Lightwave RF Glow

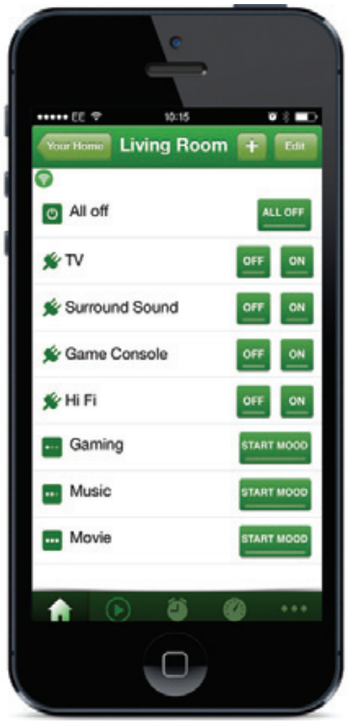
Version 2.1

2-Way Dimmer (1 Gang)

Model No. LW450

Instruction Manual





Connect Series

www.lightwaverf.house

EC DECLARATION OF CONFORMITY

Responsible Authority:

LightwaveRF PLC,
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Model Number(s):	JSJSLW450
Description:	2-Way Dimmer
Directives this equipment Complies with:	2006/95/EC The Low Voltage Directive N/A 2004/108/EEC The Electromagnetic Compatibility Directive 1999/5/EC R&TTE Directive 93/68/EEC CE Marking Directive

Standards Applied in order to verify compliance

Safety: BS EN 60730-1: 2011

Health:
R&TTE: EN 301 489-1 V1.9.2: (2011-09), EN 301 489-3 V1.4.1: (2002-08)
EN 300 220-1 V2.1.1: 2006, EN 300 220-2 V2.1.2: 2007
EMC: EN 301 489-1 V1.9.2: (2011-09), EN 301 489-3 V1.4.1: (2002-08),
EN 55022: 2010, EN 61000-3-2: 2006 +A1: 2009 +A2: 2009 Class A,
EN 61000-3-3: 2008, EN61000-4-2: 2009,
EN 61000-4-3: 2006 +A1: 2008 +A2: 2010, EN 61000-4-4: 2012,
EN 61000-4-5: 2006, EN 61000-4-6: 2009, EN 61000-4-11: 2004

For and on behalf of LightwaveRF PLC

Name J Shermer
Position Managing Director



How do I get started?

Please refer to the following installation and setup instructions. This will guide you, step by step, through the installation and setup process.



What do I need?

To install the Dimmer, you will need to remove and replace the existing lightswitch. This is usually straightforward, but you must ensure that there is a suitably deep housing (backbox) and understand how to safely turn off the electricity supply. You will also need suitable electrical screwdrivers.

