



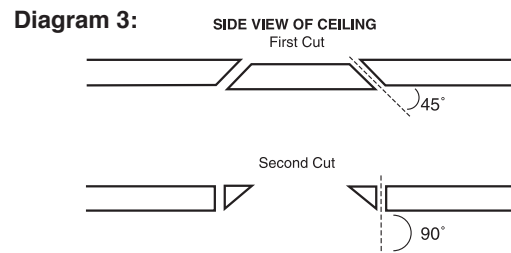
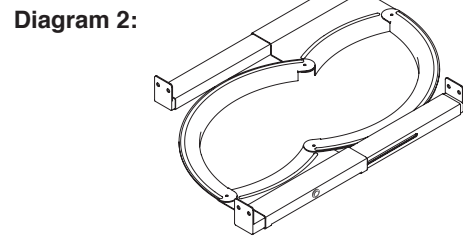
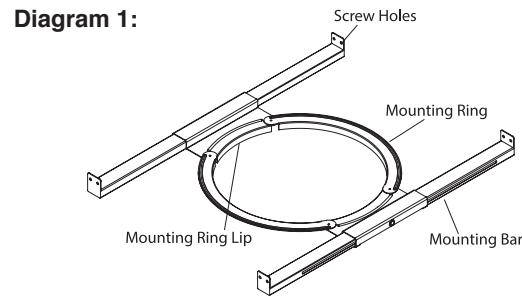
R10 CEILING SUBWOOFER INSTALL GUIDE

NCR10 Construction Bracket Recommended:

The NCR10 is designed for new construction or retrofit applications with its unique folding design. The NCR10 may be installed prior to drywall or after across joists (from 16"- 24" on-center) where a speaker will be mounted.

NCR10 Bracket Installation - New Construction

1. Find the joist nearest the desired speaker mounting location. If you need to align the speaker to some other object or molding in the room, be sure to consider the size of the baffle flange which extends beyond the mounting hole.
2. Line up the bottom of one of the mounting bars with the bottom of the joist. This will place the screw holes in an "L" position, flush with the side of the joist, and the mounting ring "lip" will be facing downward. Attach the mounting bar to the joist using appropriate wood screws.
3. Make sure that the mounting ring is in a perfectly circular shape (see **Diagram 1.**) by opening the bracket until the arms come in contact with the stoppers. Then, lineup the bottom of the other mounting bar with the bottom of the same joist. Attach the mounting bar to the joist using appropriate wood screws.
4. Extend both mounting bars to reach the opposite joist, then line up the bottoms of each mounting bar with the bottom of the joist. Attach the mounting bar to the joist using appropriate wood screws.
5. Adjust the position of the mounting ring between the joists, grab both sides of the mounting ring, where it connects to the mounting bar, then move the mounting ring to the desired position.
6. The protruding lip of the mounting ring will force the drywall installers to hang the drywall with an appropriate hole cut out around the mounting ring lip. After the drywall is hung and finished, the speakers are then easily installed.



NCR10 Bracket Installation - Retrofit

1. Find the joist nearest the desired speaker mounting location. If you need to align the speaker to some other object or molding in the room, be sure to consider the size of the baffle flange which extends beyond the mounting hole.
2. Mark the hole using the speakers cut out template. Position the template in the desired and pencil an outline on the ceiling.
3. Cut the hole. **CAUTION:** If you are not certain whether any obstructions exist behind the mounting area, you should start by cutting a small hole in the center of the penciled template outline with a drywall saw, cutting at a 45° angle towards the inside of the hole. (see **Diagram 3.**) Cutting a small hole at this angle will make drywall repair easier if needed. If there are no obstructions cut the finished hole at a 90° angle to the ceiling surface.
4. Collapse the mounting ring and the mounting bars to compress the bracket to its smallest shape (see **Diagram 2.**)
5. With the mounting lip facing downward, insert the bracket into

the ceiling cavity through the speaker cutout hole previously cut in the drywall.

6. Make sure that the mounting ring is in a perfectly circular shape by opening the bracket until the arms come in contact with the stoppers, then set it into the ceiling hole. Push one of the mounting bars L-shaped edges until it is flush with the joist, and the bottom of the mounting bar lines up with the bottom of the joist. Attach the mounting bar to the joist using appropriate wood screws.
7. Push the other mounting bar L-shaped edge until it is flush with the same joist, and the bottom of the mounting bar lines up with the bottom of the joist. Attach the mounting bar to the joist using appropriate wood screws.
8. Extend both mounting bars to reach the opposite joist, then line up the bottoms for each mounting bar with the bottom of the joist. Attach the mounting bar to the joist using appropriate wood screws.

