rbh®

IMPRESSION SERIES
I-12 and I-12/e
POWERED SUBWOOFER
Owner's Manual

Introduction

Congratulations on your purchase of an Impression Series I-12 or I-12/e powered subwoofer! Your subwoofer is the result of many years of research and development dedicated to producing high quality products for home audio and home theater systems. This owners manual contains features, setup recommendations and specifications for the Impression Series I-12 and I-12/e powered subwoofers. It is recommended you thoroughly read through the material contained in this manual before connecting your subwoofer. Doing this will ensure you have a good understanding of how to setup your subwoofer for optimum performance and allow it to provide you years of listening enjoyment.

Impression Series Subwoofers

I-12 subwoofer with grille.

I-12/e subwoofer without grille.

Break-in Period

Allow several hours of listening time to adequately break-in your Impression Series subwoofer. As your subwoofer breaks-in during the first few hours of listening, the driver suspension will loosen. Following this initial break-in period, there will be an increase in low-frequency response, improved definition, and increased clarity and detail.

Care and Cleaning

To maintain your subwoofer's appearance, we recommend carefully wiping it with a clean, damp soft cloth. To help clean dust from the grille cloth, we recommend using a vacuum with a brush attachment.

Features

The subwoofer driver features RBH's proven, proprietary aluminum cone technology and adds considerable deep bass performance to your home theater or audio system. The aluminum cone helps the subwoofer deliver extraordinary amounts of accurate, uncompressed, high-fidelity bass with power handling far beyond traditional cone materials; this is due to aluminum's natural heatsink capabilities, which helps to draw heat away from critical components.

The I-12 powered subwoofer is designed to redefine the way you experience (and listen to) bass. The I-12 features a powerful 350 Watt RMS amplifier to help deliver incredible amounts of deep, defined bass.

The I-12/e powered subwoofer is the Elite version of the Impression Series I-12, delivering on all accounts. Designed specifically for those who just can't get enough bass, the I-12/e features an upgraded, powerful 500 Watt RMS amplifier delivering outrageous amounts of pulse-pounding, clear bass. The I-12/e's 12-inch aluminum cone subwoofer is nimble enough to respond quickly to changing dynamics in music, yet is strong enough to knock you back squarely in your seat.

The Impression Series cabinet is constructed of ¾-inch medium density fiberboard. Because of MDF's inert properties, coloration of sound by the cabinet is significantly reduced.

Available in two high-gloss finishes, Black Ash or Red Burl, these subwoofers aren't just another black box subwoofer, they are visually stunning; a piece of fine furniture that commands respect from its listeners.

Low Frequency Alignment Options

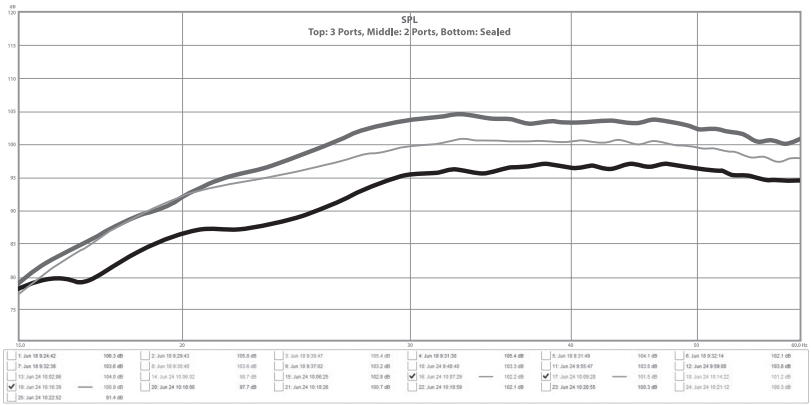
The I-12 and I-12/e subwoofers have a user-adjustable alignment with three, 3½-inch ports and 3 included port plugs. You can configure the subwoofer alignment to maximum output (3 open ports), maximum extension (2 open ports), or maximum damping (sealed).

