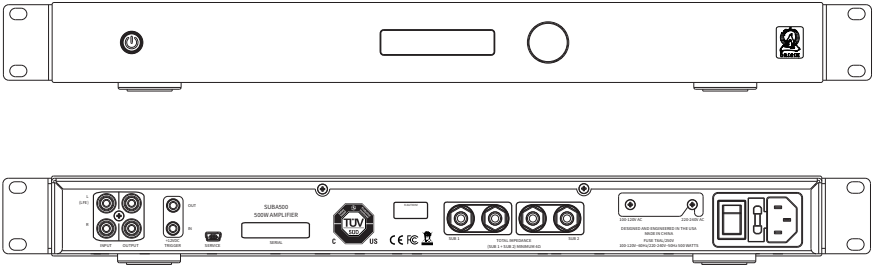




# SUBA-500

## Installation Manual

### SUBA500 SUBWOOFER AMPLIFIER



# IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions
- Keep these instructions
- Heed all warnings
- Follow all instructions
- Do not use apparatus near water
- Clean only with dry cloth
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions
- Do not install near any heat sources such as radiators, head registers, stoves, or other apparatus including amplifiers that produce heat
- Do not install near heat sources such as radiators heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding plug. The wide blade or the third prong are provided for you safety. If the plug does not fit into your outlet consult an electrician for replacement or the obsolete outlet.
- Protect the power plug from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only user attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the car/apparatus combination to avoid injury from tipping over.

- Unplug this apparatus during lightning storms or when unused for period of times.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus had been damaged, liquid had been damaged in any way, such as power supply cord or plug id damaged, liquid had been dropped or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
- The equipment shall be used at a maximum temperature of 35 degrees Celsius ambient temperature.
- Do not open the equipment to reduce the risk of electric shock. For safety reasons it is only allowed to be opened by a qualified service person.
- **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to the rain or moisture. And the apparatus shall not be e3posed to dripping or splashing and that no objects filled with liquid, such as vases, shall be placed on the apparatus.
- The MAINS plug is used as a disconnect device and shall remain readily operable.
- The product shall be used in an open area or bench.
- No naked flame sources, such as lighted candles, should be placed on the apparatus.
- The apparatus should be connected to a mains socket outlet with a protective earthing connection.
- Ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains, etc.
- This apparatus is suitable for use in tropical climates.



# Table of Contents

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## Introduction

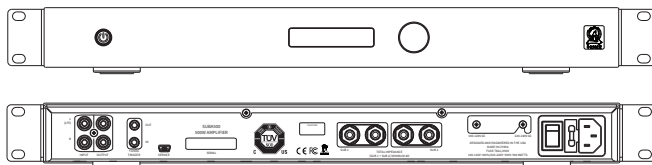
Thank you for purchasing the SubA Series amplifier. At Origin Acoustics, we take pride in providing you with a high quality product. All of Origin Acoustics' products are designed to have excellent sound quality, longevity, and a simple installation process.

This instruction booklet covers the necessary information for a smooth installation, including: the tools you will need, step-by-step instructions for installation, troubleshooting tips for any errors that may occur, and all warranty information. If for any reason you experience problems or if you have installation questions please call us at (844) 674-4461. Hours of operation are 8:00am to 5:00pm (Pacific Time), Monday through Friday.

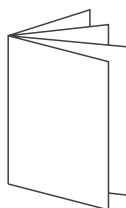
## Amplifier Specifications

<b>MODEL</b>	<b>SUBA-500</b>
<b>PART</b>	<b>AMPSUB1X500</b>
<b>Continuous Power Output</b>	250 watts RMS at 8 ohms 500 watts RMS at 4 ohms (< 0.5% THD)
<b>Input Sensitivity</b>	100 mV for 500W output 4 ohms
<b>Input Impedance</b>	15,000 ohms
<b>S/N Ratio</b>	88 dB (5 kHz bandwidth relative to 500W @ 4 ohms)
<b>Frequency Response</b>	-1.1dB at 300 Hz (Flat EQ, LFE Crossover Setting) -1.5dB at 20 Hz
<b>Distortion</b>	< 0.2%
<b>Auto On Sensitivity</b>	< 5.5 mV (Left) < 22 mV (Right)
<b>External Trigger Voltage</b>	12V +/-1.2V no load 10.5 V with 100 mA load)
<b>12V Trigger Threshold</b>	2.6 V
<b>Current Limit Threshold</b>	3.5 ohms (4 ohm minimum speaker load)
<b>Front End Overload</b>	3.6 V RMS (L + R, 20 Volume, 40 Hz Signal, Flat EQ, LFE Crossover)
<b>Dimensions</b>	16.9" W (19" including rack mounts) 1.75" H (2.1" including feet) 8.1" D (front switch to rear chassis) 8.9" D (front switch rear speaker connector)
<b>Weight</b>	8.5 lb
<b>Certification</b>	TUV Listed and tested under UL/EN60065 for US and Canada

