

EMOTIVA®



airmotiv **RS**

Reference Subwoofer Family User Manual

Important Safety Precautions and Explanation of Symbols



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important installation, operation, and service instructions in this manual.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltages within the enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to the user.

Please read this manual thoroughly before attempting to install, configure, or operate the Emotiva Airmotiv Reference Subwoofer. After successful installation and configuration of the Reference Subwoofer, be sure to retain this manual in a safe place for future reference.

Safety is a key component to a long lasting and trouble free installation. Please read and follow all instructions and heed all warnings on the Reference Subwoofer and in this manual. The vast majority of the subsequent safety precautions are common sense. If you are not comfortable with the installation of audio/video entertainment equipment, you should seek the services of a qualified installation professional or call us for help.



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT USE THE REFERENCE SUBWOOFER NEAR WATER OR IN WET LOCATIONS, DO NOT EXPOSE IT TO RAIN OR MOISTURE, DO NOT EXPOSE IT TO DRIPPING OR SPLASHING FROM OTHER SOURCES, AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS (SUCH AS VASES) ARE PLACED ON IT. DOING SO MAY RESULT IN DAMAGE TO THE UNIT AND THE RISK OF ELECTRIC SHOCK, WHICH MAY RESULT IN BODILY INJURY OR DEATH.



WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE AMPLIFIER PLATE OR DRIVER FROM THE REFERENCE SUBWOOFER. THERE ARE NO USER-SERVICEABLE PARTS INSIDE THE UNIT. REFER ALL SERVICE TO QUALIFIED SERVICE PERSONNEL.

Do not install the Reference Subwoofer near or above any heat sources such as radiators, heating vents, or other apparatus that produce heat. Do not block any ventilation openings or heat sinks. Avoid installing the unit directly above other heat-producing equipment unless sufficient ventilation or forced-air cooling is provided.

Do not install the Reference Subwoofer in locations without proper ventilation. The Reference Subwoofer should not be operated on a bed, sofa, rug, or similar surface that may block vents. The unit should not be installed in an enclosed location such as a bookcase, cabinet, or closed equipment rack unless sufficient forced-air ventilation is provided, and clearance should be maintained between the rear-mounted heat sinks and objects like drapes that may reduce ventilation.

Always install your Reference Subwoofer according to the manufacturer's instructions and only use attachments or accessories specified by the manufacturer.

Do not install the Reference Subwoofer on any stand, shelf, or other piece of furniture that is unable to support its weight. If a cart is used to move the unit, use caution to avoid injury from tip-over.

Connect the Reference Subwoofer only to power sources of the correct voltage (as shown in this manual and on the Reference Subwoofer).

Protect power supply cables from being pinched, walked on, or otherwise damaged. Be especially careful where the power cable enters the power outlet and the unit.

Only connect the Reference Subwoofer to an electrical outlet or extension cord of appropriate type and rating.

DO NOT defeat the safety purpose of a grounding or polarized plug by removing ground pins or using unsafe adapters. A polarized plug has two blades - one wider than the other. A grounding plug has a third ground prong in addition to the two main conductors. The wide blade or third grounding prong is provided for your safety. If the provided plug does not fit your outlet, consult an electrician to replace your obsolete outlet. If you replace the power cord, only use one of similar type and equal or greater current rating.

The power cable for the Reference Subwoofer should be unplugged from the outlet during severe electrical storms, or when unused for a long period of time.

Only replace the fuse(s) in the Reference Subwoofer with fuse(s) of proper value and voltage rating.

The Reference Subwoofer should only be cleaned as directed in the manual. Avoid spraying liquids directly onto the unit or drivers.

You should seek service for your Reference Subwoofer by qualified service personnel if any of the following occur:

1. The power-supply cord or the plug has been damaged.
2. Objects or liquid have fallen or spilled into the unit.
3. The unit has been exposed to rain.
4. The unit exhibits a marked change in performance.
5. The unit has been dropped, or its enclosure or drivers are damaged.



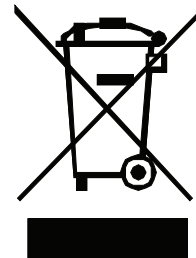
NOTE: TO COMPLETELY DISCONNECT THE REFERENCE SUBWOOFER FROM THE AC POWER MAINS, DISCONNECT THE AC POWER CORD FROM THE AC RECEPTACLE.



NOTE: THE POWER CORD ON THE REFERENCE SUBWOOFER MUST REMAIN READILY ACCESSIBLE AT ALL TIMES.



NOTE: YOUR REFERENCE SUBWOOFER IS SHIPPED PRECONFIGURED FOR EITHER 120 VAC OR 230 VAC OPERATION. RECONFIGURING YOUR REFERENCE SUBWOOFER TO OPERATE FROM A DIFFERENT LINE VOLTAGE SHOULD ONLY BE CARRIED OUT BY A QUALIFIED ELECTRONIC TECHNICIAN. CONTACT EMOTIVA TECHNICAL SUPPORT FOR DETAILS IF NECESSARY.



FCC Interference Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment to an outlet on a circuit different from that of the receiver.

Consult the manufacturer or an experienced radio/TV technician for help.

