

INSTRUCTION MANUAL

SONANCE® INVISIBLE SERIES SA3, SA1.5 and SAW SPEAKERS



Introduction

Thank you for purchasing Sonance® Invisible Series SA3, SA1.5 or SAW speakers. When properly installed into a wall or ceiling, these speakers become part of the wall or ceiling surface, providing remarkable sound while remaining completely invisible. This manual will show you how to get the very best performance from your new speakers. Please read it thoroughly.

Box Contents

- 2 Invisible Series Speakers (1 in SAW)
- 4 - 1/16" (1.5mm) Shims (2 in SAW)
- 4 - 1/8" (3.0mm) Shims (2 in SAW)
- 20 Mounting Screws in SA3; 12 in SA1.5; 10 in SAW

Before Installation

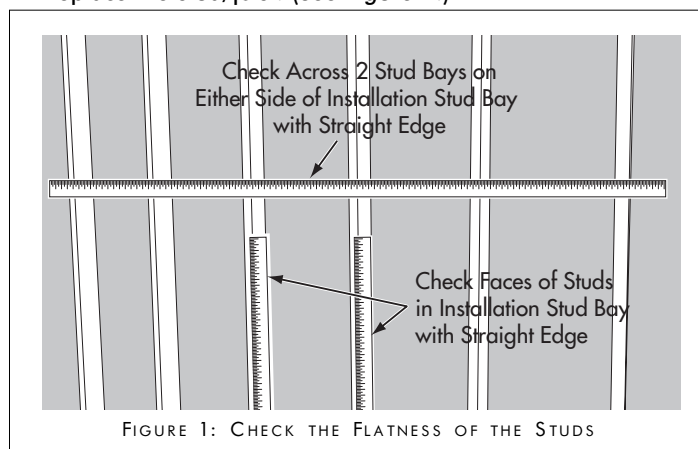
These speakers can be installed in new construction or retrofitted into existing construction.

When installing the speakers in new construction, we recommend first installing a Space Saver unit (Sonance part #92723 for the SA3 and SAW, part #92722 for the SA1.5, available separately) to reserve the space for the speaker until after the drywall has been installed. This will prevent theft or damage to the speakers on an open job site and will ensure that tradespeople do not block the speaker's installation location with conduit, ducting, etc.

Checking the Mounting Studs for Flatness

Before installing the speakers in new construction, use a straight edge to check for flatness of the studs/joists in the two different axes:

1. To measure the studs/joists lengthwise, place the straight edge on the face of one stud/joist where the speaker will be attached and verify that it is flat for at least 32" (813mm). Repeat for the other stud/joist. To obtain flat mounting surfaces on the studs/joists, place furring strips as required or replace the stud/joist. (See Figure 1.)



2. To measure across the studs/joists, place a straight edge across a minimum of 2 stud/joist bays on each side of the selected mounting position. All 5 bays should be in the same plane. Add furring strips or replace studs/joists as required to achieve a flat mounting surface for the speaker. (See Figure 1.)

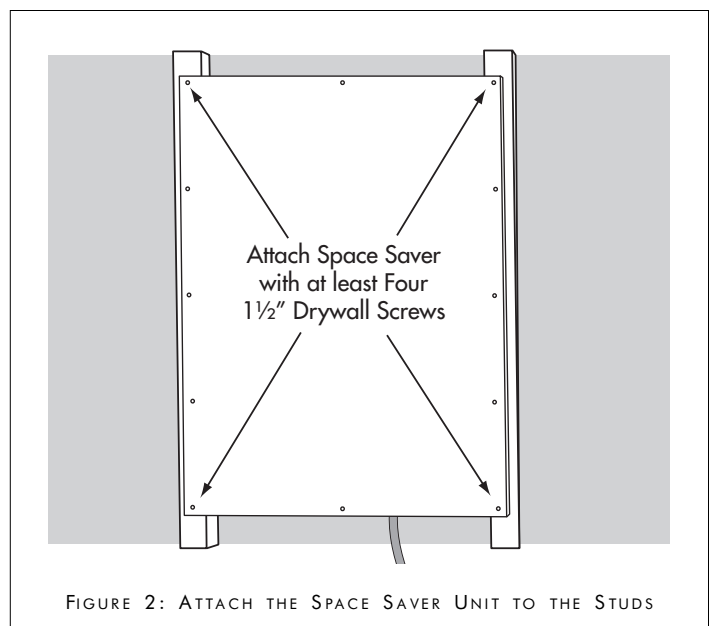
IMPORTANT: REPLACING OR FIXING STUDS/JOISTS SHOULD ONLY BE DONE BY THE PROPER TRADESPEOPLE. ADDING FURRING STRIPS SHOULD BE ONLY DONE BY THE DRYWALLER. ALWAYS ALERT THE GENERAL CONTRACTOR/PROJECT MANAGER WHENEVER YOU FIND STUDS/JOISTS THAT ARE NOT FLAT.

