

## Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

- › [KATBO](#) /
- › [KATBO Battery Charger 12A Full Automatic Maintainer User Manual](#)

### KATBO KTB-BC1902 12A battery charger 6V/12V

# KATBO Battery Charger 12A Full Automatic Maintainer User Manual

Brand: KATBO | Model: KTB-BC1902 12A battery charger 6V/12V

## 1. INTRODUCTION

---

This user manual provides detailed instructions for the safe and effective operation of your KATBO 12A Full Automatic Battery Charger. This intelligent charger is designed to charge and maintain 6V and 12V lead-acid batteries, including AGM, Gel, and STD types, commonly found in cars, motorcycles, trucks, lawn mowers, and boats. Its advanced features ensure efficient charging and multiple protection mechanisms for enhanced safety.



Figure 1.1: KATBO 12A Full Automatic Battery Charger with included accessories.

## 2. SAFETY INFORMATION

---

Please read and understand all safety warnings and operating instructions before using this battery charger. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Ventilation:** Always use the charger in a well-ventilated area. Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- **Battery Type:** This charger is designed for 6V and 12V lead-acid batteries (AGM, Gel, Wet, EFB, MF, SLA). Do not attempt to charge lithium batteries or other battery types not specified.
- **Connection:** Ensure correct polarity when connecting to the battery. Connect the red clamp to the positive (+) terminal and the black clamp to the negative (-) terminal. Reverse connection protection is built-in, but correct connection is always recommended.
- **Power Source:** Connect the charger to a grounded outlet. Do not use extension cords unless absolutely necessary, and ensure they are properly rated.
- **Protection Features:** The charger includes multiple protection systems: over voltage, reverse connection, short circuit, over current, overheating, and low voltage protection. While these features enhance safety, always exercise caution.
- **Children and Pets:** Keep the charger and battery out of reach of children and pets.

- **Damage:** Do not operate the charger if it has been dropped, damaged, or exposed to water. Contact customer support for assistance.



Figure 2.1: The charger's design helps prevent battery issues, ensuring reliability.

### 3. PRODUCT FEATURES

The KATBO Battery Charger is equipped with several features designed for optimal battery charging and maintenance:

- **Versatile Charging:** Supports 6V (2Amp) and 12V (8Amp/12Amp) lead-acid batteries from 4.5AH-220AH (12V) and 4.5Ah-32Ah (6V).
- **3-Stage Microprocessor Control:** Provides efficient and optimized charging for various battery types (STD, AGM, GEL, Maintenance).
- **Comprehensive Protection:** Built-in safeguards against over voltage, reverse connection, short circuit, over current, overheating, and low voltage.
- **Clear LCD Display:** Shows real-time data including internal temperature, voltage, current, and selected repair

mode.

- **Automatic Operation:** Automatically detects battery voltage and stops charging once fully charged.
- **Battery Repair Function:** Can diagnose and repair certain battery problems to extend battery life.
- **Wide Application:** Suitable for a broad range of vehicles including cars, motorcycles, trucks, and boats.

## 4. PRODUCT OVERVIEW AND COMPONENTS

Familiarize yourself with the main components and indicators of your KATBO Battery Charger:

# CONTROL PANEL LED INDICATORS

Capacities of 4.5-32Ah(6V) and 4.5-220Ah(12V) batteries



**Remove all cord wraps and uncoil the cables prior to using the battery charger.**



**Press and adjust current**  
press the button to adjust current  
2Amp/10Amp/15Amp



**2A (<45AH)**  
For charging small batteries



**8A (45AH-120AH)**  
For charging automotive, marine  
and light truck batteries



**12A (>100AH)**  
For charging automotive, marine  
and light truck batteries



**Press and Switch battery**  
press the button to switch Mode  
STD/AGM-GEL/MAINTENANCE



**STD (red) LED**  
Current battery type STD



**AGM/GEL (red) LED**  
Current battery type AGM/GEL



**MAINTENANCE (red) LED**  
MAINTENANCE Charging Mode



**POWER (red) LED**  
The charger is connected to  
AC power



**CONNECTION (red) LED**  
The charger is connected to  
AC power and battery



**CHARGING (yellow) LED lit:**  
The charger is charging the  
battery



**CHARGED (green)**  
The battery is fully charged

Figure 4.1: Control Panel and LED Indicators.