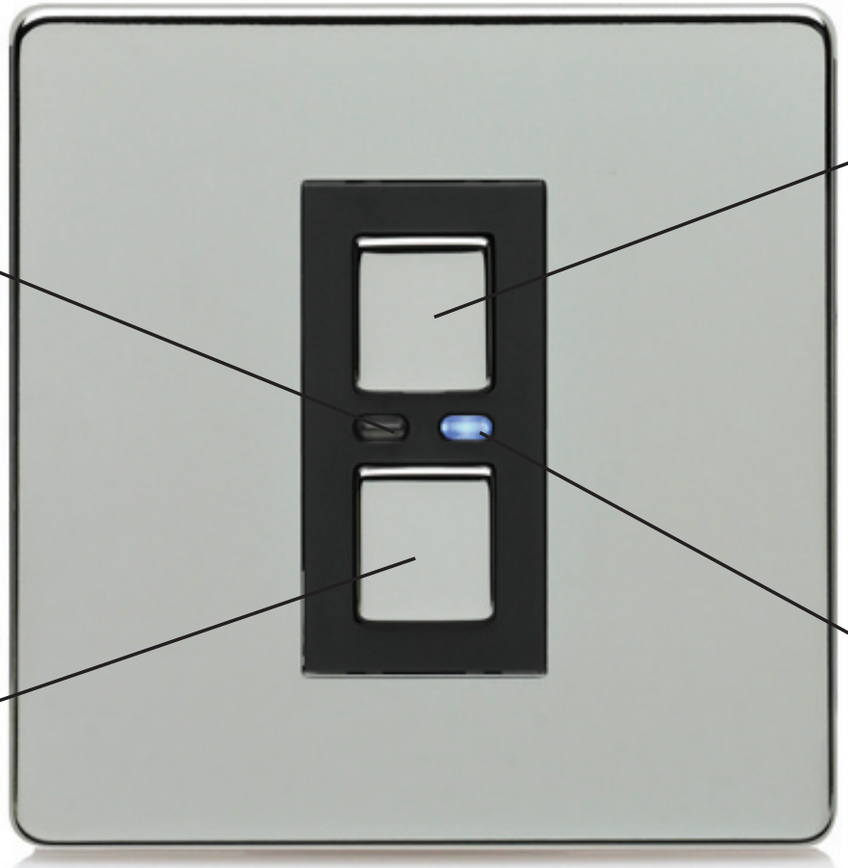


Help video & further guidance

For additional guidance, and to watch a video that will help guide you through the installation process, please visit the support section on **www.lightwaverf.com**

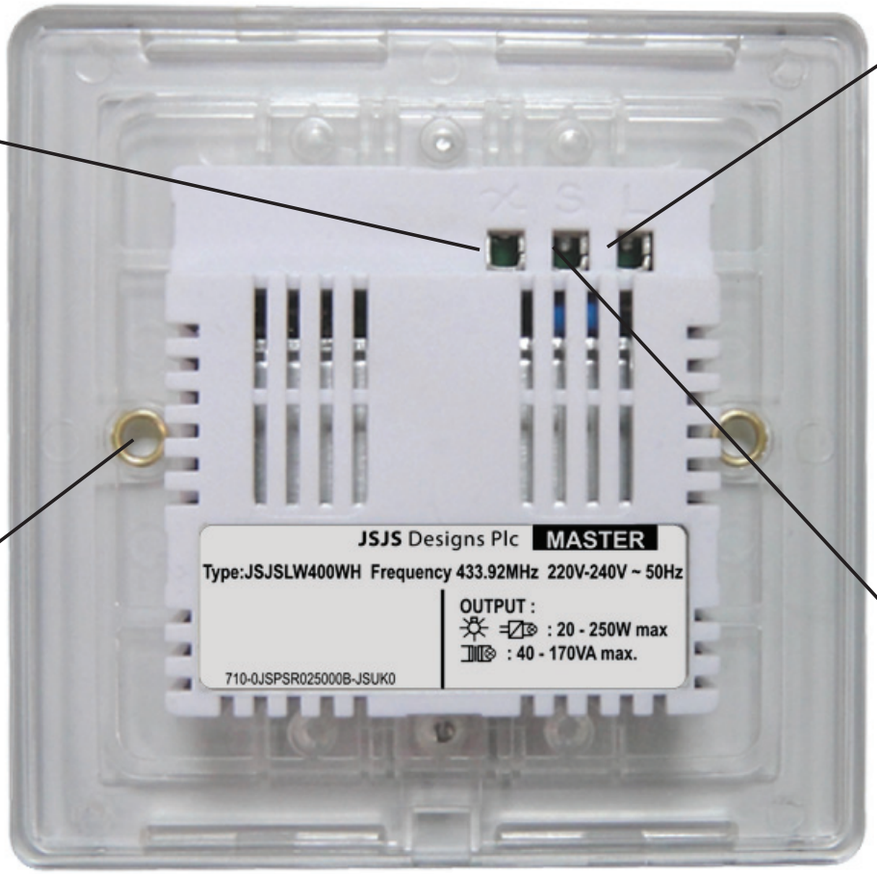


Overview



IMPORTANT: All LightwaveRF products can be legally DIY installed in your own home; however, if in doubt, always consult a qualified electrician or heating engineer. It is important to install this product in accordance with the following instructions. Failure to do so may void your warranty.

Installation



IMPORTANT: If conducting an insulation resistance test, all LightwaveRF products **must** be disconnected from the mains, or damage will occur.

