SONANCE®
CABINET SUBWOOFER
INSTRUCTION MANUAL
SONANCE CABINET SUBWOOFERS

Important Safety Information

IMPORTANT: Read all of these instructions before you install or operate your subwoofer, and save these instructions for later use.

1. Read Instructions — All these safety and operating instructions should be read before you operate the unit.

2. Retain Instructions — These safety and operating instructions should be retained for future reference.

3. Heed Warnings — All warnings on the unit and in the operating instructions should be adhered to.

4. Follow Instructions — All operating and use instructions should be followed.

5. Water and Moisture — The unit should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

6. Carts and Stands — The unit should be used only with a cart or stand that is recommended by the manufacturer.

A unit and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit and cart combination to overturn.

7. CAUTION: To prevent electric shock, do not use the subwoofer’s polarized plug with an extension cord, receptacle, or other outlets unless the blades can be fully inserted to prevent blade exposure.

8. Ventilation — The unit should be situated so that its location or position does not interfere with its proper ventilation. For example, the unit should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or be placed in a built-in installation, such as a bookcase or cabinet, that may impede the flow of air through the ventilation openings.

9. Heat — The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including other audio components) that produce heat.

10. Power Sources — The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the unit.

11. Grounding or Polarization — Precautions should be taken so that the grounding or polarization means of the unit is not defeated.

12. Power Cord Protection — Power cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the controller.

13. Cleaning — The unit should be cleaned only as recommended by the manufacturer.

14. Non-Use Periods — The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

15. Object and Liquid Entry — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

16. Damage Requiring Service — The unit should be serviced by qualified service personnel when:

- The power cord or the plug has been damaged.
- Objects have fallen or liquid has been spilled into the unit.
- The unit has been exposed to rain.
- The unit does not appear to operate normally or exhibits a marked change in performance.
- The unit has been dropped or the enclosure damaged.

17. Servicing — The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Introduction

Thank you for purchasing a Sonance Cabinet Subwoofer. When properly installed your new subwoofer will add a solid deep bass foundation to all your audio/video entertainment. This manual will teach you all about your new subwoofer’s many innovative features and will show you how to get the very best performance from it. Please read it thoroughly.

Since all Sonance Cabinet Subwoofers have identical installation requirements, the directions in this manual apply to each model in the series. This manual covers these subwoofer models: Sub 12-250, Sub 10-150, Sub 8-100.

Design and Features

Your new Sonance Cabinet Subwoofer delivers powerful, low-distortion bass, and easily blends with your room’s décor. The anodized aluminum woofer cone and heavily-braced sealed enclosure deliver room-shaking bass from a small cabinet that gives you many installation options. The front-mounted controls and recessed amplifier panel let you tuck your subwoofer away under a shelf or install it flush with a wall or cabinet front.
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Features:
• The anodized aluminum woofer cone has very low moving mass and excellent rigidity.
• The woofer’s extra long-throw voice coil allows linear excursion for low-distortion performance up to maximum amplifier power.
• The sealed, heavily-braced enclosure delivers tight, well-defined bass performance.
• An exclusive ½” MDF / ½” particle board laminate cabinet material offers superior stiffness and resonance damping that smooths bass performance.
• Front-mounted controls allow easy access wherever the subwoofer is installed.
• The recessed amplifier and flush-mounted grille allow installation flush with walls or cabinets.
• Auto-ON operation.

Box Contents
Your Sonance Cabinet Subwoofer box should contain the following items:

(1) Sonance Cabinet Subwoofer
(4) Rubber feet and screws
(4) Metal spikes
(1) IEC Power Cord (115V versions only)

Subwoofer Placement
As with any speaker, your Sonance Cabinet Subwoofer’s performance will be influenced by its placement in your listening room. However, since our ears do not hear directional sound at deep bass frequencies, your subwoofer’s placement is not as critical to its overall performance as is the placement of your system’s other speakers. Therefore, your subwoofer will deliver superior performance from a wide variety of room locations. The following guidelines — plus some experimentation — will help you get the best performance possible from your subwoofer in your listening room.