## Control Panel Elements:

**AMP Button:** Press to adjust charging current (2A, 8A, 12A).

**MODE Button:** Press to switch between battery types (STD, AGM/GEL, MAINTENANCE).

**LCD Screen:** Displays real-time charging data (Voltage, Current, Temperature, Power Level, Full Display).

## LED Indicators:

**POWER (red) LED:** Indicates the charger is connected to AC power.

**CONNECTION (red) LED:** Indicates the charger is connected to the battery.

**CHARGING (yellow) LED:** Indicates the battery is currently charging.

**CHARGED (green) LED:** Indicates the battery is fully charged.

## 5. SETUP AND INITIAL CONNECTION

---

Follow these steps to set up your battery charger:

1. **Unpack:** Carefully remove the charger and all accessories from the packaging.
2. **Inspect:** Check the charger, cables, and clamps for any signs of damage. Do not use if damaged.
3. **Placement:** Place the charger on a stable, non-flammable surface, away from direct sunlight, heat sources, and moisture. Ensure adequate ventilation around the unit.
4. **Connect to Battery:**
  - Connect the **RED (+)** clamp to the positive terminal of the battery.
  - Connect the **BLACK (-)** clamp to the negative terminal of the battery.

*Note: Ensure a secure connection. The charger will automatically detect the battery voltage (6V or 12V).*

5. **Connect to Power:** Plug the charger's AC power cord into a standard 120V AC wall outlet. The POWER (red) LED will illuminate.

# 12V Battery Charging

It is different according to the battery's old and new degree and using time



Figure 5.1: Proper connection of the charger to a 12V battery.

## 6. OPERATING INSTRUCTIONS

Once connected, the charger will automatically begin the charging process. You can adjust settings as needed.

### 6.1 Automatic Charging Process

The charger features a 3-stage microprocessor-controlled charging process:

1. **Desulfation/Soft Start:** If the battery is deeply discharged or sulfated, the charger may start with a desulfation pulse charge or a soft start to prepare the battery for bulk charging.
2. **Bulk Charge:** The charger delivers maximum current to rapidly charge the battery to approximately 80% of its capacity. The CHARGING (yellow) LED will be on.
3. **Absorption Charge:** The charging voltage is held constant while the current gradually decreases, bringing the battery to 100% charge.

4. **Float/Maintenance Charge:** Once fully charged, the charger switches to a lower voltage maintenance mode to keep the battery at optimal charge without overcharging. The CHARGED (green) LED will illuminate.

## 6.2 Adjusting Charging Current (AMP Button)

Press the **AMP** button to cycle through available charging currents:

- **2A:** For charging small batteries (e.g., motorcycle batteries, 6V batteries, or batteries up to 45AH).
- **8A:** For charging automotive, marine, and light truck batteries (e.g., 45AH-120AH).
- **12A:** For faster charging of larger automotive, marine, and light truck batteries (e.g., >100AH).

*The charger will automatically select an appropriate current based on battery size, but you can manually adjust it.*

## 6.3 Selecting Battery Type/Mode (MODE Button)

Press the **MODE** button to select the appropriate battery type or charging mode:

- **STD (Standard):** For standard lead-acid batteries (Wet, MF, SLA).
- **AGM/GEL:** For Absorbed Glass Mat (AGM) and Gel cell batteries.
- **MAINTENANCE:** For long-term trickle charging to maintain a full charge.

# **BATTERY CHARGER**

## **Auto-Voltage Detection**

### **3 Mode** STD / AGM-GEL / MAINTENANCE

### **2Amp/8Amp/12Amp Adjustable**

Power line separation design



Figure 6.1: Charger modes and adjustable amperage settings.


## 6.4 LCD Display Information


The LCD screen provides real-time feedback:

- **Current Display:** Shows the charging current in Amps.
- **Battery Voltage:** Displays the current battery voltage.
- **Power Level:** Indicates the approximate charge level of the battery.
- **Full Display 100%:** Appears when the battery is fully charged.
- **Inside Temperature:** Shows the internal temperature of the charger.


