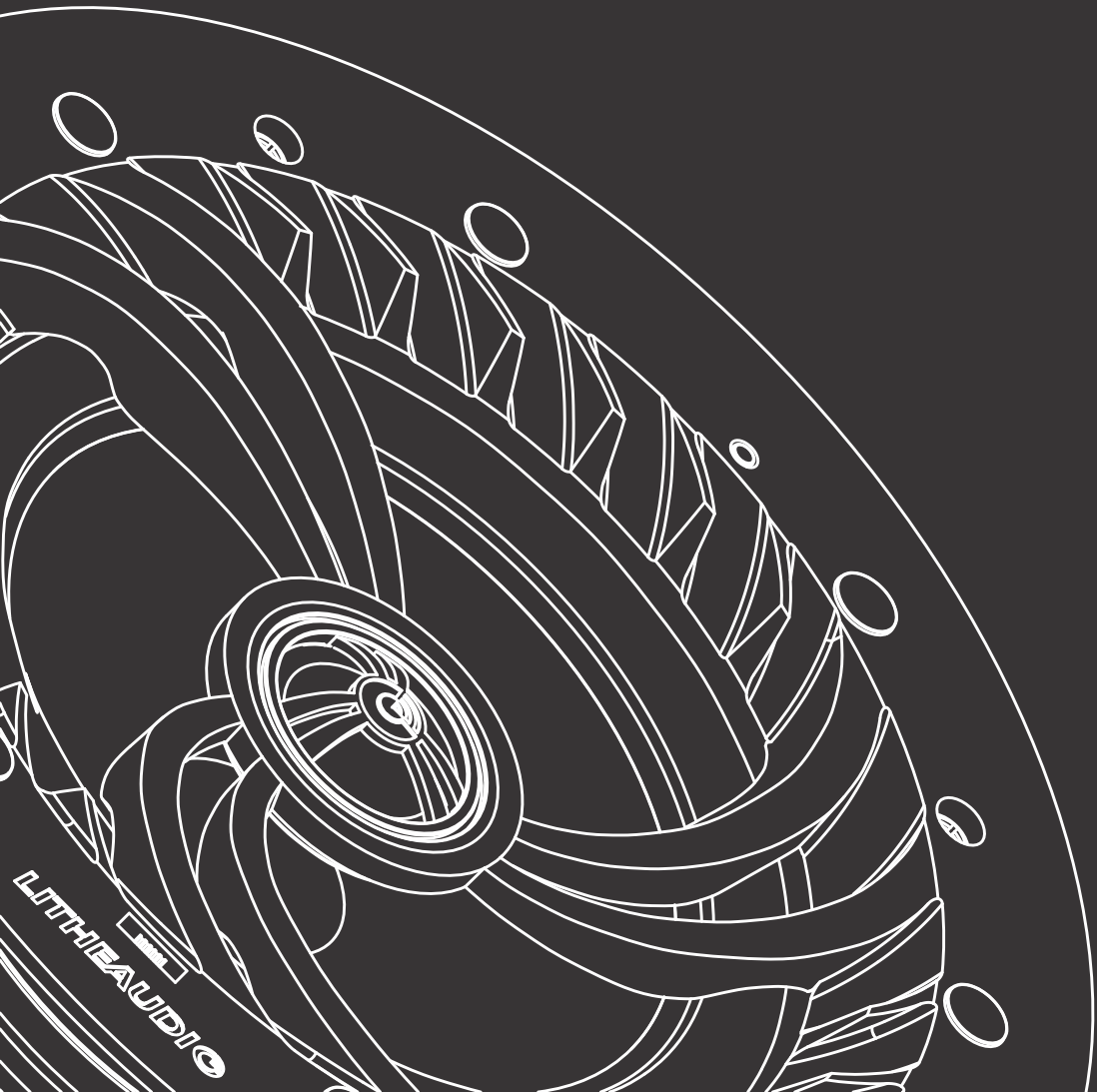




**LITHEAUDIO** 

# ALL-IN-ONE WI-FI CEILING SPEAKER

INSTRUCTION MANUAL



LITHEAUDIO 



**LITHEAUDIO**

# THANK YOU FOR CHOOSING LITHE AUDIO

Innovative design and advanced engineering are built in to our LWF series of wireless Wi-Fi ceiling mount speakers. Designed for easy installation and high quality sound, within seconds each room is setup and ready. This manual describes the installation of LWF series speakers within conventional stud and sheetrock (Joist and plasterboard) ceilings.

## IMPORTANT SAFETY WARNING

**BEFORE USE PLEASE READ COMPLETELY AND USE THE PRODUCT IN ACCORDANCE WITH THESE SAFETY INSTRUCTIONS.**

Before commencing any electrical work ensure the supply is switched OFF at the mains. Either by switching off the consumer unit or by removing the appropriate fuse. This product should be installed in accordance with the relevant sections of the building regulations code and in accordance with the latest edition of IEE regulations (BS 7671).

If the unit is to be used as a replacement for an existing product, remove the existing unit from its location and disconnect the wiring. Connect the wires as shown in diagram. Ensure terminals are properly tightened and ensure no bare wires are visible. When fitting the speaker into the ceiling, ensure no wires are trapped.

**READ THE INSTRUCTIONS CAREFULLY BEFORE STARTING THE INSTALLATION PROCESS AND KEEP THEM SAFE FOR FUTURE REFERENCE.**

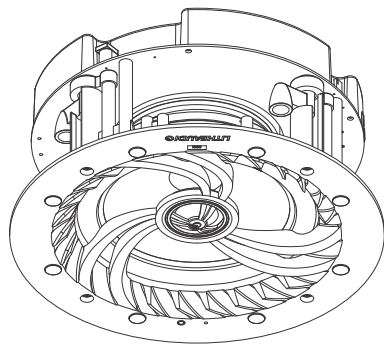
- Failure to follow the instructions in this guide voids all warranties on your speakers.
- Warning: Do not use the product in water.
- Warning: Do not install speaker directly above any heat sources such as radiators, or other apparatus that produce heat.