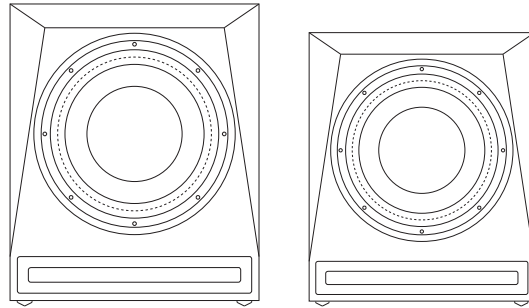
For questions regarding service, please contact:

Emotiva Audio Corporation
Attn: Repair Department
139 Southeast Parkway Court
Franklin, TN 37064

1-877-366-8324

www.emotiva.com

Airmotiv™
REFERENCE SUBWOOFERS



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Introduction

Thank you for purchasing the new Emotiva Airmotiv™ Reference Subwoofer.

All Emotiva Airmotiv™ Subwoofers are designed to reproduce the lowest frequencies in the audio spectrum accurately and with exceptionally low distortion - even at the high listening levels found in modern movies. All of our Airmotiv Reference Subwoofers deliver the dynamics and raw power you need to make a modern movie sound track rattle the walls... with the precision and superb musicality you need to get the most from well recorded music. With our Reference Subwoofers, you don't have to compromise; you really can have it all.

The Airmotiv Reference Subwoofers were designed from the ground up to deliver the lowest octaves in the audio spectrum with the ultimate in precision, accuracy, and authority. The Airmotiv RS13 is flat within +/- 3 dB all the way down to an astonishing 16 Hz, and the Airmotiv RS11 is flat within +/- 3 dB down to 20 Hz, so you will be able to actually feel the sound effects in your favorite movie, or the lowest tones in a well recorded pipe organ recital.

The ultra high performance forward firing drivers, with their high profile double roll NBR surrounds, massive Strontium Ferrite magnet structures, and all aluminum voice coils, have plenty of excursion to deliver truly prodigious amounts of bass, even at the lowest frequencies. The cone and other components in the moving systems of the drivers are optimized for both strength and low mass, enabling them to deliver excellent linearity, superb transient response, and very low distortion.

The front baffle on the massive, critically braced HDF cabinets is a full 50mm thick, and the cabinets are finished on all sides with either furniture grade black lacquer or a high-gloss piano black finish. The slot loaded front firing port is precisely contoured to avoid any trace of port chuffing or other unwanted noise. Controls are located conveniently on the top panel, under a recessed magnetically attached smoked plastic cover, and the drivers are protected by an attractive sculpted fabric grill, firmly attached by powerful magnets for easy removal.

The electronic components in the Airmotiv Reference Subwoofers are no less impressive. The sophisticated electronic crossover is implemented in a powerful 48 bit DSP audio processor. Both the Airmotiv Reference Subwoofers are powered by audiophile quality Class D amplifiers: 1000 watts continuous / 2000 watts peak on the RS13; 500 watts continuous / 1000 watts peak on the RS11. Controls are provided to adjust the level, crossover frequency, and phase on the Reference Subwoofers, and may be fully bypassed when you use the RS13 or RS11 with a system that already has its own bass management. The Reference Subwoofers also offer the choice of two different bass profiles. The Deep profile offers the flattest overall performance. The Flat profile imposes a very slight rolloff at the very lowest subsonic frequencies, in return for slightly more maximum output at higher frequencies. The Reference Subwoofers also include a handy Loop output for connecting another sub - if you really think you need one.

If you've been looking for the ultimate sub then you've come to the right place.

The Airmotiv Reference Subwoofers - power unleashed.

Happy listening!

The Emotiva Team

About This Manual

This manual will provide you with all the information you need to achieve great performance, accurate sound, and many years of reliable service from your Airmotiv Reference Subwoofer.

We suggest that you read through the entire manual; we kept things as short and direct as possible. Even if you're an expert user, you will probably find some interesting information and useful suggestions.

If you're really in a hurry to get started, please read the Quick Start section (on page 7); you may then read the remainder of the manual at your leisure.

You may wish to record serial numbers or other purchase information on the Notes page at the back of this manual.

Features

The Emotiva Airmotiv™ Reference Subwoofers were designed from the ground up to deliver the absolute ultimate in performance and sound quality.

Here are a few of the important features of the Airmotiv Reference Subwoofers:

