

THOR'S™ HAMMER

THOR'S HAMMER OWNER'S MANUAL



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THOR'S™ HAMMER

SECTION 1 - INTRODUCTION



Section 1.1 – Thor's Hammer Introduction

The Thor's Hammer subwoofer is the culmination of over thirty years of experience at Wilson Audio in building ultra-high output, low distortion woofer and subwoofer products. It was designed to further extend and enhance the bottom octave performance of music and theater systems without compromising speed, tonal accuracy, or phase coherency. Thor's Hammer will seamlessly and coherently integrate with any loudspeaker, whether you are augmenting a two-channel system or using the Thor's Hammer as the LFE channel in a home theater surround system.

The Thor's Hammer was designed to take advantage of today's multi-channel formats. The unique tune-ability of the Thor's Hammer is greatly enhanced when used with the Wilson Controller active crossover. The Controller's comprehensive control allows the Thor's Hammer to be optimized for both music and multi-channel applications, even within the same system. The Controller's adjustments allow critical setup, ensuring the best possible performance in a wide range of rooms and with a variety of speakers.

You haven't truly experienced home theater until you've felt the impact, power, and passion of a film score the way the director intended it, and no company will deliver this passion like Wilson Audio. That's why, in the past fifteen years, so many blockbuster hits have been mixed, composed, or recorded using Wilson Audio loudspeakers.

Design Considerations

The Thor's Hammer is unmatched in its ability to reproduce the deep bass region musical event. Like the legendary XS subwoofer before it, Thor's Hammer is designed to reproduce the deep bass region with no added equalization. In the region between 15 Hz and 80 Hz, it is truly state-of-the-art in terms of speed, ultra-high output, and extremely low levels of distortion. The benchmark in designing Thor's Hammer was sim-

ple: create a subwoofer that would be, in every measure, a worthy addition to a music system built around Wilson's flagship loudspeaker, the Alexandria X-2 Series 2. That meant primarily two things: the subwoofer had to perform with the same alacrity and dynamic range as the Alexandria. Secondly, it was critical that the Hammer not introduce out-of-band distortion that would rob the X-2 of its singular glory: the most revelatory and seductive midrange in the world.

It goes without saying that, having built a subwoofer that integrates seamlessly with Alexandria, Thor's Hammer, without question, enhance systems built around MAXXs, WATT/Puppies—or even, if you're into physical extremes, Duettes! Thor's Hammer performs equally well positioned upright or horizontally.

Applications

One of Wilson Audio's most important criteria in speaker development is that a speaker meets the accuracy and dynamic demands of studio monitoring, analytical hardware and software evaluation, and of course, critical music and theater soundtrack listening. The Thor's Hammer has been designed to deliver all of the speed, dynamics, and musical accuracy to satisfy even the most demanding music lovers.

The Thor's Hammer has been engineered to take full advantage of today's multi-channel surround formats, including the latest AC-3 (Dolby Digital) and DTS (Digital Theater Systems) formats.

It will provide years of satisfaction whether listening to two-channel audio, multi-channel audio, or to the latest movie sound track.

Conclusion

Finally, a subwoofer designed and manufactured with the same commitment to excellence that has characterized all products from Wilson Audio. The Thor's Hammer combines Olympian structural, design, and finish considerations with superior sonic quality. It is this approach that distinguishes Wilson Audio products. As a part of a truly

high-end multi-channel system, or in a music system, the Thor's Hammer offers unparalleled performance, quality of build, and longevity. Wilson Audio delivers a product that maintains the strictest structural tolerances, durability, and reliability. You will have consistent, repeatable performance, unaffected by the climatic conditions, anywhere in the world. The Thor's Hammer will provide an experience with film or music only obtainable through Wilson products.



FIGURE 1 – THOR'S HAMMER IN THEATER SYSTEM

THOR'S™ HAMMER

SECTION 2 – UNCRATING YOUR THOR'S HAMMER



Section 2.1 – Preparation

You will need the following items:

- Supplied hardware kit
- Known listening position
- Electric screwdriver
- Phillips head drive bit

Uncrating the Thor's Hammer

A minimum of two strong adults are required to set up the Thor's Hammer. The Thor's Hammer weighs over four hundred pounds, and care should be taken to prevent injury.

1. With the crate lid facing up, unscrew the wood screws securing the lid. Remove the lid. Remove the foam packing material that is positioned between the casters (on the bottom of the Thor's Hammer). The Thor's Hammer will not roll out of the crate with this packing material in place.
2. Carefully rotate the crate so that the Thor's Hammer is upright.
3. While one person holds the crate, another person should gently roll the Thor's Hammer out of the crate. Be careful not to scratch the sides of the painted enclosure.
4. Move the Thor's Hammer into the desired location. It is recommended that you leave the casters attached to the bottom of the Thor's Hammer during the positioning process.

Note: Be careful not to touch the driver elements when you are moving your Thor's Hammer!

THOR'S™ HAMMER

SECTION 3 - IN YOUR ROOM



Section 3.1 – In Your Room

Introduction

Thor's Hammer is unmatched in its ability to reproduce the deepest portion of the bass region in any musical event. However, room acoustics and boundary interactions affect the sound of a loudspeaker to such a large degree that poor setup can seriously degrade your enjoyment of Thor's Hammer.

Therefore, we offer the following section, which will present some guidelines on room acoustics and their interactions with subwoofers. While we will also outline some guidelines on the setup of the Thor's Hammer, we strongly suggest that you have your local Wilson Audio dealer perform the subwoofer's setup and crossover settings - as well as the final "voicing" of your primary loudspeakers. If you are using Thor's Hammer with Wilson loudspeakers, our dealers are specially trained in setting up Wilson loudspeakers and will ensure that you realize the full value of your purchase.

Section 3.2 – Room Acoustics and Subwoofers

Room Resonance

Resonance in listening rooms is generally caused by two sources:

- Structures within the listening room.
- The volume of air itself within the listening room.

