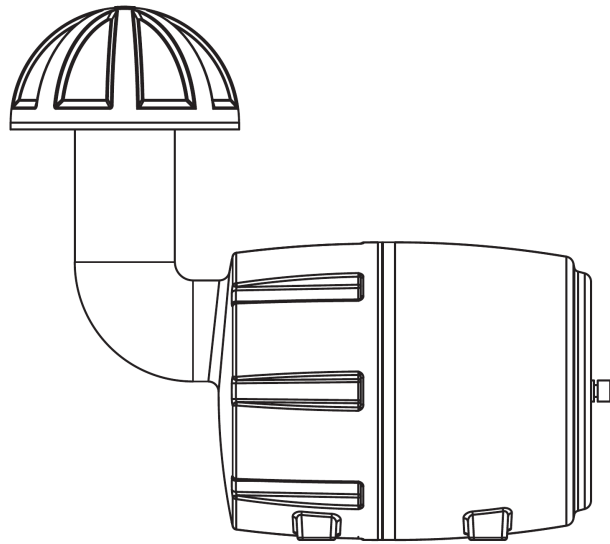




XSUB12 MKII

IN-GROUND SUBWOOFER INSTALL GUIDE



OVERVIEW

The XSUB12 MKII is a passive 12-inch in-ground subwoofer that adds deep, evenly distributed bass to outdoor entertainment systems. The enclosure installs below ground, leaving only the weather-resistant vent visible, and its omnidirectional design distributes low-frequency sound throughout patios, gardens, pool areas, and other outdoor listening spaces. A single XSUB12 MKII provides bass coverage for outdoor areas up to approximately 2,000 square feet, depending on layout, listening level, and surrounding surfaces; use two subwoofers for larger areas or more even coverage.

Enhanced performance and reliability

- Enhanced voice-coil ventilation improves heat dissipation and long-term power handling.
- Upgraded internal crossover components provide improved current-handling capability.
- Improved cable-entry bonding helps maintain a secure, weather-resistant enclosure seal.

Important — A subwoofer amplifier is required. The XSUB12 MKII is a passive 8-ohm subwoofer with no built-in amplifier and cannot connect directly to a receiver's RCA subwoofer or LFE output. A dedicated subwoofer amplifier — or an amplifier with a passive-subwoofer channel — is required to power it.

TOOLS NEEDED

- Trench Spade / Shovel
 - Wire Cutter
 - Measuring Tape
 - Direct-Burial Cables
 - Silicone Cable Connectors (Included)
 - Outdoor Volume Control (Optional)
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STEP 1 — PRE-INSTALLATION: SELECT THE LOCATION

Designate the general area where the subwoofer would be most ideal. The subwoofer should be placed within 20 feet of the general listening area for optimum performance. (See Diagram 1) The shape and finish will blend particularly well into your landscape if placed near landscape lighting, a water fountain, an open planter, or a swimming pool.

- Where is the best place to install the subwoofer?
- Where will the subwoofer sound the best?
- Place the subwoofer in a location where it will blend in best with its surroundings.

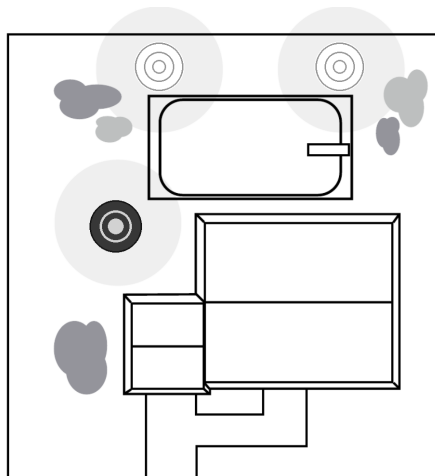


Diagram 1

Solid = recommended location · outline = alternatives to

SPEAKER WIRE

To determine the length and gauge of speaker wire, measure the distance between your receiver/amplifier and the subwoofer.