- Warning: To reduce the risk of fire or electric shock, do not expose this speaker to rain or moisture (directly above bath or shower area) or in Bathroom Zone 0 or Zone 1.
- Protect the power cable from being damaged, do not over stretch cable.
- Only use attachments/accessories specified by the manufacturer Lithe Audio.
- Turn off the power to the speaker when unused for long periods of time.
- A Fire and Acoustic speaker hood must be used in accordance with UK building and IEE Regulations with a fire rating of up to 60 minutes, is Parts B, L, C and E compliant.
- Do not open the back cover to the speaker as this protects the PCB as this will invalidate the warranty and could cause electric shock.
- Ensure speaker location is free from obstructions such as electrical conduit, HVAC ducts or Water lines.

# BOX CONTENTS

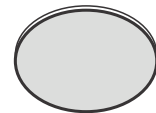
Please ensure you read the entire instruction manual carefully before you commence any work. Carefully unpack the speakers from the packaging. Please check to ensure all the parts shown below are included.

If any parts of the speaker appear damaged, please contact your dealer/reseller immediately or contact [www.Litheaudio.com](http://www.Litheaudio.com) for contact details.

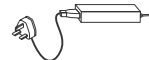
## MODEL LWFI OR LWFI/IP



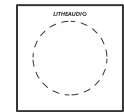
LED COVER  
WI-FI CEILING SPEAKER



SPEAKER GRILLE

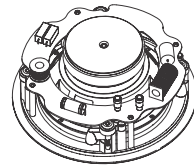


POWER ADAPTOR



CUTTING GUIDE

## PAIR MODELS ALSO INCLUDE



PASSIVE CEILING SPEAKER



5M SPEAKER CABLE

# PREPARATION EQUIPMENT YOU WILL NEED

Listed below is the hardware equipment needed to install the speaker, with the addition of a ladder to ensure the installation is done safely. A cutting template is included in the box.



