

INSTRUCTION MANUAL

SONANCE ORIGINAL SERIES LARGE IN-WALL SPEAKERS



Introduction

Thank you for purchasing Original Series Large rectangle speakers. When properly installed, these speakers will give you many years of entertainment pleasure. To get the most out of your new speakers, please read this manual thoroughly before you begin installation.

Since all of the Sonance Original Series Large rectangle speakers have the same exact footprint and have identical installation requirements, the directions in this manual apply to each model. This manual covers the following speaker models: Original Series 832, and 831.

To achieve the best performance, Sonance recommends that these speakers be installed by a Sonance Authorized Dealer/Installer.

SAFETY WARNING:

THESE SPEAKERS HAVE FASTMOUNT® TABS THAT PREVENT THE SPEAKER FROM FALLING OUT OF THE MOUNTING HOLE DURING THE INSTALLATION PROCESS.

THE EDGES OF THE FASTMOUNT TABS ARE VERY SHARP. USE CAUTION WHEN HANDLING THE SPEAKER.

See *Installation* (page 3) for complete information about the FastMount tabs.

Box Contents

Your Sonance Original Series Large rectangle speakers include the following:

- (2) Sonance Original Series Large speakers
- (2) Paintable grilles
- (2) Plastic paint plugs to protect speakers during painting
- (1) Mounting cutout template (in packaging)

Speaker Placement

All Sonance Original Series Large rectangle speakers fit into walls built with standard 2" x 4" stud construction. The locations of the speakers should be determined by considering the primary listening location, the primary use for the speakers (stereo music or home theater) and aesthetic values. For optimum results contact your Authorized Sonance Dealer for advice.

Home Theater Placement: Left and Right Front Speakers

- Place the left and right speakers on either side of the video screen, anywhere from 6 feet to 10 feet apart (2 – 3 meters), and 38 – 42 inches (1 meter) from the floor (which corresponds to the height of your ears when you're seated).
- The main listening position should be 8 – 12 feet (2.5 – 3.5 meters) away from the speakers.

- If possible, locate the speakers at least 18 inches (45 cm) away from the side walls.
- If necessary, pivot each speaker's Sonic Eye (midrange/tweeter assembly) towards the listening position to maximize the soundstage.

Use *Figure 1* as a guide.

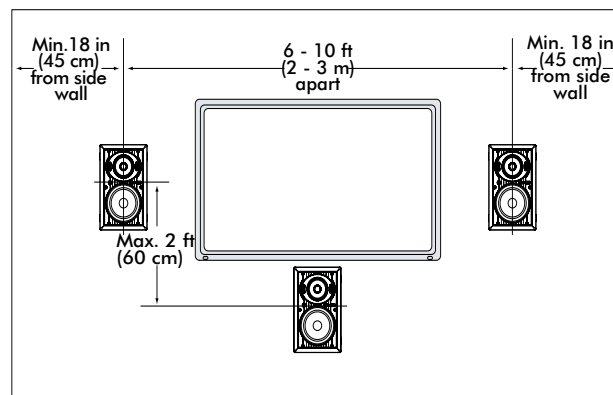


Figure 1: Left, Center & Right Speaker Home Theater Placement

Home Theater Placement: Center Speaker

- If possible, locate the center speaker at the same height as the left & right channel speakers (38 – 42 inches/1 meter from the floor).
- If you must place the center speaker above or below a video screen, we recommend placing it no more than two feet above or below the center of the left and right speakers. Keeping the speakers within a 4-foot (1.25 meters) window will maintain consistent tonality between all three front channel speakers.

Use *Figure 1* as a guide.

Home Theater Placement: Surround Speakers (5.1 Channels)

Sonance Original Series Large speakers can also be used for surround channel applications in a home theater. Depending on your room's layout, you can locate the surround channel speakers in the side walls, in the rear wall or in the ceiling. If you are not sure which location will achieve the best performance in your room, contact your Authorized Sonance Dealer for advice.