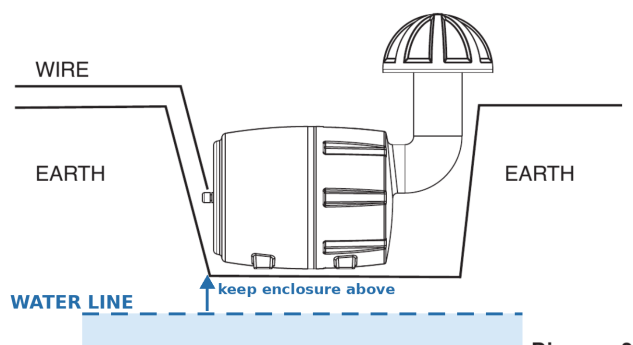
- Always buy more than you think you will need.
- Equal wire lengths should always be used to maintain an equal balance in sound volume.
- Sound quality is lost when using a thin wire gauge over a long distance.

Subwoofer Wire Guide

14 AWG	1 to 50 ft
12 AWG	50 ft and longer

STEP 2 — TRENCH AND ROUTE THE CABLE

Measure the distance from the designated subwoofer location to your stereo receiver. Try to minimize the distance without compromising overall appeal and safety. Once the route is determined, use your spade to dig the hole for the subwoofer and a wire route between 8" and 12" deep. Once the trench route is completed, lay the cable in the route. If using PVC pipe, cut the pipe to length. Ensure all electrical connections are watertight with silicone burial connectors. Once the cable layout is done, connect the subwoofer, then refill the trench and subwoofer hole. (See Diagram 2)



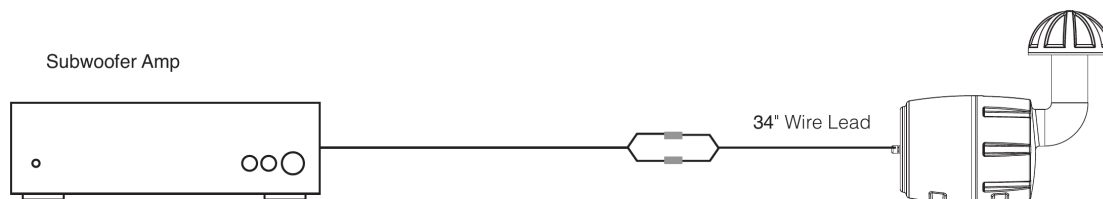
Important — do not install below the water line. If the hole fills with water while

STEP 3 — CONNECT THE SUBWOOFER AMPLIFIER

The XSUB12 MKII is a passive 8-ohm subwoofer and requires a dedicated subwoofer amplifier — either a stand-alone subwoofer amplifier or an amplifier with a dedicated passive-subwoofer channel. A single amplifier can power one XSUB12 MKII at 8 ohms; an amplifier rated for 4-ohm operation can power two XSUB12 MKII subwoofers wired in parallel. Some subwoofer amplifiers also provide powered outputs for full-range satellite speakers.

The subwoofer amplifier accepts either a low-level RCA signal or a high-level speaker-level signal. Use the low-level RCA connection when your receiver or preamp provides a Subwoofer/LFE, Preamp, or Zone Line Out — this is generally the preferred method. Use the high-level speaker-level input when the receiver does not provide an RCA output.

Connect the XSUB12 MKII to the amplifier's powered subwoofer output using direct-burial speaker cable. Note: the yellow lead indicates positive signal (+) and the black lead indicates negative signal (–). Connecting the leads incorrectly places the subwoofer out of phase and results in weaker bass response. (See Diagram 3) Remove 2"–3" of the outer jacket of the speaker wire, carefully strip ½" of insulation from each conductor, and connect to the subwoofer output on the amplifier.