PENCIL



STUD FINDER



SCREWDRIVER



CUTTING SAW



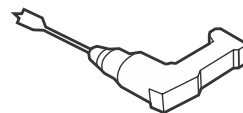
PROTECTIVE EYEWEAR



TAPE



MEASURING TAPE



DRILL



SPEAKER CABLE



WIRE CUTTERS

# KNOW YOUR SPEAKER

The Lithe Audio LWF range of Wi-Fi ceiling wireless speakers have various inputs and outputs:

**SPEAKER OUTPUT** - To connect one additional passive (Slave) speaker (Gold Plated)

**RCA INPUTS** - To connect directly from TV Output, CD Player, DVD Player etc..

**POWER INPUT** - To connect (as supplied) transformer

Connection Reset Button

LED indicator

Titanium tweeter

Magnets for Cover (8)

Environmental equalizer  
(+/- 3db)

Power input 24V/2.5A

Built in Amplifier  
& Wi-Fi chipset

RCA Input

RCA-(Black) RCA+(Red)

Speaker output

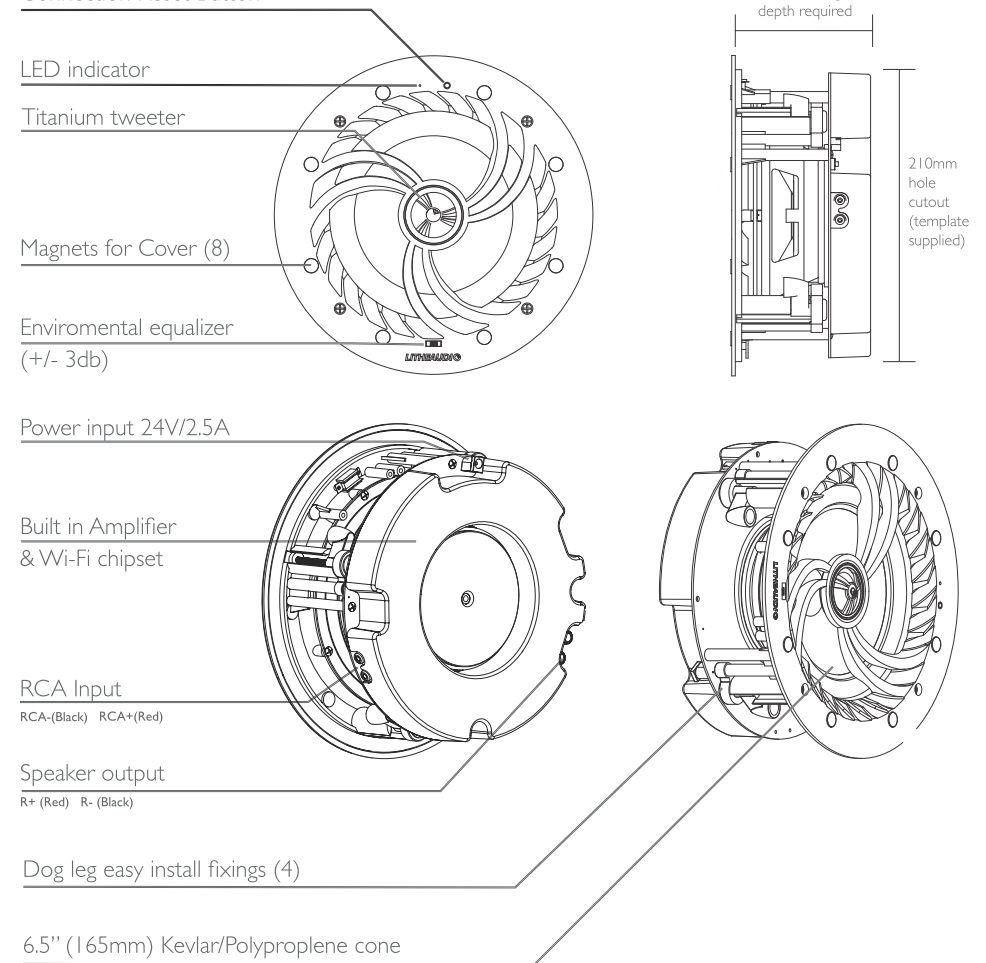
R+ (Red) R- (Black)