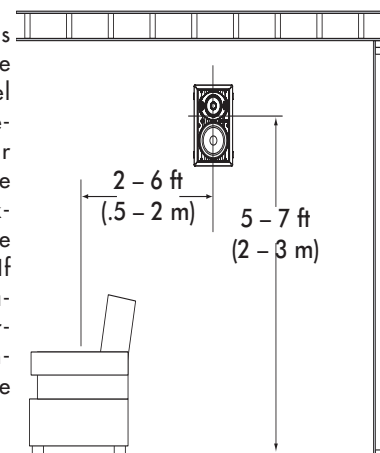


Figure 2: Side Wall Surround Speaker Placement

Side wall mounting: Locate the surround channel speakers approximately 2 – 6 feet (1 – 2 meters) behind the listening position, at least 5 feet (1.5 meter) from the floor.

- You can create a more diffuse, spacious surround effect by pivoting the Sonic Eye away from the listeners.

Use *Figure 2* as a guide.

Rear wall mounting: The listening position should be 2 – 10 feet (1 – 3 meters) in front of the rear wall. Locate the surround channel speakers on the rear wall, 6 – 10 feet apart (2 – 3 meters), at least 5 feet (1.5 meters) from the floor. Center the speakers on the listening location.

- You can create a more diffuse, spacious surround effect by pivoting each speaker's Sonic Eye towards a wall or window, away from the listeners.

Use *Figure 3* as a guide.

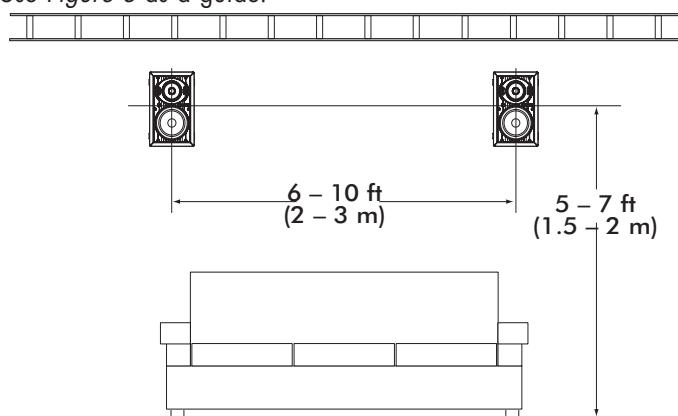


Figure 3: Rear Wall Surround Speaker Placement

Ceiling mounting: Locate the left and right surround speakers on the ceiling between 2 feet and 6 feet (1 – 2 meters) behind the listening position. The speakers should be between 6 feet and 10 feet apart (2 – 3 meters), with their woofers towards the listeners.

- You can create a more diffuse, spacious surround effect by pivoting each speaker's Sonic Eye towards a wall or window, away from the listeners.

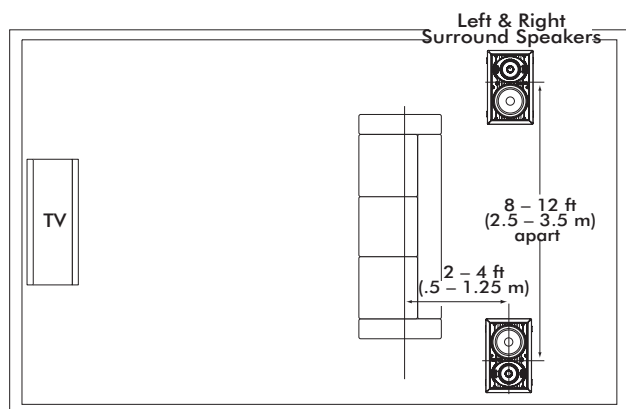


Figure 4: Ceiling Surround Speaker Placement

Use *Figure 4* as a guide.

Home Theater Placement: Surround Speakers (7.1 Channels)

- **Left & Right Surround Speakers:** Place the left and right surround speakers directly to the sides of the listening position, at least 5 feet (1.5 meters) from the floor.
- **Surround Back Speakers:** Place the surround back speakers in the rear wall, between 3 feet and 6 feet (1 – 2 meters) apart and at least 5 feet (1.5 meters) from the floor.
- You can create a more diffuse, spacious surround effect by pivoting each speaker's Sonic Eye away from the listeners.

