

REL
ACOUSTICS LTD.



Operating Instructions for the

AirShip™
Wireless

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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 and 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 into an outlet on a circuit different from that to which the receiver is connected.

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

AirShip™ Wireless

Airship™ is our newest state of the art zero compression wireless connection for use with the latest Serie S and many more RELs to come. Our goal with this design is to deliver a true hardwired quality of connection wirelessly. We have prided ourselves on our ability to deliver extremely high levels of sound quality and rock solid wireless connection protocols since our first wireless design over a decade ago. Airship™ surpasses any earlier design using a 5.8 gigahertz signal, a frequency previously reserved for military use by the US military and NATO. It results in the fastest, most transparent wireless the design team has ever experienced and verges on hardwired transparency levels.

Ultra-high quality wireless confers a number of benefits to the REL owner, notably, freedom of placement. This permits extreme performance without the cumbersome tether of a cable, permitting ideal placement without being limited by the length of a wire and can lead to a better sounding, less cluttered experience. This gives you the ability to place subs in distant corners, along glass walls, or on hardwood floors allows for a superior experience, sonically and aesthetically.

REL AirShip™ Panel Connection Legend

REL AirShip™ Transmitter

- 1 Power Switch: Used to turn on and off REL AirShip™ transmitter.
- 2 .1/LFE RCA INPUT: Used to connect to the .1/LFE output from a home theater processor. Should be used in conjunction with REL HIGH-LEVEL connection for the ultimate theater experience.
- 3 LOW LEVEL RCA INPUTS: Used to connect to a stereo output from a stereo pre-amp or home theater processor.
- 4 BALANCED .1/LFE INPUT: Used to connect to the balanced .1/LFE output from a home theater processor with XLR cables.
- 5 HIGH-LEVEL INPUT (Neutrik® Speakon® Socket): Use to connect HIGH-LEVEL to the main front amplifier speaker terminals.
- 6 Power Adapter Socket: DC input socket that accepts a detachable power adapter.
- 7 PAIR LED: Indicates whether the REL AirShip™ transmitter is paired with the receiver or not.
- 8 Pair Button: Used to pair REL AirShip™ transmitter with REL cabinet.



REL AirShip™ Receiver

- 1 LED: Indicates whether the REL AirShip™ receiver is paired with the transmitter or not.
- 2 Pair Button: Used to pair REL AirShip™ receiver with REL cabinet.
- 3 Power Adapter Socket: DC input socket that accepts a detachable power adapter.
- 4 HI/LO OUTPUT: RCA output to be connected to LOW-LEVEL input of Serie S.
- 5 .1/LFE OUTPUT: RCA output to be connected to .1/LFE input of Serie S.



Mounting Up

The receiver and bracket shall be mounted to the back panel of the Serie S using the same fasteners that hold the amplifier panel in place. Make sure the electrical interface is fully engaged to ensure proper performance and the mounting screws need to be tight. See photo below.



Loosen and remove the two lowest fasteners on along the lower left edge of the amplifier panel. You will need a 3mm hex (Allan) wrench. Then align the holes in the mounting bracket with the holes in the panel. Replace the fasteners and tighten.

Do not remove the transmitter from the bracket

Using the supplied RCA to RCA cable, connect Hi/low Output of the receiver to the Hi/Low RCA input on the REL and the LFE Output on the receiver to the LFE RCA input on the REL.

Connecting Up

The REL AirShip™ wireless is intended to be used with the Serie S Sub-Bass System. The transmitter and receiver will require power from an AC wall plug using the power adapter cables supplied.

It is not possible to use the AirShip™ wireless connection and a direct connection simultaneously. Using both wired and wireless connections simultaneously could result in damage and voids all warranties.

Always switch your system off before disconnecting any wires.

The transmitter can be placed near an amplifier, pre-amp or processor source. Make sure the electrical interface is fully engaged to ensure proper performance.

There must be at least 12 inches between AirShip™ and other wireless sources.

