KBT KEEP BETTER TECH 12V-20Ah

KBT 12V 20Ah LiFePO4 Lithium Battery User Manual

Brand: KBT KEEP BETTER TECH | Model: 12V-20Ah

1. Introduction

This manual provides essential information for the safe and efficient use of your KBT 12V 20Ah LiFePO4 Lithium Battery. The battery features high energy density, light weight, and a long cycle life, making it suitable for various applications. It includes a built-in Battery Management System (BMS) for enhanced protection.

2. Package Contents

Verify that all items listed below are included in your package:

- 1x KBT 12V 20Ah LiFePO4 Battery
- 1x 12V 1.5A Charger
- 1x Charging Clip
- 2x Charging Cables
- 2x Extension Cables
- 2x Cable Connectors



Figure 2.1: KBT 12V 20Ah LiFePO4 Battery and Accessories

3. Product Specifications



Figure 3.1: KBT 12V 20Ah LiFePO4 Battery Dimensions

Feature	Specification
Model	12V-20Ah
Battery Type	LiFePO4 (Lithium-Phosphate)
Nominal Voltage	12.8V (DC)
Capacity	20 Amp Hours (256WH)
Discharge Voltage Range	12.8V-14.6V (Max 60A)
Charge Voltage Range	14V-14.6V (Max 8A)
Cycle Life	4000+ Deep Cycles (>80% capacity)
Weight	1.3 Kilograms
Dimensions	100mm x 149mm x 98mm (approx.)
BMS Protection	Overcharge, Over-discharge, Over-current, Short Circuit
Recommended Use Environment	Indoor/Outdoor

4. Safety Information

Read and understand all safety instructions before using the battery. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Built-in BMS:** The integrated Battery Management System (BMS) protects against overcharge, over-discharge, over-

current, and short circuits.

- **Temperature:** Do not store or operate the battery above 60°C (140°F).
- **Short Circuit:** Do not short circuit the battery terminals. Avoid reverse polarity connections.
- **Disassembly:** Do not disassemble or modify the battery. Disassembly voids the warranty and can lead to dangerous situations.
- **Disposal:** Do not dispose of the battery in fire. Follow local regulations for proper recycling and disposal of lithium batteries.
- **Charging:** Use only the provided or a compatible LiFePO4 charger with appropriate voltage and current ratings.



Figure 4.1: Battery Protection Features

5. Setup and Initial Charging

5.1 Initial Charging

Before first use, fully charge the battery using the provided 12V 1.5A charger. Connect the charger to a power outlet and then connect the charging clip or cable to the battery terminals, ensuring correct polarity (red to positive, black to negative).

5.2 Connecting to Devices

Use the provided charging cables, extension cables, and cable connectors to connect the battery to your desired device. Always ensure secure connections and correct polarity to prevent damage to the battery or device.

6. Operating Instructions

The KBT 12V 20Ah LiFePO4 battery is designed for a wide range of applications due to its lightweight and powerful discharge function. It offers faster charge speeds compared to traditional lead-acid batteries.

6.1 Recommended Uses

- LED strips
- Emergency lights
- 12V routers
- Small UPS systems
- Kids ride-on toy cars and power wheels
- Fish finders
- Home alarm systems and security cameras
- Fire security systems
- Solar panel systems
- Outdoor camping, fishing, RV, and marine applications
- Trolling motors



Figure 6.1: Diverse Applications of the KBT LiFePO4 Battery

7. Maintenance and Storage

7.1 General Care

Keep the battery clean and dry. Avoid exposing it to extreme temperatures or direct sunlight for prolonged periods. Regularly inspect the terminals and cables for any signs of wear or damage.

7.2 Storage

For optimal battery life, store the battery at approximately 75% capacity. Recharge the battery every 6 months if not in regular use to maintain its health and prevent deep discharge.

8. Troubleshooting

If you encounter issues with your KBT LiFePO4 battery, refer to the following common problems and solutions:

- **Battery Not Charging:** Ensure the charger is properly connected to both the power outlet and the battery terminals with correct polarity. Check if the charger is functioning correctly. The BMS may prevent charging if the battery is severely over-discharged or if there's a fault.
- **Battery Not Providing Power:** Verify that the battery is sufficiently charged. Check all connections to the device for looseness or incorrect polarity. The BMS may have activated protection (e.g., over-discharge, over-current, short circuit) and temporarily cut off power. Disconnect the load and attempt to reset the BMS by reconnecting the charger.
- **Short Cycle Life:** Ensure the battery is not consistently deep-discharged. Adhere to recommended charging and storage practices.
- **Overheating:** If the battery feels excessively warm during operation or charging, immediately disconnect it from the load/charger. Ensure proper ventilation and that the battery is not exposed to direct heat sources. The BMS includes high-temperature protection.

If problems persist, contact customer support for assistance.

9. Warranty and Support

9.1 Warranty Information

KBT KEEP BETTER TECH provides a 12-month manufacturer's warranty for this product. This warranty covers defects in materials and workmanship under normal use.

9.2 Customer Support

For any questions, technical assistance, or warranty claims, please contact KBT customer support. We are committed to providing prompt and helpful replies to ensure your satisfaction.
Contact information can typically be found on the product packaging or the official KBT KEEP BETTER TECH website.

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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