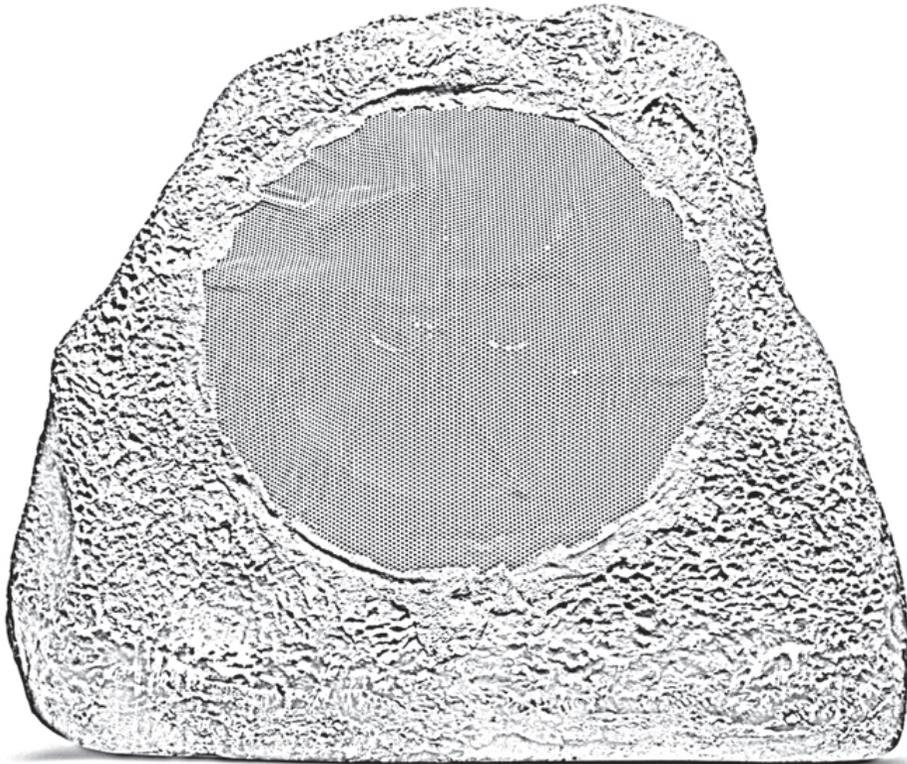


a sound relationship
Russound

Acclaim™ 5 Series OutBack

**Outdoor Rock Loudspeaker
and Rock Subwoofer
Installation Manual**



INTRODUCTION

Introduction

Thank you for selecting an outdoor rock speaker from Russound. Like all Russound speakers, they combine acoustic technology with durability and will provide years of musical enjoyment.

These Rock Speakers are designed to look like natural outcroppings of rock instead of bulky aluminum and plastic speakers that detract from nature's beauty. Russound Rock Speakers are a distinctive addition to your yard and blend into any landscape for a convenient and practical outdoor audio solution.

The realistic rock speakers are offered in three styles to match your landscape: Gray Granite, Weathered Granite and Sandstone. These shapes and finishes closely mimic rocks found in nature for a quality, believable look. The secret to the realistic look of the rock speakers is in the way they are crafted. The cast enclosure process produces more lifelike shapes and surfaces. This process is more expensive, but the three-layer fiberglass and resin construction results in an acoustically better speaker with low resonance for better sound. The process also creates an environmentally stable and durable speaker housing.

The resulting Rock Speaker has a sturdy, waterproof cabinet tough enough for use in all types of weather and environments. The enclosure is silicone sealed and equipped with a water drain for the speaker opening. For added convenience an attached security eyelet is provided to prevent the speaker from getting 'carried away.'

Each speaker has an 8" coaxial two-way or single-point stereo driver with a polypropylene cone and fully painted aluminum grille.

With 10 – 125 watt power handling, Russound Rock Speakers fit any outdoor speaker necessities, for monaural or stereo applications.

Amplifier Considerations

The Rock Speakers should be powered by an amplifier that provides a minimum of 10 watts per channel. An amplifier that has both stereo and mono capability is a plus, as you may want to use mono for large areas.

If you intend to use more than one pair of speakers at a time it's important to consider both the impedance of the speakers and the capabilities of the amplifier or receiver. Not all amplifiers or receivers can safely operate two sets of speakers at once.

