# **TROUBLESHOOTING**

# Solar lights won't turn on when it is light!

The LUX sensor in your Leaf turns your lights on automatically at night and off automatically when it's light.

If you want to test your solar lights, but you are outside during the day or you are in a lit room, you will need to cover the solar panel completely.

## Reality check...

The Leaf has been designed to work year-round in the UK using solar power alone so long as it is in a good enough location to charge and so long as the weather isn't too dull for too long. When we design our lights we use a simple formula based on how much power the solar panel can produce each day, versus how much power the LEDs consume after dark. We then factor in the average amount of sun hours in the UK (not much), an average customer solar panel location and reasonable performance expectation. Sadly, there are three things we can't control. 1. The weather. 2. Where Leaf is installed. 3. Expectations of the light. There will be dull periods in every year where even the best positioned and best performing solar lights will struggle. You would n, there are locations where no solar light will charge properly and sometimes solar lights are expected to perform like mains—powered brightness.

# Location, location!

Solar panels positioned as high as possible in clear south-facing locations always perform best, but we know that is not always desirable, even if it is achievable. The Leaf offers USB charge, Powersaving and an extra battery bay which are all designed to support longer run times. So long as the solar panel gets reasonable direct sunlight through-out the day you will get reasonable performance in Autumn, Spring and Summer. If you are looking for reasonably consistent winter performance then you will need an unshaded south-facing spot and/or be prepared to USB charge.

#### The bottom line

We have been selling and designing solar lights for 18 years now and in our experience solar lights that work are hardly ever faulty! That might seem like we're stating the obvious, but it is true. Lights that only work for half an hour after dark or lights that only turn on occasionally are just struggling to get enough charge 99% of the time. To test this turn the light off for three days (ensuring at least one sunny day has passed) and then turn it back on and see how long it works for that night – or USB charge if you can.

Another thing to look out for is nearby light. Light coming from another outdoor light or even light coming from inside a house can be enough to stop a solar light from turning on automatically. Or it can reset the 7 hour timer which means your light uses too much charge in a single night. You can test that by completely covering the solar panel to see if it then turns on.

Ultimately, if your light doesn't work after a few sunny days in a completely unshaded spot, or after a full USB charge and you have tested for nearby light interference, you may well have a very rare fault so please contact your retailer or contact us on the details below.

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# JUNO SOLAR USB MICRO SPOTLIGHTS - SET OF 2 & 4



# **USER GUIDE**

Thank you for choosing Juno Solar USB Spotlights powered by Leaf. Please read these instructions carefully before you begin

# HOW LEAF WORKS

Leaf is one of the most advanced solar panel systems currently available for home solar light setups. During the day, the sun's rays are absorbed by the Leaf's solar panel which charges the two 18650 Lithium-ion batteries. After dark, the batteries provide power for the 4 spotlights. Leaf has been designed to work year-round using solar power alone, but you can also fully charge the batteries quickly and easily by using the supplied USB-C cable (see 'USB charging' below).

# **BEFORE YOU BEGIN**

Although not essential, we thoroughly recommend fully charging your Leaf battery via USB before enjoying your lights for the first time. If you do not have access to a USB charging device, such as a computer or a USB wall plug adapter, we advise installing your lights and leaving them to charge outside for 3 days prior to first use. During this initial charge up period, please ensure that your Leaf is switched off (see diagram below).

# LEAF LAYOUT

#### **BATTERY BAYS**

# Juno Micro Spotlights - Set of 2

The Mini Leaf comes with two battery bays and one SolarCentre 2000mAh 18650 battery. You can add a second battery to double charge capacity.

#### Juno Micro Spotlights - Set of 4

Your Leaf comes with three battery bays and two SolarCentre 2000mAh 18650 batteries supplied. You can add a third battery to increase charge capacity.

# POWER SWITCH Juno Micro Spotlights - Set of 2

This 2-way switch will toggle between on and off.

#### Juno Micro Spotlights - Set of 4

Pressing the 3-way switch towards II will power the lights at full brightness. Pressing the switch towards I will double runtime by slightly reducing the brightness. Centring the switch on O will turn the lights off completely, but they will still charge.

#### LIGHT CONNECTOR

5-pin connector to connect your Juno Spotlights to your Leaf solar panel



# BALL JOINT SOCKET

Socket for ball joint which attaches to your stake or wall/deck mount

#### USB CHARGE INDICATORS

The charge indicator lights let you know exactly how much charge your Leaf battery has.

#### MODE BUTTON

The Leaf powers a variety of different solar lighting products. Some of those products have lighting modes, some don't.

#### Juno Micro Spotlights - Set of 2

The switch will toggle between Powersaving mode and full brightness mode.

# Juno Micro Spotlights - Set of 4

The Set of 4, do not have lighting modes so this switch is redundant.

### USB CHARGING PORT

Use the supplied USB-C lead to speed charge your Leaf battery by plugging it into the USB port on your computer, or by using a USB wall plug adaptor. Do not leave your Leaf unattended when it is charging by USB.

# **USB CHARGING**

See diagram on previous page. To USB charge the battery simply disconnect the Leaf from its mount, disconnect the Juno spotlights and take it inside. Before you begin, please make sure the Leaf is dry and free of any dirt or debris. Unscrew the cap on the underside of the Leaf, insert the smaller end of the supplied USB-C cable into the USB charging port and the large end into a USB wall plug adapter or a USB port on your computer. Please note that your computer needs be powered on during USB charging. The Leaf has 5 charge indicator lights which let you know how much charge the Leaf battery has. Charging times vary, but typically takes around 4 hours per battery installed. N.B Please do NOT leave your Leaf unattended while it is charging and disconnect the Leaf once you reach 100% charge.

