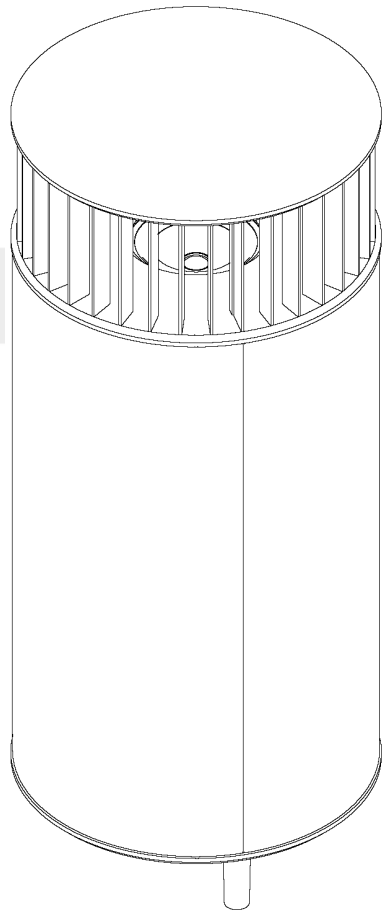


phillips design™



Oh! OH-16 User Guide



Phillips Design OH-16 Stereo Speakers

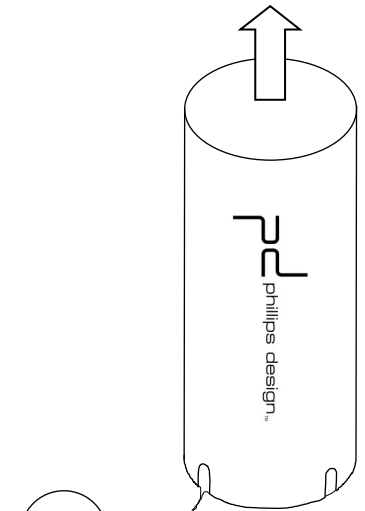
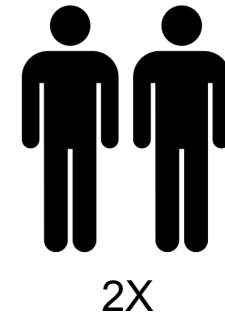
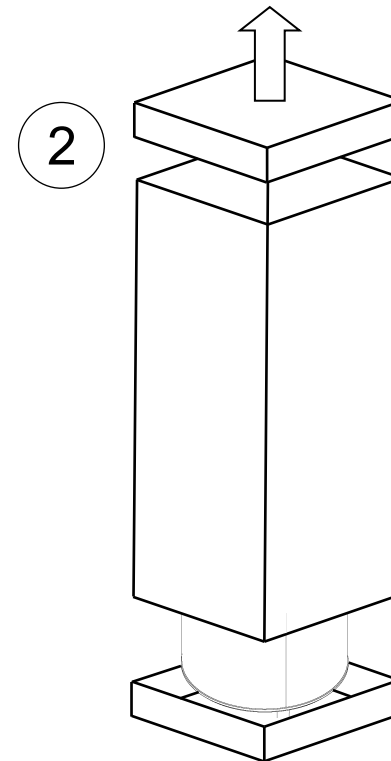
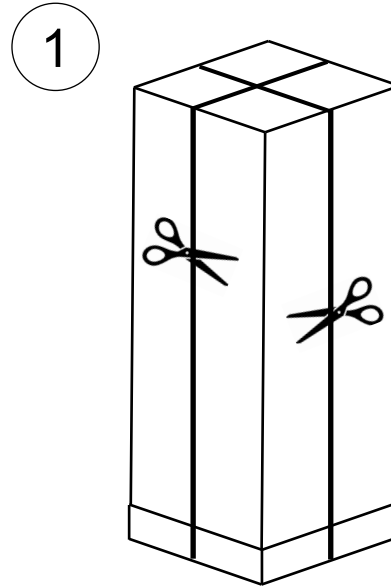
Thank you for choosing Phillips Design loudspeakers!

We believe that great audio experiences are central to a rich home life, and that speakers can and should be celebrated as beautiful works of art themselves.

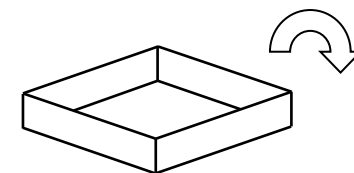
This is why we take a different approach than most loudspeaker manufacturers. Our products are a way to experience high-end sound reproduction, and are also premium furniture and interior design objects that enhance contemporary and modernist architecture and interiors.

