Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

ECI Power ECI12200

ECI Power 12V 200Ah LiFePO4 Deep Cycle Rechargeable Battery User Manual

Model: ECI12200

1. Introduction

This manual provides essential information for the safe and effective use of your ECI Power 12V 200Ah Lithium Iron Phosphate (LiFePO4) Deep Cycle Rechargeable Battery. This battery is designed for various applications including RVs, vans, solar energy systems, trolling motors, overland vehicles, and off-grid setups. It features a built-in Battery Management System (BMS) and Bluetooth connectivity for monitoring.

Please read this manual thoroughly before installation and operation to ensure proper usage and maximize battery lifespan.

2. Safety Guidelines

WARNING: Failure to follow these safety instructions may result in serious injury, property damage, or death.

- Always use a charger specifically designed for LiFePO4 batteries. Do not use lead-acid battery chargers, as this can damage the battery and pose a fire hazard.
- Do not short-circuit the battery terminals. This can cause severe damage to the battery and connected equipment, and may result in fire or explosion.
- Avoid exposing the battery to freezing temperatures during charging. The built-in BMS includes a low-temperature cut-off to prevent charging below 23°F (-5°C).
- Do not disassemble, puncture, or modify the battery. There are no user-serviceable parts inside.
- Keep the battery away from heat sources, open flames, and flammable materials.
- Ensure adequate ventilation around the battery during operation and charging.
- Wear appropriate personal protective equipment (PPE) such as safety glasses and gloves when handling batteries.
- In case of fire, use a Class D fire extinguisher. Water or standard fire extinguishers may not be effective.

3. Product Features

- **Advanced LiFePO4 Chemistry:** Utilizes UL1642 listed Grade-A LiFePO4 cells for enhanced safety and performance.
- **Integrated Battery Management System (BMS):** Protects against overcharge, deep discharge, overloading, overheating, and short circuits. Includes a low-temperature charging cut-off.

- **Bluetooth Connectivity:** Monitor battery State of Charge (SOC), temperature, protection warnings, and other parameters via a smartphone application.
- **High Cycle Life:** Designed for a minimum of 3500 cycles at 80% Depth of Discharge (DOD), with up to 7000 cycles at 50% DOD.
- **Long Lifespan:** Offers a potential 10-year lifetime under proper maintenance.
- **Expandable System:** Supports connections of up to 4 batteries in series for 48V 200Ah, or in parallel for 12V 2000Ah.
- **Lightweight Design:** Significantly lighter than traditional lead-acid batteries.
- **Low Self-Discharge Rate:** Ensures up to 1 year of maintenance-free storage.

4. Installation and Connection

Before installation, ensure all components are present and undamaged. Disconnect all loads and charging sources from your system.

4.1 Physical Installation

The ECI Power LiFePO4 battery is compact and lightweight, allowing for flexible installation in various environments such as RV compartments or battery boxes.



Image: ECI Power LiFePO4 battery installed in an RV compartment, demonstrating its suitability for mobile applications.



Image: Detailed dimensions of the ECI Power 12V 200Ah LiFePO4 battery, showing its length, width, height, and weight (48.3 lbs).

4.2 Electrical Connections

The battery supports both series and parallel connections for increased voltage or capacity. Always use appropriate gauge cables and ensure all connections are tight.

- **Parallel Connection:** Connect positive terminals together and negative terminals together to increase total capacity (Ah) while maintaining 12V. Up to 4 batteries can be connected in parallel for a total of 12V 2000Ah.
- **Series Connection:** Connect the positive terminal of one battery to the negative terminal of the next to increase total voltage (V). Up to 4 batteries can be connected in series for a total of 48V 200Ah.
- **Important:** Series-parallel connections are not recommended. Ensure all batteries in a series or parallel bank are of the same brand, model, and age.

