



PN.33-1684 10.03

INTRODUCTION

Congratulations on choosing The Sub by Sonance®, the third-generation, freestanding subwoofer from the leader in architectural audio products. All Sonance speakers deliver outstanding fidelity and imaging for all audio source material - they let you hear movies the way the directors intended them to be heard on the big screen. In addition, THX certified subwoofers provide the highest level of bass performance when playing any music source. The extended low frequency response of The Sub completes any premium sound system.

By relieving the main amplifier and speakers of the need to reproduce low frequencies, there will be an instant improvement in their performance as well. The result will be dramatically enhanced frequency response and dynamic range from your sound system. Compact and sonically superior, The Sub by Sonance meets the highest standard for accurate reproduction of cinema soundtracks and is compatible with all Dolby Digital®, THX®, and Dolby Pro-Logic® systems.

The Sub is uniquely designed for maximum placement flexibility and can be positioned wherever optimum sound or décor considerations dictate, even inside a cabinet (with open front). All controls are located on the front, as are the four tuned ports with flared openings. No down- or rear-firing driver limits your placement options. Electromagnetic shielding prevents interference with video reproduction.

The Sub provides the powerful bass essential to complete a truly visceral movie experience. Employed singly or in pairs, these sub systems are capable of shaking the foundation of the most massive fortress of solitude.

The Sub's 12" driver features a high-density cone with rubber surround, rigid steel frame, long-excursion 3" diameter voice coil, and massive 60-oz magnet. The 60-lb. cabinet is free of degrading resonances thanks to its cross-braced construction of 3/4" and 1-1/2" (MDF) medium-density fiberboard and isolation of the amplifier in an integrated back box. Its high-efficiency 150-watt (RMS) amplifier attains undistorted output levels exceeding 105 db.

The Sub contains both an active crossover with a fixed 12 dB per octave slope at 250 Hz for THX® processors and a variable 12 dB per octave 45-150Hz crossover for user preference. Both provide a clean transition between The Sub and the main speakers. The Sub can be easily integrated with anything from full-range speakers to miniature satellites thanks to phase inversion and crossover bypass switches, wide-range crossover frequency (45-250 Hz) and level controls, as well as line level and speaker level inputs and outputs.

INSTALLATION INSTRUCTIONS

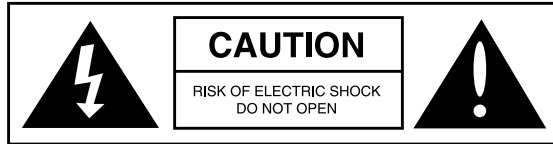
THE SUB™ (POWERED SUBWOOFER)



THX Select®, A New Reference Standard for Smaller Rooms

THX Select brings the clear advantage of THX performance to a new class of home theatre components, those designed for use in typical living room/family room environments. Like the original Home THX Program (now distinguished as THX Ultra), THX Select establishes specific performance criteria for creating the ultimate cinema experience in a home setting. However, where the original Home THX specifications must take into account viewing spaces of 3000 cu. ft. or more, THX Select criteria are specifically calibrated to define reference level performance in room volumes of about 2000 cu. ft. Compared to most other components in the same price range, THX Select components not only offer exclusive features (like THX Mode processing), but also provide higher levels of overall audio performance. Though THX Select loudspeakers are available in a variety of sizes and designs, all have been painstakingly tested and evaluated by THX engineers to certify that each will meet stringent performance standards when used in a typical living room setting. Whether you listen to movie soundtracks or new 5.1 channel surround music recordings, THX Select gives you full confidence that each certified component will perform as "the best in its class."