Use *Figure 5* as a guide.

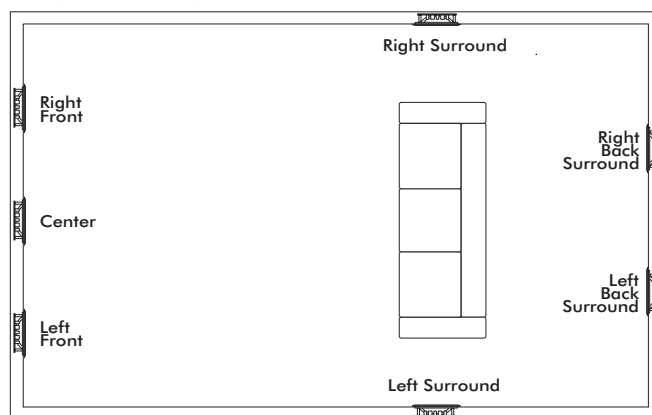


Figure 5: 7.1-Channel Speaker Placement

2-Channel Placement

Follow the directions in *Home Theater Placement: Left & Right Front Speakers*, on page 1.

Wire Gauge

Extra resistance in the speaker wire can make speakers sound less dynamic and reduce definition of the bass frequencies. In extreme cases, it can even attenuate high frequencies. Also, amplifier power is wasted in wire with extra resistance, reducing your system's maximum output level.

To prevent degrading sound quality, the total wire resistance should be less than 10% of the speaker's impedance. This means that for an 8-ohm speaker, the total resistance of the wire should be less than 0.8 ohms.

Refer to the following table when selecting the proper wire gauge for your system:

Preparing the Installation Location

Wire resistance in Ohms vs. length of cable run

Distance in Feet	50'	100'	150'	200'	250'	300'
20 gauge	1.04	2.07	3.11	4.14	5.18	6.22
18 gauge	.65	1.30	1.96	2.61	3.26	3.91
16 gauge	.41	.82	1.22	1.63	2.04	2.45
14 gauge	.26	.52	.77	1.03	1.29	1.55
12 gauge	.16	.32	.49	.65	.81	.97
10 gauge	.10	.20	.31	.41	.51	.61

All Sonance speakers are designed to be relatively insensitive to variations in enclosure volume. To achieve the ultimate performance from your speakers, a section of the ceiling bay can be sectioned-off to form a back box. Building such an enclosure will create a dramatic improvement in your speakers' bass performance and power handling.

Ideal back box volume requirements:

Model 832: 2.0 ft (60 cm)

Model 831: 2.0 ft (60 cm)

Insulating the Wall Cavity

You can reduce sound transmission to adjacent rooms and further improve speaker performance by inserting a sheet of unfaced fiberglass insulation over the back of the speaker.

To reduce noise produced by unsupported drywall, install fiberglass insulation in the stud bays adjacent to the speaker location.

Optional Retrofit Enclosures

For installations where it isn't possible to section-off the stud bay to form a back box (such as when you're retrofitting the speakers into an existing wall), you can effectively reduce sound transmission into adjacent rooms by fitting the speakers with optional Retrofit Enclosures (part# 92242). This enclosure is specifically designed to noticeably reduce sound "spillover" from the rears of the speakers into adjacent rooms and spaces.

Installing the Speakers

Before Installation: New Construction

For installations in new construction, Sonance recommends using a FlexBracket (part# 92246) to reserve a location for the speaker. The FlexBracket is nailed or screwed to the studs and serves as a guide for the drywaller so that the speaker hole will be in the desired location once the drywall is installed.

Before Installation: Retrofit

1. Determine the location for the speaker (see *Speaker Placement* on page 1).
2. Perform an obstruction survey to be certain that there are no studs, conduit, pipes, heating ducts or air returns that will interfere with the speaker.
3. The cutout for all Original Series Large speakers is 8⁷/₁₆" (214mm) wide and 14¹/₂" (368mm) high. There also must be at least 3⁷/₈" (99mm) depth within the wall for the speaker.
4. Position the included cutout template where the speaker is to be located and pencil an outline on the wall.
 - If you are unsure about obstructions, drill a small hole in the center of the outline and insert a coat hanger wire into the hole to feel-around for possible obstructions.