#1 Leave all 3 ports open for maximum output for 25Hz and above.

#2 Leave 2 ports open for maximum low frequency extension below 25Hz.

#3 Plug all ports for maximum damping (least amount of output below 30 Hz).

The subwoofer's position in the room, the size of the room, and personal sound preference will dictate which configuration is best for your particular situation.



The above frequency response graph shows the responses for the port configurations mentioned above.

Room Setup Suggestions

In order to obtain the best possible sound from your speaker system, it is important to determine where the speakers will sound best in your listening room. Room reflections from the floor, ceiling and side walls influence the balance, imaging and overall sonic quality at the listening position. It is good practice to experiment with speaker placement to determine which location offers the best overall sound. As a general guide, use the room layout diagram and the following descriptions when setting up a 5.1 home theater system. Some speakers shown in the diagram may not always be applicable to your system. For more home theater system diagrams, please visit http://www.dolby.com.

Front Main Speakers
As a starting point, place your left and right front speakers at least 15 inches away from the front wall and at least 7-feet apart from each other. The distance from the listening position to each speaker should be close to the distance that separates the left and right front speakers. Slightly angling the speakers inward towards the listening position (toe-in) may give a more spacious and realistic sound stage.

Center Channel Speaker
The center channel speaker should be placed in the center between both left and right front speakers. Often, this positioning dictates placing the speaker either directly above or below a television monitor or projection screen.

Rear Surround Speakers
The rear surround speakers may be placed either above, behind, or to the sides of the listening position. The listening position should be centered between the surround speakers. To obtain the best performance, experiment with angling the surround speakers either towards, or away from, the listening position. If using bi-polar surround speakers, the optimal location for these is about 5-6 feet high on the walls and directly to the left and right of the listening position. This position should allow one half of the speaker to point forward of the listening position, while the other half of the speaker points behind the listening position.

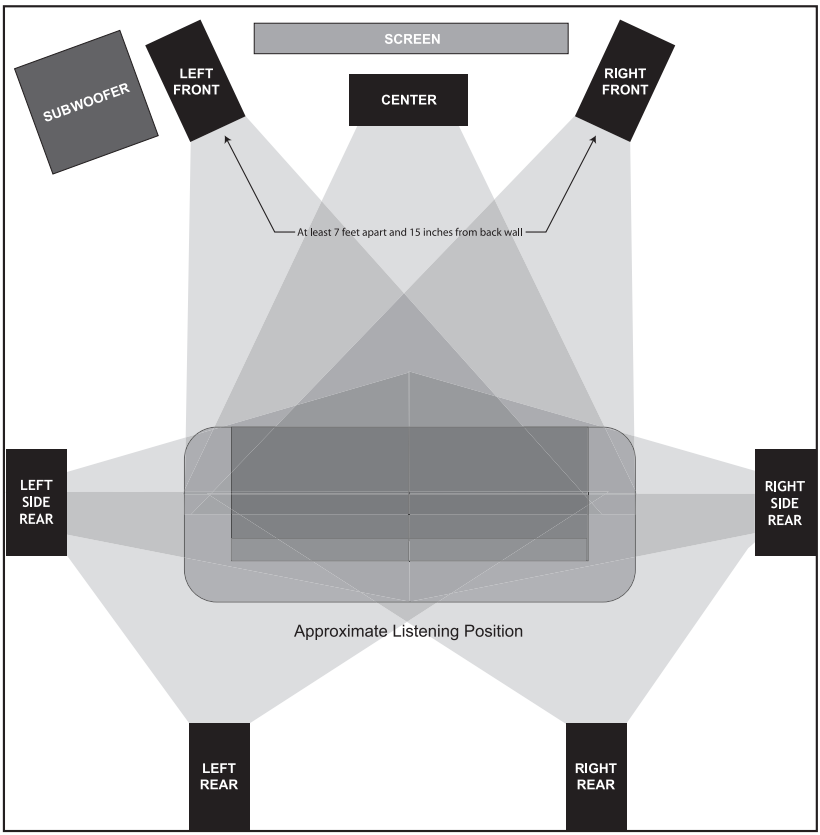
Subwoofer
In order to obtain the best possible performance from your subwoofer, it is important to determine where the subwoofer will sound best in your listening room. Sound reflections from the floor, ceiling and side walls largely influence the balance, imaging and overall sonic quality at the listening position. Be sure to experiment with subwoofer placement to determine which location offers the best overall performance.

