



# INSTRUCTION MANUAL

## SONANCE VIRTUOSO® DR-SERIES

### A800DR 8" IN-CEILING WOOFER

## INTRODUCTION

Thank you for purchasing the Sonance Virtuoso® A800DR in-ceiling woofer. When properly installed, this woofer will give you many years of entertainment pleasure. To get the most out of your new woofer, please read this manual thoroughly before you begin installation.

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

## SAFETY WARNING

This woofer has FastMount® tabs that prevent the woofer from falling out of the mounting hole during the installation process.

**The edges of FastMount tabs are very sharp. Use caution when handling the woofer.**

See *Installing The Woofer* (page 3) for complete information about the FastMount tabs.

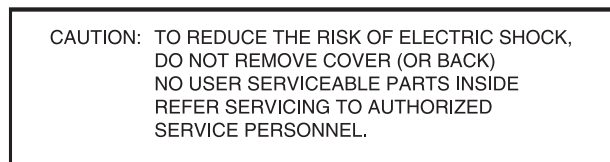
## IMPORTANT SAFETY INSTRUCTIONS

Basic safety precautions should always be followed When using your Virtuoso A800D woofer, to reduce risk of fire, electric shock, and injury to persons:

1. Read and understand all instructions.
2. Retain these instructions for future reference.
3. Follow all warnings and instructions in this manual and marked on the product.
4. Any service or repair required must be performed by qualified factory-authorized personnel.
5. Do not use the amplifier in a high-humidity environment or near water — for example in a wet basement, or near a wet bar or swimming pool.
6. Never touch the speaker driver or push any object through the grille.
7. Always provide adequate ventilation for the amplifier. Allow a minimum of one (1) inch above and three (3) inches behind the amplifier. Do not block the cooling vents on the amplifier case.
8. The amplifier should be situated away from heat sources such as heat registers, radiators, stoves, or other appliances that produce heat.
9. The amplifier should only be connected to a power supply of the type marked on its back panel. The power supply cord should be routed to avoid damage from contact with sharp objects or being stepped on.
10. Unplug the amplifier during thunderstorms or when the woofer will be unused for extended periods of time.
11. Exercise care to avoid spilling liquids on or in the amplifier or woofer.
12. Do not place the amplifier on an unstable table, stand, or cart. Improper placement of the amplifier may cause it to fall on an adult of child causing serious injury, as well as damage to the amplifier.
13. Do not expose the amplifier to dripping or splashing. Do not place objects filled with liquids, such as vases, on the amplifier.
14. Cleaning: The amplifier and woofer should be cleaned only as recommend by the manufacturer.
15. Non-Use Periods: Unplug the amplifier's power cord from the electrical outlet when the woofer will be unused for a long period of time.



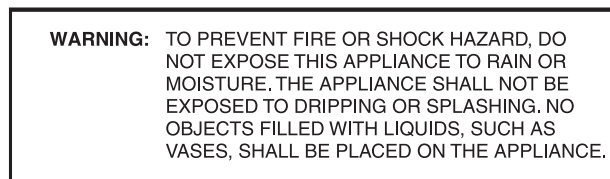
16. Damage Requiring Service: The woofer and/or amplifier should be serviced by qualified service personnel when:
  - A. The power cord or plug has been damaged
  - B. Objects have fallen, or liquids have been spilled into the amplifier
  - C. The amplifier or woofer have been exposed to rain.
  - D. The amplifier and/or woofer does not appear to be operating properly or exhibits a marked change in performance.
  - E. The woofer or amplifier has been dropped or appears to have been damaged.
17. Servicing: The user should not attempt to service the woofer or amplifier beyond that described in these instructions. All other servicing should be referred to qualified service personnel.
18. Storms: To prevent damage to components, unplug all electronic equipment during thunderstorms.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



## PARTS LIST

Each Sonance Virtuoso A800DR woofer includes the following:

- (1) Sonance Virtuoso A800DR woofer
- (1) Sonance Virtuoso A800 150-watt amplifier
- (1) Paintable grille
- (1) Plastic paint plug to protect woofer during painting
- (1) Mounting cutout template (in packaging)
- (1) IEC Power Cord