SPEAKER PAIRS / PLACEMENT

Number of Speaker Pairs

First, determine the size of the listening area, and identify any gathering areas where folks will sit or stand. The typical coverage area is 20 feet from the front of the speaker for normal listening levels. There should be a maximum of 20 feet between speakers for better stereo imaging. Too far away from each other creates an acoustic void when used for stereo. Monaural will not be affected to the same degree.

Use as many pairs of speakers as needed to achieve the desired coverage and dispersion of sound. Getting more sound with more speakers is better than cranking the volume, which may lead to amp clipping. Large areas are better served by monaural audio instead of stereo. In most outdoor environments, there is no ideal listening area to give stereo image or separation.

Speaker Placement

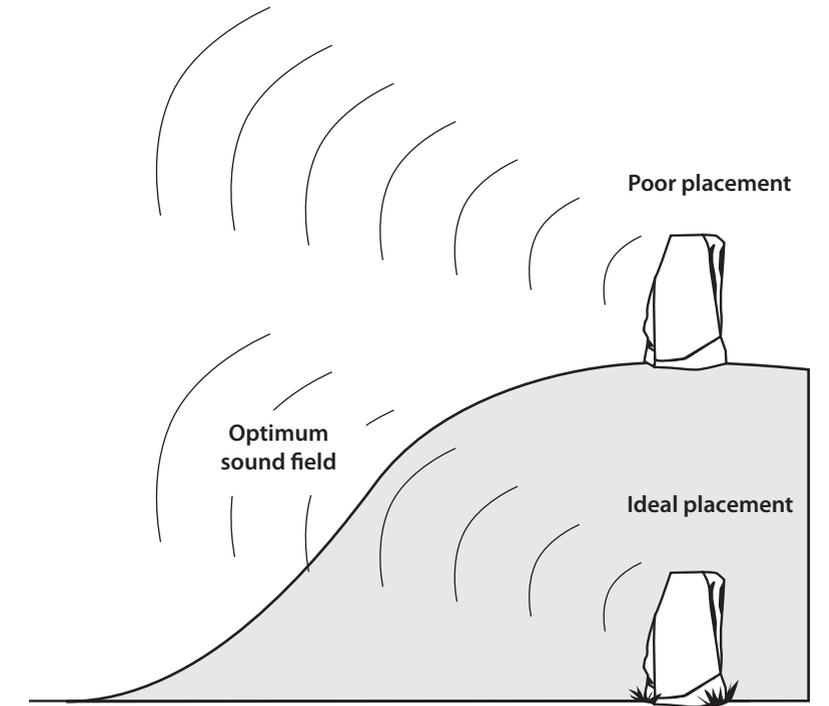
An important factor for speaker placement is the location elevation. Select a spot wires can be run to from the audio system. The speakers should face the listening area and be spaced for best sound coverage for the area.

The realistic rock shape and finish will blend in best if placed in a manner that mimics nature, such as near a rock wall or amidst ground plantings. Be sure to avoid placing the speaker in low spots that collect water.

Elevation and Slope

Speakers should be placed on the same level for balanced sound delivery. Speakers on different elevations will have different sound characteristics. The acoustic design is optimized to provide the best sound when placed on level ground at the same elevation as the listening area. Placing the speaker on higher elevations or tilting it upwards will provide less than optimal sound. Speakers should be placed for best sound delivery with the base of the speaker as level as possible. Never lean a speaker back to aim the sound up as this could allow it to retain water.

The Rock Speakers have been optimized to provide the best response when placed on the same elevation as the listening area and sitting flat on the ground. Tilting the speaker up can potentially create a problem with proper rainwater drainage also.



