Nova

Power From The Heavens

Nova FF12 Front Firing Powered Subwoofers Operation Manual & Technical Guide

www.earthquakesound.com

EARTHQUAKE. SOUND
Sound That Will Move You.

Five (5) Years Limited Warranty.

Earthquake warrants the original purchaser that all Factory Sealed New Audio Products to be free from defects in material and workmanship under normal and proper use for a period of five (5) years from the date of purchase (as shown on the original bill of sale with serial number affixed/written on it). The five (5) year warranty period is valid only if an authorized Earthquake dealer properly installs the product and the warranty registration card is properly filled out and sent to Earthquake Sound Corporation. If a non-authorized party installs the product, a ninety (90) day warranty period will be applied.

(A) Five (5) years limited warranty plan coverage guidelines:

? **First year:** Earthquake pays for labor, parts, and ground freight (only in US mainland, not including Alaska and Hawaii. Shipping to us is not covered).

? **Second year:** Earthquake pays for labor and parts only, customer must pay freight both ways.

? **Third, fourth & fifth year:** Earthquake pays labor only. Customer must pay for parts and freight both ways.

(B) Warning:

Products (sent for repair) that are tested by Earthquake technicians and deemed to have no problem(s) will not be covered by the five (5) year limited warranty. Customer will be charged a minimum of one (1) hour of labor (at the ongoing rates) plus shipping charges back to customer.

(C) Earthquake will repair or replace at our option all defective products/parts subject to the following provisions:

? Defective products/parts have not been altered or repaired by other than an Earthquake factory-approved technicians.

? Products/parts are not subjected to negligence, misuse, improper use or accident, damaged by improper line voltage, used with incompatible products or have its serial number or any part of it altered, defaced or removed, or have been used in any way that is contrary to Earthquake's written instructions.

(D) Warranty Limitations:

Warranty does not cover products that have been modified or abused, including but not limited to the following:

? Damages to speaker cabinet and cabinet finish due to misuse, abuse or improper use of cleaning materials/methods.

? Bent speaker frame, broken speaker connectors, holes in speaker cone, surround & dust cap, burnt speaker voice coil.

? Fading and/or deterioration of speaker components & finish due to improper exposure to elements.

? Bent amplifier casing, damaged finish on the casing due to abuse, misuse or improper use of cleaning material.

? Burnt tracers on PCB.

? Product/part damaged due to poor packaging or abusive shipping conditions.

? Subsequent damage to other products.

A warranty claim will not be valid if the warranty registration card is not properly filled & returned to Earthquake with a copy of the sales invoice. Warranty card is located on the last page of this manual.

(E) Service Request:

To receive product service, contact Earthquake Service Department at (510) 732-1000 and request an RMA number (Return Material Authorization). Items shipped without a valid RMA number will be refused. Make sure you provide us with your complete/correct shipping address, a valid phone number, and a brief description of the problem you are experiencing with the product. In most cases, our technicians might be able to resolve the problem over the phone; Thus, eliminating the need to ship the product.

(F) Shipping Instructions:

Product(s) must be packaged in its original protective box(es) to minimize transport damage and prevent repackaging cost (at the ongoing rates). Shipper claims regarding items damaged in transit must be presented to carrier. Earthquake Sound Corporation reserves the right to refuse improperly packed product. Original bill of sale must accompany product returned to service. We encourage you to include with the package a written description of the problem. Ship product to: Earthquake Sound Corp. 2727 McCone Avenue, Hayward, CA 94545. Ph: (510) 732-1000. You are responsible for the cost of shipping the product to Earthquake Sound Corporation.

(G) Disputes Resolution:

All disputes between clients and Earthquake Sound Corporation resulting from the five (5) year limited warranty policy must be resolved according to the laws & registration of the county of Alameda California.

PRODUCT REGISTRATION

This Earthquake product can be registered by returning the Product Registration card attached to this manual or by visiting www.earthquakesound.com/form_reg.htm. Please also retain the bill of sale, which represents proof of purchase.

