

## Unocho EPA1020-0612

# Unocho 6V/12V 1.5A Automatic Battery Charger User Manual

Model: EPA1020-0612

Your guide to safe and efficient battery maintenance.

## 1. INTRODUCTION

Thank you for choosing the Unocho 6V/12V 1.5A Automatic Battery Charger. This smart float charger is designed to automatically charge and maintain various lead-acid batteries, ensuring their longevity and optimal performance. Please read this manual thoroughly before use to ensure safe and proper operation.

## 2. SAFETY PRECAUTIONS

**WARNING: Always follow these safety guidelines to prevent injury or damage.**

- Ensure the charger is disconnected from the power outlet before making or breaking connections to the battery.
- Charge batteries in a well-ventilated area.
- Avoid open flames or sparks near the battery during charging.
- Wear eye protection and gloves when working with batteries.
- This charger is designed for lead-acid batteries only (SLA/VRLA/GEL/AGM/WET). Do not use with other battery types.
- The charger features multiple protection mechanisms including reverse polarity, short circuit, over voltage/current, over charge/discharge, overload, and overheating protection.

## 5 Protection



Over Current  
Protection



Over Temperature  
Protection



Over Voltage  
Protection



Reversed Polarity  
Protection



Short-Circuit  
Protection



Figure 2.1: The charger incorporates five key protection features: Over Current, Over Temperature, Over Voltage, Reversed Polarity, and Short-Circuit Protection, ensuring safe operation.



Figure 2.2: The charger includes an in-line fuse for additional protection against overcurrent, enhancing overall safety.

### 3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Unocho 6V/12V 1.5A Automatic Battery Charger Unit
- Detachable Alligator Clip Connectors
- Detachable Ring Terminal Connectors with 10A Fuse

# Package content:



Figure 3.1: The complete package contents, including the charger unit, alligator clips, and ring terminal connectors, with indicated cable lengths for each component.

## 4. PRODUCT OVERVIEW



Figure 4.1: The Unocho 6V/12V 1.5A Automatic Battery Charger, showcasing the main unit with its LED indicators and the versatile detachable alligator clip and ring terminal connectors.

The Unocho battery charger is a compact and intelligent device designed for ease of use. It features a mode button to switch between 6V and 12V charging, and clear LED indicators to display charging status. The detachable connectors provide flexibility for various battery types and applications.

## 5. SETUP AND CONNECTION

1. **Select Connectors:** Choose either the alligator clip connectors or the ring terminal connectors based on your battery type and application.
2. **Connect to Battery:**
  - Connect the **RED (+)** connector to the positive (+) terminal of the battery.
  - Connect the **BLACK (-)** connector to the negative (-) terminal of the battery.
3. **Connect to Power:** Plug the charger's AC power cord into a standard 100-240V AC electrical outlet.
4. **Select Voltage:** Press the 'MODE' button on the charger to select either 6V or 12V charging mode, corresponding to your battery's voltage.

# APPLY TO 6V AND 12V



Figure 5.1: The charger features MCU control for intelligent charging and reversed protection without sparking, ensuring safe and easy connection.

## 6. OPERATING THE CHARGER

### 6.1. 5-Stage Automatic Charging Process

The Unocho charger utilizes an advanced 5-stage charging process controlled by an MCU chip to optimize battery charging and extend lifespan:

1. **Quality Inspection:** Initial check of battery condition.
2. **Soft Start:** Gentle charging to prevent damage to deeply discharged batteries.
3. **Bulk Charge:** Charges the battery to approximately 80% capacity at maximum current.
4. **Absorption:** Charges the battery to 100% capacity at a decreasing current.
5. **Maintenance (Float Mode):** Maintains the battery at full charge, preventing overcharging and sulfation.

