ALIDA™

ALIDA OWNER'S MANUAL

WILSON AUDIO

This manual was produced by the Wilson Audio Engineering and the Sales and Marketing Departments. The information contained herein is subject to change without notice. Current Revision 3.0. If you are in need of a more recent manual, please contact your dealer.

Contents

Section 1—Introduction

Section 1.1—Alida Design Considerations

Special Applications projects have a long and illustrious history at Wilson Audio. In 1983, Dave Wilson needed a small location monitor for the series of audiophile-acclaimed classical music recordings he was doing at the time. Finding nothing suitable on the market, he went into his garage and built the original WATT®. Its truncated pyramid shape, constructed from mineral-filled methacrylic, broke the mold of then-current loudspeaker design and has been widely copied since for one reason: it worked extremely well. Mated to its dedicated woofer enclosure, the WATT/Puppy, now called Sasha W/P, continues to be Wilson Audio's longest running and best-selling loudspeaker.

Alida is the latest Special Applications product from Wilson Audio. It was designed to offer the timbrel neutrality, dynamic response, soundstage depth, and transparency of floor-standing Wilson loudspeakers, but to do so in the extremely adverse conditions of wall-mounted applications. The Alida is a perfect example of performance disproportionate to size.

Unlike most wall-mount speakers, Alida possesses all the salient attributes of Wilson loudspeakers: dynamic agility, tonal expression, and musical beauty. The Alida incorporates the same anti-jitter crossover technology that underlies the astonishingly grain-free transparency and musicality of full-size Wilson loudspeakers. With strong power handling capacity and low end frequency response reaching 40 Hz, this speaker will forever change the perception of just how good a wall-mounted speaker can sound.

Adjustable Mounting System:

The greatest challenge for any wall-mount loudspeaker is accounting for the deleterious interaction with the wall and ceiling, as well as degradation caused by the mount itself. This causes frequency nonlinearities—accentuating some frequencies and

effectively masking others. Alida minimizes wall/ceiling resonant interactions through thoroughly re-engineered mounting system. The Alida is mounted to its bracket via an new individually machined, aircraft-grade aluminum mechanism, reducing wall-born interactions and resonances.

Where the outgoing Wilson Surround Series 2 could be rotated up to 10 degrees, Alida's new mount provides up to 30 degrees of rotation. The Alida can be more fully optimized for both the time-domain and driver dispersion.

For those clients upgrading from the Surround Series 2 to the Alida, Wilson has made the task of swapping the two loudspeakers relatively straightforward by providing compatible mount locations on the X-material wall bracket. Simply remove the old bracket and replace it with the Alida bracket. The top three holes in the center will correspond to those same holes in the replacement bracket. For an additional fee, Wilson will paint the X-material bracket to match the wall or the Alida itself.

New Enclosure

Using state-of-the-art materials technology first developed for the Alexandria XLF and the Sasha W/P, Alida provides stunning results. By employing Wilson's state-of-the-art enclosure analysis, the heart of which is probing the minute panel resonances using laser vibrometry, the engineering team was able to reduce the resonant signature of the Alida enclosure to vanishing levels. A rear-wave diffuser, similar to the technology found in Wilson's larger speakers, helps reduce time-domain distortion inside the cabinet.

Convergent Synergy Tweeter

The new Wilson Convergent Synergy Tweeter first found a home in the Alexandria XLF. Wilson's tweeter rejects exotic materials in favor of a new silk dome design that better meets all of Wilson Audio's musical design goals—and, perhaps most importantly, provides a seamless match to Wilson's midrange driver.

The Convergent Synergy Tweeter now makes its debut in the Alida. This version of the Convergent Synergy Tweeter features a bespoke rear-wave chamber, designed specifically for the Alida platform. Additionally, Wilson will offer a custom version a modified titanium dome tweeter for those customers replacing the outgoing Surround, who still use front speakers with this tweeter.

New Grill-frame:

The contribution of the speaker grills is an often-overlooked component in high-end loudspeaker design. One solution employed by some designers is to omit the grill entirely, but this creates a cosmetic presentation that many homeowners understandably view as unfinished. Still other loudspeaker manufacturers treat the grill as an afterthought, and devote very little in the way of engineering time to the problems poorly designed grills and grill frames cause. Wilson grill frames are built entirely from its proprietary composite X-Material. X-Material has the advantage of being both extremely rigid and very well-damped; it quickly and efficiently converts unwanted vibrations into heat. Since each grill frame is individually milled, special attention can be given to its shape, the complexity of which in the Alida minimizes sporadic diffraction and reflections normally caused by the grill's frame.

Crossover

Careful attention was paid to Alida's crossover. The goal was to optimize the time domain and the overall tonal balance for wall placement. The Alida's tonal beauty, dynamic expression, and scaling belie its placement in a difficult environment and call to mind Wilson's larger reference products.

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Section 2—Uncrating your Alida

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Section 2.1—Uncrating the Alida

Note: To avoid damaging the Alexx's painted surface. Please remove any jewelry such as rings, watches, necklaces, and bracelets during this process.

Initial Check

The Alida and its mounting bracket are shipped in a wooden crate. Upon receiving the crates, please check their condition. If there is any damage, please report it to the shipping company immediately for insurance verification.

The following items are recommended for this procedure:

- Supplied hardware kit
- Tape measure
- Known listening position
- Electric screwdriver/drill
- Phillips head drive bit

Unpacking the Alida

Gently lift the Alida out of the crate. Remove the plastic outer bag by tilting the Alida over on one side and opening the bag at the base of the Alida. Slide the bag off the loudspeaker. Do not remove the protective film until you are ready to place the Alidas onto the mounting bracket.

Note: Do not cut the bags off of the Alidas. By using scissors or a knife, you could unintentionally mark the cabinet or damage a driving element. Keep the bags in case you need to repackage the Alidas. Likewise, save your shipping crates and all packing materials. They are specifically designed to prevent harm from coming to your Alidas.

Move the Alida into the desired location.

Note: Be careful not to touch the driving elements when you are moving your Alida.

Section 2.2—Crate Content Checklist

Now that you have unpacked your Alida, you can inventory all the additional items in the crate. With each pair of Alidas, you will receive the following:

Alida Crate

1. 1 - Owner's Manual
2. 1 - Warranty Registration
3. 1 - Template Guide
4. 2 - Mounting Brackets
5. 2 - Grills
6. 8 - 1/4 x 2 1/2″ Lag Bolt
7. 8 - 1/4 x 1 3/4″ Rawl Bolt
8. 8 - 5/16 x 3/4 Stainless Steel Flat Washer
9. 2 - Expanding spikes
10. 1 - 5/16 Socket
11. 1 - 7/16 Socket
12. 1 - 1/4″ Rachet
13. 1 - 3″ Masonry Bit
14. 1 - 3/16 x 3″ Drill Bit
15. 1 - 5/32 Allen Wrench
16. 1 - 1/8 Allen Wrench

17. 1 - Blue Polishing Cloth

18. 1 - 1/4″ Hex Driver

19. 1 - 1/2 x 3/8″ Combo Wrench

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Section 3—In Your Room

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Section 3.1—The Wilson Audio Setup Procedure

You are surely excited about setting up your Alidas and doing some listening, but before you begin, we would like to discuss some of the important room acoustical information that will help you set up your loudspeakers properly.

Listening Room Setup (Voicing)

Wilson Audio loudspeakers are unmatched in their ability to reproduce the 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 even the finest loudspeaker.

Therefore, we offer the following section, which will present some guidelines on room acoustics and their interactions with loudspeakers. While we will also outline some detailed suggestions on the setup of the Alidas, we strongly suggest that you have your local Wilson Audio dealer perform the final speaker "voicing" with you. Wilson dealers are specially trained in setting up Wilson loudspeakers and will ensure that you realize the full value of your purchase. What follows is an outline of the Wilson Audio Setup Procedure (WASP). When carefully followed, the process has been shown to be the most effective method for setting up Wilson loudspeakers. WASP works equally well for left and right channels, which are set up first, and for additional speakers such a Center channel, Alidas, or the WATCH Dog Passive subwoofer.

Zone of Neutrality: Alida

The Zone of Neutrality is the speaker location where your speakers sound most natural and interact the least with the room. We realize that the location of your on-wall speakers is not very flexible. Nevertheless, careful selection of the mounting location will improve the performance of the speakers. If you are able to be flexible as to the location of the Alida on the wall, you will be able to more fully optimize their

sound. To find the best Zone for placement, do as follows:

1. Stand on a ladder or a chair against the wall in the general location where you would like to place the speakers. Position your head at the highest point possible for mounting the Alida. Speaking in a moderately loud voice and at a constant volume, project your voice out into the room. By walking slowly down the rungs of the ladder you move your voice vertically.

2. As you move down the wall, (You will need to have another listener seated in the listening position to aid you in the evaluation), listen to how the voice "frees up" from the added bass energy imparted by the ceiling boundary.

3. When you hear the voice "free up" from this artifact, place a piece of tape on the wall to mark this location.

4. As you move lower, you will hear were your voice begins to interact with the floor. Put a piece of tape in this location. You have a good vertical range in which optimize best possible placement of your Alidas.

5. Repeat the procedure coming off of the side walls. Again, listen for your voice to lose the added bass energy from the wall behind you and continue until there is an obvious interaction with the opposite wall in front of you. Do each side of speaker location individually.