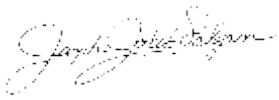
Notes and Warnings

Dear Valued Customer,

Welcome to the eclectic world of Earthquake High Fidelity sound systems; you are about to experience the FF12 subwoofer. This system is designed to dramatically enhance your enjoyment of music and films at home, by adding power and impact to low frequency sound effects.

Earthquake Sound Corporation is located in the heart of the Silicon Valley. It specializes in manufacturing high end home and car audio products ranging from the smallest driver to the loudest subwoofer system. In its dedication to excellence, Earthquake has maintained extensive programs in research and development to provide you with the highest quality audio products.

This owners manual is designed to better acquaint you with the Nova FF12 subwoofer system, and to guide you through the phases of system design and application. It is imperative that you read this manual in its entirety. EARTHQUAKE technicians and staff are looking forward to answering any questions you might have. Please call (1-800-576-7944).



T.O.C.

WARNING: This product is capable of generating high sound pressure levels. You should exercise caution when operating these speakers. Long term exposures to high pressure levels will cause permanent damage to your hearing. Sound pressure levels exceeding 85dB can be dangerous with constant exposure, set your audio system to a comfortable loudness level. Earthquake Sound Corporation does not assume liability for damages resulting from the direct use of Earthquake subwoofers , and urges users to play volume at moderate levels.

Joseph J. Sahyoun - Vice President and inventor of the SLAPS - proudly showing off a SLAPS12 at one of the subwoofers assembly lines.

Specifications & Performance

Specifications

Power: 400 watts

Frequency Response: 20-125Hz

Dimensions (HxWxD):
Height = 19.5" / 495.3mm (including legs)
Width = 14" / 355.6mm
Depth = 16.125" / 409.575mm (including amplifier controls)

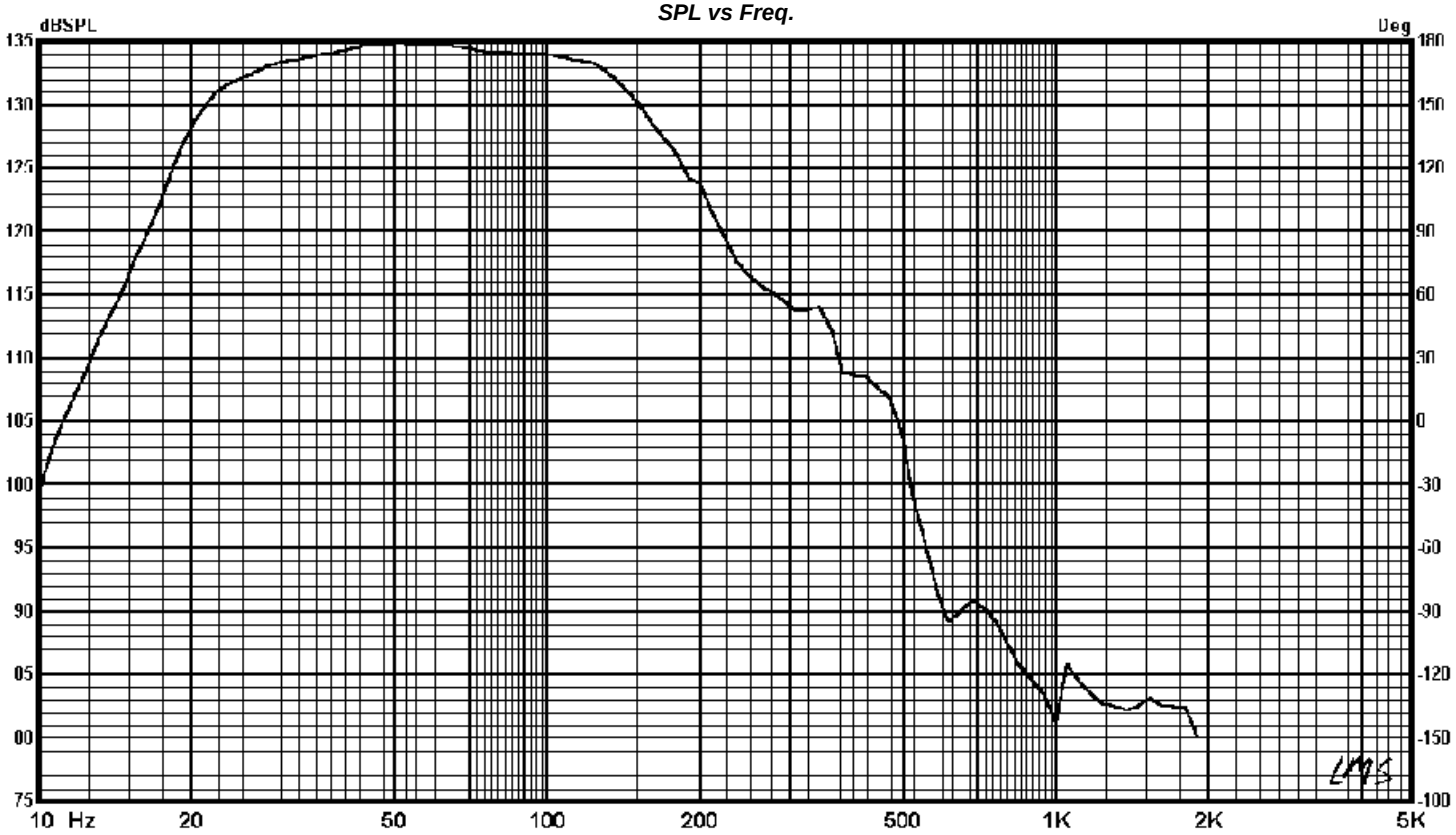
Weight: 37 lbs.