VERY IMPORTANT

• A LightwaveRF 2-Way Dimmer needs to be used in conjunction with a standard LightwaveRF Dimmer to perform 2-Way Switching. **The LightwaveRF 2-Way Dimmer cannot be used in conjunction with a standard lightswitch.** This will cause damage to the Dimmer.

• **Never install and run power to a 2-Way Dimmer before first installing and connecting the corresponding standard LightwaveRF Dimmer. Serious damage could be caused to the unit.**

• The 2-Way Dimmers use standard 3-core connecting cables (or 3 core plus earth); however, because they are electronic dimmers, they utilise one of the cores as a signal cable ('S') running between the Dimmers (as shown on the diagram). **This is low voltage only and should not be connected to 230V mains**; serious damage will occur.

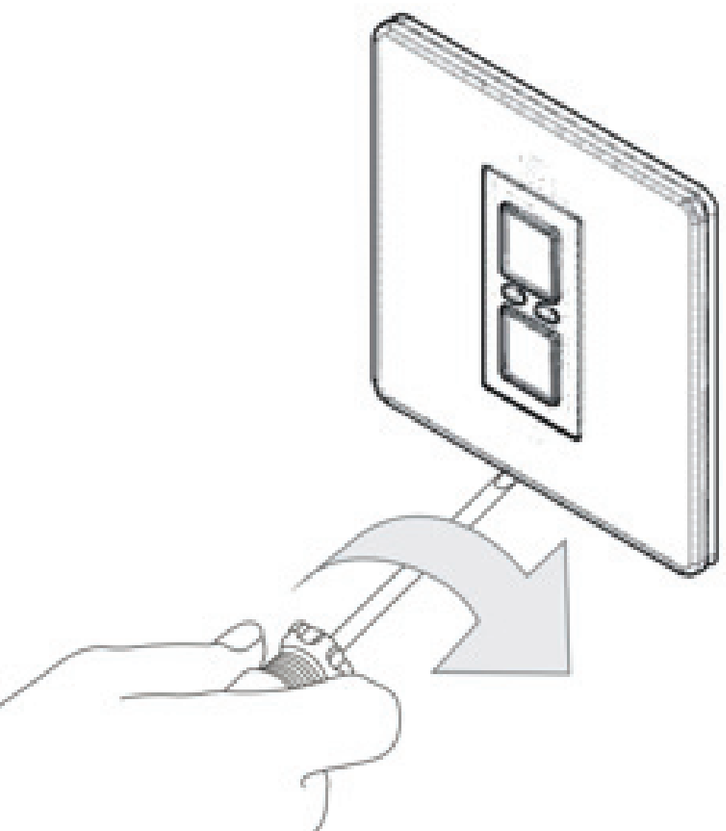
• Up to six 2-Way Dimmers (six gangs) can be connected to a standard LightwaveRF Dimmer Switch. Each 2-Way can be connected directly to the standard Dimmer, or connected to each other in a 'daisy-chain'. This provides an alternative to using intermediate switches (maximum cable length of 100m).

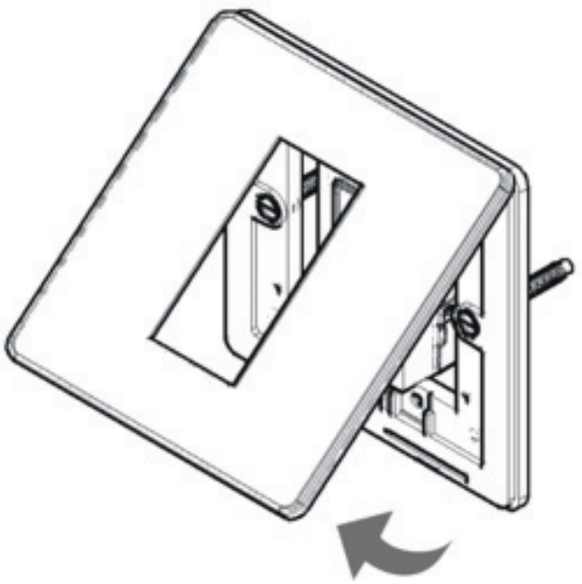
1. IMPORTANT: Turn off the mains electrical supply.

