



Mrcartool®

Battery Capacity Tester User Manual

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► Brief Introduction

This battery tester tool is for testing the performance of start-up lead-acid batteries. The device uses a large-screen LCD display, and the test process and results can be displayed through sound alarms and icons. The internal protection of the device has been strengthened to prevent it from reverse polarity connection, high voltage access, and poor test clamp contact, which ensure more security and convenience in the operation.

► Safety Rules And Precautions

This manual includes instructions for using the instrument and warnings for safe operation and how to maintain it. Please use the battery tester device strictly according to the manual. This device strictly complies

with GB4793.1 Safety requirements for electronic measuring instruments and IEC/EN61010-1 safety standards for design and production.

- This product is suitable for the detection of 12V/24V car batteries.
- The working voltage range is 8V to 30V with direct current (DC).
- When the battery is in just fully charged state, the voltage will be slightly higher than the normal value. Please turn on the headlights for 2~3 minutes and wait for the voltage to drop back to normal before testing.
- Before use, check whether the insulating layer of the test clamps is intact, damaged, exposed, or disconnected. It is strictly prohibited to use the back cover before it is closed, otherwise, there is a danger of electric shock.
- Do not use or store the device in harsh environments such as high temperature, high humidity, flammable, explosive, and strong electromagnetic fields.
- Do not change the internal wiring of the device at will to avoid damage to the meter.
- If the car engine is running, do not put the equipment and accessories next to the engine or exhaust pipe to avoid damage by high temperature.

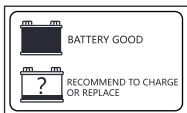
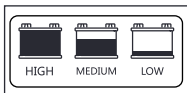
► Product Icons And Description

Description of icons and test clamps:

- Voltage display:



- Battery status: high, medium, low;



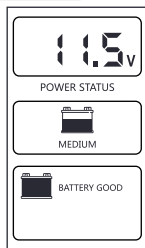
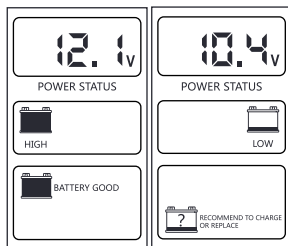
Determined Recommendation by status: good, charge or replace

- Red test clamp: Positive wiring test clamp;
- Black test clamp: Negative wiring test clamp.

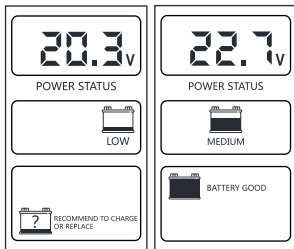
► Function Instructions

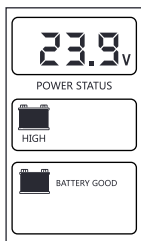
This battery tester has two modes for voltage detection: 12V/24V. After the device is powered on, it will automatically identify the 12V or 24V battery voltage type and display the measured voltage and battery status on the LCD screen.

- Example display of 12V battery :



- Example display of 24V battery :





► Installation Instruction

After confirming that the car battery is in normal condition, please install it in the following order.

- Please connect the power cord with the car cigarette lighter and make sure they are well connected, so as not to affect the test results.
- After the connection is completed, the battery tester will automatically detect and identify the 12V or 24V battery voltage type, and its voltage value and battery status will be displayed on the LCD screen.
- The principle process of this product is: After power on, the buzzer will beep once, and the 12V/24V battery will be automatically detected and displayed. The indicator lamp lights up one after another and the voltage is detected after three cycles of operation, and the battery status is judged. After the test is completed, the buzzer beeps once, and the LCD screen displays

the voltage value and battery status.

⚠ Precautions

- If the voltage reading is greater than 15.0V (for a 24V system, the reading is greater than 30.0V), please check if there is a problem with the voltage regulator.
- If the voltage reading is less than 13.3V (for a 24V system, the reading is less than 26.6V), please check the connection, wires, and generators.
- If the voltage reading is less than 12.8V (for a 24V system, the reading is less than 25.6 V), please check whether the generator belt is worn out and the wires are short-circuited.

⚠ Precautions

- The engine starting performance of the battery varies with factors such as temperature, and the starting performance at low temperatures is poor. Therefore, even if the battery decays to the same extent, it shows a poorer starting performance at low temperatures than at room temperature.
- Since this product diagnoses the engine starting performance of the battery based on the engine starting characteristics of the vehicle, this result may differ from that of a battery tester.

If an external power supply is used to start the engine through the booster cable, the correct engine starting

performance will not be displayed. (Usually, the engine starting will show the correct engine cranking performance.)

- If the motor is turned without stepping on the clutch while the manual vehicle is in gear, the correct engine starting performance will not be displayed. (Usually, the engine starting will show the correct engine cranking performance.)

Precautions

- When the battery voltage is detected as low voltage, the buzzer will beep five times, wait for three seconds and then cycle, then the “CHARGE” or “REPLACE” icon will light up.
- When the battery voltage is detected as medium voltage or high voltage, the “BATTERY GOOD” icon lights up.

Maintenance/Inspection

1. Clean car battery lifespan diagnose unit

- Wet the cloth with water, wring out, and wipe the dirt.
- Do not wipe with a dry cloth or other materials that may generate static electricity.
- Do not use volatile oil (petroleum), thinner, gasoline and other organic solvents as cleaning agents.

2. Installation inspection of connectors

- Make sure the test clamps are well-connected.
- If it is loose, the test clamp needs to be reconnected and fixed.

Parameter

Battery type	12V	24V
Low voltage	≤10.5v	≤21.0v
Medium voltage	10.6v~11.8v	21.1v~23.7v
High voltage	≥11.9v	≥23.8v

Warranty Service

There are 2 years' warranty for MRCAR-TOOL product main unit and 1 year warranty for the accessories since the day the customers have received the product parcel.

- Repair or replace the equipment will be done according to the specific fault conditions.
- We guarantee that all replacement parts, accessories or equipment are brand new.
- When there is a product breakdown that can not be solved within 90 days, customer should provide video and pictures as proof, we will bear the freight cost and provide customer the accessories in need to replace. After receiving the product for more than 90 days, the customer shall bear the freight cost, we will provide the accessory for free to replace.

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