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ACTIV
X0

INPUT
SELECT

PROCESSOR

REM

LINE

Dual Subwoofer Active System

SECTION 1—INITIAL SETUP

Section 1.1—Connecting the ActivXo—Home Theater

You can connect the ActivXo within your system in a variety of ways, depending on your needs. You can use it in conjunction with an LFE (Low-Frequency Effects) channel for a dedicated home theater system, or it can be used in conjunction with a subwoofer to extend the bass in a two-channel music system. In systems where it is desirable to use the ActivXo with both the surround processor in a theater system and in conjunction with a two-channel music system featuring a preamp, you can switch between the two sources via the ActivXo's front panel's Line/Processor switch. Switchable inputs enable you to optimize the ActivXo for the surround mode and music mode separately and simultaneously.

The ActivXo is also capable of accepting either balanced (XLR) or single-ended (RCA) cable connectors from your preamplifier or surround processor. Your choice will depend on the configuration of your particular preamp or surround processor.

Connection With a Surround Processor

Use the following steps when connecting the ActivXo to a surround sound processor with its own subwoofer controls.

1. Make sure the ActivXo power switch is in "off" position, and the Level control on the front panel is in the "Min" position during the connecting process.





2. Locate the “Processor In” section of the ActivXo on the right rear of the unit. Use the Processor Input of the ActivXo in conjunction with the LFE (Low-Frequency Effects) outputs of a surround processor. Balanced (XLR) or single-ended (RCA) connecting cables may be used, depending on the connector type used on your surround processor. Select either “UNBAL” or “BAL,” depending on your connection type. Connect the LFE output of your surround processor to the ActivXo via the input labeled “PROCESSOR IN.”
3. On the front panel, locate the switch labeled “PROCESSOR,” “REM,” and “LINE.” Select the “PROCESSOR” input.
4. On the front panel, locate the switch labeled “HP IN” and “HP OUT.” Select “HP OUT”. On the front panel, locate the switch labeled “LP IN” and “LP OUT.” Select “LP OUT”.
5. Proceed to Section 2, “Setup and Final Tuning,” to continue the setup of your unit.

Section 1.2—Connecting the ActivXo—Music System

Connect the ActivXo to the Subwoofer Amplifier

The “LOW PASS OUT” connectors labeled Left and Right are the output signal connectors for the subwoofer amplifier. There is a single-ended and a

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balanced connector for each output.

Setup for a single, mono sub:

1. If you are using a single subwoofer, select Mono. In Mono, either the left or the right channel outputs can be used for a single subwoofer, as they each output the same signal. If you are using one subwoofer, connect the amplifier driving the subwoofer to the ActivXo's "LOW PASS OUT" via either output.
2. On the front panel in the Low Pass section, choose either the balanced cable or single-ended (labeled "UNBAL") output to match the input configuration of the amplifier.
3. Select "Mono" on the Mono/Stereo switch on the rear panel.

Setup for two, stereo subs:

4. If you are using two subwoofers with separate amplifiers, connect the subwoofers to the Left and Right outputs, and select Stereo.

Bypassing the High Pass Filter

In systems where the main speakers are full-range, the subwoofer used with the ActivXo can be configured more successfully without the use of the High Pass filter. Bass roll-off occurs naturally in your listening room. This effect acts like a 6 dB per octave low pass filter and rolls off the bass from your main





speakers. In most systems, it is not necessary or desirable to use the High Pass filter. The ActivXo's Low Pass filter controls, in conjunction with the Bass Equalization and Phase controls (discussed in Section 2), will allow you to successfully integrate the main loudspeakers with the subwoofer without the use of the High Pass filter by observing the following:

1. Make sure the ActivXo power is off during the connecting process.
2. Locate the input section of the ActivXo on the rear of the unit. The ActivXo features both balanced (XLR) and single-ended (RCA) inputs for the High pass section of crossover.

Note: When connecting the ActivXo without the use of the High Pass Filter, a second output from your preamplifier is required. If your preamplifier does not have two sets of outputs, consult with your Wilson dealer about using high quality "Y" connectors to facilitate connecting your unit.

3. From one of the preamp outputs, connect your preamp directly to your main amplifier.
4. From the second set of preamp outputs, connect both left and right channels to the Line In of the ActivXo.
5. On the ActivXo front panel, locate the switch labeled "PROCESSOR," "REM," and "LINE." Select the "LINE" input.

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6. On the front panel in the High Pass Section, find the switch label “HP IN,” “REM,” and “HP OUT”. Select “HP OUT.” When “HP OUT” is selected, the signal at the “HIGH PASS OUT” connectors is full range.
7. On the front panel Low Pass section, locate the switch labeled “LP IN,” “REM,” and “LP OUT”. Select “LP IN.”
8. Proceed to Section 2, “Front Panel Setup and Final Tuning,” to continue the setup of your unit.

Utilizing the High Pass Filter

The ActivXo employs a high quality high pass filter as a part of its cross-over design. The High Pass Filter can be 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 amplifier is low power. Use the following steps to utilize the high pass filter:

1. Make sure the ActivXo power is off during the connecting process.
2. On the rear of the unit, locate the Line Level inputs of the ActivXo. Connect the preamplifier output, left and right, to the Line Level input of the ActivXo. Use the XLR inputs for balanced cables or the RCA inputs for single-ended cables.
3. Locate the High Pass Output on the rear of the ActivXo. These



connectors pass the high pass section of the signal to your main amplifier for your loudspeakers. Connect the High Pass Output, left and right, of the ActivXo to the inputs of your power amplifier. Use the XLR inputs for balanced cables or the RCA inputs for single-ended cables.

4. On the ActivXo front panel in the High Pass section, locate the switch labeled “BAL,” and “UNBAL.” Select “BAL” for use with balanced cables, or “UNBAL” for use with single-ended cables.
5. Locate the switch on the front panel labeled “HP IN,” “REM,” and “HP OUT”. This switch defeats or alternatively engages the high pass filter. Turn the switch to the HP IN position.
6. Locate the switch on the front panel labeled “HP 6 dB” and “HP 12 dB”. This switch changes the slope of the high pass filter to either 6 decibels per octave or 12 decibels per octave. The position of this switch will be set in its final position in the final tuning stages of the ActivXo. For now, set the switch to the 6 dB per octave position.
7. Proceed to Section 2, “Front Panel Setup and Final Tuning,” to continue the setup of your unit.