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## OPTIONAL ACCESSORIES

- Virtuoso<sub>D</sub> Metal Grille (part# 92290):** Metal replacement for included grilles.
- Virtuoso<sub>D</sub> Cloth Grille (part# 92285):** Cloth-covered replacement for included grilles.
- Virtuoso<sub>D</sub> FlexBracket (part# 92247):** Plastic template to reserve a mounting hole for the woofer in new construction. Designed to be used with the RotoLock® mounting system.
- Virtuoso<sub>D</sub> Coverplate (part# 92245):** Covers the hole made by the FlexBracket during construction until the speaker is installed.
- Virtuoso<sub>D</sub> Acoustic Enclosure (part# 91900):** ½" MDF enclosure that provides ideal acoustic performance and maximum reduction of sound transmission into adjacent spaces. Designed for use only in new construction.
- Virtuoso<sub>DR</sub> Fire-Rated Back Can (part# 91908):** Meets ASTM E 119 and UL2043 criteria for commercial installations.

**Sonafill® In-Wall System (part# 91928):** Retrofittable acoustical treatment for in-ceiling speakers consisting of two pillows and four tiles that virtually eliminates noise produced by resonating drywall. Dramatically improves midbass sound quality and reduces sound transmission into adjacent rooms.

## WOOFER PLACEMENT

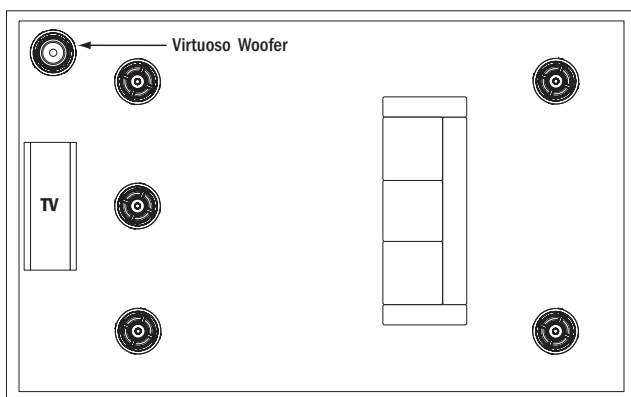
### Home Theater Placement

For highest output and best overall performance the Virtuoso A800DR woofer should be placed in the front corner of the room. Place the woofer as close as possible to the left, center and right speakers to assure seamless integration of the sound from the main speakers and the woofer.

For optimum results contact your Authorized Sonance Dealer for advice.

- **The woofer should not be mounted in the same ceiling joist bay as the left or right speakers.**

Use *Illustration 1* as a guide.

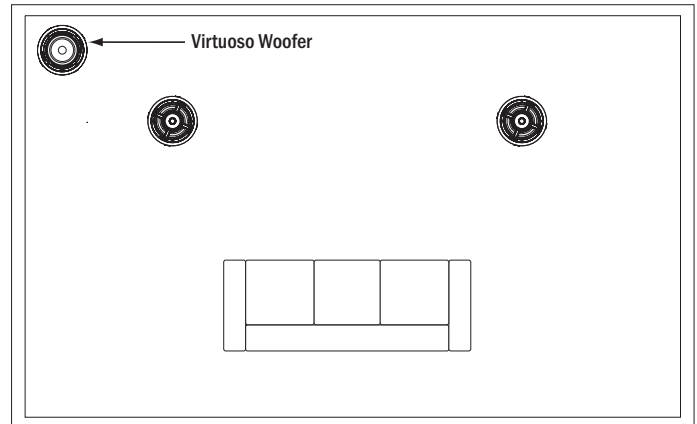


*Illustration 1: Virtuoso A800DR Placement for Home Theater*

### 2-Channel Placement

In a 2-channel system the A800DR woofer should be located on a corner of the room, as close as possible to the left or right speaker. Corner placement provides the highest output and best overall performance.

Use *Illustration 2* as a guide.



*Illustration 2: Virtuoso A800DR Placement for 2-Channel*

## 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:

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

## PREPARING THE INSTALLATION LOCATION

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 joist bay can be sectioned-off to form a back box. Building such an enclosure will create a dramatic improvement in your woofer's bass performance and power handling.

