

DC HOUSE ECO-LFP123001

DC HOUSE 12V 30Ah Mini Lithium Battery and Multi-Port USB Charger User Manual

Model: ECO-LFP123001

1. INTRODUCTION

Thank you for choosing the DC HOUSE 12V 30Ah Mini Lithium Battery with 2-in-1 Multi-Port USB Charger. This product is designed to provide reliable power for various applications, including fish finders and trolling motors, and offers convenient charging and discharging capabilities for multiple devices. This manual provides essential information for safe and efficient use of your new battery and charger.

2. PRODUCT OVERVIEW

The DC HOUSE 12V 30Ah Mini Lithium Battery is a lightweight, high-capacity power source featuring Lithium Iron Phosphate (LiFePO₄) technology. It includes a robust Battery Management System (BMS) for enhanced safety and longevity. The accompanying 2-in-1 Multi-Port USB Charger functions as both a 12V DC-DC converter and a 45W maximum lithium battery charger.

Key Features:

- **Lightweight Design:** Weighs only 6.61 pounds, significantly lighter than traditional lead-acid batteries.
- **High Capacity:** 12.8V 30Ah (384Wh) LiFePO₄ battery.
- **Integrated BMS:** Provides Voltage Self-Balance, High/Low Temperature Protection, Short Circuit Protection, Over Current Protection, Overcharge Protection, and Over Discharge Protection.
- **Low-Temperature Cut-Off Protection:** Ensures safe operation in cold environments.
- **Versatile Charger/Converter:** Features one USB-C (In/Out) port and two USB-A (Out) ports.
- **Fast Charging:** USB-C port supports up to 45W charging for the battery.
- **Multi-Device Charging:** Can power up to three devices simultaneously.

384Wh Energy Longer Power Supply time

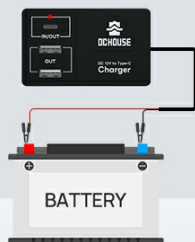
Supports More Loads Simultaneously



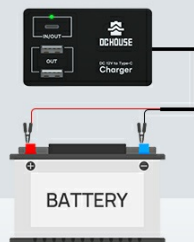
Image: The DC HOUSE 12V 30Ah Lithium Battery and its multi-port charger connected to a fish finder, demonstrating its use in marine applications.

Type-C Port Indicator

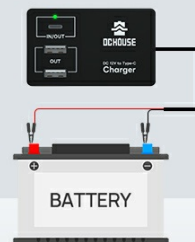
Indicates the working status of the Type-C port



Charging Status
Red Light On



Full Status
Green Light On



Discharging Status
Green Light On

Image: A diagram detailing the various protections offered by the Smart Battery Management System (BMS), including voltage self-balance, high/low temperature, short circuit, over current, overcharge, and over discharge protection.

3. SAFETY INSTRUCTIONS

Read all safety warnings and instructions before using this product. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Do not disassemble, open, or shred the battery pack.
- Do not expose the battery to heat or fire. Avoid storage in direct sunlight.
- Do not short-circuit the battery.
- Do not expose the battery to mechanical shock.
- Keep the battery clean and dry.
- Do not use the battery if it is damaged or shows signs of leakage.
- Ensure proper ventilation when charging or discharging.
- Use only the provided charger or a compatible charger designed for LiFePO4 batteries.
- Keep out of reach of children.
- Observe temperature limits for charging and discharging as specified in the specifications section.

Parameters	
Interface:	3 (USB *2+Type-C*1)
Battery Voltage:	10-14.6V
USB A1/USB A2 Output:	5V/2.4A
Type-C Maximum Output Power:	45W
Type-C Output:	20V/3A;15V/3A;12V/3A;9V/3A;5V/3A
Maximum Charging Current:	3A
Recommended Temperature:	0-60°C
Shell Dimension:	77.4*51*20.8mm(3.04*2*0.8inch)
Weight:	70 G(0.15lb)

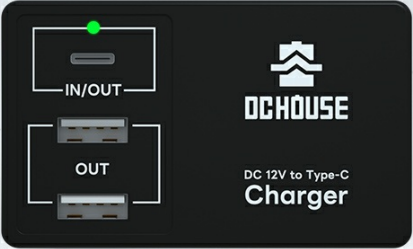


Image: An illustration demonstrating the battery's low-temperature cut-off protection, indicating that charging is off below 20°F (-7°C), charging recovers above 32°F (0°C), and discharging is off below -4°F (-20°C).

4. SETUP

This section details the initial setup of your DC HOUSE 12V 30Ah Mini Lithium Battery and Multi-Port USB Charger.

What's in the Box:

- 1 x DC HOUSE 12V 30Ah Lithium Battery
- 1 x DC HOUSE 2-in-1 Multi-Port USB Charger (12V DC to Type-C Charger)
- 1 x DC 5.5*2.1mm to Alligator Clip Cable (approx. 9.84 inches)

Connecting the Charger to the Battery:

1. Identify the DC 5.5*2.1mm port on the charger and the corresponding DC 5.5*2.1mm plug on the alligator clip cable.
2. Connect the DC plug of the alligator clip cable to the DC input port on the charger.
3. Connect the red alligator clip to the positive (+) terminal of the 12V 30Ah battery and the black alligator clip to the negative (-) terminal. Ensure a secure connection.

Video: This video demonstrates the physical characteristics of the DC HOUSE 12V to Type-C Charger, including its dimensions and

port types (USB-C, USB-A, DC input). It also shows how to connect the charger to the battery using the alligator clip cable and illustrates the charging and discharging processes with indicator lights.