- THX Select front speakers (Left, Center and Right) have a virtually identical sonic signature. This ensures precise positioning of sonic images and consistent panning dynamics. Also, horizontal dispersion is wide and even to cover all listening positions with consistent, full sound.
- THX Select loudspeakers exhibit a simplified and refined directivity pattern, one ideally suited to smaller room volumes and shortened distances between listeners.
- THX Select surround loudspeakers employ a variety of designs, including dipole, bipole or monopole, to allow compact cabinets and placement flexibility. All designs maintain flat power response at the listening position while exhibiting ideal tonal balance and listening clarity.
- THX Select loudspeaker systems produce dynamic peak levels of 105db in a 2000 cu. ft. room. This standard allows for accurate reproduction of transient peaks in digital soundtracks.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE REFER SERVICING TO AUTHORIZED SERVICE PERSONNEL.



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.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



**WARNING
MOVE WITH CARE**

IMPORTANT SAFETY INSTRUCTIONS

When using The Sub, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

1. Read Instructions – All safety and operating instructions should be read before the product is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the product and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and use instructions should be followed.
5. Cleaning – Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. Attachments – Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. Water and Moisture – Do not use this product near water – for example, near a bathtub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
8. A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
9. Ventilation – Slots and opening in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these opening must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. Power Sources – This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products

intended to operate from battery power, or other sources, refer to the operating instructions.

11. Grounding – This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon them or against them, paying particular attentions to cords at plugs, convenience receptacles, and the point where they exit the product.
13. Protective Attachment Plug – The product is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.
14. Overloading – Do not overload wall outlets, extension cords, or integral convenience receptacle as this can result in a risk of fire or electric shock.
15. Object and Liquid Entry – Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on this product.
16. Servicing – Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Damage Requiring Service – Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a) When the power supply cord or plug is damaged,
 - b) If liquid has been spilled, or objects have fallen into the product
 - c) If the product has been exposed to rain or water,
 - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation,
 - e) If the product has been dropped or damaged in any way, and
 - f) When the product exhibits a distinct change in performance – this indicates a need for service.
18. Replacement Parts – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Safety Check – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
20. Heat – The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

GETTING THE MOST FROM THE SUB

When properly installed, The Sub will provide many years of entertainment pleasure. To realize the full potential of your new speaker, please read all instructions before starting the installation process.

FIGURE 1. Room placement for The Sub.

Correct placement of The Sub assures that you will enjoy the full bass extension and impact of which your system is capable. The key factor in maximizing the performance of your subwoofer is its proximity to room boundaries and relationship with main speakers. Room shape and furnishings largely dictate the optimum location of The Sub, since the listening room contributes materially to the performance of a low frequency speaker system. For this reason, experimentation may be necessary to optimize placement of The Sub. Some general guidelines include:

1. Although The Sub reproduces nondirectional low frequencies, it should be installed on or near the same plane as the LCR (left-center-right) speakers in order to form a coherent, integrated soundstage.

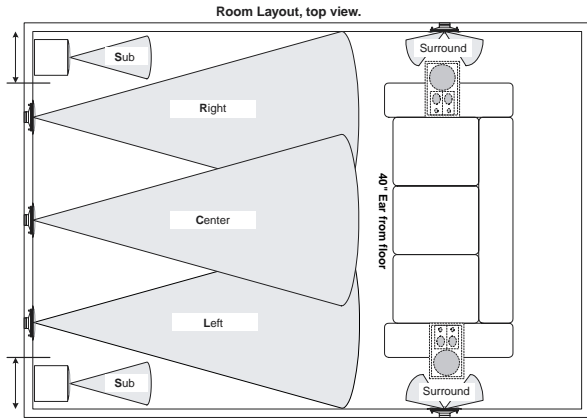


Figure 1

- For placement, start at 1/4 or 1/2 the distance in from the side wall in the same plane as the front speakers. Then fine tune the placement until the bass response is smooth at all listening positions. The Sub does not need room support for impressive bass output.
- When two subwoofers are used, the best sound usually results from placing them in the room as recommended in the illustration above (Figure 1). Because most rooms have resonant modes (frequencies at which the room shape emphasizes sound), such placement smooths bass response.

NOTE: If you experience buzzing or rattling during strong bass passages, it may be necessary to relocate or remove items in the listening room which become excited by the high energy levels reproduced by The Sub.

