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SUNER POWER BC-6W

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Model: BC-6W

1. INTRODUCTION

The SUNER POWER 12V 6W Solar Battery Charger and Maintainer is designed to provide a continuous trickle charge to 12-volt batteries, preventing discharge and extending battery life. This waterproof portable solar panel kit is suitable for a wide range of vehicles and equipment, ensuring your batteries remain optimally charged using solar energy.



SUNER POWER 6W Solar Battery Charger and Maintainer.

2. PRODUCT FEATURES

- **Portable & Charge Anywhere:** Converts light energy from the sun into 12-volt DC electricity, delivering it to rechargeable batteries. The charger generates current to trickle charge the battery as long as sufficient sunlight is available.
- **Multipurpose Charger & Maintainer:** Safely charges and maintains various 12V battery types, including Wet, Gel, SLA, AGM, and Deep Cycle batteries. Ideal for cars, motorcycles, boats, marine vehicles, tractors, RVs, Powersports, snowmobiles, and trucks.
- **Reverse Protection:** Features a built-in blocking diode that prevents reverse discharge, ensuring no power drains from your battery back to the solar panel during low light conditions or at night.
- **Waterproof & High-Quality Materials:** Constructed with 30% high conversion efficiency crystalline silicon material and high-strength solar energy glass, offering 95% strong light transmittance and waterproof performance. The durable ABS frame allows it to withstand harsh weather conditions.
- **Free Maintenance:** Designed for years of reliable use with tempered glass and a strong ABS frame. Comes with 3-piece SAE cable kits for plug-and-play convenience, requiring no electricity cost for operation.



Image showing the solar panel's high conversion efficiency and waterproof design, with arrows indicating light absorption and water droplets on the surface.

3. PACKAGE CONTENTS

The SUNER POWER 12V 6W Solar Battery Charger & Maintainer package includes:

- 1 x SUNER POWER 6W Solar Panel
- 1 x SAE Cable with Alligator Clips
- 1 x SAE Cable with Cigarette Lighter Adapter
- 1 x SAE Cable with Bare Wire Adapter
- 4 x Suction Cups



Image detailing the dimensions of the solar panel (14.8 inches x 6.3 inches) and showing the included SAE cable kits: alligator clips, cigarette lighter adapter, and bare wire adapter, along with suction cups.

4. SETUP AND INSTALLATION

1. **Choose a Location:** Select a location that receives maximum direct sunlight throughout the day. For vehicles, this is often the dashboard or windshield. For boats or RVs, a clear, unobstructed area on the deck or roof is ideal.
2. **Clean the Panel:** Ensure the surface of the solar panel is clean and free of dirt, dust, or debris to maximize light absorption.
3. **Mount the Panel:** Use the provided suction cups to mount the panel securely to a smooth surface like a windshield. For more permanent installations on boats or RVs, the panel's frame includes mounting holes for screws (screws not included).
4. **Connect the Appropriate Adapter:**
 - **For Battery Terminals:** Use the SAE cable with alligator clips. Connect the red clip to the positive (+) battery terminal and the black clip to the negative (-) battery terminal. Ensure a secure connection.
 - **For Vehicle's 12V Socket:** Use the SAE cable with the cigarette lighter adapter. Plug the adapter into your vehicle's 12V accessory socket. Note: Some vehicle sockets are only powered when the ignition is on.

- **For Permanent Installation:** Use the SAE cable with bare wire adapter. Connect the red wire to the positive (+) battery terminal and the black wire to the negative (-) battery terminal. Ensure connections are insulated and secure.

5. **Connect to Solar Panel:** Plug the chosen adapter's SAE connector into the SAE output port of the solar panel. The connection is plug-and-play.



The solar panel mounted on the rear rack of an ATV, demonstrating outdoor use.



Two images showing the solar panel placed inside a car, one on the dashboard and one on the windshield using suction cups.



A close-up image of an SAE plug, a common connector for solar charging accessories.

5. OPERATING INSTRUCTIONS

Once properly installed and exposed to sunlight, the SUNER POWER solar charger operates automatically:

- The solar panel converts sunlight into electrical energy, which is then delivered to your 12V battery.
- The charger provides a gentle trickle charge, maintaining the battery's optimal charge level without overcharging.
- The integrated blocking diode prevents current from flowing back from the battery to the solar panel when there is no

sunlight, protecting your battery from discharge.

Video demonstrating the features and setup of the SUNER POWER 6W Solar Battery Charger and Maintainer, including a multimeter test of its output.

6. MAINTENANCE

To ensure optimal performance and longevity of your solar charger:

- **Clean the Panel:** Regularly wipe the solar panel surface with a soft, damp cloth to remove any accumulated dust, dirt, or debris. A clean panel ensures maximum sunlight absorption and charging efficiency.
- **Inspect Connections:** Periodically check all cable connections (SAE plugs, alligator clips, cigarette lighter adapter) to ensure they are secure and free from corrosion or damage.
- **Environmental Durability:** The panel's waterproof design and durable ABS frame allow it to be left outdoors in various weather conditions. However, extreme conditions may warrant temporary storage indoors to prolong its lifespan.

7. TROUBLESHOOTING

If your solar charger is not performing as expected, consider the following:

- **No Charge or Low Output:**
 - **Sunlight Exposure:** Ensure the solar panel is receiving direct, unobstructed sunlight. Tinted windows or partial shading can significantly reduce charging efficiency.
 - **Panel Cleanliness:** A dirty panel will not absorb sunlight effectively. Clean the surface as described in the Maintenance section.
 - **Connections:** Verify that all cables are securely connected and that there are no loose or corroded contacts.
 - **Battery Condition:** Ensure the 12V battery itself is in good working condition and capable of holding a charge.
 - **Multimeter Test:** If possible, use a multimeter to check the open-circuit voltage and short-circuit current of the panel in direct sunlight to confirm it is generating power.
- **Battery Draining:** The product includes a built-in blocking diode to prevent reverse discharge. If you suspect your battery is draining while connected to the solar panel, double-check all connections for proper polarity and integrity. If the issue persists, contact customer support.

8. SPECIFICATIONS

Brand	SUNER POWER
Model Number	BC-6W
Output Voltage	12 Volts (DC)
Input Voltage	12 Volts (DC)
Product Dimensions	0.51"D x 6.3"W x 14.8"H
Item Weight	1.04 Kilograms
Materials	Polycrystalline silicon, high-strength solar glass, ABS frame

9. WARRANTY AND SUPPORT

For detailed warranty information, product registration, or technical support, please refer to the official SUNER POWER website or contact their customer service department. Keep your purchase receipt for warranty claims.