Note: Before proceeding with the Front Panel setup and configuration, please connect your system as outlined in Section 2, which contains valuable information needed before proceeding further.



Axo

Dual Subwoofer Active Crossover

Wilson
Audio

LOW PASS

LEFT

FREQ

RIGHT

LEFT

GAIN

RIGHT

LEFT

PHASE

RIGHT

INPUT

OUTPUT

SLOPE

HIGH PASS

LEFT

FREQ

RIGHT

LEFT

GAIN

RIGHT

LEVEL

POWER

BYPASS

CROSSOVER

INPUT

OUTPUT

SLOPE

LEFT

FREQ

RIGHT

LEFT

GAIN

RIGHT

LEFT

PHASE

RIGHT

INPUT

OUTPUT

SLOPE

LEFT

FREQ

RIGHT

LEFT

GAIN

RIGHT

LEVEL

POWER

SECTION 2—FINAL TUNING

Section 2.0 - Front Panel Setup and Final Tuning

Preparation

To realize the full potential of your ActivXo, we recommend that you have a trained Wilson Audio Specialist install and perform the final adjustment and setup of your ActivXo. Wilson Audio has invested in the training of all authorized dealers in the art of ActivXo setup. If you choose to do the installation yourself, here are some guidelines to assist you. These guidelines come from many years of experience and should be followed carefully to ensure the best possible result from your ActivXo.

You will need the following items:

- Supplied ActivXo Setup CD
- High Quality dB Meter
- Pen and paper to make notes

Double check the switch control settings to ensure that they are in the proper positions as outlined in Section 1. In this section, you will be adjusting and fine tuning the ActivXo front panel.

Locate the main power switch on the rear panel ActivXo. Toggle the switch to the “on” position. Engaging this button powers the ActivXo into the “standby” mode and can be left in the “On” position. When in Standby Mode, the LED associated with the switch is red. Locate the Off/Remote switch on the front





of the ActivXo. Depress the switch and check to see that the front panel LED changes color from red to green. This brings the ActivXo from standby to full power on. Generally, the ActivXo can be left in the standby off mode when not in use.

Note: We recommend that you turn the main power switch to the off position and disconnect the power cord during lightning storms or when you are away.

Section 2.1 - Notes on Proper Use of the Test CD

Wilson Audio has provided a test CD to aid you in the setup of your ActivXo. The following comments and recommendations refer most precisely to the use of the ActivXo in conjunction with a subwoofer in a two-channel music system. However, these procedures can also be used to optimize the ActivXo to the left and the right channels of a multi-channel home theater system.

Subwoofer Placement

The ActivXo possesses sophisticated low pass filter control features as well as the ability to vary phase angle continuously. As a result, the placement of the subwoofer is less critical when used with the ActivXo. The subwoofer can be successfully placed between and slightly behind the left and right speakers. However, because of the ActivXo's setup flexibility, the subwoofer can be successfully placed in a variety of locations in the listening room—such as on a side

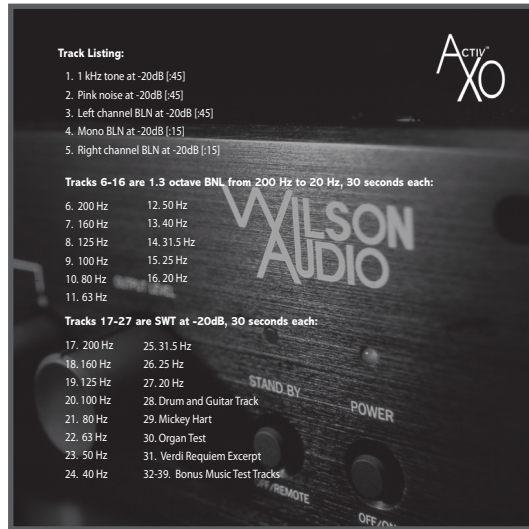
wall or behind the listener.

Filtering of LF to the Left & Right Speakers

With two-channel music systems in moderately sized rooms, where ultra-high volumes are not required, it is often desirable to run the main loudspeaker full-range without the use of a high-pass filter. This is particularly desirable in a system employing Wilson Audio speakers because of the low distortion, high-output, and robust power-handling capabilities of these designs. The usual rationale for eliminating the high-pass from the configuration is the signal loses some of its midrange and high-frequency transparency as a result of being routed through the active high-pass crossover. While this is theoretically true, in many systems, the complex low-frequency room interaction is the more important factor. These interactions typically occur between the subwoofer's output and the full range output of the L and R channels. Filtering out the bass below the crossover region often ameliorates this type of room interaction. To optimize the system for the most believable music reproduction in your room, you should experiment with both approaches.

