LightwaveRF
connect

Wifi-Link
Operation Manual

Model No: JSJSLW500

It is important to install this product in accordance with the fitting instructions below. Failure to do so may render your guarantee void.

IMPORTANT: PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE AND FOR GUIDANCE ON THE ASSOCIATION OF REMOTE HANDSETS. FOR HELP AND SETUP GUIDANCE PLEASE VISIT www.lightwaverf.com

OVERVIEW:

The LightwaveRF Connect Series Wifi-Link enables you to use an Apple iPod Touch, iPhone or iPad; Android Phone or any other web enabled device (not included) to operate any of the LightwaveRF Connect devices (not included). This device must be used in conjunction with your wireless internet router (not included).

Included in this kit:

1 X Wifi-Link,
1 X Power supply
1 X RJ45 cable

NOTE: This product is designed to work with general household wireless systems. Commercial usage is not recommended due to firewall and security software, which may prohibit this device from working.

IMPORTANT: Reliable operation requires good existing wifi coverage and a strong wifi signal. Unreliable operation, in the majority of cases, is due to poor wifi coverage and may usually be solved by upgrading to a more powerful wireless router.

INSTALLATION:

Wifi-Link installation:

1. Take the RJ45 cable (supplied) and connect it to an available port on your wireless router, connecting the other end of the cable to the Wifi-Link.

2. Plug in the power supply, and push the jack plug into the AC connection on the back of the Wifi-Link. After switching on at the mains, the LCD display will illuminate and an i.p. address (series of numbers) will be displayed, showing that the connection has been successful.

NOTE: Older wireless routers use an 'auto-switch' cable type. If no i.p. address appears and the connection is unsuccessful, remove the RJ45 cable and repeat the process using another available port.

3. A few seconds after a successful connection, the LCD display will show the time and date. This is automatically set from the internet.

SETUP:

Application Installation:

If you intend to use your smartphone, iPod or iPad to operate the Wifi-Link, then you first need to download the LightwaveRF app.

APPLE IPOD/IPHONE/IPAD

In the case of the iPhone/iPod/iPad the app can be found on the Apple Appstore. In the Appstore type in 'LightwaveRF' in the 'search' bar. This is a free app, which you need to download using your computer or straight from your Apple device. Once installed, the LightwaveRF app will appear alongside the other apps on your device's screen.

ANDROID

In the case of an android phone, the free app can be downloaded from the Android Market Place - search for 'LightwaveRF'. This is a free app, which you need to download using your Android device. Once installed, the LightwaveRF app will appear alongside the other apps on your device's screen. The android app must be setup initially using the 'web console' using your web device or a PC (see in-app instructions).

PC / OTHER WEB-BASED DEVICE

If you intend to operate the Wifi-Link via a PC or other web-enabled device, then you need to access the LightwaveRF WEB CONSOLE. This is located at www.lightwaverf.com. Click on the 'My Lightwave' option toward the right of the main menu bar at the top of the page and follow the instructions.

To set up your smart home for the first time please click on the manager and follow the instructions provided. Once you have set up your devices, you can use the Console to operate them from your PC or any web-enabled device or android phone.

If you are using a tablet device or PC, you can access the console instantly by downloading the desktop app (follow instructions in the manager).

Basic Application Setup:
This section refers to the setup of the Apple and Android applications. For guidance as to how to setup the web console please refer to the instructions on that webpage.

IMPORTANT: Before use, please ensure that the wifi enabled device that you are using to set up the Wifi-Link (eg. iPhone) is connected to the same wireless network (it can be surprisingly easy to accidently forget this if your device frequently connects to different networks!)

ROOM/DEVICE SETUP

1. Press the LightwaveRF app icon on your screen. You will be presented with a Home page showing eight room buttons.

NOTE: In the top right hand corner of the page is a welcome button, by pressing this it will take you to a LightwaveRF introductory page including live web links with set up tutorials.

2. Back on the App Home page, press one of the 'ROOM' buttons. An option to name your room will be given

3. Type in your desired name (e.g. Lounge, Kitchen, Bathroom) and press 'OK'.

4. Press the (now renamed) 'ROOM' button again to enter the room.

5. If you press one of the 'DEVICE' buttons, a new page will appear allowing you to name your device and select its function. The type of device will depend on which LightwaveRF Connect Series device you want to operate: this includes 'ON/OFF' (e.g. sockets), 'DIMMER' (e.g. dimmer switches), 'LOCK ON/OFF' or 'HEATING'.