Airship™ permits simultaneous use of our new 5.8 gigahertz connection for both HIGH-LEVEL connection AND the .1/LFE needed for high quality theater. In this way, both 2-channel music and multi-channel theater are supported simultaneously meaning the REL owner can use their REL without adjusting anything further to any form of music or theater.

Our HIGH-LEVEL input is designed to accept the stereo (two-channel) signals from the speaker terminals of your receiver, integrated amplifier or power amplifier(s). This has the advantage of ensuring that your subwoofer receives exactly the same signal as the main speakers, which means that the character of the bass from the main system is carried forward into our Sub-Bass System. Along with our extremely fast, natural sounding Filter Circuits, Airship™ ensures you receive the benefits of REL's superior system integration since RELs are known the world over for their perfect, rich integration without the ability to sonically locate the subwoofer's origin.

For top theater performance, the .1/LFE circuit is granted its own dedicated wireless channel which allows for the largest, most dynamic special effects in theater to be properly replicated in all their glory. Airship™ delivers 2 channels in parallel, one for music and theatre in HIGH-LEVEL (or LOW-LEVEL, increasingly needed for active wireless speakers for example) and a second channel for .1/LFE in theater use.

When both are used correctly, normal theater transforms because the cold, edgy sound most theaters deliver becomes rich and full-bodied. Dialogue and atmospheric effects take on new drama and realism because the full range of sounds are provided every moment of the movie by our HIGH-LEVEL, whilst the .1/LFE channel delivers extra emphasis during the 15-20 minutes of a movie that this channel is active. Truly the best of both worlds.

HIGH-LEVEL connection, using the enclosed cable with the Neutrik Speakon connector, is always the first choice. This connection can be made without affecting the performance of the amplifier because the REL's amplifier input impedance is 150,000 ohms, in effect not producing any additional demand whatsoever on the rest of your system.

Connecting to the Power Amplifier Using the Speakon HIGH-LEVEL INPUT

To engage the Neutrik Speakon plug, insert fully into socket and rotate clockwise until locked.

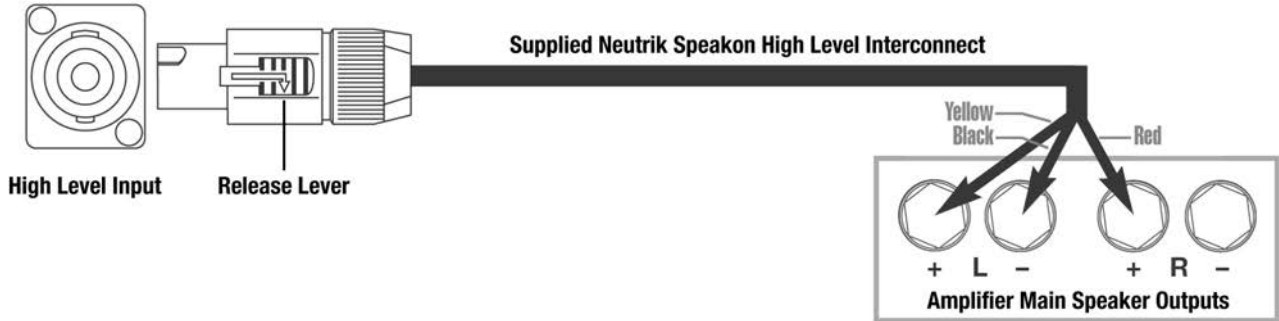
To remove the Neutrik Speakon plug, grip body of plug, place thumb on chrome lever, move lever backwards, rotate plug anticlockwise quarter turn and withdraw.

The following are ways to connect to common amplifier types. There is more detailed connection information at User Guides on REL.net.

Please note: Since REL AirShip™ uses an external AC to DC converter, it does not have an connection to earth ground, so a connection with the BLACK wire of the high level cable OR the collar of an RCA connection must be made to the stereo, or home theater system.