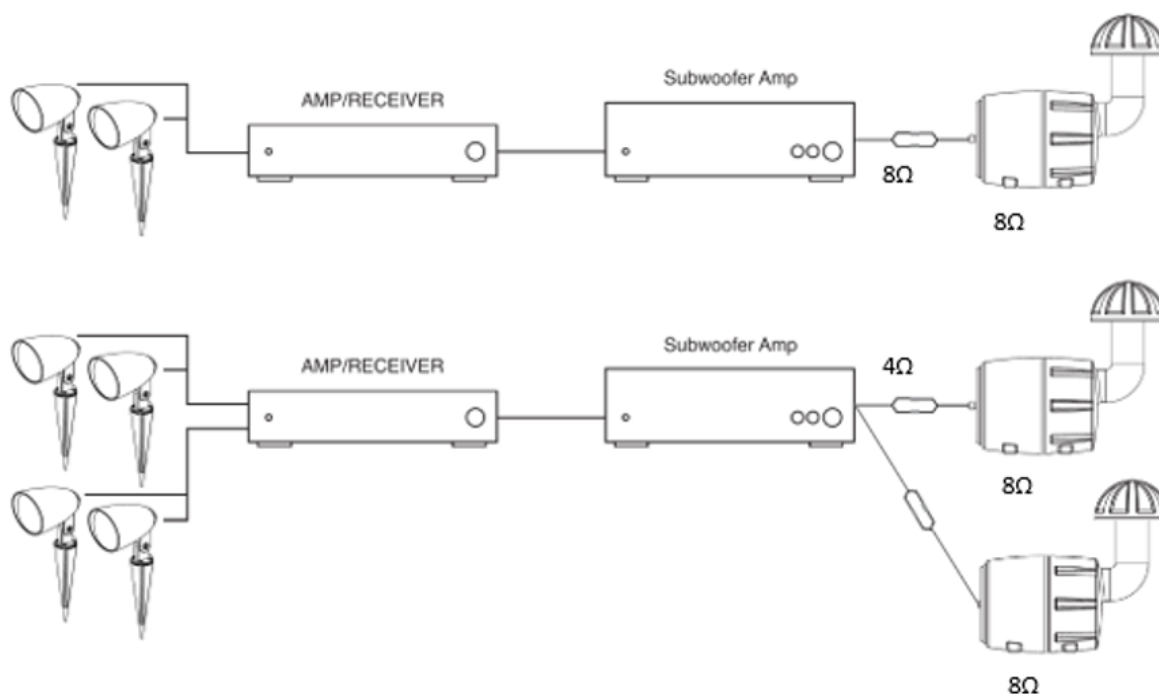
SYSTEM DIAGRAMS

For optimum performance, combine the XSUB12 MKII with OSD landscape satellite speakers to create an unobtrusive, stealthy outdoor sound system. Additional system configurations can be created for up to 8 pairs of speakers using multichannel amplifiers and/or series-parallel wiring.

Impedance and load

Each XSUB12 MKII is an 8-ohm passive subwoofer. A single XSUB12 MKII presents an 8-ohm load. Two XSUB12 MKII subwoofers wired in parallel present a 4-ohm load — use an amplifier rated for 4-ohm operation.

Note: Always verify your amplifier's minimum impedance and power rating before wiring multiple speakers or subwoofers.