Dog leg easy install fixings (4)

6.5" (165mm) Kevlar/Polypropylene cone

95mm ceiling  
depth required

210mm  
hole  
cutout  
(template  
supplied)

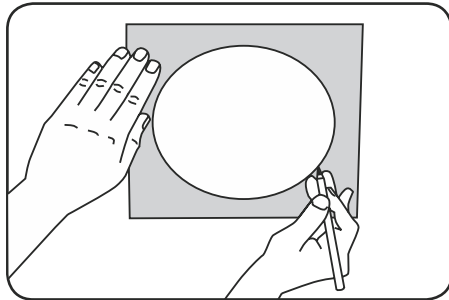


In built over voltage, under voltage, over temperature, and short circuit protection, if there is an electrical fault, the power supply to the amplifier will cut off automatically and restart when the speaker has stabilised.

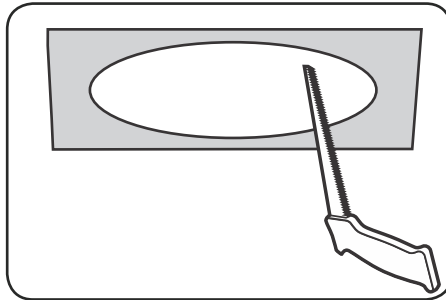
# INSTALLATION

**IMPORTANT: BEFORE COMMENCING ANY ELECTRICAL WORK ENSURE THE SUPPLY IS SWITCHED OFF AT THE MAINS. IF YOU ARE UNSURE HOW TO FIT SEEK HELP FROM A PROFESSIONAL ELECTRICIAN / AV INSTALLER**

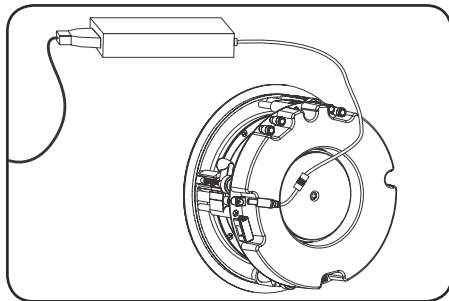
**1.** Mark out the position of the speaker using a tape measure and mark using a pencil with the template supplied. Check using a stud finder to make sure no obstruction is present prior to cutting.



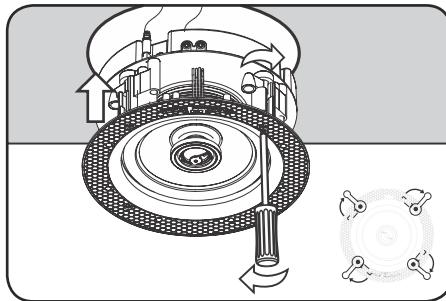
**2.** Drill a pilot hole and cut the speaker hole using a cutting saw. **Take caution when cutting to keep fingers away from cutting blade and wear protective eyewear.**



**3.** Connect the power lead from the transformer (supplied) to a 13A mains plug socket or terminate to a dedicated 3A fused spur. Ensure the power lead is not overstretched.



**4.** Insert speaker into the ceiling then using a screwdriver lock the 4 dog leg fixings to secure the speaker in place, do not over tighten. Attach the magnetic grille to the speaker front.



