

**Jaycar 3611004**

# Powertech MB3904 8 Step Intelligent Lead Acid and Lithium Battery Charger User Manual

Model: MB3904

## 1. INTRODUCTION

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This manual provides essential information for the safe and efficient operation of your Powertech MB3904 8 Step Intelligent Lead Acid and Lithium Battery Charger. Please read this manual thoroughly before use and retain it for future reference.

## 2. SAFETY INFORMATION

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Always observe the following safety precautions:

- Ensure the charger is disconnected from the power supply before making or breaking connections to the battery.
- Use the charger only in well-ventilated areas.
- Avoid charging frozen batteries.
- Do not expose the charger to rain or excessive moisture.
- Keep out of reach of children.
- This charger is designed for 6V or 12V Lead Acid or LiFePO4 batteries only. Do not use with other battery types.

## 3. PACKAGE CONTENTS

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Verify that all items are present in the package:

- Powertech MB3904 8 Step Intelligent Battery Charger Unit
- Battery Clamp Connectors (Red and Black)
- Ring Terminal Connectors
- AC Power Cord
- User Manual (this document)



Image: The Powertech MB3904 battery charger unit shown with its various included accessories, including battery clamps, ring terminals, and the AC power cord.

## 4. PRODUCT FEATURES

The Powertech MB3904 charger offers advanced features for optimal battery maintenance:

- **8-Step Charging Process:** Ensures thorough and efficient charging for various battery types.
- **Multi-Voltage Compatibility:** Suitable for both 6V and 12V lead acid and LiFePO4 batteries.
- **Comprehensive Protection:** Includes overload, short circuit, reverse polarity, safety timer, and wrong battery protection.
- **Intuitive LED Indicators:** Clearly display charge status and selected mode.
- **Mode Selection Button:** Allows easy switching between charging modes.



Image: A top-down view of the Powertech MB3904 charger, highlighting the LED indicators for charge status and the 'MODE' button for selecting charging programs.

## 5. SETUP

1. **Placement:** Place the charger on a stable, flat surface in a well-ventilated area, away from direct sunlight or heat sources.
2. **Battery Connection:** Ensure the battery terminals are clean. Connect the red (+) clamp/ring terminal to the positive (+) battery terminal and the black (-) clamp/ring terminal to the negative (-) battery terminal. Ensure a secure connection.
3. **Power Connection:** Plug the AC power cord into a suitable wall outlet. The charger will enter standby mode.

## 6. OPERATING INSTRUCTIONS

### 6.1. Selecting Charging Mode

After connecting the battery and power, press the **MODE** button to cycle through the available charging programs. The corresponding LED will illuminate to indicate the selected mode:

- **12V 3.8A (Normal):** Standard charging for 12V lead acid batteries.
- **12V 3.8A (Cold/AGM):** For charging 12V lead acid batteries in cold conditions or AGM batteries.
- **12V 0.9A (Small):** For charging smaller 12V lead acid batteries.
- **6V 3.8A:** For charging 6V lead acid batteries.
- **Lithium (12.8V/12V):** For charging 12V LiFePO4 batteries.
- **Repair:** A special mode for desulfation of deeply discharged lead acid batteries.

### 6.2. Charging Process

Once a mode is selected, the charger will automatically begin the 8-step charging process. The progress LEDs (25%, 50%, 75%, 100%) will illuminate sequentially to indicate the battery's charge level. When the 100% LED is solid, the battery is fully charged.

### 6.3. Disconnecting the Charger

1. Unplug the AC power cord from the wall outlet.
2. Disconnect the black (-) clamp/ring terminal from the negative (-) battery terminal.
3. Disconnect the red (+) clamp/ring terminal from the positive (+) battery terminal.

## 7. MAINTENANCE

- **Cleaning:** Clean the charger casing with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the charger in a cool, dry place when not in use.
- **Cable Inspection:** Periodically inspect the power cord and battery cables for any signs of damage. Do not use the charger if cables are damaged.

## 8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Charger not turning on.	No power from outlet; loose connection.	Check power outlet; ensure power cord is securely plugged in.
Error LED illuminated.	Reverse polarity; short circuit; wrong battery type.	Check battery connections for correct polarity; inspect cables for shorts; ensure battery type matches selected mode.

Problem	Possible Cause	Solution
Battery not charging.	Battery deeply discharged/damaged; incorrect mode selected.	Try "Repair" mode for lead acid batteries; test battery with a multimeter; ensure correct charging mode is selected.

## 9. SPECIFICATIONS

- **Model:** MB3904
- **Input Voltage:** 220-240V AC, 50/60Hz
- **Output Voltage:** 6V / 12V DC
- **Charging Current:** 0.9A / 3.8A
- **Battery Types:** Lead Acid (WET, MF, CA, EFB, GEL, AGM), LiFePO4
- **Protection:** Overload, Short Circuit, Reverse Polarity, Safety Timer, Wrong Battery
- **Dimensions:** Approximately 20.4 x 7.4 x 4.8 cm
- **Weight:** Approximately 534 g
- **Compliance:** CE

## 10. WARRANTY AND SUPPORT

This Powertech product is covered by a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your purchase or contact your retailer.

For technical support or service inquiries, please contact Jaycar Electronics customer service or visit their official website.

Keep your proof of purchase for warranty claims.

**Jaycar Electronics Website:** [www.jaycar.com.au](http://www.jaycar.com.au)

