ECO-WORTHY L02EPN7.5BB18V-1

ECO-WORTHY 7.5W Solar Car Battery Charger Maintainer User Manual

Model: L02EPN7.5BB18V-1

1. Introduction

This manual provides essential information for the safe and effective use of your ECO-WORTHY 7.5W Solar Car Battery Charger Maintainer. Please read these instructions carefully before installation and operation. This device is designed to maintain the charge of 12V batteries in various vehicles and equipment, preventing discharge and extending battery life.

Your browser does not support the video tag.

Video Description: This video provides an overview of the solar trickle charger, explaining how lead-acid batteries lose charge over time and how the ECO-WORTHY solar charger helps maintain battery levels. It highlights the product's efficiency, smart features, and broad compatibility with various 12V batteries and vehicles.

2. Product Overview

2.1 Key Features

- **Upgraded Smart Charger Controller:** Features six protection functions including over-temperature, reverse discharge, short circuit, reverse polarity, and over-charging prevention. A built-in blocking diode prevents reverse current flow.
- **Real-time Monitoring:** An LED indicator displays charging status: half-lit for charging, blinking for fully charged, and off for no input or no battery connection. Automatic cut-off prevents overcharging.
- **Durable Construction:** A+ grade monocrystalline silicon wafers offer up to 23% conversion efficiency. The fiberglass surface provides high environmental resistance with IP64 waterproofing and UV protection.
- **Easy Installation:** Simple to install with direct connection to the battery using alligator clips. The panel is bendable for windshield placement and includes 4 PVC suction cups for secure mounting.
- **Wide Application:** Suitable for maintaining 12V batteries in cars, $LiFePO_4$, Lithium Ion, motorcycles, boats, tractors, ATVs, and farm equipment.

2.2 What's in the Box

Image Description: An image displaying the contents of the product package, including the 7.5W solar panel, one alligator clip to SAE connector cable, and four suction cups.

- 1 x 7.5W Solar Panel
- 1 x Alligator Clip to SAE Connector Cable
- 4 x Suction Cups
- 1 x Instruction Manual

Your browser does not support the video tag.

Video Description: This video demonstrates the unboxing of the 7.5W solar car battery charger maintainer, showcasing its ultra-thin and light design, good flexibility, and the included accessories: solar panel, SAE connector cable, alligator clips, suction cups, and instructions.

3. Setup Instructions

3.1 Mounting the Solar Panel

The solar panel is designed for easy placement and can be mounted on a windshield or other suitable surfaces using the provided suction cups. Ensure the panel receives maximum direct sunlight for optimal performance.

Image Description: A close-up view of the solar panel attached to a car's windshield with suction cups, demonstrating its flexible design and secure mounting.

1. Clean the surface where you intend to mount the solar panel to ensure the suction cups adhere properly.
2. Attach the four PVC suction cups to the designated holes on the solar panel.
3. Press the solar panel firmly onto the desired surface, such as the inside of a windshield, ensuring the suction cups create a strong seal.

3.2 Connecting to the Battery

The solar charger offers flexible connection options to your 12V battery. Always ensure correct polarity when connecting.

Image Description: A visual guide illustrating the 'Plug and Play' connection methods for the solar panel, including direct battery connection via alligator clips, connection through the OBD port, and connection via the cigarette lighter socket.

1. Connect the solar panel's output cable to the appropriate adapter (alligator clips, cigarette lighter plug, or OBD connector).
2. **Using Alligator Clips:** Connect the red clip to the positive (+) terminal of the 12V battery and the black clip to the negative (-) terminal. Ensure a secure connection.
3. **Using Cigarette Lighter Plug:** Insert the plug into your vehicle's 12V cigarette lighter socket. This method is suitable for maintaining batteries when the vehicle's ignition is off and the socket is powered.
4. **Using OBD Connector:** Plug the OBD connector into your vehicle's OBD-II port. This method can also be used for battery maintenance.

Note: Some vehicles may not be able to be charged from the cigarette port. In that case, use the alligator adapter instead. For optimal performance, it is recommended to mount the solar panel outside the window to avoid light loss through glass.

4. Operating Instructions

4.1 Charging Process

Once the solar panel is correctly positioned and connected to your 12V battery, it will automatically begin charging when exposed to sufficient sunlight. The integrated smart controller manages the charging process to prevent overcharging.

Image Description: An illustration highlighting the intelligent charge controller with various protection icons: Reversed Polarity, Over Voltage, Over Current, Short Circuit, Discharge, and Over Charge Protection.

4.2 LED Indicator Status

The built-in LED indicator provides real-time feedback on the charger's status:

- **Half-lit:** The battery is currently charging.
- **Blinking:** The battery is fully charged. The charger will automatically stop charging to prevent overcharge.
- **Off:** No input (insufficient sunlight) or no battery connected.