Initial Placement of the L & R Speakers

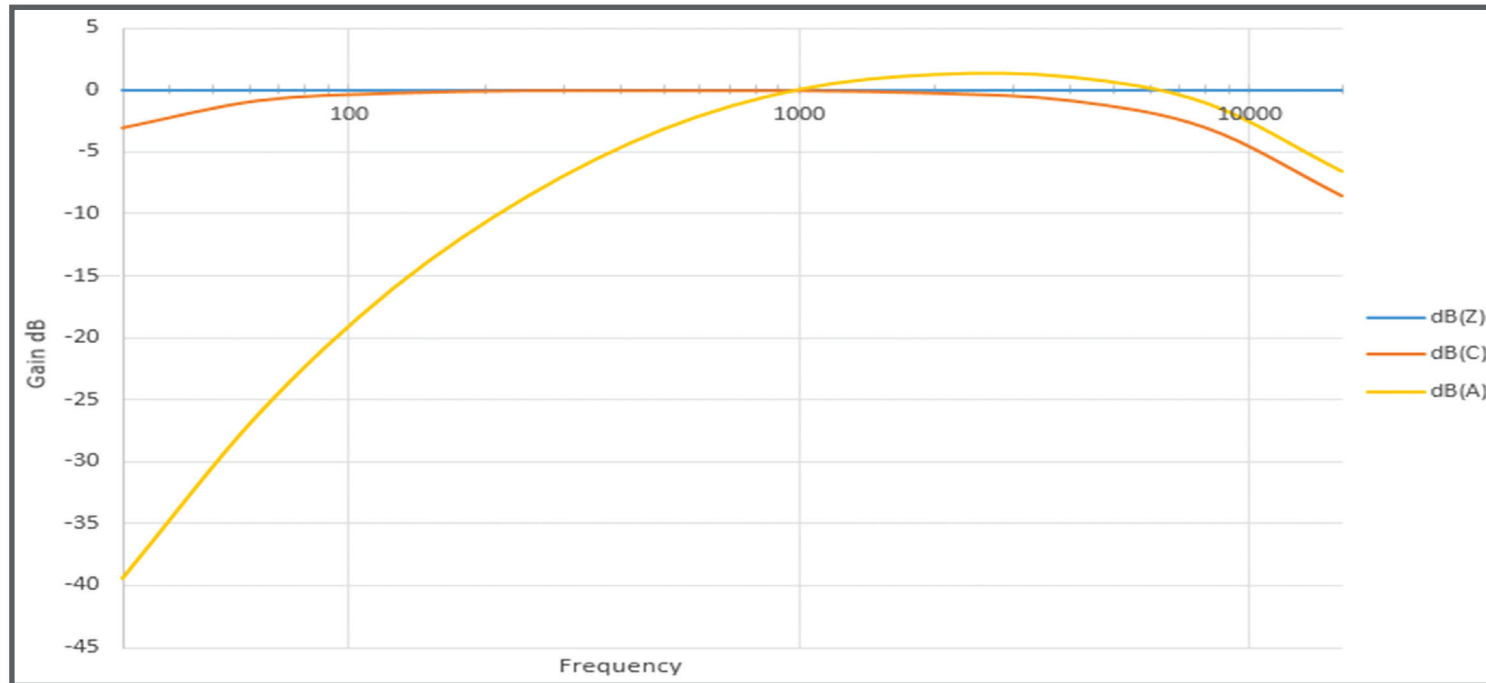
If both the subwoofer and the main speakers are new to the system, Wilson Audio recommends you optimize the main speaker positions for overall sound quality before introducing the subwoofer. To prevent equipment damage



and facilitate movement, keep the subwoofer out of the listening area during the two-channel setup phase.

The ActivXo CD contains a variety of test tones to aid you with the setup of your ActivXo.

1. If your playback electronics have signal level metering facilities, use track 1 (1 kHz tone) to assure equal signal levels to both left and right loudspeakers. The ActivXo's output level should be turned all the way down.
2. Before you adjust the subwoofer, ensure that the left and right main loudspeakers are in phase by using track 4, (BLN—bandwidth limited noise). The noise should appear to come from exactly between your left and right loudspeakers.
3. If you have either a spectrum analyzer or a sound pressure level (SPL) meter, you should measure and document the in-room response of your L & R loudspeakers, running full-range, without subwoofer contribution. This will give you a baseline measurement. While you can measure each channel individually, it is more expedient to measure both simultaneously using the test signals, which are recorded in mono. Measurement locations for the microphone should include one at ear height at the main listening location. Additional locations could include: two meters on either side of the primary listening position;



halfway between the listening position and the back wall. These readings must be averaged together. Expect measurements taken close to walls to show substantially more low frequency energy than those taken near the center of the room. Use the dB-C weighting, or, if available, the "Flat"/ non-weighted scale of your instrument. The graphic above compares dB-A & dB-C weighting. The more commonly used dB-A scale is intended to correspond to the ear's "frequency response" at low SPL and should never be used to calibrate low frequency levels. Please note that, even at 50 Hz, the dB-C scale is still down approximately 2 dB relative to 800 Hz. Don't be disappointed, therefore, if your dB-C scale measure-



ments show a gradual roll off in the bass. If your measurements follow the profiled roll off, it indicates a very linear speaker/room response. Use track 2, (pink noise), for spectrum analysis measurements. For measurements using a SPL meter, use tracks 6 through 16, (1/3 octave BLN beginning at 200 Hz and going down to 20 Hz). Document your measured results.

Warning: Tracks 17 through 27 are sine wave tones at the 1/3-octave center frequencies. These should not be used to perform in-room frequency response estimates due to gross inaccuracies which will be created by standing waves. Pure tones are included to scan for mechanical resonances and other distortions.

Notes 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.

4. If you choose to use the high pass section of the ActivXo to roll off bass to your main speakers, you can use your measured data to select a low pass (LP) frequency. The suggested setting for the high pass frequency is at the point where the measured frequency curve begins to “roll off,” specifically at the frequency that is minus three to minus six dB (relative to the average level of the full-range response). If specific measurements are

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not available, experience suggests a good place to start is at 50 Hz with an 18-dB/octave LP slope. The vast majority of loudspeakers with which your subwoofer will likely be partnered should have enough clean output and power handling in the 40-50 Hz region to allow this approach. However, some rooms exhibit so much loss in the LF that the L & R speakers may have difficulty powering bass into that region and benefit from the subwoofer augmentation up to 60-80 Hz.

Introduction of the ActivXo into Your System

Note: Each of the individual adjustment knobs correspond with a concentric Reference Knob with a red indicator. Once you have established your various settings for phase, gain, and low- and high-pass frequencies, move the red indicator such that it lines up with the white indicator on the adjustment knob. The Reference Knob ensure the documentation of your settings is intuitive and graphical. The reference indicator does not affect any of the setting parameters.

5. Ensure that the L & R loudspeaker power amps are "Off" or on "Standby."
6. Double check that all system cabling is correct and secure. At this point in the set up process, the input switches should be configured properly, according to instructions in Section 1 in this manual. It is now time to optimize Level, and Phase set-





tings.

7. If you are filtering the bass to your L & R speakers, select "HP In," and set the high pass frequency according to the acoustical measurements you have taken. Start with HP 12 dB/octave slope.
8. Initially select the low pass frequency 10% lower than the setting for the high pass frequency.
9. Select "LP In" and LP 18-dB/octave slope.
10. Initially set the Gain for the Left and Right channels of the of the Low Pass output to the twelve o'clock positions.
11. Initially set the Phase control at 90°.
12. Set the Level control at the "Min" position.
13. Turn on the program source components and preamplification.
14. After two minutes of stabilization time, turn on your ActivXo.
15. After two additional minutes of stabilization time, turn on your L & R channel power amplifiers.
16. Using track 2 (pink noise), turn the L & R speakers up to 75 dB-C using the main Level Knob; note the position of the Level

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knob.