- **High performance** - The Airmotiv Reference Subwoofers deliver the lowest musical octaves with both precision and stunning authority. The RS13 is flat +/- 3 dB from 16 Hz to 240 Hz and can deliver a full 106 dB SPL of clean bass at 20 Hz at two meters. The RS11 is flat +/- 3 dB from 20 Hz to 240 Hz and can deliver a full 103 dB SPL of clean bass at 20 Hz at two meters.
- **Forward firing high performance driver** - The Airmotiv Reference Subwoofers feature ultra high performance forward firing drivers, with non-magnetic cast aluminum frames, 60mm all aluminum voice coils, and massive double-stacked Strontium Ferrite magnet structures. These drivers, with their large long fiber treated paper cones, high profile double roll NBR surrounds, twin aluminum shorting rings, and undercut carbon steel pole pieces, are capable of incredible linear maximum excursions. Special care was paid to minimizing the mass of the moving system, enabling the Reference Subwoofers to offer excellent linearity, superb transient response, and extremely low distortion.
- **Powerful Class-D amplifier** - Both the RS13 and RS11 feature efficient audiophile quality Class-D amplifiers (1000 watts RMS / 2000 watts peak in the RS13; 500 watts / 1000 watts in the RS11)... so your Reference Subwoofer will never run out of power when you need it.
- **Convenient top-mounted control panel** - All of the operating controls and status indicators on the Airmotiv Reference Subwoofers are located on the top panel... under a removable, magnetically attached, smoked plastic cover.
- **Flexible DSP-based crossover and EQ controls** - The controls and adjustments on the Reference Subwoofers are implemented by a powerful dual-core 48 bit DSP audio processor for optimum precision and flexibility. Controls include continually variable adjustments for Phase, Level, and Crossover Frequency. Separate switches allow you to bypass the internal crossover, select between two different Bass response profiles, and choose between always-on and auto-on operation.
- **Transparent limiter circuitry** - The Airmotiv Reference Subwoofers feature a truly transparent limiter, which is totally inaudible in normal operation, but makes it virtually impossible to accidentally overload them, or get them to sound anything less than awesome.
- **Plenty of input and output options** - The Airmotiv Reference Subwoofers offer both a balanced monaural audio input and loop output and a pair of stereo unbalanced inputs. Inputs and outputs are located conveniently out of the way on the rear panel.
- **Heavy-duty furniture grade cabinet** - The Airmotiv Reference Subwoofers are housed in a massive, critically braced, furniture quality HDF cabinet. The cabinet features a full 50mm thick front baffle, 25mm side walls, and a low noise front firing port. The choice of either furniture-grade flat black lacquer or a high gloss piano black finish, and an attractive sculpted fabric grill, held firmly in place by powerful magnets, complete the picture.
- **Detachable IEC power cable and user-accessible AC fuse** - The rear panel of the Airmotiv Reference Subwoofers includes the main AC Power switch, a receptacle for the heavy duty IEC power cable, and the access panel for the user-replaceable main AC power fuse. A high quality heavy duty IEC power cable is included with each Reference Subwoofer.
- **Full five year warranty** - A full five year warranty ensures that you'll enjoy your Airmotiv Reference Subwoofer for many years to come.

You can find more information about the Airmotiv RS13 and RS11 Reference Subwoofers at: www.emotiva.com.

Unpacking

Your Airmotiv Reference Subwoofer was carefully packed and should reach you in perfect condition. If you notice any shipping damage or other issues when you unpack it, please contact Emotiva immediately.

Gently remove your Reference Subwoofer from the packing carton and remove all wrappings and shipping material.

It is important to save the box and all packing materials in case your Reference Subwoofer ever needs to be moved or shipped back to the factory for service.

Please keep your sales receipt in a safe place. It is the easiest way to verify your purchase date for warranty purposes, and may also be required if you ever have to file an insurance claim.

We truly value customer feedback and would like to hear from you.

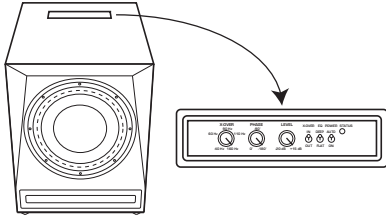
Quick Start

To get the most from your Airmotiv Reference Subwoofer, we urge you to read the entire manual. If you just can't wait to hear how great your Reference Subwoofer sounds, this section will cover the basics you need to get started.

- Find a secure location for your Reference Sub.
- Connect your Reference Sub to the LFE or subwoofer output on your AVR or pre/pro.
- Configure your AVR or pre/pro to work with a subwoofer.
- Find some music you *really* like to listen to.
- Hold onto your seat!
- Enjoy!

While you're enjoying your Airmotiv Reference Subwoofer, it would be a great time to read the rest of the manual to learn more about them.

Airmotiv RS13 Reference Subwoofer



The Airmotiv RS13 Reference Subwoofer delivers the ultimate in technical performance, precision, musicality, and just plain awesome bass output. Unlike lesser subs, the RS13 can actually deliver huge amounts of clean deep low bass, all the way down to 16 Hz, giving both music and movies the all important foundation they need to sound their best, with no compromise in sound quality.

Output Specifications

Frequency response:

- 16 Hz - 240 Hz +/- 3 dB (Deep).
- 21 Hz - 240 Hz +/- 3 dB (Flat).

Maximum output level:

- 101 dB SPL at 16 Hz at 2 meters.
- 106 dB SPL at 20 Hz at 2 meters.
- 113 dB SPL at 40 Hz at 2 meters.

Driver Complement

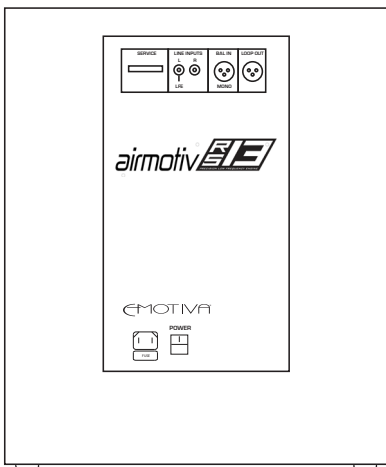
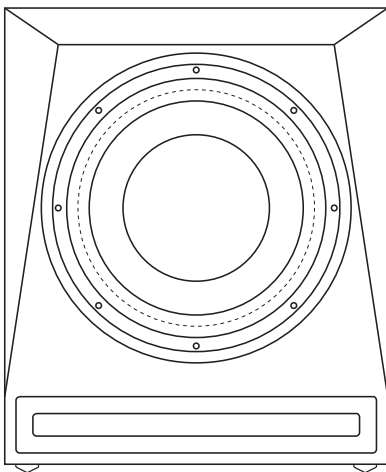
Long excursion ultra high performance 13" forward firing powered driver featuring:

- Long fiber treated paper cone with oversized inverted dust cap.
- High profile double roll NBR surround.
- Non-magnetic cast aluminum frame.
- 60mm all aluminum voice coil.
- Double-stacked 165 oz Strontium Ferrite magnet structure with twin aluminum shorting rings and undercut carbon steel pole piece.
- Maximum linear excursion: 38mm.
- Maximum peak excursion: 75mm.