## PAINTING THE SPEAKER GRILLE

Do not paint the speaker grilles whilst attached to the speaker. Lithe Audio recommends spray painting using 5 parts thinning agent to 1 part paint. Spray thinly to ensure speaker cover grille holes are not blocked as this will effect the sound quality of the speakers.

## INSTALLATIONS IN FIRE-RATED CEILINGS

If you plan to mount your speakers in a fire-rated ceiling, you should purchase a fire hood for the speaker. Visit [www.litheaudio.com](http://www.litheaudio.com) for more information and recommended hoods.

# YOUR HOME WI-FI NETWORK

To enable the Lithe Audio Wi-Fi ceiling speakers, your device must be on the same network.

- Ensure your network has a high speed internet connection, as the speakers designed to provide you with free online software/firmware updates.
- High speed DSL / cable modem, or fiber to the home broadband is recommended for best possible playback of music services.
- Lithe Audio communicates over a 2.4GHz Wi-Fi home network supporting 802.11 b/g/n wireless technology only.
- For larger homes where Wi-Fi signal is not stable, we suggest adding repeaters to strengthen the network or updating your router to a higher specification model to suit the demand.
- For connections to computer or NAS drive for playing personal music library, we recommend for best performance connecting via Ethernet cable.

## LITHE AUDIO APP

- To enhance your listening experience download Lithe Audio app via the app store on your device follow the setup procedures within this instruction manual.
- The app will allow you to setup singular rooms, groups of speakers or play in Party Mode.
- You can connect up to 30 speakers simultaneously and control them all from the app.

## STATUS INDICATOR LIGHT

Located on the front face of the speaker; the LED Indicates the status of your speaker:

- **Red solid:** Speaker booting up
- **Red quick flash (1s 4 times):** Speaker under restart operation
- **Red slow flash (3s 1 time):** Speaker under standby mode, waiting for user operation
- **Green solid:** Speaker is active and connected to Wi-Fi
- **Green slow flash(1s 1 time):** Speaker trying to connect to the preconfigured Wi-Fi
- **Solid purple:** Speaker under Aux mode
- **Green quick flash(1s 4 times):** Speaker in WAC/SAC mode, user to configure Wi-Fi
- **Green & Blue quick flash(1s 4 times):** WPS mode - user to configure the Wi-Fi

# SETUP FOR APPLE IOS

Download on the  
App Store

OPEN CAMERA & SCAN TO  
DOWNLOAD THE APP



# PLAY VIA IOS AIRPLAY



1. Download the Lithe Audio App from the App Store.
2. Ensure the Wi-Fi speaker is connected to the power supply and is turned on, the LED indicator will flash red slowly.
3. Press and hold the 'Connection Reset Button' for 5 seconds & release, the LED indicator will flash Green and the speaker is now ready to connect to your Wi-Fi network.

To play directly to 1x speaker using a iOS devices (iPad, iMac, iPhone, Apple TV etc) you can connect via Airplay. Please follow the steps below:

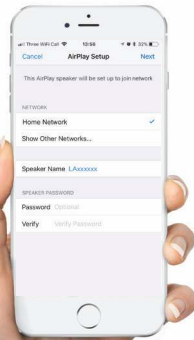
## ENSURE THE WI-FI SPEAKER IS CONNECTED TO THE POWER SUPPLY, AND THE WIFI NETWORK.