**Ideal back box volume requirements: 1.5 cu. ft. (45.5 liters)**

### Insulating the Ceiling Cavity

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

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



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## INSTALLING THE WOOFER

### Before Installation: New Construction

For installations in new construction, Sonance recommends using a Virtuoso FlexBracket (part# 92247) to reserve a location for the woofer. The FlexBracket is nailed or screwed to the studs and serves as a guide for the drywall so that the woofer hole will be in the desired location once the drywall is installed.

### Before Installation: Retrofit

1. Determine the location for the woofer (see *Woofer Placement* on page 2).
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 woofer.
3. The cutout for the Virtuoso A800DR woofer is 10<sup>1</sup>/<sub>8</sub>" (257mm) in diameter. There also must be at least 6" (152mm) depth within the ceiling for the woofer.
4. Position the included cutout template where the woofer is to be located and pencil an outline on the ceiling.
  - 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.
5. Cut the hole using a drywall saw, and run the speaker wire between the amplifier and the woofer location.

### Installation

The Sonance Virtuoso A800DR woofer features exclusive FastMount® tabs and an integral RotoLock® mounting system for quick mounting directly into an existing ceiling (see *Illustration 4*).

**WARNING: The edges of FastMount tabs are very sharp. Use caution when handling the woofer.**

1. Remove the paint plug from the woofer. Connect the speaker wire to the terminals on the woofer. 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 woofer into the hole in the ceiling. The RotoLock system can accommodate a maximum wall material thickness of 1<sup>1</sup>/<sub>4</sub>".
  - The FastMount tabs will prevent the speaker from falling out of the mounting hole, allowing the installer to let go of the woofer to pick-up tools or other items (see *Illustration 4*).

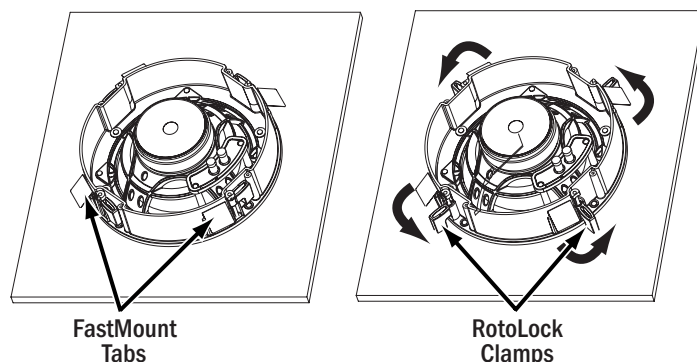


Illustration 4: A800DR Woofer Installation

*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 ceiling.*

3. Tighten the four screws on the front of the woofer baffle. The RotoLock clamps will automatically rotate into position and begin clamping the woofer (see *Illustration 4*).

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

*Note: The woofer 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 after the woofer has been installed. Insert about half of the grille into the groove at the edge of the woofer. Gently fit the remaining half of the grille by working around the woofer, 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 WOOFER AND GRILLE

You can paint the woofer and grille before installing it, which will eliminate the "paint scar" if the woofer ever needs to be removed for service. You can also paint the woofer after installation, but before the grille is attached. The Virtuoso A800DR woofer comes from the factory fitted with a plastic 'paint plug'. Use the paint plug to protect the woofer driver while the flange is being painted along with the wall.

Sonance always suggests painting the grille separately from the woofer. 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 grille 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 can adversely affect the sound of the woofer.

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



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### A800DR 8" IN-CEILING WOOFER