Placing the subwoofer as close as possible to the same plane as your main (left and right) speakers will help your subwoofer’s sound properly blend with the sound from your main speakers, creating a solid, integrated soundstage that enhances the impact of music and films. We suggest starting with the subwoofer in line with your left and right speakers, somewhere between either speaker and the side wall (see Figure 2).

Your subwoofer’s location relative to walls will influence the amount of bass it produces — placing the subwoofer next to a wall will increase bass output; placing it in a corner will maximize its bass output. However, corner placement can increase standing waves in the room (peaks and dips in bass response related to the room’s dimensions) that can make the subwoofer’s bass performance sound uneven at different listening locations. Experiment with different subwoofer locations until you find one that produces strong bass that sounds clear (without boominess) at the seating locations while maintaining the sound’s impact.
Your local authorized Sonance dealer is an expert in audio/video system planning and installation. We strongly recommend that you work with your dealer to ensure that you get the best performance possible from your subwoofer.

NOTE: THESE SUBWOOFERS CAN PRODUCE ENOUGH BASS ENERGY TO CAUSE OBJECTS IN THE ROOM TO RATTLE OR BUZZ DURING PASSAGES WITH VERY STRONG BASS. IF THIS HAPPENS, TRY RELOCATING THE ITEMS. IF THAT FAILS TO STOP THE RATTLING YOU MAY HAVE TO REMOVE THE ITEMS.

Installing the Subwoofer Flush in a Wall or Cabinet
Your subwoofer’s flush grille and recessed amplifier panel let you install it flush with a wall or cabinet surface for a clean, uncluttered appearance. To allow for proper ventilation when installing the subwoofer this way, leave at least 1” of clearance around the top and sides of the subwoofer and 1” of clearance behind it. If it is not possible to provide the necessary clearance, install a fan that will bring cooling air into the rear of the compartment containing the subwoofer.

Attaching the Spikes
Your subwoofer comes with a set of rubber feet installed for use on wood or other hard floor surfaces, and it also includes a set of metal spikes for use on carpeting.

To attach the spikes, use a screwdriver to remove the rubber feet and screw the spikes into the threaded inserts (see Figure 3). Once installed, the height of the spikes can be adjusted so the subwoofer will sit level on an uneven floor.

Subwoofer Rear Panels
Figure 4 shows the controls and connections located on the subwoofer rear panel.
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**Voltage Selector**
Sonance Cabinet Subwoofers are equipped with a Voltage Selector switch that is factory-set to the proper position for the country where the subwoofer is sold. Subwoofers sold in the United States are set for 115V operation; subwoofers sold in other countries are set for 230V operation. The subwoofer’s proper operating voltage is shown on the switch itself (see Figure 5).

The Voltage Selector switch is not user-selectable, and has a plastic cover to prevent it from being accidentally changed. If you need to operate your subwoofer on an AC voltage that is different from the one showing on the switch, contact your Authorized Sonance Dealer or Service Center.

**Replacing the AC Fuse**
Your subwoofer is factory-equipped with the following AC fuse:

- **115V Version:**
  - Sub 12-250 — 5A, 250V slo-blo
  - Sub 10-150 and Sub 8-100 — 2A, 250V slo-blo

- **230V Version:**
  - Sub 12-250 — 2.5A, 250V slo-blo
  - Sub 10-150 and Sub 8-100 — 1A, 250V slo-blo

To replace the fuse, unplug the power cord from the Power Cord Connector and use a screwdriver to remove the fuse holder (see Figure 6).

**CAUTION:** FOR CONTINUED PROTECTION AGAINST FIRE, REPLACE THE FUSE WITH ONLY THE SAME TYPE AND RATING.

**Subwoofer Connections**

**Power Connection**
Your Sonance Cabinet Subwoofer features a removable IEC power connector (see Figure 6). (A power cord is included only with 115V versions of the subwoofers.) Plug the female end of the power cord into the Power Cord Connector on the subwoofer’s rear panel and plug the male end into a grounded wall socket. Do NOT plug the subwoofer’s power cord into a convenience outlet on any other audio or video component.