INSTALLATION

These sizes of quality speaker wire are recommended for The Sub if the speaker level inputs are employed:

- 14 gauge up to 30'
- 12 gauge from 30' to 75'
- 10 gauge longer than 75'

When using The Sub speaker level outputs to drive main speakers, consider the sum of both wire lengths (amplifier to The Sub and The Sub to speakers) when determining wire size. When The Sub active crossover is used to divide the preamplifier signal between the subwoofer and main speakers, interconnect cables of sufficient length are needed to reach from the preamp/processor to The Sub, and from The Sub to the amplifier driving the main speakers. Most preamplifiers are capable of driving signals—without loss of fidelity—through quality interconnect cables up to 20' long.

Maximize the fidelity of your system with line level connections using premium cables such as Sonance Bronze or Silver MediaLinQ® oxygen-free high-grade interconnects. MediaLinQ interconnects are available from your Sonance dealer in lengths up to 20'. To realize the full potential of The Sub with speaker level connections, use quality speaker wire such as oxygen-free Sonance Gold, Silver, or

Bronze MediaLinQ. An SPL (sound pressure level) meter is available from most Radio Shack® stores. This is required to calibrate an installation with a processor that includes an internal 75db pink noise test signal generator.

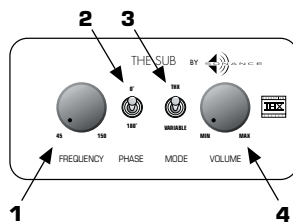
The Sub offers many options for connection to other components in your system. The methods discussed are listed in descending order of preference, with the most ideal method first. Note that more than one method may be valid for your equipment configuration, and placement of your The Sub and main speakers may dictate which you choose.

SUBWOOFER SETTINGS

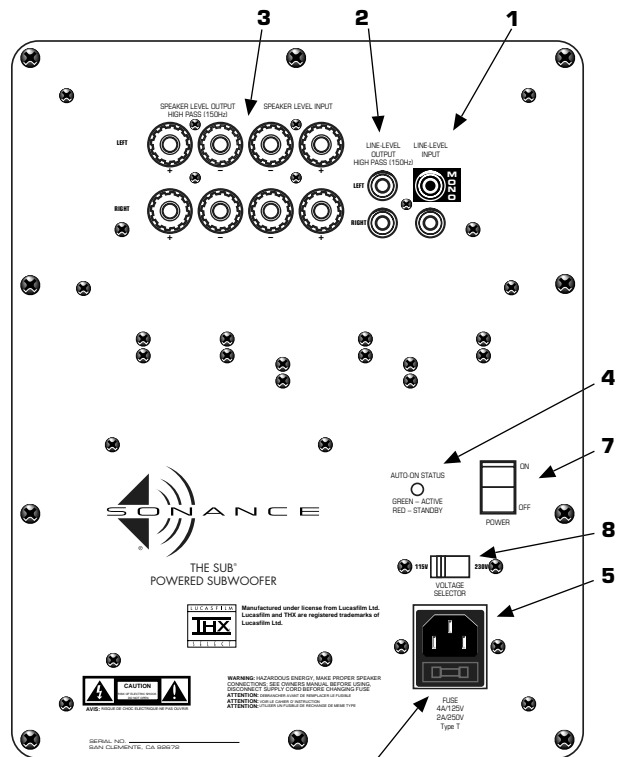
Volume, phase, crossover bypass, and crossover frequency controls on the front of The Sub maximize placement flexibility (Figure 2).