We've developed a range of concepts that not only look amazing, but also provide world-class audiophile-grade sound reproduction. Great sound and great aesthetics can harmonize like never before.

This guide is meant to help you get the most out of your new Phillips Design speakers. May you enjoy them for years to come!



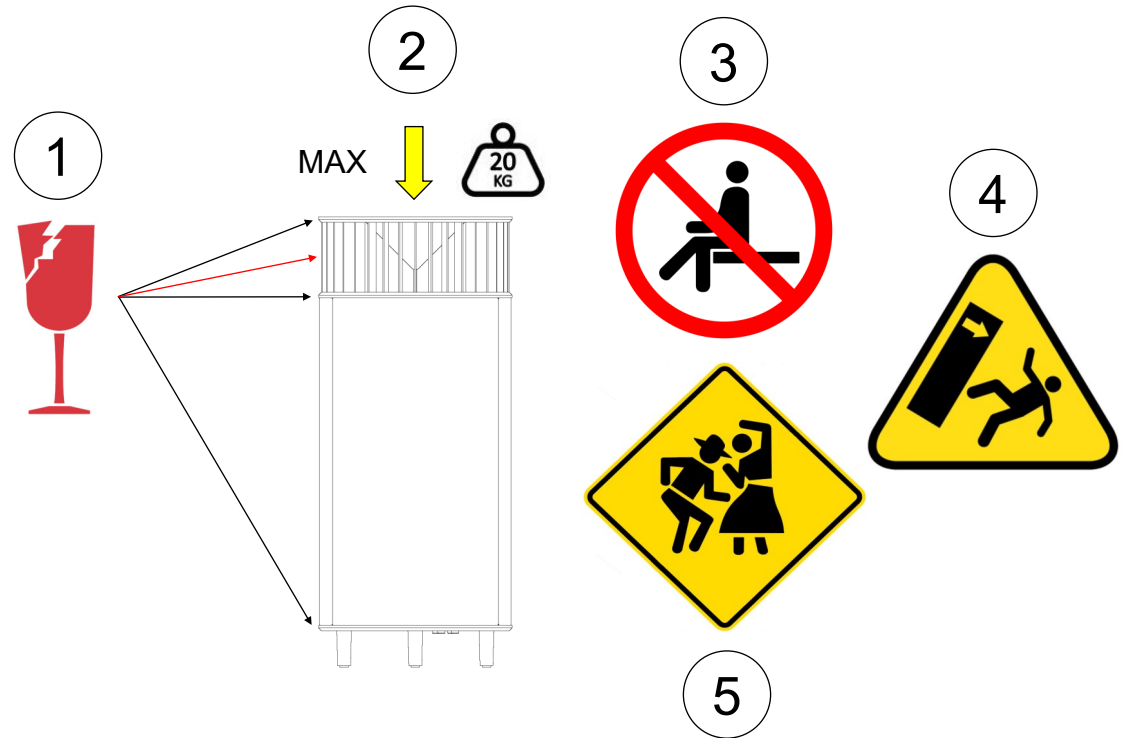
78 lb
(35.5 kg)





Important Safety Instructions

1. **Caution:** Exposed edges are fragile, may chip on impact. Do not touch or place load on wood slats.
2. **Caution:** Max top load 20 kg (44 lb)
3. **Caution:** Do not sit or stand on top of unit. Product damage or personal injury may result.
4. **Caution:** Do not tip unit over. Product damage or personal injury may result.
5. **Caution:** Spontaneous dancing may occur upon connection to signal.



Care and Maintenance

Solid Surface: Clean with water and dish soap, household cleaners, denatured alcohol, or acetone. Scratches may be gently sanded; use progressive sanding process (coarse to fine), from as coarse as required, up to 1000 grit sandpaper, using a random orbital sander.

