



Manuals.plus /

› DC HOUSE /

› DC HOUSE 48V 100Ah LiFePO4 Golf Cart Battery User Manual (Model ECO-LFP4810003)

## DC HOUSE ECO-LFP4810003

# DC HOUSE 48V 100Ah LiFePO4 Golf Cart Battery User Manual

Model: ECO-LFP4810003

## 1. IMPORTANT SAFETY INFORMATION

Read all safety instructions before installing or operating the battery. Failure to follow these instructions may result in electric shock, fire, or other serious injury or property damage.

- Always wear appropriate personal protective equipment (PPE), including safety glasses and insulated gloves, when working with batteries.
- Do not short-circuit the battery terminals.
- Do not expose the battery to fire or extreme heat.
- Do not immerse the battery in water or other liquids.
- Ensure proper ventilation during charging and operation.
- Keep the battery away from children and pets.
- Use only the specified charger for this battery.
- In case of fire, use a Class D fire extinguisher. Water may not be effective.

## Metal Case More Safer and Sturdier



## Help to Vent Internal Gases



## Smart LiFePO4 Battery with One Touch



Figure 1.1: Illustration of the metal casing's fire resistance compared to a plastic case.

# Dual Safety Design

## Power On/Off Switch & Relief Valve

Safe Power Off  
Low Self-discharge

Help to Release  
Internal Pressure



Figure 1.2: Detail of the battery's power on/off switch and pressure relief valve for enhanced safety.

## 2. PRODUCT OVERVIEW

The DC HOUSE 48V 100Ah LiFePO4 Golf Cart Battery (Model ECO-LFP4810003) is designed as a robust and efficient power source for golf carts and other 48-volt equipment. It features a durable metal case, integrated Battery Management System (BMS), and includes an LCD monitor with Bluetooth connectivity for real-time data access.

### Key Features:

- **Easy Installation:** Designed for direct replacement of lead-acid batteries, simplifying the wiring process.

- **Durable Metal Case:** Features a sturdy, fireproof, and anti-collision sheet metal casing for enhanced safety and longevity.
- **Internal Cell Fixation:** Battery cells are secured with metal clamps, weighing approximately 2.2 lbs (1 kg), to ensure stability and safety.
- **Dual BMS Protection:** Provides comprehensive protection during discharge and charging, including a 2C discharge capacity (250A/30S, 700A/1S peak). The included 18A charger also has BMS protection.
- **Integrated LCD Monitor & Bluetooth:** Allows wireless monitoring of battery information via a touch screen or Bluetooth-enabled device.
- **Low-Temperature Cut-Off Function:** Protects the battery by cutting off charging below 32°F (0°C) and discharging below -4°F (-20°C), with automatic recovery.
- **Compact and Lightweight:** Approximately one-third the size and weight of comparable lead-acid batteries, weighing 95.5 lbs (43.3 kg).
- **Long Cycle Life:** Offers a service life up to 8 times that of lead-acid batteries.



Figure 2.1: DC HOUSE 48V 100Ah LiFePO4 Battery with included LCD monitor and smartphone app interface.

### 3. WHAT'S IN THE BOX

The package for your DC HOUSE 48V 100Ah LiFePO4 Golf Cart Battery includes the following items:

- 1 x DC HOUSE 48V 100Ah LiFePO4 Lithium Battery

- 1 x Battery Monitor (LCD with Bluetooth)
- 1 x 18A Charger (shipped separately due to weight)
- 1 x Charging Cable (5 meters / 16.4 feet)

*Note: The 48V 100Ah battery and the 48V 18A charger are shipped in two separate packages. If you receive only one package, please wait for the second delivery. If the attached monitor is damaged during express delivery, please contact customer support for a replacement.*

## 4. INSTALLATION GUIDE

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This section provides instructions for installing the DC HOUSE 48V 100Ah LiFePO4 battery and its accompanying LCD Bluetooth monitor. Ensure the golf cart is turned off and safety precautions are followed before beginning installation.