Example of speaker elevation placement

PLACEMENT FOR STEREO IMAGING

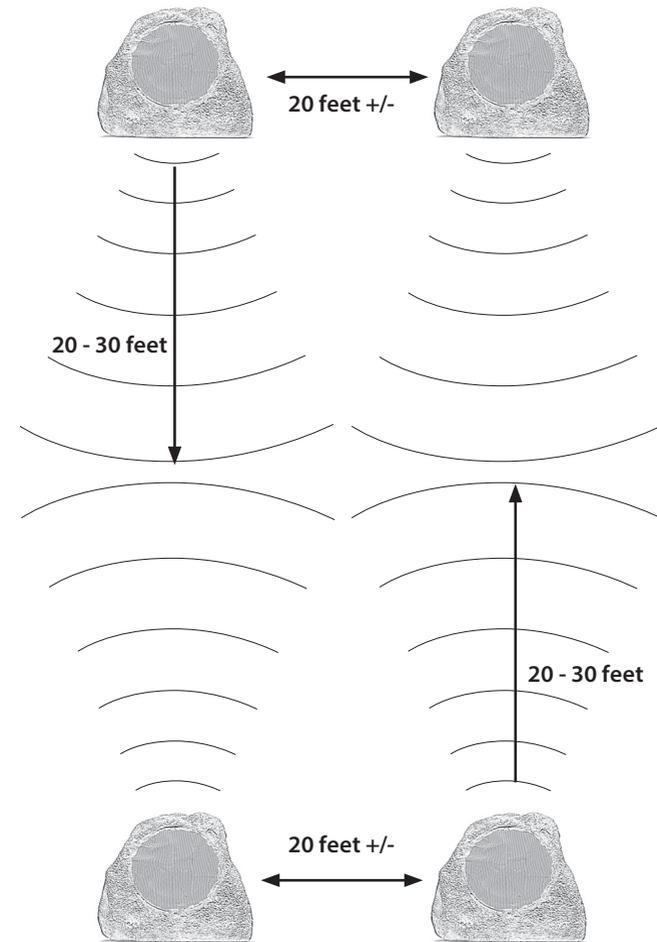
Placement of Speaker Pairs

The best stereo imaging can be achieved by placing rock speakers no closer than 20 feet next to one another. The sound propagation outward from the face of the speaker is ideal within a 20 to 30 foot range. The rock speakers can certainly cover larger areas but as the distance between adjacent speakers increases, the stereo imaging starts to deteriorate. As the distance between opposing speakers increases beyond the 20 to 30 foot range, the volume level to cover the whole area can reach uncomfortably loud levels when the listener moves closer to the speakers.

Large areas are better served by monaural audio instead of stereo. In most outdoor environments, there is no ideal listening area to give stereo image or separation.

Placement of a Subwoofer

As with the stereo speakers, a rock speaker can generally cover an area around it of 20-30 feet (6-9 meters). Your Russound rock subwoofer is front-firing but the bass sound is less directional than higher frequencies. As with stereo speakers, using more rock speakers playing at a lower sound volume to cover a larger area is better than having fewer speakers playing loudly as they can tend to create too many "hot" spots where the sound is uncomfortably loud. Keep in mind that placing a subwoofer near a wall or other solid physical boundary can augment the sound by approximately 3dB.



Rock speaker stereo imaging placement

PLACEMENT FOR STEREO IMAGING

Rock Subwoofer Recommendations

Your Russound rock subwoofer is a passive, sealed, front-firing design and can be powered by a typical amplifier. Enhanced performance can be obtained by utilizing an active crossover to adjust the sound characteristics of the speaker. Russound's website, Russound.com has typical settings available that can be imported directly when using the MiniDSP brand of active crossovers which are commonly available however any brand of active crossover or DSP-enabled amplifier may be used for enhanced response.

You are free to adjust the parameters to your particular preference, but the Russound recommended settings for an installation for both the Russound rock subwoofers and rock stereo speakers are below. For any installations where stereo (left/right channel) placement is difficult, Russound recommends using Mono sound to simplify installation and maximize enjoyment in outdoor environments:

Rock Subwoofer

Input 1/Output 1 to Subwoofer Amplifier

Crossover Filters:

48dB/octave BW* Highpass Filter set to 45Hz
24 dB/octave BW* Lowpass Filter set to 120Hz

Parametric Filters:

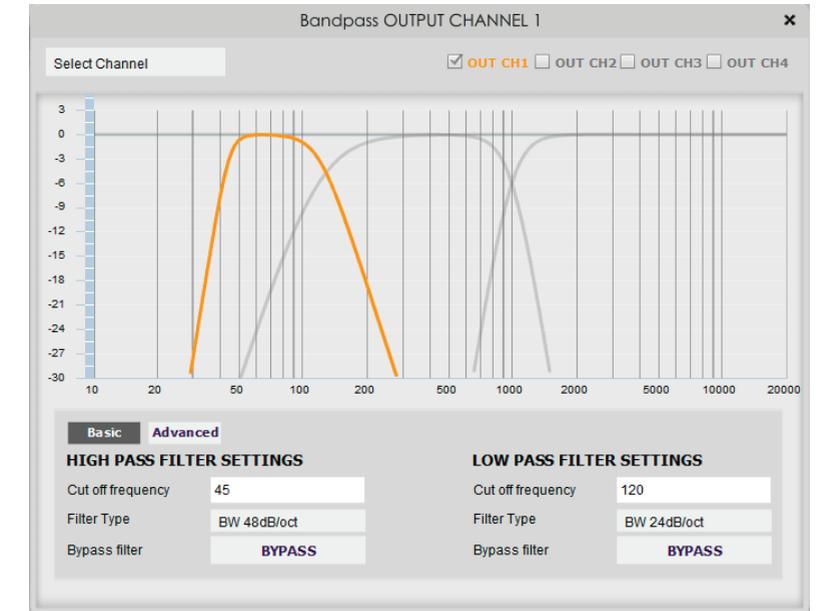
Low Shelf Filter set to 80Hz, 5.0dB Gain with Q=1
Peak Filter set to 50Hz, 2.0dB Gain with Q=3

Rock Stereo Speaker

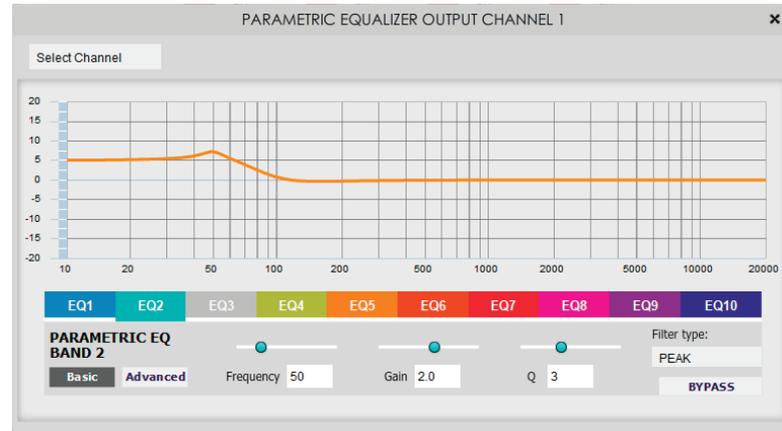
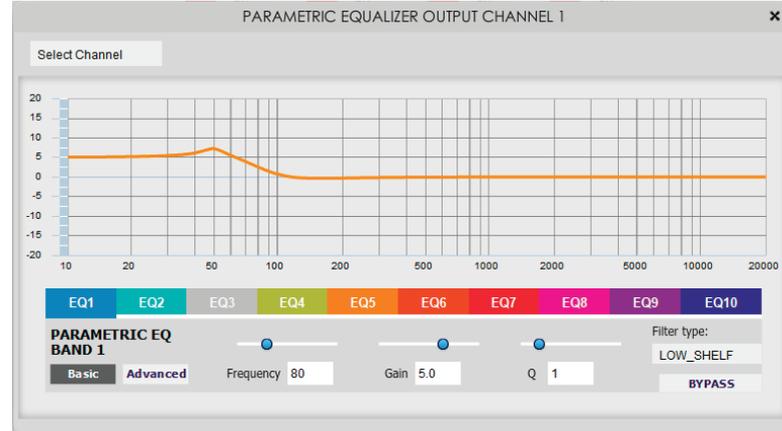
Input 1/Output 2 to Stereo Speaker Amplifier
Crossover Filter: 24dB/Octave LR* Highpass Filter set to 120Hz

