Mighty Max Battery ML5-12

Mighty Max Battery ML5-12 12V 5AH SLA Battery Instruction Manual

Model: ML5-12 | Brand: Mighty Max Battery

1. Introduction

This manual provides essential information for the safe and effective use of your Mighty Max Battery ML5-12 12V 5AH Sealed Lead Acid (SLA) battery. This rechargeable, maintenance-free battery is UL Certified and designed for various applications, including compatibility with Mipro MA-708 and MA-707 PA Systems.
Please read this manual thoroughly before installation and operation to ensure proper handling and to maximize the battery's lifespan and performance.

2. Safety Information

- **Non-Spillable Design:** The ML5-12 battery features a non-spillable design, making it safe for operation in various positions.
- **Avoid Short Circuits:** Do not short circuit the battery terminals. This can cause severe damage to the battery and pose a fire hazard.
- **Temperature Limits:** Do not expose the battery to temperatures above 60°C (140°F) or below -15°C (5°F). Store in a cool, dry place.
- **Ventilation:** Ensure adequate ventilation during charging to prevent gas accumulation.
- **Recycling:** Batteries contain hazardous materials. Always recycle used batteries according to local regulations. Do not dispose of with household waste.
- **Handling:** Always handle the battery with care. Avoid dropping or subjecting it to strong impacts.

3. Product Overview

The Mighty Max ML5-12 is a compact and robust sealed lead-acid battery. Its design incorporates an Absorbent Glass Mat (AGM) technology for efficient gas recombination and spill-proof operation.

3.1. Physical Dimensions

Below are the typical dimensions of the ML5-12 battery, including and excluding terminals.

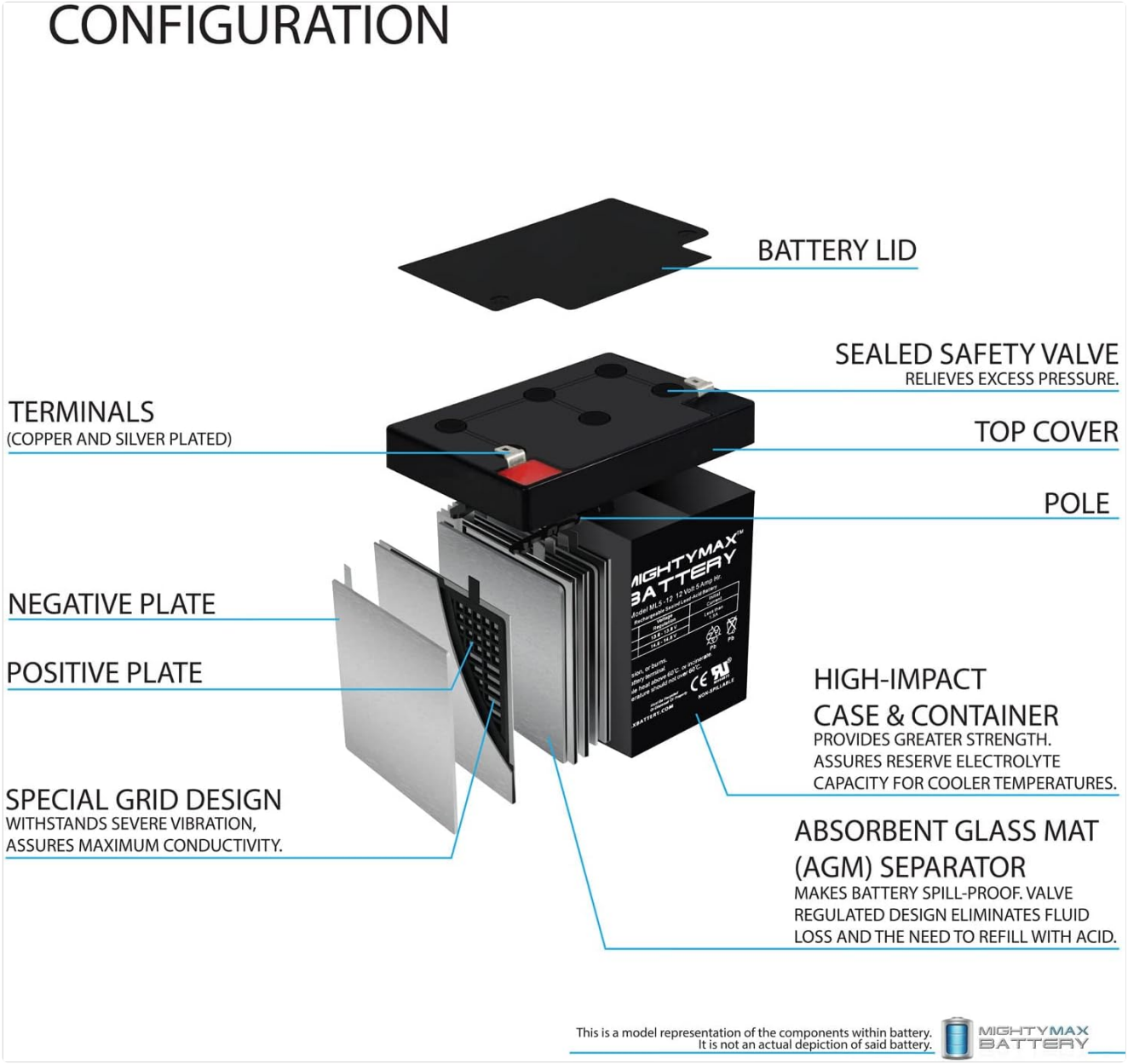


Image: Mighty Max Battery ML5-12 showing dimensions. Height including terminal is 4.21 inches (10.69 cm), height excluding terminal is 4.02 inches (10.21 cm), width is 3.58 inches (9.09 cm), and depth is 2.76 inches (7.0 cm).