Structural Resonance

Structural resonances are familiar to most people as buzzes and rattles, but this type of resonance usually only occurs at extremely high volume levels and is usually masked by the music. In many wood frame rooms the most common type of structural resonance problem is "booming" of walls and floors. You can test for these very easily

by tapping the wall with the palm of your hand or stomping on the floor. Most rooms exhibit mid-bass “boom” when struck. The loudspeaker playing in the room also excites these resonances. To give you an idea of what the perfect wall would sound like, imagine rapping your hand against the side of a mountain. Structural wall resonances generally occur in the low to mid-bass frequencies and add a false fullness to the tonal balance. They, too, are more prominent at louder levels, but their contribution to the sound of the speaker is more progressive. Rattling windows, picture frames, lamp shades, etc., can generally be silenced with small pieces of caulk or with blocks of felt. However, short of actually adding additional layers of sheet rock to flimsy walls, there is little that can be done to eliminate wall resonances.

Volume Resonance

The physical dimensions and volume of air in a room will also support standing wave modes and resonances at frequencies determined by the size of that room. Larger rooms will resonate at a lower frequency and have more complex (better) modal distributions than will smaller rooms. Volume resonances, wall panel resonances, and low frequency standing waves combine to form a low frequency coloration in the sound. At its worst, it is a grossly exaggerated fullness, which tends to obscure detail and distort the natural bass balance in the system. Careful tuning with the Wilson Controller can minimize the interaction with the room and the subwoofer.

Section 3.2 – Initial Placement of Thor’s Hammer

The Thor’s Hammer is shipped with casters installed on the bottom of the cabinet. Leave the casters on the Thor’s Hammer as you move it to its desired location. Thor’s Hammer can be installed either vertically or horizontally. If the intent is to install it vertically, leave the castors on as you proceed with the setup.

Note: If you are installing the Thor’s Hammer horizontally, remove the castors before tipping it onto its side. Also, make sure you orient Thor’s Hammer such that the con-

nectors are positioned on the side that best accommodates cable installation.

Because the Thor’s Hammer’s frequency range is limited to the sub-frequency bass range, its placement requirements are fundamentally different than for a full frequency speaker. Subwoofers reproduce a relatively small percentage of the audio spectrum, with a typical bandwidth of less than two octaves. The strategy for placing a subwoofer can be centered around bass optimization; the room’s effect on the midrange and treble can be largely disregarded. When used with the Wilson Audio Controller, placement flexibility of Thor’s Hammer is further enhanced.

The ideal position of the Thor’s Hammer subwoofer is somewhat dependent on its primary use.

Section 3.3 – Thor’s Hammer in a Music Systems

For the best musical results, it is recommended that the Thor’s Hammer be used in conjunction with the Wilson Controller in music systems.

The Thor’s Hammer subwoofer was designed to enhance the musical performance of all Wilson Audio loudspeakers. Wilson Audio loudspeakers are designed to be audibly propagation delay correct and time coherent. The Wilson Controller was engineered to maximize the low frequency performance of music systems without compromising the phase and time accuracy of Wilson loudspeakers. The versatile Phase Control on the Wilson Controller allows the Thor’s Hammer to be optimized in the time do-



FIGURE 2 – WILSON CONTROLLER FRONT PANEL

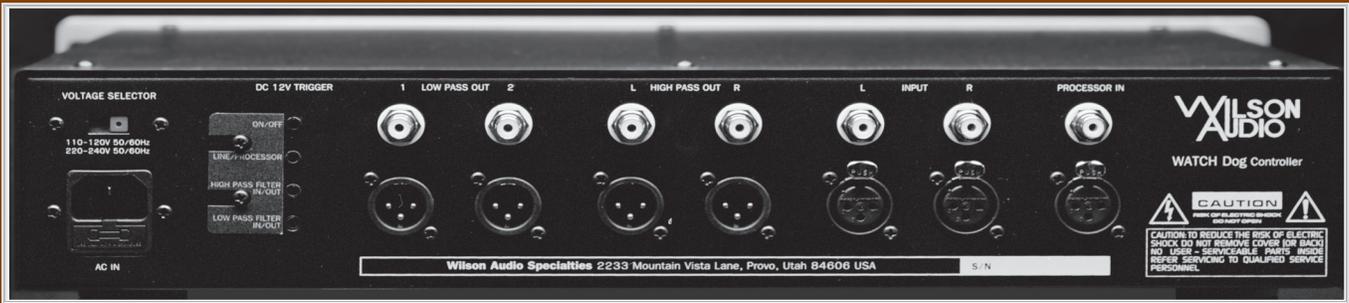


FIGURE 3 – WILSON CONTROLLER REAR PANEL

main within the listening environment. Correct phase setup of Thor’s Hammer results in greater frequency linearity, dynamic impact, sound-stage accuracy, and speed. (See Controller manual for details.)

Successful integration with the main loudspeakers is more easily achieved when the Thor’s Hammer is placed between and behind the two main speakers or in the left or right corners behind the main loudspeakers. It is possible to successfully integrate the Thor’s Hammer in other locations using the Controller’s phase control (See Controller manual).

Corner placement provides the greatest low frequency reinforcement (up to 6dB), but care is required in order to avoid upper bass colorations resulting in less coherent integration with the main speaker. Corner induced upper-bass colorations can be reduced by lowering the Low Pass Filter frequency crossover point. Further



FIGURE 4 – HIGH PASS FILTER CONTROLS

correction of room-induced anomalies in the in-room bass response can be minimized with the Wilson Controller’s unique Bass Equalization Control. (See Controller owner’s manual for detailed information on critical setup.)

The Thor’s Hammer can be used simultaneously as both the LFE channel subwoofer in the surround mode and as the subwoofer to the main speakers when listening to music. This is achieved by switching between the “Line” and “Processor” inputs on the Controller. Low and High Pass filter settings are also switchable, allowing the Thor’s Hammer to be optimized for both music and home theater – even within the same system. (See Controller owner’s manual for detailed information on critical setup.)