## CONNECTING THE AMPLIFIER

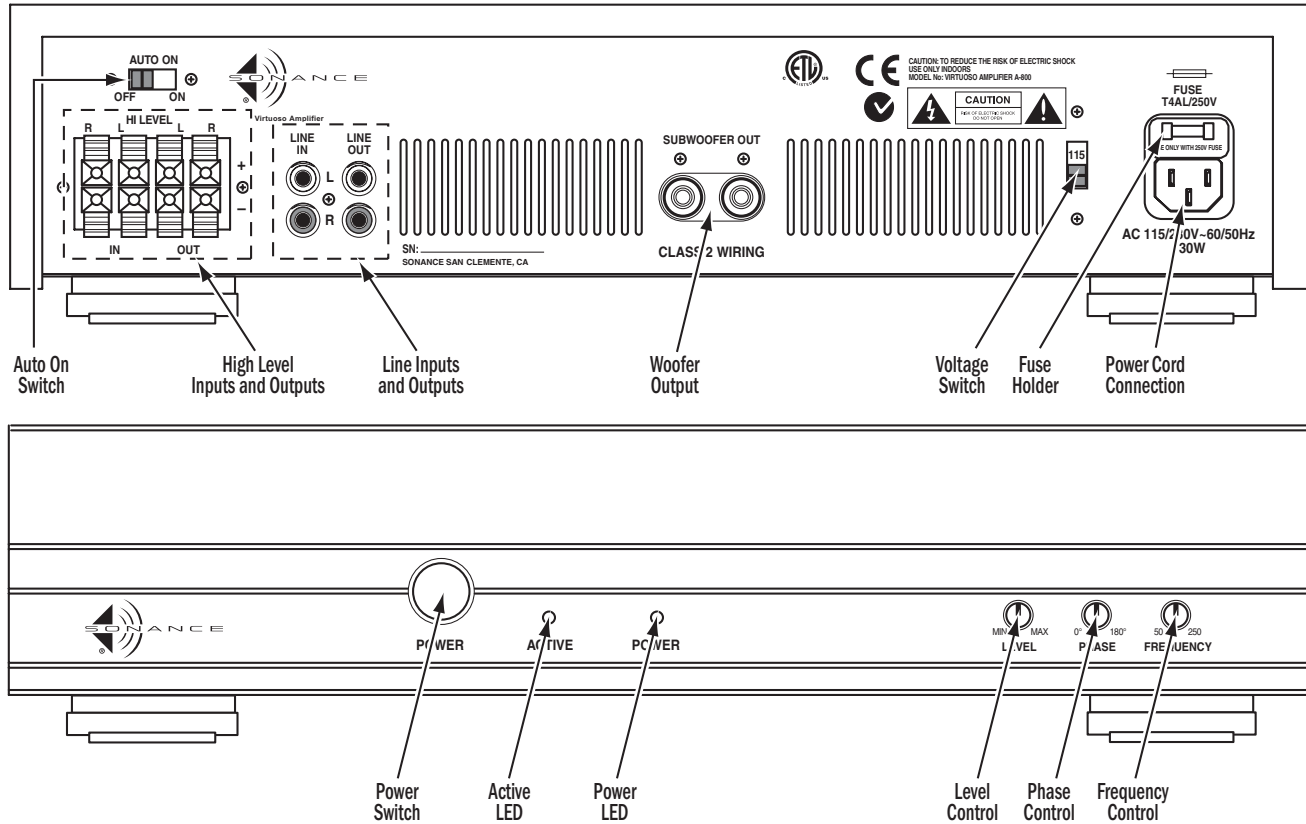


Illustration 5: Virtuoso A800 Amplifier Front and Rear Panels

## Rear-Panel Features

### Power Cord Connection

The A800 amplifier comes with a 14-gauge EIA standard 120V grounded power cable. Plug this cable directly into a wall outlet. *NEVER* attempt to power the amplifier from the accessory outlet of another audio component.

### Voltage Switch

The A800 amplifier is shipped with this switch set in the 115V position. This is the correct setting for use in the United States.

### Fuse Holder

The A800 amplifier is shipped with a 4 amp fuse installed. This is the correct value for operation in the United States.

### Changing the Voltage

**Important: Unplug the power cord from the amplifier and the wall outlet before changing the voltage.**

In addition to 120V operation, the A800 amplifier can also operate on voltages from 220V to 240V. To change the voltage:

1. Remove the power cord from the wall outlet and from the amplifier's power connection.
2. Insert a flat-blade screwdriver or similar tool into the empty power cord socket and gently pry the fuse holder out of its socket.
3. Install the supplied 2 amp fuse in the fuse holder and replace the fuse holder back into its socket above the power cord connection.

4. Use a flat-blade screwdriver or similar tool to change the Voltage Switch to the 230V setting.

5. Replace the supplied power cord with a 14-gauge grounded IEC power cord that is appropriate for the country where the amplifier is being used.

### Line Inputs and Outputs

The A800 amplifier has Line Inputs and unfiltered Line Outputs. Use these connections if your receiver or preamp has a line-level subwoofer output. If the subwoofer output is mono you can connect it to either the A800's Left or Right Line Input.

If your system has a separate preamp and power amplifier you can connect the A800 amplifier between the preamp and power amp using its Line Input and Line Output jacks.