Power Line Voltage: 115-230~AC / 50/60Hz

Output Levels: Greater than 130dB peak SPL (includes room gain) from 25Hz to 125Hz.

Performance

Typical Near Field Measurements



Product Overview

Front Panel:

* Volume control
* Operation status LED
  a. Blue = Power "ON"
  b. Red = Power "OFF" or Auto "OFF"

Class "A/B" Amp

* 400 watts class "AB" , high efficiency power amplifier.

* 24 dB / Octave variable filter from 40 Hz to 180 Hz.

* Automatic signal detection circuitry, When "ON", it automatically turns on the subwoofer when an audio signal is detected. It also shuts the subwoofer off after 30 minutes if no signal is detected.

* High level (speaker) audio inputs.

* Low level (RCA) audio inputs.

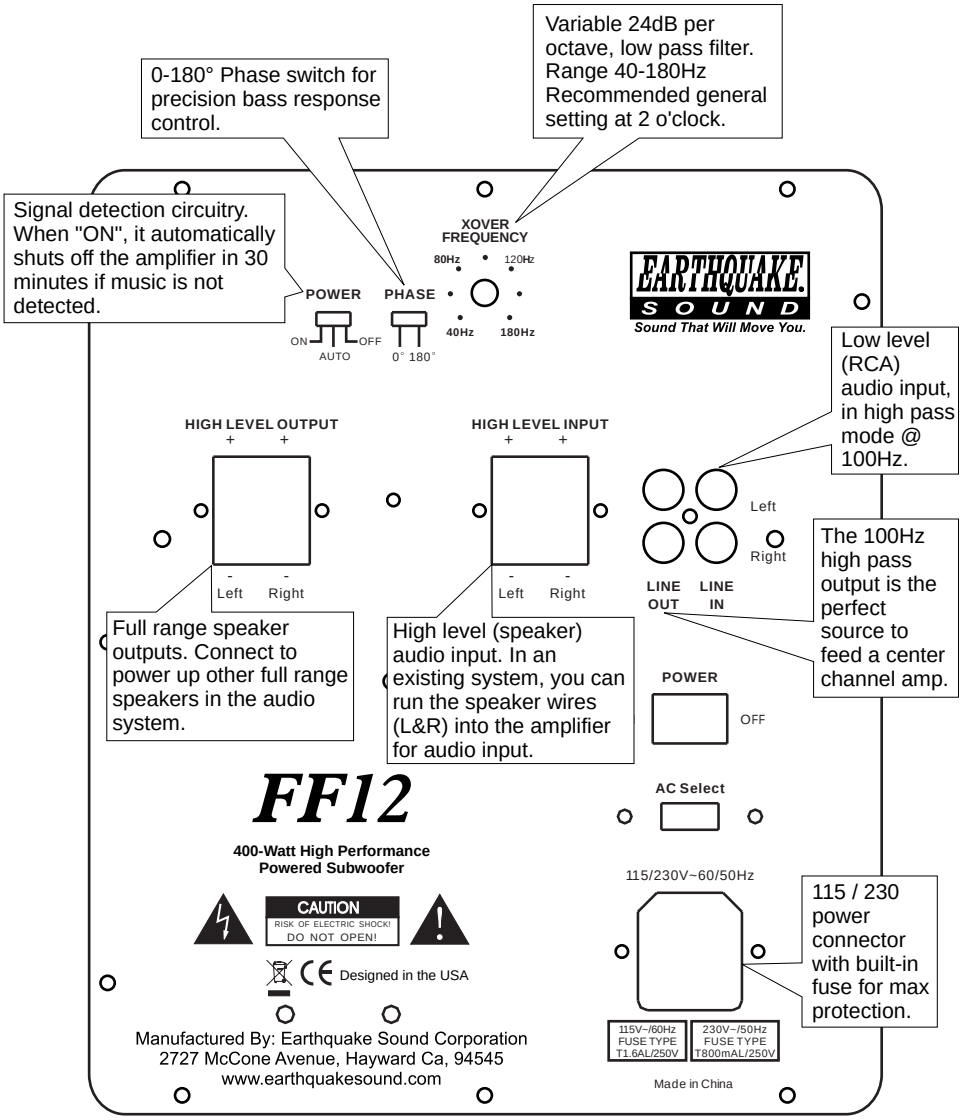
* Full range speaker outputs that can be used to power up other full range speakers in the system.

XLT Drivers

Every component of the XLT driver is designed for accurate reproduction of bass and sub-bass frequencies. With a massive moving structure, the XLT operates with extremely low distortion and impressive transient response. Its performance is attributed to a non-conventional motor structure design, that integrates components such as:

***** Thick, high-gauss magnets, with a total height of 1.2 inches.
***** Over 7 inch (D), epoxy coated super spider. Chill-plated for long lasting linear performance.
***** 2.5" diameter, high temperature voice coil, with 1,85" copper winding (height).
***** 1.5" thick, single layer, thermally pressed poly-ether foam surround.

The XLT structure allows for extreme excursions (19 to 21mm) without physical deformation or running out of Reactive Electromagnetic Coupling.



Positioning Your Subwoofer

Subwoofer Placement

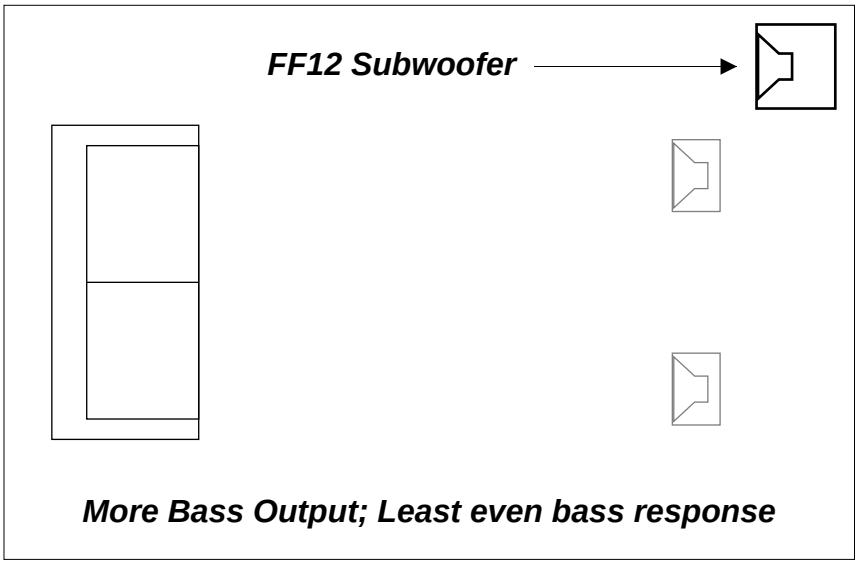
There is no argument among audio professionals that the loudest bass output from a subwoofer comes from corner placement. The sound flaring outward from a room corner focuses low frequencies giving them no place to go but toward you. In the case of subwoofers, there is no automatic penalty in giving overall balance for this peak bass, since your main speakers can be located elsewhere. It still may be too much bass for your room or (more particularly) your favorite listening spot in the room, but unless you are seated in a “void” spot, where sound from the sub is cancelled or diminished by out-of-phase reflections from elsewhere, there should be plenty of bass from corner placement.

