

## LEICESTERCN LST-US-BC02

# LEICESTERCN Automatic 12V 800mA Trickle Battery Charger Maintainer User Manual

Model: LST-US-BC02

## 1. INTRODUCTION

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This manual provides instructions for the safe and efficient operation of your LEICESTERCN Automatic 12V 800mA Trickle Battery Charger Maintainer. This device is designed to charge and maintain various 12V lead-acid batteries, including GEL, AGM, and WET types, commonly found in cars, motorcycles, lawn mowers, tractors, boats, and ATVs.

Please read this manual thoroughly before using the charger to ensure proper usage and to prevent damage to the unit or your battery.

## 2. SAFETY INFORMATION

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**WARNING:** Always observe safety precautions when working with batteries and electrical equipment. Failure to do so may result in injury or damage.

- Ensure proper ventilation when charging batteries.
- Avoid sparks or flames near the battery during charging.
- Wear eye protection and gloves when handling batteries.
- Do not cover the charger during operation to allow for natural convection cooling.
- This charger is designed for 12V lead-acid batteries only. Do not use with lithium-ion batteries or other battery types.
- Keep out of reach of children.
- Ensure all connections are secure before plugging the charger into an AC outlet.

## 3. PRODUCT FEATURES

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Image: The LEICESTERCN Automatic 12V 800mA Trickle Battery Charger Maintainer, showing the main unit, detachable alligator clips, and ring terminal connectors. The unit features LED indicators for charging status and reverse polarity protection.

- **Automatic 3-Stage Charging:** Utilizes a fully automatic CC-CV(H)-CV(F) charging process for optimal battery health.
- **Versatile Compatibility:** Designed for all types of 12V lead-acid batteries, including GEL, AGM, and WET cell batteries.
- **Smart LED Indicators:** Features a bi-color LED (Red for charging, Green for floating/finished) for clear status indication.
- **Safety Protections:** Includes protection against battery polarity reversal, overcurrent (OCP), overvoltage (OVP), and output short circuits.
- **Maintenance Float Mode:** Prevents overcharging by automatically switching to a maintenance float mode once the battery is fully charged.
- **Compact and Portable:** Ultra-compact, lightweight design with mounting holes for easy installation and portability.
- **Durable Enclosure:** IP64 rated for dust protection and resistance to water splashing.

#### 4. SPECIFICATIONS

<b>Input Voltage</b>	100-240VAC, 50-60Hz
<b>Input Current</b>	0.1A
<b>Back Current Drain</b>	1.3mA
<b>Charge Voltage Rating</b>	12V
<b>Bulk Limited Voltage</b>	14.7V
<b>Bulk Charge Current</b>	0.8A ± 0.2A
<b>Cooling</b>	Natural convection
<b>Charge Principle</b>	Automatic 3 stages CC-CV(H)-CV(F)
<b>Compatible Battery Types</b>	All types of 12V AGM, GEL, and Lead-Acid batteries
<b>Recommended Battery Capacity</b>	4-12Ah
<b>Enclosure Rating</b>	IP64 (Dust protected, Water splashing resistance)
<b>Product Dimensions</b>	1.5 x 3.2 x 1.7 inches
<b>Item Weight</b>	6.6 ounces
<b>Model Number</b>	LST-US-BC02

## 5. SETUP AND INSTALLATION

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### 1. Connect to Battery:

- Connect the **red** clip to the battery's positive (+) terminal.
- Connect the **black** clip to the battery's negative (-) terminal.
- *Alternatively, if using other DC plugs (e.g., ring terminals), ensure correct polarity connection.*

### 2. Connect to AC Power:

- Plug the AC power cord into a standard 100-240VAC wall socket.
- Upon successful connection, the LED indicator on the charger will light up **Green**, indicating the charger is powered on and ready.

## 6. OPERATING INSTRUCTIONS

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- Initiating Charge:** Once the battery is correctly connected and the AC plug is inserted, the LED lamp will turn **Red**, indicating that the battery is currently charging.
- Charging Process:** The charger will automatically proceed through its 3-stage charging cycle (CC-CV(H)-CV(F)) to optimize the charge.
- Charge Completion:** When the battery is fully charged, the LED lamp will change from **Red** to **Green**. At this point, the charger enters a float maintenance mode.
- Disconnection:** You can disconnect the charger from the AC outlet and then from the battery once charging is complete. The charger can also remain connected in float mode for long-term maintenance without overcharging.

## 7. LED INDICATORS

- **Green LED (Solid):**
  - Charger is powered on and ready (no battery connected or battery fully charged/in float mode).
- **Red LED (Solid):**
  - Battery is currently charging.
- **LED Off:**
  - Indicates battery polarity is reversed or output is short-circuited. Disconnect immediately and check connections.
  - Charger is not receiving AC power.

## 8. MAINTENANCE

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- The charger is designed for natural convection cooling. Ensure it is not covered during operation to prevent overheating.
- The charger automatically enters a float maintenance mode, preventing overcharging even if left connected for extended periods.
- Periodically inspect the charger and cables for any signs of damage. Do not use if damaged.
- Clean the exterior of the charger with a dry cloth. Do not use liquids or solvents.

## 9. TROUBLESHOOTING

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Problem	Possible Cause	Solution
Charger LED is off.	No AC power, reversed battery polarity, or output short-circuited.	<ul style="list-style-type: none"> <li>• Check AC power connection.</li> <li>• Disconnect from battery and AC, then re-connect ensuring correct polarity (red to positive, black to negative).</li> <li>• Inspect cables and clips for damage or short circuits.</li> </ul>
Charger LED remains Green when connected to a discharged battery.	Battery may be deeply discharged or faulty.	<ul style="list-style-type: none"> <li>• This charger is not recommended for totally dead batteries.</li> <li>• Ensure the battery is within the recommended capacity range (4-12Ah).</li> <li>• Test the battery with a multimeter to confirm its voltage. If voltage is extremely low, the charger may not initiate.</li> </ul>
Charging takes a very long time.	Battery is large capacity or deeply discharged.	<ul style="list-style-type: none"> <li>• Charging time varies based on battery size and discharge level. Larger or more discharged batteries will take longer.</li> <li>• Ensure the charger is not covered, allowing for proper cooling.</li> </ul>

## 10. WARRANTY AND SUPPORT

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This LEICESTERCN product comes with a **1-year quality warranty** from the date of purchase.

For technical support, warranty claims, or further inquiries, please visit the official LEICESTERCN store or contact customer service through your purchase platform.

Official Brand Store: [LEICESTERCN Store on Amazon](#)