What you should have at the end of this procedure are two rectangles on the wall (usually nearer the corners), which is your Zone of Neutrality for each channel. By installing your Alidas in this general area, you ensure getting the most performance and musical satisfaction.

Note: The more reflective or "live" sounding the room is, the more difficult it will be to detect the changes in your voice. Thus, you may have to repeat this process until the zones have been determined.

Section 3.2—Room Acoustics

Note: The following section contains general information on room acoustics and loudspeaker/room interaction. The concepts outlined below are equally relevant when dealing with multi-channel audio or home theater. The careful application of these concepts, as you evaluate the acoustical characteristics of your own room configuration, will allow you to optimize the performance of your Alidas.

Slap Echo

Probably the most obnoxious form of reflection is called "slap echo." With slap-echo, primarily midrange and high frequency sounds reflect off of two parallel hard surfaces. The sound literally reverberates back and forth until it is finally dissipated over time. You can test for slap echo in any room by clapping your hands sharply in the middle of the room and listening for the characteristic sound of the echo in the mid-range. Slap echo destroys the sound quality of a stereo system in two ways:

- It adds harshness to the upper midrange and treble by storing time-domain smearing energy.
- It destroys the delicate phase relationships, which help to establish an accurate soundstage.

Slap echo (see Figure 1) is a common acoustical problem in the typical domestic listening room because most of these rooms have walls with a hard, reflective nature, only occasionally interrupted by curtains, wall art, or drapes. The best (but least practical) solution to eliminate slap echo is nonparallel walls. This is because, rather than support slap-echo, nonparallel walls allow the sound to diffuse. This approach can be accounted for during the construction process. For existing rooms, slap echo can also be controlled entirely by the application of absorptive materials to the hard surfaces. These are absorptive materials that can be used to ameliorate slap echo:

- Illbruck Sonex®
- Air duct board

- Cork panels
- Large ceiling to floor drapes
- Carpeting to wall surfaces

In many domestic listening environments, heavy stuffed furnishings reduce slap echo somewhat. Unfortunately, their effectiveness is not predictable. Diffusers are sometimes also used to very good subjective effect, particularly in quite large rooms. Sound absorbent materials such as described above will alter the tonal characteristic of the room by making it sound "deader," less "bright and alive," and "quieter." These changes usually make the room more pleasant for conversation, but sometimes render it too dull in the high frequencies to be musically involving. Soundtrack effects will be more localized. However, over-damping the room can render reproduced sound that is lacking in musical involvement and "aliveness."

Diffusers, on the other hand, do not affect the tonal balance characteristic of the room as much. Placed properly, diffusers create a smoother and more open sound. Some diffusers, due to their construction, create narrow midrange peaks and suck out the warmth region. Do not use diffusers on the wall behind the speakers or on the side-walls directly beside the speakers. It is our experience that all of these room treatment devices should be used judiciously.

Standing Waves

Another type of reflection phenomenon is "standing waves." Standing waves cause the unnatural boosting or accentuation of certain frequencies, typically in the bass, to be found at certain discreet locations in the room. These locations differ according to room dimension and size. A room generating severe standing waves creates difficulty in setup. In these rooms, the speaker will sound radically different as it is moved around. The effects of standing waves on a loudspeaker's performance are primarily in the areas listed.

- Tonal balance
- Resolution of low-level detail
- Soundstaging

Standing waves are more difficult to correct than slap echo because they tend to occur at a lower frequency. Absorbent materials, such as Illbruck Sonex®, are ineffective at controlling reflections in the bass region. Moving speakers about slightly in the room is, for most people, their only control over standing waves. Sometimes a change of placement of as little as two or three inches can dramatically alter the tonal balance of a small system.

Fortunately, minor low frequency standing waves are well controlled by positioning ASC Tube Traps™ in the corners of the room. Very serious low frequency accentuation usually requires a custom-designed bass trap system.

Low frequency standing waves can be particularly troublesome in rooms constructed of concrete or brick. These materials trap the bass in the room unless it is allowed to leak out of the room through windows and doors.

In general, placement of the speaker in a corner will excite the maximal number of standing waves in a room and is to be avoided for most direct radiator, full-range loudspeaker systems. Some benefit is achieved by placing the stereo pair of loudspeakers slightly asymmetrically in the listening room. This is so the standing waves caused by the distance between one speaker and its adjacent walls and floors are not the same as the standing wave frequencies excited by the dimensions in the other channel.

Comb Filter Effect

The “comb filter” effect is a special type of standing wave noticeable primarily at higher frequencies and shorter wavelengths.

Acoustical comb filtering occurs when sound from a single source, such as a loud-

speaker, is directed toward a microphone or listener from a distance. The first sound to reach the microphone is the direct sound, followed by a delayed, reflected sound. At certain frequencies, cancellation occurs because the reflected sound lags in phase relative to the direct sound. This cancellation is most apparent where the two frequencies are 180 degrees out of phase. Further, there is augmentation at other frequencies where the direct and the reflected sounds arrive in phase. Because it is a function of wavelength, the comb filter effect will notch out portions of the audio spectrum at linearly spaced intervals. Subjectively, comb filter effect evidences itself as follows:

- Added roughness to the sound
- Reduction of harmonic richness
- Smearing of lateral soundstage, image focus, and placement

Comb filter effects are often caused by side wall reflections. They are best controlled by very careful speaker placement and by the judicious placement of Illbruck Sonex® or air duct panels applied to that part of the wall where the reflection occurs.

Section 3.3—Resonances

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

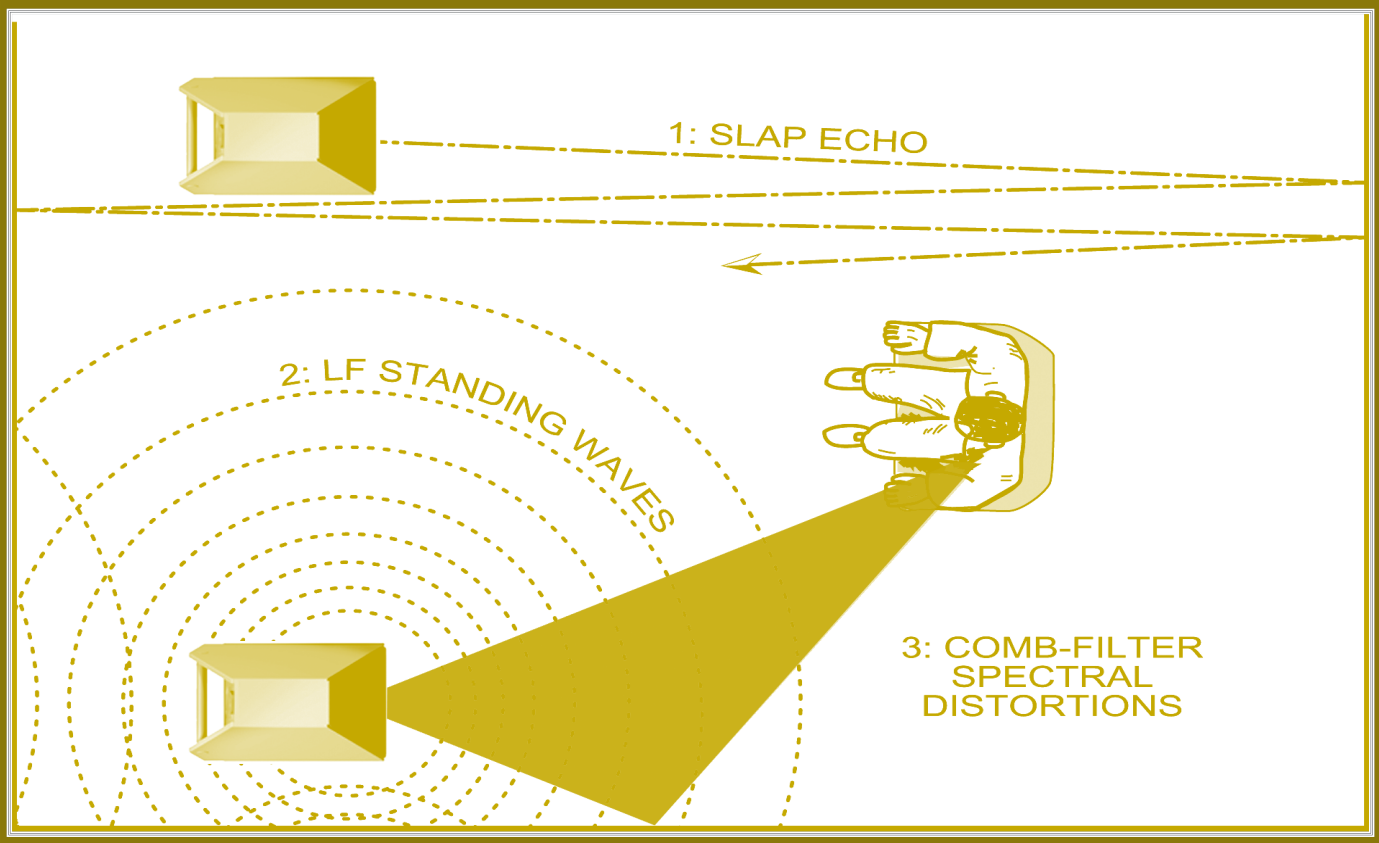

Figure 1—Common Room Reflection Problems

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 tonal balance of the speaker system.