For various iOS devices the process of connecting via AirPlay is different, example using a iPhone is shown below:

4. Open the  
y



5. Select the new Airplay speaker listed you would like to add to your network



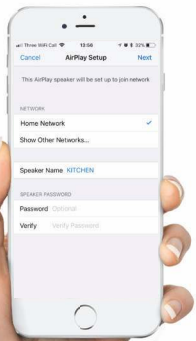
1. Swipe from the bottom of the screen upwards to access menu



2. Click on the right corner icon to show available AirPlay devices



6. Select your network and change the 'Speaker Name' to something easily identifiable e.g. Kitchen and click Next



4. setup is no the Lithe



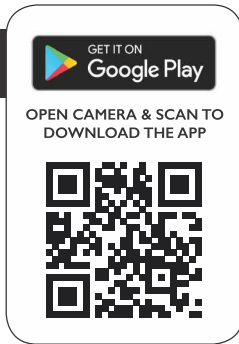
3. Audio display screen shall show available devices to play music through as per list



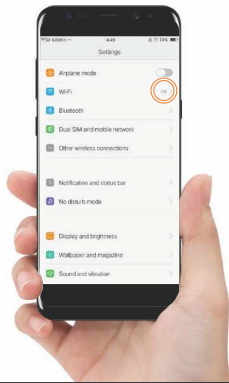
4. Select the speaker to play music through and press play on your source player



# SETUP FOR ANDROID



1. Download the Lithe Audio App from the Google Play store
2. Ensure the Wi-Fi speaker is connected to the power supply and is turned on, the LED indicator will flash red slowly.
3. Press and hold the 'Connection Reset Button' for 5 seconds & release, the LED indicator will flash Green and the speaker is now ready to connect to your Wi-Fi network.
4. Open the Wi-Fi setting menu on your phone or tablet
5. Choose "LAConfigure\_XXXX" from the list of Wi-Fi networks



6. Ensure "LAConfigure\_XXXX" is connected with a tick



7. Return back to the Lithe Audio app to continue the setup process.



# SPOTIFY CONNECT



You will need to have the Spotify Premium account, the latest spotify app installed and be connected to the Wi-Fi network to play via Spotify connect directly.

Open Spotify app, on your phone, tablet or laptop.

Play a song and select DEVICES AVAILABLE at bottom of player page  
Select your device and start listening to your spotify music

**NOTE:** If your connection to speaker is lost, the device may have weak Wi-Fi signal.  
Please visit: <https://www.spotify.com/uk/connect/> for further details

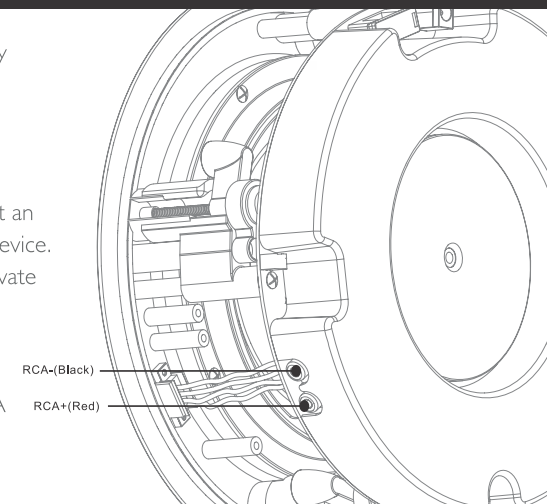
# HARD WIRED INPUT- RCA

To connect other devices such as CD player, BluRay player etc) to play through the Wi-Fi speakers please follow the steps below:

## RCA Connection:

To play music via speaker RCA connection connect an RCA cable to the speaker and play through your device. Within the Lithe Audio App click on source to activate RCA to be able to play through the speaker:

Note: To ensure the best possible sound without humming or noise, we recommend a shielded RCA cable be used.

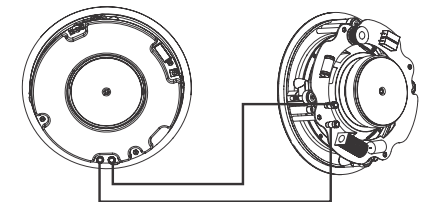


# CREATE STEREO PAIR

PLEASE NOTE: LWF1 DOES NOT INCLUDE PASSIVE SPEAKER

The Lithe Audio Master Wi-Fi ceiling speaker is able to connect to and power an additional passive speaker via the speaker output (+/-)

Use wire cutters to strip the ends of the speaker cable (if required).