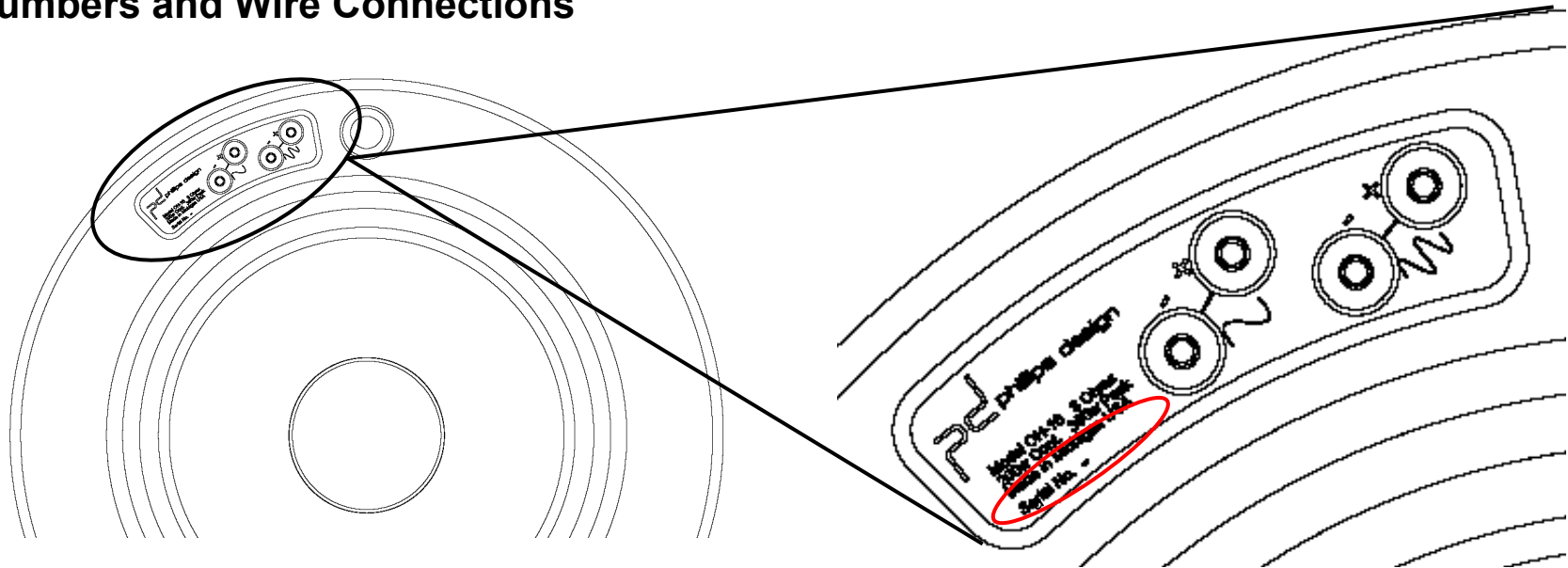
Wood: Clean with gentle soap and water, dry immediately. Do not use chemical cleaners. Coating is formaldehyde-free polyurethane.

Upholstery: Clean fabric upholstery with gentle upholstery/carpet cleaner; clean vinyl with soap and water, or gentle household cleaners; clean leather with gentle soap and water or leather cleaner, can treat with furniture-grade leather conditioner. For all upholsteries, clean/treat a small, non-visible area first to assess any potential negative effects of cleaning method used.

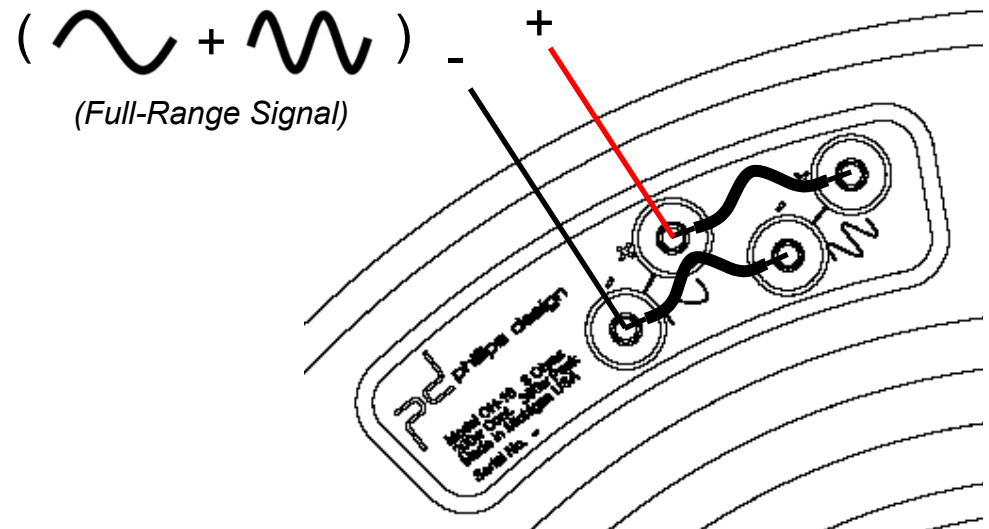
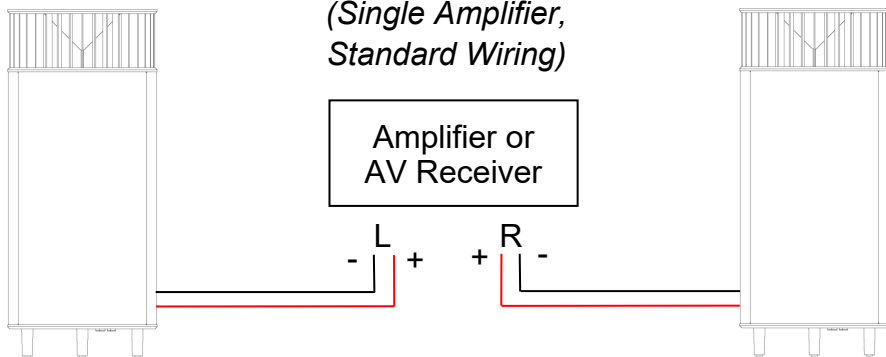
Metal: Clean raw polished aluminum surfaces only if necessary / badly tarnished using metal polish designed for raw aluminum, such as Mother's aluminum wheel polish. Clean painted, plated, or anodized metal parts with gentle soap and water only.