2. Ensure that the wall (back) box has a minimum depth of 35mm.

3. Remove and disconnect the existing lightswitch (if applicable). It may be useful at this point to mark out or take a photograph of the connections to the existing switch so that the correct wires can easily be transferred to the new dimmer. Some existing wiring configurations can be complex so take care.

4. Gently remove the dimmer faceplate by inserting a screwdriver into one of the bottom slots and lifting away from the unit as shown.



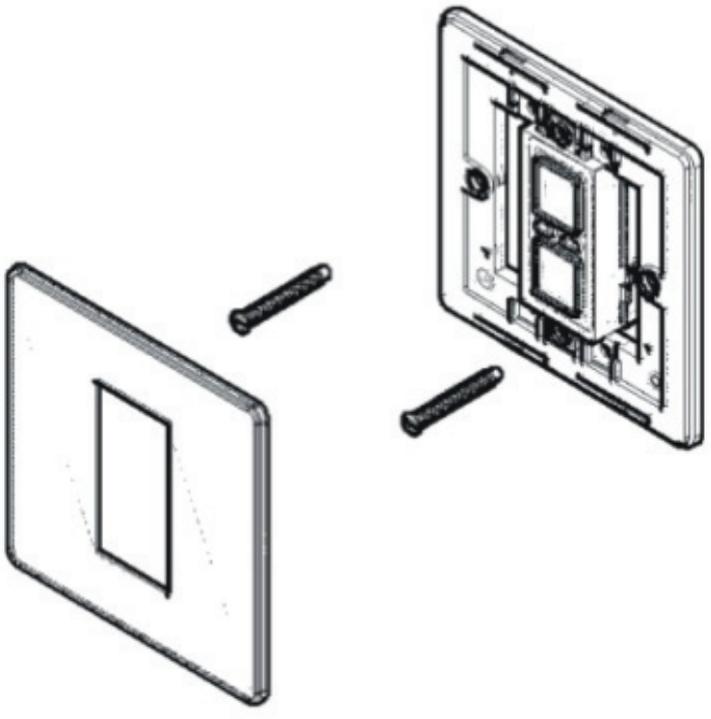


5. Connect the wiring as per the wiring diagram on the following page. Ensure that the terminals are properly tightened and that no bare wire is visible. Be aware that existing wiring circuits are not always correctly coloured, and that there may be other wired connections present in the back box; if in doubt, always seek the advice of a qualified electrician.