*BW=Butterworth, LR=Linkwitz-Riley

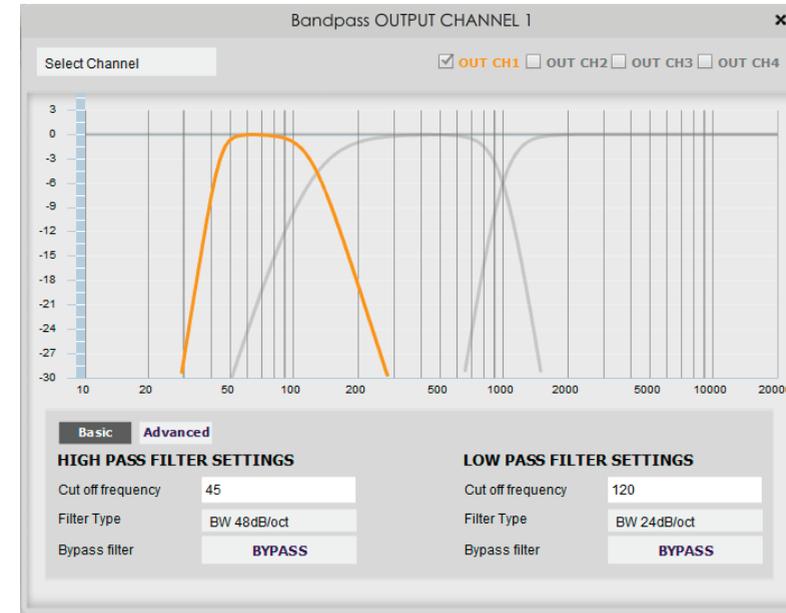
Here are some images from the MiniDSP configuration as a guide:



Here are some images from the MiniDSP configuration as a guide:



Stereo Speaker Crossover Filter



Speaker Cable

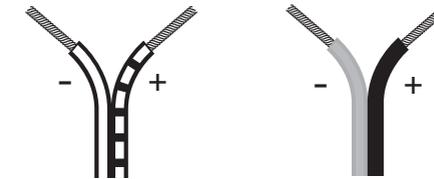
The amount of wire needed varies with speaker placement. Label speaker wires with left, right, and location.

Use Russound AW series speaker cable or any reputable brand of 16 to 12 gauge multi-stranded wiring for amplifier- to-speaker connections.

Wire is measured in gauges: the greater the number, the smaller the wire. The gauge of wire needed is determined by the distance between the amplifier/ receiver and the speakers. The longer the run, the heavier the gauge needed. Use the following chart as a guide:

Length	Minimum Gauge
0' to 100'	16
50' to 150'	14
100' to 200'	12

The standard colors on the terminals are red Positive (+) and black Negative (-). If the wire has transparent insulation, one conductor will be copper-colored (+) and the other silver-colored (-). If the wire has an opaque insulation, the conductors are differentiated by a series of ribs or grooves, a stripe, or dotted line on one conductor. Use and mark these as the Positive (+) conductor.



Typical usage of speaker wire conductors

Prewiring

Run a separate 2-conductor stranded copper speaker cable of at least 16 AWG (1.5 mm) from the amplifier to each speaker. Be sure to use cable with the appropriate fire resistance rating for the application.

If you are installing a single-point stereo rock speaker, we recommend using four-conductor speaker cable.

When running a speaker cable parallel to an AC power cable, keep them at least 12 inches (30 cm) apart to minimize electromagnetic interference. If the speaker cables must cross AC wiring, cross them at right angles.

Leave about 2 feet (0.6 m) of cable at each end for connecting to the speakers and amplifier. Label the cables so you will know which cable connects to each keypad or amplifier output channel.

Planning Path for Cable Burial

First, consult your local phone and/or electric company to learn of existing buried cables or pipes. Watch for buried water lines or gas lines. If necessary, use a metal detector to discover buried cables. Be aware of any local building code requirements that may be applicable.

Trenching Cable

To ensure proper installation of direct burial speaker cable, consult the manufacturer of the cable you are using, and adhere to all applicable electrical codes. After positioning the speakers and determining where any buried obstructions exist, you can dig the trench. Lay the cable out on top of the ground from the speaker to the outdoor volume control to determine length.

Trench below the frost line for the cable. The frost line will vary depending on geography, and is typically no deeper than three feet. If using conduit, size and cut it to length. Connect the conduit lengths and elbows with PVC cement.

Run cable through the conduit.

Connecting Cable to the Speaker

Make cable connections at the speaker. Be sure to observe polarity.