### 4.1 Battery Installation

The DC HOUSE 48V 100Ah LiFePO4 battery is designed for direct replacement of existing lead-acid batteries in 48-volt golf carts such as Yamaha, EZ GO, and Club Car models. Its compact size (19.72 × 10.55 × 9.17 inches) and lighter weight (95.5 lbs) facilitate easier installation and improved space utilization compared to traditional lead-acid setups.

1. **Prepare the Golf Cart:** Ensure the golf cart is powered off and the key is removed. Disconnect the existing battery system following the manufacturer's guidelines.
2. **Remove Old Batteries:** Carefully remove the old lead-acid batteries. Note their configuration for reference if needed.
3. **Position the LiFePO4 Battery:** Place the DC HOUSE LiFePO4 battery in the designated battery compartment. Ensure it is securely seated and will not shift during operation.
4. **Connect Battery Terminals:** Connect the positive and negative terminals of the LiFePO4 battery to the golf cart's electrical system. Ensure all connections are tight and secure. Refer to your golf cart's specific wiring diagram if necessary.

# Easier, Lighter, Faster

Better than 6\*8V 100Ah Lead-Acid Battery

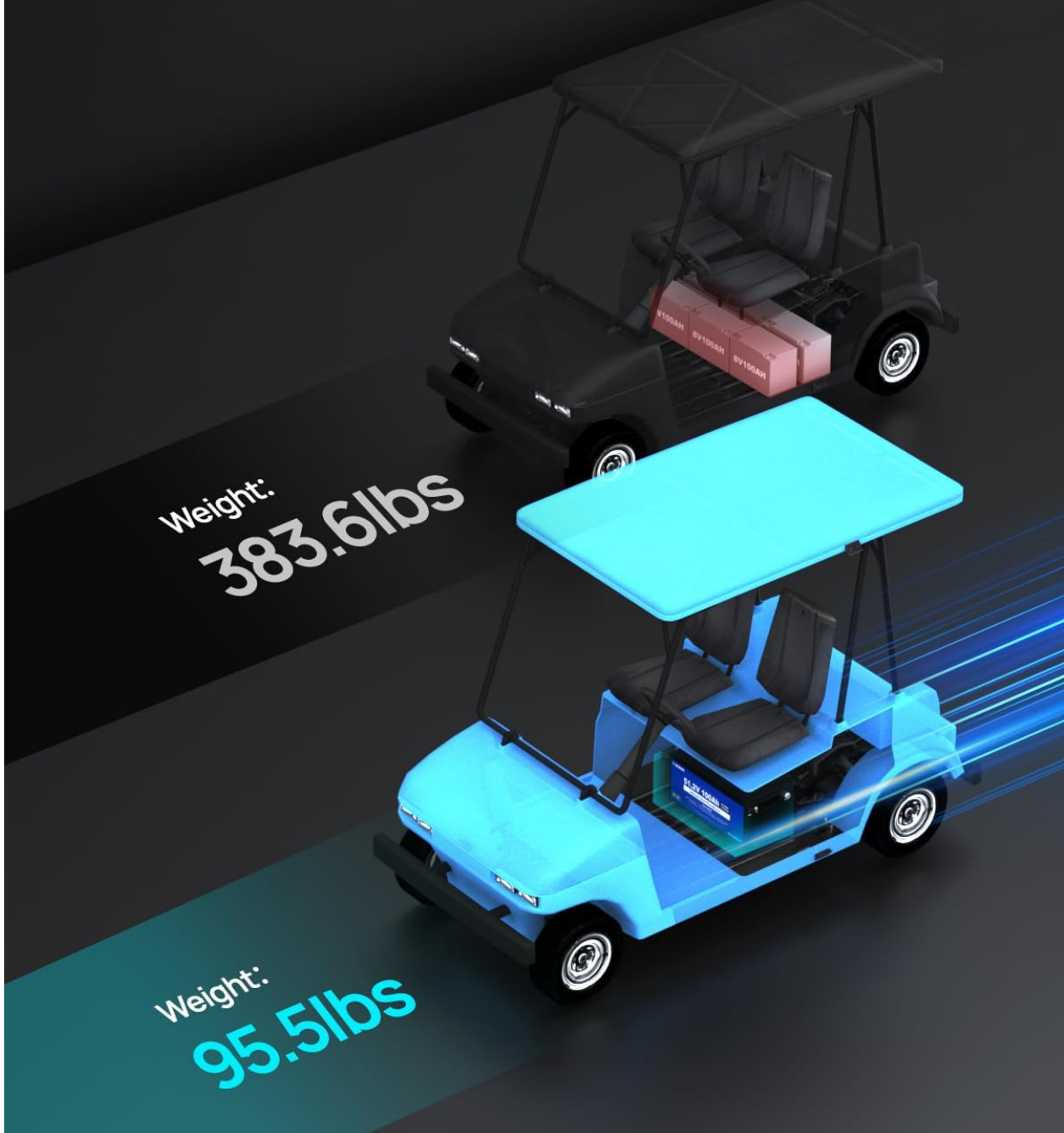


Figure 4.1: Illustration of the DC HOUSE LiFePO4 battery installed in a golf cart, highlighting its size and weight advantage.

## 4.2 LCD Bluetooth Monitor Installation

The included LCD Bluetooth monitor provides real-time battery data. Follow these steps to install it in your golf cart:

1. **Turn off the Golf Cart:** Ensure the golf cart is completely powered off.
2. **Locate Power Supply:** Identify the positive and negative power supply poles, typically found in the golf cart's control panel.
3. **Confirm Installation Position:** Determine a suitable location for the monitor on the dashboard or control panel. The monitor has removable clips for flexible mounting.
4. **Connect Monitor Wires:** Connect the monitor's positive wire to the golf cart's positive power supply and

the monitor's negative wire to the golf cart's negative power supply.

5. **Check Start-up:** Push the switch on the monitor to check if it powers on. Wait for the display to flash and connect to the LiFePO4 battery. Ensure no other phone Bluetooth is paired with the monitor during this step.
6. **Secure the Monitor:** Attach the monitor to the golf cart using the double-sided adhesive or by utilizing the removable clips to fix it to the steering wheel, windshield, or other suitable locations.

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Video 4.1: Installation guide for the DC HOUSE LCD Bluetooth Monitor. This video demonstrates the steps for connecting the monitor to a golf cart's control panel and securing it.