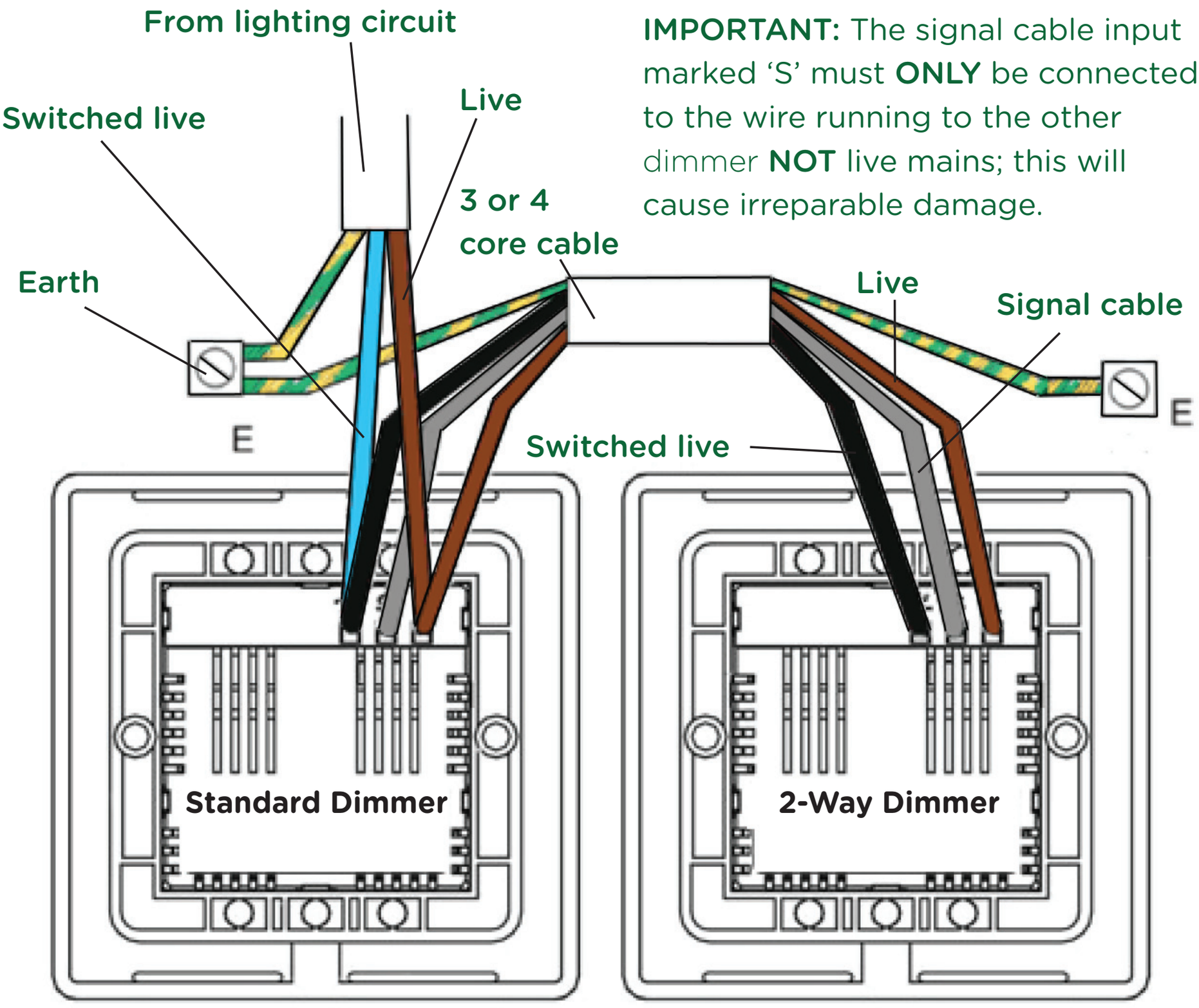
NOTE: LightwaveRF dimmers do **NOT** require a mains neutral wire to be connected; they only require 'live in' and 'switched live out'.

6. Any earth wires present must be attached either to the earth terminal located in the back box or capped with a strip connector. The dimmers are double insulated so are not required to be earthed directly.

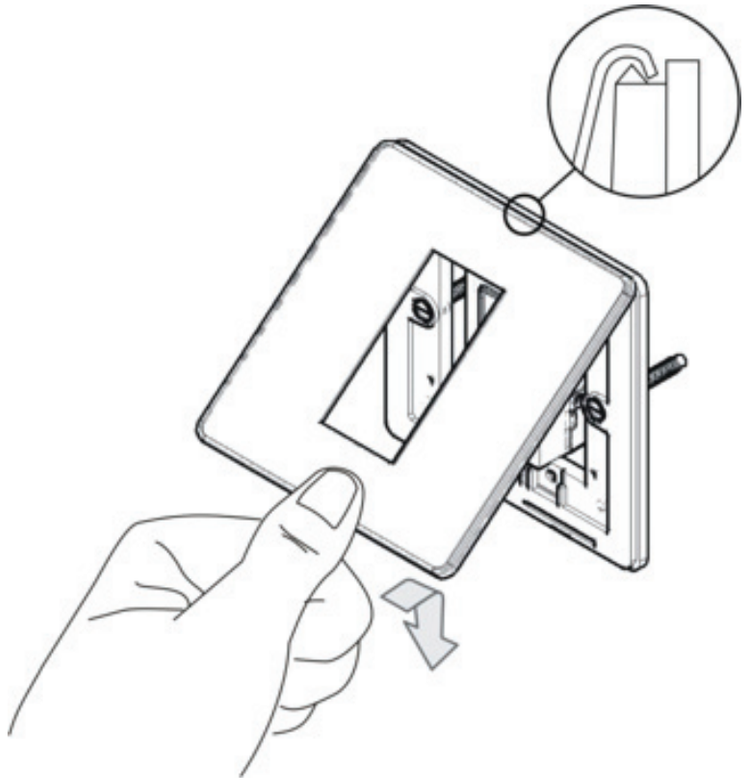
7. Screw the dimmer switch to the mounting box and ensure that the screws are sufficiently tight to support the product, but do not over tighten as this may cause the chassis to bend. Ensure that the plastic spacer is correctly aligned and that no wires are trapped between the dimmer switch and the back box.