IMPORTANT: Please ensure the correct function is selected for your device, failure to do so could impair the device's ability to function.

CONTROLLER REGISTRATION

For security your Apple/Android device must be registered with the Wifi –Link before it will operate any Connect Series products. The Wifi-Link can register up to 6 controlling devices.

To Register:

1. Enter the LightwaveRF App and select any device in any room (you will have to name the room and device if selecting this for the first time - see previous section).

2. Press the 'ON' command. Once this command is sent, the LCD display on the Wifi-Link unit will ask you to confirm that you want to register and point toward one of the four buttons.

3. Press the relevant Wifi-Link button to register your controller device. The LCD Display will now show that the device has been successfully registered and the controller is now ready to be paired with all of your Connect Series products.

IMPORTANT: If, when you attempt to register a controller device, the Wifi-Link displays 'Failed to Register' on the display, it is likely that the maximum number of 6 registered devices has been reached. You must de-register your existing devices before adding a new one.

To De-Register:

1. Press one of the four buttons on the Wifi-Link to enter the main menu.

2. Scroll across until the 'RESET' category is displayed.

3. Press the button next to the label 'Dereg' and confirm the action. This will de-register all currently registered phones and clear the memory.

PAIRING CONNECT SERIES DEVICES WITH THE WIFI-LINK AND CONTROLLER DEVICE

1. Select the required LightwaveRF Connect Series device and put this into learning mode (each type of device will have its own pairing instructions, please refer to these if you are unsure how to enter learning mode).

2. When the device is in learning mode, select any device button on your LightwaveRF app and press the 'ON' button. This will pair the device to that button. For the majority of Connect Series devices, LED lights will flash continuously to confirm a successful pairing, but it is best to refer to the individual device's instructions if you are unsure.

3. You can now repeat the process with your other Connect Series devices.

NOTE: If a device fails to pair it may be because its memory is full. You may need to unpair existing controller devices before new ones can be linked.

UNPAIRING DEVICES

1. Select the required LightwaveRF Connect Series device and put this into learning mode (each type of device will have its own pairing instructions, please refer to these if you are unsure how to enter learning mode).

2. When the device is in learning mode, select the button on your LightwaveRF app that you wish to unpair from the device that it controls and press 'OFF'. This will unpair the device.

IMPORTANT: Ensure that you are in wifi and RF range of the devices when setting up. If the wifi signal is too weak, you may need to upgrade your wireless router.

NOTE: If the RF range between the transmitter and receiver is too great to achieve reliable operation, two Wifi-Links may be used in conjunction with each other to increase the overall range. They should both be connected by ethernet cable to the network and positioned a distance apart to extend the RF range. The Wifi-Links should self-configure and recognise each other as part of the same network. Both units can be configured as normal and phones registered in the same way. Each unit will then send commands and boost the signal range.

Isolated transmission black-spots, should they occur, may be addressed using a LightwaveRF **SIGNAL BOOSTER** to increase the signal strength in that area.

Advanced Application Setup:

DATA SETS

The LightwaveRF app contains a fixed number of rooms and device slots in each room. All together these create a 'data set' which simply refers to your saved devices that you have set up and linked in your house. You can save this data set to the LightwaveRF cloud server by simply pressing 'upload database', and access it by pressing 'download database'. These options are accessible in the 'settings' tab under 'database management'.

Being able to save a data set is very useful because:

- Your house data is then backed up remotely incase you lose your phone or accidently reset the Wifi-Link

- Anyone subsequently registering their phone/wifi device to your Wifi-Link can instantly download all your current house settings on their app without having to manually input them.

- If you have several locations/houses each with their own Wifi-Links, you can save and change to different data sets at the touch of a button to control devices in each location without having to manually re-enter data every time.

To set up a dataset you must first setup some simple security on your device to ensure that your personal data is secure and nobody else can access control of your Wifi-Link (see below).

SECURITY SETTINGS

To set up Wifi-Link security:

1. Press the 'settings' tab and in the 'security settings' section choose 'Edit comms and security details'.

2. In the 'user details' section, enter a valid email and PIN number of your choice. This PIN stops other people being able to input your email address into their app and accessing your data.