Maintenance or Repair: Contact Phillips Design via our website support page for all repair or maintenance needs. There are no user-serviceable parts inside. Product warranty is void if product is disassembled, or if serial number is modified or defaced.

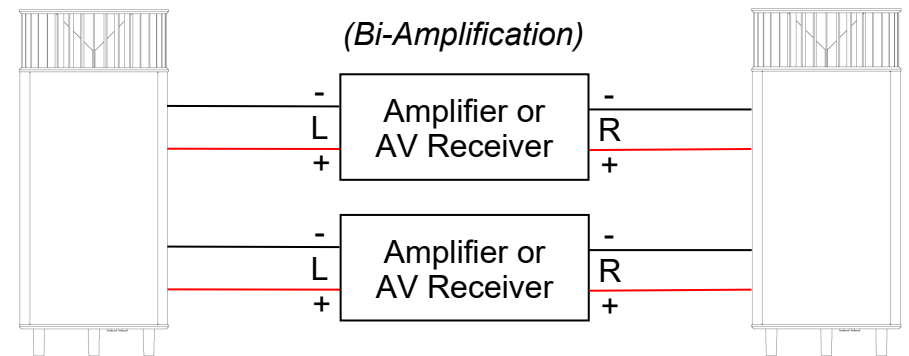
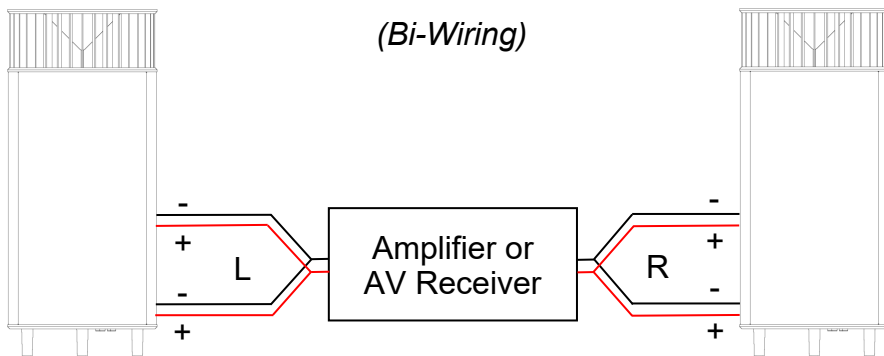
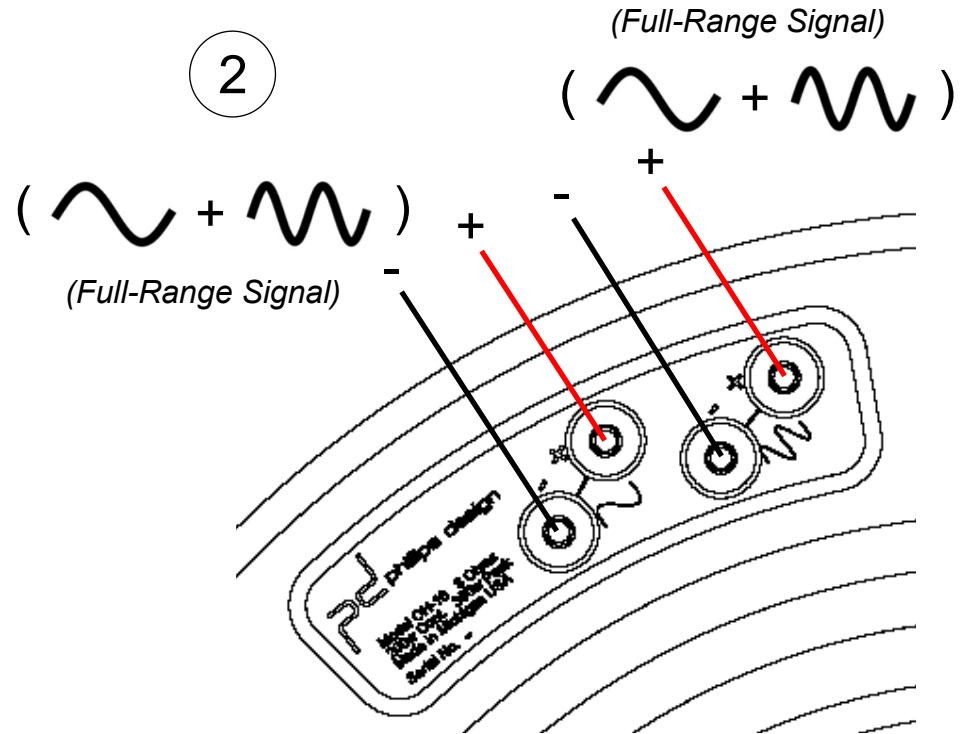
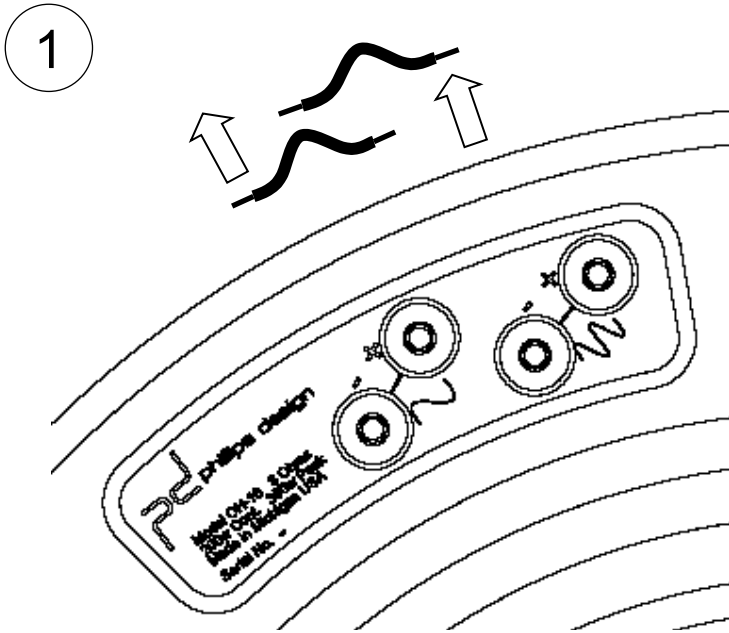
Serial Numbers and Wire Connections