IMPORTANT: The signal cable input marked ‘S’ must **ONLY** be connected to the wire running to the other dimmer **NOT** live mains; this will cause irreparable damage.



8. Replace the plate – a ‘click’ sound should be heard to signify that the plate has been correctly replaced.



Important things to Consider

• Wattage ratings for the Dimmers are **per gang**. The maximum circuit load for each 2-Way Dimmer Gang is equal to the maximum load on the standard LightwaveRF Dimmer it is connected to (i.e. 250W or 210W).

• **ONLY** Dimmable lamps can be used even if the Dimmers are used solely to switch between the on and off states without dimming. This is because the technology used in an electronic dimmer is fundamentally different to that of a simple on/off switch and requires compatible lamp technology.

NOTE: Compatibility between electronic Dimmers and LEDs can be affected if the total circuit loading is very small. Total LED load decreases (relatively) as it is shared between a greater number of connected Dimmers; therefore, as more 2-Way Dimmers (up to 6) are added to a single circuit, it is possible that LED performance may become less stable.

Compatibility

Ensuring the compatibility of your lamps (bulbs) with LightwaveRF Dimmers will ensure that you get the best experience from your lighting setup.

LightwaveRF dimmers are compatible with the following:

- Selected dimmable LED lamps (see www.lightwaverf.house for further guidance and information).
- Standard mains voltage incandescent & low energy incandescent lighting (min 20W, max 250W)
- GU10 and equivalent HI spot mains halogen lamps
- Dimmable electronic low voltage transformers (20W - 250W max.)
- Inductive transformers (40 – 170VA max.)

LightwaveRF dimmers are NOT compatible with the following:

- Wirewound transformers (generally older style)
- Electric motors
- Non dimmable LEDs
- CFLs
- CFL tube arrays

Manual operation

Manual dimming

• Tap the ‘on’ (top) button once to switch the dimmer on (blue LED indicator will illuminate). Press and hold the ‘on’ button to raise the light level.



• Tap the ‘off’ (bottom) button once to switch the dimmer off (amber LED indicator will illuminate). Press and hold to lower the light level.



NOTE: When the ‘on’ button is tapped to turn on the dimmer, the light level will return to that at which it was last at before the dimmer was turned off. The ‘on’ or ‘off’ buttons can then be pressed and held to customise the light level.

Troubleshooting

Problem: ***The 2-Way Dimmer will not operate the lights and the LEDs on the Dimmer do not light up.***

Solution: Firstly, check that there is power to the dimmer. Make sure that the connected lamps (bulbs) are functioning correctly; the dimmer switch will not run unless it has a functioning lamp/s to complete the circuit. Ensure that the maximum LED/incandescent loading has not been exceeded (if so this may have damaged the dimmer). Check that the wiring is correct; it is important that the live, switched live and signal wires are attached to the correct terminals; a common mistake is to reverse the live and switched live connections. Remember, the signal terminal must **NOT** be connected to 230V mains. If these measures fail, contact technical support via www.Lightwaverf.com.

Problem: ***The 2-Way Dimmer has power (LEDs on) but will not turn on the Lights/turns on then off by itself/ will not operate from the other dimmer.***

Solution: Check that the wiring is correct; it is important that the live, switched live and signal wires are attached to the correct terminals; a common mistake is to reverse the live and switch live connections which may cause the 2-Way Dimmer to function improperly. Remember, the signal terminal must **NOT** be connected to 230V mains. If these measures fail, contact technical support via www.lightwaverf.com.