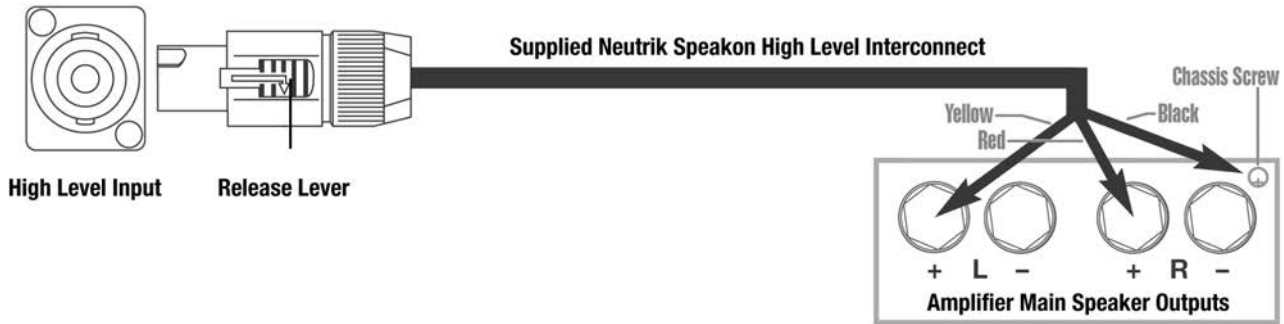
- The standard HIGH-LEVEL hook up procedure is: attach the red wire to the amplifier's right positive speaker output terminal; attach the yellow wire to the amplifier's left positive speaker output terminal; attach the black wire to whichever of the amplifier's ground output terminals is convenient; plug the Speakon connector into the AirShip™ wireless transmitter's HIGH-LEVEL input.

Standard HIGH-LEVEL



- For differential (i.e. fully balanced) amplifiers using one REL, simply use the standard connecting scheme with the exception of connecting the black wire to chassis ground (i.e. a metal bolt or screw, preferably not painted or anodized, on the chassis of the power amp or receiver), not to a negative speaker terminal, and then connecting into the HIGH-LEVEL input on the AirShip™ wireless transmitter. Please contact your dealer should there be any questions concerning this or any other hookup procedure.

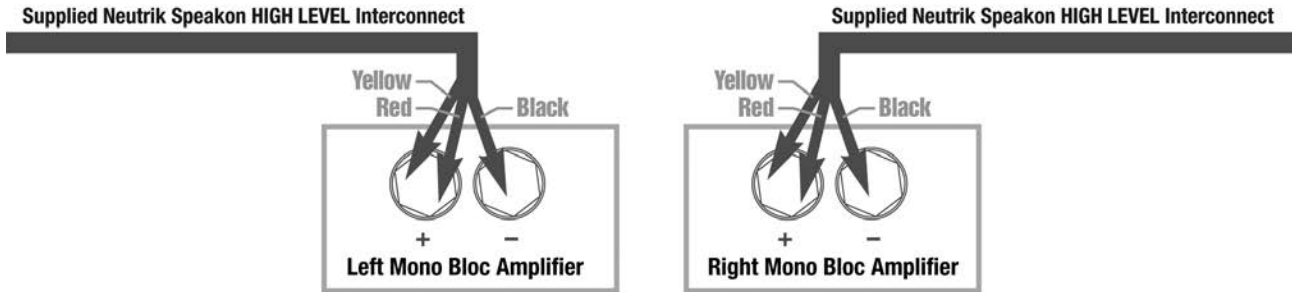
Differential (i.e. Fully Balanced)



