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## Power Queen 12.8V 200Ah PLUS LiFePO4 Battery

# Power Queen 12V 200Ah PLUS LiFePO4 Battery Instruction Manual

Model: 12.8V 200Ah PLUS LiFePO4 Battery

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your Power Queen 12V 200Ah PLUS LiFePO4 Battery. Please read all instructions carefully before installation and operation to ensure optimal performance and longevity of your battery.



Image 1.1: The Power Queen 12V 200Ah PLUS LiFePO4 Battery.

## 2. SAFETY INFORMATION

Observe the following safety precautions to prevent injury and damage to the battery or connected

equipment:

- This battery is designed for energy storage, not for starting engines or golf carts.
- Wear appropriate personal protective equipment, including gloves and eye protection, during installation and handling.
- Ensure proper ventilation when installing the battery.
- Avoid short-circuiting the battery terminals.
- Do not disassemble, puncture, or modify the battery.
- Keep the battery away from heat sources, open flames, and flammable materials.
- If OT terminals are attached directly with screws and their thickness is less than 2mm, add gaskets to ensure secure attachment and prevent loosening or overheating. This precaution also applies when using clamps.

### **3. WHAT'S IN THE BOX**

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

- 12.8V 200Ah PLUS LiFePO4 Battery
- 2 \* M8 - 5/8" (16MM) Terminal Bolts
- Insulating Caps for Bolts
- Product Instruction Manual



Image 3.1: The Power Queen battery packaging, showing the serial number and product details.



Image 3.2: Shipping box for the Power Queen battery, indicating proper orientation.

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Video 3.1: An unboxing video demonstrating the contents of a Power Queen LiFePO4 battery package.

## 4. PRODUCT FEATURES & OVERVIEW

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The Power Queen 12V 200Ah PLUS LiFePO4 Battery is engineered for reliable and long-lasting power in various applications.

### 4.1. Advanced Battery Management System (BMS)

This battery features a built-in 200A BMS, providing comprehensive protection against over-charge, over-discharge, high-temperature, short-circuit, and over-current conditions. It supports a maximum load power of 2560W.