**Note: If you are using the A800's High Level Inputs (see below), DO NOT make any connections to the Line Level Inputs.**

### High Level Inputs and Outputs

If your system's electronics do not have preamp outputs or subwoofer outputs you can connect its left and right speaker outputs to the A800D's High Level Inputs. Then connect the A800's High Level Outputs to your left and right speakers. Always make sure to connect the A800's "+" terminals to the electronics' and speakers' "+" terminals, and its "-" terminals to the electronics' and speakers' "-" terminals.

**Note: If you are using the A800's Line Level Inputs (see above), DO NOT make any connections to the High Level Inputs.**



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#### Woofers Output

The Virtuoso A800 amplifier features binding post speaker connectors that can accept bare wire and wire terminated in pins or single banana connectors.

**Note:** *If using single banana connectors, be sure the terminals are closed (rotated fully clockwise) before inserting the connector.*

If you use bare wire, make sure you strip only enough wire (1/2") to fit into the slot in the terminal. Before inserting the wire, twist all strands tightly to prevent strays that could cause a short circuit between the "+" and "-" terminals. Insert wire in the direction of terminal rotation (clockwise) to force the wire around the terminal post to make a secure connection.

#### Auto On Switch

When this switch is in the *ON* position the A800 will automatically turn on when it senses a signal on either of its inputs. The amplifier will remain on for approximately 5 minutes after the signal has ceased. If you want to manually turn the amplifier on and off, set the Auto On switch to the *OFF* position. This allows the amplifier to be switched on and off by the front-panel *Power* switch.

#### Front-Panel Features

##### Power Switch

When the rear-panel *Auto On* switch is in the *OFF* position, the *Power* switch turns the A800 on and off. If the *Auto-On* switch is in the *ON* position the *Power* switch will have no effect.

##### Active LED

The *Active* LED illuminates whenever the A800 is operating.

##### Power LED

The *Power* LED indicates that the A800 is connected to an active power outlet.

##### Level Control

The *Level* Control adjusts the output level of the A800D woofer. To accurately calibrate the level we recommend using your receiver or processor's built-in test tone generator and a sound pressure level meter. If your equipment does not have a built-in test tone generator you can adjust the woofer's level by ear. Play music and films you are very familiar with and adjust the level so the amount of deep bass sounds right on a wide variety of material.

##### Phase Control

The *Phase* Control can be adjusted from 0° to 180°. At the 0° setting, when an electrically positive signal is sent to the A800D woofer the speaker driver will move out (towards the room); at the 180° setting, when an electrically positive signal is sent to the A800D woofer the speaker driver will move in (away from the room). This allows you to better match the phase of the woofer's output with that of your left and right speakers so that their signals all reach your ears properly aligned (in phase) with each other.

When the woofer is properly in phase with the left and right speakers the sound will be clearer and have maximum impact in the midbass range. This will make percussive sounds like drums, piano and plucked strings sound more life-like.

The best way to adjust the *Phase* Control is to listen to music that you are familiar with and adjust the control until so that drums and other percussive sounds have maximum impact.

##### Frequency Control

The *Frequency* Control determines the highest frequency the A800D woofer operates at. If you are using the A800 amplifier with a surround receiver or processor that has a built-in subwoofer crossover, set the *Frequency* Control at 250Hz.

If your electronics do not have a built-in subwoofer crossover, the best way to adjust the *Frequency* Control is to play music and films that you are familiar with and adjust the control so that the bass sounds full without being boomy, and so that male voices do not sound too thick or heavy.

#### SPECIFICATIONS

Woofers:	8" (203mm) Long throw carbon fiber cone, with a rubber surround
Frequency Response:	35Hz – 250Hz
Amplifier Power:	150 watts
Controls:	Variable crossover frequency (80Hz ~ 250Hz) and output level, phase control
Dimensions (Dia x D):	11¼" x 6" (286mm x 152mm)
Cutout Dimensions (Dia):	10⅞" (257mm)
Amplifier Dimensions (W x H x D):	16¾" x 4" x 13½" (425mm x 102mm x 343mm)
Shipping Weight:	29 lbs (13 kg) system

#### TECHNICAL ASSISTANCE AND SERVICE

***If you any have questions about the operation or installation of this product, please call our Technical Assistance Department on any business day at (800) 582-0772 or (949) 492-7777; from 7 a.m. to 5 p.m., PST.***

If your speakers should need repair or service, contact your Sonance Authorized Dealer for help, or use the following procedure:

1. Prior to calling note the product's model number, serial number, purchase date, and the name and address of the dealer where you purchased the product.
2. Contact our Technical Assistance Department at the above number(s) and describe the problem the unit is experiencing. If applicable, they will issue a Return Authorization Number.