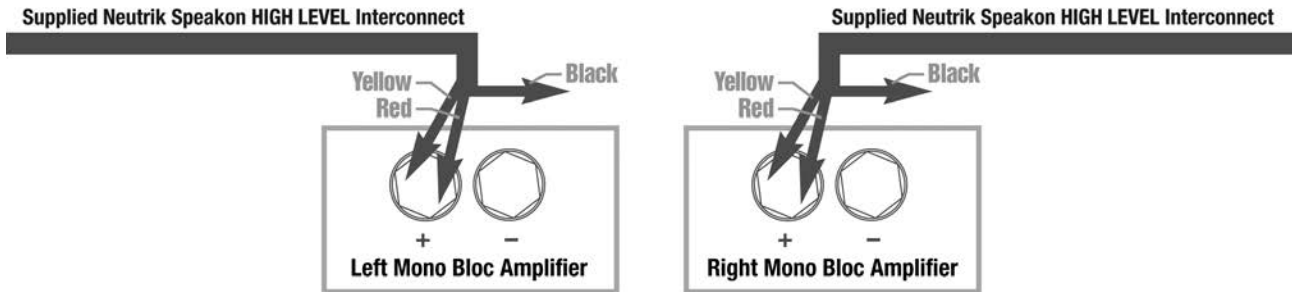
NOTE: The REL AirShip™ transmitter is equipped with internal circuitry to allow seamless connection to Class-D (digital) main amplifiers. If connecting to a Class-D amplifier, follow the above connection procedure for differential amplifiers.

- If connecting RELs to Mono Bloc amplifiers, we strongly advocate using two (2) RELs, one for each amplifier. Connect the black wire of each REL to the negative speaker terminal of the corresponding amplifier channel; twist together the red and yellow wires of each REL separately and connect each pair to the positive speaker terminal of the corresponding amplifier channel. In some instances, this will result in exceptionally high gain (output) from the RELs. If it seems simply too high in gain, please remove either the red or yellow wire from the twisted pair. This will reduce output by half and restore a natural dynamic. If the amplifier is of balanced differential design, please follow the instructions in the section above labeled Differential Connection.

Mono Bloc

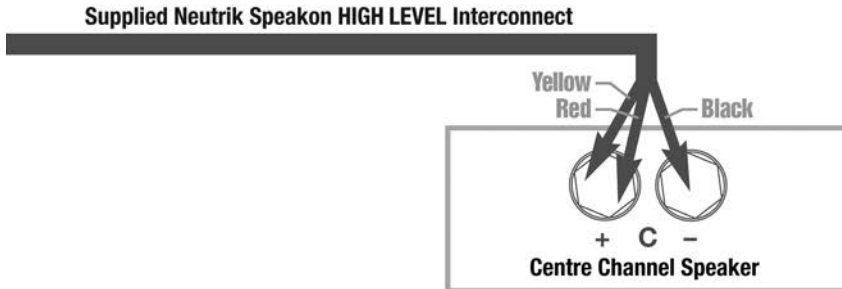


Mono Bloc Differential



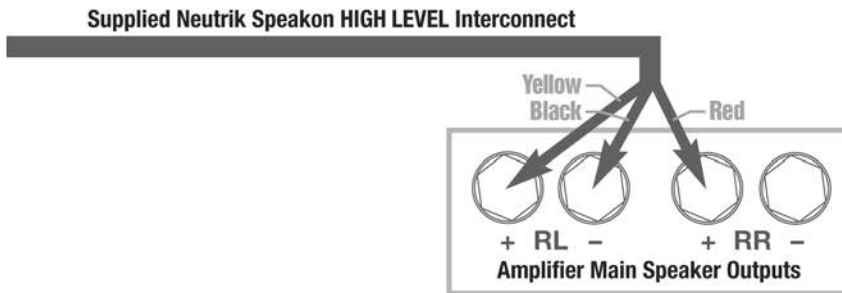
- If connecting a single REL as a dedicated center channel sub, connect the black wire of the REL to the negative center channel speaker terminal; twist together the red and yellow wires and connect this pair to the positive center channel speaker terminal.

Dedicated Centre Channel



- If connecting a REL as a dedicated rear channel sub, connect the black wire of the REL to either the left rear or right rear negative speaker terminal; connect the yellow wire to the left rear positive speaker terminal; connect the red wire to the right rear positive speaker terminal. If the amplifier is of balanced differential design, please follow the instruction in the section above labeled Differential Connection.