Placement of the subwoofer will largely determine quality, quantity and extension of the bass frequencies within your listening room. Bass frequencies are reinforced by close room boundaries. Thus, placing the subwoofer closer to a corner will make the subwoofer sound louder and boost the very lowest frequencies.

Placing the subwoofer away from walls will provide the least reinforcement, making the bass sound subjectively thinner than if the subwoofer were closer to a wall. Good results can usually be obtained by placing a subwoofer along a wall and approximately 1-3 feet from a corner. Experiment with placement of the subwoofer and adjust the amplifier controls and your surround processor's bass management settings to achieve the best bass balance.

Room Setup Suggestions (continued)

IMPORTANT NOTICE REGARDING BASS MANAGEMENT: It is important the signal being sent to the subwoofer be a non-boosted or "flat" signal. To be sure of this, check the settings on your receiver or processor to make sure any "bass boost", "super bass" or "loudness" is set to Off. In most cases a home theater receiver or processor will determine the crossover frequency through bass management settings. In this configuration, connect the receiver's or processor's subwoofer output to the subwoofer's LFE Line Level Input. Your subwoofer will now reproduce the bass frequencies the way they were originally recorded. Use the subwoofer level control and the individual bass management control within the receiver or processor to adjust the subwoofers' volume if necessary. Once set, the volume controls should not need to be altered as the subwoofers' volume will track with the master volume control of your receiver or processor.



NOTE: There are several different surround formats available. Please consult your audio/video professional to determine which system is best for you and how many speakers you will require.

Subwoofer Safety Instructions

The lightning flash with the arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product enclosure that may be of sufficient magnitude to constitute a risk of shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

When using your subwoofer, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury.

1. Read and understand all instructions in this owners manual before operating the subwoofer and retain this user manual for future reference.
2. Follow all warnings and instructions in this manual and any marked on the back of the subwoofer.
3. Never touch the woofer or push objects of any kind into the woofer.
4. The subwoofer should be connected to a power supply compatible with the power consumption requirements. For more information, see the specifications section of this manual.
5. If mounting the subwoofer on a stand, the wall, or other device, only do so as recommended by an authorized technician.
6. Place the subwoofer a safe distance from all heat sources such as radiators, stoves, or heaters.
7. Do not operate the subwoofer near water—for example, do not operate near a bathtub, kitchen sink, in a wet basement, or near a swimming pool.
8. Power supply cords should be routed so they are not likely to be walked on or pinched by items placed upon or against them.
9. Any service or repair required must be performed by qualified, authorized technician.

Subwoofer Amplifier Controls and Setup

This section describes the functions and/or use for each of the amplifier controls located on the back of the I-12 and I-12/e subwoofer, refer to the diagram on page 8.

1. **Voltage Selector Switch:** Before connecting the amplifier to any power source, make sure the AC Voltage Selector is set to either 110V or 220V and matches the power voltage in your area. **Note:** If switching voltage, also make sure to change the fuse (see #11).

   WARNING! If the voltage setting does not match the AC power supplied, damage to the Subwoofer Amplifier may result.