Amplification

Audiophile quality, efficient, cool running, Class D amplifier.

- 1000 watts RMS continuous.
- 2000 watts peak.



AIRMOTIV REFERENCE SUBWOOFERS

Inputs and Outputs:

To reduce unwanted noise, when the RS13 is powered on, it will detect which audio input is being used, and temporarily disable the other input.

The Airmotiv RS13 Reference Subwoofer has:

- Stereo Left and Right unbalanced RCA inputs.
(The Left Unbalanced input is also the Unbalanced LFE input.)
- Balanced Mono LFE input.
- Balanced Loop Output (pass through).

Electronics

All of the operating controls and status indicators on the Airmotiv RS13 are located on the top panel under a removable, magnetically attached, smoked plastic cover.

- Powerful dual-core 48 bit DSP audio processor for optimum precision and flexibility.
- Variable Phase control: 0 to -180 degrees.
- Variable Level control: -20 dB to +15 dB.
- Variable Crossover Frequency control: 40 Hz to 160 Hz.
- An extremely effective, totally transparent limiter which makes it virtually impossible to overload the RS13 or make it sound bad.
- User selectable Bass profiles:
 - Deep profile allows for response flat from 16 Hz to 240 Hz +/- 3 dB.
 - Flat profile introduces a gradual rolloff below 30 Hz (-3 dB at 21 Hz).
- User selectable Crossover Bypass.
- User selectable power mode:
 - Always On
 - Auto-On

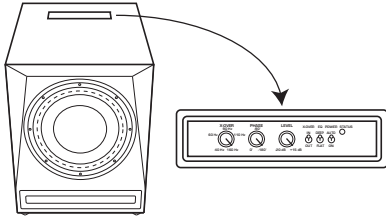
Cabinet

- Heavy-duty furniture grade acoustically inert HDF cabinet.
- Full 50mm thick front baffle, 25mm side walls, and extensive internal bracing.
- Front firing low noise countoured slot loaded port.
- Finished on all sides in furniture grade flat black lacquer or a high gloss piano black finish.
- Attractive countoured fabric grill, firmly attached by powerful magnets for easy removal.

Environmental and Mechanical

- AC Power: Available in both 120 VAC and 230 VAC versions.
- Dimensions: 17 inches wide x 22 inches deep x 20 inches high.
(add one inch to height for feet; add one inch to depth for grill and one inch for connectors)
- Weight: 86 Pounds.
- Permanently attached non-slip rubber feet.

Airmotiv RS11 Reference Subwoofer



The Airmotiv RS11 Reference Subwoofer delivers the ultimate in technical performance, precision, musicality, and just plain awesome bass output. Unlike lesser subs, the RS11 can actually deliver huge amounts of clean deep low bass, all the way down to 20 Hz, giving both music and movies the all important foundation they need to sound their best, with no compromise in sound quality.

Output Specifications

Frequency response:

- 20 Hz - 240 Hz +/- 3 dB (Deep).
- 23 Hz - 240 Hz +/- 3 dB (Flat).

Maximum output level:

- 103 dB SPL at 20 Hz at 2 meters.
- 110 dB SPL at 40 Hz at 2 meters.

Driver Complement

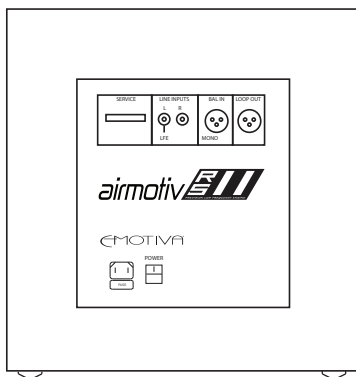
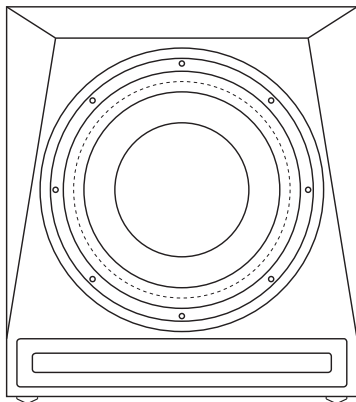
Long excursion ultra high performance 11" forward firing powered driver featuring:

- Long fiber treated paper cone with oversized inverted dust cap.
- High profile double roll NBR surround.
- Non-magnetic cast aluminum frame.
- 60mm all aluminum voice coil.
- Double-stacked 100 oz (2 x 50 oz) Strontium Ferrite magnet structure with twin aluminum shorting rings and undercut carbon steel pole piece.
- Maximum linear excursion: 38mm.
- Maximum peak excursion: 75mm.

Amplification

Audiophile quality, efficient, cool running, Class D amplifier.

- 500 watts RMS continuous.
- 1000 watts peak.



Inputs and Outputs:

To reduce unwanted noise, when the RS11 is powered on, it will detect which audio input is being used, and temporarily disable the other input.

The Airmotiv RS11 Reference Subwoofer has:

- Stereo Left and Right unbalanced RCA inputs.
(The Left Unbalanced input is also the Unbalanced LFE input.)
- Balanced Mono LFE input.
- Balanced Loop Output (pass through).

Electronics

All of the operating controls and status indicators on the Airmotiv RS11 are located on the top panel under a removable, magnetically attached, smoked plastic cover.