Installing the Space Saver Unit (New Construction Only)

1. After determining that the stud faces are flat (see *Before Installation*, above), finalize the speaker's position in the stud/ceiling bay.
2. Run speaker wire from the speaker location to the amplifier location. Ensure that the wiring methods comply with all applicable local, electrical, and building codes.

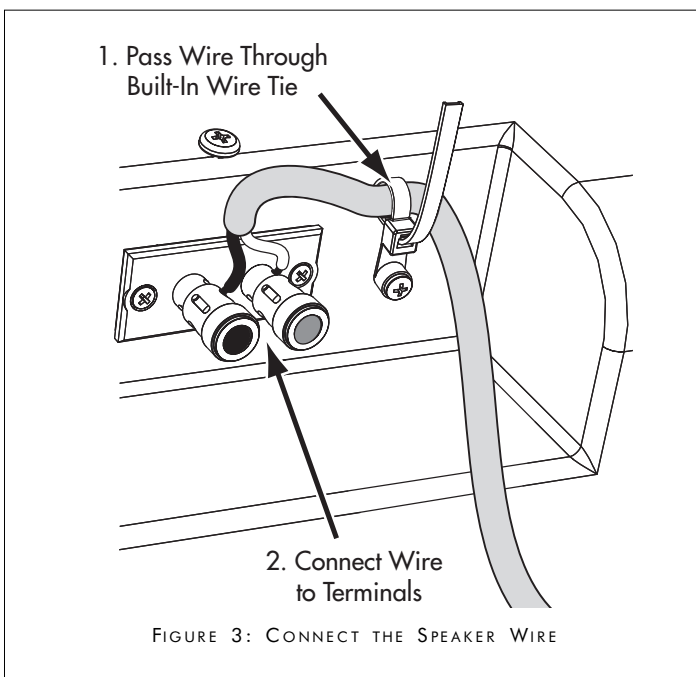
NOTE: TO MAKE CONNECTION TO THE SPEAKER EASIER, LEAVE AT LEAST 2-3 FEET (609-914MM) OF EXTRA WIRE.

3. Drill a hole in the back of the Space Saver and push at least 18" (457mm) of speaker wire through. Tie a knot in the wire to secure it. This will ensure that the wire will be easily accessible when you return to install the speaker after the drywall has been installed.
4. Attach the Space Saver to the studs with drywall screws (not provided). Use at least 4 screws. (See Figure 2.)



Connecting the Speaker Wire

1. After the drywall has been installed, remove the Space Saver unit and retrieve the speaker wire from it.
2. Strip no more than $\frac{1}{4}$ " (6mm) of insulation from each speaker lead. Twist the strands or tin the exposed wire with solder to ensure that there are no stray strands. (Stray strands that touch each other the amplifier chassis can cause a short circuit that can damage the amplifier.)
3. Pass the speaker wire through the built-in wire tie next to the connector panel, and route the wire's end to the speaker connector panel. (See *Figure 3*.) DO NOT TIGHTEN THE WIRE TIE.