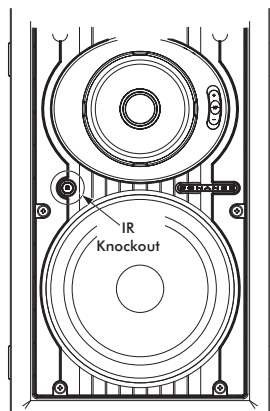


Figure 6: IR Knockout

Before Installation: IR Knockout

All Sonance Original Series Large speakers have a knockout for installing an IR receiver into the speaker's front baffle. This remote controls to be aimed at the front of the room instead of at the electronics, in systems where the electronics may be placed in an inconvenient location.

The knockout is in the form of a bolt and retaining nut. To remove the knockout, unscrew the nut (located behind the baffle) and remove the bolt. The hole is designed to receive a Sonance SMR1 or SMR1P Surface-Mount IR receiver. Insert the IR receiver through the front of the speaker baffle and use the nut included with the receiver to fasten it to the baffle.

NOTE: THE SPEAKER'S GRILLE MAY REDUCE THE EFFECTIVENESS OF THE IR RECEIVER. IF THIS OCCURS, SLIGHTLY ENLARGE THE HOLES IN THE GRILLE THAT ARE DIRECTLY IN FRONT OF THE IR RECEIVER.

Installation

Sonance Original Series Large speakers feature exclusive FastMount® tabs and an integral RotoLock® mounting system for quick mounting directly into existing walls (see *Figure 7*, below).

WARNING: THE EDGES OF FASTMOUNT TABS ARE VERY SHARP. USE CAUTION WHEN HANDLING THE SPEAKER.

1. Remove the paint plug from the speaker. Connect the speaker wire to the terminals on the speaker. (The V834D has two sets of "+" and "-" terminals (see below). You can use either set.) Double-check that you connected amplifier + to speaker + and amplifier - to speaker -.
2. Make sure all the RotoLock clamps are in the full clockwise position so that they are tucked within the mounting hole's border. Insert the speaker into the hole in the ceiling. The RotoLock system can accommodate a maximum wall material thickness of 1¹/₄" (32mm).
 - The FastMount tabs will prevent the speaker from falling out of the mounting hole, allowing the installer to let go of the speaker to pick-up tools or other items (see *Figure 7*).

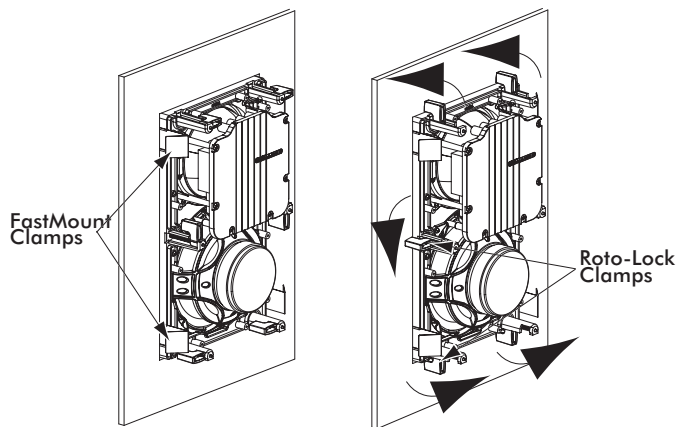


Figure 7: Original Series Large Installation

NOTE: THE FASTMOUNT TABS ARE DESIGNED FOR ONE-TIME USE ONLY. IF THE SPEAKER IS REMOVED FROM THE MOUNTING HOLE THE FASTMOUNT TABS WILL DISCONNECT AND REMAIN INSIDE THE WALL.

3. Tighten the six screws on the front of the speaker baffle. The RotoLock clamps will automatically rotate into position and begin clamping the speaker (see Figure 8).

- When you notice resistance on the screws the speaker has been clamped successfully.