1. Strip 1 to 2 inches (2.5 to 5 cm) off the end of the cable jacket. Then strip ½ inch (1.3 cm) of insulation off each wire.
2. Twist the wire strands together so there are no strands separated from the bundle.
3. Connect the wires to the speaker terminals, being sure to observe proper polarity. For standard speaker cable with red and black wires, connect the red wire to the red positive (+) terminal and the black wire to the black negative (-) terminal.

4. Check to make sure there are no stray strands of wire outside the terminals. If there are, remove the wire, twist the strands together, and reconnect the wire to the terminal.
5. Ensure all electrical connections are watertight. Use silicone-impregnated wire nuts for weathertight electrical terminations, and seal with additional silicone if necessary.

Burying Cable

Bury the cable or conduit in the trench, and leave an extra 3 feet of cable under the speaker to allow for future adjustments in position. Seal the cable paths through structure walls with silicone.

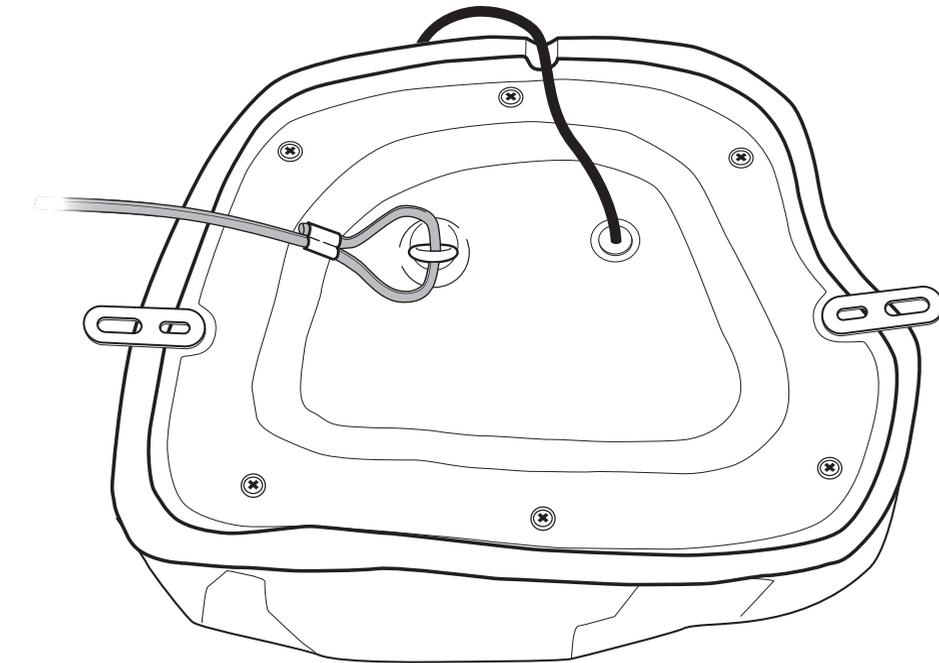
Security Eyelet

The speaker has a security eyelet on the bottom through which a security cable can be looped. Attach as vinyl coated cable at a low position to a non-moveable object such as a bench, fence post or tree.

Run the cable to the speaker, and bury or cover the cable to hide it and prevent a trip hazard. Secure the cable to the eyelet on the bottom of the speaker. Use compression fittings or a crimp to form a loop.

Mounting Bracket

There are two mounting brackets on the bottom of the speaker. These are used as an alternate method to secure the speaker to a hard surface.



Bottom of rock speaker showing security eyelet and mounting brackets

Connecting the Amplifier

1. Make sure the amplifier is turned off.
2. Strip 1 to 2 inches (2.5 to 5 cm) off the end of each cable's outer jacket. Then strip just enough insulation off each wire to allow inserting the wires fully into the amplifier's speaker terminals.
3. Twist the wire strands together so there are no strands separated from the bundle.
4. Connect the wires to the speaker terminals, being sure to observe proper polarity.
5. Check to make sure there are no stray strands of wire outside the terminals. If there are, remove the wire, twist the strands together, and reconnect the wire to the terminal.

Speaker Care

These sealed construction speakers are made of durable materials that need very little care. Occasionally wipe them with a soft, damp cloth. Do not use any harsh detergents, chemical solvents, or abrasive materials on your speakers, and do not spray water or other liquids into the grilles.