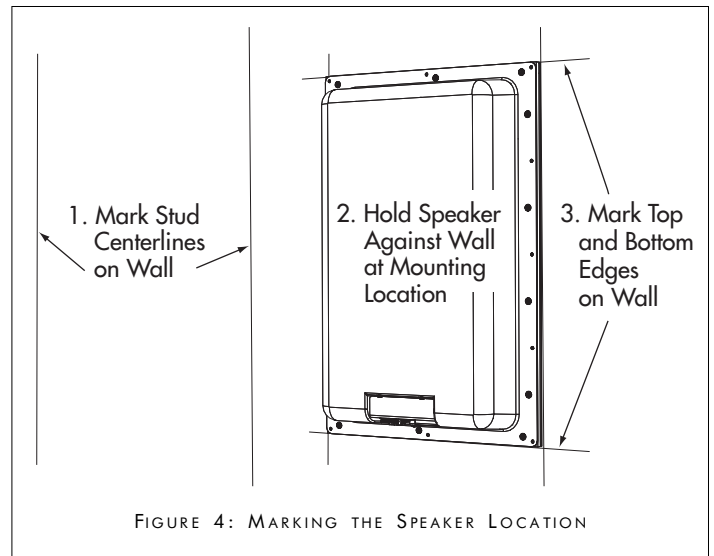


4. The speaker's positive connector post is labeled with a red dot; the negative post is labeled with a black dot. Push the top of each connector post down to open the connector and insert the exposed wires into the holes in the posts (see *Figure 4*). Double-check that you connected amplifier "+" to speaker "+" and amplifier "-" to speaker "-".
5. Once the speaker wire is properly connected, tighten the wire tie.

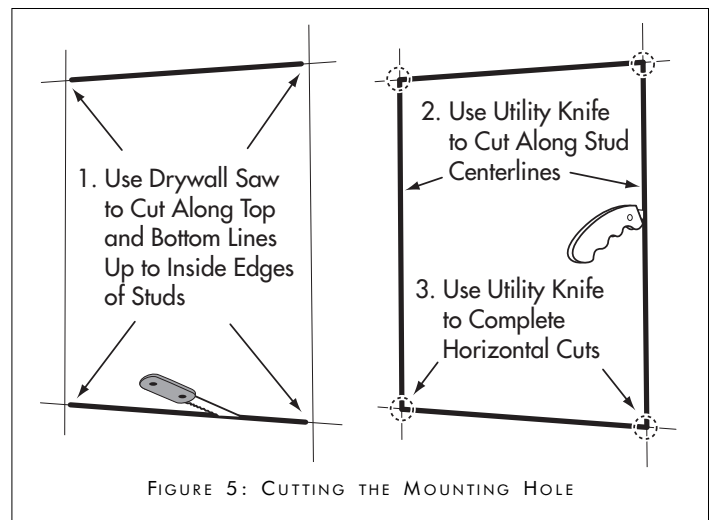
NOTE: The SAW must be used with the Sonamp® A800 amplifier (available separately).

Retrofit Placement

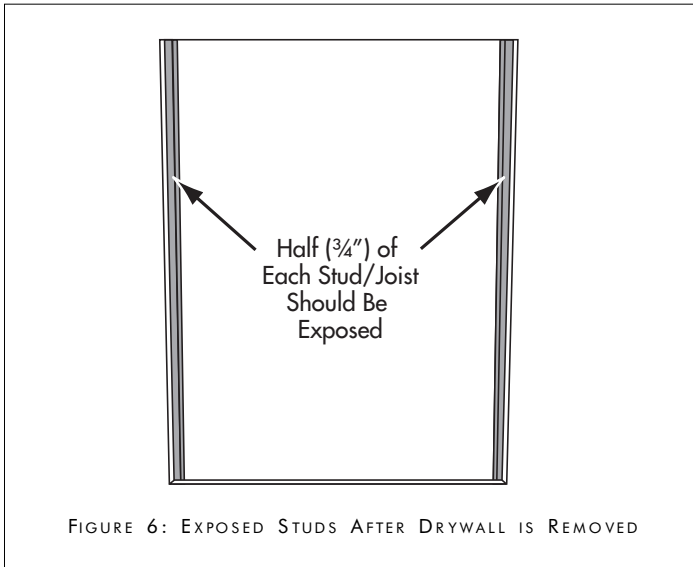
1. Determine the location for the speaker.
2. Using a stud finder, locate the first studs/joists to the right and left of the speaker position.
3. Mark the centers of the studs/joists. (See *Figure 4, left*.)