**IMPORTANT:** DO NOT PLUG THE POWER CORD INTO THE WALL OUTLET UNTIL ALL SYSTEM CONNECTIONS HAVE BEEN MADE AND VERIFIED.

**NOTE:** IF YOU NEED TO USE AN EXTENSION CORD, USE ONLY A HEAVY-DUTY (14-GAUGE OR LARGER) EXTENSION CORD TO AVOID STARVING THE SUBWOOFER OF ALL THE CURRENT NECESSARY FOR FULL-POWER OPERATION.

**Audio Connections**
Your Sonance Cabinet Subwoofer has flexible connections that let you use it in a wide variety of audio system configurations. You can connect the subwoofer’s Line Inputs to a surround processor or receiver’s line-level dedicated subwoofer output or a stereo preamp/integrated amplifier’s left and right main outputs. The subwoofer’s Speaker Inputs can be connected to the speaker outputs of a receiver or integrated amp that does not have left and right line-level outputs or a dedicated subwoofer output.

The subwoofer has a pair of Line Outputs that feed the signal to a main speaker power amplifier when the subwoofer is being fed by a stereo preamp’s main outputs. The subwoofer’s Speaker Outputs feed a pair of main speakers when the subwoofer is being fed by a receiver or power amp’s speaker outputs. The subwoofer’s Line Outputs and Speaker Outputs are both high-pass filtered at 100Hz, 6dB/octave. This high-pass filter is not defeatable.

To minimize noise interference on line-level cable runs longer than 20 feet we recommend converting the audio signal to balanced configuration with the Sonance LS2 Balanced Line Sender at the source component, and back to unbalanced configuration with the Sonance LR2 Balanced Line Receiver at the subwoofer.

When using the subwoofer’s Speaker Inputs and Speaker Outputs we recommend the following minimum speaker wire sizes:

- 14 gauge for a total wire length up to 30 feet
- 12 gauge for a total wire length from 30 feet to 75 feet
- 10 gauge for a total wire length longer than 75 feet

To determine the total wire length, add the lengths of wire between the amplifier and subwoofer and between the subwoofer and the main speakers.
Connection Examples
Follow the connection example that best describes your audio system. The examples are listed in descending order of preference, with the most ideal method presented first. If you can connect the subwoofer to your system using more than one of the following methods, use the one that is applicable.

IMPORTANT: DO NOT CONNECT THE SUBWOOFER’S LINE INPUTS AND SPEAKER INPUTS AT THE SAME TIME UNDER ANY CONDITIONS.

1. Surround sound processor, surround sound receiver, or stereo preamp with a dedicated Subwoofer Output (see Figure 7):

   Connect the processor’s dedicated Subwoofer Output to one of the subwoofer’s LINE INPUT jacks (you can use either jack). If you are installing two subwoofers in the system, use a ‘Y’ connector to connect both subwoofers to the processor’s Subwoofer Output.

2. Stereo preamp/power amp combination or an integrated amplifier with Pre Out and Main In jacks (see Figure 8):

   Connect the preamp/integrated amplifier’s left and right Main Outputs to the both of the subwoofer’s LINE INPUT jacks. Use another set of cables to connect the subwoofer’s Line Output jacks to the power amplifier/integrated amplifier’s left and right Main Inputs.

   If you are installing two subwoofers, connect the preamp/integrated amplifier’s left Main Output to the left LINE INPUT jack of the first subwoofer, and connect that subwoofer’s left LINE OUTPUT jack to the power amp/integrated amplifier’s left Main Input. Connect the preamp/integrated amplifier’s right Main Output to the right LINE INPUT jack of the second subwoofer and connect that subwoofer’s right LINE OUTPUT jack to the power amplifier/integrated amplifier’s right Main Input.
3. Integrated amplifier with left and right line-level outputs but no Main In or Amp In jacks (see Figure 9):

Use a stereo audio cable to connect the integrated amplifier’s left and right Line Outputs to the subwoofer’s left and right LINE INPUT jacks. If you are installing two subwoofers in the system, connect the integrated amp’s left Line Output to the first subwoofer’s left LINE INPUT jack and connect the integrated amp’s right Line Output to the second subwoofer’s right LINE INPUT jack.

