

Leo: the Battery Life Extender

Button

Set Mode:

1x Smart Charging

2x Ghost Mode

3x Safe Mode

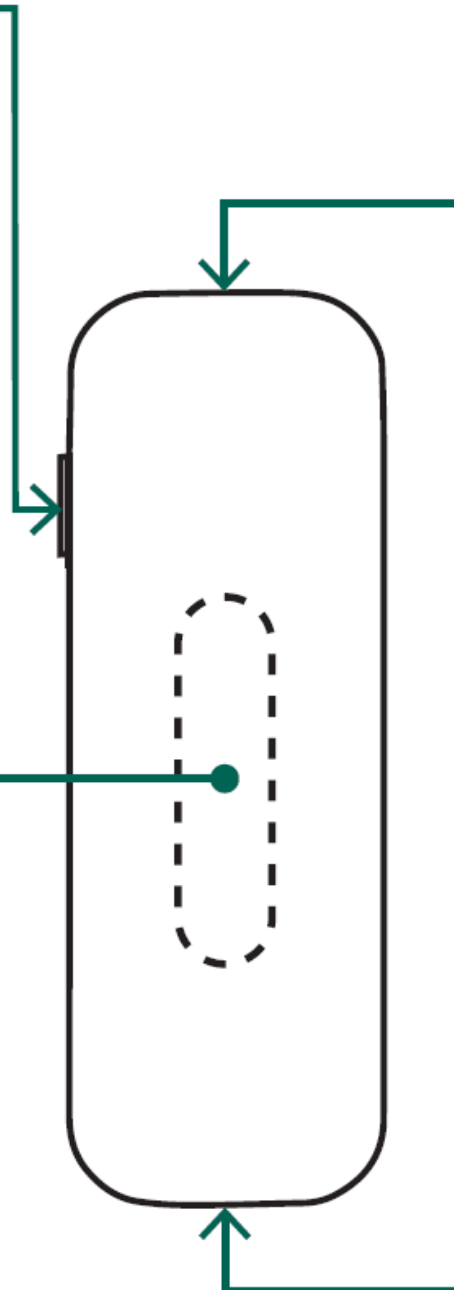
Hold: Restart / top-up

LED Bar

Smart charging: White

Ghost mode: Blue

Safe mode: Green



USB-C

Step 1: Connect Charger

Step 2: Set Mode (button)

Step 3: Connect charging device

If Leo does not start charging within ~1 minute, unplug fully and repeat steps 1, 2 and 3.

Button	Mode	Explanation	LEDs
1x Press	Smart Charging	<p>Return Leo to Standard Smart-Charging Mode</p> <p>This is Leo's default mode, and we recommend keeping your Leo in this mode for optimal battery lifespan. In smart-charging mode, Leo extends battery lifespan by charging slowly and automatically stopping at around 90% capacity.</p> <p>Please ensure that your charger provides sufficient power for the device you are charging to allow Leo to optimize the charging process.</p>	White
2x Press	Ghost Mode	<p>Enter 'Ghost Mode' and Charge Normally to 100%</p> <p>In Ghost Mode, Leo bypasses smart charging and allows the device to charge fully to 100%.</p> <p>With the latest update, Leo also supports faster charging setups (up to 100W), acting as if it's not there to enable the device's normal charging speed.</p> <p>Note: Some devices, chargers, or cables may not be compatible with Leo's 100W e-marked cable, especially if they use proprietary fast-charging protocols.</p>	Blue
3x Press	Safe Mode	<p>Prevent Any Data Transfer to Keep Your Data Safe</p> <p>Activate Safe Mode to block data transfer while charging, ensuring your privacy and security, especially when using public USB ports or unknown devices. This mode prevents the transfer of any data, including device information, personal data, or potential threats like viruses, while still allowing your device to charge safely.</p> <p>Stay secure and protect your data!</p>	Green
Hold 1 sec	Restart / Top-Up	<p>Reset Leo and Restart Smart Charging</p> <p>This action resets Leo and restarts the smart charging process.</p> <p>This reset is useful if Leo is in smart-charging mode but currently paused, when you start charging a new device, or if you've just set up a new charging configuration and want Leo to adapt. It's also helpful for quickly topping up the battery.</p> <p>When switching devices, either wait 5 seconds or hold the button to reset Leo. This clears the previous device's charging data, allowing Leo to begin charging the new device from scratch.</p>	White

Connection

Leo can be connected on either the charger side or the device side, in any orientation. It features USB-C ports and includes a USB-C cable, but is backward compatible with USB-A, Micro USB, or Lightning connections when using the appropriate adapter.

Important: Always use the 10cm cable supplied with your Leo as either the input or output for safety.