Bypassing The High Pass Filter

In systems where the main speakers are full range, the Thor’s Hammer can be configured more successfully in most rooms without the use of the High Pass Filter. There is a normal bass roll-off that occurs naturally in your listening room. This effect acts

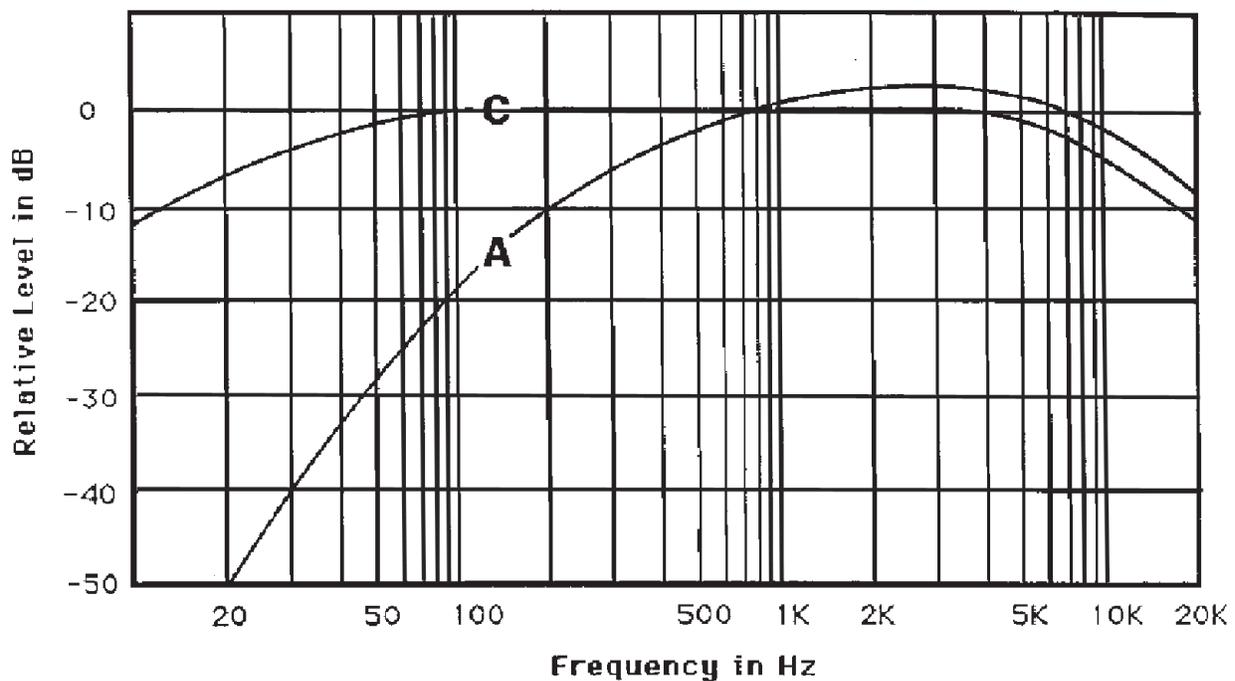


FIGURE 5 – WEIGHTED FILTER: A vs... C WEIGHTING

like a six dB per octave low pass filter. By carefully using the Controller's Low Pass filter controls, along with the Bass Equalization and Phase controls (discussed in detail in the Controller owner's manual), you can successfully integrate the main loudspeakers in your system with the Thor's Hammer without the use of the High Pass Filter (see the Controller owner's manual for connection details).

Utilizing The High Pass Filter

In some rooms or with certain speakers, there are times when a high pass filter is desirable. The Wilson Controller has an optional high quality high pass filter. The High Pass Filter control is used to filter bass from the main loudspeakers. This can be desirable in systems where the main loudspeakers have limited bass dynamics or if the main power amplifier is low power. Some rooms have extreme bass nonlinearities that can be better ameliorated when the main speaker is bass-limited. (See the Controller owner's manual for connection details).

Section 3.4 – The Thor's Hammer in a Home Theater

The Thor's Hammer can be connected in a variety of ways depending on your system needs. It can be used as the LFE (Low Frequency Effects) channel for a dedicated home theater system, or it can be used to extend the bass in a two-channel music system. In systems where it is desirable to use the Thor's Hammer with both surround and two-channel music modes, you can switch between the two modes via the Wilson Controller (see Controller owner's manual).

In home theaters, where the Thor's Hammer is used as the Low Frequency Effects (LFE) Channel, it may be located in a variety of positions, depending on architectural considerations. In general, the lower frequency range will be reinforced by room boundaries and corners. Since most of the information contained in the LFE channel is in the sub-frequency bass range, with little information in the mid and upper bass,

there are some advantages to placing the Thor's Hammer near the room boundaries or near a corner. Some care is needed to avoid introducing upper-bass colorations caused by corner placement. While surround processors provide the low frequency equalized signal for the LFE Channel, it has been our experience that in some systems it is desirable to use the Low Pass crossover (via the Wilson Controller) to additionally limit upper bass range. This is particularly important and useful when the Thor's Hammer is placed in the corner. Since all Wilson Audio Speakers are phase and time coherent, it is very important to time align the Thor's Hammer in the room using the Phase Control on the Controller (see Section 4 and the Controller owner's manual for more details).

Connection With a Surround Processor

You must use a dedicated amplifier to power your Thor's Hammer. The Thor's Hammer subwoofer can be used in conjunction with your surround processor without the need of an additional crossovers. In those systems where the Thor's Hammer is being used as the point one channel in a surround system, the subwoofer is connected through the sub output of the surround processor. Connect this output to the input of the Thor's Hammer's amplifier and, in turn, connect the amplifier output to the input of the Thor's Hammer.

In systems where it is desirable to use the subwoofer in both the surround mode and to augment the main speakers when listening to music, the following connection strategy employing the Wilson Controller is recommended (see also the Controller owner's manual for further details).

Section 3.5 – Setup Summary

When used in a home theater system as the LFE channel, the Thor's Hammer can be positioned in a variety of areas within the room successfully. Room boundaries and corners enhance low frequency coupling with the room, but care is required in attend-

ing to resulting upper bass colorations.

When used in a music system, the subwoofer integrates more consistently with the main speakers when placed behind the plane of the speakers or in a corner of the room behind the main speakers. If you are using the Thor's Hammer in conjunction with a Wilson Controller, careful setup using the Phase control and the Low and High Pass filters (see Controller owner's manual) is necessary to optimize low bass performance and to ensure proper integration with the main loudspeakers.

Note: If you are using a meter to measure bass output from your Thor's Hammer, please be aware of the following regarding the interpretation of measurements:

A. Use "slow" meter response ballistics to help average out the reading... and to keep from going crazy trying to read it!