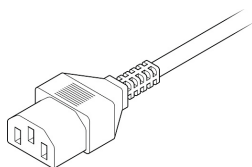
## What's Included\*



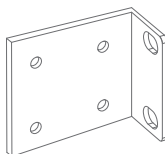
**Amplifier**



**Manual**



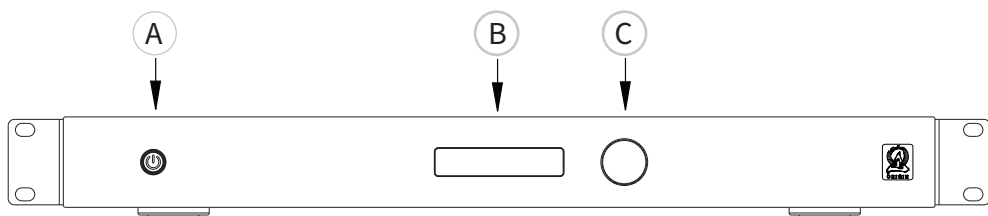
**Power Cable**



**Rack Ears**

\*Rack Ears For Dual 1U Mount Sold Separately

## Amplifier Features



### A. Power

Red: Off/Standby

Blue: On/Operating

### B. STATUS DISPLAY MENU

Displays current function/setting.

### C. SELECTION KNOB/ROTARY ENCODER

Navigates and controls menu display functions.

### D. RCA LINE LEVEL INPUTS

**LFE IN:** Connects the left female RCA input to an LFE output connection on a receiver or pre-amp processor.

**L/R IN:** Connects the left and right female RCA input to the left and right front output connections on a receiver or pre-amp processor.

### E. RCA LINE LEVEL OUTPUTS

**OUT:** Connects additional amplifiers.

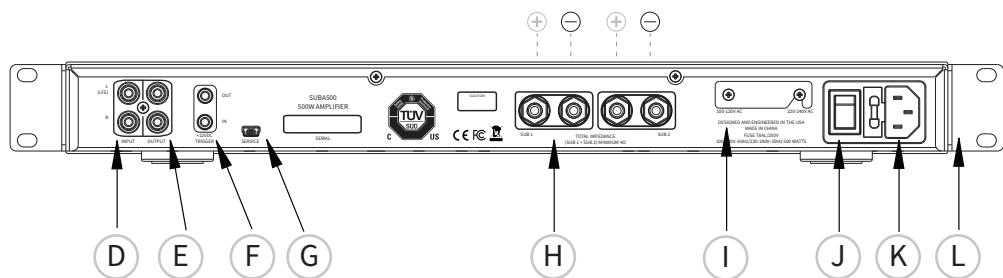
### F. 12V TRIGGER IN/OUT

**12V TRIGGER IN:** Turns on the amp when a 12V signal is received from another 12V trigger device.

**12V TRIGGER OUT:** Sends a 12V signal to another 12V trigger device.



## Amplifier Features



### G. MINI USB PORT

Reserved for future use.

### H. SPEAKER OUTPUTS

Connects the speaker wires to the binding posts.

**NOTE:** Total impedance (SUB 1 + SUB 2) should not be less than 4Ω.

### I. VOLTAGE SELECTOR

Selects the appropriate input voltage setting: 100V or 220V.

### J. MASTER POWER SWITCH

Switch between on/off.

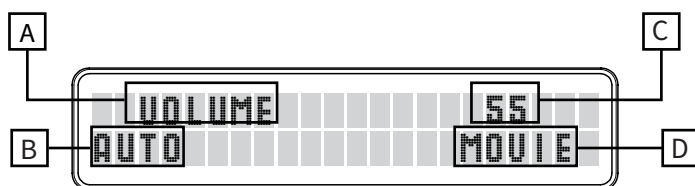
### K. FUSE

Additional fuse included for servicing.