# Upgrade 200A BMS & EV Grade Cells

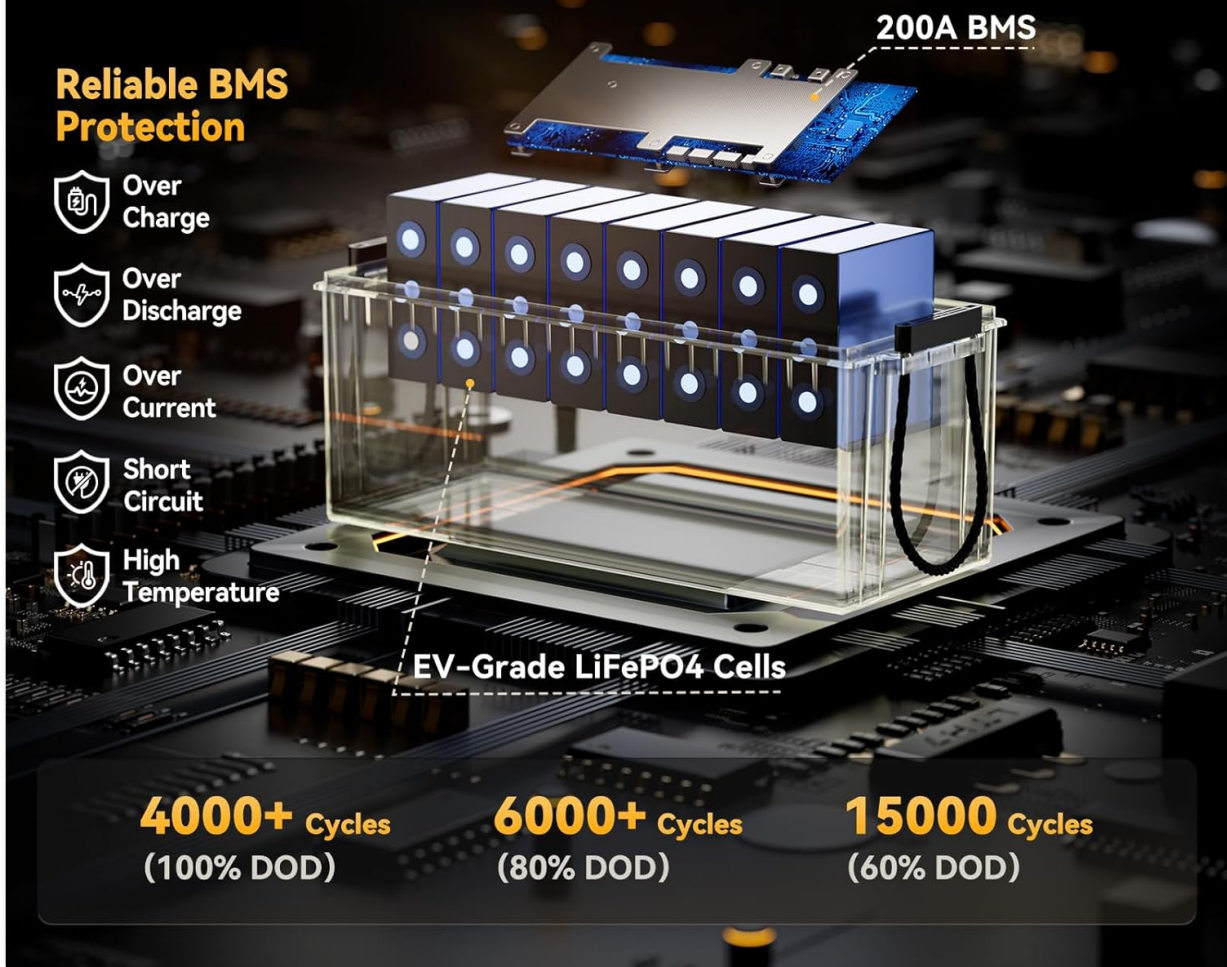


Image 4.1: Internal view highlighting the 200A BMS and EV-grade LiFePO4 cells, detailing protection features and cycle life.

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Video 4.1: A detailed video showcasing the 200A BMS and its protective features within the Power Queen 12V 200Ah PLUS LiFePO4 Battery.

## 4.2. Lightweight Design & High Energy Density

Weighing approximately 48.58 lbs, this LiFePO4 battery is significantly lighter than comparable lead-acid batteries (which can weigh around 130 lbs). Its energy density is 52.69Wh/lb, offering extended operation time.

# Ultra-High Energy Density For Longer Lasting Power

\*Compared with 12V 200Ah AGM Battery



Image 4.2: Visual comparison illustrating the weight and energy density advantages of the Power Queen LiFePO4 battery over traditional lead-acid batteries.

## 4.3. Expandable Energy Solutions

The battery supports configurations of up to 4 in series and 4 in parallel (Max 4S4P), allowing for increased capacity (up to 800Ah) and higher voltage (up to 51.2V). A maximum of 16 batteries can be connected to achieve a 51.2V 800Ah system, providing 40.96kWh of energy.

