



LFR1 100 v4 Active Omnidirectional



# IMPORTANT SAFETY INSTRUCTIONS

## CAUTION

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the 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 prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
- 12.



Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. The mains plug of the power supply cord shall remain readily operable.
18. Do not expose batteries to excessive heat such as sunshine, fire or the like.



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric 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.

**WARNING :** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

## SAFETY PROCEDURES

- Ensure that you connect your DSP only to the type of power supply indicated on the rear panel, and ensure that the power cord cannot be walked on or otherwise damaged.
- To prevent electric shock, match wide blade of plug to wide slot, fully insert.
- Ensure that objects or liquids are not allowed to penetrate the enclosure.

For any additional information or service, contact:

**AXIOM, 2885 HWY 60  
DWIGHT ON CANADA  
P01 1H0**

Phone: **1-866-244-8796**



Every member of our Axiom team is pleased that you have decided to purchase one of our products. We have all worked hard to bring the highest level of satisfaction to your audio experience.

Axiom is deeply committed to ongoing audio research. It began in the early 1980s when I was involved with the world-class psycho-acoustical research that was being conducted at the National Research Council in Ottawa, Canada. Since that time we have built one of the finest acoustical laboratories in the world at our facility in Dwight, Canada where we continue this research allowing Axiom to provide the world's most realistic-sounding loudspeakers.

At Axiom our goal is to provide you with a truly exciting and emotional experience every time you listen to your audio system. We want you to feel part of our Axiom family and as such we stand at the ready to deliver personal, expert advice on any of your audio needs.

A handwritten signature in blue ink, appearing to read 'I. Colquhoun'.

Ian Colquhoun  
President and Founder  
Axiom Audio

## Placement

The location of your new Axiom LFR1100 speakers will significantly affect the sound quality you experience in your particular room so take care to position them correctly. Since the LFR1100 is an omnidirectional speaker with active drivers located in both the front and rear of the cabinet you will want to keep some space all around your LFR1100s. Around twelve inches (300mm) would be considered the neutral position. If you need to place them closer to or further from the wall or corner than this your DSP box does have a switch on the rear panel labeled "Boundary Compensation". Around 8" (200mm) from the wall would be "Near 1" and 6" (150mm) or closer would be "Near 2". If you are more than 24" (600mm) from the wall "Far 1" should be used and more than 48" (1200mm) would be "Far 2". The "Boundary Compensation" switch can also be used to adjust for highly reflective or highly damped rooms. A highly reflective room may be more suited to the switch being in one of the "Near" positions and a highly damped room one of the "Far" positions. For rooms with asymmetrical layouts, such as having an opening or doorway behind one speaker, having a separate DSP for the left and right channel allows use to use a different Boundary Compensation position for each channel in order to balance out the sound. Ultimately it is best to try various positions in your room and go with what you feel delivers the best performance.

For a wide and spacious stereo or home theater soundstage, separate the front left and right speakers by 6 feet or more, up to 12 feet apart, or by at least half the distance you sit from the speakers, e.g. if you sit 15 feet away from the speakers, separate them by at least 8 feet if possible. You can experiment with slightly angling the speakers in toward the listening area or having them face straight out into the room. Each room is different, and toeing in the speakers toward your seating may improve the stereo soundstage. LFR1100s have the unique ability of removing the "sweet-spot"; a large 3-D soundstage can be enjoyed from many seating positions.

## Suggestions and Steps for Setting up the LFR1100 Actives

With significantly more connections than a conventional pair of stereo loudspeakers, we highly recommend taking your time and working through each set of connections section by section, double-checking as you progress. If possible, we recommend using XLR connections between the DSP and power amplifier(s) if your amplifier(s) support XLR connections. Likewise, if your pre-amp/processor has XLR outputs they should be used for connection to the DSP inputs.

In order to avoid crossing DSP or speaker connections and ending up with unsatisfactory performance, it's advisable to make a single RCA or XLR connection from the output of the DSP to the corresponding input on your power amplifier (FRONT TW, for example). Then proceed to make the connection for that section from the amplifier speaker output to the corresponding loudspeaker input. Pay close attention to speaker cable polarity on each end. Ideally you will have enough space around the speakers to place them in their approximate locations and then make the connections. If you have purchased the optional LFR1100 Active wiring kit, each cable will be color-coded and each speaker cable will have pre-installed dual banana plugs, simplifying the installation process significantly. For other types of speaker wire connections, please refer to page 7.