ONE SUB IS GOOD; TWO SUBS ARE BETTER

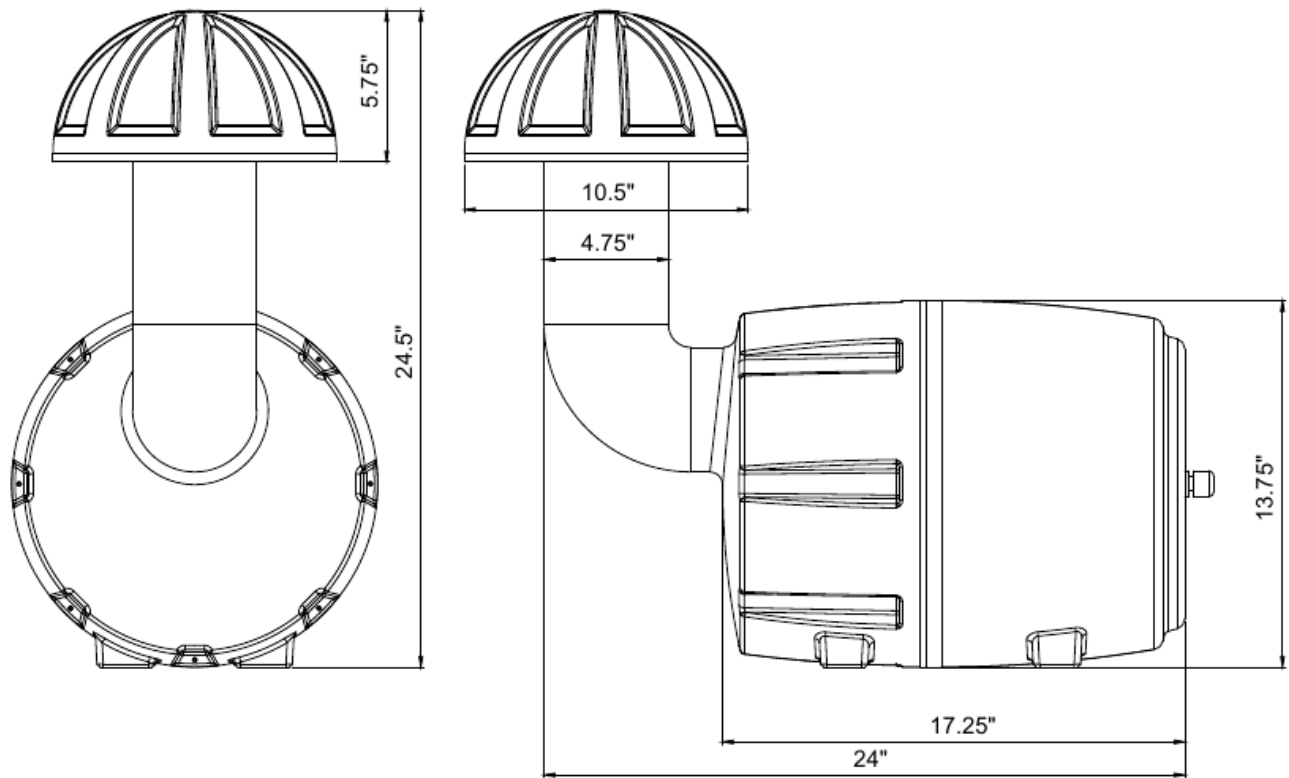
For larger areas or more even bass coverage, use two XSUB12 MKII subwoofers. Position them on opposite sides of the main listening area at similar distances from the patio, pool, and seating.

Each XSUB12 MKII is an **8-ohm passive subwoofer**. Two XSUB12 MKIIs may be wired in parallel to a single dedicated subwoofer amplifier, creating a **4-ohm load**. Use an amplifier rated for 4-ohm operation.

SPECIFICATIONS

XSUB12 MKII

Woofer	12" Polypropylene Cone with Rubber Surround
Power Handling	300W RMS / 600W Peak
Recommended Amplifier Power	100–300W RMS at 8 Ohm
Frequency Response	20–150 Hz (±3 dB)
Sensitivity	84 dB (1W/1m)
Impedance	8 Ohm
Coverage	360° Omnidirectional
Dimensions (H × W × D)	24.5" × 24" × 13.75"
Weight	31 lbs
Included	Silicone-Filled Waterproof Wire Connectors



TROUBLESHOOTING

The XSUB12 MKII is a passive subwoofer and does not contain a built-in amplifier. Always verify the dedicated subwoofer amplifier, source signal, and speaker wiring before assuming the subwoofer is defective.