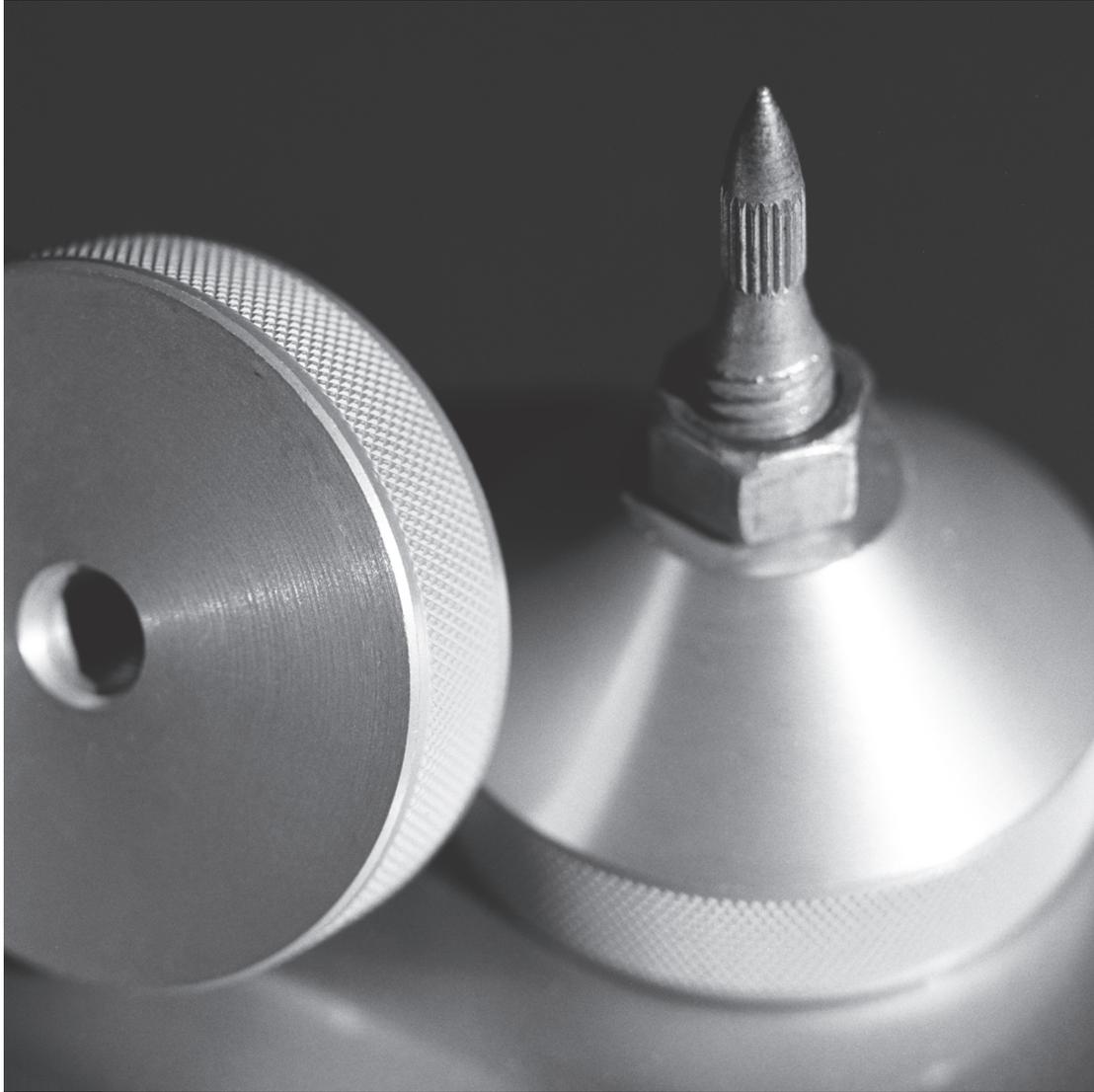
B. Ears and meters are not directly interchangeable. They neither sample nor process the sound in a completely analogous manner (see Figure 7).

Summary

In summary, for optimal tonal balance accuracy, resolution of low level detail, and soundstaging performance, the Thor's Hammer Subwoofer should be positioned as outlined in this section. If you are using a Wilson Controller, final setup of Thor's Hammer is contained in the Controller manual. By following the guidelines in this manual and the Controller manual, your new Thor's Hammer Subwoofer can provide you with a lifetime of pure music reproduction.

THOR'S™ HAMMER

SECTION 4 - FINISHING UP



Section 4.1 – Spiking Thor’s Hammer

The Thor’s Hammer comes with a set of heavy duty spikes that provide acoustical isolation as well as optimal height placement for your Thor’s Hammer. Brass disks that fit beneath the spikes are included for installations where spikes might damage the floor surface (such as wood floors).

Note: Thor’s Hammer weighs over four hundred pounds (181.43 Kg). Two strong individuals are required to safely install spikes.

After determining the Thor’s Hammer’s position, assemble the spikes as follows:



FIGURE 6 – INSTALL SPIKES INTO THE THREADED HOLES ON BOTTOM

Assembly – Vertical Placement

1. Remove the casters from the bottom of the Thor’s Hammer
2. Carefully tilting the Thor back, exposing the two front spikes holes beneath, insert threaded bolts in the bolt holes in the front of the subwoofer until they are flush with the inner surface visible through the acoustic port. Make sure the Allen key end is facing downward.
3. Screw the acoustical diode onto the bolt until it fits snugly against the

bottom of the Thor's Hammer. Do not overtighten.

4. Screw the spike (with nut) all the way in until it just touches the bolt. Do not tighten the nut at this time.
5. Repeat steps 1 through 4 with the other spikes.
6. Using a bubble level, adjust the spikes so that the Thor's Hammer is level and so that all of the spikes are making equal contact with the hard surface beneath.

The spikes, installed properly, decouple the Thor's Hammer from the floor, reducing resonances within the room. They also provide a stable platform for the Thor's Hammer to launch bass energy into the room. The result is cleaner, faster, more dynamic bass, with improved extension and linearity.

Plinth and Spike Installation - Horizontal Placement

Note: Thor's Hammer is extremely heavy. Two or more strong individuals are required to safely lay Thor's Hammer on its side.