# SPECIFICATIONS

## SPEAKER

- Sound Quality THD+N<0.009%, 65Hz-20kHz
- RMS Power: 60W RMS (2x 30W)
- Impedance: 8 Ohms
- Sensitivity (1W/1m): 90dB
- Line In Analog (RCA), auto-detecting
- Type: Class D (Digital)
- Woofer: 6.5" Kevlar Woven / Polypropylene Cone
- Tweeter: 0.75" Titanium Cone

## MUSIC ACCESS

- Audio Formats Supported Support for compressed MP3, WMA, AAC (MPEG4), AAC+, ALAC, FLAC, APE, WAV
- Audio Sample Rate: 8kHz
- Music Services Supported by Lithe Audio include; TuneIn Radio, Spotify, as well as other services updated on our Android or IOS app.
- Operating Systems (for stored files) Windows XP SP3 and higher; Mac OS X 10.6.8 and higher; NAS (network-attached storage) devices supporting CIFS
- Album Art Supported JPEG, PNG, BMP, GIF

## MULTI ROOM

- Expandable up to 30 speakers within same Wi-Fi network

## WIRELESS NETWORKING

- Wi-Fi Connectivity: Wi-Fi CERTIFIED™ b, g, n WPA™ - Personal WPA2™ - Personal WMM®, Wi-Fi Protected Setup™
- Wireless connectivity works on your home Wi-Fi network with any 802.11b/g/n, 2.4GHz broadcast router
- Internet connection required for access to Internet radio stations, online music services and software updates.

## GENERAL

- Power Input Supply : 100 - 240V ~ / 2A
- Transformer Output Supply : DC24V / 2.5A
- Dimensions (W x D) 230 x 95mm (6.5 x 3.8 in)
- Weight 1.75kg (3.85 lbs)
- IP rating: IP44 (Model: LWF1/IP or LWF2/IP only)
- Operating Temperature 0° to 40° C (32° to 104° F)
- Storage Temperature -20° to 70° C (4° to 158° F)
  
- Standby power: 1.3W / 0.02A
- Connected power: 1.5W / 0.03A
- Playing Music: 2.8W - 10.5W / 0.03A - 0.09A\*\*

\* Specifications subject to change without notice.

\*\* Power Consumption depends on the type of music & volume  
- Increased Bass & volume requires more power loading on the amplifier:

- Internet functionality may require payment of separate fee to service provider.

# TROUBLESHOOTING

If a problem arises, please try the troubleshooting guide below. If the problem is not listed please contact Lithe Audio Customer Service Support

### Q: Speaker has not been found during setup

**A:** Please check power cord is correctly connected into speaker and transformer; Check the red light is ON. Press reset button for 5 seconds on the speaker (discoverable mode), green light shall flash, follow the instructions for Android or Airplay setup.  
\*Before commencing any electrical work ensure the supply is switched OFF at the mains.

### Q: Speaker connected to Airplay but not playing through device

**A:** Please ensure device has good Wi-Fi strength and battery power, check the led indicator is solid green, if not press reset button for 3 secs. Failing this, turn the speaker power off then on.

### Q: Device is connected to Wi-Fi speaker but no sound

**A:** Ensure your device volume is NOT muted, increase the volume within app and try again. Restart the app which the audio is playing from and try again.

### Q: Lithe Audio App not showing connected speakers

**A:** Ensure your speakers green light are on, and connected as per setup. The app shall automatically find active speakers, if not, restart app or press reset on speaker for 3 secs to wake speaker: to show green status light.

### Q: Lithe Audio App not working correctly

**A:** Ensure your speaker firmware/app are up to date, OR restart app fully.

### Q: Can the speaker be installed into the bathroom ceiling.

**A:** The IP rated models 'LWF1/IP' or 'LWF2/IP' can be installed in zone 2 or 3 of a bathroom. Ensure you read the safety precautions on page 1 before installation. **Warning:** Do not use the product in water or directly above the bath or shower area.