Occasionally, however, there is just enough resonance to give a little added warmth to the sound—an addition some listeners prefer. Careful placement of loudspeakers in the room can dramatically reduce the speakers' destructive interaction with low frequency modes. ASC Tube Traps™ are effective in reducing some of this low frequency room coloration. Custom designed bass traps, such as perforated Helmholtz resonators, provide the greatest degree of low frequency control.

SECTION 3.4—YOUR ROOM

Room Shapes

Standing waves are pressure waves propagated by the interaction of sound and opposing parallel walls. This interaction creates patterns of low and high acoustical pres-

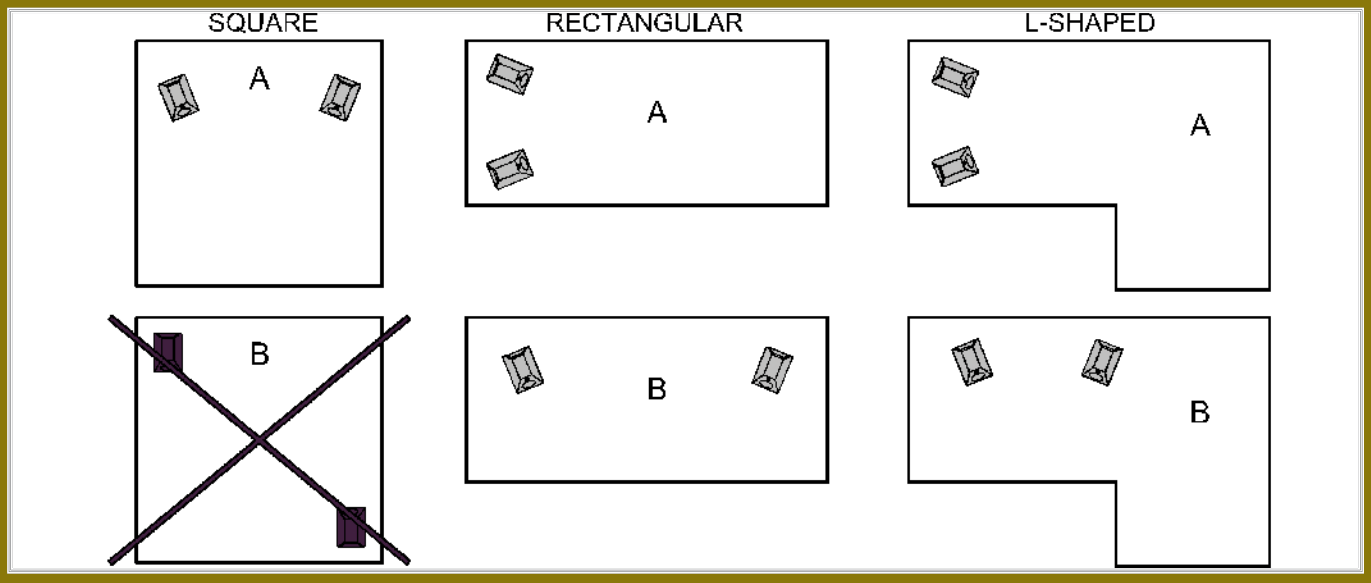

FIGURE 2—POSSIBLE LOUDSPEAKER PLACEMENT WITHIN VARIOUS ROOM SHAPES

sure zones that accentuate and attenuate particular frequencies. Those frequencies are dependent on room size and dimension.

There are three basic shapes for most rooms: square, rectangular, and L-shaped (see Figure 2).

A perfectly square room is the most difficult room in which to set up speakers. By virtue of its shape, a square room is the perfect medium for building and sustaining standing waves. These rooms heavily influence the music played by loudspeakers, greatly diminishing the listening experience.

Long, narrow, rectangular rooms also pose their own special acoustical problems for speaker setup. They have the ability to create several standing wave nodes, which will have different standing wave frequency exaggerations depending on where you are sitting. Additionally, these long rooms are often quite lean in the bass near the center of the room. Rectangular rooms are still preferred to square rooms because, by having two sets of dissimilar length walls, standing waves are not as strongly reinforced and will dissipate more quickly than in a square room. In these rooms, the preferred speaker position for spatial placement and midrange resolution would be on the longer walls. Bass response would be reinforced by speaker placement on the short walls.

In many cases, L-shaped rooms (see Figure 6) offer the best environment for speaker setup. Ideally, speakers should be set up along the primary (longest) leg of the room. They should fire from the end of the leg (short wall) toward the L, or they should be along the longest wall. In this way, both speakers are firing the same distance to the back wall. The asymmetry of the walls in L-shaped rooms resists the buildup of standing waves (see Figure 2

).

Alida in a Dedicated Home Theater

Home theaters can be organized many different ways. Some use rows of couches. Others use rows of multiple chairs.

In addition to watching movies, most users want to listen to two-channel music at the highest quality possible. It is desirable, therefore, to choose a single optimum seating position in a home theater and build the rest of the seating positions around this position.

If your optimum position is located on a couch, you should center the loudspeakers on the middle position of the couch.

If the seating area consists of multiple rows of chairs, the second row should be optimized for the best sound quality. Odd numbers of chairs arranged in rows work best as this will allow a single chair to be positioned in the center. This approach will also provide the best overall sound for the greatest number of seats.

Speaker Placement Versus Listening Position

The location of your listening position is as important as the careful setup of your Wilson Audio loudspeakers. The listening position should ideally be no more than 1.1 to 1.25 times the distance between the tweeters on each speaker. Therefore, in a long, rectangular room of 12′ x 18′, if the speaker tweeters are going to be 9′ apart, you should be sitting 9′11″ to 11′3″ from the speaker. This would be more than halfway down the long axis of the room.

Many people place the speakers on one end and sit at the other end of the room. This approach will not yield the finest sound. Carefully consider your listening position. Our experience has shown that any listening position that places your head closer than 14″ from a room boundary will diminish the sonic results of your listening.

Speaker Orientation

Speaker placement and orientation are two of the most important considerations in obtaining superior sound. The first thing you need to do is eliminate the sidewalls as a sonic influence in your system. Speakers placed too close to the sidewalls will suffer from a strong primary reflection. This can cause out-of-phase cancellations, or comb filtering, which will cancel some frequencies and change the tonal balance of the music. The Wilson Audio Setup Procedure (Section 3.1) is the best method with which to position your loudspeakers.

Alida as a rear or side channel

Wilson Audio has done everything possible to eliminate the boundary interactions caused by mounting a speaker onto the wall. The mounting bracket allows for significant improvements in detail, speed, and clarity. The Alidas will perform well in almost any location in which they are placed. The mounting bracket and the careful design of the Alida have eliminated most of the sonic problems encountered when placing a standard speaker too close to a boundary. Nevertheless, we have performed extensive testing on the Alida and found that significant improvement on speaker linearity and integration can be achieved by careful selection of the Alida mounting location.

We realize that when used as a rear or side channel augmenting a theater, the location of the of the Alida is generally set by the architecture of the room. However, if you have some flexibility in locating your Alidas, we suggest that you use WASP as outlined in Section 3.1 to find the Zone of Neutrality. Be sure to listen for room modes and frequency response peaks or dips.

WATCH Dog Passive Subwoofer

Because the WATCH Dog's frequency range is limited to the sub-frequency bass range, its placement requirements are slightly different than for a full frequency speak-

er. The WATCH Dog is shipped with casters installed on the bottom of the cabinet. Leave the casters on the Dog as you move it to its desired location.

The ideal position of the WATCH Dog subwoofer is somewhat dependent on its primary use. In home theaters, where the WATCH Dog 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 WATCH Dog 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 WATCH Dog is placed in the corner. Since all Wilson Audio Speakers are phase and time coherent, it is very important to time align the WATCH Dog in the room using the Phase Control on the Controller (see Controller owner's manual).

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Section 4—Mounting the Alida

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Note: Before setting up the Alidas, study carefully Section 3, "In Your Room." It provides valuable information on determining the ideal room location for your speakers.

Section 4.1—Mounting the Alida

You will need the following items:

- Supplied hardware kit
- Tape measure
- Known listening position
- Hand Drill

Your dealer is trained in the art and science of the Wilson Audio Setup Procedure (WASP) outlined in Section 3, and Wilson Audio recommends dealer installation of your new loudspeakers.

Section 4.2—Safety Warning

Serious injury may occur if you do not follow these instructions carefully.

This wall mounting bracket was designed to be mounted into wood or concrete. Each Alida weighs 58 lbs. and requires that the mounting plate be firmly attached to the wall. We recommend that you have your professional home theater installers mount the Alidas to the wall. They can make sure that the mounting plate is properly attached to the wall. Before any holes are drilled, you must make sure that there are no electrical wires in the wall behind the speaker. If you cannot verify the location of all of the electrical wiring, do not proceed with the installation. Contact your contractor or an installation specialist.

Mounting Surface Evaluation

Wilson Audio has provided two different wall anchors depending on whether you are mounting into wood or concrete. We have evaluated these anchors and found them

to securely attach the wall mounting bracket to the wall in most domestic environments in the U.S.A. (specifically to cement foundations, 2'x 4' studs, or 2 layers of reinforced plywood). These attachments may also work well in other countries. Because of the large variation in wall construction from country to country, we cannot predict their performance outside of the U.S.A. We recommend that you have a professional evaluate your particular wall construction and determine the ideal mounting hardware.