Amplifier Connections



Bi-Wire or Bi-Amplifier Connections



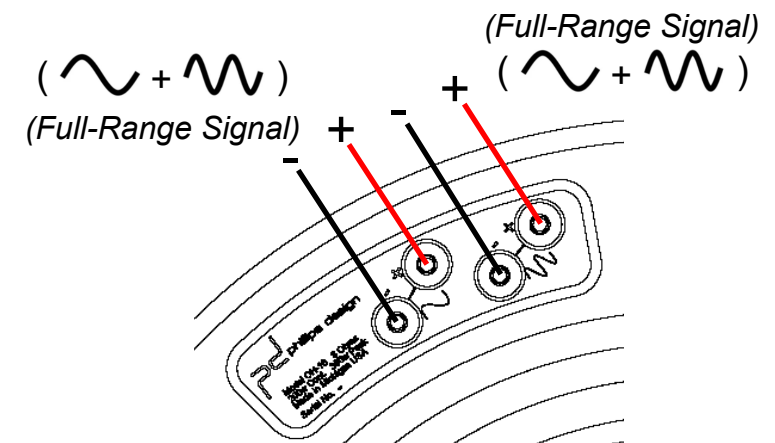
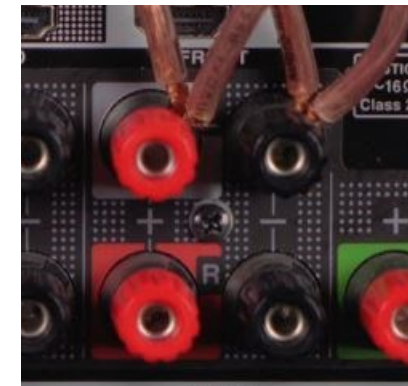
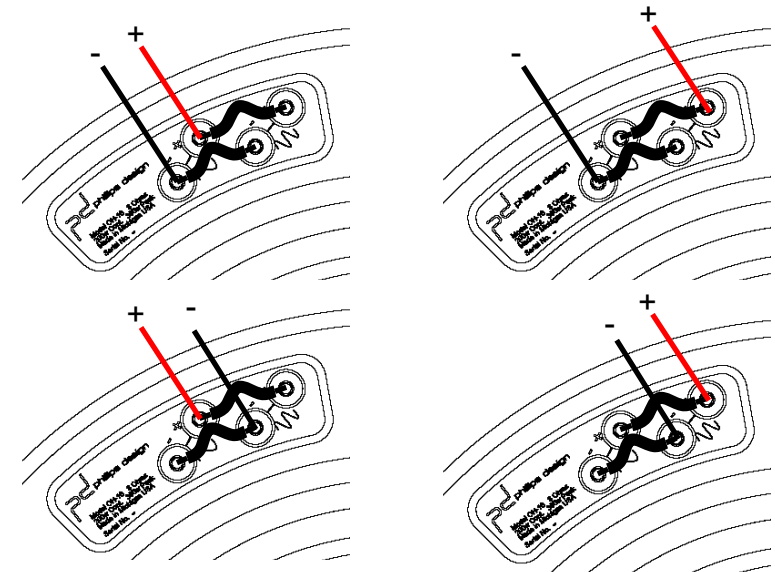
Notes on Wiring, Bi-Wiring, and Bi-Amplification