Some experimentation may be necessary to achieve the best possible integration of The Sub with the other speakers in the system. If your source components include a processor with provision for a subwoofer, refer to that component's manual for any special instructions for calibrating subwoofer performance. Start the calibration process with the following settings on The Sub:

Figure 2



- A**
- A. FRONT PANEL**
1. CROSSOVER FREQUENCY
 2. PHASE SWITCH
 3. MODE SWITCH
 4. VOLUME LEVEL CONTROL



- B**
- B. REAR PANEL**
1. RCA INPUT JACKS
 2. RCA OUTPUT JACKS
 3. SPEAKER TERMINALS
 4. AUTO ON STATUS LED
 5. POWER CORD RECEPTACLE
 6. FUSE
 7. MAIN POWER SWITCH
 8. 115/230V— POWER SELECTOR



- VOL: 12:00
- PHASE: up, 0 (normal)
- BYPASS: down, normal (crossover engaged)
- FREQUENCY: fully clockwise, highest crossover frequency (250 Hz)

BYPASS MODE

THX® and Dolby Digital processors provide a special facility to calibrate subwoofers. When installing The Sub with such a controller, follow the controller's instructions for calibrating subwoofer output. When used with THX components, the THX CALIBRATED setting assures proper output level of The Sub. The VARIABLE setting may be used to defeat this feature if you prefer a different bass level crossover frequency for music listening.

PHASE

When used in conjunction with some components, the bass response of The Sub will be greater with the phase switch in the down (180°) position.

Listen to music with significant bass content with the switch in each position to determine the correct setting for your system. Sitting in the normal listening position, listen while a friend changes the phase switch position. The audibly louder setting is correct. Alternately, use an SPL meter to determine which setting produces greater output in the 75-125 Hz range.

VOLUME

After the correct phase has been determined, you may arrive at the desired level setting for non-THX listening by measuring test tones starting above 1000 Hz down to 50 Hz. To achieve smooth transition between the subwoofers and other drivers, it may be useful to employ test tones available on compact disk and an SPL meter. Adjust the level control on the subwoofer amplifier until all tones measure the same SPL. Some THX® controllers include the THX Wow disk with test tones with the controller manual. Some controllers can produce a pink noise

signal for speaker calibration. Other test CDs are available from your Sonance dealer. Always take SPL readings from ear level at the listening position.

FREQUENCY

This adjustment is for use in non-THX applications and will only be functional when the mode switch is in the variable position. Use this control to create a smooth transition of bass frequencies from the fullrange speakers to the subwoofer. Generally, when used with speakers with larger woofers the frequency should be set at a lower setting and when used with speakers with smaller woofers it should be closer to the 150Hz setting. If you have access to test tones you can use an SPL meter to determine where the frequency adjustment should be set.

STANDBY

In normal operation, it is most convenient to set the POWER switch to ON. In this mode, the amplifier turns on when it receives an input signal, and turns off after eight to four minutes of no input. In the OFF position, the amplifier is powered on and off by the master power switch.

System Connections

Strip 1/2" of insulation from each speaker wire. Attach the positive conductor to the red binding post and the negative wire to the black binding post. The following are system set-up examples (A-F). Pick the example which best describes your system.

- A. THX, or AC-3 processor: Use the processor's line level subwoofer output. Use a single interconnect cable to the LEFT LOW-LEVEL RCA INPUT jack (Figure 3). When installing a pair of The Subs, use a Y connector at the processor to split the subwoofer signal to two interconnects, each driving the LEFT LOW LEVEL INPUT. Set mode and phase switches in the up position.
- B. Preamplifier and power amplifier, ProLogic processor, or