### 6.2. LED Indicators

The intelligent LED indicator lights provide clear feedback on the charging status:

# FOR 6V/12V BATTERY CHANGEABLE BY ONE BUTTON



6V	Light on	for 6V battery
12V	Light on	for 12V battery
	Light on	Bad battery (flashing)
	Lighting	below 50%, charging
	Light on	above 50%, charging
	Lighting	below 100%, charging
	Light on	100% battery

**LED Lights indicate different charging status clearly**

Figure 6.1: The LED indicator panel on the Unocho charger, detailing the meaning of each light for 6V/12V selection, charging status, and fault conditions.

- **6V Light On:** Charger is set to 6V battery charging mode.
- **12V Light On:** Charger is set to 12V battery charging mode.
- **Bad Battery (Flashing):** Indicates a fault or a severely damaged battery.
- **Charging (Lighting):** Battery is below 50% charge and actively charging.
- **Charging (Light On):** Battery is above 50% charge and actively charging.
- **Full Maintaining (Lighting):** Battery is below 100% and in the final stages of charging or maintenance.
- **Full Maintaining (Light On):** Battery is 100% charged and in maintenance (float) mode.

## 6.3. 72-Hour Safety Timer

Once the charger is turned on, a 72-hour safety timer begins. This feature prevents overcharging. If the battery voltage reaches the appropriate level within 72 hours, the charger will automatically switch to float mode. If the battery does not reach full charge within 72 hours, the charger will stop charging to prevent potential damage.

## 7. COMPATIBILITY

The Unocho 6V/12V Smart Battery Charger is widely compatible with various vehicles and battery types:

- **Vehicles:** Automotive, Motorcycles, ATVs, RVs, Powersports, Boats, Scooters, Golf Carts, Lawnmowers, Snowmobiles, and more.
- **Battery Types:** All 6V/12V lead-acid batteries, including SLA (Sealed Lead Acid), VRLA (Valve Regulated Lead Acid), GEL, AGM (Absorbed Glass Mat), and WET (Flooded) batteries.

## 8. MAINTENANCE

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The Unocho charger is designed to automatically maintain your battery once it reaches full charge. This float mode prevents self-discharge and keeps the battery in optimal condition without overcharging. For long-term storage, simply connect the charger and leave it plugged in. Periodically check the charger's LED indicators to ensure it is operating correctly.

## 9. TROUBLESHOOTING

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If you encounter issues, refer to the LED indicators for diagnostic information:

- **Bad Battery (Flashing) Indicator:** If this light flashes, it indicates a problem with the battery. This could mean the battery is severely discharged, damaged, or has an internal fault. Disconnect the charger and have the battery inspected by a professional.
- **No Lights:** Ensure the charger is properly plugged into a live power outlet and that the battery connections are secure. Check for any damage to the cables or charger unit.
- **Charger Does Not Switch to Float Mode:** If the charger remains in a charging state for an extended period (beyond 72 hours), the battery may be unable to hold a charge or may be too large for this charger's capacity.



Figure 9.1: The 'Bad Battery' indicator flashing, signaling a potential issue with the connected battery that requires attention.

## 10. SPECIFICATIONS

Feature	Specification
Model Number	EPA1020-0612
Input Voltage	100-240V AC
Output Voltage	6V / 12V DC (Automatic Selection)
Output Current	1.5 Amps
Product Dimensions	3.1"D x 5.1"W x 3"H (approx.)
Item Weight	7 ounces (0.2 Kilograms)
Compatibility	6V/12V Lead-Acid, SLA, VRLA, GEL, AGM, WET batteries

Safety  
Features

Reverse Polarity, Short Circuit, Over Voltage/Current, Over Charge/Discharge,  
Overload, Overheating Protection

11. WARRANTY INFORMATION

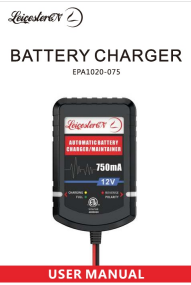


Unocho products are manufactured to high-quality standards. This product typically comes with a limited warranty covering defects in materials and workmanship. Please refer to the product packaging or the official Unocho website for specific warranty terms and conditions, as these may vary by region and purchase date.