# **ADDITIONAL BATTERIES**

Your Juno lights come with enough battery power for the vast majority of consumer applications. An additional battery bay is provided to give you the option to add an another battery if you would like to increase your charge capacity. Please ensure that any additional batteries used match the 2000mAh rating of the battery supplied. You can upgrade to a higher mAh rating so long as all the batteries in use have the same mAh rating. We recommend fully charging Leaf by USB when new batteries are added.

# SETTING UP YOUR LEAF SOLAR PANEL & JUNO LIGHTS

Before you begin, please remember that there is 2m of cable between your Leaf solar panel and the splitter and a further 85cm of cable from the splitter to each of the Juno Spotlights.

# POSITIONING YOUR SOLAR PANEL

Before positioning your Leaf solar panel please think very carefully about the location you intend to put it in. Your Leaf can be charged quickly via USB so it can work in locations that get little or no sunlight, but a good solar panel location will mean you will hardly ever need to rely on USB charging. Leaf panels that are mounted higher up in unshaded south, south—east or south—west facing locations always perform best. Always try to avoid north facing or shaded areas that are obstructed by buildings, trees, fences, sheds, bushes or the shadows that these create.

# STAKE MOUNTING YOUR SOLAR PANEL

Before attempting to push the stake into the ground, please ensure that the Leaf panel is not attached and that the ground is not too hard. Never try to install the stake by pushing down onto the Leaf solar panel. Any damage caused to your Leaf as a result of attempting to drive it into hard ground will be obvious to your retailer and is not covered by your warranty. If the ground is too hard, pour water on the desired area to soften the ground and make a hole using a strong metal object before driving your stake into that hole. Once the stake is securely in place, gently slot the Leaf onto it and use the ball socket to tilt the solar panel.

# WALL, FENCE OR DECK MOUNTING YOUR SOLAR PANEL

Attach the wall mount to your wall, fence or decking using the supplied screws and screw-plugs. Once your wall mount is in place, attach the Leaf to the mount and use the ball socket to tilt the solar panel.

## TILT

Your Leaf solar panel can be tilted vertically and horizontally to achieve the perfect angle to catch the sun. To make adjustments, loosen the ball socket, make your adjustments and then tighten the ball socket to secure it in that position.

# INSTALLING YOUR JUNO MICRO SPOTLIGHTS

Please note that there is 2m of cable between your Leaf solar panel and the splitter and a further 85cm of cable from the splitter to each of the Juno Spotlights.

Please take care when installing your Juno spotlights. Before you begin, please check the ground is not too hard. Grip the stake immediately below the light head and gently ease the first 6cm of the stake into the ground. Stop when the cable exit is flush with the ground. If the ground is too hard, pour water on the desired area to soften it and make a hole using a large screwdriver before pushing your stake into that hole. Please do not attempt to drive the stake into the ground by pushing down on the spotlight heads. Any damage caused to the lights as a result of attempting to drive them into hard ground is not covered by your warranty.

# CONNECTING YOUR JUNO SPOTLIGHTS TO LEAF

Once your Leaf is installed and your Juno spotlights are in place, connect the Juno spotlights to the Leaf via the 5-pin connector. Please take care to ensure the pins are correctly aligned before pushing in the connector. Once the connector in place, fully tighten the valve to secure the connection.

# **OPERATING INSTRUCTIONS**

Leaf is fully automatic so once turned on, your lights will come on automatically at night and turn off automatically after 7 hours (unless you turn them off at the switch beforehand, or the timer is reset by nearby light). To turn your solar lights on, simply unscrew the screw cap on the underside of the Leaf and press the rocker switch towards II for full power or I for Powersaving mode.

# POWERSAVING MODE

Powersaving mode is a good option if you don't have a great solar panel location available or you aren't able to USB charge. Some users might select Powersaving mode simply because they prefer a slightly dimmer light. In Powersaving mode, the Leaf will use half the amount of power as it does in normal full brightness mode. To select Powersaving mode press the power switch towards I. In Standard mode (switch pressed towards II) the spotlights will operate at full brightness.

# **WATER INGRESS:**

Your Leaf screw cap offers an exceptionally high level of protection against water ingress, but this protection is not unlimited. Once your Leaf is setup and you have adjusted any settings, always ensure that the screw cap and cable connector have been fully tightened to avoid water ingress. Please ensure that your Leaf solar panel is correctly installed using either the ground stake or wall mount and not left lying on the ground or anywhere else where water can accumulate. Failure to follow this guidance will invalidate your warranty.

# REPLACING THE BATTERY

The supplied  $2 \times 18650 \ 3.7V \ 2000 \ mAh$  SolarCentre rechargeable Lithium Ion batteries are designed to work for at least a year or two before they needs replacing. If you are experiencing issues within the first year of using your lights, it is highly unlikely that replacing the battery will resolve the problem. When it is time to replace your batteries remove the screw cap from the underside of the solar panel, locate the battery compartment and remove the batteries. Please dispose of the dead battery responsibly and in accordance with your local waste disposal guidelines.