4. Receiver or integrated amplifier with no line-level outputs (see Figure 10):

Use speaker wire to connect the receiver/ integrated amplifier’s left and right speaker outputs to the subwoofer’s left and right SPEAKER INPUTS. Use additional lengths of speaker wire to connect the subwoofer’s left and right SPEAKER OUTPUTS to the left and right main speakers.

If you are installing two subwoofers in the system, use a length of speaker wire to connect the receiver/ integrated amplifier’s left Speaker Output to the left Speaker INPUT of one subwoofer, and use another length of speaker wire to connect that subwoofer’s left Speaker Output to the left main speaker. Use another length of speaker wire to connect the receiver/integrated amplifier’s right Speaker Output to the right Speaker INPUT of the other subwoofer and another length of speaker wire to connect that subwoofer’s right Speaker Output to the right main speaker.
Subwoofer Adjustments (see Figure 11)

Bypass Switch

The BYPASS switch bypasses the subwoofer’s internal crossover network (XOVER control) and the subwoofer’s LEVEL control.

If you have connected the subwoofer to a surround processor’s dedicated Subwoofer Output (Connection Example #1, on page 6), set the BYPASS switch to the ON position. All of the system’s subwoofer crossover and volume functions will be handled by the surround processor’s internal subwoofer crossover. Refer to your surround processor’s documentation for information about adjusting your subwoofer’s volume.

If you have connected your subwoofer to your preamplifier’s Line Outputs or using the subwoofer’s SPEAKER INPUTS, set the BYPASS switch to the OFF position. The subwoofer’s XOVER and LEVEL controls will function (see below).

Xover (Crossover) Control

The XOVER control adjusts the subwoofer’s internal crossover between 50Hz and 250Hz. The crossover’s slope is 18dB/octave. The higher you set the XOVER control, the higher in frequency the subwoofer will operate.

Use the XOVER control to achieve a smooth transition of bass frequencies between the subwoofer and your main speakers. Generally, the XOVER control should be set at a lower frequency if your main speakers have larger woofers, and at a higher frequency if your main speakers have smaller woofers.

When setting the XOVER control by ear, listen for the smoothness of the bass. If the bass seems too strong at certain frequencies (especially if your main speakers have larger woofers), try a lower XOVER control setting. If the bass seems too weak at certain frequencies (especially if your main speakers have smaller woofers), try a higher XOVER control setting.

Ideally, the XOVER control should be set to the frequency where your main speakers’ low-frequency response roll-off is ~3dB. However, this is usually impossible to determine without sophisticated test equipment since each listening room has a different influence on your main speakers’ bass performance.

NOTE: THE XOVER CONTROL DOES NOT FUNCTION WHEN THE BYPASS SWITCH IS IN THE ON POSITION.

Phase Switch

When the subwoofer’s PHASE switch is in the 0 position, a positive input voltage will cause the woofer cone to move out (towards the room). When the PHASE switch is in the 180 position, a positive input voltage will cause the woofer cone to move in (away from the room).

There is no absolute correct setting for the PHASE switch. Depending on the location of the subwoofer relative to your main speakers and seating location, one of the settings will produce a better match with the main speakers, improving bass impact, and in some cases, improving overall bass level as well.

To determine the correct setting of the PHASE switch, listen to music with significant impactful bass content with the switch in each position (it may be helpful to sit in the normal listening position while someone else changes the PHASE switch between 0 and 180). Leave the switch in the position that produces audibly louder bass with more impact.

NOTE: THE PHASE SWITCH WILL FUNCTION NO MATTER WHAT POSITION THE BYPASS SWITCH IS SET IN.

Level Control

The LEVEL control sets the subwoofer’s volume. When setting the subwoofer’s LEVEL control by ear, try to find a volume setting where the bass sounds balanced on both music and films. Listen to several different music recordings and film soundtracks that contain strong bass passages and try to find a setting for the LEVEL control that doesn’t over-emphasize the bass or make it sound weak.