Section 4.3—Mounting the Wall Bracket

The Alida mount has been designed to mount into concrete or at least 1.5" thick wood. Depending your wall, you may need to reinforce the wall before attaching the mount to the wall. Use care when attaching the wall mount. If it is not attached correctly, it may fall and cause injury.

Marking Location

- Decide how the speaker cables will be routed to the speaker. An opening in the mounting bracket makes it possible for cables to run from inside the wall directly to the Alida.

Using the template provided, mark the mounting holes on the wall according to Figures 3 and 4 below.

- If you are mounting into concrete, mark the outer 5 holes.
- If you are mounting into a wood surface, mark the 3 center holes.
- If you are not mounting into a wall stud but into a wood support, mark the outer 5 holes.

Important: Know the location of all internal wall electrical wiring in order to avoid problems.

Drilling Pilot Holes

Drill the mounting pilot holes into the marked wall locations as follows:

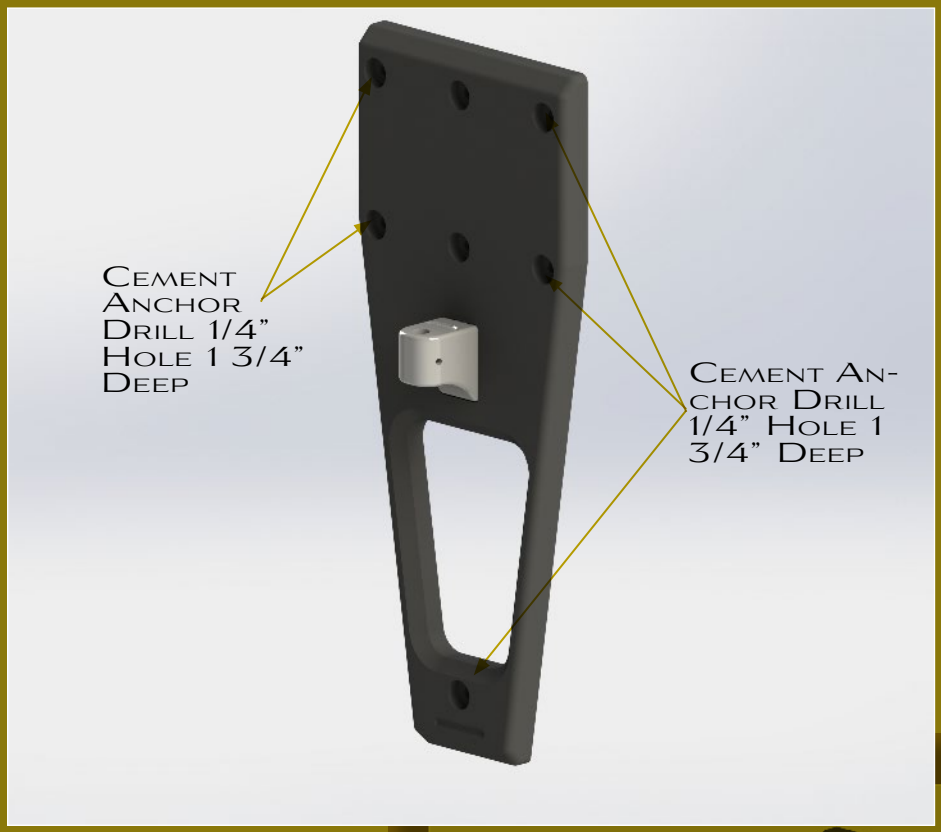


Figure 3—Mounting Locations for for a Concrete Wall

Figure 4—Mounting Locations for Wall Stud or Wood Support

- Concrete: drill a pilot hole 1/4″ in diameter and 1 3/4″ deep using the provided cement drill bit and a hammer drill.
- Wood: drill a 3/16″ diameter by 1 3/4″ deep pilot hole.
- Using the provided wall anchors (lag bolt or concrete anchor), washers, and ratchet with socket, position the correct mounting bracket (CW or CCW) onto the wall and screw into place.
- Check that the mounting bracket is securely attached to the wall by pulling on the bracket. If properly attached, the bracket should be able to support 200+ lbs.

Section 4.3—Placing Alida

Install the tensioning spike into the threaded receptacle on the bottom back of the Alida (see Figure 5). The spike is adjustable via an internal thread. For now, leave the spike in its shortest configuration.

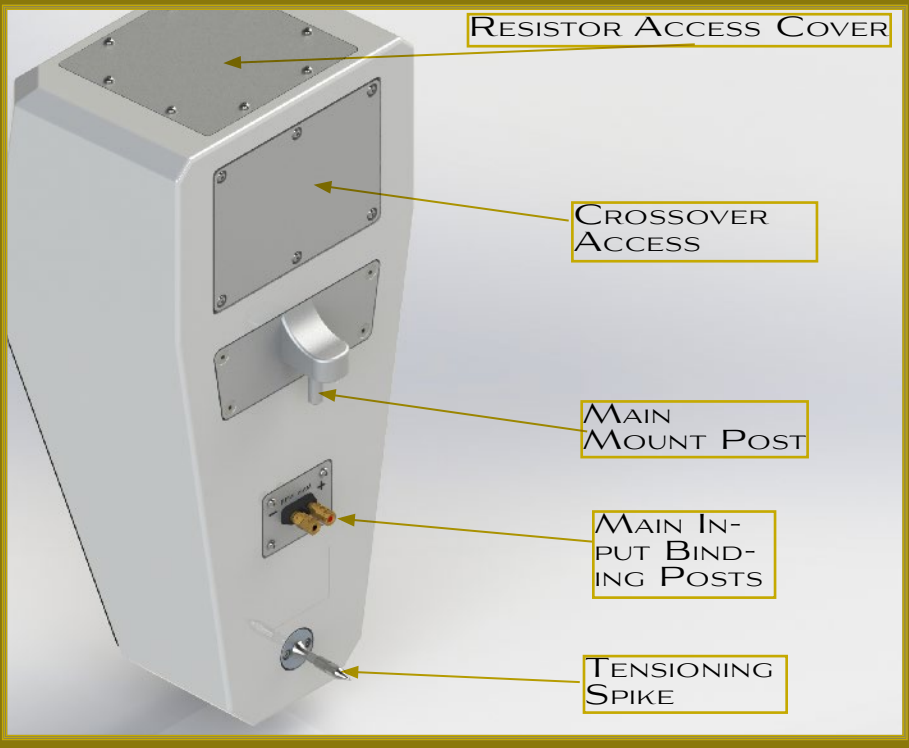


Figure 5—Alida Hardware Attachment

Placing Alida on its Bracket

Place the Alida onto the bracket by lifting it up and sliding the post into the upper into the cylindrical receptacle (See Figure 6). There is a small spike behind the mounting post which corresponds with a series of seven detents in the mount (See Figure 7). The detents allow the Alida to be precisely angled toward the listener.

Alida sounds best when it is on axis to the listening position, such that the tweeter is "aimed" directly at the main listener. Position the alignment spike into the lower spike detent that corresponds with the best aligned position of the Alida to the listen-

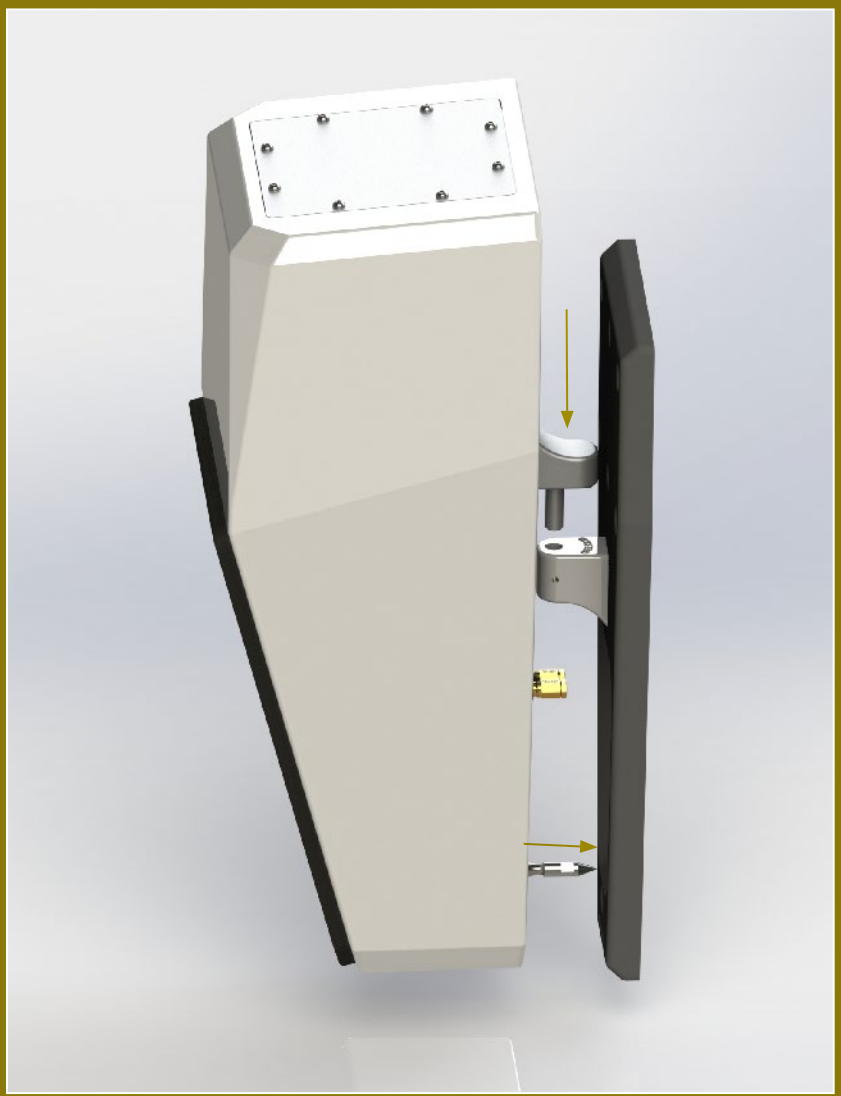


Figure 6—Placing the Alida onto the Mounting Bracket

ing position.