For standard wiring, keep the jumper wires in place. You may connect to either terminal, so long as one positive (+) and one negative (-) are connected.

Bi-wiring can be accomplished with cable sets designed for this purpose (with one +/- pair on one end, and two +/- pairs on the other end), but can also be done with two complete sets of regular speaker cables. Simply connect both (+) ends together at the single (+) terminal of the amplifier, and both (-) ends together at the single (-) terminal of the amplifier. Do this by either connecting both bare wires to the same terminal, or connect both (+) wires and both (-) wires each to a single banana/SBAN plug, or double-stack banana plugs, or connect one set with a spade and the other with a banana to the same terminal, or other methods. Just be sure to keep the (+) and (-) leads from touching each other and short-circuiting. If you don't hear any sound, double-check your connections for inadvertent (+) and (-) contact.

When bi-wiring or bi-amplifying, always connect a full-range signal to each terminal pair. The internal passive crossover will send the appropriate frequencies to the drivers. Do not attempt to implement a crossover before the amplifier, or else the two crossovers will 'fight' each other, creating undesirable peaks and valleys in the resulting frequency response.

Pro Tip: For true bi-amplification with an AV receiver, use the 'Amp Assign' function to re-assign one of the multi-zone or side/rear channel amplifiers to be a second amp for the front main speakers.



Room & Placement Recommendations

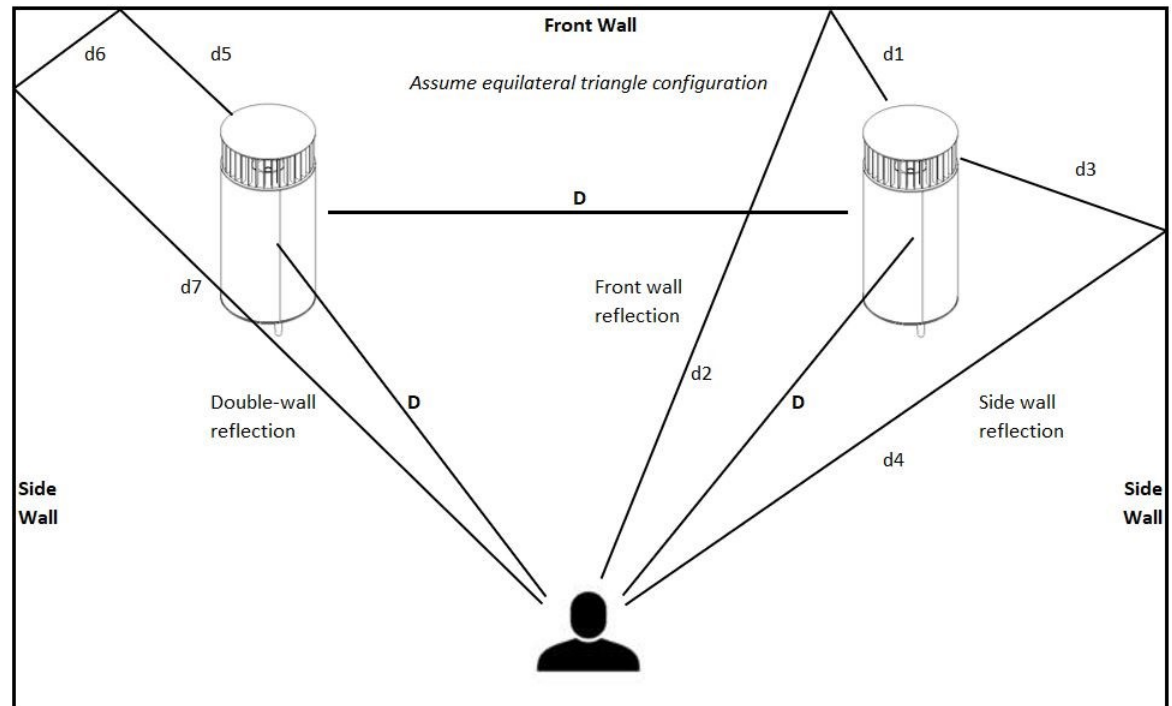
It's always fun to experiment with speaker placement to find the best sound - how the soundstage and imaging changes, and how the bass response changes with placement. The best placement is up to your own ears.