Preparation:

Tools For Installation

- Pencil
- Drill
- Tape Measure
- Wire Cutter
- Phillips Screwdriver
- Utility Knife
- Safety Eye Wear
- Gloves
- Sandpaper

Speaker Wire Guide

- 18AWG minimum - for distances up to 10 ft
- 16AWG - from 10 to 50 ft
- 14AWG - from 50 to 100 ft

Considerations

- Where is the best place to install the speakers?
- Where do the speakers sound the best?
- Separate the speakers 6 - 10 feet apart.
- If you intend to paint the grilles, do so before installation.

Installation:

Cut Out

NOTE: This is the most important part of the entire installation. If you are not certain whether any obstructions exist behind the desired mounting area, you should start by cutting a small hole in the center of your penciled mounting hole with a drywall saw.

Trace along the included template. Cut along the traced line using a drywall saw or rotary drill. Use a piece of sandpaper to sand down the cut out edge for a smoother contour. (See **Diagram 1.**)

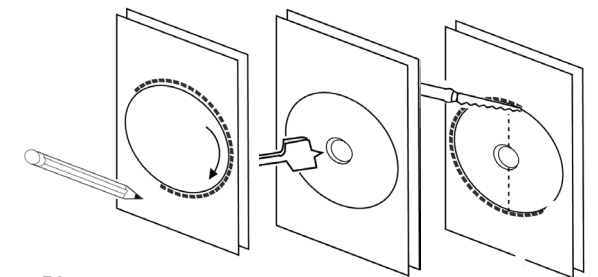


Diagram 1:

Mounting

Tighten the mounting brackets by simply turning the screws on the front of the speaker baffle slowly clockwise. The quick-turn mounting system and frame will "sandwich" or clamp around the dry-wall to hold the speaker securely in place once fully tightened to the locked position. (See **Diagram 2.**)

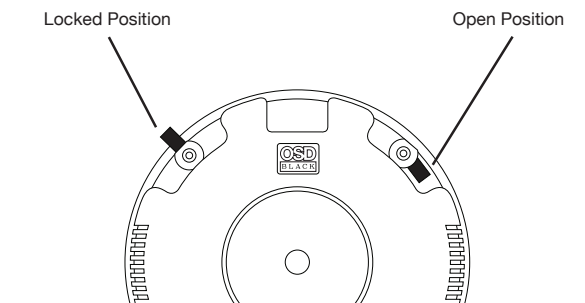


Diagram 2:

Connection

We recommend using a OSD SMP300 or SMP500 DSP Amplifier. When connecting any speakers to the amplifier or receiver, always make sure the power is off. Locate the connection terminals on the back of your receiver or amplifier. Always make sure to connect audio out from the back of your receiver or amplifier to the speakers. (See **Diagram 3.**)

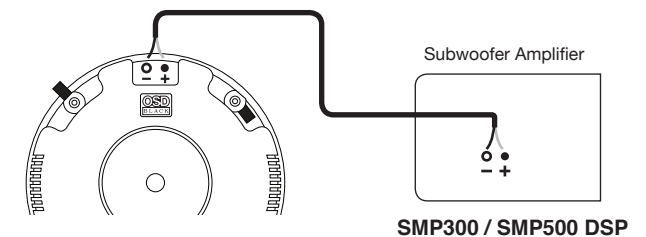


Diagram 3:

NOTE: Not all Amplifier/Receivers can safely play more than one pair of speakers at once. Please refer to your owner's manual for impedance and wattage compatibility.

Specifications

Type:	Passive Ceiling Subwoofer
Woofers:	10" Long Excursion Graphite Cone
Power Handling:	200 Watts
Freq Response:	30 - 120Hz
Sensitivity:	92dB 1W/1m
Grille:	Trimless Thin-Bezel held by Neo Magnets
Dimensions:	13 ³ / ₈ " x 6 ¹ / ₂ "
Cut Out:	11 ⁷ / ₈ "

WARRANTY

All Optimal Speaker Design speaker products have Limited Lifetime Warranty against defects in materials and workmanship. Proof of purchase must accompany all claims. During the warranty period Optimal Speaker Design will replace any defective part and correct any defect in workmanship without charge for either parts or labor. Optimal Speaker Design may replace returned speakers with a product of equal value and performance. In such cases, some modification to the mounting may be necessary and are not Optimal Speaker Design'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 Optimal Speaker Design. The unit must be returned to Optimal Speaker Design 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 Optimal Speaker Design.

Optimal Speaker Design sells products only through authorized dealers and distributors to ensure that customers obtain proper support and service. Any Optimal Speaker Design product purchased from an unauthorized dealer or other source, including retailers, mail order dealers and on-line sellers will not be honored or serviced under existing Optimal Speaker Design warranty policy. Any sale of product by an unauthorized source or other manner not authorized by Optimal Speaker Design 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 the unit must be shipped to Optimal Speaker Design 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 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 (installation) • Any products that have been altered or modified • Any product whose identifying number of decal, serial #, etc. has been altered, defaced or removed • Normal wear and maintenance.