Once the desired "toe" of the Alida has been achieved, rotate the tensioning spike such that it expands out via its internal threads. The spike should be snug against the mount, but take care not to over-extend the spike against the mounting plate. Also, make sure the spike is expanding, and that you are not just simply loosening the spike in the receptacle.

Section 4.4—Connecting Speaker to Amplifier

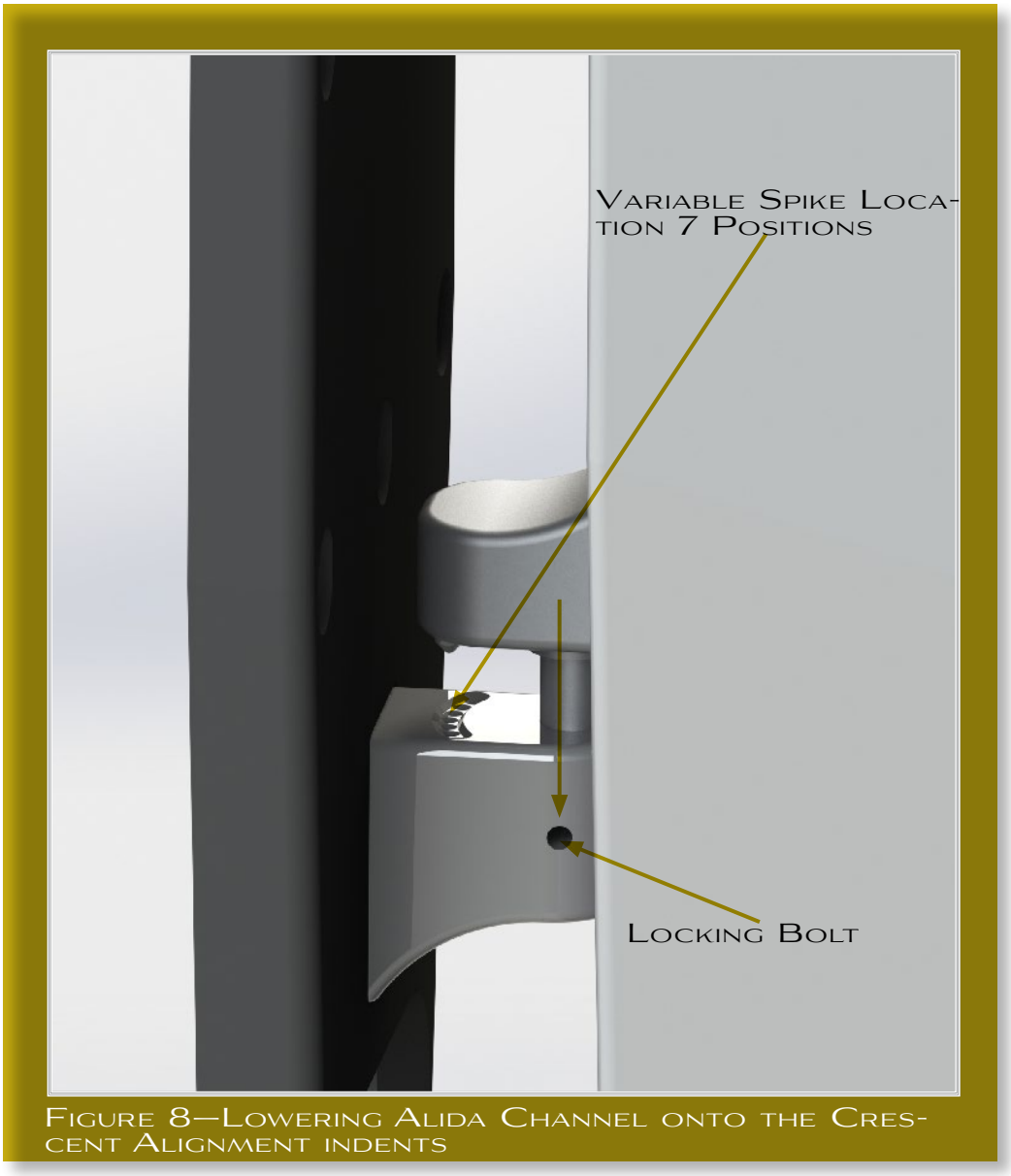


Figure 8—Lowering Alida Channel onto the Crescent Alignment indents

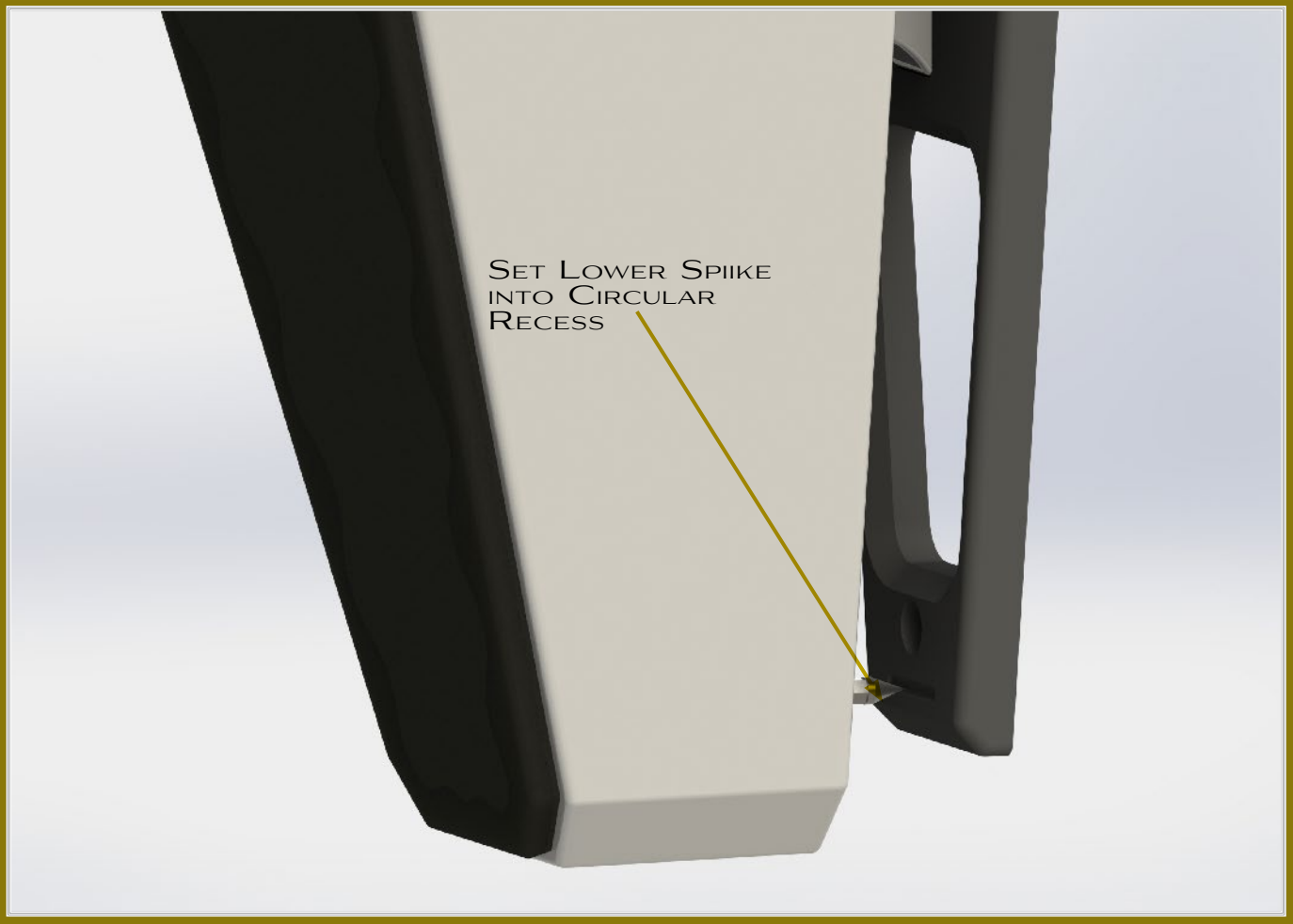


Figure 9—Positioning the Lower Spikes

- Turn off the power amplifier(s) and remove the AC power cord from the wall outlet.
- Lay out the speaker cables before hooking them up to the Alida. Make sure that there are no *kinks, twists,* or *right angle bends* in the cable. If you need to turn corners, attempt to use a gradual curve as opposed to a severe right-angled bend.
- Connect the negative (normally black) end of the speaker cable to the high current speaker binding post with the engraved "-" above it.

Note: Do not over tighten the binding post. Over tightening can cause the posts to break off.

- Connect the Positive (normally red) end of the speaker cable to the high current speaker binding post with the engraved "+" above it.
- Plug your amplifier(s) AC power cord into the wall outlet.