4. Using the speaker as a template, determine the desired speaker location on the wall. Mark the speaker's top and bottom edges on the drywall. (See *Figure 4, right*.)
5. Before proceeding, perform an obstruction survey to be certain that there are no studs, conduit, pipes, heating ducts, pocket doors, or air returns in the wall cavity that will interfere with the speaker.
6. Using a drywall saw, cut the drywall along the top and bottom horizontal marks UP TO THE INSIDE EDGES OF THE LEFT AND RIGHT STUDS/JOISTS. (See *Figure 5 left*.)



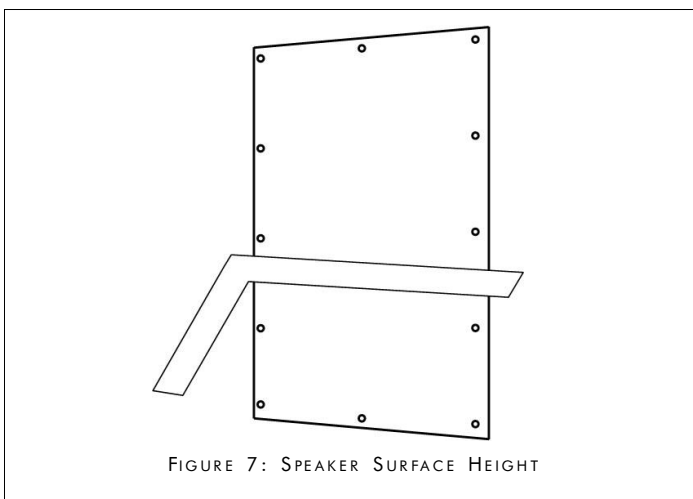
7. Using a utility knife, cut the drywall along the vertical marks at the centers of the studs/ joists. Use the utility knife to complete the horizontal cuts at each stud/joist. (See *Figure 5, right*.) Remove the drywall from the opening.
 - This should expose only $\frac{3}{4}$ " (19mm) of each stud/joist or half of the stud/joist surface. (See *Figure 6*.)



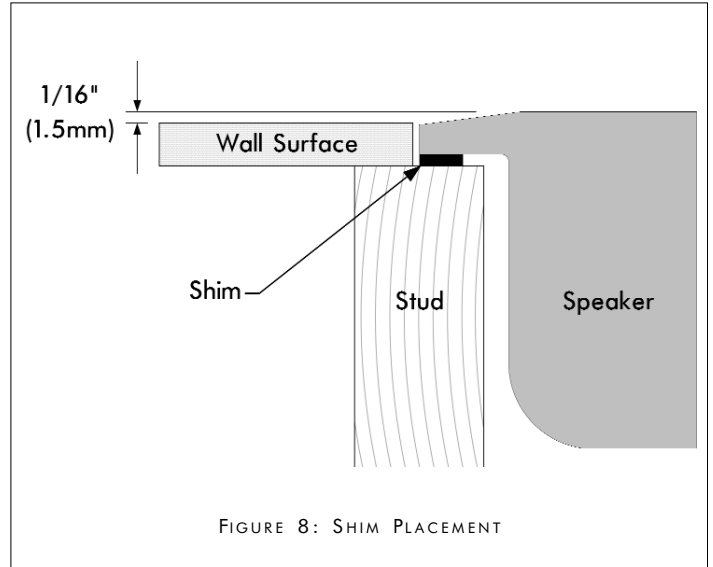
8. Test-fit the speaker into the opening, verifying that all of the speaker's edges are even with the drywall edges. If necessary, trim the edges of the drywall to properly accommodate the speaker.

Mounting the Speaker

1. Place the speaker in the drywall opening.
2. Using a square or straight edge, measure the height from the center of the speaker to the drywall surface. (See *Figure 7*.)