5. Maintenance

The ECO-WORTHY solar charger is designed for durability and minimal maintenance. Follow these guidelines to ensure its longevity:

- **Cleaning:** Periodically wipe the solar panel surface with a soft, damp cloth to remove dust, dirt, or debris that may reduce efficiency. Avoid abrasive cleaners or harsh chemicals.
- **Connection Check:** Regularly inspect the cables and connectors for any signs of wear, damage, or corrosion. Ensure connections remain secure.
- **Storage:** If storing the charger for an extended period, disconnect it from the battery and store it in a cool, dry place away from direct sunlight.
- **Environmental Protection:** The panel features IP64 waterproofing and UV protection, making it suitable for outdoor use. However, avoid submerging the panel in water.

Image Description: This image details the robust construction of the solar panel, emphasizing its fiberglass material, IP64 splash-proof rating, and UV protection for outdoor durability.

6. Troubleshooting

If you encounter issues with your ECO-WORTHY solar charger, refer to the following common problems and

solutions:

Problem	Possible Cause	Solution
LED indicator is off.	Insufficient sunlight, no battery connected, or faulty connection.	Ensure the panel is in direct sunlight. Verify battery connection. Check cables for damage.
Battery not charging or charging slowly.	Insufficient sunlight, dirty panel surface, incorrect angle, or battery issues.	Relocate the panel to direct sunlight. Clean the panel surface. Adjust the panel angle (recommended 30°-45°). Ensure battery is not severely discharged or damaged.
LED indicator is half-lit but battery remains low.	Battery capacity is too large for the 7.5W output, or significant parasitic drain on the battery.	The 7.5W charger is a maintainer, not a rapid charger. It prevents discharge. For larger batteries or faster charging, consider a higher wattage charger. Check for vehicle systems draining the battery.
Panel gets hot.	Normal operation under direct sunlight.	This is generally normal. The smart controller includes over-temperature protection. Ensure adequate ventilation around the panel.

7. Specifications

Image Description: A detailed table outlining the product parameters, including rated power, solar cell type, maximum/peak voltage, maximum current, over-charged protection voltage, over-charged recovery voltage, cable lengths, weight, and size.

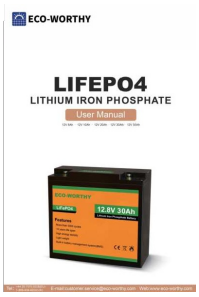
Parameter	Value
Brand	ECO-WORTHY
Model Number	L02EPN7.5BB18V-1
Rated Power	7.5 Watts
Solar Cell Type	Monocrystalline Silicon
Maximum Voltage	12 Volts
Maximum/Peak Voltage (Vmp)	18V
Maximum Current	0.56 Amps
Over-Charged Protection Voltage	14.5V
Over-Charged Recovery Voltage	13.0V
Product Dimensions	9.84"L x 8.66"W x 0.47"H (250*230*12mm)
Item Weight	0.8 ounces (22.68 g)
Waterproof Rating	IP64
Included Components	Cigarette lighter adapter, Alligator clips

8. Warranty and Support

For warranty information and customer support, please refer to the documentation included with your product or visit the official ECO-WORTHY website. Keep your purchase receipt as proof of purchase for any warranty claims.

Related Documents - L02EPN7.5BB18V-1

	ECO-WORTHY Solar Trickle Charger-Battery Maintainer User Manual User manual for the ECO-WORTHY Solar Trickle Charger-Battery Maintainer, detailing features, safety information, application, technical parameters, installation, wiring, testing, and included accessories.
	ECO-WORTHY 2.5W Solar Trickle Charger Manual: Features, Specifications, and Usage Guide Detailed manual for the ECO-WORTHY 2.5W Solar Trickle Charger. Covers product features, technical specifications, installation, wiring, testing, troubleshooting, maintenance, and warranty information.
	ECO-WORTHY Solar & Battery Products Catalog | Lithium Batteries, Solar Panels, Inverters Explore the comprehensive ECO-WORTHY product catalog featuring high-performance lithium batteries, efficient solar panels, versatile inverters, and solar charging solutions. Find specifications, applications, and system references for your renewable energy needs.
	ECO-WORTHY 400W Solar Panel Kit Installation and User Manual This manual provides instructions for the installation, connection, testing, maintenance, and troubleshooting of the ECO-WORTHY 400W Solar Panel Kit, including a 40A MPPT charge controller.

	[ECO-WORTHY APP User Manual: Connect and Control Your Device via Bluetooth & WiFi] Comprehensive user manual for the ECO-WORTHY APP, guiding you through app installation, Bluetooth and WiFi connection, device management, and troubleshooting. Learn to connect your ECO-WORTHY device easily.
	[ECO-WORTHY LiFePO4 Lithium Iron Phosphate Battery User Manual] User manual for ECO-WORTHY LiFePO4 Lithium Iron Phosphate batteries, covering specifications, charging methods, and troubleshooting for 12V 8Ah, 10Ah, 20Ah, 30Ah, and 50Ah models.