### Q: I have a new router and speakers not visible anymore

**A:** If you have purchased a new router or reset the router back to default, you shall need to install the speakers again. Please follow the setup procedures for IOS or Android.

For further queries and support questions please visit [www.litheaudio.com/support](http://www.litheaudio.com/support) email us at [info@litheaudio.com](mailto:info@litheaudio.com) or via our website's live chat service (during working hours)

# REGULATION INFORMATION

## FCC STATEMENT

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 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 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.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (example- use only shielded interface cables when connecting to computer or peripheral devices).

## FCC RADIATION EXPOSURE STATEMENT

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

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.

## EUROPE

Lithe Audio declares that this product herewith complies with the requirements of the EMC Directive 2004/108/EC, Low Voltage directive 2006/95/EC, Eco-Design Directive 2005/32/EC, RoHS Directive 2011/65/EU and the R&TTE Directive 1999/5/EC when installed and used in accordance with the manufacturer's instructions. A copy of the full Declaration of Conformance may be obtained at [www.litheaudio.com/support/policies](http://www.litheaudio.com/support/policies).

Lithe Audio Speakers have a standby mode or remove the power cord from the AC mains.

## RECYCLING INFORMATION

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead please deliver it to the applicable collection point for the recycling of electrical and electronic equipment. By recycling this product correctly, you will help conserve natural resources and prevent potential negative environmental consequences. For more detailed information about recycling of this product, please contact your local council office, your household waste disposal service or the shop where you purchased the product(s) from.

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"Made for iPod", "Made for iPhone", and "Made for iPad" mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.

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Android™ is a trademark of Google, Inc.

Google Play and the Google Play logo are trademarks of Google LLC.

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## 2 YEAR GUARANTEE

This Ceiling Speaker is of excellent quality and construction. However, if any defects in materials or workmanship do appear during the guarantee period, we will, at our discretion, either repair or replace the defective parts, free of charge, subject to the terms and conditions of our Guarantee shown below.

This Guarantee covers both parts and labour. Carriage is not included.

This Guarantee provides benefits which are additional to, and do not affect, your statutory rights. This Guarantee does not cover the cost of returning the product to the dealer from whom it was purchased or to ourselves. This Guarantee applies only to products sold and located in mainland Great Britain. It does not cover liability in respect of or replacement of plugs, cables or fuses and also does not cover defects due to:

- Failure to use or maintain product in accordance with Lithe Audio instructions.
- The product being connected to an unsuitable electricity supply.
- Accidental damage to or abuse or misuse of the product.
- Product modification, except by Lithe Audio or approved agent.
- Dismantling of or interference with the product.

Before returning any product under this Guarantee, please check that:

- You have followed the product instructions correctly.
- Your mains electricity supply is functional.
- The defect is not due to a blown fuse.

If you wish to claim under this guarantee you should:

- Send the product, postage or carriage paid, to the dealer from whom it was purchased or to Lithe Audio direct.
- Ensure that the product is clean and packed carefully (preferably in its original carton).
- Enclose details of your name, address and telephone number and when and where the product was purchased, together with proof of purchase (e.g. a invoice or till receipt).
- Give exact details of the nature of the defect.

This Guarantee does not cover any other claims whatsoever, including, without limitation, any liability for incidental, indirect or consequential damage, nor does it cover any claims for conversion or modification or for the costs of repair carried out by any third party without the prior consent of Lithe Audio. If replacement parts are fitted to the product this will not extend the period of the Guarantee. For further advice contact the Lithe Audio customer services.



Lithe Audio products marked with the CE mark comply with the EC Low Voltage Directive: 73/23/EEC, Electromagnetic Compatibility Directive 89/336/EEC