12. CUSTOMER SUPPORT

For technical assistance, troubleshooting, or warranty claims, please contact Unocho customer support through the retailer where the product was purchased or visit the official Unocho website for contact information. When contacting support, please have your product model number (EPA1020-0612) and purchase details ready.

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Related Documents - EPA1020-0612

<div><p>LeicesterCN BATTERY CHARGER EPA1020-075</p><p>750mA 12V</p><p>USER MANUAL</p></div>	<p><a href="#">LeicesterCN EPA1020-075 Automatic Battery Charger User Manual</a></p> <p>User manual for the LeicesterCN EPA1020-075 automatic battery charger and maintainer. Includes safety instructions, preparation for charging, DC connection precautions, O-rings adapter precautions, features, specifications, how to use, LED status, charging times, and after-sales customer service.</p>
<div><p>INSTRUCTION MANUAL</p><p>SMART BATTERY CHARGER EPA1020-0612 6V/12V/24V/48V/72V/96V/120V/144V/168V/192V/216V/240V/264V/288V/312V/336V/360V/384V/408V/432V/456V/480V/504V/528V/552V/576V/600V/624V/648V/672V/696V/720V/744V/768V/792V/816V/840V/864V/888V/912V/936V/960V/984V/1008V/1032V/1056V/1080V/1104V/1128V/1152V/1176V/1200V/1224V/1248V/1272V/1296V/1320V/1344V/1368V/1392V/1416V/1440V/1464V/1488V/1512V/1536V/1560V/1584V/1608V/1632V/1656V/1680V/1704V/1728V/1752V/1776V/1800V/1824V/1848V/1872V/1896V/1920V/1944V/1968V/1992V/2016V/2040V/2064V/2088V/2112V/2136V/2160V/2184V/2208V/2232V/2256V/2280V/2304V/2328V/2352V/2376V/2400V/2424V/2448V/2472V/2496V/2520V/2544V/2568V/2592V/2616V/2640V/2664V/2688V/2712V/2736V/2760V/2784V/2808V/2832V/2856V/2880V/2904V/2928V/2952V/2976V/3000V/3024V/3048V/3072V/3096V/3120V/3144V/3168V/3192V/3216V/3240V/3264V/3288V/3312V/3336V/3360V/3384V/3408V/3432V/3456V/3480V/3504V/3528V/3552V/3576V/3600V/3624V/3648V/3672V/3696V/3720V/3744V/3768V/3792V/3816V/3840V/3864V/3888V/3912V/3936V/3960V/3984V/4008V/4032V/4056V/4080V/4104V/4128V/4152V/4176V/4200V/4224V/4248V/4272V/4296V/4320V/4344V/4368V/4392V/4416V/4440V/4464V/4488V/4512V/4536V/4560V/4584V/4608V/4632V/4656V/4680V/4704V/4728V/4752V/4776V/4800V/4824V/4848V/4872V/4896V/4920V/4944V/4968V/4992V/5016V/5040V/5064V/5088V/5112V/5136V/5160V/5184V/5208V/5232V/5256V/5280V/5304V/5328V/5352V/5376V/5400V/5424V/5448V/5472V/5496V/5520V/5544V/5568V/5592V/5616V/5640V/5664V/5688V/5712V/5736V/5760V/5784V/5808V/5832V/5856V/5880V/5904V/5928V/5952V/5976V/6000V/6024V/6048V/6072V/6096V/6120V/6144V/6168V/6192V/6216V/6240V/6264V/6288V/6312V/6336V/6360V/6384V/6408V/6432V/6456V/6480V/6504V/6528V/6552V/6576V/6600V/6624V/6648V/6672V/6696V/6720V/6744V/6768V/6792V/6816V/6840V/6864V/6888V/6912V/6936V/6960V/6984V/7008V/7032V/7056V/7080V/7104V/7128V/7152V/7176V/7200V/7224V/7248V/7272V/7296V/7320V/7344V/7368V/7392V/7416V/7440V/7464V/7488V/7512V/7536V/7560V/7584V/7608V/7632V/7656V/7680V/7704V/7728V/7752V/7776V/7800V/7824V/7848V/7872V/7896V/7920V/7944V/7968V/7992V/8016V/8040V/8064V/8088V/8112V/8136V/8160V/8184V/8208V/8232V/8256V/8280V/8304V/8328V/8352V/8376V/8400V/8424V/8448V/8472V/8496V/8520V/8544V/8568V/8592V/8616V/8640V/8664V/8688V/8712V/8736V/8760V/8784V/8808V/8832V/8856V/8880V/8904V/8928V/8952V/8976V/9000V/9024V/9048V/9072V/9096V/9120V/9144V/9168V/9192V/9216V/9240V/9264V/9288V/9312V/9336V/9360V/9384V/9408V/9432V/9456V/9480V/9504V/9528V/9552V/9576V/9600V/9624V/9648V/9672V/9696V/9720V/9744V/9768V/9792V/9816V/9840V/9864V/9888V/9912V/9936V/9960V/9984V/10000V</p></div>	<p><a href="#">EPA1020-0612 Smart Battery Charger Instruction Manual</a></p> <p>This instruction manual provides essential safety and operating guidelines for the EPA1020-0612 Smart Battery Charger, designed for 6V and 12V lead-acid batteries. It covers warnings, precautions, charging preparation, connection procedures, operating instructions, light indicators, troubleshooting, and technical specifications.</p>
<div><p>NECS-W 0152 - 1204</p><p>CLIMAVENETA</p></div>	<p><a href="#">Climaveneta NECS-W 0152 - 1204 Water Cooled Chiller Technical Specification</a></p> <p>Explore the technical specifications, features, and certifications of the Climaveneta NECS-W 0152 - 1204 water-cooled chiller. This bulletin provides comprehensive data for HVAC professionals.</p>