The LFR1100 Actives come with a separate DSP chassis for each channel. When selecting partnering amplification, it's best to dedicate a single 5-channel amplifier (or a combination of amplifiers to make up five channels) to ONE speaker channel. That means one DSP to one amplifier. Combining connections from two DSPs to a single amplifier can sometimes result in signal ground loops that cause buzzing or hum. Ideally you would also not share the LFR amplifiers with other speaker channels in your system for the same reasons (like using a 6-channel amplifier for one LFR and your centre channel).

For the electronic components, it's best to have each chassis on a dedicated shelf with adequate air space above the amplifiers. If you need to stack components, it's best to have the DSP under the amplifier for proper ventilation. Cables should be routed in such a way to keep low-level interconnects together and away from AC cables. It's also a good idea to have all of your components on the same AC circuit as it will minimize the chance of ground loops.



## Connecting the DSPs

### Step 1 (Check your Voltage)

Look at the rear panel of each active DSP. A voltage rating will be stated near the power switch. Be sure that the indicated voltage rating corresponds to the voltage supply in your country. If there is a difference please do not proceed any further and contact AXIOM for assistance.

### Step 2 (DSP Input)

Your active DSPs will accept single-ended RCA or balanced XLR input connections. If your amplifier(s) AND your pre-amp/processor have available XLR connections, we recommend their use for best performance. If your amplifier(s) does not have XLR inputs you should use RCA input connections. We do not recommend using XLR to RCA converters.

### Step 3 (DSP Output)

Each active DSP has five output connections for one speaker channel. If you have ordered an LFR1100 Active package that included dedicated amplifiers note that each amplifier channel is labelled for the corresponding DSP and loudspeaker connection. We suggest that you follow this connection scheme for best performance. Connection from the DSP outputs to the amplifier(s) can be RCA or XLR, but again we recommend using XLR connections, even if your input connections are single-ended RCA.

### Step 3 (DSP Output) (cont.)

In addition to the amplifier output connections, each DSP also has RCA and XLR outputs marked SUB. This output can be used to send a full-range signal to accompanying system subwoofers. A Crossover Frequency control is located on the back of each DSP to select a bass roll-off frequency for each LFR active. Setting the control to zero will allow the LFR active to operate full range with no filtering. By using this control you can tailor the overlap between your LFRs and subwoofer(s) for the smoothest bass performance and also off-load subsonic frequencies to the subwoofer(s) which may result in better bass dynamics and power handling from the LFR actives.

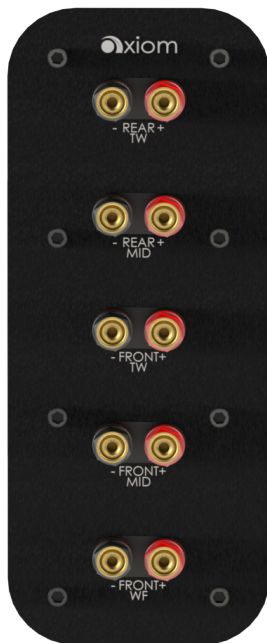
### Step 4 (Power Cord)

Connect the supplied power cords to your DSPs and plug them into your power supply. Ideally both DSPs and amplifier(s) will share the same electrical circuit with your pre-amp/processor. Turn on the main power switch on the rear panel of each DSP. The front switch will now be active for bringing your DSPs in and out of standby mode. The led on each front panel will glow blue to indicate your DSP is now ready for use.



