

# REL

ACOUSTICS LTD.



Operating Instructions for the

## AirShip Direct™ 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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**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.

This Equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20cm between the radiator (wireless transmitter) and your body.

## **AirShip Direct™ Wireless:**

AirShip Direct™ 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 Direct™ 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 Direct™ Panel Connection Legend



### REL AirShip Direct™ Transmitter

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



## REL AirShip Direct™ Receiver

- 1 Pair Button: Used to pair REL AirShip Direct™ receiver with transmitter.
- 2 Power Switch: Used to turn on and off REL AirShip Direct™ receiver.
- 3 LED : Indicates whether the REL AirShip Direct™ receiver is paired with the transmitter or not.

## Mounting Up

The receiver must be mounted to the back panel of the SerieS using supplied hardware. Make sure the electrical interface is fully engaged to ensure proper performance and the mounting screws need only be finger tight.

Please turn the REL off and make sure that the PWR switch is in the off position before mounting the receiver.



## Connecting Up

The REL AirShip Direct™ wireless is intended to be used with the Serie S sub bass system. The transmitter will require power from an AC wall plug using the power adapter cable supplied.

It is not possible to use the AirShip Direct™ 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 Direct™ and other wireless sources.**

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

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 Direct™ 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 theatre performance, the .1/LFE circuit is granted its own dedicated wireless channel which allows for the largest, most dynamic special effects in theatre to be properly replicated in all their glory. AirShip Direct™ 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 theatre use.

When both are used correctly, normal theatre transforms because the cold, edgy sound most theatres 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.

## **Connecting**

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.

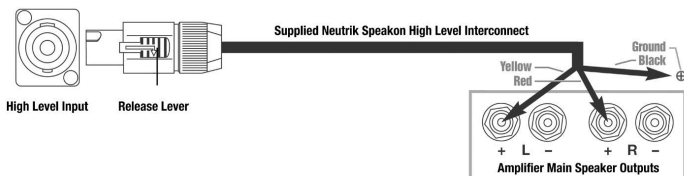
To remove the Neutrik Speakon plug, grip body of plug, place thumb on chrome lever, move lever backwards, rotate plug anticlockwise quarter turn and withdraw.

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

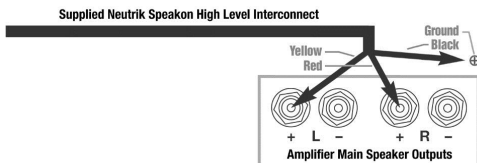
Please note: Since REL AirShip Direct™ uses an external AC to DC converter, it does not have an connection to earth ground, so a connection with the BLACK wire of the high level cable OR the collar of an RCA connection must be made to the stereo, or home theater system.



- The standard High Level hook up procedure is attaching 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 chassis ground screws or bolts is convenient; plug the Speakon® connector into the Sub-Bass System's HIGH LEVEL INPUT.

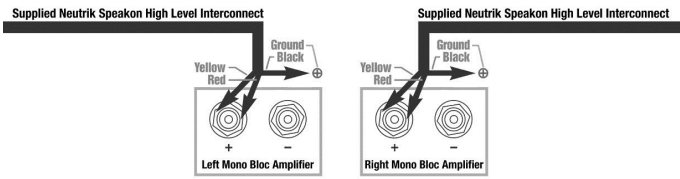


- For differential (i.e. fully balanced) stereo amplifiers using one REL, simply use the standard connecting scheme of connection to an exposed chassis ground screw or bolt. It may also be allowed to “float” or hang down without connection to ANY terminal. Should hum occur using this method, please return to connecting to chassis ground or an unused RCA connector on the rear of a preamp or amplifier. Please contact your dealer should there be any questions concerning this or any other hookup procedure.

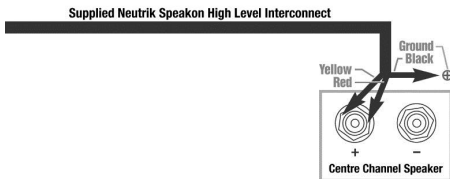


NOTE: The REL AirShip Direct™ transmitter is equipped with internal circuitry to allow seamless connection to Class-D (digital) main amplifiers. If connecting to a Class-D amplifier, follow the above connection procedure for differential amplifiers.

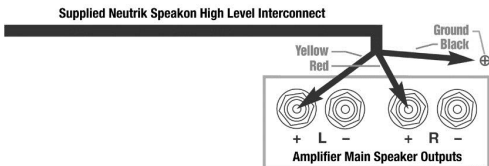
When connecting RELs to Mono Bloc amplifiers (2) RELs, one for each amplifier, must be used. Connect the black wire of each REL to chassis ground screws or bolts of the corresponding amplifier channel; twist together the red and yellow wires of each REL separately and connect each pair to the positive 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 connecting a single REL as a dedicated centre channel sub, twist together the red and yellow wires and connect these paired wires (red/yellow paired together) to the positive centre channel amplifier terminal. Connect the black wire to a ground lug or chassis screw on the amplifier.



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



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 Direct™ wireless transmitter.



## REL Theatre Reference™ Home Cinema Applications

For home theatre 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 Direct™ 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 is connected to the REL's amplifier panel as described in mounting up on page 9.
- 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" button on receiver until the LED flashes.

- 7 Then exercise the “Pair” button on the transmitter.
- 8 When correctly paired, the LEDs on both units will stop flashing and stay solid within 5 seconds.

Status	LED Indicator
Paired	Continuously on
Looking for Pair	Blinks twice per second
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 Direct™ transmitter. Never use a dry cloth on this finish.

## Technical

The AirShip Direct™ transmitter provides true REL Theatre 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.

## Specifications

### AirShip Direct™ Transmitter

<b>Input Connectors:</b>	High-Level Neutrik Speakon, L/R Low-Level RCA, LFE single phono RCA, LFE balanced XLR
<b>Input Impedance:</b>	High-Level: 150k ohms Low-Level: 10k ohms RCA .1/LFE: 10k ohms XLR .1/LFE: 10k ohms
<b>Wireless Output Power:</b>	Less than -3dBm
<b>Wireless Effective Distance:</b>	30 ft (10 meters) with clear line of site
<b>Mains Input Voltage:</b>	5V DC, 5.5mm circular connector, positive center
<b>Power Consumption:</b>	600 mWatts
<b>Dimensions (WHD):</b>	Transmitter 8.5 x 8.5 x 1.8 in., (215.5 x 215.5 x 46.5 mm) Receiver 3.15 x 2.40 x 0.7 in., (80 x 60 x 17.5 mm)
<b>Finish:</b>	Black
<b>Supplied Accessories</b>	Power adapter High Level cable X2 RCA cable

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



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