The most accurate way to set the LEVEL control is with calibrated test noise or test tones and a sound-pressure level (SPL) meter or real-time analyzer. There are several CDs and DVDs that contain subwoofer test signals. If you use an SPL meter, set the subwoofer’s LEVEL control so that it plays at the same volume as the system’s other speakers.

NOTE: THE LEVEL CONTROL DOES NOT FUNCTION WHEN THE BYPASS SWITCH IS IN THE ON POSITION.
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Auto-On
The subwoofer is in the STANDBY mode whenever its power cord is plugged-into a live AC outlet. When the subwoofer detects an audio signal at either the LINE or SPEAKER INPUT it will automatically turn ON (the rear-panel On/Standby Indicator will illuminate Green). The subwoofer will continue to remain ON for approximately 30 minutes after no signal is detected at either input, then it will return to STANDBY (the rear-panel On/Standby Indicator will illuminate Red).

Grille Pull Strap
Your subwoofer’s flush-mount grille has a pull strap that makes it easy to remove the grille to perform adjustments. Once your subwoofer has been installed and you have finalized all of the adjustments, you can tuck the grille pull strap behind the grille before putting the grille back on the subwoofer for a neater appearance. You can still remove the grille by using a dull knife or similar tool to gently pry the grille away from the subwoofer.

Specifications

**Sub 12-250**
- **Woofers:** 12" (305mm) Anodized aluminum cone with a rubber surround
- **Frequency Response:** 22Hz – 250Hz ±3dB
- **Amplifier Power:** 250 Watts
- **Crossover Frequency:** 50Hz ~ 250Hz (adjustable), 18dB/octave
- **Inputs:** Line-level and speaker-level
- **Outputs:** Line-level and speaker level (high-pass filtered at 100Hz, 6dB/octave)
- **Grille Material:** Black cloth
- **Cabinet Finish:** High-gloss black paint
- **Adjustments:** Front-accessible level, crossover, phase, and bypass
- **Dimensions (W x H x D):** 15" x 18" x 16" (381mm x 457mm x 406mm)
- **Shipping Weight:** 70 lbs. (31.5kg)

**Sub 10-150**
- **Woofers:** 10" (254mm) Anodized aluminum cone with a rubber surround
- **Frequency Response:** 28Hz – 250Hz ±3dB
- **Amplifier:** 150 Watts
- **Crossover Frequency:** 50Hz ~ 250Hz (adjustable), 18dB/octave
- **Inputs:** Line-level and speaker-level
- **Outputs:** Line-level and speaker level (high-pass filtered at 100Hz, 6dB/octave)
- **Grille Material:** Black cloth
- **Cabinet Finish:** High-gloss black paint
- **Adjustments:** Front-accessible level, crossover, phase, and bypass
- **Dimensions (W x H x D):** 14" x 16" x 14" (355mm x 406mm x 355mm)
- **Shipping Weight:** 60 lbs. (27kg)

**Sub 8-100**
- **Woofers:** 8" (203mm) Anodized aluminum cone with a rubber surround
- **Frequency Response:** 35Hz – 250Hz ±3dB
- **Amplifier:** 100 Watts
- **Crossover Frequency:** 50Hz ~ 250Hz (adjustable), 18dB/octave
- **Inputs:** Line-level and speaker-level
- **Outputs:** Line-level and speaker level (high-pass filtered at 100Hz, 6dB/octave)
- **Grille Material:** Black cloth
- **Cabinet Finish:** High-gloss black paint
- **Adjustments:** Front-accessible level, crossover, phase and bypass
- **Dimensions (W x H x D):** 12" x 14" x 12" (305mm x 355mm x 305mm)
- **Shipping Weight:** 40 lbs. (18kg)
LIMITED FIVE (5) YEAR 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 period stated below. Sonance will 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.

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: Sonance Cabinet Subwoofers

Warranty Period for this Product: Five (5) years from the date on the original sales receipt or invoice or other satisfactory proof of purchase.

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