17. The ActivXo features individual level adjustments for each of the subwoofer channels. These adjustments are located in the Low Pass section are labeled "Gain." If one sub is used, the level adjustments should remain in the twelve o'clock position.
18. If one subwoofer is in use, slowly advance the main output level control on the ActivXo while the L & R speakers are playing the pink noise until the low frequencies seem to be in balance with the rest of the spectrum. If you have a spectrum analyzer, adjust the output level for greatest linearity and extension.
19. If two subs are used, it is easiest to adjust each subwoofer individually, using the following steps.
20. With the Left and Right Gain controls in the twelve o'clock position, slowly advance the main output level control on the ActivXo while the L & R speakers are playing the pink noise until the low frequencies seem to be in balance with the rest of the spectrum. If you have a spectrum analyzer, adjust the output level for greatest linearity and extension.
21. Document this setting using the concentric Reference knob.
22. Turn the Left Gain Control to Min



23. Next, slowly rotate the Right Channel Phase control counter clockwise from 90° to 0° and notice how LF levels will change; note the position between 0° & 90° where the LF output is greatest.
24. Repeat this process from 90° to 180°, again noting the position where LF output is greatest. These two settings become your “semifinalists.”
25. Go to track 28 (drum and guitar music) and compare the sound of your two Phase “semifinalists.” Listen for cleaner LF transient attack speed and greater weight to select your “winner.” Note the winning setting.
26. Use two tracks, 29 and 32, to establish the ActivXo’s upper frequency limit with the LP frequency control setting for the right channel. What you are looking for is a setting that is low enough to keep from adding artificial chestiness to the male voice in track 32, yet high enough to provide convincing, linear low frequency continuity in track 29. Note the setting.
27. Using the same tracks (29 & 32) and similar listening-judgment criteria, optimize the setting of HP frequency control, which establishes the low frequency limit of your L & R speakers. Note the setting.

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28. At this point in the process, it is instructive to measure the acoustic response of the combined L & R system a second time, but this time with the addition of the subwoofer. Compare the results of this measurement with your prior measurements made without the subwoofer. Document these new measurements. You should now clearly observe more output below 40 Hz as well as good linearity.
29. Using the Right Gain control in the Low Pass section, trim the output so it returns to a balanced setting with the left and right main channels.
30. Ensuring your Gain setting is documented with Reference Knob, move the Right Channel Gain setting to Min.
31. Turn the Left Channel Setting to the 12 O'Clock and repeat the



above steps for the left channel.

32. Now is a good time to experiment with different filter slopes. Simply follow the same procedures as above, being careful to note all settings. This second experiment can then be compared with the first, using music and measurements. Pick the approach that gives the most satisfying musical results.

Section 2.2—Break-in Period

All audio equipment will sound its best after the components have been broken-in for some period of use. While it should sound quite good out of the box, the ActivXo will sound its best after approximately fifty hours of playtime.

ACTIV
XO

WILSON
AUDIO

LOW PASS

INPUT SELECT: PROGRAM, LINE

INPUT: LP IN, LP OUT

OUTPUT: BAL, UNBAL

SLOPE: LP 12dB

LEFT FREQ: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150

RIGHT FREQ: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150

LEFT GAIN: *MAX

RIGHT GAIN: *MAX

LEFT PHASE: 0, 180

RIGHT PHASE: 0, 180

HIGH PASS

INPUT: HP IN, HP OUT

OUTPUT: BAL, UNBAL

SLOPE: HP 6dB, HP 12dB

LEFT FREQ: 70, 80, 90, 100, 110, 120, 130, 140, 150

RIGHT FREQ: 70, 80, 90, 100, 110, 120, 130, 140, 150

LEFT GAIN: MIN, *MAX

RIGHT GAIN: MIN, *MAX

LEVEL: MIN, MAX

POWER: STANDBY, OFF / REMOTE

Dual Subwoofer Active Crossover

LOW PASS

INPUT SELECT: PROGRAM, LINE

INPUT: LP IN, LP OUT

OUTPUT: BAL, UNBAL

SLOPE: LP 12dB

LEFT FREQ: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150

RIGHT FREQ: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150

LEFT GAIN: *MAX

RIGHT GAIN: *MAX

LEFT PHASE: 0, 180

RIGHT PHASE: 0, 180

HIGH PASS

INPUT: HP IN, HP OUT

OUTPUT: BAL, UNBAL

SLOPE: HP 6dB, HP 12dB

LEFT FREQ: 70, 80, 90, 100, 110, 120, 130, 140, 150

RIGHT FREQ: 70, 80, 90, 100, 110, 120, 130, 140, 150

LEFT GAIN: MIN, *MAX

RIGHT GAIN: MIN, *MAX

LEVEL: MIN, MAX

POWER: STANDBY, OFF / REMOTE

Dual Subwoofer Active Crossover

SECTION 3—TWELVE-VOLT TRIGGERS

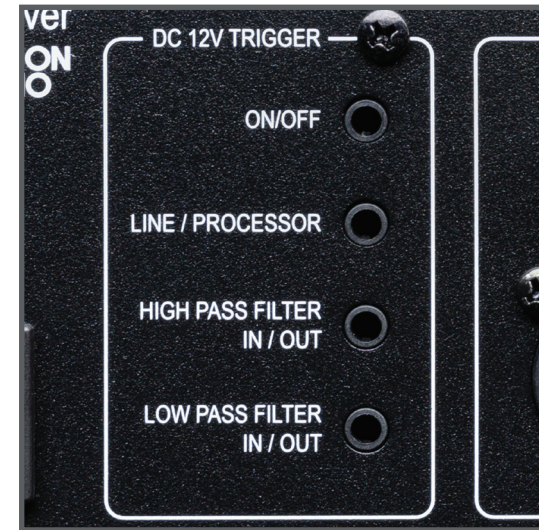
Section 3.1 - Twelve-volt Trigger Controls

Certain features of the ActivXo are controllable via a series of twelve-volt triggers. The triggers allow remote control access of these features by external control systems, Audio/Video, etc. This is a feature provides more convenient and seamless operation of the ActivXo within home theaters and complex audio systems.