- Powerful dual-core 48 bit DSP audio processor for optimum precision and flexibility.
- Variable Phase control: 0 to -180 degrees.
- Variable Level control: -20 dB to +15 dB.
- Variable Crossover Frequency control: 40 Hz to 160 Hz.
- An extremely effective, totally transparent limiter which makes it virtually impossible to overload the RS11 or make it sound bad.
- User selectable Bass profiles:
 - Deep profile allows for response flat from 20 Hz to 240 Hz +/- 3 dB.
 - Flat profile introduces a gradual rolloff below 30 Hz (-3 dB at 23 Hz).
- User selectable Crossover Bypass.
- User selectable power mode:
 - Always On
 - Auto-On

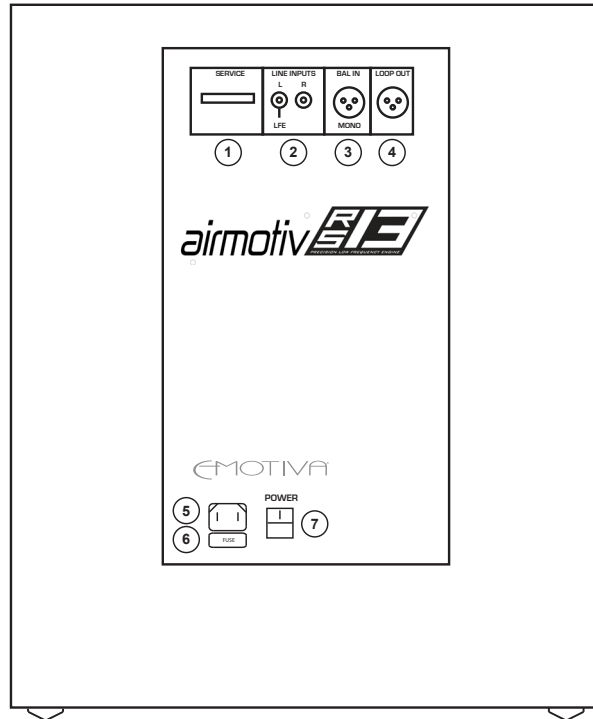
Cabinet

- Heavy-duty furniture grade acoustically inert HDF cabinet.
- Full 50mm thick front baffle, 25mm side walls, and extensive internal bracing.
- Front firing low noise countoured slot loaded port.
- Finished on all sides in furniture grade flat black lacquer or a high gloss piano black finish.
- Attractive countoured fabric grill, firmly attached by powerful magnets for easy removal.

Environmental and Mechanical

- AC Power: Available in both 120 VAC and 230 VAC versions..
- Dimensions: 15 inches wide x 17-1/4 inches deep x 15-1/2 inches high.
(add one inch to height for feet; add one inch to depth for grill and one inch for connectors)
- Weight: 62 Pounds.
- Permanently attached non-slip rubber feet.

Rear Panel Connections & Controls



All audio inputs and AC power connections for the Airmotiv Reference Subwoofers are located on the rear panel. The RS13 and RS11 have identical controls, audio inputs, and AC power connections. (Airmotiv RS13 Reference Subwoofer shown.)

1. Service Port

The service port is used by the factory to configure the DSP firmware in the Reference Subwoofer.

2. Line Level Inputs

Use the Left and Right Line Level Inputs to connect the Reference Subwoofer to a line level audio source that has stereo subwoofer outputs. Use just the Left (L) Line Level Input if your source has a single unbalanced subwoofer output or LFE output.

3. Balanced Line Level Input

Use the Balanced Line Level Input to connect the Reference Subwoofer to a source with a balanced line level output.

AIRMOTIV REFERENCE SUBWOOFERS

Note: The Airmotiv Reference Subwoofers have a sophisticated built-in DSP-based crossover system, which offers flexible configuration options for connecting to a source that provides a stereo or monaural full range output, or can be bypassed for use with sources that have internal bass management and offer a subwoofer or LFE output.

Note: In order to minimize input noise, the Reference Subwoofers detect whether you are using the balanced or unbalanced inputs when you power them on, and disable the input not currently in use. If you wish to change active input you must power cycle the Reference Subwoofer so that it recognizes the change.

4. Loop Output

The input signal received by the Reference Subwoofer is passed directly to the balanced Loop Output for connection to additional subwoofers.

5. IEC Power Receptacle

The IEC Power Receptacle accepts any standard IEC power cable. A high quality commercial power cable is provided with your Reference Subwoofer.