### L. AC POWER IN

IEC power cord.

## Menu Display



### A. VOLUME DISPLAY

#### B. VOLUME LEVEL

Displays the volume level.

**NOTE:** Lock mode overrides power mode.

#### C. POWER MODE

Displays the power control mode for the amplifier. No display if FRONT PANEL power control mode is selected.

**NOTE:** Only the volume level can be adjusted while on the main menu screen.

#### D. SOUND MODE

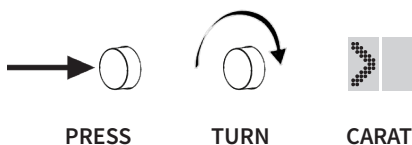
Displays the current sound mode setting. No display if sound mode is set to BYPASS.

## Menu Function Screen

Press the selection knob to enter the function sub menu.

- Turn the selection knob to cycle through each sub menu option.
- Press the selection knob to adjust the menu function.
- A carat will appear when levels can be adjusted.
- Press the selection knob again to exit the adjustment menu and turn the knob to advance to the next sub menu function.
- Repeat to set all functions.
- Once reaching the last option in the function sub menu, press to exit to the main menu.

**NOTE:** The sub menu will scroll continuously in both directions until the knob is pressed to exit once reaching the “Menu Exit” screen.



### A. CROSSOVER: 40Hz–250Hz/LFE

Selects the low pass filter for the amplifier

**NOTE:** Set LFE when using the LPF on an AVR.

**DEFAULT:** LFE



### B. SPEAKER EQ: LFE(FLAT)/ EQ1/ EQ2/ EQ3

Selects the EQ mode for the amplifier.

**FLAT:** 0 reference setting (unmodified sound).

**EQ1/ EQ2 / EQ3:** Preset values table on page 14.

**DEFAULT:** FLAT



### C. PHASE: 0–180° (45° steps)

Contours subwoofer performance to match speaker performance and acoustic environment.

**DEFAULT:** 0°



## Menu Function Screen

### D. SOUND MODE: BYPASS/MUSIC/MOVIE

Selects media preference.

**BYPASS:** Reference

**MUSIC:** Boosts +1.5dB @ 50Hz

**MOVIE:** Boosts +3dB @ 30Hz

**DEFAULT:** BYPASS

A screenshot of the amplifier's menu screen showing "SOUND MODE" on the top line and "BYPASS" on the bottom line.

### E. POWER CONTROL:

FRONT PANEL/12V TRIGGER/AUDIO SENSE

Sets the power on state.

**FRONT PANEL:** Always on. Amplifier does not turn off automatically. Turn until ON/OFF using the front panel power button.

A screenshot of the amplifier's menu screen showing "POWER CONTROL" on the top line and "FRONT PANEL" on the bottom line.

**12V TRIGGER:** Amplifier turns on when 12V signal is detected and off when 12V signal is absent.

**AUDIO SENSE:** Audio Sense enabled. Amplifier turns on when audio signal is detected. Unit enters standby mode if no signal is detected after 15 minutes.

**DEFAULT:** FRONT PANEL

## Menu Function Screen

### F. LOCK CONTROLS: ON/OFF

Locks the controls to prevent accidental changes in settings. Press and hold knob for 10 seconds to unlock.

**ON:** Locks controls

**OFF:** Allows adjustment of settings

**DEFAULT:** OFF



LOCK CONTROLS  
OFF

### G. FACTORY RESET

Resets all functions to default settings. Push the knob to enter the reset menu, turn the knob once to select firmware reset, then push once more to reset to factory settings.



FACTORY RESET  
OF SWU 1-18

**NOTE:** Firmware version is displayed on screen when selected. (SW V11

### H. MENU EXIT SCREEN

Press the selection knob to exit to the main menu screen, or turn the selector knob to scroll to the beginning of the sub menu. The selector knob will advance the sub menu continuously in both directions until the knob is pressed to exit once returning to the “Menu Exit” screen.