Note:

- Some devices may not fast-charge if you use cables that don't support the required charging speed or protocol.
 - Ensure you use a charger or port that provides sufficient current for the device being charged, ideally the original charger. Using a slower charger/port may limit the current, causing Leo to misinterpret the charging protocol and potentially not perform optimally, such as not stopping charging before the device reaches 100%.
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Compatibility

Leo is designed for devices that are USB 2.0 compliant. Some high-power USB-C devices, such as certain laptops, may not charge with Leo. While future software updates may expand compatibility, the current version requires a USB-protocol compliant device to function properly.

LED Functions

When charging starts, the LEDs will animate in a wave pattern, indicating the charging process.

To save energy and reduce light pollution at night, the LEDs will turn off after a while (except when in Ghost Mode or Safe Mode, where the LEDs remain on).

Press the button slowly in a rhythm reminiscent of a dark Star Wars melody to turn the LEDs red.

Safety Warnings

Model: Leo

The term product refers to Leo: The Battery Life Extender and its accessories.

Do not use this product in a small confined space such as a bookcase or built-in cabinet.

Do not expose the product to excessive heat, such as sunshine or fire.

Do not use this product with USB adapters rated above 20V.

Do not expose the product to extreme low temperatures.

Do not open or dismantle the product. There are no serviceable parts inside.

Do not expose the product to rain or snow.

Unplug Leo when not being used for extended periods.

Never insert the USB plug when the product is wet. If the USB plug is inserted while the product is wet, a short circuit may occur due to the liquid or foreign matter causing abnormal heat generation or malfunction.

Precautions

On Bluetooth communications

Microwaves emitted from a Bluetooth device may affect the operation of electronic medical devices. Turn off this unit and other Bluetooth devices in the following locations, as it may cause an accident:

- In hospitals, near priority seating in trains, locations where flammable gas is present, near automatic doors, or near fire alarms.

On charging

Use the supplied USB Type-C cable to ensure the product does not exceed maximum rated input/output.

Other notes

If you have any questions or problems with the product that are not covered in this manual, please contact Liion Power at <https://liionpower.nl/contact>.

If water or foreign matter enters the product, it may result in fire or electric shock. If water or foreign matter enters the product, stop use immediately. In particular be careful when using the product:

- Near a sink or liquid container.
- High humid locations.

Dispose of properly.

For details on the effect of contact with the human body from the mobile phone or other wireless device connected to the unit, refer to the instruction manual of the wireless device.

Note about static electricity

If you use the unit when the air is dry, you may experience discomfort due to static electricity accumulated on your body. This is not a malfunction of the unit. You can reduce the effect by wearing clothes made of natural materials that do not easily generate static electricity.

Notice for customers

US:

The following information is only applicable to the products sold in countries/regions applying US directives.

This product has been manufactured on behalf of Liion Power B.V.

Inquiries to the US Importer or related to product compliance in the US, should be sent to the Liion Power B.V. De Boelelaan 1095 A, 1081 HV Amsterdam

Hereby, Liion Power declares that this product is in compliance with FCC directive ANSI c63.10-2013.



The full text of the FCC declaration of conformity is available at <https://liionpower.nl/compliance>.

EU/UK:

The following information is only applicable to the products sold in countries/regions applying EU directives and/or UK applying relevant statutory requirements.

This product has been manufactured on behalf of Liion Power B.V.

Inquiries to the EU/UK Importer or related to product compliance in Europe/UK, should be sent to the Liion Power B.V. De Boelelaan 1095 A, 1081 HV Amsterdam

Hereby, Liion Power declares that this product is in compliance with directives 2014/53/EU and 2011/65/EU.



A full text of the EU/UK declarations of conformity is available at <https://liionpower.nl/compliance>.

Specifications

Device

Rated Input/Output:

5V = 2A (Max 20V = 5A, 100W)

Operating conditions:

0 - 40 degrees °C

0 - 90% Relative Humidity (non-condensing)

Max. altitude: 2000m / 6600 feet.

Mass:

Approximately 12g

Included items:

Leo: The Battery Life Extender

USB Type-C cable (USB-C to USB-C) rated 100W. Approximately 13cm

Communication Specifications

Communication system:

BLE class 1

Output:

BLE Power Class 1

Frequency band:

2.402 GHz to 2.480 GHz

Maximum output power:

+3.910 dBm EIRP

Design and specification are subject to change without notice.

System requirements

USB AC adapter

Minimum. A commercially available USB AC adapter capable of supplying an output current of at least 0.5 A or more.

Recommended. For autonomous smart charging capabilities, a commercially available USB AC adapter of at least 5V = 2A is needed.

Maximum. A commercially available USB AC adapter capable of supplying Max 20V = 5A, 100W.

Use with double isolated or Class-II adapters only.

System requirements are subject to change without notice.

Limitations

When switching between devices, when using smart-charging mode, please wait five seconds before plugging in a new device.

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Firmware & Software

Keep your firmware up to date. For details please refer to the Liion Power application.

Application

Download and keep up to date the Liion Power App found in the Apple App Store or Google Play Store.