 The image shows the cover of the Wagner PaintREADY Spray Gun Owner's Manual and Operating Guide. It features the Wagner logo at the top left, a photograph of the spray gun, and the title 'PaintREADY Spray Gun Owner's Manual and Operating Guide' in a bold, sans-serif font. Below the title, there is a small graphic of a paint can and a spray gun nozzle.	<p><a href="#">Wagner PaintREADY™ Spray Gun Owner's Manual and Operating Guide</a></p> <p>Comprehensive owner's manual for the Wagner PaintREADY™ Spray Gun, covering safety information, controls, assembly, operation, cleanup, maintenance, troubleshooting, and warranty. Includes detailed instructions and parts list.</p>
 The image shows the cover of the LEDVANCE LED Value Wattage Switch TRI CCT Panel Installation and Warranty Guide. It features the LEDVANCE logo at the top left, a photograph of the LED panel, and the title 'LEDVANCE LED Value Wattage Switch TRI CCT Panel Installation and Warranty Guide' in a bold, sans-serif font. Below the title, there is a small graphic of a light fixture.	<p><a href="#">LED Value Wattage Switch TRI CCT Panel Installation and Warranty Guide</a></p> <p>Comprehensive guide for the LEDVANCE LED Value Wattage Switch TRI CCT Panel, covering installation instructions, safety warnings, warranty details, and technical specifications for models 0306/0606/0312/0612.</p>
 The image shows the cover of the GNB Fury X-3 Industrial Battery Charger: Installation & Operating Manual. It features the GNB logo at the top left, a photograph of the battery charger, and the title 'GNB Fury X-3 Industrial Battery Charger: Installation & Operating Manual' in a bold, sans-serif font. Below the title, there is a small graphic of a battery.	<p><a href="#">GNB Fury X-3 Industrial Battery Charger: Installation &amp; Operating Manual</a></p> <p>Comprehensive installation and operating instructions for the GNB Fury X-3 dedicated fast charger for industrial batteries. Learn about features, specifications, safety, installation, and troubleshooting.</p>