Note: Always attempt to keep your pair of speaker cables the same length. This will ensure that the signals arrive at each speaker in the proper time frame as the signals travel the same distance to each speaker.

Speaker Cables

We recommend the use of the very highest quality loudspeaker cables, particularly those designed for high frequency propagation correction and phase linearity. Beware of "zip cord" type speaker cables, which will smear sound from your Alidas and limit their effective bandwidth. Also, do not use braided litz-type loudspeaker cables as they will cause an unnatural brightness to the sound, compromise sound staging performance, and may cause instability, oscillation, and damage in wide bandwidth solid state amplifiers.

Spade Lugs

The spade lugs of some of the high quality cables often used with the Alida are angled to reduce pressures on the cable during installation. Avoid the instinct to push the cable's spade lug ends all the way into the Alida's connectors (see Figure 13). Partial insertion of these angled spade lugs will actually improve the reliability of the connection. Flat lugs may be fully inserted to connectors before tightening.

Section 4.5—Alida Setup Completed

This completes the initial setup of your Series 2 Alidas. Final system tuning and voicing should be performed as outlined in Section 5. Section 5 will evaluate your entire speaker setup and allow you to make small modifications in speaker rotation and location (except, of course, the Alida Channel), which will greatly improve the perfor-

mance of your multi-channel audio or home theater system.

Section 4.6—Locking down the Alida

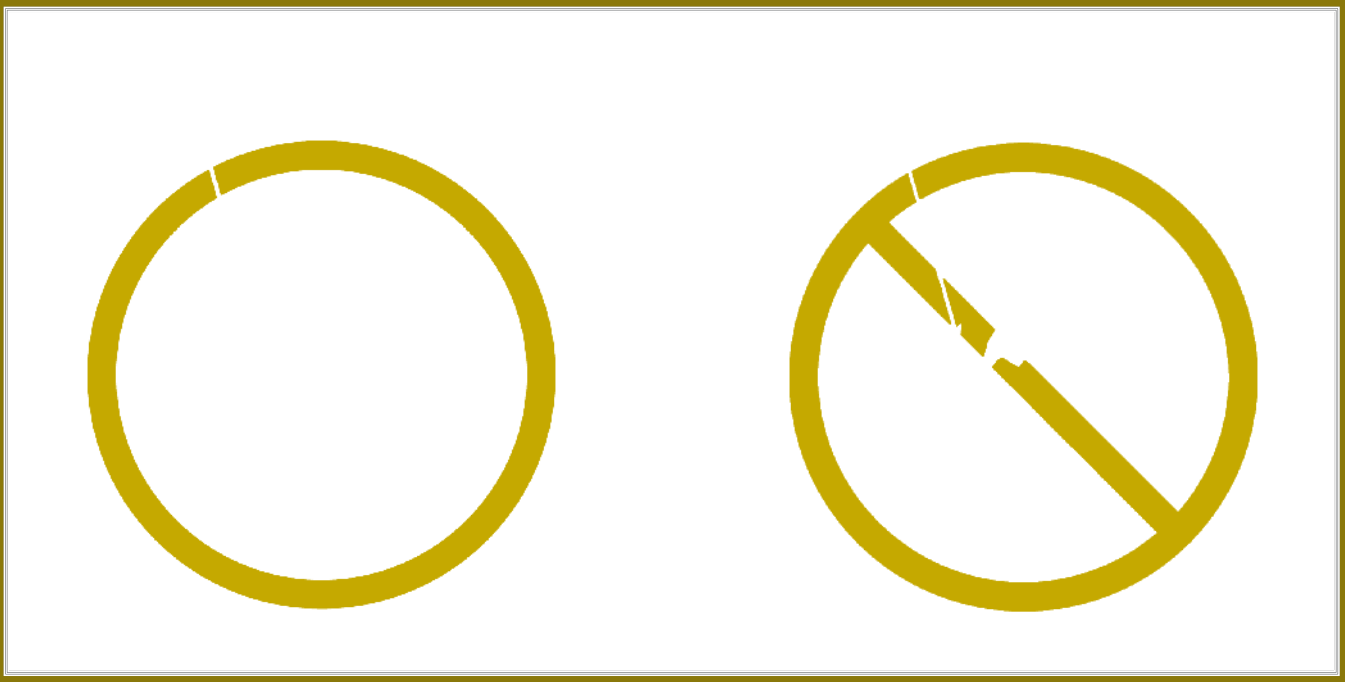


Figure 10—Spade Lug Attachment

Locate the locking bolt on the side of the Alida bracket. This is a small allen-head bolt (See Figure-8) that when tightened secures the Alida from moving. Locate the 1/4" Allen head wrench, and tighten the bold against the cylindrical post.

Note: Do not over-tighten the bolt against the post, as this will cause damage to both the post and the allen bolt.

ALIDA™

Section 5—Care of the Finish

WILSON AUDIO

Section 5.1—Care of the Finish

The Alida 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 Alida

It is important that the delicate paint finish of the Alida 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 Grilles

Periodically, you will want to clean the Alida's grilles. This is best done by using the round brush attachment on a vacuum cleaner hose. Gently vacuum the front surface of the grille. Be careful not to apply too much pressure. Do not use a hard plastic

attachment against the grille. The grille cloth is stretched tightly over the grille frame. Too much pressure or use of a hard plastic attachment could cause the grille 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 grilles. In addition to basic black, Wilson Audio offers a variety of grille colors to match most WilsonGloss finishes. Contact your local dealer for grille cloth samples or to order replacement grilles for your Alidas.

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 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

With the development of each new product, Wilson Audio has focused intensive research on the impact materials have 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 and WATCH Dog. Even the best materials are not suited to all aspects of enclosure construction. Therefore, like all Wilson loudspeakers, the Alida is constructed of several exotic materials chosen for their specific performance attributes relevant to different portions of the enclosure.

The Alida 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, thermo-set adhesive is used for the construction of the enclosure. It was also chosen for its excellent bond strength, solvent resistance, hardness, and optimum vibrational characteristics.

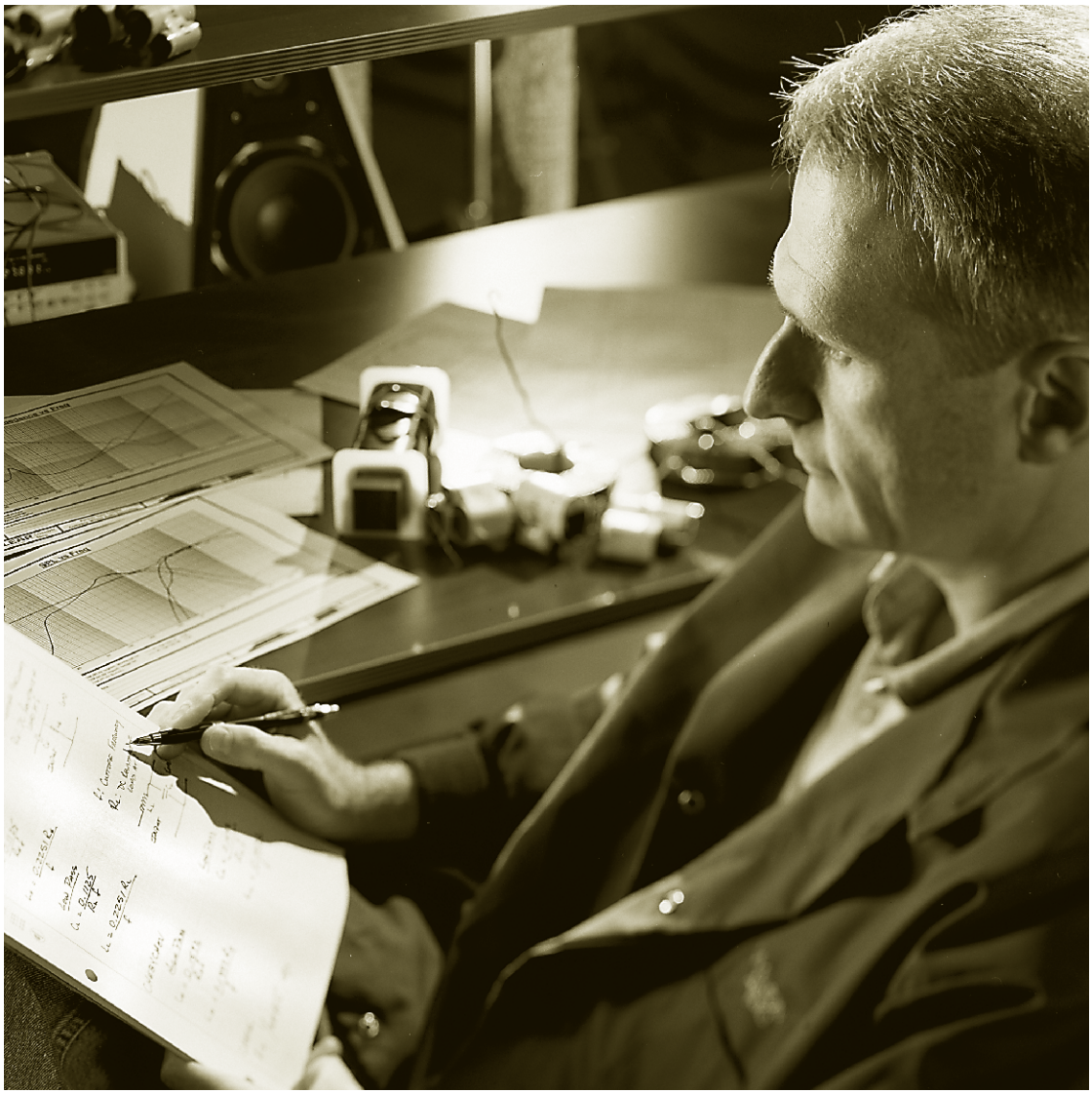
Section 5.3—Depth of Design

Alida'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 Alida 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 Alida will have consistent, repeatable performance, unaffected by the climatic conditions, anywhere in the world. Finally, like all Wilson products, the Alida is hand-crafted with meticulous attention to detail, with an unwavering commitment to excellence. Thus, the Alida will impart to

her owner beauty and pleasure for many years to come.