EXIT MENU  
PRESS TO EXIT

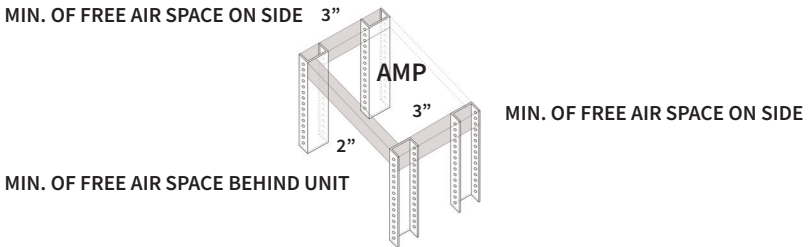
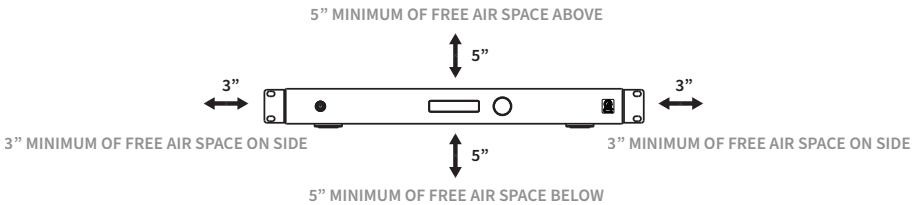
**NOTE:** The volume level can be adjusted immediately once exiting the sub menu to the main menu.

# Set Up Guide

## AMPLIFIER POSITIONING

Placing the amplifier can have a large impact on performance and longevity. Please take the following guidelines into consideration:

- Ensure that the unit is in a well-ventilated area that provides adequate cooling.
- A minimum of 5" should be allowed above and below the amplifier for optimum performance.



2" MINIMUM OF FREE AIR SPACE BEHIND UNIT  
(FOR CABLES AND CONNECTORS)

## INSTALLATION

- Attach ears to the amplifier if mounting into rack.
- Bottom feet on the amplifier chassis may be removed if necessary.

## CONNECTION

**! CAUTION:** All connections and switching must be done with the amplifier turned off. Connect the power cord last to ensure that the amplifier is off during all the connections and set up.

### RCA Line Level

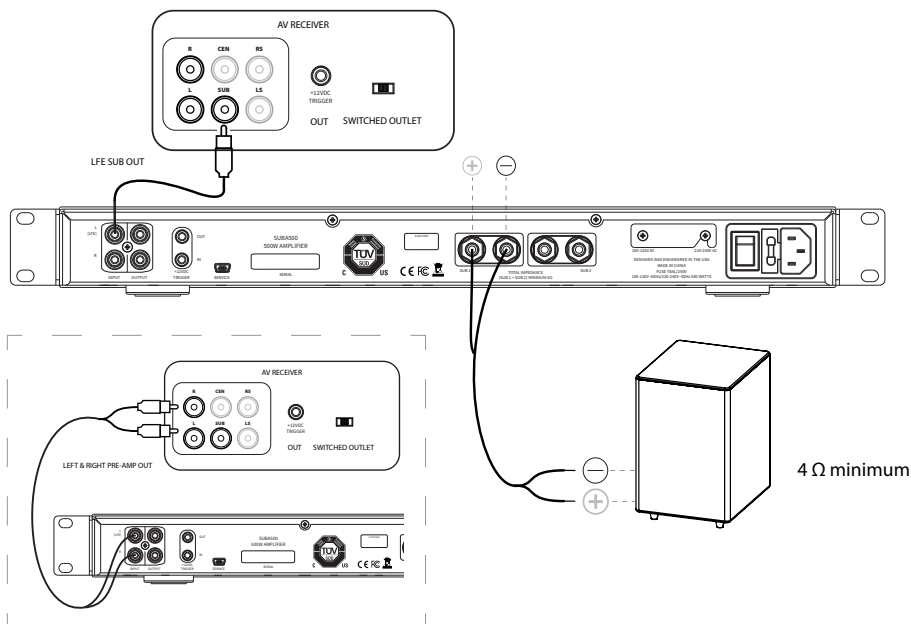
Use high-quality RCA cables that feature low impedance with adequate shielding and high-quality connectors.

### Speaker Outputs

Use 14 or 16 gauge stranded two-conductor speaker wire. Connect the appropriate conductor to each screw terminal, observing correct polarity.