A separate accessory plinth is supplied in the event Thor's Hammer is placed on

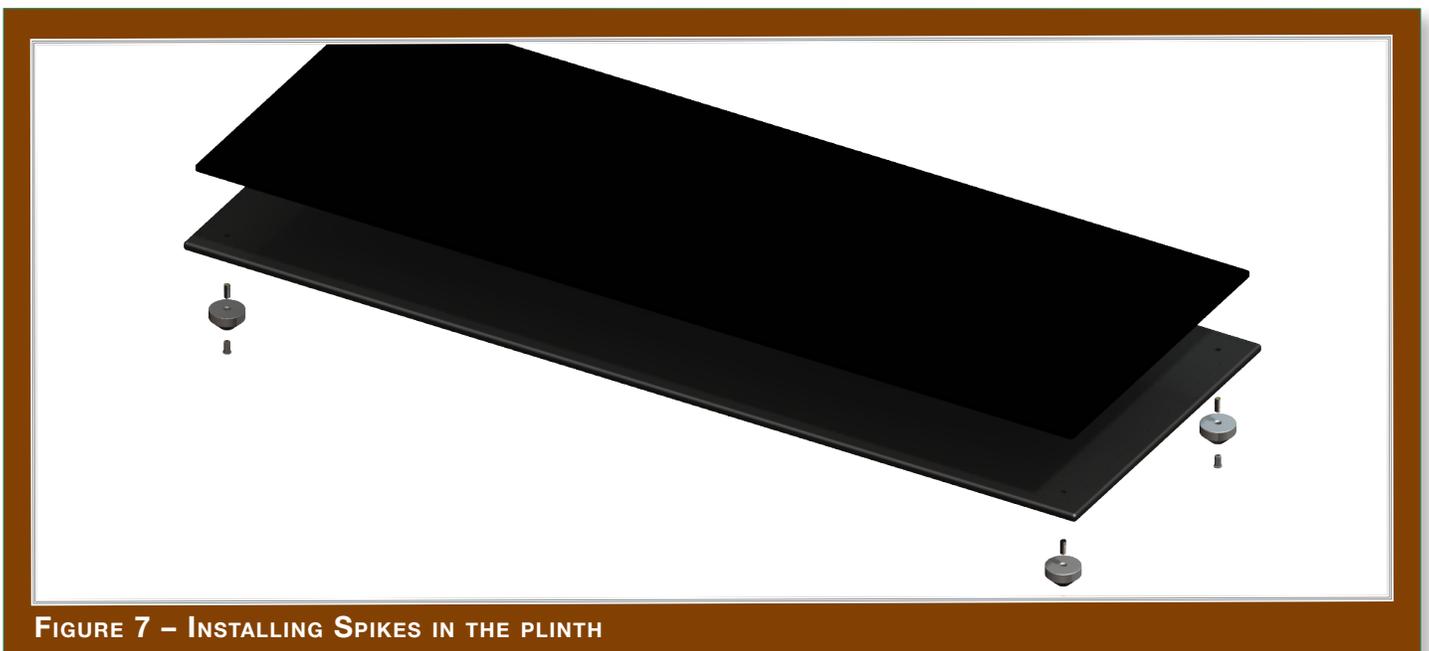


FIGURE 7 – INSTALLING SPIKES IN THE PLINTH

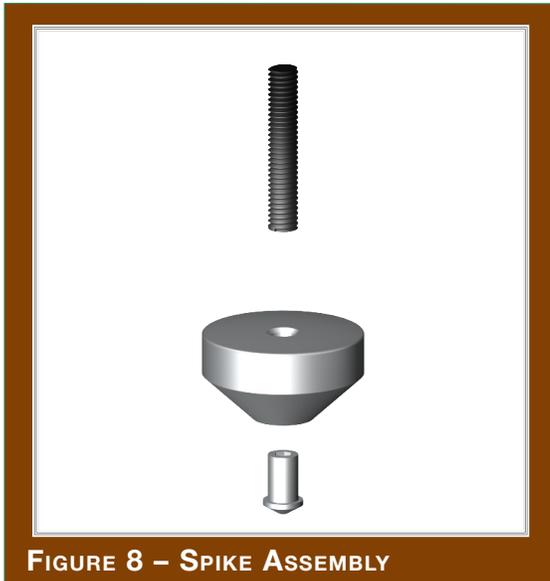


FIGURE 8 – SPIKE ASSEMBLY

its side. This plinth features a special padded surface on its upper that provides a degree of protection for Thor’s Hammer’s painted surface. Determine the final position of Thor’s Hammer. Make sure to position the Hammer such that the binding posts are oriented to the side most convenient to connection. Place the plinth in this location. Assemble spikes (see Figure 8 and follow the instructions in the previous section) by first screwing the spike into the diode. Install the spikes into thread-

ed holes in the bottom of the plinth.

Note: Remove the casters when tipping Thor’s Hammer on its side. Thor’s Hammer is very heavy—over four hundred pounds (182 Kg.)—and can bend or break the caster shaft as the subwoofer rotates horizontally.

Tip the Hammer onto its side near adjacent to the plinth. Reinstall the casters on the top-side holes. Using the port holes and/or casters as hand grips, carefully tip the Thor’s Hammer up enough that you are able to rotate the subwoofer onto its plinth. The