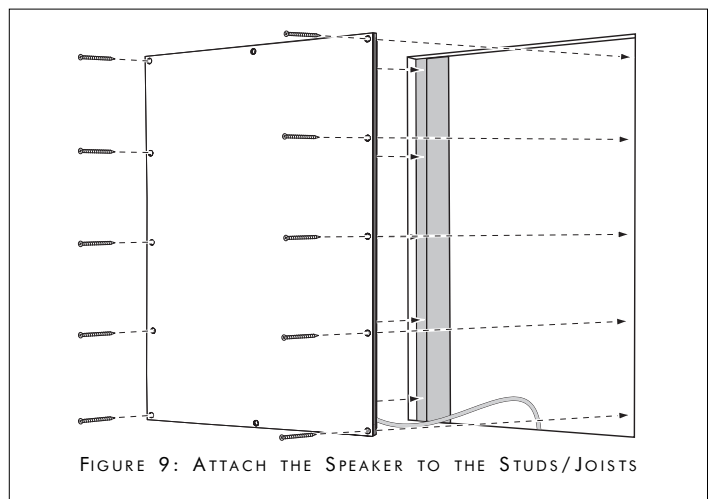


3. THE CENTER OF THE SPEAKER MUST BE $\frac{1}{16}$ " (1.5mm) HIGHER THAN THE DRYWALL SURFACE. This step is critical to eliminate any drywall joint compound from being applied to the active surface of the speakers.
4. If necessary, place the supplied $\frac{1}{16}$ " (1.5mm) or $\frac{1}{8}$ " (3mm) shims between the speaker and the studs. (See *Figure 8*.)



5. Connect the speaker wire to the speaker. (See *Connecting The Speaker Wire, Page 2 step 2*)
6. Fit the speaker in the opening in the drywall.
7. Use the supplied screws to attach the speaker to the studs/joists, driving the screws through the recessed mounting holes along the edges of the speaker. (See *Figure 9*.)

IMPORTANT: The SA3 and SAW each require 10 or more screws, depending on how the speaker is oriented relative to the studs/joists; the SA1.5 requires 6 screws regardless of orientation.



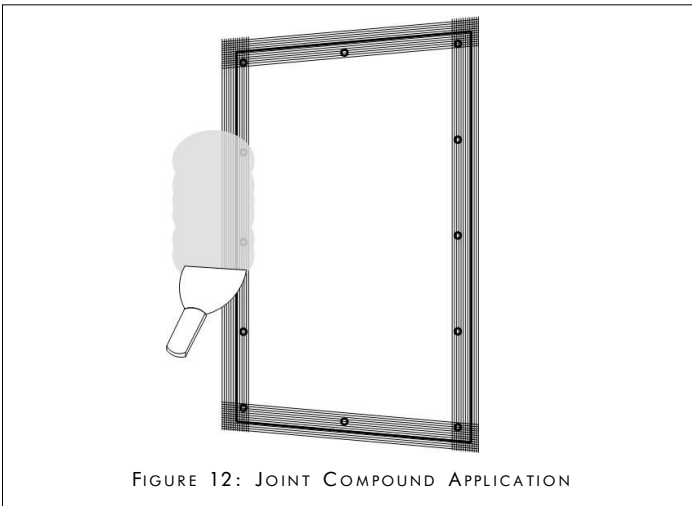
Finishing the Speaker

NOTE: THIS SECTION SHOULD BE PERFORMED BY THE APPROPRIATE QUALIFIED TRADESPERSON.

1. Apply adhesive backed fiberglass mesh joint tape around the perimeter of speaker. (See Figure 11.)



2. Apply joint compound to all gaps between the edges of the speaker and the drywall. Be sure to completely fill the gaps. DO NOT EXTEND THE COMPOUND MORE THAN 2" (50mm) ONTO THE SPEAKER SURFACE. (See Figure 12.)



3. Using standard drywall techniques, feather the compound out 12" (305mm) or more to ensure a smooth transition from the edges of the speaker to the adjoining wall surface.

IMPORTANT: TO INSURE OPTIMUM ACOUSTIC PERFORMANCE, DO NOT APPLY JOINT COMPOUND OR ANY OTHER WALL FINISHING COMPOUND ON OR OVER THE SURFACE AREA OF THE SPEAKER.

4. After the layer of joint compound has completely dried, sand the compound carefully so that the finish blends smoothly into the surrounding drywall. This is a critical step and may take multiple coats of compound to eliminate visual imperfections. The speaker is now ready to paint or texture.
5. All Sonance Invisible Series speakers feature a pre-primed surface, which is ready for paint or light texture. For optimum acoustic performance a thin sprayed on "orange peel" texture, paint or thin wallpaper is recommended. HEAVY TEXTURES AND TROWLED FINISHES ARE NOT RECOMMENDED AND WILL ADVERSELY AFFECT THE ACOUSTIC PERFORMANCE OF THE SPEAKERS.