However, omnidirectional speakers are a very different animal compared to typical box speakers that fire forward toward the listener.

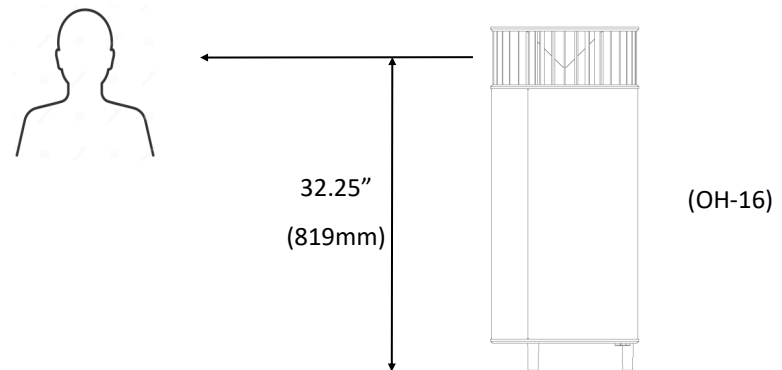
With traditional box speakers, the listener is primarily concerned with direct (first-arrival) sounds, and all reflections are considered undesirable, something to be absorbed or diffused.

With omnidirectional speakers, first-order reflections (bouncing off one surface before arriving at the ear) are a key part of creating a realistic aural illusion of a real performance, making the speakers disappear. Reflected sound should have a) the same spectral response as the direct sound (full-bandwidth), and b) sufficient delayed time of arrival (at least 5-10 ms) to allow our aural cognition system to recognize the reflection as a reflection of and indistinct from the initial direct sound event. These two concepts are crucial in creating a realistic illusion in the listener's mind.

Another key difference is the 'on-axis' response. Traditional box speakers have an 'axis', pointing straight out at the listener from the front-facing drivers. Their



Calculated distances and angles based on assumption of symmetric setup with equilateral triangle configuration between speakers and listener.



Room & Placement Recommendations

frequency response is ideal only along this axis, and falls off significantly at any side angle, or for reflections. Toe-in can help allow for some lateral movement or (gasp!) another listener, however the 'sweet spot' is severely limited to a single, central listening position.

OH-16's 'on-axis response' is along a horizontal plane located 32-1/4" from the floor. Anywhere on this plane, the listener will receive a full-bandwidth frequency response from the speakers. With 'on-axis' response throughout the entire listening room, everybody in the room gets to enjoy the same great sound.

This also means the sound emanating toward the front and side walls is full-spectrum sound, making the reflections more representative of a real performance.

Placing our speakers (as measured from edge of solid surface disc) 36" or more from the rear wall, and 48" or more from the side walls, in a 14-ft wide room or larger, will result in the important 5-10 ms delay of the first order reflections. Greater distances = greater delay times = more realistic sound. Bigger rooms work best for this.