ALIDA™

Section 6—Troubleshooting



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Section 6.1—Troubleshooting

One channel is not operating:

Check the interconnects from source.

Imaging is off-center:

Check the connections on the speaker cables, both at the amplifier and speaker ends. Watch especially for connectors touching each other.

A chronic lack of bass energy:

Check your connections. A connection to one of the modules may have come loose. When a tweeter or midrange driver is not working, or is out of phase, the Alida will not "image" properly. Double check your connections for red-to-red and black-to-black.

Driver out or not playing after connections have been verified:

Play music at a low level and listen to each driver in each channel. You may have a driver that is not operating correctly. If you find a driver that is silent, please go to the "Driver Out" section of this troubleshooting guide.

Check the input cable connections on your woofer enclosure. If one channel is out of phase (connections reversed), bass will be cancelled. Note: Turn off your amplifier and unplug it from the wall.

If you have found a driver with no output, move to the rear of this particular loudspeaker.

Amplifier shuts off as soon as it is turned on:

Using the appropriate Allen key, open the X-material door on the back of the Woofer module.

If the problem is solved:

You will find some resistor connections. Replace the resistor with the supplied matching resistor. Tighten the new resistor in the old one's place.

If the problem persists:

Note: Use only Wilson Audio replacement resistors in the Alida These resistors were carefully chosen for the overall sonic and thermal performance.

If the problem is solved:

If the problem persists:

Plug your amplifier into the wall and turn it on.

If the problem is solved:

Listen to the channel at a low level. The driver should now be operating correctly.

If the problem persists:

Check to see if your speaker cables are properly secured. Look for frayed ends, loose connections, or a conductor contacting the amplifier chassis.

Turn the amplifier off and disconnect it from the AC wall outlet. Disconnect the preamplifier leads to the amplifier. Now turn on the amplifier.

There is likely something wrong with your preamplifier or interconnect. Contact your dealer.

Leave the preamp leads disconnected and continue to the next step.

Turn the amplifier off. Disconnect the speaker leads at the main input to the

speaker. Now turn on the amplifier.

Call your Wilson Audio dealer. There may be a problem with the crossover or the speaker's internal wiring.

Continue to the next step.

Turn the amplifier off and disconnect it from the AC wall outlet. Disconnect the speaker cable leads to the amplifier and turn the amplifier on again.

You have a short in your speaker cables. Check for frayed ends, holes or make sure that your spade lug is not touching the chassis while it is connected to the binding post.

Call the dealer where you bought your amplifier. You appear to have a problem with this component.

ALIDA™

Section 7 – Repairs

WILSON AUDIO

Section 7.1—Repair Procedures

Replacing an Open Resistor

The Alida loudspeaker has a resistor that will protect the tweeter, in most cases, if the speaker is over driven during normal operation. This is done so that the driver is not damaged. Replace a blown resistor as follows:

1. Turn off the amp.

2. Disconnect the speaker cables and remove the Alida from the wall.

3. Place the speaker on its side on a comfortable working surface.

Note: It is best to place a cloth towel under the driver so that you will not damage the enclosure when unsoldering the driver.

4. Remove the resistor access cover from the enclosure by removing each of the button head screws (see Figure 5 for resistor cover locations).

5. Use a screwdriver to carefully remove the screws, taking care not to let them drop into the enclosure.

6. Install new resistor in the same location as the defective unit. Re-install the screws.

7. Re-attach the resistor access cover to the enclosure, making sure not to over tighten the screws.

Replacing a Bad Driver

If you believe that a driver is blown, make sure that you have tried replacing the protective resistor before you replace the driver. No sound coming from a driver is often a blown resistor and not a bad driver. If you need to replace a driver, do so as follows:

1. Turn off the amp.

2. Disconnect the speaker cables and remove the Alida from the wall.

3. Place the speaker on its side on a comfortable working surface.

Note: It is best to place a cloth towel under the driver so that you will not damage the enclosure when unsoldering the driver.

4. Using an Allen wrench, remove the screws holding the driver in place.

5. Insert the Allen wrench into one of the driver mounting holes 1/8″. Gently lift out the driver and place it onto the foam pad covering the front baffle.

6. Using a 1100 degree F soldering iron, heat up the solder joints and remove the driver.

7. Melt a small 1/8″ diameter bead of solder onto the terminal posts of the driver.

8. Slide the driver foam gasket over the wires before soldering the driver.

9. Place the replacement driver onto the cloth and solder the wires onto the driver. The white wire connects to the positive side, and the black wire connects to the negative. The positive side is generally indicated by a red dot. Make sure to heat up the solder joint completely and hold firmly in place until the solder sets.

10. Place the driver into the driver location.

11. Replace the machine screws, tightening them to 30 inch-pounds of torque.

12. Re-install the Alida Channel on its wall-mount.

Note: Be careful not to over tighten the screws as you may damage the enclosure or break a screw.

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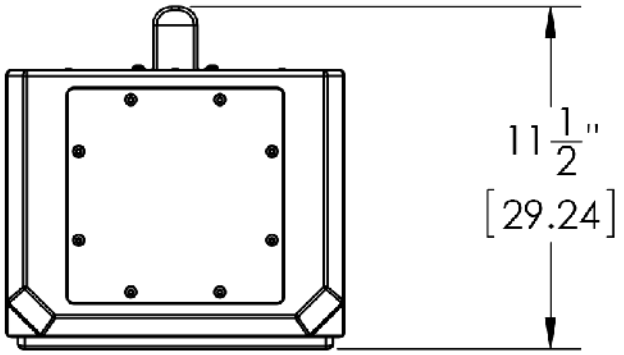
Section 8—Alida Specifications

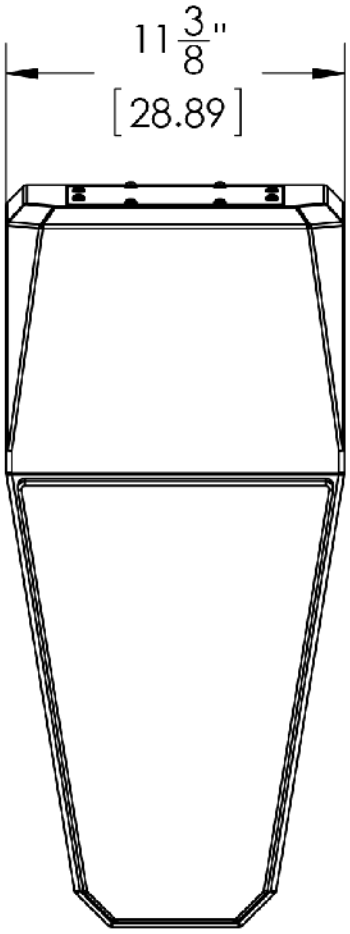
WILSON AUDIO

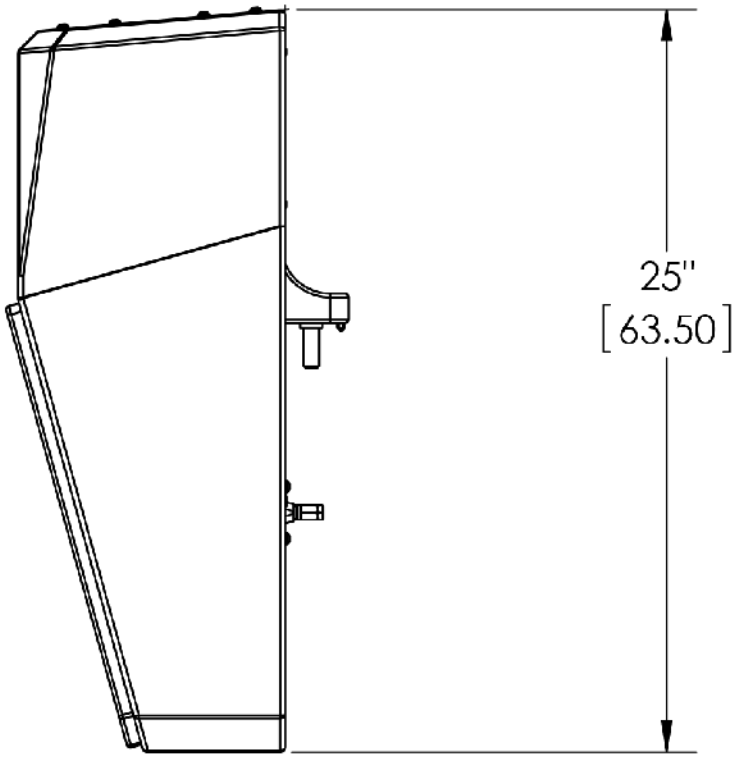
Section 8—Alida Specifications

Enclosure Type	Ported, X- and S-Material
Woofer:	5 3/4 inches (14.61 cm) Paper Pulp
Tweeter:	1 inch (2.54 cm) Doped Silk Fabric
Sensitivity:	84 dB (one watt at one meter at 1Khz)
Nominal Impedance:	4 ohms/minimum 4.35 ohms @ 268 Hz
Minimum Amplifier Power:	20 watts per channel
Frequency Response:	32 Hz – 30 kHz: +/- 3 dB: (RAR) (Wall-mounted)
Overall Dimensions:	Height: 25 inches (63.50 cm)
Alida Weight Per Channel:	Width: 11 9/16″ (29.24 cm)
Mount Weight Per Channel:	Depth: 12 13/16 inches (32.50 cm)
Per Crate:	Width: 11 3/8 inches (28.89 cm)
	49.5 lbs. (18.6 kg)
	8.5 lbs. (3.86 kg)
	220 lbs (99.79kg) both crates