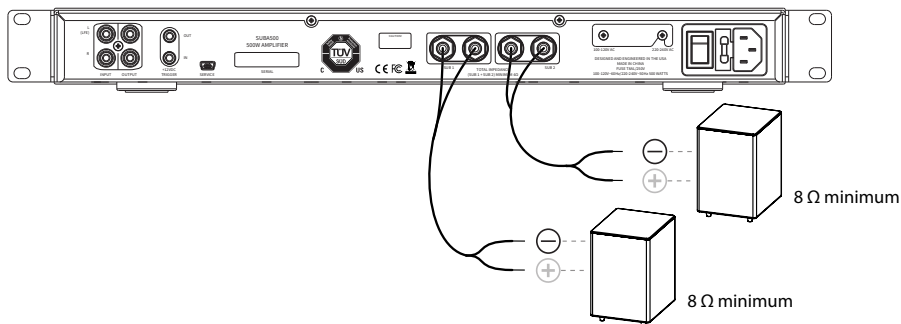
**! CAUTION:** When two subwoofers are connected in parallel, the nominal impedance of each subwoofer should not be less than  $8\Omega$ .

## SINGLE SUB CONNECTIONS



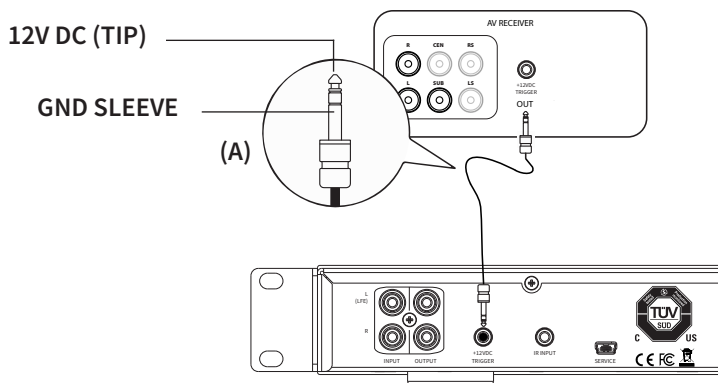
# Set Up Guide

## DUAL SUB CONNECTIONS



## 12V DC TRIGGER

Connect the 12V trigger output of another device to the 12V trigger input of the amplifier using a high quality mono cable.



Use

**(A)** 12 V Triger Output

Connect the appropriate conductor to each screw terminal, observing correct polarity.



## Fine Tuning

After making all connections and calibrating the speakers, fine tune the subwoofer as instructed below. See pages 4–5 for more on menu functions.

**NOTE:** When using an AV receiver and the LFE input, set the subwoofer calibration level to the factory setting, and select LFE for CROSSOVER.

**1.** Ensure that the subwoofer is plugged in.

During initial setup, set the POWER CONTROL to FRONT PANEL. Once calibration is complete, switch to AUDIO SENSE to enable the automatic power-saving mode. For reference, the different modes are as follows:

**FRONT PANEL:** Always on. Amplifier does not turn off automatically. Turn the unit ON/OFF using the front panel power button.

**12V TRIGGER:** Amplifier turns on when 12V signal is detected and off when 12V signal is absent.

**AUDIO SENSE:** Audio Sense enabled. Amplifier turns on when audio signal is detected. Unit enters standby mode if no signal is detected after 15 minutes.

**2.** Select the desired EQ setting or set to FLAT (unmodified sound). Set the controls to positions that will enable tuning for maximum performance.

FLAT: Unmodified Sound	
Setting	Value
Initial Volume	30
Initial Crossover	Set to 170Hz, or set to LFE if LFE input is used
Initial Phase	100Hz

**NOTE:** If deeper bass is desired, adjust the Crossover control toward the lower frequencies. Experiment with different frequency settings until finding one that sounds best. When using the LFE input, set to LFE and make any crossover adjustments in the preamplifier or receiver crossover settings.

	Frequency	Boost
EQ1:	30Hz	6dB
EQ2:	50Hz	6dB
EQ3:	70Hz	6dB

**3.** Play a movie scene or music track and set the system volume to an average level. Listen to the bass level from the preferred listening position. Adjust the VOLUME control as desired.

**4.** Continue listening to music and movie sources using the settings chosen for volume and crossover.

**5.** Experiment with the PHASE until finding the best setting. Depending on the subwoofer placement, the bass may sound louder or deeper when the phase has been optimized. In some cases, adjusting phase will make no discernible difference.