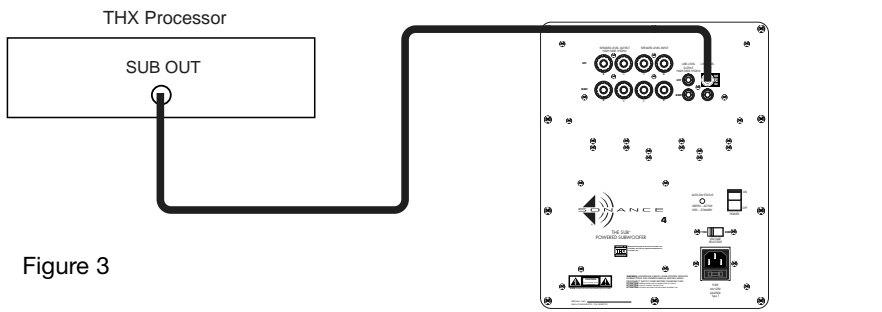


Figure 3

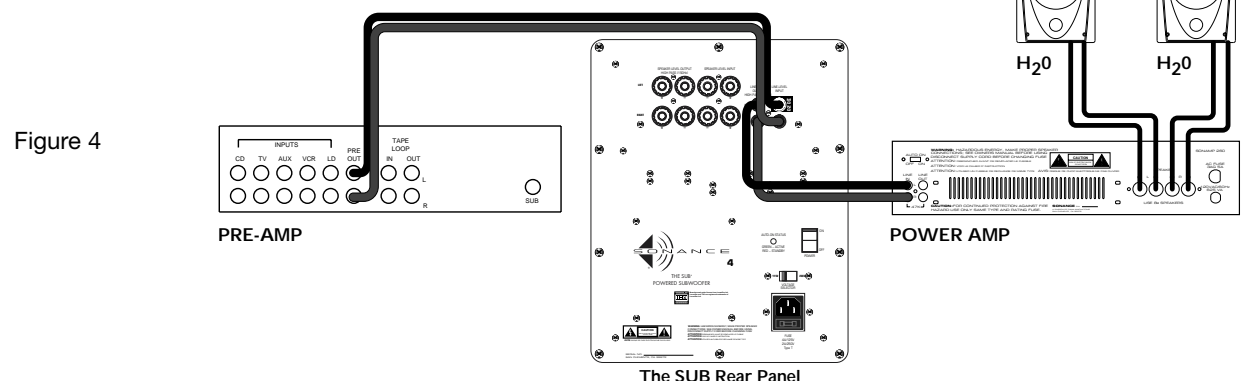


Figure 4

integrated amplifier with PRE OUT and AMP IN jacks:

Connect the preamp outputs to the LOW LEVEL INPUTs on The Sub using interconnect cables (Figure 4). Return the signal to the power amplifier inputs with a second pair of cables. When installing a pair of The Subs, connect the right and left channel outputs to the LEFT LOW LEVEL INPUTs of both subwoofers, and return the signal to the power amplifier from the LEFT LOW LEVEL OUT jacks. Set mode switch in variable position. Set frequency control midpoint for starters.

C. Preamplifier and power amplifier, or an integrated amplifier with low level outputs but no AMP IN jacks: : Using two Y connectors and interconnect cables, connect both preamp outputs to the LOW LEVEL INPUTs on The Sub. When installing a pair of The Subs, connect the right and left channel outputs to the LEFT LOW LEVEL INPUTs of both subwoofers. Set mode switch in variable position. Set frequency control midpoint for starters.

D. Receiver or integrated amplifier with no line level outputs: Connect the left and right speaker outputs to The Sub speaker level inputs using speaker wire. Use additional lengths of speaker wire to connect the speaker level outputs to the main speakers. When two Subs are employed in such a system, run the left and right speaker connections to and from the LEFT speaker level inputs. Set mode switch in variable position. Set frequency control midpoint for starters.

E. Receiver or integrated amplifier with no line level outputs: Connect the left and right speaker outputs to The Sub speaker level inputs and the main speakers in parallel, using speaker wire. Attach two lengths of speaker wire to the amplifier outputs: one to The Sub and one to the main speakers.

F. Receiver or integrated amplifier with no line level outputs and with two sets of speaker outputs: Connect the left and right speaker “B” outputs to The Sub speaker level inputs, using speaker wire. While the impedance characteristics of The Sub inputs are specifically designed to present an “amplifier friendly” load, consult your amplifier manual before adding The Sub to a system with very low impedance speakers, as amplifier damage may result.
Note: This only applies if A and B speaker outputs are parallel.