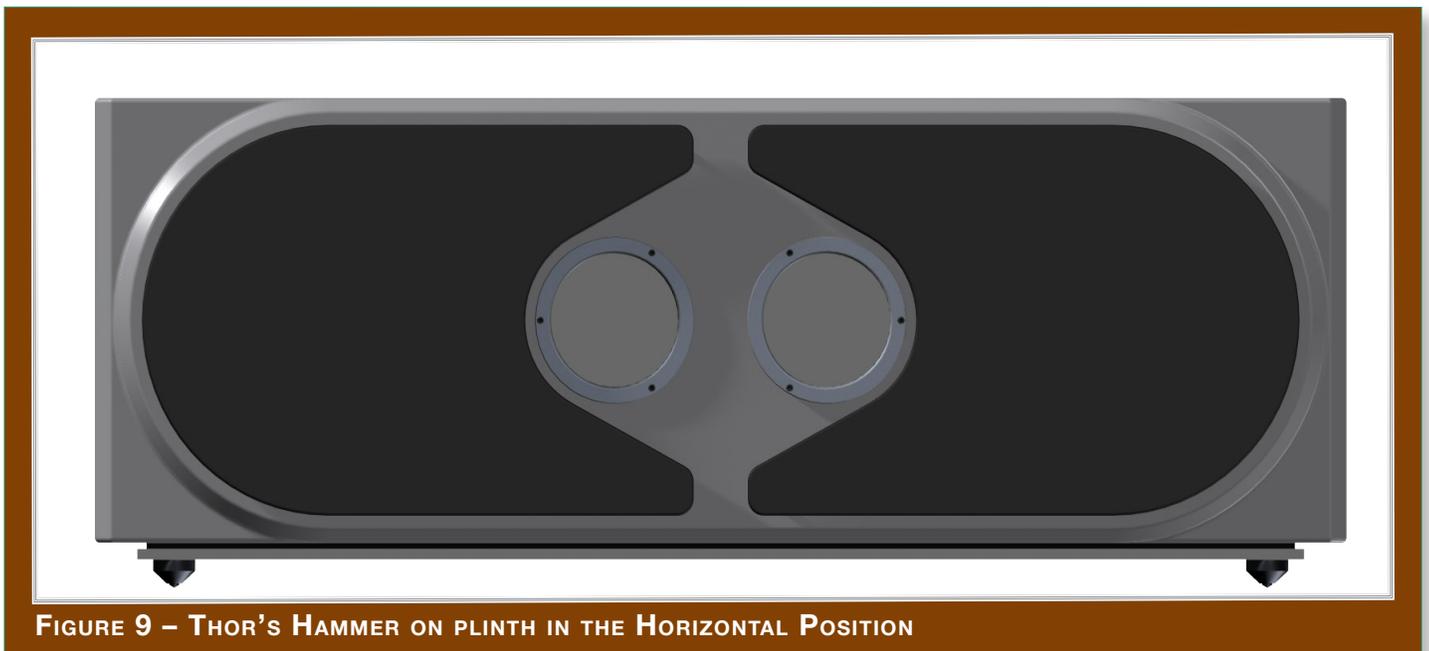


FIGURE 9 – THOR’S HAMMER ON PLINTH IN THE HORIZONTAL POSITION

second person should then rotate his side onto the plinth. Ensure the Thor's Hammer is centered on the plinth as pictured in Figure 9. Remove the casters.

Assembly and Care of the Grills

The Thor's Hammer's grills are attached using Wilson's unique austenitic stainless pin system. Each of the two grills contain four pins. Assemble the grill by screwing each pin into the four threaded holes in each grill. The grill frames are milled from solid "X" material. The threads are tapped directly into the "X" material. Avoid cross threading the grill pins.

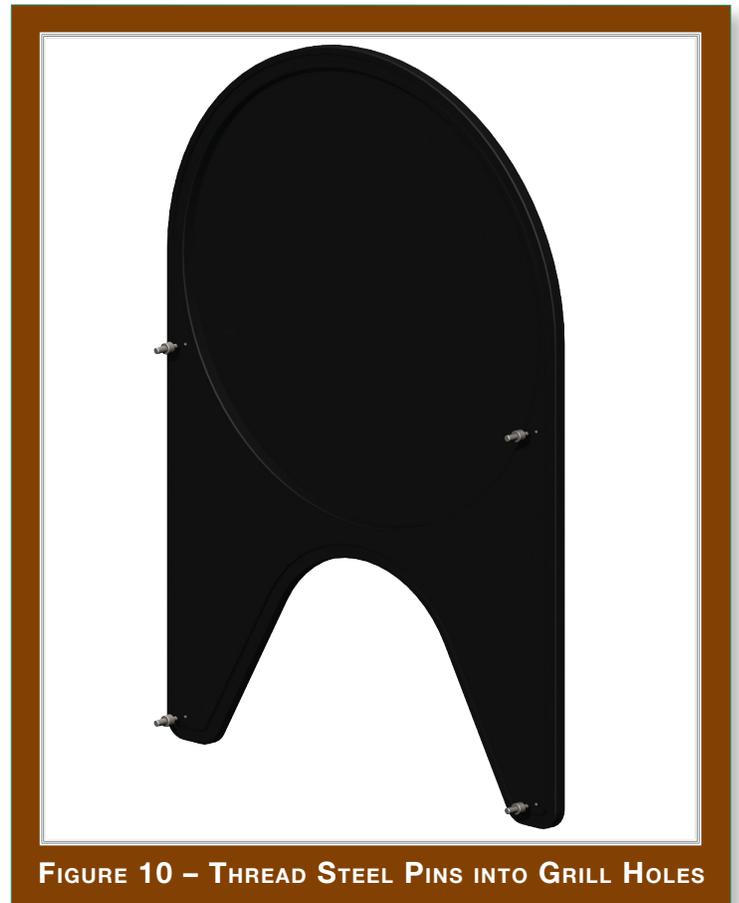


FIGURE 10 – THREAD STEEL PINS INTO GRILL HOLES

THOR'S™ HAMMER

SECTION 5 - CARE OF THE FINISH



Section 5.1 – Care of the Finish

The Thor's Hammer loudspeakers are hand painted with WilsonGloss™ paint and hand polished to a high luster. While the finish seems quite dry to the touch, final curing and complete hardening takes place over a period of several weeks.

Dusting the Thor's Hammer

It is important that the delicate paint finish of the Thor's Hammer be dusted carefully with the dust cloth, which has been provided. We recommend that the following procedure be observed when dusting the speakers:

- Blow off all loose dust.
- Using the special dust cloth as a brush, gently whisk off any remaining loose dust.
- Shake out the dust cloth.
- Dust the finish, using linear motions in one direction parallel to the floor. Avoid using circular or vertical motions.

Because the paint requires a period of several weeks to fully cure, we recommend that no cleaning fluids, such as glass cleaners, be used during this initial period of time. When the paint is fully cured, heavy fingerprints and other minor smudges may be removed with a glass cleaner. Always use the dust cloth. Stronger solvents are not recommended under any circumstances. Consult your dealer for further information if required. To maintain the high luster of the finish, periodic polishing may be desired. We recommend a nonabrasive carnauba-based wax and a soft cloth.