## Troubleshooting

If you have a problem, try isolating it first. For example, if you're playing a DVD and there is no sound, try replacing the DVD with an MP3 player to see if you get sound. If it does work, then the problem is with the television, DVD player, or the cables connecting them. If it doesn't work, the problem will be with the amplifier, speakers, or those cables.

Problem	Possible Cause
No Sound	The volume may be turned down or muted. Check the volume settings on both the amplifier and the television/computer/CD player/etc.
No Sound	Make sure the proper source is selected on the amplifier or receiver. Check amplifier is not in standby mode and needs to be turned on (blue LED).
No Sound	Check the cord connecting the amplifier with the source. The cord may be damaged or plugged into the wrong input or output.
No Sound	Check the wires connecting the amplifier with the speakers. Make sure they're connected properly and not damaged in any way.
Poor Sound Quality	If you hear something like static, or the sound is cutting in and out, check the audio cables. If the problem increases when a cable is being moved, then the cable is most likely faulty or not connected properly. Also, check RCA input cables by removing them one at a time and verify connections.
Poor Sound Quality	Today's audio systems may have several places to adjust the volume, for example your MP3 player may have a volume control, and your amplifier may also have one. Check to be certain that the volume isn't turned up past 80% on any device.
Poor Sound Quality	Try changing sources to be certain that the selection you've chosen is a good quality recording.

Problem	Possible Cause
No Power	Ensure the amplifier is plugged into a live outlet.
No Power	Ensure the power switch on the front panel is on (blue LED).
No Power	Fuse is blown. Replace with T8AL fuse type.
No Power	The power mode may be set to the wrong mode for the system's configuration or setup.
Unable to control menu	Ensure amplifier is not in Lock Mode. Hold for 10 seconds to unlock menu.

## Technical Assistance

If you have any questions or concerns about installing or using this product, you can reach us through one of the following methods:

Phone: (844) 674-4461

Hours of operation: 8:00am - 5:00pm (Pacific Time), Mon - Fri

Email: [techsupport@originacoustics.com](mailto:techsupport@originacoustics.com)

If you are having technical trouble, please include the model number and briefly explain what steps you took to resolve the problem in your email, or be prepared to answer these questions over the phone. If you are considering returning the product, it's required that you contact Origin Acoustics prior to any return attempts. This way we can determine if the issue can be resolved without returning the product, or if needed we can provide instructions and support for the return process.

## 2 Year Limited Warranty

Origin Acoustics warrants to the original retail purchaser only that this Origin Acoustics product will be free from defects in materials and workmanship, provided the speaker was purchased from an Origin Acoustics authorized dealer.

If the product is determined to be defective, it will be repaired or replaced at Origin Acoustics' discretion. If the product must be replaced yet it is no longer manufactured, it will be replaced with a model of equal to or greater value that is the most similar to the original. If this is the case, installing the replacement model may require mounting modifications; Origin Acoustics will not be responsible for any such related costs.

## Requirements & Warranty Coverage

This warranty may not be valid if the product was purchased through an unauthorized dealer. This warranty only applies to the individual that made the original purchase, and it cannot be applied to other purchases. The purchaser must be prepared to provide proof of purchase (receipt). This warranty will not be valid if the identifying number or serial number has been removed, defaced, or altered.

**\*All warranties and warranty conditions are subject to change. Please refer to [www.originacoustics.com](http://www.originacoustics.com) for the latest information.**

## Not Covered by Warranty

- Accidental damage
- Damage caused by abuse or misuse
- Damage caused by attempted repairs/modifications by anyone other than Origin Acoustics or an authorized dealer
- Damage caused by improper installation
- Normal wear, maintenance, and environmental issues
- Damage caused by voltage inputs in excess of the rated maximum of the unit
- Damage inflicted during the return shipment

## Return Process

Before making any return attempts, it is required that you first contact Origin Acoustics. Return product to Origin Acoustics or your dealer, either in person or by mail. It's preferable if the product is returned in the original packaging. If this isn't possible, the customer is responsible for insuring the shipment for the full value of the product.

This warranty is in lieu of all other expressed or implied warranties. Some states do not allow limitations on implied warranties, so this may not apply depending on the customer's location. (For more information, see Magnuson-Moss Warranty Act.)





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