Troubleshooting

Problem: ***The LED/CFL lamps that I am using flash / do not dim properly.***

Solution: Ensure that the lamps being used are dimmable; non dimmable lamps are not compatible with LightwaveRF dimmers. If the problem persists, the LED/CFL lamps may not be compatible with the dimmers; please contact technical help (via www.lightwaverf.com) for further advice.

Problem: ***The 2-Way Dimmer will not link to a LightwaveRF controller.***

Solution: The 2-Way Dimmer is not designed to link to a LightwaveRF controller and therefore does not contain an RF radio module. This is because it takes direct commands, instead, from the corresponding standard LightwaveRF dimmer via the connected signal wire. The standard LightwaveRF dimmer *can* be linked to a controller and passes on commands to the 2-Way Dimmer automatically.

Problem: ***The dimmer keeps turning off automatically / will not turn off.***

Solution: The connected standard LightwaveRF dimmer may be **locked**. This may have been done using a Socket Locker or from the LightwaveRF App. If it is locked on, then the 2-Way Dimmer will not turn off manually. If it is locked off, it will be possible to turn the dimmer on, but it will automatically turn off again after five minutes. To unlock the dimmer, press the unlock button on the Socket Locker or Smartphone App. If this is not possible, the dimmers can be reset by turning of mains power to the circuit for a period of 30 seconds.

FAQs

Q. ***Can I link the 2-Way Dimmer to a LightwaveRF controller?***

A. No. The 2-Way Dimmer is designed to take wired commands directly from the standard Dimmer that it is connected to. It does not contain an RF module and will not enter linking mode.

Q. ***How do I know that the dimmer switch will fit?***

A. The Dimmer is the same size as a standard lightswitch - it will fit all back boxes (standard lightswitch housing) over 35mm deep.

Q. ***Is it legal for me to install the dimmer?***

A. Yes, LightwaveRF is fully legal for you to install in your own home.

Q. ***Is there a maximum number of lamps I can control with the dimmer?***

A. You can control any number of lamps (bulbs) as long as they do not exceed the maximum loading in total. Note: Max. load differs for LED/incandescent.

Q. ***How many devices can I have on the LightwaveRF system?***

A. Each device has 6 memory slots for up 6 controllers (one of these can be the Lightwave Link allowing up to 6 smartphones to control hundreds of devices.

Q. ***Can I use LED or CFL lamps?***

A. Most LEDs can be controlled as long as the lamps are dimmable variants (see www.lightwaverf.com for guidance). CFLs are not compatible.

FAQs

Q. ***Can I use non dimmable lamps (bulbs) if I don't dim them?***

A. No. The lamps must be dimmable even if they are not dimmed; the technology in the lamp must be compatible with that of the dimmer.

Q. ***What if I need a switch to operate on/off only?***

A. A LightwaveRF Relay in conjunction with a Wire-free Switch can be used for on/off switching in place of the dimmer (see www.lightwaverf.com).

Q. ***Can I separate and change individual switches in multigang Dimmers?***

A. Multigang dimmers are not designed to have their switch modules separated and interchanged; disconnecting and removing Dimmer Modules will invalidate the warranty.

Q. ***What Happens after a power cut?***

A. Standard LightwaveRF dimmers default to the off position after a power cut. The 2-Way Dimmer will, therefore, also default to off. This can be overridden using the Lightwave Link to set default status for devices on power up. See www.lightwaverf.com for details.

Q. ***Is it normal for the dimmer to get warm when it is turned on?***

A. Yes it is perfectly normal for dimmer switches to feel warm to the touch if left on for a period of time close to maximum load. It is completely safe.

Specification

Input rating: 220-240V~ 50Hz.

Back Box Depth: 35mm min.

Earthing Requirement: Not essential (double insulated)

Standby Energy Use: Less than 1W

Wiring: Neutral wire NOT required

Warranty: 2 year standard warranty

Version 2.1



Lightwave RF Glow

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www.lightwaverf.house