If you are seated in such a void spot, your only real choices are to move either the subwoofer or your listening position until the bass returns to the point that satisfies your listening criteria. Turning up the level control or changing the crossover point almost certainly won't help much. But flipping the phase control 180 degrees sometimes may make a difference, especially if the void is a product of cancellations caused by interaction with low frequencies from your main speakers.

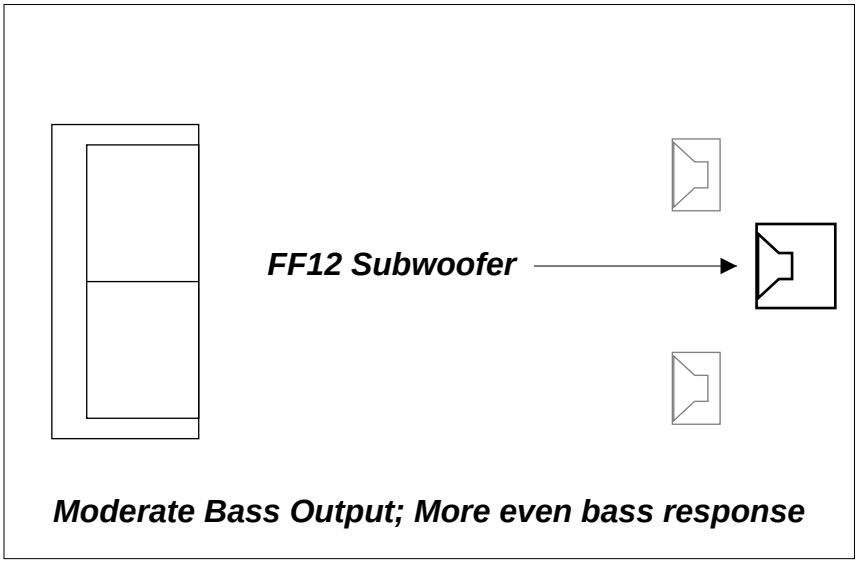
Using Two Subwoofers

If you choose the use two woofers, the sound output will double (an increase of 5dB). Locate the woofers with one in each corner and experiment with the location and phase control to achieve the best bass response.