2. **Volume/Gain Control:** The volume/level control should be at the minimum setting (all the way counter-clockwise) before plugging the subwoofer into an AC wall socket. Once plugged in, turn the level control up one quarter of a turn (9 o'clock position) for an initial setting. The level control may be adjusted while playing to match the subwoofer level with the rest of the system.

   IMPORTANT! The volume control should be at the minimum setting (all the way counter-clockwise) before plugging the subwoofer into an AC wall socket.

3. **Crossover Frequency Control:** The variable crossover frequency control allows you to set the low-pass crossover point of the subwoofer anywhere from 40-150 Hz. Experiment with setting the crossover frequency control at highest setting initially. Increasing the crossover frequency will allow more mid-bass output from the subwoofer. Decreasing the frequency will allow only deeper bass from the subwoofer. If using LFE In (#7), this crossover frequency control will not function.

   NOTE: Read the Important Notice regarding bass management on page 4.

4. **Auto Signal Tracking:** The subwoofer amplifier uses "smart" signal tracking circuitry. Once the power cord is plugged in and this switch is set to "ON", the amplifier automatically turns on when an audio signal is detected and turns off when no signal has been detected for approximately 15 minutes.

5. **Phase Control:** This control changes the phase of the subwoofer. Changing the phase will change the way the subwoofer and main speakers interact with each other at the crossover frequency. Varying the phase position may result in more or less mid bass depending on the phasing between the main speakers and the subwoofer. Generally, the phase is left at the "0" position.

6. **Line Inputs:** These RCA terminal connections receive the pre-amp line out from an amplifier/receiver. This input uses the amplifier's internal crossover.

7. **LFE In:** This line level input is used to connect to most receivers or processors. This bypasses the sub amplifier's internal low-pass filter. If your receiver or pre-amp has a subwoofer out, this is most likely the input you will need to use.

8. **LFE Out:** This RCA terminals is for "daisy chaining" to another subwoofer or amplifier. A full-range signal is sent through this terminal.

9. **Balanced LFE In:** Impedance-balanced XLR female input connection to receive balanced pre-amp output from receiver or processor. This input reduces susceptibility to external noise.

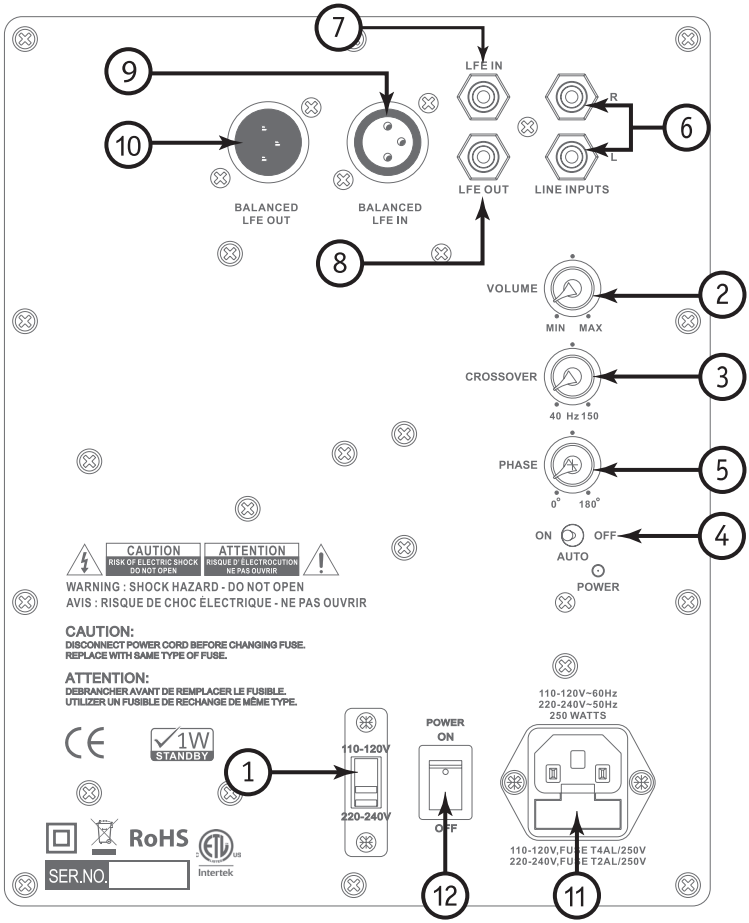
10. **Balanced LFE Out:** Impedance-balanced XLR male output to connect to another XLR input amplifier.