Dedicated Rear Channel



When connecting to a home cinema system where a .1/LFE channel output is present, connect a single phono or XLR cable between the sub output of the processor/receiver and the .1/LFE input jack on the AirShip™ wireless transmitter.

REL Theater Reference™ Home Cinema Applications

For home theater systems, once the standard set-up for two-channel outlined above is complete, the LFE output from the processor or receiver should be connected to the .1/LFE input and appropriate volume adjustments made using the .1/LFE LEVEL control. For this configuration, you must set the processor to the “large” or “full range” setting for the left and right speakers in order for the REL to receive the bass signal via the HIGH-LEVEL cable. In this configuration, the REL provides support for both the left and right speakers for two-channel listening, and support for the LFE when films are playing. Most processors will allow you to defeat the subwoofer output when listening in the two-channel mode. The effect of this set-up is one of greatly increased dynamics in the mid-bass range, no bass bloat, and a greater degree of space and timing from the special audio effects.

The .1/LFE input is via an XLR, or RCA jack that connects to the .1/LFE output of a home cinema amplifier/processor.

Pairing

The AirShip™ wireless transmitter and receiver should be paired with each other from the factory. When the power is applied to both units, you should find that the LED on each unit is on. If this is not the case, then it will be necessary to pair them together. Follow the instructions below to pair the transmitter to the receiver.

- 1 Make sure that the transmitter AC to DC wall plug supply is connected to an AC outlet, and that the barrel connector is connected to the transmitter.
- 2 Make sure that the receiver AC to DC wall plug supply is connected to an AC outlet, and that the barrel connector is connected to the receiver.
- 3 Turn the transmitter power switch on and a blue LED on the input face of the transmitter will indicate the unit is on by blinking in the standby pattern which is one flash per second.
- 4 Turn the receiver power switch on.
- 5 At this point the transmitter and receiver should find each other and pair together. This will be indicated by the “Pair” LEDs on both the transmitter and control panel staying lit (no flashing).
- 6 In the event that the transmitter and receiver do not automatically pair, simply exercise the momentary “Pair” buttons on the transmitter and the receiver.

Status	LED Indicator
Paired	Continuously on
Standby	Blinks once per second

Care and Polishing

The enclosures are best maintained by using a light automotive spray-on wax and a micro fiber cloth. Take care not to spray the aluminum badge. Do not place objects, such as drinks on top of your REL AirShip™ transmitter. Never use a dry cloth on this finish.

Technical

The AirShip™ transmitter provides true REL Theater Reference™ connectivity, permitting both HIGH-LEVEL and LFE channels to be wirelessly fed to Serie S. This occurs with virtually zero delay and a complete absence of compression.

AirShip™ Transmitter Specifications

Input Connectors: High-Level Neutrik Speakon, L/R Low-Level RCA, LFE single phono RCA, LFE balanced XLR

Input Impedance

HIGH-LEVEL: 150k ohms

LOW-LEVEL: 10k ohms

RCA .1/LFE: 10k ohms

XLR .1/LFE: 10k ohms

Wireless output power: Less than -3dBm

Wireless effective distance: 30 ft (10 meters) with clear line of site

Mains Input Voltage: 5V DC, 5.5mm circular connector, positive center

Power consumption: 600 mWatts

Dimensions (WHD): Transmitter 6 x 6 x 2 5/8 in., (152.4 x 152.4 x 66.7 mm)
Receiver 5 1/2 x 4 5/16 x 1 3/16 in., (139.7 x 109.5 x 30 mm)

Finish: Black

Supplied Accessories

Power Adapter: X2

High Level cable: 3 meter in length

Dual RCA Cable: 2 meter in length

In the interest of product improvement, REL Acoustics Limited reserves the right to alter these specifications without notice.

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