Connect the 12-volt triggers via standard DC ports located adjacent to the audio inputs on the rear of the ActivXo. You can switch the following functions via the triggers: On/Off (Stand By); Line/Processor; High Pass Filter In/Out; Low Pass Filter In/Out.

To access control of one of these four features via its twelve-volt trigger, move the switch corresponding to that function to the “Rem” position. The switches for Line/Processor, High Pass Filter In/Out, and Low Pass Filter In/Out are three position toggles located on the front control panel. If you wish to control any of these features via the twelve-volt trigger, move the corresponding switch to the center position labeled “Rem.” The switch for the Stand By On/Off control is located on the right-hand side of the front panel. Leave this switch undepressed when controlling this function via the twelve-volt trigger.

Please Note: Only the switches relevant to the features to be remote controlled should be switched to the “Rem” position. Toggling the switch to the remote position without a twelve-volt trigger connected to that switch will potentially result in your ActivXo being improperly configured. The



Twelve-volt Trigger Switch Table		
Feature	Zero Volts	Twelve Volts
On/Off (Stand By)	Stand By Mode	On
Line/Processor Input	Processor	Line
High Pass In/Out	High Pass Engaged	High Pass Bypassed
Low Pass In/Out	Low Pass Engaged	Low Pass Bypassed

trigger switch defaults to the zero-volt position with nothing connected.

The trigger is designed to be attached to two-state, relay switches which toggle between zero volts and twelve volts. Several Audio/Video ActivXos feature twelve-volt relay triggers, the status of which are associated with selected modes. These can be used in conjunction with the ActivXo relay switches to configure your cross-over ideally for those corresponding modes. Similarly, control systems such as Crestron, Control 4, and others have the option for interfacing with controllable devices via twelve-volt relay triggers. Consult your audio specialist or installer for more details.

The twelve-volt triggers are two-state switches: the presence of zero volts (no voltage) on the input of the trigger switches to one state and the presence of twelve volts on the input, the other. The above table outlines the trigger state of the controllable features of the ActivXo.

ACTIV
XO

Wilson
Audio

LOW PASS

INPUT SELECT: PROCESSOR (REM), LINE

INPUT: LP IN, LP OUT; OUTPUT: BAL, UNBAL; SLOPE: LP 12dB, LP 24dB

LEFT: FREQ (30, 50, 70, 100, 150, 200, 300, 500, 700, 1000, 1500, 2000, 3000, 5000, 7000, 10000); GAIN (MIN, 0, 10, 20, 30); PHASE (0, 180); RIGHT: FREQ (30, 50, 70, 100, 150, 200, 300, 500, 700, 1000, 1500, 2000, 3000, 5000, 7000, 10000); GAIN (MIN, 0, 10, 20, 30)

HIGH PASS

INPUT: HP IN, HP OUT; OUTPUT: BAL, UNBAL; SLOPE: HP 6dB, HP 12dB

LEFT: FREQ (30, 50, 70, 100, 150, 200, 300, 500, 700, 1000, 1500, 2000, 3000, 5000, 7000, 10000); RIGHT: FREQ (30, 50, 70, 100, 150, 200, 300, 500, 700, 1000, 1500, 2000, 3000, 5000, 7000, 10000); GAIN (LEFT, RIGHT) (0, 10, 20, 30)

LEVEL: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

POWER: STANDBY, ON

Dual Subwoofer Active Crossover

Dual Subwoofer Active Crossover

LOW PASS

INPUT SELECT: PROCESSOR (REM), LINE

INPUT: LP IN, LP OUT; OUTPUT: BAL, UNBAL; SLOPE: LP 12dB, LP 24dB

LEFT: FREQ (30, 50, 70, 100, 150, 200, 300, 500, 700, 1000, 1500, 2000, 3000, 5000, 7000, 10000); GAIN (MIN, 0, 10, 20, 30); PHASE (0, 180); RIGHT: FREQ (30, 50, 70, 100, 150, 200, 300, 500, 700, 1000, 1500, 2000, 3000, 5000, 7000, 10000); GAIN (MIN, 0, 10, 20, 30)

HIGH PASS

INPUT: HP IN, HP OUT; OUTPUT: BAL, UNBAL; SLOPE: HP 6dB, HP 12dB

LEFT: FREQ (30, 50, 70, 100, 150, 200, 300, 500, 700, 1000, 1500, 2000, 3000, 5000, 7000, 10000); RIGHT: FREQ (30, 50, 70, 100, 150, 200, 300, 500, 700, 1000, 1500, 2000, 3000, 5000, 7000, 10000); GAIN (LEFT, RIGHT) (0, 10, 20, 30)

LEVEL: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

POWER: STANDBY, ON

SECTION 4—SPECIFICATIONS

Section 4.1—Specifications

Input Impedance: 22k ohms single-ended, 50k ohms bal.

Inputs: Balanced and single-ended, Processor

Outputs: High-pass, balanced and single-ended, 2 stereo
Low-pass, balanced and single-ended, 2 mono

Low Pass Filter: Level & Frequency (30 to 150 Hz)
Adjustable, 12 dB or 18 dB/Octave