6. Fuse Holder

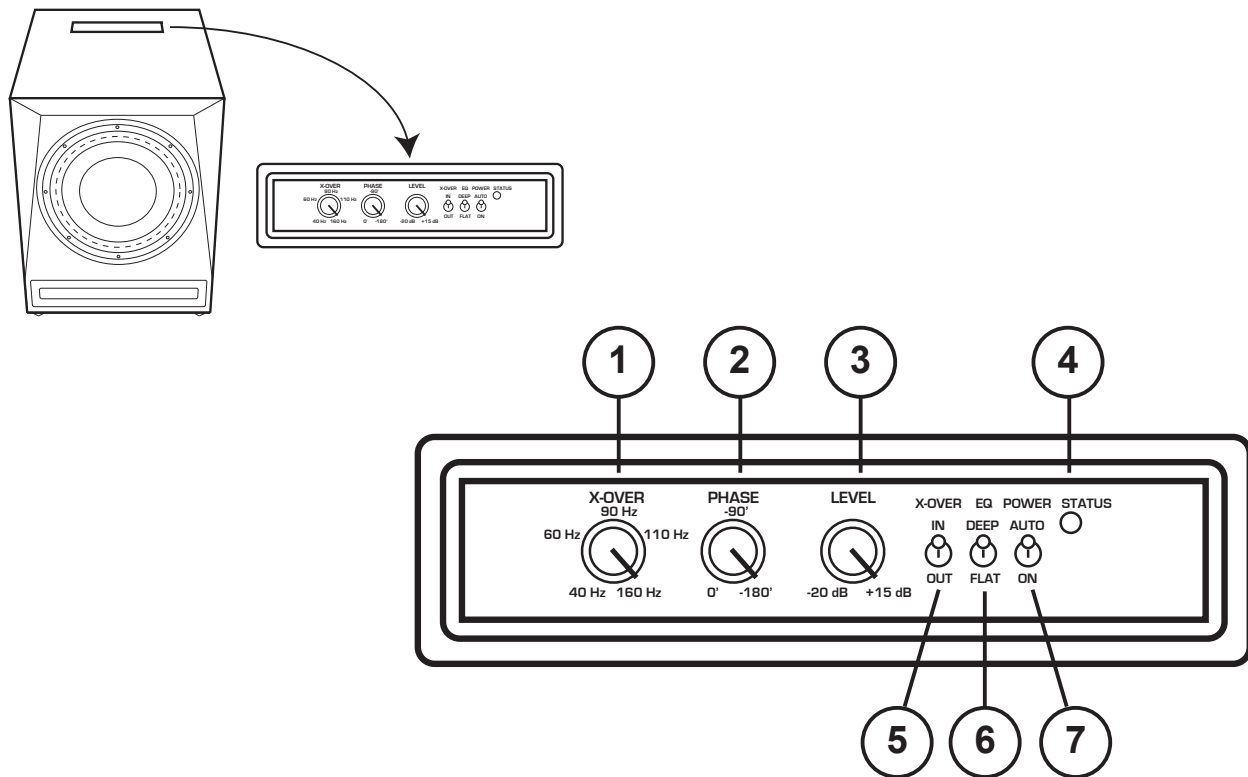
The AC line fuse for the Airmotiv Reference Subwoofer is located directly beneath the IEC Power Receptacle on the rear panel. (See Page 17 for details about how to change the AC line fuse.)

7. AC Power Switch

Use this switch to turn the main AC Power to your Airmotiv Reference Subwoofer Reference Subwoofer On and Off.

Note: The Airmotiv Reference Subwoofer will only operate if the AC POWER Switch is turned ON. If the AC POWER Switch is OFF, your Reference Subwoofer will NOT operate, and the Power Auto / On Switch will have no effect.

Control Panel (top)



The configuration controls on the Airmotiv RS13 and RS11 Reference Subwoofers are located under a tinted plastic cover located near the rear of the top panel. The cover is attached magnetically - simply lift to remove it and access the controls.

1. X-Over (Crossover Frequency)

This control sets the low-pass crossover frequency for the internal crossover on the Reference Subwoofer. This is used to configure the smoothest possible blend between the Reference Subwoofer and your main speakers.

2. Phase

This control allows you to adjust the phase of the acoustic output on the Reference Subwoofer relative to your main speakers. This is used to adjust your Reference Subwoofer so it is “in phase” with your main speakers.

Note: The X-Over and Phase controls only affect the output of the Reference Subwoofer when the X-Over Switch is set to In. They have no effect when the X-Over Switch is set to Out, and they have no effect on the Loop output.

3. Level

This control allows you to adjust the output level on your Reference Subwoofer.

4. Status LED

The Status LED on the Airmotiv Reference Subwoofer provides information about the status of the Reference Subwoofer.

- An UNLIT Status LED indicates that the main AC Power switch is Off or there is no AC power.
- A RED Status LED indicates that the Reference Subwoofer is in Standby mode.
- A FLASHING BLUE Status LED indicates that the Reference Subwoofer is On but has not detected an input signal.
- A BLUE Status LED indicates that the Reference Subwoofer is On and playing or ready to play.

Note: When the Reference Subwoofer is powering On, the status LED will blink several times before turning solid RED to indicate that the Reference Subwoofer is in Standby. This is part of the normal startup process.

Note: When the Reference Subwoofer powers Off, you will notice that the Status LED and panel lighting flash for a period, go off entirely, flash briefly a few seconds later, then flash briefly again after a few more seconds. This is part of the normal shutdown process. The Reference Subwoofer is only fully Off after the second brief flash.

5. X-Over Switch

This switch enables you to bypass the internal crossover in the Reference Subwoofer. This switch should be set to Out when the Reference Subwoofer is connected to the Subwoofer or LFE output on a system that has bass management, and should be set to In, to enable you to use the internal crossover on the Reference Subwoofer, when the Reference Subwoofer is connected to a full range output.

6. EQ Switch

This switch allows you to select between the Deep and Flat response curves. Limiting the lowest frequencies results in a slightly higher maximum output.

- The Deep response curve is the flattest:
 - +/-3dB to 16 Hz on the RS13
 - +/-3dB to 20 Hz on the RS11
- The Flat setting introduces a slight rolloff at very low frequencies (starting around 30 Hz):
 - 3 dB at 21 Hz on the RS13
 - 3 dB at 23 Hz on the RS11

7. Power Auto/On Switch

This switch selects between allowing the Reference Subwoofer to remain powered on at all times and enabling the Reference Subwoofer to automatically turn on when it detects an audio signal.