This email then becomes the name of your current data set and is the code you will need to input if you should need to recall this data set. You can create multiple data sets by choosing new email addresses and uploading (saving) your modified data to each one using the 'upload' command (see previous).

IMPORTANT: Only one email address can be used per data set (i.e. per house/location). Other users in the house must use the same email address and PIN to access the same data and device settings (up to a maximum of 6 users).

SETTING UP REMOTE INTERNET ACCESS

Setting up the remote internet access allows you to use the app to control devices in your home whilst you are away.

1. In the 'settings' tab choose 'set up internet control'. You will then be asked for the 'MAC address' of your Wifi-Link.

2. Find the MAC address number of your Wifi-Link. To find this number, press the top button repeatedly on the left-hand side of the WIfi-Link display until the words SYSTEM and INFO appear. Then, press the bottom right button on the display and the Mac address will appear.

3. Input the MAC address to the app and press 'send request to server'. After this command is sent, the Wifi-Link will display a four digit PIN code on its screen.

4. Input the four digit PIN code into the app as instructed. This should complete the remote internet access setup process.

To engage 'remote access', on the app home page press the green lightwave symbol. You can then choose between 'local' and 'remote' access. Choose local when in range of your wifi network and remote when away from home for 3G or internet access.

SETTINGS

Device Settings:

The 'Device Settings' menu on the 'Settings' tab allows you to review and manually edit all of the room and device information including names and functions.

Location:

Enter your home town location and geographical time zone to ensure that the Sequences and Timers are triggered at the correct time.

Reset Wifi-Link database:

If, you are experiencing any problems with Sequences or Timers on the app, resetting the Wifi-Link wipes and then refreshes them from data stored on the server. All of the data you input into the app is stored on the server as soon as it is saved.

NOTE: If Timers and Sequences are running at the time of the reset, the current cycle will be interrupted. You can either manually reset them or alternatively wait until the next scheduled start time, when the Sequence will resume.

Advanced Functions:

MOODS

As well as the 6 device buttons per room screen, there are also 4 available **'MOOD'** buttons.

3 of the 'moods' are customisable (shown in green); the fourth being an 'ALL OFF' function (shown in red), which turns off all the devices in that room.

A 'mood' allows you to set all of the devices in any given room to whatever status you like, save these settings to one of the 'MOOD' buttons, and then recreate them at any time by pressing the appropriate button again. For example, a 'mood' called 'MOVIE' might turn off the main light in the room, dim several secondary lights, and turn on the DVD-player.

To save a mood:

1. Set all of the devices in the room to exactly the status that you require (including dim level for lights) manually or using your controller device.

2. Select one of the 3 available green MOOD buttons, press it and give it a name.

3. Select 'Save settings as Mood' and confirm. For example, to arrange our 'MOVIE' scenario, you might set your main light to 'OFF', two different lamps to '25%', and the DVD-power socket to 'ON'. By saving these settings to a 'mood', you could then recreate them instantly at any time simply by choosing the 'mood' named 'MOVIE'.

QUICKTIMER

The Quicktimer allows you set a single timer for any device, so that you can turn it on automatically at a set time of your choosing.

1. Choose the 'Quicktimer' button in the top right-hand corner of any Room page and press 'Set Quicktimer now'. The message 'Learning Quicktimer' will appear in the centre of the screen.

2. Choose the device you want, the action required and the date and time for it to start. Then press 'Set Quicktimer' to begin.

SEQUENCES

'Sequences' combine several timers together to allow you to create a **series** of timed commands to operate Connect Series devices.

This can be extremely useful; for example, you could create a Sequence called 'Go to Bed' which would automatically turn off all devices in the Lounge and kitchen after you have gone to bed. This could be triggered by you on the handset OR be put on a timer to switch everything off automatically at, say, 12.00pm.

Up to 10 different steps can be programmed into any given 'sequence', each followed by a customisable time delay. Each Sequence can be triggered manually or using a timer function. The Timer can measure seconds, minutes, hours, days, months and years.

Sequences can also be programmed to commence at the start or the end of the day using the 'DUSK' and 'DAWN' functions. The app alters the sequence start time in accordance with the sunrise/sunset throughout the year according to your geographical location.