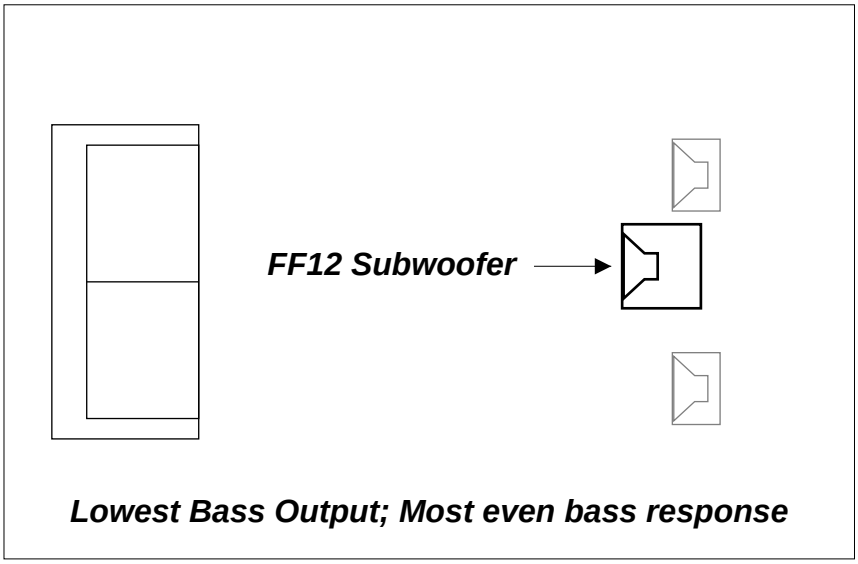
Always drive each woofer through the Left/Mon input even though you are driving one woofer on a right channel drive and the other with a left channel drive. If your pre-amplifier has a single Sub/LFE output, use a 'Y' cable to split it into two outputs.



More Bass Output; Least even bass response



Moderate Bass Output; More even bass response



Lowest Bass Output; Most even bass response

Connecting Your Subwoofer

Connections to a AV Receiver, Integrated Amplifier, Pre-Amplifier Or Processor Output

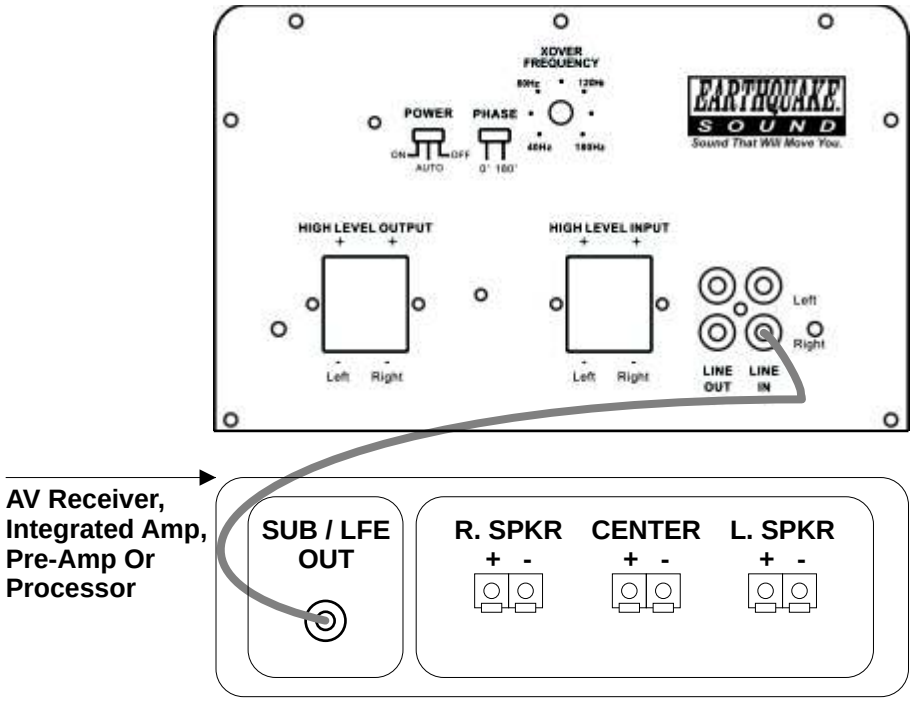
If your pre-amplifier, receiver etc. has a subwoofer output (often labeled LFE for Low Frequency Effects), it can be connected to the subwoofer's Left (Mono) input as shown. This is the simplest and recommended connection. A receiver with a SUB / LFE output can be connected in the same way.

The subwoofer will play the low frequency range and the other speaker will play the frequency range delivered to them by your amplifier.

If you have a home theater pre-amplifier, it may have an independent subwoofer volume control. Make sure this is correctly adjusted, and that the Earthquake subwoofer's crossover frequency is set to 100Hz. This is by no means an iron-clad rule, rather it is a good starting point.