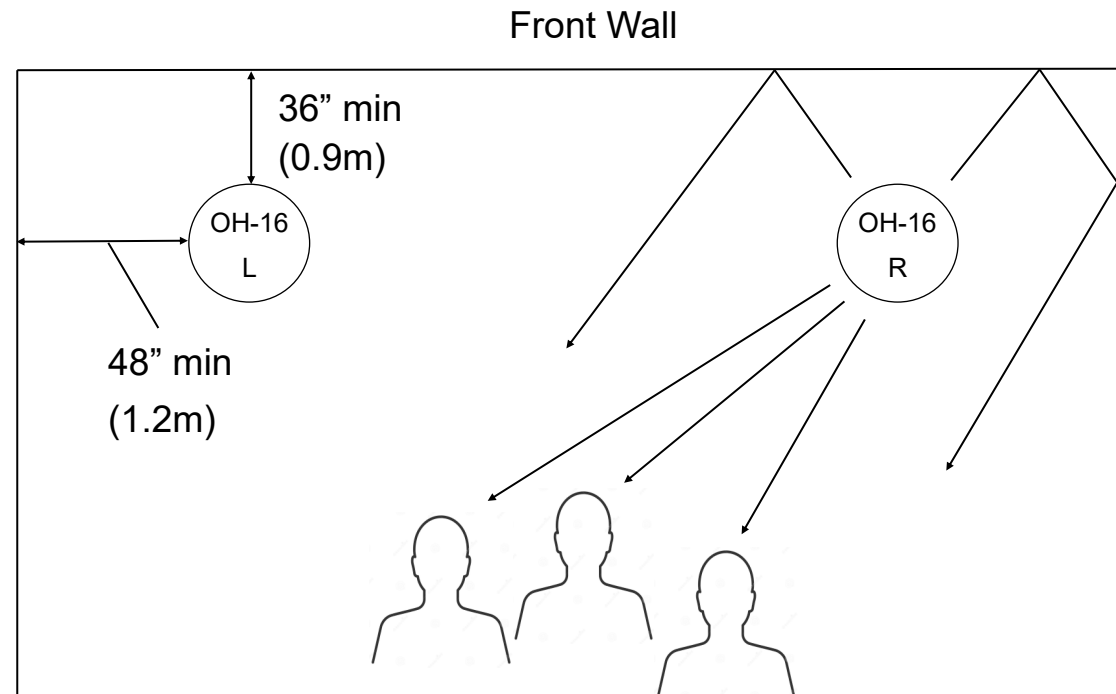
However, if your aesthetic concerns over-rule the potential for greater sound quality, our speakers won't necessarily sound 'bad' if they're right up against the walls. You might need to adjust the bass, and you'll lose some of the imaging / soundstage quality.

Bonus: Visit our website's Support page for a *free* spreadsheet-based reverberation time calculator. This tool allows you to enter your room width and speaker positions, and will calculate the resulting first-order reflection times to an idealized listening position, helping you choose the ideal speaker placements and listening position for your space.

Room Treatments

Because of the importance of full-spectrum reflections to the creation of a realistic aural illusion, we do not recommend room treatments designed to significantly absorb or diffuse reflected sounds. Our speakers can sound 'strange' in such rooms. Similarly, the room should not be overly 'live' or reverberant, as too much reflection or reverb can be a distraction or coloration.

In a 'normal' living environment, with a good balance of hard and soft surfaces, a room comfortable for conversation and gathering, and with sufficient power to produce realistic dynamic range and volume levels, our speakers can 'disappear', leaving you with only the joy of the music.





OH-16 Specifications

- Frequency Response: 30 - 20,000 Hz
- Nominal Impedance: 8 Ohms
- Sensitivity: 88 dB (2.83v input @ 1m)
- Power Handling: 200w RMS continuous, 350w peak
- Recommended Amplifier: 50-200 watts/channel into 8 ohms
- Dimensions:
 - ◆ Height: 38-3/16" (970 mm)
 - ◆ Diameter: 16-5/8" (422 mm)
 - ◆ Weight: 78 lb (35.5 kg) each
- Enclosure Design: Acoustic Suspension (sealed)
- Crossover: 3-way 12 dB/oct, computer optimized
- Woofer: 12" carbon fiber composite cone, cast aluminum frame, 3" flat-wire voice coil, massive magnet assembly, high-excursion rubber surround, and extensive thermal management
- Midrange: 6" Polypropylene/TPX polymer cone, cast aluminum frame, massive magnet, rubber surround
- Tweeter: 1" pre-coated fabric dome, rare-earth magnet, point-source integration with midrange
- Break-In Period: ~20 hours of music playback at realistic volume levels.

Caution: *Listening at levels exceeding 90 dB can result in permanent hearing damage, even for very short intervals. Protect your hearing by listening for extended periods only at conservative volume levels.*

Note: *Amplifiers with less than 100 watts/channel into 8 ohms may not provide sufficient dynamic headroom to produce music with a realistic dynamic range. If the speakers sound 'thin' or 'lifeless', try a higher-powered amplifier, or try bi-amplification with two lower-powered units.*



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