## Connecting the Loudspeakers

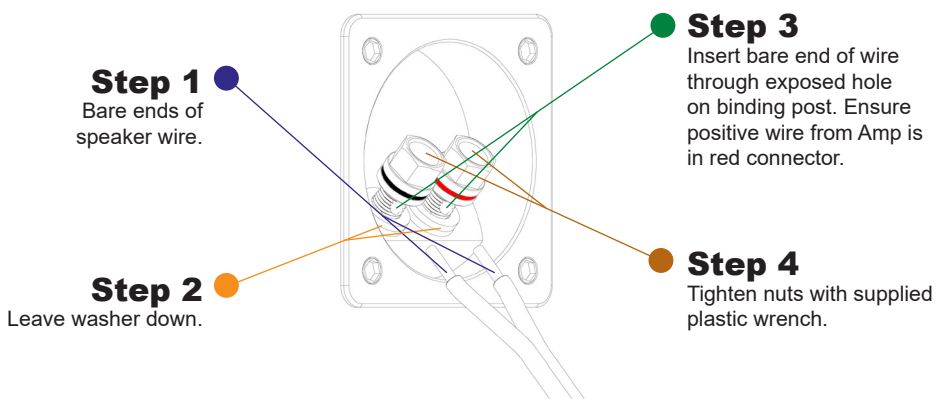
Turn your speakers around and look at the back panel. You'll see five pairs of gold-plated 5-way binding posts, to which you are going to connect the speaker cables from your amplifier. Each gold binding post is color-coded - RED is POSITIVE, BLACK is NEGATIVE. You will also see a positive (+) sign beneath each RED binding post, and a negative (-) sign beneath each BLACK binding post. It is important that the negative wires from your amplifier go to the negative inputs on your speaker and the positive wires from your amplifier go to the positive inputs on your speaker. The five pairs of binding posts are also labelled with the name of each driver section, from top to bottom: REAR TW, REAR MID, FRONT TW, FRONT MID, FRONT WF. Connect each of these pairs to the amplifier output corresponding to the DSP connection with the same name. Connect



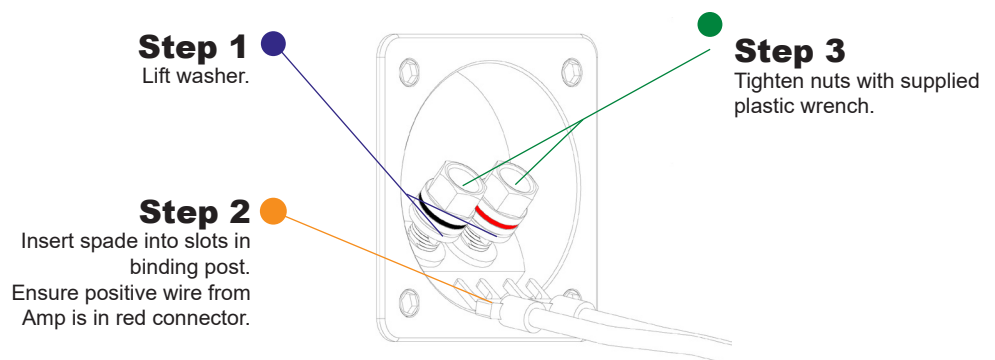
## Leveling

To level your speaker simply rotate the outside of each foot until they reach the desired height.

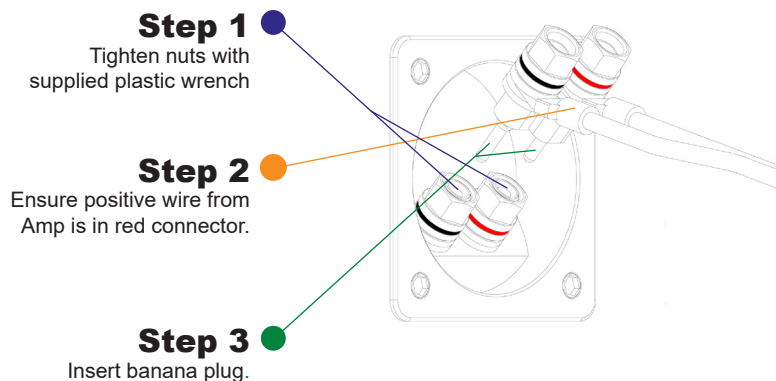
### Bare Wire



### Spade Lug (1/4-inch spade)



### Banana Plug (3/4-inch spacing)



For detailed instructions on dual binding post inputs, please visit:

[www.axiomaudio.com/dual-input-connections](http://www.axiomaudio.com/dual-input-connections)



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