Care of the Grills

Periodically, you will want to clean the Thor's Hammer's grills. This is best done by using the round brush attachment on a vacuum cleaner hose. After removing the

grill from the loudspeaker, gently vacuum the front surface of the grill. Be careful not to apply too much pressure. Do not use a hard plastic attachment against the grill. The grill cloth is stretched tightly over the grill frame. Too much pressure or use of a hard plastic attachment could cause the grill material to tear, especially in the corners.

Often Wilson speaker owners desire to change the look of their listening room by changing the color of their speaker grills. In addition to basic black, Wilson Audio offers a variety of grill colors to match most WilsonGloss finishes. Contact your local dealer for grill cloth samples or to order replacement grills for your Thor's Hammer.

Break-in Period

All audio equipment will sound best after its components have been broken in for some period of use. Wilson Audio breaks in all woofers and mid-range drivers for approximately 12 hours. All drivers are then tested, calibrated, and matched for their



FIGURE 11 – REMOVE THE GRILLS TO CLEAN

acoustical properties. In your listening room, expect 25 to 50 percent of break-in to be complete after two hours of playing music at normal listening levels. Ninety percent of break-in is complete after 24 hours of playing. Playing a CD on repeat overnight can accomplish this task quickly. Wilson Audio recommends chamber music for this task.

Section 5.2 – Enclosure Technology

Materials

Wilson Audio has conducted many hours of research on the impact of materials on speaker enclosure performance. Through this effort, Wilson pioneered the use of non-resonant materials, first with the use of mineral-filled acrylic in the WATT and continuing with the further development of proprietary materials for X-1 Grand SLAMM, MAXX, and Alexandria. Even the best materials are not suited to all aspects of enclosure construction. Therefore, like all Wilson loudspeakers, the Thor's Hammer is constructed of several exotic materials chosen for their specific performance attributes relevant to different portions of the enclosure.

The Thor's Hammer is constructed using non-resonant, high-density, composites which are then cross-braced to further reduce cabinet resonance. Each of these composites meets and exceeds the highest of ANSI test standards for its use, while offering very tight tolerances, high hardness, uniform density, and dimensional stability.

Adhesive

Wilson Audio has conducted exhaustive research into the best adhesives to permanently bond our speaker enclosures. This is often an overlooked element crucial to the proper performance of a loudspeaker. Correct modulus of elasticity, coefficient of thermal expansion, and natural frequency response are just a few of the important elements of adhesives.

A highly cross-linked, thermoset adhesive is used for the construction of the en-

closure. It was also chosen for its excellent bond strength, solvent resistance, hardness, and optimum vibrational characteristics.

Section 5.3 – Depth of Design

Thor's Hammer's compellingly authentic performance and lasting value are achieved through careful implementation of cutting edge design and engineering and then executed using the highest performance materials. Wilson Audio's use of proprietary enclosure materials and adhesives are employed to achieve truly exceptional speaker cabinet performance. The use of these materials in the Thor's Hammer results in an enclosure that is inherently inert and non-resonant. All of these structural aspects are combined, allowing Wilson Audio to deliver a product that maintains the strictest structural tolerances, durability, and reliability. This also means that the Thor's Hammers will have consistent, repeatable performance, unaffected by the climatic conditions, anywhere in the world. Finally, like all Wilson products, the Thor's Hammer is hand-crafted with meticulous attention to detail, with an unwavering commitment to excellence. Thus, the Thor's Hammer will impart to her owner beauty and pleasure for many years to come.

THOR'S™ HAMMER

SECTION 6 - SPECIFICATIONS



Passive Thor's Hammer Specifications

Enclosure Type: Front Ported

Woofers: 2 each 15 inch, dual spider

Nominal Impedance: 4 ohms

Sensitivity: 93 dB @ 1 watt (2.83v at one meter)

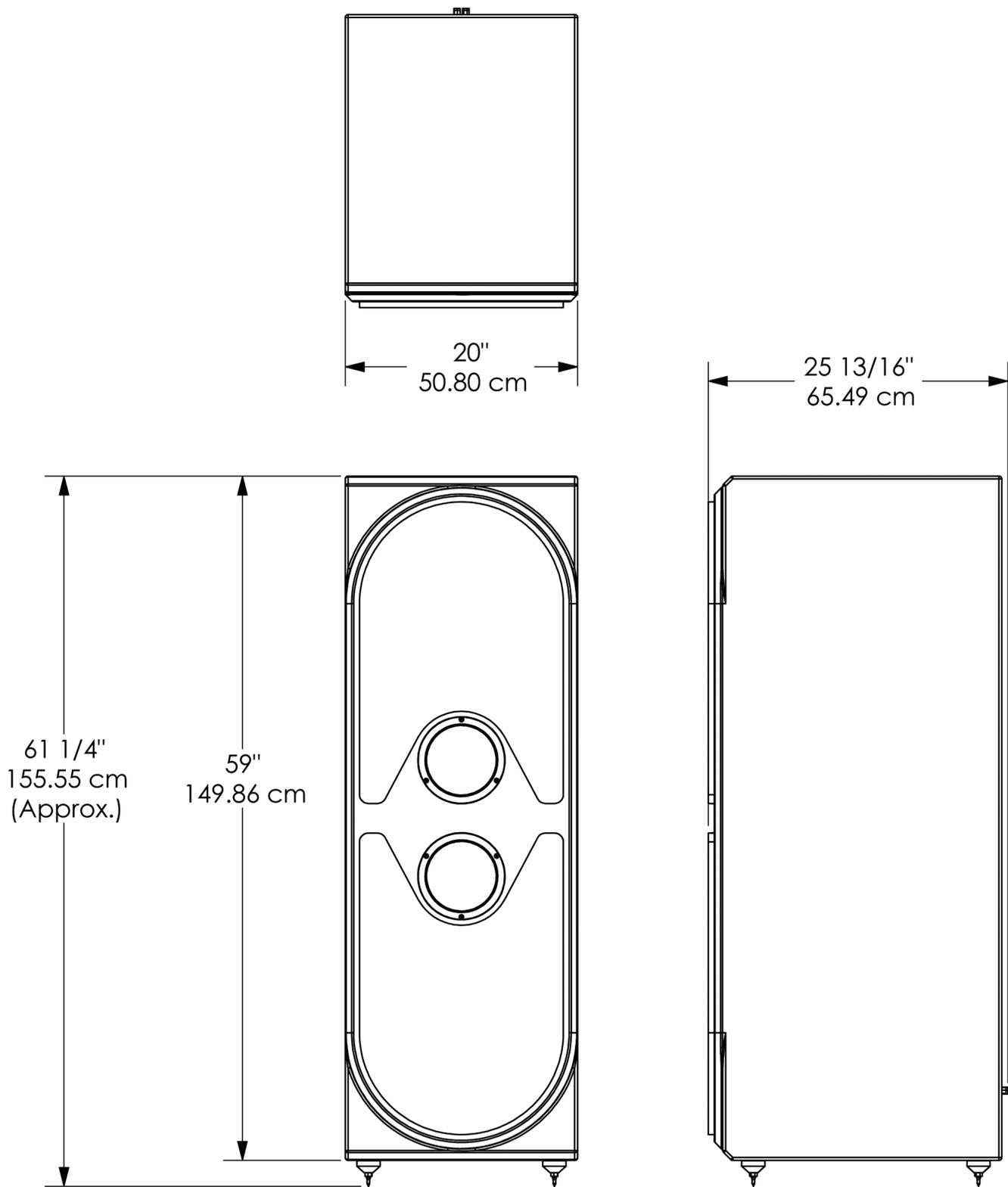
Overall Dimensions: Height: 59" (149.86 cm) with spike
Depth: 25 1/2" (65.25 cm)