Subwoofer Placement and Configuration

The best location for your subwoofer will depend on a lot of things - including the acoustics of your room, the characteristics of your main speakers, and practical considerations like where you have room for it. Whole books have been written about the subject - and even experts often disagree. The Reference Subwoofer has a single port on the front, and no extensive vents or heat sinks on its rear panel, so it may be placed in a corner or close to a wall.

Some frequently chosen locations include: in the front between your main front speakers, in a front or rear corner, or in the center of a side wall or rear wall. Each has advantages and disadvantages, and each may or may not work well in your particular system.

One way of choosing a good location is sometimes humorously referred to as the “subwoofer crawl”. To use this method, you connect your subwoofer temporarily to your audio system, place the sub in your normal listening position, where you would normally sit, and play music through it with plenty of bass. You then crawl around on the floor, stopping and listening at each location where you’re considering putting your sub. Once you find the spot where the bass sounds the best and cleanest, you switch places with the subwoofer, placing it in the location where the bass sounded the best. This often turns out to be a good location for your sub.

Note: Your Reference Subwoofer contains a powerful yet efficient Class D amplifier. While the back plate of the Reference Subwoofer will get slightly warm in normal use, no special ventilation or clearance is required.

The Airmotiv Reference Subwoofer may be used with a wide variety of different systems and how you configure it will depend on the type of system you have. A properly configured subwoofer should add depth and a solid foundation to your listening experience, but should not be audible as a separate sound source, and you should not be able to detect its physical location in the room by listening to it. The visceral low bass delivered by a subwoofer should simply fill the listening area. Please feel free to call us at Emotiva Technical Support if you have any questions about how to connect or configure your Airmotiv Reference Subwoofer Reference Subwoofer.

Note: The way your main speakers and subwoofer blend together will sound slightly different at different locations in the room. These adjustments should be made by listening at your normal listening location. If your equipment is located across the room, walk back to your favorite chair and listen to the results from there each time you make an adjustment.

Note: After you’ve configured everything on your pre/pro, or used your automatic room correction to do so, you should AVOID changing location of the Reference Subwoofer, and the Crossover and Phase Control settings, as this will change the way it sounds. However, you may use the Volume Control to increase or reduce the overall amount of bass to suit your tastes.

Care and Maintenance

Periodic Maintenance

Your Airmotiv Reference Subwoofer requires no periodic maintenance or calibration.

Cleaning the Cabinet and Baffle

- The cabinet of your Reference Subwoofer should normally be cleaned with a rag dampened with plain water. **DO NOT** spray water directly onto or into the speaker and **DO NOT** use abrasive or chemical cleaners. Gently dry the surface with a clean soft rag after cleaning.
- If necessary, use a mild detergent, wipe the surface with a rag dampened with plain water afterwards to rinse it, and then gently dry the surface with a clean soft rag.
- If something nasty does get on the sides or top of your Reference Subwoofer, use a rag dampened with a weak solution of dish detergent or other mild cleaning liquid, followed by a rag dampened with plain water, and then dry with a clean rag.

Cleaning the Grill Cloth

- If necessary, the grill cloth may be carefully vacuumed to remove dust or hair.
- Animal hair may be removed by using a "tape" type lint remover or soft brush. Avoid using brushes with stiff bristles that may pull or damage the grill cloth.

Note: DO NOT use any sort of liquid or wet cloth on the woofer cone, grill, or control panel.

Replacing The Main AC Line Fuse

The main AC power fuse on the Airmotiv Reference Subwoofer is accessed from the rear panel. In the unlikely even that you need to replace the fuse, here's how:

- Turn off your Reference Subwoofer
- Disconnect the IEC power cable from its receptacle on the rear panel.
- The fuse is located in a small drawer which is part of the IEC power cable receptacle. (Refer to the picture on Page 12.)
- Once the cable is removed, reach across the cable receptacle opening with a small knife or screwdriver, and pry gently outwards on the small plate with the fuse symbol on it. The fuse holder will slide out like a drawer, allowing you to access and replace the fuse.
- Replace the fuse with a new one of the same size and rating.
- Carefully replace the fuse holder, making sure to orient it in the correct direction, and snap it firmly back into place.
- Replace the IEC power cable.

Note: If the fuse in your Reference Subwoofer blows repeatedly without apparent reason, then you might have an electrical fault in your sub, and you should call Emotiva Technical Support for assistance.

Emotiva Audio Corporation Five-Year Limited Warranty

What does this warranty cover?

Emotiva Audio Corporation (Emotiva) warrants its products against defects in materials and workmanship. This warranty, and all rights provided hereunder, is granted to the original owner, and may be transferred by the current owner to a new owner if the unit is gifted or sold. In the event the original owner transfers ownership of the Product prior to the expiration of the applicable term described below, this Warranty shall terminate at the end of the original term.

This Warranty only applies to Products purchased directly from Emotiva or any of its Authorized Dealers or International Distributors.

Emotiva warrants any replacement product or part furnished hereunder against defects in materials and workmanship for the longer of the following: (i) the amount of time remaining under the original warranty, or (ii) 120 days from your receipt of the repaired or replaced product. The duration described in this paragraph is hereinafter referred to as the "Term".

