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› Go Power! GP-PWM-30-UL BlueTooth 30 Amp Solar Regulator User Manual

Go Power GP-PWM-30-UL

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Model: GP-PWM-30-UL

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Go Power! GP-PWM-30-UL BlueTooth 30 Amp Solar Regulator. This device is designed to protect your batteries from overcharging when connected to a solar panel, ensuring optimal battery health and longevity. It features a 30 amp capacity and a 4-stage battery charging algorithm, compatible with various battery types including Lithium, wet cell, AGM, and gel batteries. Please read this manual thoroughly before use to ensure safe and efficient operation.

KEY FEATURES

- Displays voltage, amperage, and battery percentage of charge.
- Full 4-stage charging algorithm for optimal battery health, with an equalize option.
- Capable of handling up to 570 watts of solar input.
- Bluetooth connectivity for remote monitoring and control via a mobile application.
- Selectable battery types: Lithium, Wet Cell, AGM, and Gel.
- UL listed for safety and compliance.

SAFETY INFORMATION

Always observe the following safety precautions to prevent personal injury or damage to the equipment:

- Ensure all connections are secure and properly insulated to prevent short circuits.
- Do not expose the regulator to water or excessive moisture.
- Verify battery voltage and polarity before connecting the regulator.
- Install in a well-ventilated area, away from flammable materials.
- Only qualified personnel should perform installation and maintenance.
- Disconnect all power sources before servicing the unit.

PACKAGE CONTENTS

Upon opening the package, verify that all components are present:

- Go Power! GP-PWM-30-UL Solar Regulator
- User Manual (this document)
- Mounting Screws



Image: Front view of the Go Power! GP-PWM-30-UL Solar Regulator, showing the digital display, control buttons, and branding.

SETUP AND INSTALLATION

Follow these steps for proper installation of the solar regulator:

1. **Mounting:** Choose a dry, well-ventilated location close to the batteries. Ensure there is sufficient space for wiring and air circulation. Use the provided mounting screws to secure the regulator to a flat surface.
2. **Wiring Sequence:** It is crucial to connect the components in the correct order to prevent damage.
 - **Step 1: Connect to Battery:** Connect the positive (+) and negative (-) terminals of the regulator to the battery bank. Ensure correct polarity. The regulator display should illuminate.
 - **Step 2: Connect to Solar Panel:** Connect the positive (+) and negative (-) terminals of the solar panel to the regulator's solar input terminals. Ensure correct polarity. The regulator will begin charging if solar power is available.
 - **Step 3: Connect to Load (Optional):** If using the load output feature, connect your DC loads to the regulator's load terminals.
3. **Battery Type Selection:** Once powered, select the appropriate battery type (Lithium, Wet Cell, AGM, or Gel) using the regulator's interface or the Go Power! Connect app. Refer to the Operating section for detailed instructions.



Image: Rear or side view of the Go Power! GP-PWM-30-UL Solar Regulator, illustrating the wiring terminals for battery, solar panel, and optional load connections.

OPERATING INSTRUCTIONS

Display and Buttons

The GP-PWM-30-UL features a clear digital display and intuitive buttons for easy operation.



Image: Close-up view of the Go Power! GP-PWM-30-UL Solar Regulator's digital display, showing various indicators for voltage, amperage, battery status, and battery type selection.

- **Display:** Shows real-time data such as battery voltage, charging current (amperage), battery state of charge (percentage), and selected battery type.
- **Buttons:** Used to navigate menus, select battery types, and initiate equalization (if applicable). Consult the on-screen prompts for specific button functions.

Bluetooth Connectivity

The integrated Bluetooth module allows for remote monitoring and control via the Go Power! Connect mobile application.

1. **Download App:** Download the "Go Power! Connect" app from your device's app store (iOS or Android).
2. **Pair Device:** Open the app and follow the on-screen instructions to pair with your GP-PWM-30-UL regulator. Ensure

Bluetooth is enabled on your mobile device.

3. **Monitor and Control:** Once connected, you can view charging status, battery parameters, historical data, and adjust settings remotely.

Charging Algorithm

The regulator employs a 4-stage charging algorithm to optimize battery charging and extend battery life:

- **Bulk Charge:** Delivers maximum current to rapidly charge the battery to approximately 80% capacity.
- **Absorption Charge:** Charges at a constant voltage to bring the battery to 100% capacity, reducing current as the battery fills.
- **Float Charge:** Maintains the battery at a full charge by providing a small, constant voltage, compensating for self-discharge.
- **Equalization (for Wet Cell batteries):** Periodically overcharges the battery at a higher voltage to balance cell voltages and prevent sulfation. This feature is typically only for flooded lead-acid batteries and should be used with caution.

MAINTENANCE

The GP-PWM-30-UL is designed for minimal maintenance. However, periodic checks are recommended:

- **Connections:** Annually inspect all wiring connections for tightness and corrosion. Loose connections can lead to power loss or overheating.
- **Cleanliness:** Keep the regulator clean and free of dust and debris. Use a dry cloth for cleaning. Do not use liquid cleaners.
- **Ventilation:** Ensure the installation area remains well-ventilated to prevent overheating of the unit.
- **Firmware Updates:** Check the Go Power! website or the mobile app for any available firmware updates to ensure optimal performance and access to new features.

TROUBLESHOOTING

If you encounter issues with your GP-PWM-30-UL, refer to the table below for common problems and solutions.

Problem	Possible Cause	Solution
Regulator display is off.	No power from battery or reversed polarity.	Check battery connections and polarity. Ensure battery voltage is above minimum operating voltage.
No charging current.	No solar input, reversed solar polarity, or faulty panel/wiring.	Verify solar panel connections and polarity. Check for sufficient sunlight. Test solar panel voltage.
Battery not fully charging.	Incorrect battery type setting, insufficient solar power, or battery degradation.	Confirm correct battery type setting. Increase solar panel capacity if needed. Have battery tested.
Bluetooth connection issues.	App not updated, Bluetooth off on device, or interference.	Ensure app is updated. Turn Bluetooth off/on on your device. Move closer to the regulator.

If the problem persists after attempting these solutions, please contact Go Power! customer support.

SPECIFICATIONS

Parameter	Value
Model Number	GP-PWM-30-UL
Rated Charge Current	30 Amps
System Voltage	12V / 24V Auto-detect
Max Solar Input Power	570 Watts (12V system)
Battery Types Supported	Lithium, Wet Cell, AGM, Gel
Charging Algorithm	4-Stage (Bulk, Absorption, Float, Equalization)
Dimensions (L x W x H)	8.5 x 2 x 4.5 inches
Weight	15.5 ounces
Operating Temperature	-35°C to +55°C (-31°F to +131°F)
Certifications	UL Listed

WARRANTY AND SUPPORT

Warranty Information

The Go Power! GP-PWM-30-UL Solar Regulator comes with a **5-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by improper installation, misuse, accidents, or unauthorized modifications. Please retain your proof of purchase for warranty claims.

Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact Go Power! customer support. Visit the official Go Power! website for the most up-to-date contact information and additional resources.

Go Power! Official Website: gpelectric.com

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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