To set a sequence:

1. Go to the 'Sequences' tab and select 'Learn a new Sequence'.

2. Name the Sequence and, press 'OK'. A message will appear instructing you on how to choose the desired commands for your sequence.

3. Press 'OK' and choose the 'Home' tab along the bottom of the screen. Begin selecting the commands you want the sequence to perform in the order you want them to take place, by choosing a room, a device, and a command such as 'On' or '50%'.

4. Once selected, another message will appear informing you that the sequence has learned its first of a maximum of ten steps, which can be saved to any one sequence. Simply go through the different rooms and select different commands until you are satisfied that the sequence is complete.

5. Now that you have chosen the commands you want, go back to the 'Sequences' tab and select the 'Save Sequence' button.

6. Once the commands are locked-in, you can go ahead and select the length of the time intervals between each command. Press the blue arrow to the right of your sequence (which will now have appeared on the main screen of the 'Sequences' tab) and then another blue arrow to the right of the first command in the list. Here you can select the time delay between the first and second command in hours, minutes and seconds. Choosing 'Random' will cause this step to take place at any time during the selected day period.

7. Repeat this process for the other Sequence commands and once completed, return to the main 'Sequences' screen to set the overall start time and frequency you want your sequence to operate at. Choose the 'Make a New Timer' button, and begin by choosing the blue arrow to the right of the word 'Sequence'.

8. Choose your sequence from the list, and using the other blue arrows on the previous page, set the daily start time of your Sequence, and then how often you want the Sequence to take place. You can opt for it to take place once only, on specific days of the week, specific days of the month or every x number of days. You can then set the initial start date of the sequence, and when in the future you want the sequence to end. If you want it to continue indefinitely, select 'Continue until I cancel manually'.

9. Once all the timer settings are complete, select 'SAVE THIS TIMER'; return to the 'Sequences' tab and you are ready to start the sequence. To do this, choose your sequence from the list and when prompted to start, press 'OK'.

ECOMETER

You can use a LightwaveRF Connect Energy Monitor to send live energy data straight to your app via the Wifi-Link. The Ecometer tab displays the current electricity usage in your house, as well as its approximate cost in pence per hour.

For full setup instructions please refer to the Energy Monitor Instruction booklet.

In order to setup the calculation of the cost of your electricity, first you need to enter in the amount you pay per KwH from your electricity provider. To do this, go to the settings tab, and choose Security Settings > Edit Comms and security details > Eco Meter - Electricity Cost/KwH. Enter your cost in pence per unit (usually marked on your electricity bill) and press 'Ok'.

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LightwaveRF

Lighting Compatibility Information

If you are going to use LightwaveRF equipment in your house, please read the information below to ensure you will get the most out of your hardware.

Loading

Our one and two gang dimmers can handle a maximum of 250W of load on *each gang* of the switch. The three and four gang switches have a maximum load of 210W on *each gang.* If you exceed this load, the switches may overheat and cease to work correctly.

Each gang requires a minimum load to function. This is generally 40w but can be lower with some lamps. This is generally the case with LEDs where a load of 14W can be enough to have the switch operating.

Bulbs

LightwaveRF switches can be used with standard incandescent bulbs, halogen bulbs (including low energy halogens) and dimmable LED bulbs (see below).

Fluorescent tube lighting, including CFL bulbs cannot be used with LightwaveRF equipment. This includes the LightwaveRF CFR bulb.

LEDs

As there is no standard set for LEDs at present, we cannot state that every dimmable LED will work with LightwaveRF equipment. Even if exceeding the minimum load, certain LEDs will not function on their own. In these situations wiring a dummy load* in parallel across the circuit will correct the issue.

The following LEDs have been tested and do work when at least 2 lamps are in a circuit:

- AuraLED AL-GU10 PRO 5W
- AuraLED AU-GU10 5x1W
- Auralux AU-5W LED Globe 5x1W
- IstoriaLED G9 DL Flood
- IstoriaLED G9 WW Flood
- TCP Dimmable Energy Saver LED 5W
- Truelux 230-5W-DIM
- Toshiba LDRC0627MU1EUD 6.5W 270lm LED

Please check **www.lightwaverf.com** for up-to-date information on compatibility.

LightwaveRF dimmer switches use trailing edge technology.   * *www.mr-resistor.co.uk/item.aspx?i=10031*