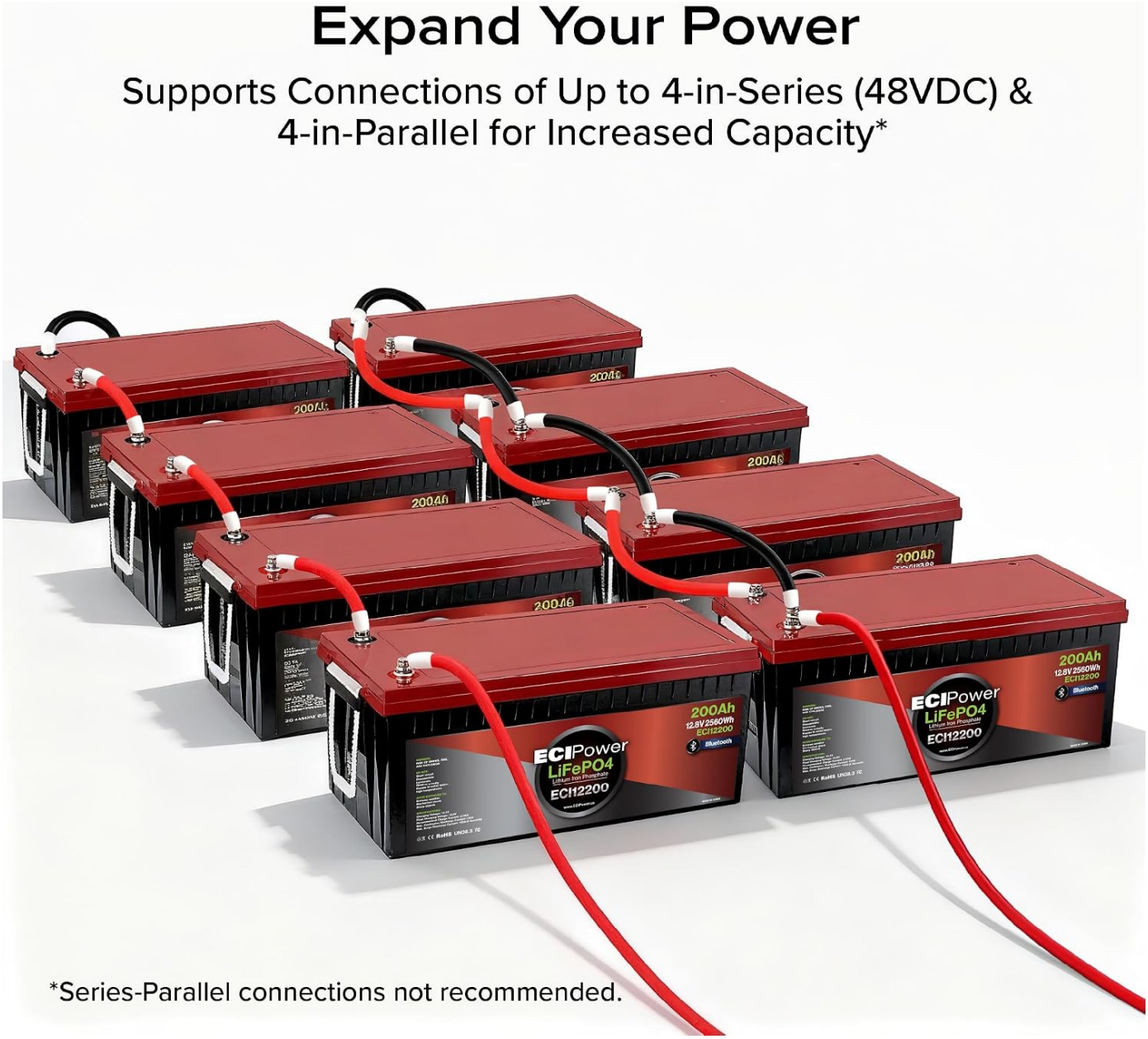


Image: Illustration demonstrating how to connect multiple ECI Power LiFePO4 batteries in series (for higher voltage) and parallel (for higher capacity).

5. Charging Instructions

Proper charging is crucial for the longevity and performance of your LiFePO4 battery.

- **Dedicated LiFePO4 Charger:** Always use a charger specifically designed for Lithium Iron Phosphate (LiFePO4) batteries. Using chargers for other battery chemistries (e.g., lead-acid) can damage the battery and void the warranty.
- **Charging Temperature:** The battery's internal BMS will prevent charging if the temperature is below 23°F (-5°C). Ensure the battery is within the recommended charging temperature range.
- **Charging Parameters:** Refer to your charger's manual for specific settings. Generally, LiFePO4 batteries do not require a float charge.