# Unlock More Energy, Up to 4P4S

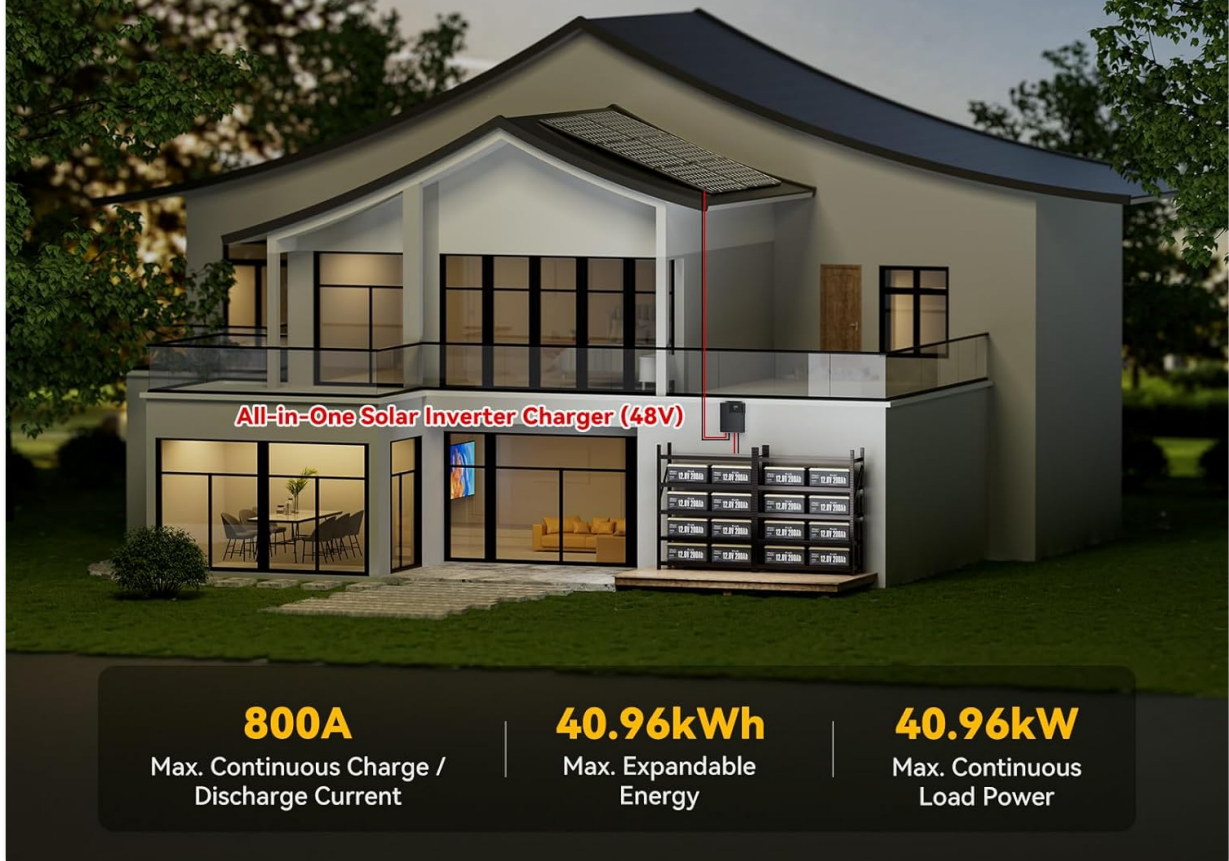


Image 4.3: Illustration of a scalable home solar system utilizing multiple Power Queen batteries for significant energy storage.

## 4.4. Versatile Applications

This battery is suitable for various applications, including home solar systems, emergency backup power, marine use, and RV trips.

# Applications For Various Uses



Image 4.4: Examples of diverse applications for Power Queen batteries, including emergency backup, RVs, off-grid, and marine environments.

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Video 4.2: An overview video highlighting the benefits and applications of Power Queen LiFePO4 batteries.

## 5. SETUP & INSTALLATION

### 5.1. Terminal Connection

Connect the battery terminals securely using the provided M8 bolts and insulating caps. Ensure a tight connection to prevent resistance and overheating.

### 5.2. Series and Parallel Connection Guidelines

For increased voltage or capacity, multiple batteries can be connected. Always follow these guidelines:

- **Series Connection:** Connect up to 4 batteries in series to increase voltage (e.g., two 12.8V batteries in series yield 25.6V). Ensure all batteries have the same voltage and capacity.
- **Parallel Connection:** Connect up to 4 batteries in parallel to increase capacity (e.g., two 200Ah batteries in parallel yield 400Ah). Ensure all batteries have the same voltage and capacity.
- **Combined Series-Parallel:** A maximum of 16 batteries (4S4P) can be combined for a 51.2V 800Ah system.