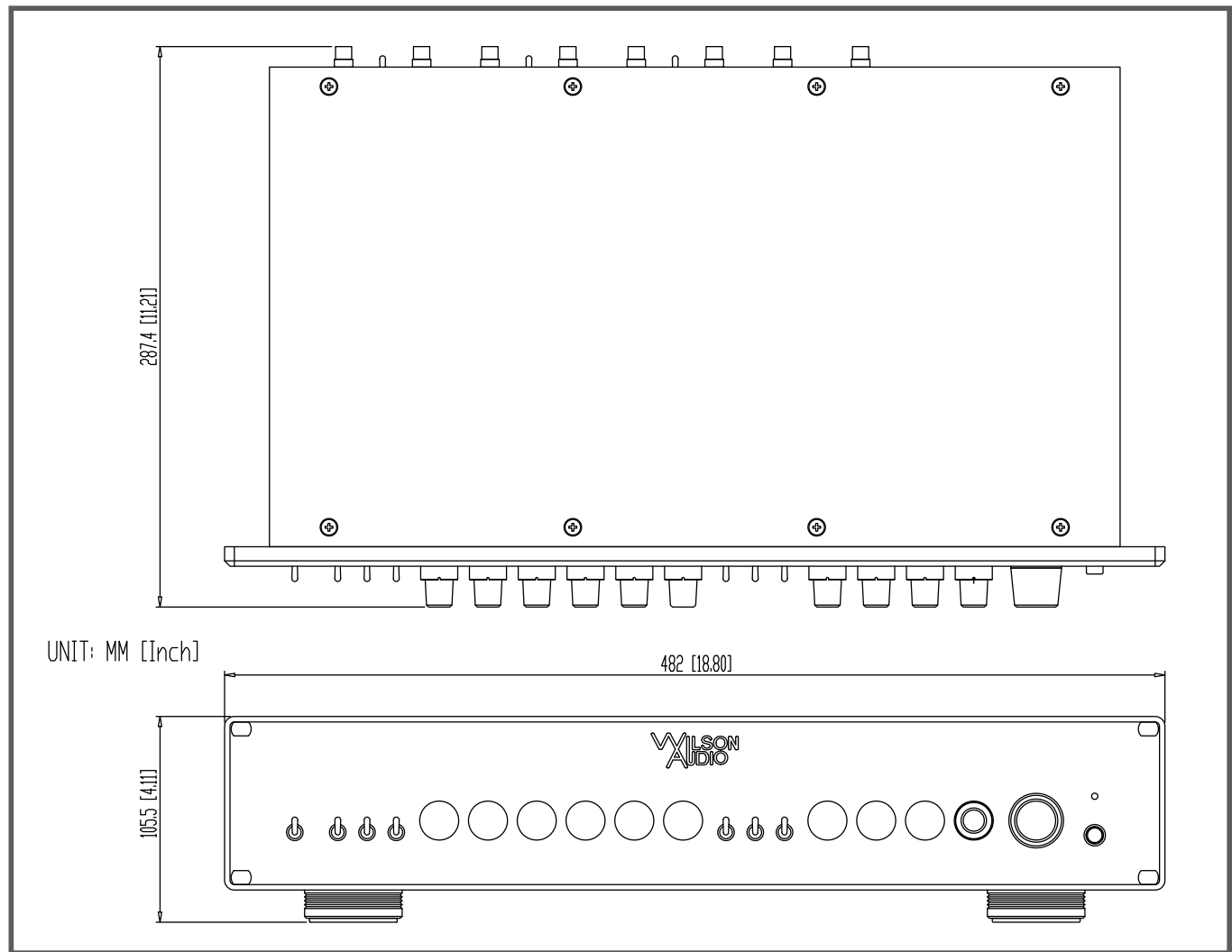
High Pass Filter: Level & Frequency (30 to 150 Hz)
Adjustable, 6 dB or 12 dB/Octave

Phase: 0 - 180 degrees, continuously variable

Dimensions: Width: 18.8" (482mm)
Height: 4.5" (155.4mm) - Includes feet
Depth: 11.5" (287.4mm) - Includes knobs

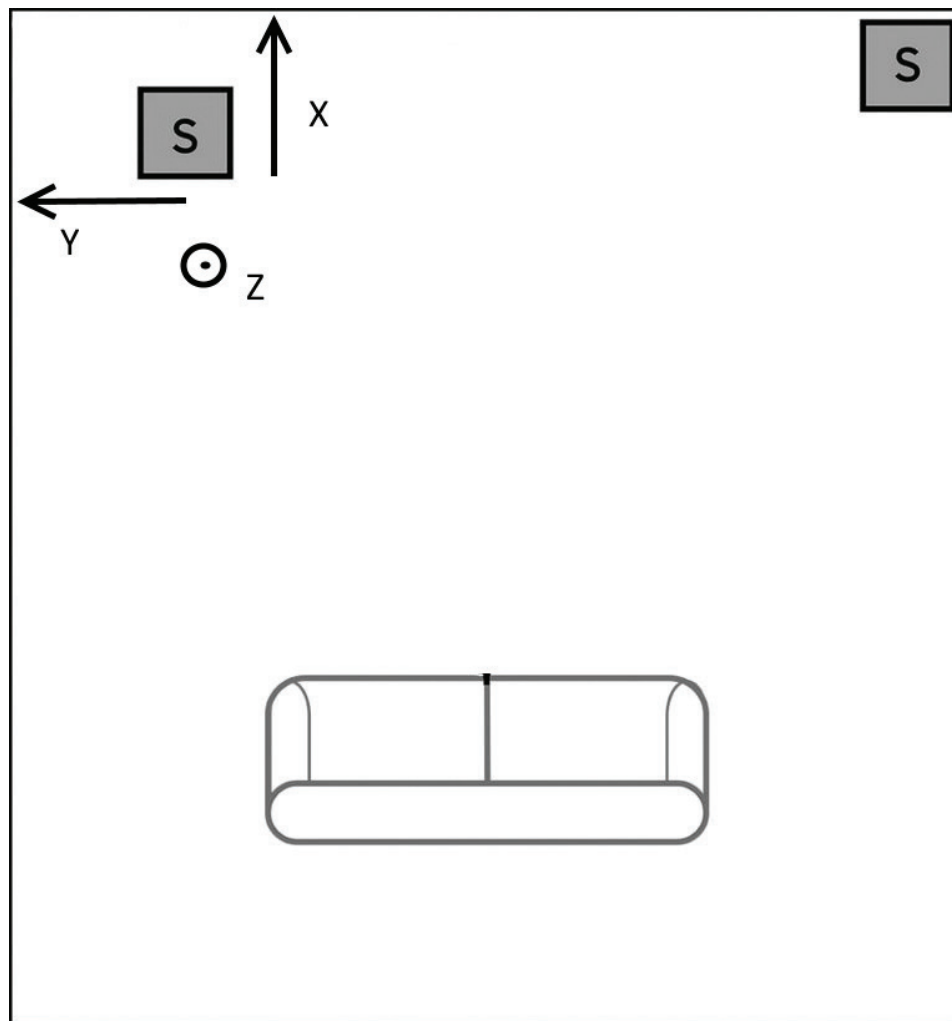
Weight: Net - 16.75 lbs (7.6 kg)
Approx. Shipping - 22 lbs. (10 kg)

