Settings On Circuit Boards



EZB Connecting Blocks

The EZB-1 and EZB-2 connecting blocks are Russound accessories that simplify connections of multiple volume controls and speaker pairs. The EZB-1 is a neat, compact wiring device capable of connecting four volume controls to an amplifier's outputs. The EZB-2 expands the EZB-1 to another 4 volume controls. Multiple EZB-2's can be used to expand the system to sixteen volume controls.

Wiring Instructions

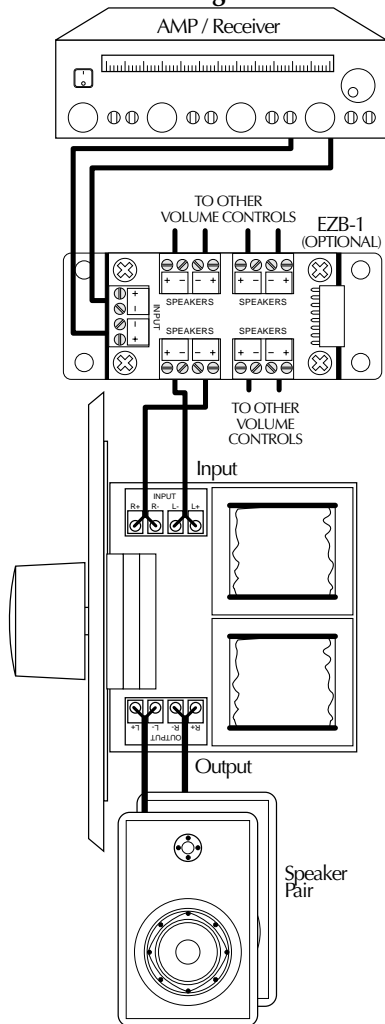
1. Connect the leads from the amplifier's outputs to the connector labeled input. The wires should stay consistent, left + of the amplifier to left + input of the volume control, observing polarity and identification.

CAUTION: Do not reverse the input and output connections!!

CAUTION: A majority of receivers are designed to operate at a rating of 8Ω . 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 UltraMatch™ volume controls, it is recommended to wire all speakers 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 junction box. Insert carefully to avoid excessive strain on the connector. Taking the time to feed the excess wire out the back of the junction box will help you with the final assembly.

Fig 3



Installation Instructions

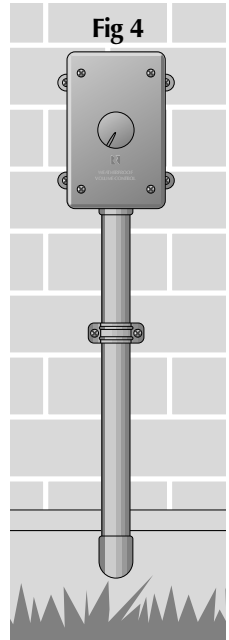
1. Select a suitable location for the WALTx-2. The WALTx-2 can be mounted to a hard surface (Fig 4) or can be placed directly onto 3/4" PVC conduit (Fig 5) . Do not permanently mount the WALTx-2 until you have completed steps 2 - 6. Make sure that the WALTx-2 can be accessed easily with the intended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

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.