Troubleshooting Guide

Before returning your Russound speakers for service, try these simple remedies first.

No sound from either speaker:

- Incorrect source selected on receiver or preamplifier.
- Mute button pressed on receiver.
- Wrong speaker output selected; many receivers have an "A" and "B" speaker switch. Make sure it is in the correct position.
- Volume control not turned up or wired incorrectly.
- If using a speaker selector, room/station not turned on or improperly connected.

No sound from one speaker:

- Unsecured connection at either the speaker or amplifier - double-check all connections.
- Balance control turned all the way left or right - return it to center.
- Bad connecting cable between sound source and amplifier - try a new cable.
- Check for stray wire strands crossing the speaker terminals.
- Defective speaker - contact your Russound dealer or call Russound Tech Support at 603.659.5170.

Muffled sound from a stereo speaker:

- Check polarity of speaker connections. One channel may be reversed.

Any other problems not listed, discuss with your dealer or call Russound.

MODEL: 5R82

Type

2-Way Loudspeaker

Woofers

8" (20.3 cm) Polypropylene

Tweeter

1.1" (28 mm) Aluminum Dome

Crossover

2nd Order LP/3rd Order HP (2.8kHz)

Frequency Response

58Hz-20kHz

Sensitivity

90db SPL 2.83V @ 1m

Nominal Impedance

8 ohms

Recommended Power

10-125 watts

Dimensions

14" x 12" x 11" (35.6 x 30.5 x 27.9 cm)

Weight

12 lbs (5.4 kg)

Available Colors

Gray Granite, Sandstone, Weathered Granite

MODEL: 5R8SUB

Type

Front Firing Subwoofer

Woofers

8" (20.3 cm) Polypropylene

Frequency Response

40Hz-200Hz +/- 3dB

Sensitivity

90db SPL 2.83V @ 1m

Nominal Impedance

8 ohms

Recommended Power

10-125 watts

Dimensions

14" x 12" x 11" (35.6 x 30.5 x 27.9 cm)

Weight

12 lbs (5.4 kg)

Available Colors

Gray Granite, Sandstone, Weathered Granite

All Russound Acclaim 5 Series Rock Speakers have a five-year limited warranty against defects in materials and workmanship. Proof of Purchase must accompany all claims. During the warranty period Russound will replace any defective part and correct any defect in workmanship without charge for either parts or labor.

Russound may replace returned speakers with a product of equal value and performance. In such cases, some modifications to the mounting may be necessary and are not Russound's responsibility.

For this warranty to apply, the unit must be installed and used according 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. Accidental damage and shipping damage are not considered defects, nor is damage resulting from abuse or from servicing performed by an agency or person not specifically authorized in writing by Russound.

Russound products are sold only through authorized Dealers and Distributors to ensure that customers obtain proper support and service. Russound reserves the right to limit the warranty of products purchased from an unauthorized dealer or other source, including retailers, mail order sellers, and online sellers, to ninety (90) days from the date of purchase.

Damage to or destruction of components due to application of excessive power voids the warranty on those parts. In these cases, repairs will be made on the basis of the retail value of the parts and labor. To return for repairs, the unit must be shipped to Russound at the owner's expense, along with a note explaining the nature of service required. Be sure to pack the speaker(s) in a corrugated container with at least 3" (7.6 cm) of resilient material to protect the unit from damage in transit.

Before returning the unit for repair, call Russound at 603.659.5170 for a Return Authorization number. Write this number on the shipping label and ship to:

Russound

Attn: RA# (Insert your RA number here)

1955 Wehrle Dr

Williamsville NY 14221

This Warranty Does Not Cover:

- Damage caused by abuse, accident, misuse, negligence, or improper operation (installation).
- Products that have been altered or modified.
- Any product whose identifying number or decal, serial #, etc. has been altered, defaced or removed.
- Normal wear and maintenance.

Due to our continual efforts to improve product quality as new technology and techniques become available, Russound/FMP, Inc. reserves the right to revise speaker systems specifications without notice.

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Russound

Acclaim™ 5 Series OutBack
Outdoor Rock Loudspeaker & Subwoofer
Installation Manual

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