TO THE FULLEST EXTENT PERMITTED BY LAW, ALL IMPLIED WARRANTIES RELATED TO THE ORIGINAL PRODUCT AND ANY REPLACEMENT PRODUCT OR PARTS (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE EXPRESSLY LIMITED TO THE TERM OF THIS LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

The original owner must make a claim within the Term of the Warranty. A claim shall not be valid (and Emotiva has no obligation related to the claim) if it is not made within the Term and if it is not made in strict compliance with the requirements of the "How do you get service?" section.

How long does this coverage last?

The warranty on the Emotiva Airmotiv Reference Subwoofer commences on the date of retail purchase by the original retail purchaser and runs for a period of five years thereafter. This warranty may be transferred by the current owner to a new owner at any time during the original term. Emotiva warrants any replacement product or part furnished hereunder against defects in materials and workmanship for the longer of the following: (i) the amount of time remaining under the original warranty, or (ii) 120 days from your receipt of the repaired or replaced product. The duration described in this paragraph is hereinafter referred to as the "Term".

What will Emotiva do?

Emotiva will, at its option, either: (i) repair the product, or (ii) replace the product with a new consumer product which is identical or reasonably equivalent (in Warrantor's sole discretion) to the product. In the event Warrantor, in its sole discretion, is unable to replace or repair the Product or it is not commercially practicable to do so, then: (i) if the claim was submitted during the first 365 days of the Term, Warrantor shall refund to you the purchase price that you paid for the Product; and (ii) if the claim was submitted after the first 365 days of the Term, Emotiva shall issue you a credit equal to the purchase price that you paid for the product. The credit may only be used for the purchase of merchandise from Emotiva, and cannot be used for freight charges.

AIRMOTIV REFERENCE SUBWOOFERS

When a Product or part is repaired or replaced, any replacement item becomes your property and the replaced item becomes Emotiva's property. When a refund or credit is given, the Product for which the refund or credit is provided must be returned to Emotiva and becomes Emotiva's property.

What is not covered by this warranty?

This warranty does not apply: (i) to damage caused by use with products not manufactured by Emotiva, where the non-Emotiva product is the cause of the damage; (ii) to damage caused by service or maintenance performed by anyone who is not a representative of Emotiva; (iii) to damage caused by accident, abuse, misuse, flood, fire, earthquake or other external causes; (iv) to a product or part that has been modified after its retail purchase, where the modification caused or contributed to the damage; (v) to consumable parts, such as batteries or failure of or damage to the Product caused by batteries; (vi) if any Emotiva serial number has been removed or defaced on the product; (vii) glass or plastic panels, cabinetry, trim or other appearance items; (viii) cosmetic wear or damage to remote controls by user.

EMOTIVA SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM OR RELATED TO ANY DEFECTS IN OR DAMAGES TO ITS PRODUCTS. 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.

How do you get service?

In order to make a claim under the Warranty, you must:

1. Call or e-mail a customer service representative at 1-877-EMO-TECH (1-877-366-8324) or support@emotiva.com. You must provide a description of your problem, the serial number of the Product for which the warranty claim is being made, and the original purchase date.
2. Then, you will be provided with a warranty service authorization number ("WS").
3. Next, you must ship the Product to the following address, with the WS written in large, bold numbers on the outside of the box, and with the letters "WS" written before the number, for example: WS1234. Parcels arriving without a WS number on the outside of the box will be refused. The customer pays for the shipping to Warrantor. Warrantor pays for the shipping back to the customer within the continental United States only. Customer is responsible for shipping charges on all other warranty claims.

**Emotiva Audio Corporation
Attn: Repair Department
139 Southeast Parkway Court
Franklin, TN 37064**

Units will be refused by Emotiva for the following:

- Product was sent without the WS#
- Product was sent with inadequate packaging.
- Product was damaged in transit.
- Product was shipped collect for shipping charges.

How does state law apply?

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

What if my product is damaged on the way to you?

Emotiva is not liable for damages that may incur while an item is in transport to us. Please purchase insurance when you ship your item. If your Product was not adequately packaged, we will refuse receipt and the damaged package will be returned to you at your cost. If you do not have the original Emotiva Audio packaging, please check with our sales department to purchase replacement-shipping cartons.

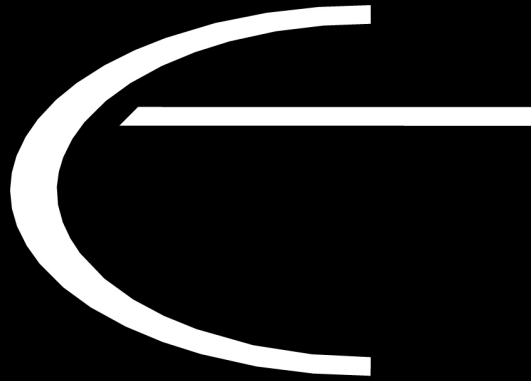
How does the Warranty and service apply to international orders?

The Product Warranty is only valid in the country where the Emotiva product was originally shipped via an authorized dealer, distributor, or direct from the Emotiva factory. The Warranty is subject to change at any time depending on the laws and regulations within your specific country. Please check with your distributor for a complete understanding of the warranty in your county.

If you purchased your Emotiva Product outside of the USA and wish to have it serviced at the factory, all freight charges are your responsibility. If you do not have an authorized distributor or repair center in your country, your Product must come back to the Emotiva USA factory for warranty service.

Notes

All information contained in this manual is accurate to the best of our knowledge at the time of publication. In keeping with our policy of ongoing product improvement, we reserve the right to make changes to the design and features of our products without prior notice.



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135 Southeast Parkway Court
Franklin, TN 37064

www.emotiva.com