6. Operating the Battery

6.1 General Use

The ECI Power LiFePO4 battery is designed for deep cycle applications, providing stable voltage output throughout its

discharge cycle. Its robust design makes it suitable for demanding environments.

6.2 Bluetooth Monitoring

Your battery is equipped with built-in Bluetooth for convenient monitoring via a smartphone application. This allows you to track key battery parameters in real-time.

1. Download the official ECI Power Bluetooth app from your device's app store.
2. Ensure Bluetooth is enabled on your smartphone.
3. Open the app and search for available ECI Power batteries.
4. Connect to your battery to view its State of Charge (SOC), voltage, current, temperature, and any protection warnings.



Image: A smartphone displaying the ECI Power app interface, showing battery State of Charge (SOC), voltage, current, and temperature readings.

7. Maintenance and Storage

7.1 General Maintenance

- Regularly inspect battery terminals for corrosion or loose connections. Clean as necessary.
- Keep the battery clean and dry.
- Monitor battery health using the Bluetooth app.

7.2 Storage

- For long-term storage, ensure the battery is charged to approximately 50-70% State of Charge.
- Store the battery in a cool, dry place, ideally between 50°F to 60°F (10°C to 15°C).
- The low self-discharge rate allows for up to 1 year of maintenance-free storage. However, periodic checks and top-ups are recommended for optimal longevity.

8. Troubleshooting

Problem	Possible Cause	Solution
Battery not charging	Charger not compatible with LiFePO4. Temperature too low (below 23°F / -5°C). BMS in protection mode.	Use a dedicated LiFePO4 charger. Move battery to a warmer environment. Connect to a LiFePO4 charger to reset BMS.
Battery shows 0V or very low voltage	BMS has triggered deep discharge protection (e.g., due to short circuit). Battery is fully discharged.	Connect to a LiFePO4 charger. The BMS should reset and allow charging within minutes. If the issue persists, contact customer support.
Bluetooth app not connecting	Bluetooth disabled on phone. Battery out of range. App issue.	Enable Bluetooth on your device. Move closer to the battery. Restart the app or your phone.

For issues not covered here, please contact ECI Power customer support.

9. Technical Specifications

Specification	Value
Brand	ECI Power
Model	ECI12200
Voltage	12 Volts
Battery Capacity	200 Amp Hours (Ah)
Battery Cell Composition	Lithium Iron Phosphate (LiFePO4)
Item Weight	48.3 Pounds
Terminal Type	Button Terminal
Manufacturer	ExpertPower
UPC	840140946963

Specification	Value
Cycle Life	3500 cycles @ 80% DOD (min), 7000 cycles @ 50% DOD (max)
Low-Temperature Cut-off	23°F (-5°C) for charging



Image: Front view of the ECI Power 12V 200Ah LiFePO4 battery, showing its robust casing and terminals.



Image: Internal view of the ECI Power LiFePO4 battery with the top cover removed, highlighting the integrated Battery Management System (BMS) and cell structure.

10. Warranty and Support

ECI Power batteries are backed by a manufacturer's warranty. While some reviews mention a 1-year warranty, please refer to the official ECI Power website or your purchase documentation for the most accurate and up-to-date warranty terms.

ECI Power (ExpertPower Direct) has an established engineering and after-sale support team. For technical assistance, warranty claims, or any questions regarding your battery, please contact their customer support.

Contact information can typically be found on the product packaging, the ECI Power website, or through your retailer.

11. Applications

The ECI Power 12V 200Ah LiFePO4 battery is versatile and suitable for a wide range of deep cycle applications, including:

- **Recreational Vehicles (RVs) & Vans:** Providing reliable power for onboard appliances and systems.
- **Solar Energy Systems:** Efficient energy storage for off-grid or grid-tied solar installations.
- **Trolling Motors:** Delivering consistent power for marine applications.
- **Overland & Off-Grid Setups:** Durable power solutions for remote adventures and independent living.
- **Backup Power:** Reliable energy storage for emergency situations.

Your browser does not support the video tag.

Video: An overview of ECI Power Lithium LiFePO4 Batteries, highlighting their features and various applications.

© 2024 ECI Power. All rights reserved.
This manual is for informational purposes only. Specifications are subject to change without notice.

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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

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.

Submit question

Open the live page

https://manuals.plus/asin/B09DTR9P1F

More documents and user manuals: **https://manuals.plus/**