Possible Cause	Recommended Solution
No sound from the XSUB12 MKII	
Subwoofer amplifier is off or in standby	Confirm the amplifier has AC power and is turned on. If using auto or signal-sensing mode, play audio with strong bass.
No signal reaching the amplifier	Verify the RCA/LFE or high-level speaker connection between the source and the subwoofer amplifier.
Incorrect input selected	Confirm the amplifier is set to the input in use (RCA/LFE or high-level speaker).
Speaker wire disconnected	Inspect the amplifier output, waterproof connectors, and XSUB12 MKII speaker leads.
DSP output muted	Check the amplifier output level, mute setting, input routing, and DSP configuration.
Very little bass	
Subwoofer level too low	Gradually increase the amplifier's output-level control.
Crossover frequency set too low	Begin with a low-pass setting of approximately 80–120 Hz, then adjust to blend with the landscape speakers.
Source subwoofer output disabled	Enable the subwoofer output in the receiver/processor menu and verify bass-management settings.
Placement provides little boundary reinforcement	Temporarily test the XSUB12 MKII near a wall, patio boundary, or corner before permanent burial.
Bass weak or uneven	
XSUB12 MKII polarity reversed	Verify amplifier positive connects to XSUB12 MKII positive and negative to negative; confirm identical polarity on both subs.
Listening position in a cancellation area	Test the subwoofer or listening position in a slightly different location.
Bass boomy or muddy	
Output level too high	Reduce the amplifier's output level.
Crossover frequency too high	Lower the low-pass crossover until bass blends naturally with the landscape speakers.
Excessive corner reinforcement	Move the subwoofer farther from the corner or reduce output.
Excessive DSP equalization	Reduce low-frequency boost; avoid excessive boost at very low frequencies.
Amplifier shuts down or enters protection	
Load below the amplifier's minimum impedance	One XSUB12 MKII = 8 Ω ; two in parallel = 4 Ω . Verify the amplifier supports the resulting load.
Shorted or damaged speaker wire	Disconnect power and inspect the entire cable route and waterproof connectors for crossed conductors or damaged insulation.
Amplifier overheating	Provide adequate ventilation; do not enclose the amplifier in an unventilated cabinet.
Distortion, popping, or mechanical noise	
Amplifier clipping	Lower the volume and confirm the amplifier provides suitable power at the connected impedance.

Possible Cause	Recommended Solution
Loose speaker-wire connection	Turn off the amplifier and inspect all terminals and waterproof connectors.
Debris obstructing the vent	Keep the vent opening clear of soil, mulch, and leaves.
Hum or noise	
Line-level signal connection problem	If using RCA/LFE, reseal or replace the RCA cable and keep it separated from AC power cables.
Water collecting around the enclosure	
Poor drainage or direct irrigation	Turn off the system and inspect the installation area; improve drainage and ensure water is not collecting around the enclosure.

Quick System Check — before contacting technical support

- Turn off the subwoofer amplifier.
- Confirm the connected load: one XSUB12 MKII = 8 Ω ; two in parallel = 4 Ω .
- Inspect speaker-wire polarity and waterproof connections.
- Confirm the correct RCA/LFE or high-level input is selected.
- Set the crossover between approximately 80 Hz and 120 Hz; set phase to 0° initially, if available.
- Disable excessive bass boost or EQ.
- Turn the system on and gradually increase the subwoofer level.
- Test with familiar bass-heavy program material.
- Record the amplifier model, connection method, number of XSUB12 MKII subwoofers, and DSP settings before contacting OSD Audio.

WARRANTY INFORMATION

All OSD Audio outdoor speakers have a five (5) year Limited Warranty against defects in materials and workmanship. Proof of purchase must accompany all claims. During the warranty period, OSD Audio will replace any defective part and correct any defect in workmanship without charge for either parts or labor.

OSD Audio 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 OSD Audio'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 OSD Audio. The unit must be returned to OSD Audio 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 OSD Audio.

OSD Audio sells products only through authorized dealers and distributors to ensure that customers obtain proper support and service. Any OSD Audio product purchased from an unauthorized dealer or other source, including retailers, mail order dealers and online sellers, will not be honored or serviced under existing OSD Audio warranty policy. Any sale of product by an unauthorized source or other manner not authorized by OSD Audio shall void the warranty on the applicable product.

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, you must email customer service at RMA@audiogeargroup.com for a Returned Merchandise Authorization (RMA) number, then ship the unit to OSD Audio at the owner's expense, along with a note explaining the nature of service required. Be sure to pack the product(s) in a corrugated container with at least 3 inches of resilient material to protect the unit from damage in transit.

This Warranty Does Not Cover

- Damage caused by abuse, accident, misuse, negligence, or improper operation or installation.
- Damage resulting from over-powering — driving the XSUB12 MKII with continuous power above its 300W RMS rating, or with an amplifier that exceeds the rated maximum (including bridged amplifiers). If distortion or clipping is heard, reduce the volume immediately.
- Damage resulting from improper or wet installation — including water intrusion caused by an unsealed or improperly bonded cable entry, installation in standing water, direct irrigation, or an area without adequate drainage, or a vent left obstructed by soil, mulch, or debris.
- Any product that has been altered or modified, or whose identifying number, decal, or serial number has been altered, defaced, or removed.
- Normal wear and maintenance.