11. Fuse Access: This is the power fuse access.

WARNING! In the event the fuse must be replaced, the replacement fuse must match exactly the original fuse value. If the replacement fuse is not of the same value, damage to the Subwoofer Amplifier may result.

CAUTION! Before replacing the fuse, disconnect the power cord from the power receptacle.

12. Power ON: Power switch**.**



Impression Series Subwoofer Diagram for the I-12 and I-12/e.

Specifications

Model	I-12 Subwoofer	I-12/e Subwoofer
System Type:	Powered Subwoofer	Powered Subwoofer
Amplifier Type:	Class D	Class D
Drive Units:	(1) 12″ (305mm) Aluminum Cone Subwoofer	(1) 12″ (305mm) Aluminum Cone Subwoofer
Voltage:	110V/220V	110V/220V
Amplifier Power:	350 Watts RMS	500 Watts RMS
Frequency Response:	23Hz-200Hz (±3dB)	20Hz-200Hz (±3dB)
Low-pass Crossover:	40Hz-150Hz (continuously variable)	40Hz-150Hz (continuously variable)
Line Level Input:	Yes	Yes
Speaker Level Inputs:	No	No
Speaker Level Outputs:	No	No
Phase Controls:	Yes (0/180 Degrees)	Yes (0/180 Degrees)
Cabinet Finish:	High-gloss Red Burl or High-gloss Black Ash	High-gloss Red Burl or High-gloss Black Ash
Grille:	Black Fabric	Black Fabric
Dimensions:	20″ (508mm) W 22¾″ (578mm) H 22″ (559mm) D	20″ (508mm) W 22¾″ (578mm) H 22″ (559mm) D
Weight:	65 lbs. (29.48 Kg)	65 lbs. (29.48 Kg)

Troubleshooting

Situation:	Probable Cause:	Solution:
No sound from subwoofer.	Amplifier is not connected to constant power outlet.	Make certain the amplifier is plugged into an unswitched AC power outlet.
	Amplifier is not receiving an audio signal from receiver or processor.	Make certain there is an audio signal from receiver or processor.
	Amplifier fuse might be blown.	Replace fuse.
Performance is less than expected.	Crossover frequency is not adjusted correctly.	Adjust the crossover frequency by turning the crossover frequency control clockwise until the desired sound is obtained.

NOTE: You may also want to check with the manual provided with your receiver or pre amp for the correct subwoofer/EQ settings.

Warranty

Your RBH Sound Impression Series subwoofer is covered by a limited warranty against defects in materials and workmanship for a period of 5 years, with the subwoofer amplifier covered for 2 years from the original date of purchase. This warranty is provided by RBH Sound. Warranty repair will be performed only when your purchase receipt is presented as proof of ownership and date of purchase. Defective parts will be repaired or replaced without charge by RBH Sound. Charges for unauthorized service and transportation cost are not reimbursable under this warranty. This warranty becomes void if the product has been damaged by alteration, misuse or neglect. RBH Sound assumes no liability for property damage or any other incidental or consequential damage whatsoever which may result from the failure of this product. Any and all warranties of merchantability and fitness implied by law are limited to the duration of this express warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Warranty Registration

Please fill out and submit the registration form found online at http://rbhsound.com to register your subwoofer.

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382 Marshall Way, Layton, Utah • USA • 84041
Toll Free: (800) 543-2205 • Fax: (801) 543-3300
www.rbhsound.com