You can set the subwoofer's Bass Level control on your receiver to 0dB, and then use the pre-amplifier's subwoofer level control for normal and routine adjustments.

FF12 Amplifier Plate



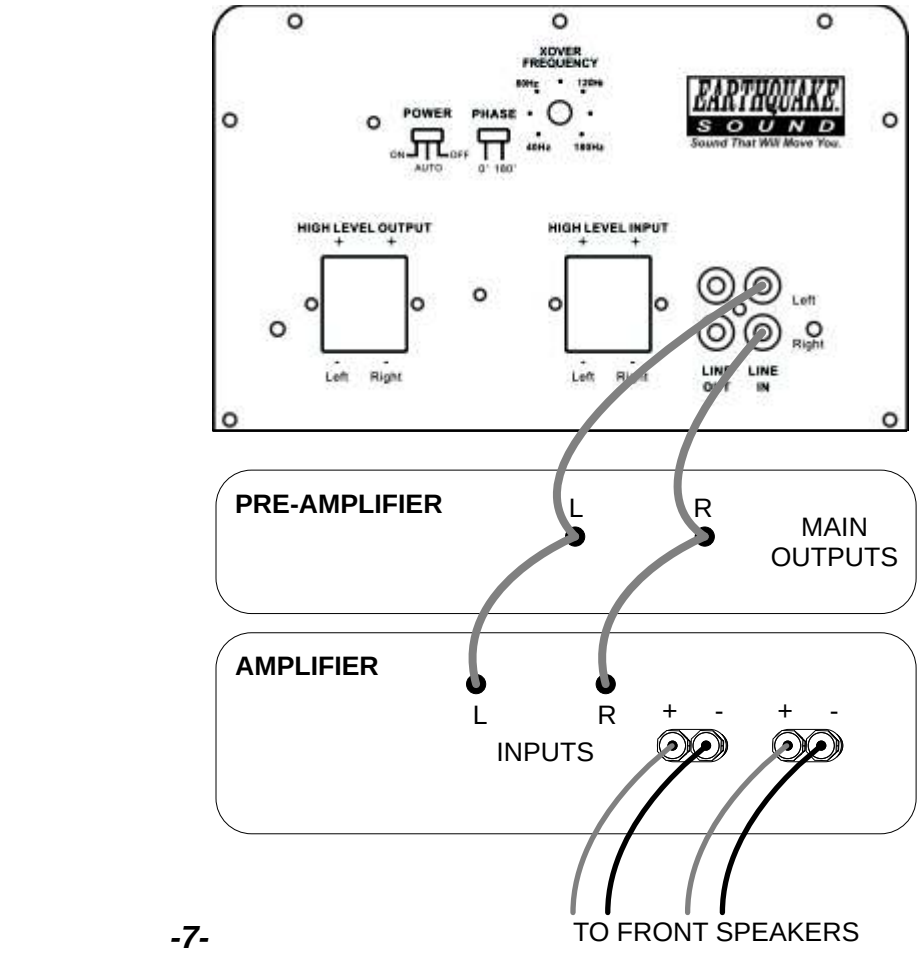
Connections To A Pre-amplifier Using “Y” Cables

If your pre-amplifier does not have a sub/LFE output, you can use “Y” cables to send its main outputs to both the subwoofer and your amplifier.

The subwoofer will play the low frequency range and your front speakers will play the full range.

Although bass is commonly distributed evenly between left and right channels (L+R bass), movie soundtracks often contain differential (L-R) bass. The opening scene in “Top Gun”, for example, has loads of L-R bass information. If this is not preserved, the bass in these scenes sounds anemic. The Earthquake subwoofer utilized differential gain on the left and right inputs to retain both the L+R and L-R information. Therefore, systems which do not have a dedicated sub/LFE output should use both the left and the right inputs as shown, for the greatest bass impact.

FF12 Amplifier Plate



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2727 McCone Avenue Hayward, CA 94545, Phone: 800•576•7944 Fax: 510•732•1095