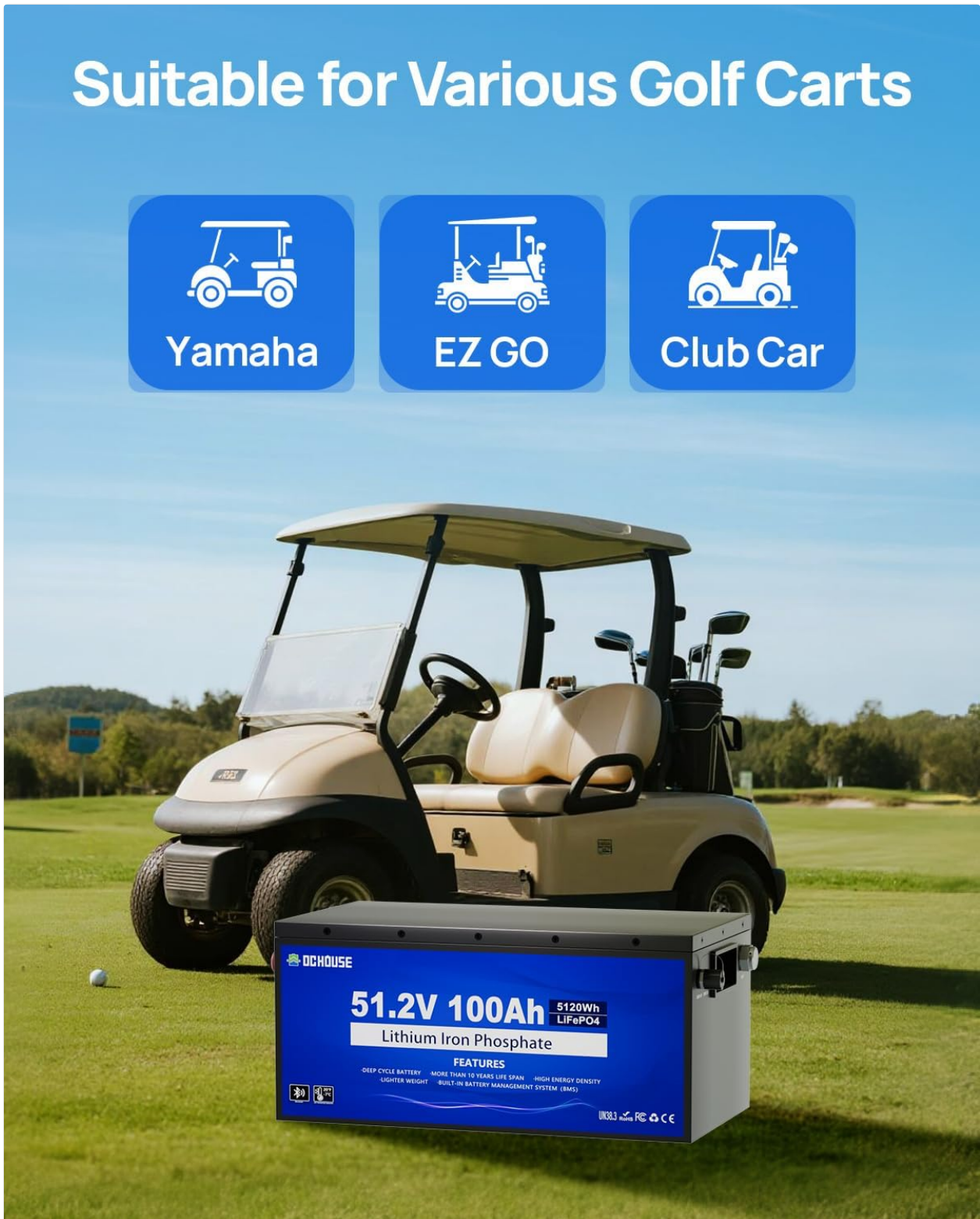


Figure 4.2: The DC HOUSE battery is compatible with various golf cart models, including Yamaha, EZ GO, and Club Car.

## 5. OPERATION

Operating your DC HOUSE LiFePO4 battery and monitor is straightforward. This section covers basic usage and monitoring.

### 5.1 Battery Usage

Once installed, the battery is ready for use. The 48V 100Ah capacity provides ample power for extended golf cart operation, typically supporting 7-9 rounds of 18-hole golf or 40-56 miles on a single charge. The battery's 2C discharge capacity (250A/30S, 700A/1S peak) ensures consistent power delivery, even on inclines or during acceleration.

**Climbing Hill Easier, Run Faster**  
2C Discharge Rate

**200A**  
Continuous Discharge

**250A/30s**  
Maximum Discharge

**700A/1s**  
Peak Discharge

51.2V 100Ah

Figure 5.1: The battery's discharge capabilities, enabling efficient performance on varied terrain.

## 5.2 Monitoring Battery Status

The included LCD monitor and Bluetooth connectivity allow you to monitor your battery's status in real-time. The monitor connects directly to the battery to provide accurate data.

- **LCD Monitor:** The physical LCD screen displays key battery parameters.
- **Bluetooth App:** For wireless monitoring, download the DC HOUSE app on your smartphone. Connect via Bluetooth to view detailed battery information.

*Note: The app monitoring and LCD monitor both connect via Bluetooth. They cannot be used online simultaneously. Ensure only one device is connected at a time for accurate readings.*

**Low-Temp Cut-off Protection**

**20°F (-7°C)**  
Charging Off

**32°F (0°C)**  
Recover of Charging

**-4°F (-20°C)**  
Discharging off

**DCHOUSE**  
**51.2V 100Ah** 5120Wh  
LIFePO4  
Lithium Iron Phosphate

**FEATURES**  
DEEP CYCLE BATTERY    MORE THAN 10 YEARS LIFE SPAN    HIGH ENERGY DENSITY  
LIGHTER WEIGHT    BUILT-IN BATTERY MANAGEMENT SYSTEM (BMS)

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Figure 5.2: Two methods for monitoring battery status: the LCD screen and a smartphone application.

## 6. CHARGING AND MAINTENANCE

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Proper charging and maintenance are crucial for maximizing the lifespan and performance of your LiFePO<sub>4</sub> battery.