NOTES: Polarity of speaker wires is critical. All positive leads (+) must be attached to red connectors throughout the system. Positive leads may be identified by the color of the conductor, a ridge on the insulation, writing on the insulation, or some other means.

Plug the power cord into an AC outlet of the voltage indicated on the amplifier. Do not use a switched outlet on another component. The Sub amplifier features Auto-On circuitry. After four minutes of no input signal, the amplifier turns itself off. It automatically powers on when an input signal is detected.

CARE AND MAINTENANCE

Retain the safety and operating instructions for future reference.

1. Follow all warnings and instructions in this manual and marked on the product.
2. Any service or repair required must be performed by qualified factory authorized personnel.
3. Do not use liquid or aerosol cleaners on the speaker or amplifier.
4. To clean your speaker, wipe the grille with a soft cloth dampened with water. The baffle, driver, and amplifier may be dusted by gentle use of “canned air” commonly used to clean cameras and computer equipment.
5. Do not use this product in a high humidity environment or near water, for example a wet basement, wet bar, or swimming pool.
6. Do not expose The Sub to direct sunlight or high heat. Extended periods of exposure may cause deterioration of adhesives and driver materials, compromising the useful life of the speaker.
7. Sine wave test tones can damage The Sub and should only be used at low volume levels for short periods.
8. Never touch the driver (woofer) or push objects of any kind into this product through the grille.
9. Do not expose The Sub to construction dust, dirt, or airborne paint particles.

SPECIFICATIONS

Drivers:	1-12" Video-shielded dual voice coil woofer	
Power Output (RMS):	150 Watts	
Input Impedance:	10KΩ	
Crossover	12dB/octave	fixed: 250Hz variable: 45-150 Hz
Frequency Response:	35Hz-250 Hz +/-3 dB	
Power Consumption: (THX® calibrated mode)	500 Watts (625VA) at full output	
~ Fuse:	125V ~ T4A 250V ~ T2A	
~ Power Cord:	120V ~ (Included) 230V ~ (Not Included)	
Overall Dimensions: (WxHxD)	15" x 19" x 20" (381mm x 482mm x 508mm)	
Overall Dimensions: (With Feet)	15" x 19 1/2" x 20" (381mm x 495mm x 508mm)	
Weight	60 lb (27kg)	

TECHNICAL ASSISTANCE

If you any have questions about the operation or installation of The Sub, 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 or contact us at www.sonance.com

OBTAINING SERVICE

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

1. Prior to calling, note the product's model number, purchase date, and original dealer's name and address.
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: Do not return the unit to Sonance without first obtaining a Return Authorization Number.
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.
4. Contact United Parcel Service, Federal Express, or RPS to arrange prepaid (not collect) shipping. Do not use the U.S. Mail Service.
IMPORTANT: Freight collect shipments will be refused.
5. Write the Return Authorization Number on the outside of the shipping carton. For warranty work, please include a copy of the original bill of sale inside the package.
6. Ship the packaged unit to: Technical Assistance Department • Sonance • 212 Avenida Fabricante San Clemente, CA 92672-7531

LIMITED LIFETIME WARRANTY

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 *after September 1, 2003*. Purchases made before that date carry a limited 5 year warranty.

Defective products must be shipped, together with proof of purchase, prepaid insured to the Sonance Authorized Dealer from whom they were purchased, or to the Sonance factory at the address listed on this installation 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 Sonance Authorized Dealer, it is determined that the unit was defective in materials or workmanship at any time during this warranty period, Sonance or the Sonance Authorized 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 can not 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 a Sonance Authorized 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.

Declaration of Conformity



We, Sonance

212 Avenida Fabricante

San Clemente, CA 92672-7531 U.S.A.

declare in own responsibility, that the product described in this owner's manual is in compliance with technical standards:

EN 50082-1:1992

EN 55013:1993

EN 50020:1994

A handwritten signature in black ink that reads "Chip Brown". The signature is written in a cursive, flowing style.

Chip Brown
Sonance
San Clemente, CA U.S.A.

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