NOTE: THE SPEAKER FLANGE IS DESIGNED TO FLEX AND CONFORM TO ANY SMALL IMPERFECTIONS IN THE CEILING SURFACE. DO NOT TIGHTEN THE SCREWS SO MUCH SO THAT THE FLANGE BOWS-OUT.

IMPORTANT: ALWAYS USE LOW-TORQUE SETTINGS; NEVER OVER-TIGHTEN.

4. Attach the grille once the speaker has been installed. Insert half of the grille into the groove at the edge of the speaker. Gently fit the other half of the grille by working around the speaker, fitting the grille into the groove as you go.

NOTE: YOU CAN ADJUST THE TORQUE APPLIED TO THE ROTOLOCK SCREWS TO ACHIEVE A PROPER GRILLE FIT.

Painting The Speakers and Grilles

You can paint the speakers and grilles before installing them, which will eliminate the "paint scar" if the speaker ever needs to be removed for service. You can also paint the speakers after installation, but before the grilles are attached. All Original Series Large speakers come from the factory fitted with a plastic 'paint plug'. Use the paint plug to protect the speaker drivers while the flange is being painted along with the wall.

Sonance always suggests painting the grille separately from the speaker. Before painting, carefully remove the under-grille cloth. It is held in place with a light tacking glue that makes it easy to remove.

Spray the grilles with thinned paint (5 parts thinner to 1 part paint), being careful not to plug the holes. Too heavy a coat of paint on the grille will adversely affect the sound of the speaker.

Once the grilles and flange are painted and dry, replace the under-grille cloth, remove the paint plug from the speaker flange and install the grille.

Adjusting Your Speakers

Pivoting Sonic Eye®

All Original Series Large speakers have a pivoting Sonic Eye® (midrange/tweeter assembly). These pivoting drivers allow you to direct sound toward or away from the listening area.

If you're using the speakers in stereo or as the front L/C/R speakers in a home theater, pivot the Sonic Eye directly towards the listening area. This can be especially helpful if the speakers are widely-separated and the music fails to blend into a central sonic image.

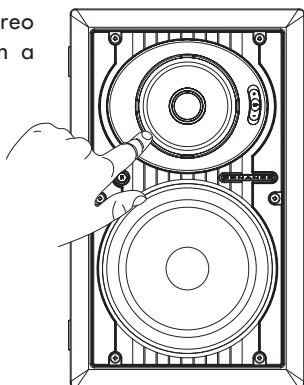


Figure 8:
Pivoting the Sonic Eye

If you're using the speakers as surround channel speakers in a home theater, you can create a more diffuse, spacious surround effect by aiming the Sonic Eye towards a wall or window, away from the listeners.

To pivot the Sonic Eye, apply light pressure to the outside edge of the midrange, as shown in Figure 8. Do not apply pressure to the midrange cone or the tweeter dome.

Tweeter and Midrange Level Controls

The Original Series 832 has a tweeter level control switch that lets you boost or cut the tweeter's level by 3 dB. (See Figure 9.)

Once you have installed the speakers, listen to a variety of music that you are familiar with. If the music *all* tends to sound too bright or dull, use the Tweeter Control to compensate. If some recordings sound dull or lack presence and some sound bright and have too much presence, the speaker is accurately reproducing differences in the recordings, and you should leave the control in the middle (0 db) position.