Section 4.2—Graphical Dimensions



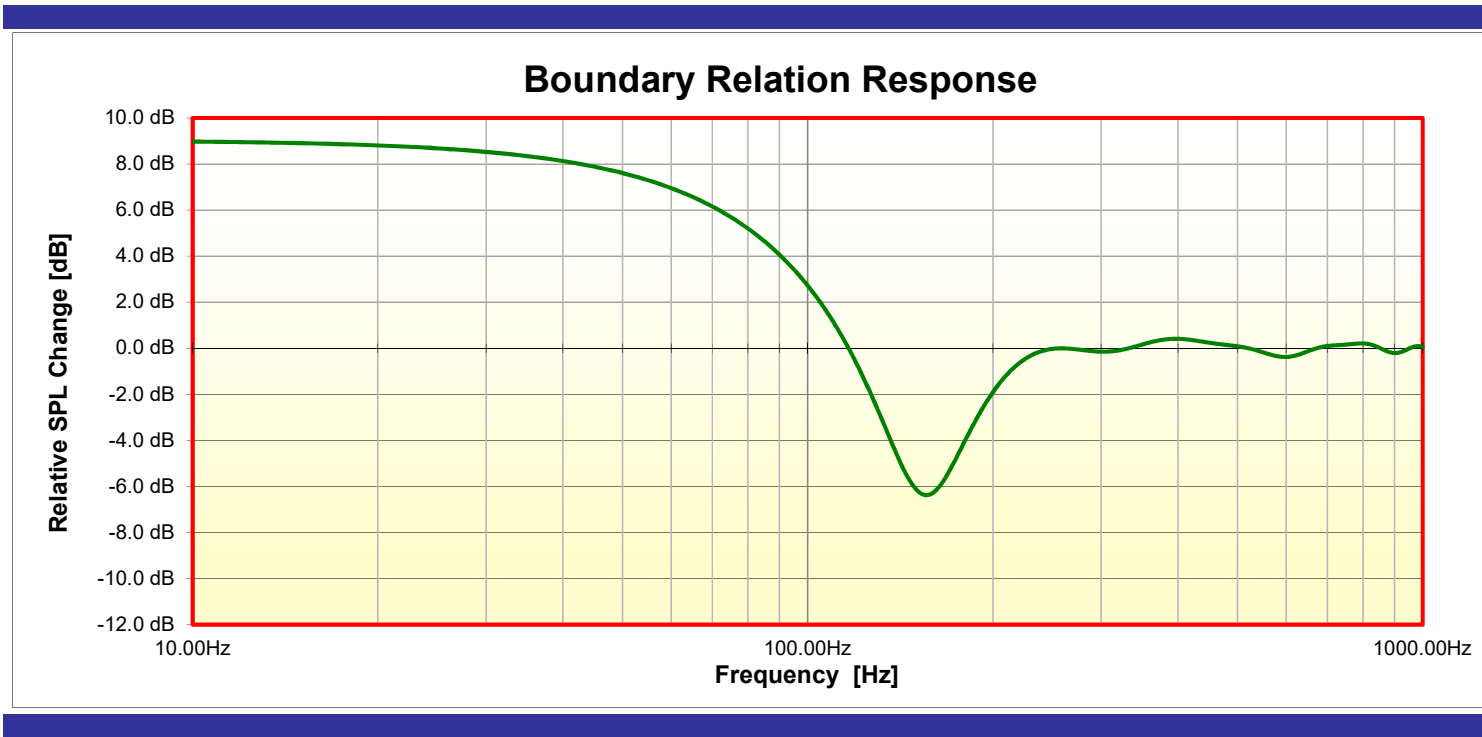
Section 4.3—Typical Placement of Subwoofer in Corner

Note: X and Y are the driver coordinates based on a where the subwoofer is six inches away from the side and rear walls respectively.



Section 4.4—Room Induced Frequency Alterations for Wilson Subs

Boundary Effects for WATCH Dog:

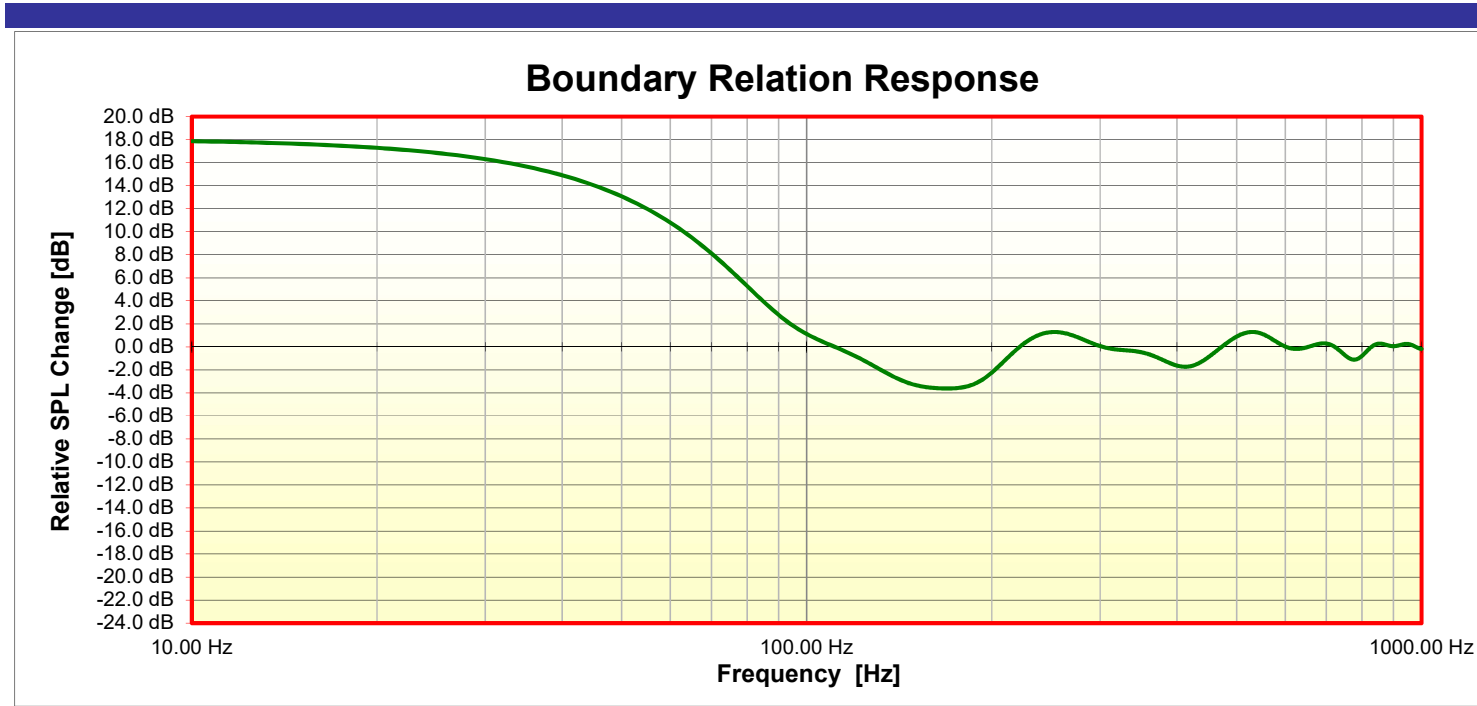


Loudspeaker Relation to Boundary

X-Direction	28.5000 in
Y-Direction	24.0000 in
Z-Direction	19.5000 in

Temperature	20.00°C
Speed of sound	343.53m/s

Boundary Effects for Thor's Hammer:

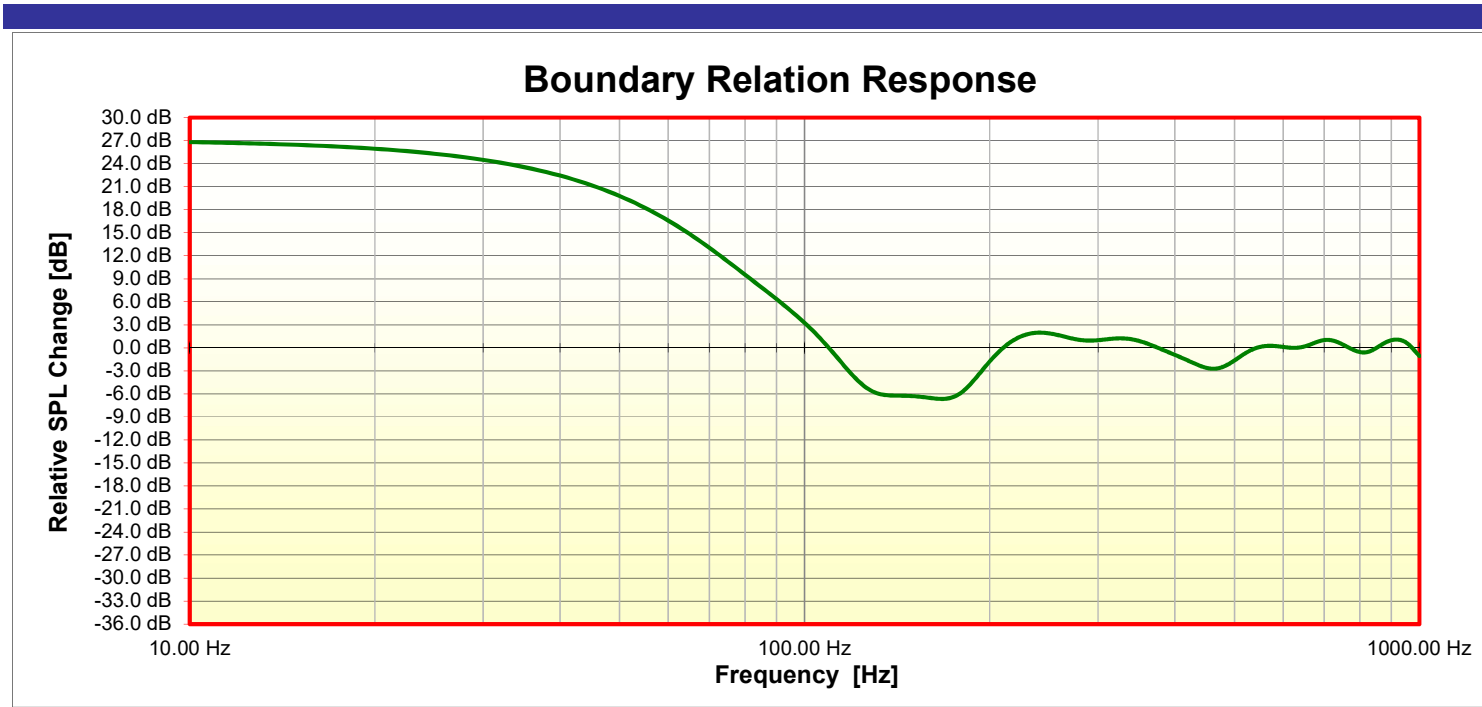


Loudspeaker Relation to Boundary

X-Direction	31.0000 in	
Y-Direction	26.0000 in	
Z-Direction	15.0000 in	51.5000 in
	Bottom Woofer	Top Woofer

Temperature	20.00°C
Speed of sound	343.53m/s

Boundary Effects for Subsonic & WAMM Master Subsonic:



Loudspeaker Relation to Boundary

X-Direction	30.0000 in		Temperature	20.00°C
Y-Direction	24.0000 in		Speed of sound	343.53m/s
Z-Direction	11.0000 in	34.0000 in		
	Bottom Woofer	Middle Woofer		58.5000 in
				Top Woofer

WILSON
AUDIO

LOW PASS

LEFT
GAIN
RIGHT

LEFT
R
PHASE
RIGHT
L

INPUT
OUTPUT
SPE

HIGH PASS

PHASE
GAIN

LEFT

RIGHT

INPUT

OUTPUT

SPE

SECTION 5 – WARRANTY

Section 5.1—Warranty Details

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. Alternatively, the warranty may be filled out on-line.

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.