5. OPERATING INSTRUCTIONS

Charging the Battery:

The 2-in-1 Multi-Port USB Charger can charge the 12V 30Ah battery via its USB-C port.

1. Ensure the charger is connected to the battery as described in the Setup section.
2. Connect a compatible USB-C power adapter (not included) to the 'IN/OUT' USB-C port on the charger. The charger supports up to 45W input.
3. The USB-C port indicator light will show a red light during charging.
4. When the battery is fully charged, the indicator light will turn green.
5. **Note:** It is recommended to charge batteries up to 50Ah with this charger. The charge/discharge input/output battery voltage range is 10-14.6V.



Image: The DC HOUSE 2-in-1 Multi-Port USB Charger connected to a wall power adapter via its USB-C port and to the 12V 30Ah battery via alligator clips, illustrating the charging process.

Discharging (Powering Devices):

The charger acts as a DC-DC converter, allowing you to power and charge external devices from the 12V 30Ah battery.

1. Ensure the charger is connected to the battery.
2. Connect your devices to the available USB ports on the charger:
 - **USB-C (IN/OUT) Port:** Supports QC 3.0 up to 45W output.
 - **USB-A (OUT) Ports (x2):** Each supports 5V 2.4A output.
3. The charger can power up to three devices simultaneously.
4. During discharge, the USB-C port indicator light will be green.
5. **Note:** The conversion rate is up to 96% for efficient power delivery.



Image: The DC HOUSE 12V 30Ah Lithium Battery and its multi-port charger simultaneously powering a smartphone, a DSLR camera, and a portable fan, demonstrating its capability to power multiple devices.



Image: A diagram explaining the Type-C port indicator light: Red light indicates charging status, Green light indicates full status, and Green light also indicates discharging status.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your DC HOUSE battery and charger.

- **Storage:** Store the battery in a cool, dry place away from direct sunlight and extreme temperatures. For long-term storage, ensure the battery is charged to approximately 50% of its capacity.
- **Cleaning:** Use a dry, soft cloth to clean the battery and charger. Do not use harsh chemicals or abrasive materials.
- **Terminal Inspection:** Periodically check the battery terminals for corrosion or loose connections. Clean as necessary.
- **Temperature Management:** Avoid operating or storing the battery outside its specified temperature ranges to prevent damage and ensure safety.

7. TROUBLESHOOTING

If you encounter issues with your DC HOUSE battery or charger, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Battery not charging	Loose connections; Incompatible charger; Battery temperature too low/high; Faulty charger/cable.	Check all connections; Ensure USB-C power adapter is compatible and functional; Move battery to an appropriate temperature environment (0-55°C for charging); Try a different USB-C cable or power adapter.
Devices not charging from USB ports	Battery discharged; Loose connection; Device incompatibility; Overload protection activated.	Charge the battery; Check USB cable connections; Ensure device is compatible with USB-A (5V/2.4A) or USB-C (up to 45W) output; Reduce the number of connected devices.
Charger indicator light not working	No power input/output; Internal fault.	Ensure battery is connected and a device is drawing power (for discharge indicator) or a power source is connected (for charge indicator); If issue persists, contact support.
Battery not holding charge	Battery degradation; Extreme temperatures during use/storage.	Ensure proper charging and storage conditions; If battery life significantly reduced, it may be nearing end of life.

If these steps do not resolve the issue, please contact DC HOUSE customer support for further assistance.

8. SPECIFICATIONS

DC HOUSE 12V 30Ah Lithium Battery (Model: ECO-LFP123001)

Parameter	Value
Battery Capacity	30Ah
Battery Power	384Wh
Nominal Voltage	12.8V
Maximum Charge Current	30A
Maximum Discharge Current	30A
Maximum Charge Voltage	14.6V
Discharge Cut-off Voltage	10V
Charge Temperature Range	0-55°C
Discharge Temperature Range	-20-55°C (-4°F - 131°F)
Terminal Screw Size	M5
Battery Dimensions (D x W x H)	3" x 7.1" x 6.6" (7.1" x 3.0" x 6.6" from image)
Battery Weight	6.61 lbs (3.0KG)



Image: A visual representation of the 12V 30Ah Mini Battery specifications, including capacity, power, voltage, charge/discharge

currents, temperature ranges, and physical dimensions.

DC HOUSE 2-in-1 Multi-Port USB Charger

Parameter	Value
Interface	3 (USB-A x 2 + Type-C x 1)
Battery Voltage Range (Input)	10-14.6V
USB A1/A2 Output	5V/2.4A
Type-C Maximum Power	45W
Type-C Output (PD)	20V/3A; 15V/3A; 12V/3A; 9V/3A; 5V/3A
Maximum Charging Current (Input)	3A
Recommended Operating Temperature	0-60°C
Shell Dimensions	77.4*51*20.8mm (3.04" x 2" x 0.8")
Weight	70g (0.15lb)



Image: A visual table detailing the specifications and parameters of the DC HOUSE 2-in-1 Multi-Port USB Charger, including its interfaces, output voltages, and dimensions.

9. WARRANTY AND SUPPORT

The DC HOUSE 12V 30Ah Mini Lithium Battery comes with a **3-year warranty** from the date of purchase. For warranty claims, technical support, or any questions regarding your product, please contact DC HOUSE customer service. Please have your model number (ECO-LFP123001) and purchase information ready when contacting support. You can visit the official DC HOUSE store for more information and support resources: [DC HOUSE Store](#)