**IMPORTANT: YOU MUST HAVE PRIOR AUTHORIZATION TO RETURN YOUR SPEAKER OR AMPLIFIER TO SONANCE!**

3. If you're directed to return the unit to Sonance for repair, pack the unit in its original shipping carton. If needed, you can obtain replacement packaging from us for a small charge. Note: it is best if you place the box into an additional outer "overcarton" before shipment to minimize a chance of theft in shipment. Please include a copy of the original bill of sale inside the package.
4. Contact a package delivery service such as United Parcel Service or Federal Express to arrange prepaid (not collect) shipping. Do not use the U.S. Postal Service.

IMPORTANT: Freight collect shipments will be refused.

5. Write the Return Authorization Number on the outside of the shipping carton.

6. Ship the packaged unit to:

Quality Assurance Department  
Sonance  
212 Avenida Fabricante  
San Clemente, CA 92672-7531



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#### WARRANTY (U.S. ONLY)

##### Limited Lifetime Warranty Coverage – Woofer Unit Only

Sonance warrants to the original retail purchaser only that this Sonance product will be free from defects in materials and workmanship, provided the speaker was purchased from a Sonance Authorized Dealer.

##### Limited Warranty Coverage – Amplifier Unit Only

Sonance warrants to the original retail purchaser only that this Sonance product will be free from defects in materials and workmanship for a period of five (5) years, provided the product was purchased from a Sonance Authorized Dealer.

Defective products must be shipped, together with proof of purchase, prepaid insured to the Authorized Sonance Dealer from whom they were purchased, or to the Sonance factory at the address listed on this instruction manual. Freight collect shipments will be refused. It is preferable to ship this product in the original shipping container to lessen the chance of transit damage. In any case, the risk or loss or damage in transit is to be borne by the purchaser. If upon examination at the factory or Authorized Sonance Dealer it is determined that the unit was defective in materials or workmanship at any time during this warranty period, Sonance or the Authorized Sonance Dealer will, at its option, repair or replace this product at no additional charge, except as set forth below. If this model is no longer available and cannot be repaired effectively, Sonance, at its sole option, may replace the unit with a current model of equal or greater value. In some cases where a new model is substituted, a modification to the mounting surface may be required. If mounting surface modification is required, Sonance assumes no responsibility or liability for such modification. All replaced parts and product become the property of Sonance. Products replaced or repaired under this warranty will be returned to the original retail purchaser, within a reasonable time, freight prepaid.

This Warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, or service, repair or modification of the product which has not been authorized or approved by Sonance. This Warranty also excludes normal cosmetic deterioration caused by environmental conditions. This Warranty will be void if the Serial Number on the product has been removed, tampered-with or defaced. This Warranty is in lieu of all other expressed warranties. If the product is defective in materials or workmanship as warranted above, the purchaser's sole remedy shall be repair or replacement as provided above. In no event will Sonance be liable for any incidental or consequential damages arising out of the use or inability to use the product, even if Sonance or an Authorized Sonance Dealer has been advised of the possibility of such damages, or for any claim by any other party.

Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply. All implied warranties on the product are limited to the duration of this expressed Warranty. Some states do not allow limitation on the length of an implied warranty. If the original retail purchaser resides in such a state, this limitation does not apply.

#### EXCLUSIONS AND LIMITATIONS

The warranty set forth above is in lieu of all other warranties, express or implied, of merchantability, fitness for a particular purpose, or otherwise. The warranty is limited to Sonance products registered herein and specifically excludes any damage to loudspeakers and other allied or associated equipment which may result for any reason from use with this product. Sonance shall, in no event, be liable for incidental or consequential damages arising from any breach of this warranty or otherwise. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

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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](http://www.sonance.com)

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[www.sonance.com](http://www.sonance.com)

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