Operation Instructions

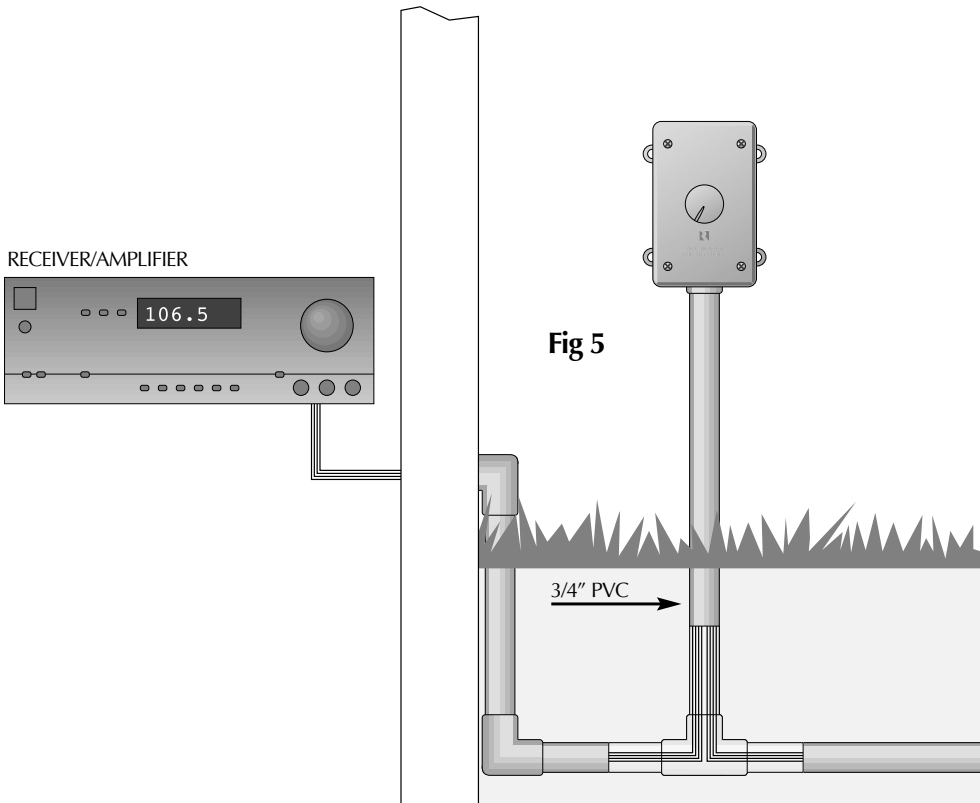
1. Make sure the amplifier/receiver is turned OFF and the volume is set to minimum.
2. If you are using a Russound speaker selector system, locate the ON/OFF button which corresponds to the speaker pair you wish to play. Set the button to the ON position.
3. Set the WALTx-2 volume to maximum (fully clockwise).
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: 12 o'clock on most receivers is approximately full volume. Adjust the volume of the speakers using the WALTx-2. By using a Russound PRO-VC speaker selector in your system, you can leave the amplifier or receiver volume set at one position and use the WALTx-2 and ALT volume controls independently from the primary listening area.

6. You can turn OFF the speakers by turning the knob on the WALTx-2 fully counter-clockwise, or by pressing the corresponding ON/OFF button on your speaker selector.



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.

Warranty

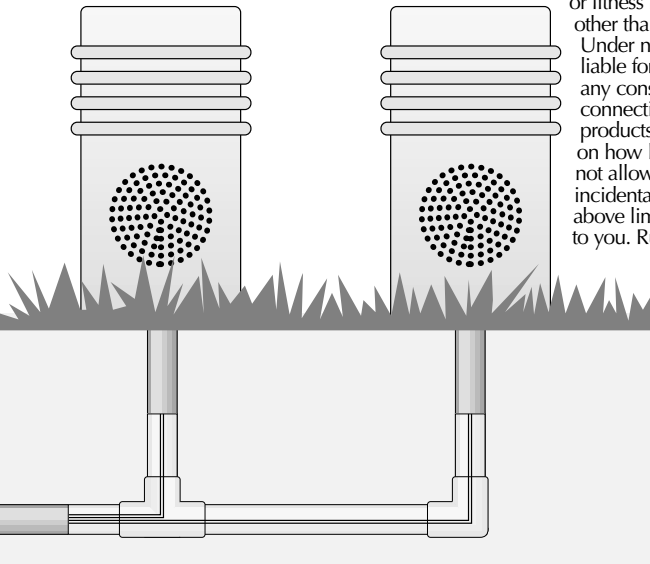
This Russound volume control is fully guaranteed against all defects in materials and workmanship as long as the original purchaser and user of the volume control owns the unit. During the warranty period, Russound, at its option, will replace or repair any defective part and correct any defect in workmanship without charge for parts or labor. For this warranty to apply, the unit must be installed and used in accordance to its written instructions. If necessary, repairs must be performed by Russound. The unit must be returned to Russound at the owner's expense and with prior written permission of Russound. Accidental damage and shipping damage are not considered defects, nor is damage resulting from abuse, or from servicing performed by an agent or person not specifically authorized in writing by Russound. Damage to or destruction of components due to application of excessive power voids the warranty on those parts.

Repairs to components damaged or destroyed due to application of excessive power will be made by charging the owner the retail value of the parts and labor for the repair. To return items for repairs, the unit must be shipped to Russound at the owner's expense, along with a written explanation of the nature of the service required. The unit must be packed in a corrugated container with at least 3 inches of resilient material to protect the unit from damage in transit. Russound reserves the right to request proof of purchase. Except to the extent prohibited by applicable law, no other warranties, whether expressed or implied, other than the express warranties stated herein, shall apply to units sold to the purchaser. Russound shall not be

liable for any implied warranty of merchantability or fitness for a particular purpose to any person other than the original purchaser and user.

Under no circumstances shall Russound be liable for property damage, economic loss or any consequential damages sustained in connection with the purchase and use of its products. Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Russound neither assumes nor

authorizes any representative or other person to assume for it any obligation or liability other than such as is expressly set forth herein. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



Russound

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