- Use appropriate cabling and fusing for your system's current requirements.

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Video 5.1: A demonstration of setting up a Power Queen battery system, including connections and monitoring.

## 6. OPERATING INSTRUCTIONS

The Power Queen LiFePO<sub>4</sub> battery is designed for deep cycle applications. It provides stable power output for various devices.

- Ensure the battery is adequately charged before initial use.
- Monitor battery status using compatible monitoring devices if available.
- Avoid exceeding the maximum continuous discharge current of the battery (200A).
- The battery's 2560Wh energy capacity can power various appliances. For example, it can run an 800W microwave for approximately 3.2 hours or a 100W television for 25.6 hours.

**Fully Powered  
And Ready for Anything**

**2560W**  
Load Power

**POWER QUEEN PLUS**  
**12.8V 200Ah**  
LiFePO<sub>4</sub>  
LITHIUM IRON PHOSPHATE DEEP CYCLE BATTERY  
www.powerqueen.com

 <b>3.2 H</b> Microwave (800W)	 <b>25.6 H</b> Television (100W)
 <b>1.7 H</b> Water Boiler (1500W)	 <b>3.2 H</b> Coffee Maker (800W)

Image 6.1: Examples of appliances and their estimated run times when powered by the Power Queen battery.

## 7. MAINTENANCE

LiFePO<sub>4</sub> batteries require minimal maintenance compared to lead-acid batteries. Follow these simple steps to ensure optimal performance:

- Keep the battery terminals clean and free from corrosion.
- Regularly inspect the battery for any physical damage.
- Store the battery in a cool, dry place when not in use.
- Avoid prolonged storage at a completely discharged state. It is recommended to store the battery at 50% state of charge.