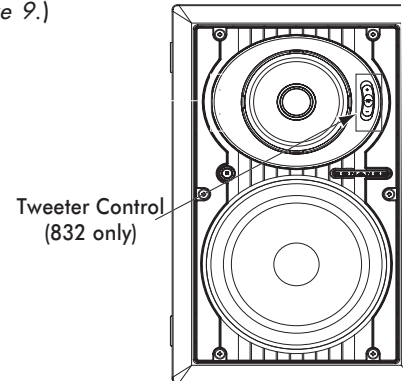


Figure 9:
Tweeter and Midrange Level Controls

Specifications

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Tweeter:	1" (25mm) Silk dome, Ferrofluid cooled, pivoting
Midrange:	4" (102mm) Polypropylene cone, rubber surround, pivoting
Woofers:	8" (203mm) Polypropylene cone, rubber surround
Frequency Response:	38Hz – 20 kHz $\pm$ 3dB
Impedance:	8 Ohms nominal; 6 Ohms minimum
Power Handling:	5 Watts minimum; 125 Watts maximum
Sensitivity:	90 db SPL (2.83V 1 meter)
Grille Material:	Perforated Aluminum
Adjustments:	Tweeter level ($\pm$ 3dB)
Dimensions (HxWxD):	9 ⁷ / ₈ " x 15 ¹⁵ / ₁₆ " x 3 ⁷ / ₈ " (251mm x 405mm x 99mm)
Cutout Dim (W x H):	8 ¹ / ₂ " x 14 ¹ / ₂ " (216mm x 368mm)
Shipping Weight:	20 lbs. (9kg) Pair

831

Tweeter:	¾" (19mm) Silk dome, Ferrofluid cooled, pivoting
Midrange:	4" (102mm) Polypropylene cone, rubber surround, pivoting
Woofers:	8" (203mm) Polypropylene cone, rubber surround
Frequency Response:	45Hz – 20 kHz $\pm$ 3dB
Impedance:	8 ohms nominal; 6 ohms minimum
Power Handling:	5 Watts minimum; 100 Watts maximum
Sensitivity:	89 db SPL (2.83V 1 meter)
Grille Material:	Perforated Aluminum
Adjustments:	None
Dimensions (HxWxD):	9 ⁷ / ₈ " x 15 ¹⁵ / ₁₆ " x 3 ⁷ / ₈ " (251mm x 405mm x 99mm)
Cutout Dim (W x H):	8 ¹ / ₂ " x 14 ¹ / ₂ " (216mm x 368mm)
Shipping Weight:	16 lbs. (7.3kg) Pair

LIMITED LIFETIME WARRANTY

Sonance warrants to the first end-user purchaser that this Sonance-brand product ("Product"), when purchased from an authorized Sonance Dealer/Distributor, will be free from defective workmanship and materials for the life of the Product. Sonance will at its option and expense either repair the defect or replace the Product with a new or remanufactured Product or a reasonable equivalent.

EXCLUSIONS

TO THE EXTENT PERMITTED BY LAW, THE WARRANTY SET FORTH ABOVE IS IN LIEU OF, AND EXCLUSIVE OF, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED BY SONANCE. ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, IMPLIED WARRANTY OF FITNESS FOR USE, AND IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY EXCLUDED. No one is authorized to make or modify any warranties on behalf of Sonance.

The warranty stated above is the sole and exclusive remedy and Sonance's performance shall constitute full and final satisfaction of all obligations, liabilities and claims with respect to the Product. IN ANY EVENT, SONANCE SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, ECONOMIC, PROPERTY, BODILY INJURY, OR PERSONAL INJURY DAMAGES ARISING FROM THE PRODUCT, ANY BREACH OF THIS WARRANTY OR OTHERWISE.

This warranty statement gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow the exclusion of implied warranties or limitations of remedies, so the above exclusions and limitations may not apply. If your state does not allow disclaimer of implied warranties, the duration of such implied warranties is limited to period of Sonance's express warranty.

Your Product Model and Description: Original Series Large Rectangle Speaker

Additional Limitations and Exclusions from Warranty Coverage: The warranty described above is non-transferable, applies only to the initial installation of the Product, does not include installation of any repaired or replaced Product, does not include damage to allied or associated equipment which may result for any reason from use with this Product, and does not include labor or parts caused by accident, disaster, negligence, improper installation, misuse (e.g. overdriving the amplifier or speaker, excessive heat or cold or humidity, outdoor installation), or from service or repair which has not been authorized by Sonance.

Obtaining Authorized Service: To qualify for the warranty, you must (1) contact your authorized Sonance Dealer/Installer or call Sonance Customer Service at (800) 582-0772 within the warranty period, (2) obtain a return merchandise number (RMA), and (3) deliver the Product to Sonance shipping prepaid during the warranty period, together with the original sales receipt, invoice or other satisfactory proof of purchase.



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Due to continuous product improvement, all features and specifications are subject to change without notice.

For the latest Sonance product specification information visit our website: www.sonance.com

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