# Charging LED Real Time Display and Troubleshooting

voltage, electric quantity display, analysis and detection battery operation display, etc







Current Display



Battery Voltage



Power Level



Full display 100%

### ERROR CODES/TROUBLESHOOTING

Error Codes	POSSIBLE CAUSE	REASON/SOLUTION
F01	The battery voltage is still under 5V (for a 6V), 10V (for a 12V battery) or 19V (for a 24V battery) after 2 hours of charging.	The battery could be bad. Have it checked or replaced.
F02	The connections to the battery are reversed.	The battery is connected backwards. Unplug the charger and reverse the connections to the battery.
F03	The battery was unable to reach the "full charge" voltage.	May be caused by trying to charge a large battery or bank of batteries on too low of a current setting. Try again with a higher current setting or have the battery checked or replaced.
F04	The charger cannot desulfate the battery.	The battery could not be desulfated; have it checked or replaced.
F05	The charger was unable to keep the battery fully charged in maintain mode.	The battery won't hold a charge. May be caused by a drain on the battery or the battery could be bad. Make sure there are no loads on the battery. If there are remove them. If there are none, have the battery checked or replaced.
F06	The charger detected that the battery may be getting too hot (thermal runaway).	The charger automatically shuts the current off if it detects the battery may be getting too hot. The battery could be bad. Have the battery checked or replaced.

When the charging 12V battery shows 6V, disconnect the plug, press and hold the key key, and then connect the power plug for 3 seconds to start the strong charging. After 15-20 minutes, when the battery voltage rises, disconnect the power supply and recharge

Figure 6.2: Real-time data display on the LCD screen.

## 7. MAINTENANCE

Proper maintenance ensures the longevity and reliable operation of your KATBO Battery Charger:

- **Cleaning:** Disconnect the charger from both AC power and the battery before cleaning. Wipe the casing with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Cable Care:** Regularly inspect the charging cables and clamps for any cuts, fraying, or damage. Replace if necessary.
- **Storage:** Store the charger in a cool, dry place when not in use. Keep it away from moisture, dust, and extreme temperatures.
- **Ventilation:** Ensure the charger's ventilation openings are clear of obstructions during operation to prevent overheating.

## 8. TROUBLESHOOTING

If you encounter issues with your KATBO Battery Charger, refer to the following table for common problems and solutions:

Error Code	Possible Cause	Reason/Solution
F01	The battery voltage is still under 5V (for a 6V battery) or 10V (for a 12V battery).	The battery could be bad. Have it checked or replaced.
F02	The connections to the battery are reversed.	The battery is connected backwards. Unplug the charger and reverse the connections to the battery.
F03	The battery was unable to reach the "full charge" voltage.	May be caused by trying to charge a large battery or bank of batteries on too low of a current setting. Try again with a higher current setting or have the battery checked or replaced.
F04	The charger cannot desulfate the battery.	The battery could not be desulfated; have it checked or replaced.
F05	The charger was unable to keep the battery fully charged in maintain mode.	The battery won't hold a charge. May be caused by a drain on the battery or the battery could be bad. Make sure there are no loads on the battery. If there are none, have the battery checked or replaced.
F06	The charger detected that the battery may be getting too hot (thermal runaway).	The charger automatically shuts off if it detects the battery may be getting too hot. The battery could be bad. Have the battery checked or replaced.

**Important Note for 12V Charging:** When the 12V battery shows 6V, disconnect the plug, press and hold the key, then connect the power plug for 3 seconds to start the strong charging. After 15-20 minutes, when the battery voltage rises, disconnect the power supply and recharge.

## 9. SPECIFICATIONS

Technical specifications for the KATBO Battery Charger:

Specification	Value
Model Number	KTB-BC1902 12A battery charger 6V/12V

Specification	Value
Input Voltage	100-240V AC, 50/60Hz
Output Voltage	6V / 12V DC (Automatic Detection)
Output Current	2A, 8A, 12A (Selectable)
Battery Capacity (12V)	4.5AH - 220AH
Battery Capacity (6V)	4.5AH - 32AH
Compatible Battery Types	Lead-Acid (Wet, MF, SLA), AGM, Gel, EFB
Product Dimensions	4.53 x 3.54 x 2.36 inches (11.5 x 9 x 6 cm)
Item Weight	1.28 pounds (0.58 kg)
Color	Yellow+Black
Manufacturer	KATBO

## 10. WARRANTY AND SUPPORT

---

For warranty information or technical support, please contact KATBO customer service through the retailer where you purchased the product or visit the official KATBO website. Please have your model number (KTB-BC1902) and purchase details ready when contacting support.

**Online Resources:** For additional information and updates, you may visit the [KATBO Store on Amazon](#).