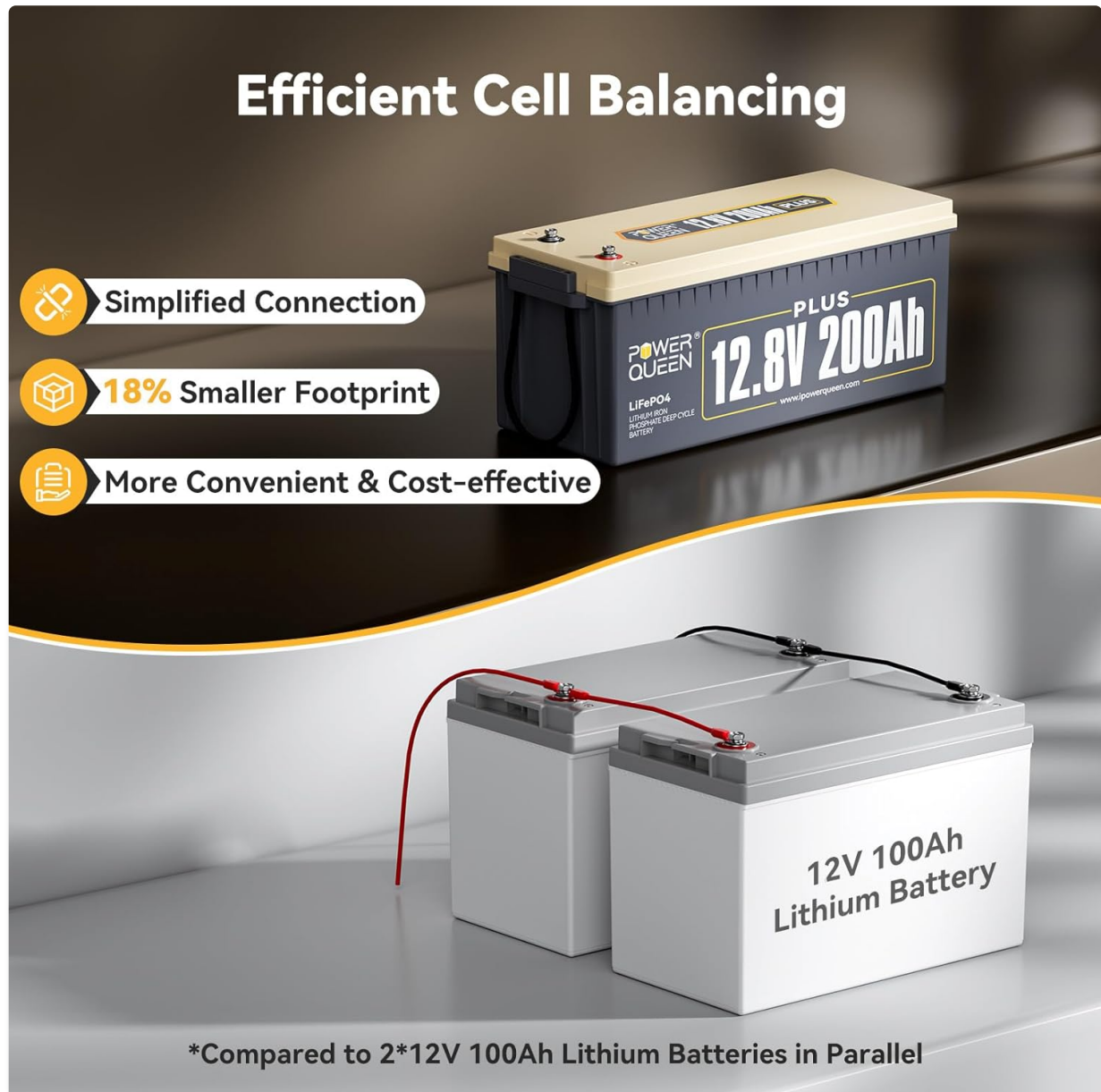


Image 7.1: Visual representation of efficient cell balancing and the compact design of the Power Queen battery.

## 8. TROUBLESHOOTING

If you encounter issues with your Power Queen battery, consider the following common troubleshooting steps:

- **Battery Not Charging:** Verify that the charger is compatible with LiFePO<sub>4</sub> batteries and is properly connected. Check for loose connections or blown fuses.
- **Low Voltage Output:** Ensure the battery is sufficiently charged. Check all connections for tightness and corrosion.

- **Battery Shutting Off:** The built-in BMS may have activated a protection feature (e.g., over-discharge, over-current, high-temperature). Allow the battery to rest or address the cause of the protection trigger.
- **Overheating:** Ensure adequate ventilation around the battery. Reduce the load if the battery is consistently running hot.

## 9. SPECIFICATIONS

Feature	Specification
Brand	Power Queen
Model	12.8V 200Ah PLUS LiFePO4 Battery
Product Dimensions	9.37"D x 20.5"W x 8.54"H
Item Weight	49.5 pounds
Battery Capacity	200 Amp Hours
Nominal Voltage	12.8V
Built-in BMS	200A
Max. Load Power	2560W
Cycle Life	4000+ cycles (@100% DOD), 15000 cycles (@60% DOD)
Terminal Type	M8
Number of Cells	4
Resistance	40 Milliohms
Max Series/Parallel	4S4P (Max 16 batteries)

# Dimension Details

Size: L20.95\*W8.15\*H8.5 inch



Image 9.1: Detailed dimensions and weight of the Power Queen 12V 200Ah PLUS LiFePO4 Battery.

## 10. WARRANTY & SUPPORT

The Power Queen 12V 200Ah PLUS LiFePO4 Battery includes a 5-year service period. For technical assistance, warranty claims, or further inquiries, please refer to the contact information provided in the product packaging or visit the official Power Queen website.

For more information, visit the [Power Queen Store](#).