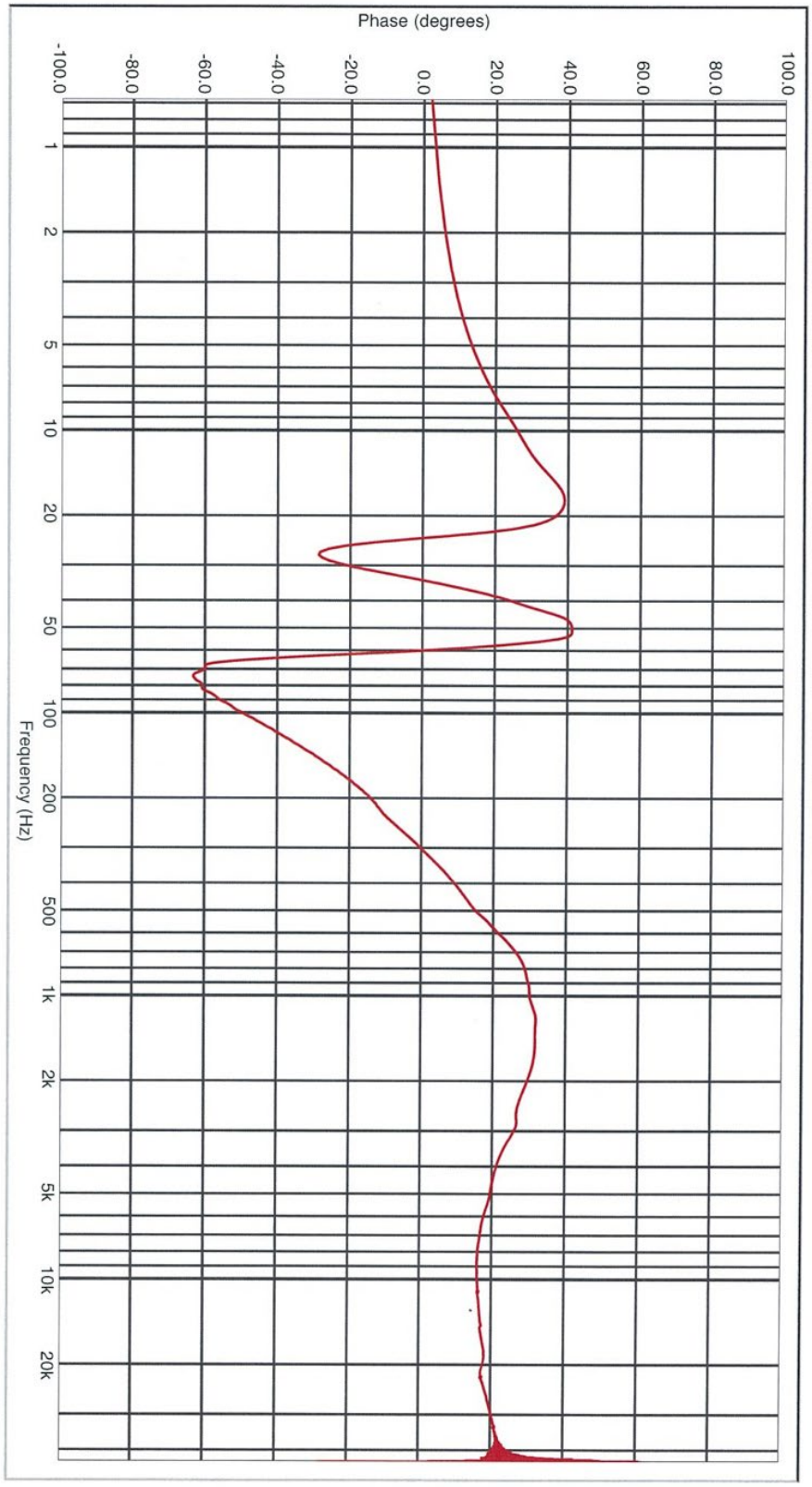
Alida Dimensions Illustrated







Impedance Curve



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Section 9—Nomograph

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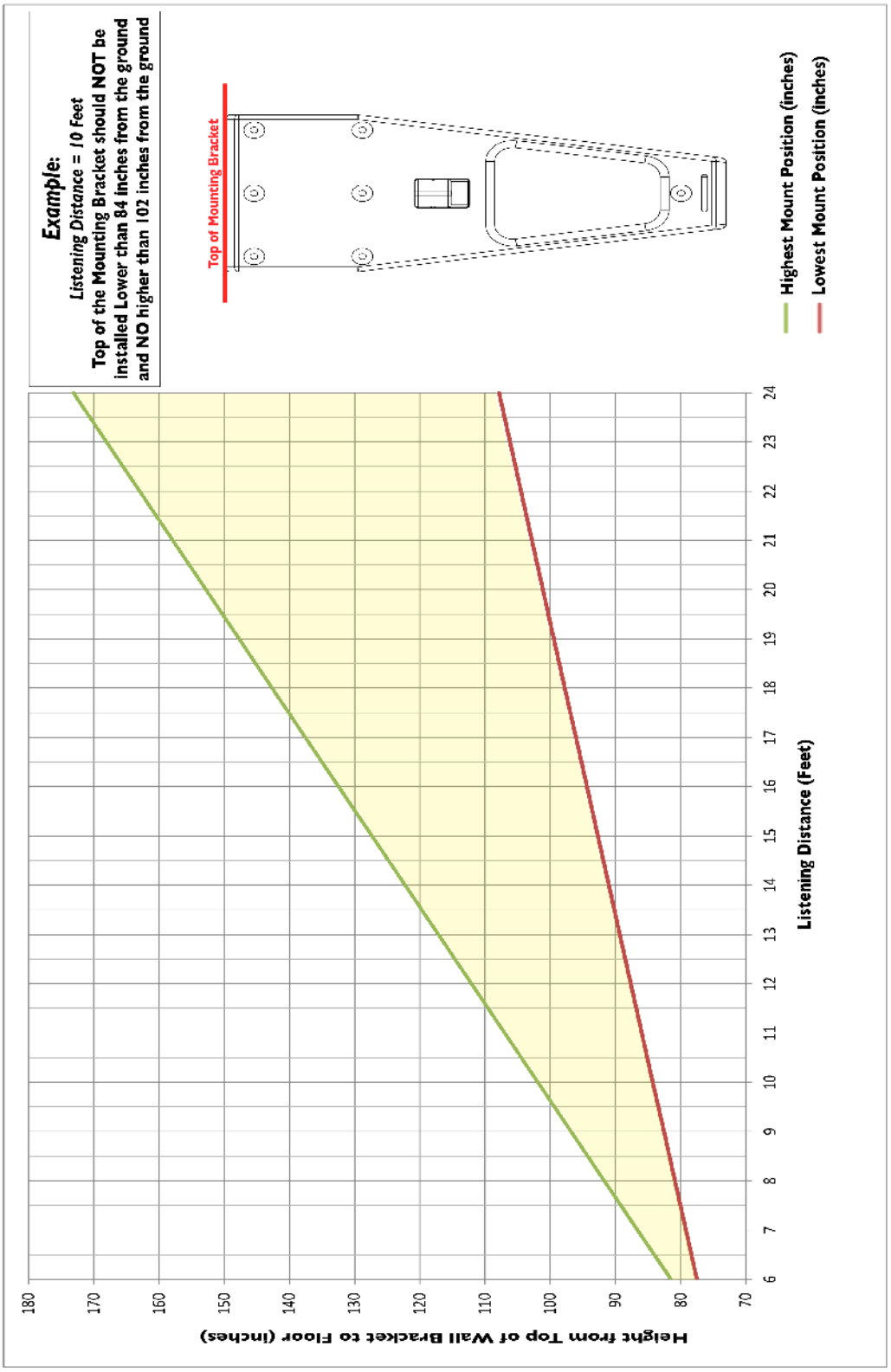
Example:
Listening Distance = 10 Feet
Top of the Mounting Bracket should NOT be installed Lower than 84 inches from the ground and NO higher than 102 inches from the ground
Top of Mounting Bracket
Highest Mount Position (inches)
Lowest Mount Position (inches)
Height from Top of Wall Bracket to Floor (inches)
180
170
160
150
140
130
120
110
100
90
80
70
Listening Distance (Feet)
6
7
8
9
10
11
12
13
14
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ALIDA™

Section 10—Warranty Information

WILSON AUDIO

Section 10.1—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.