Weight: Width: 20" (50.80 cm)

412 lbs (186.88 Kg)

545 lbs (245.21 KG) in shipping crates

Thor's Hammer Dimensions



THOR'S™ HAMMER

SECTION 7 - WARRANTY INFORMATION



Section 7.1 – Warranty Information

Limited Warranty

Subject to the conditions set forth herein, Wilson Audio warrants its electronics to be free of manufacturing defects in material and workmanship for the Warranty Period. The Warranty Period is a period of 90 days from the date of purchase by the original purchaser, or if both of the following two requirements are met, the Warranty Period is a period of five (5) years from the date of purchase by the original purchaser:

Requirement No. 1. No later than 30 days after product delivery to the customer, the customer must have returned the Warranty Registration Form to Wilson Audio;

Requirement No. 2. The product must have been professionally installed by the Wilson Audio dealer that sold the product to the customer.

FAILURE TO COMPLY WITH EITHER REQUIREMENT NO. 1 OR REQUIREMENT NO. 2 WILL RESULT IN THE WARRANTY PERIOD BEING LIMITED TO A PERIOD OF 90 DAYS ONLY.

Conditions

This Limited Warranty is also subject to the following conditions and limitations. The Limited Warranty is void and inapplicable if the product has been used or handled other than in accordance with the instructions in the owner's manual, or has been abused or misused, damaged by accident or neglect or in being transported, or if the product has been tampered with or service or repair of the product has been attempted or performed by anyone other than Wilson Audio, an authorized Wilson Audio Dealer Technician or a service or repair Center authorized by Wilson Audio to service or repair the product. Contact Wilson Audio at (801) 377-2233 for information on location of Wilson Audio Dealers and authorized service and repair Centers. Most repairs can

be made in the field. In instances where return to Wilson Audio's factory is required, the dealer or customer must first obtain a return authorization. Purchaser must pay for shipping to Wilson Audio, and Wilson Audio will pay for shipping of its choice to return the product to purchaser. **A RETURNED PRODUCT MUST BE ACCOMPANIED BY A WRITTEN DESCRIPTION OF THE DEFECT.** Wilson Audio reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.

Remedy

In the event that the product fails to meet the above Limited Warranty and the conditions set forth herein have been met, the purchaser's sole remedy under this Limited Warranty shall be to: (1) contact an authorized Wilson Audio Dealer within the Warranty Period for service or repair of the product without charge for parts or labor, which service or repair, at the Dealer's option, shall take place either at the location where the product is installed or at the Dealer's place of business; or (2) if purchaser has timely sought service or repair and the product cannot be serviced or repaired by the Dealer, then purchaser may obtain a return authorization from Wilson Audio and at purchaser's expense return the product to Wilson Audio where the defect will be rectified without charge for parts or labor.

Warranty Limited to Original Purchaser

This Limited Warranty is for the sole benefit of the original purchaser of the covered product and shall not be transferred to a subsequent purchaser of the product, unless the product is purchased by the subsequent purchaser from an authorized Wilson Audio Dealer who has certified the product in accordance with Wilson Audio standards and requirements and the certification has been accepted by Wilson Audio, in which event the Limited Warranty for the product so purchased and certified shall expire at

the end of the original Warranty Period applicable to the product.

Demonstration Equipment

Equipment, while used by an authorized dealer for demonstration purposes, is warranted to be free of manufacturing defects in materials and workmanship for a period of five (5) years from the date of shipment to the dealer. Demo equipment needing warranty service may be repaired on-site or, if necessary, correctly packed and returned to Wilson Audio by the dealer at dealer's sole expense. Wilson Audio will pay return freight of its choice. A returned product must be accompanied by a written description of the defect. Dealer owned demonstration equipment sold at retail within two (2) years of date of shipment to the dealer is warranted to the first retail customer to be free of manufacturing defects in materials and workmanship for the same time periods as if the product had originally been bought for immediate resale to the retail customer. Wilson Audio products are warranted for a period of 90 days, unless extended to 5 years, as provided above, by return and filing of completed Warranty Registration at Wilson Audio within 30 days after product delivery to customer and the product was professionally installed by the Wilson Audio Dealer that sold the product to the customer.

Miscellaneous

ALL EXPRESS AND IMPLIED WARRANTIES NOT PROVIDED FOR HEREIN ARE HEREBY EXPRESSLY DISCLAIMED. ANY LEGALLY IMPOSED IMPLIED WARRANTIES RELATING TO THE PRODUCT SHALL BE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. THIS LIMITED WARRANTY DOES NOT EXTEND TO ANY INCIDENTAL OR CONSEQUENTIAL COSTS OR DAMAGES TO THE PURCHASER.

Some states do not allow limitations on how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