3.2. Internal Configuration

The battery's internal structure is designed for durability and performance, featuring a sealed safety valve, high-impact case, and absorbent glass mat separators.

Image: Exploded view diagram illustrating the internal components of a Mighty Max Battery, including the battery lid, sealed safety valve, top cover, pole, negative plate, positive plate, special grid design, high-impact case & container, and absorbent glass mat (AGM) separator.

3.3. Terminal Type

The ML5-12 battery typically comes with F1 terminals, designed for secure and efficient connections.



Image: A close-up view of the F1 terminal on the Mighty Max Battery, showing its design for electrical connections.

4. Setup and Installation

Before installing the battery, ensure the device it will power is turned off and disconnected from any power source. Always wear appropriate safety gear, such as gloves and eye protection.

1. **Inspect the Battery:** Check the battery for any signs of damage, such as cracks, leaks, or swollen casing. Do not use a damaged battery.
2. **Prepare the Device:** Locate the battery compartment in your Mipro MA-708, MA-707 PA System, or other compatible device. Remove the old battery if present.
3. **Clean Terminals:** Ensure the device's battery terminals and the new battery's terminals are clean and free of corrosion. Use a wire brush if necessary.
4. **Connect Terminals:** Connect the positive (+) terminal of the battery to the positive terminal of the device. Then, connect the negative (-) terminal of the battery to the negative terminal of the device. Ensure connections are tight and secure.
5. **Secure the Battery:** Place the battery securely in its compartment. Ensure it does not move freely.

6. **Initial Charge:** For optimal performance, it is recommended to fully charge the battery before its first use.

The following video demonstrates general battery installation and features, which can be helpful for understanding the process:

Your browser does not support the video tag.

Video: An official Mighty Max Battery video showcasing various battery features, applications, and general installation steps in different devices, including a motorcycle. This provides a visual guide to handling and connecting the battery.

5. Operating Instructions

5.1. Charging

Use a charger specifically designed for 12V Sealed Lead Acid (SLA) batteries. Overcharging or undercharging can reduce battery life.

- **Float Use:** For standby applications, maintain a constant voltage of 13.5V - 13.8V.
- **Cycle Use:** For applications involving regular discharge and recharge, use a voltage of 14.5V - 14.8V.
- **Initial Current:** The initial charging current should be less than 1.5A for this 5AH battery.

5.2. Discharge

Avoid deep discharges as they can shorten the battery's lifespan. The battery is designed to provide consistent power output within its rated capacity.

6. Maintenance

The Mighty Max ML5-12 is a maintenance-free battery. This means it does not require water additions or electrolyte level checks.

- **Keep Clean:** Periodically inspect the battery and its terminals for dirt, dust, or corrosion. Clean with a damp cloth if necessary.
- **Terminal Connections:** Ensure terminal connections remain tight to prevent power loss and overheating.
- **Storage:** If storing the battery for an extended period, ensure it is fully charged and stored in a cool, dry place. Recharge every 3-6 months to prevent self-discharge and maintain capacity.

7. Troubleshooting

If you encounter issues with your Mighty Max Battery, consider the following common problems and solutions:

- **Battery Not Holding Charge:**
  - Ensure the charger is functioning correctly and is appropriate for SLA batteries.
  - Check for proper terminal connections; loose connections can prevent effective charging.
  - The battery may have reached the end of its service life.
- **Low Power Output:**
  - Verify the battery is fully charged.
  - Check for any corrosion on the terminals that might impede current flow.
  - Ensure the battery's capacity (5AH) is sufficient for the device's power requirements.
- **Battery Overheating During Charge:**
  - Disconnect the charger immediately.
  - Ensure the charging voltage and current are within the recommended specifications.

- Charge in a well-ventilated area.

If problems persist, consult the support section for further assistance.

8. Specifications

Detailed technical specifications for the Mighty Max Battery ML5-12.

Specification	Value
Brand	Mighty Max Battery
Model Number	ML5-12
Voltage	12 Volts
Battery Capacity	5 Amp Hours (5AH)
Battery Cell Composition	Lead Acid (SLA/AGM)
Terminal Type	F1 Terminal
Product Dimensions (LxWxH)	3.58" x 2.76" x 4.21" (including terminal)
Item Weight	3.5 pounds
Number of Cells	6
Application (Float Use)	13.5V - 13.8V
Application (Cycle Use)	14.5V - 14.8V
Initial Current	Less than 1.5A
Certifications	UL Certified

8.1. Performance Characteristics

The following image provides detailed performance characteristics and curves for the ML5-12 battery.

Image: A table detailing the performance characteristics of the ML5-12 battery, including capacity at various discharge rates, internal resistance, temperature effects on capacity, and charge/discharge voltage regulation.

Image: A series of graphs illustrating various performance curves for the ML5-12 battery, such as charge and discharge characteristics, temperature effects on float life and capacity, cycle service life, and self-discharge rates.

9. Warranty Information

Mighty Max Battery products typically come with a manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation included with your purchase or visit the official Mighty Max Battery website. Keep your proof of purchase for warranty claims.

10. Support

For technical assistance, troubleshooting, or general inquiries regarding your Mighty Max Battery ML5-12, please visit the official Mighty Max Battery website or contact their customer support directly. Contact information can usually be found on the product packaging or the company's website.

Website: www.mightymaxbattery.com

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.

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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