NOTE: FOR FINISH OVER INSTALLATIONS THAT USE PLASTER OR A LEVEL 5 DRYWALL FINISH THE SONANCE SA-2 IS THE OPTIMUM SPEAKER CHOICE.

Overload Protection

The SA3, SA1.5, and SAW are protected from being overdriven by self-resetting gel switches. The SA3 and SA1.5 each have 2 gel switches — one for the mid/tweeter and one for the woofer. If the speaker is overdriven, the switch will open and disconnect the driver(s) from the crossover. After the cause has been corrected (usually requiring lowering the volume being fed to the speaker), the switches will close and the drivers will resume functioning.

Specifications

SA3

Tweeter:	48in ² (122cm ²) planar diaphragm
Woofers:	50in ² (127cm ²) low frequency radiator
Frequency Response:	40Hz – 20kHz ±3dB
Impedance:	8 ohms nominal
Power Handling:	80 watts RMS
Sensitivity:	90dB (1w/1 meter)
Dispersion:	140° hemispherical, up to 10kHz
Finish	Primed surface ready for texture and paint
Overload Protection:	Two independent self-resetting gel switches (low frequency and high frequency)
Included Supplies:	Mounting screws, shims
Dimensions (W x H x D):	16" x 24" x 3 7/8" (406mm x 610mm x 98mm)
Shipping Weight:	20 lbs (9kg) pair

SA1.5

Tweeter:	40in ² (102cm ²) planar diaphragm
Woofers:	33in ² (84cm ²) low frequency radiator
Frequency Response:	50Hz – 20kHz ±3dB
Impedance:	8 ohms nominal
Power Handling:	80 watts RMS
Sensitivity:	88dB (1w/1 meter)
Dispersion:	140° hemispherical, up to 10kHz
Finish:	Primed surface ready for texture and paint
Overload Protection:	Two independent self-resetting gel switches (low frequency and high frequency)
Included Supplies:	Mounting screws, shims
Dimensions (W x H x D):	16" x 12" x 3 7/8" (406mm x 305mm x 98mm)
Shipping Weight:	12 lbs (5.4kg) pair

SAW*

Woofers:	Two x 50in ² (127cm ²) low frequency radiator
Frequency Response:	35Hz – 150Hz ±3dB
Impedance:	8 ohms nominal
Power Handling:	150 watts RMS
Sensitivity:	90dB (1w/1 meter)
Dispersion:	180° hemispherical up to 150Hz
Finish:	Primed surface ready for texture and paint
Overload Protection:	Self-resetting gel switch
Included Supplies:	Mounting screws, shims
Dimensions (W x H x D):	16" x 24" x 3 7/8" (406mm x 610mm x 98mm)
Shipping Weight:	17 lbs (7.7kg) each

*Requires Sonamp A800 (available separately)

LIMITED FIFTEEN (15) YEAR WARRANTY

Sonance warrants to the first end-user purchaser that this Sonance-brand product ("Product"), when purchased from an authorized Sonance Dealer/Distributor and installed by a certified Sonance installer, will be free from defective workmanship and materials in the initial installation for the period stated below. Subject to the additional limitations stated below, Sonance will (a) at its option and expense during the warranty period, either repair the defect or replace the Product with a new or remanufactured Product or a reasonable equivalent, and (b) arrange at its reasonable expense to re-install the Product and prepare the surface of the speaker and/or mounting platform for finishing and nothing more.

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 WARRANTY 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 the period of Sonance's express warranty.

Your Product Model and Description: Sonance Invisible Series Speakers

Warranty Period for this Product: Fifteen (15) years from the date on the original sales receipt, invoice or other satisfactory proof of purchase.

Additional Limitations and Exclusions From Warranty Coverage: The warranty described above is non-transferrable, applies only to the initial installation of the Product, does not include re-finishing of the speaker and/or mounting platform or surrounding surface, does not include damage to allied or associated equipment which may result for any reason from use with this Product, and does not include Product failure 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 (1) must contact your authorized Sonance Dealer/Installer or call Sonance Customer Service at (800) 582-0772 within the warranty period, (2) must 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.

Notes:



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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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