### 6.1 Charging Instructions

Use the provided 18A charger to charge the battery. The charging cable is 5 meters (16.4 feet) long, allowing for convenient charging. A full charge typically takes 5.5 hours.

- Connect the charger to the battery and then to a power outlet.
- The charger is equipped with BMS protection to ensure safe charging.
- The charger is fully charged when the green light remains steady and does not flash.

### 6.2 Low-Temperature Protection

The battery features a low-temperature cut-off function to prevent damage:

- **Charging:** Charging is cut off when the battery temperature is below 32°F (0°C). It will automatically resume when the temperature rises to 32°F (0°C).
- **Discharging:** Discharging is cut off when the battery temperature is below -4°F (-20°C). It will automatically resume when the temperature rises.

*Tip: In cold winter conditions, ensure the battery is kept above 32°F (0°C) for charging to prevent capacity attenuation.*

# 2 Ways to Monitor Battery

## LCD Monitor & App Display in Real-Time



Figure 6.1: Visual representation of the battery's low-temperature protection features in cold environments.

### 6.3 General Maintenance

- Regularly inspect battery terminals for cleanliness and tightness.
- Keep the battery clean and dry.
- Store the battery in a cool, dry place when not in use for extended periods.
- Avoid fully discharging the battery frequently to prolong its life.

## 7. TROUBLESHOOTING

This section addresses common issues you might encounter with your DC HOUSE LiFePO4 battery and

monitor.

Problem	Possible Cause	Solution
Battery not charging	Charger not connected properly; charger malfunction; battery temperature too low.	Ensure secure connections. Check charger indicator light. Move battery to a warmer environment if below 32°F (0°C). Contact support if issues persist.
Battery not discharging	Battery temperature too low; BMS protection activated due to over-discharge or other fault.	Move battery to a warmer environment if below -4°F (-20°C). Check monitor for error codes. Contact support.
Monitor not displaying data	Loose connection; monitor power issue; Bluetooth interference.	Check monitor wiring connections. Ensure monitor switch is on. Disconnect other Bluetooth devices. Contact support if damaged.
Reduced range/performance	Battery not fully charged; aging battery; extreme operating conditions.	Ensure battery is fully charged. Check battery health via monitor. Avoid operating in extreme temperatures.

## 8. SPECIFICATIONS

Detailed technical specifications for the DC HOUSE 48V 100Ah LiFePO4 Golf Cart Battery and its monitor.

### 8.1 LiFePO4 Battery (Model: ECO-LFP4810003)

Feature	Specification
Brand	DC HOUSE
Model	ECO-LFP4810003
Rated Capacity	100Ah / 5120Wh (0.5C)
Rated Voltage	51.2V
Voltage Range	40V - 58.4V
Max Continuous Charging Current	200A
Max Continuous Discharging Current	200A
Charging Voltage	58.4V
Dimensions (LxWxH)	19.72"D x 10.55"W x 9.17"H (50.1 x 26.8 x 23.3 cm)
Weight	95.5 lbs (43.3 kg)
Charging Temperature	32°F to 131°F (0°C to 55°C)
Discharging Temperature	-4°F to 131°F (-20°C to 55°C)
Number of Cells	16 A batteries (included)
UPC	810127139367



Figure 8.1: Comprehensive specifications for the 48V 100Ah LiFePO4 battery.

## 8.2 LCD Bluetooth Monitor (Model: ECO-GCBM80V)

Feature	Specification
Model	ECO-GCBM80V
Operating Voltage	5.5V - 80V
Operating Power	≤1.3W
Screen Size	3.2 inch
Screen-off Power Consumption	≤0.2W
Operating Temperature	-10°C to 65°C
Dimensions (LxWxH)	12 x 8.7 x 2.3 cm
Weight	0.15 kg



Figure 8.2: Comprehensive specifications for the LCD Bluetooth monitor.

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or any questions regarding your DC HOUSE 48V 100Ah LiFePO4

Golf Cart Battery, please refer to the contact information provided with your product packaging or visit the official DC HOUSE website.

You can also reach out to the seller, DC HOUSE - US, through the Amazon platform for assistance.