## KAIWEETS KVB01

# KAIWEETS KVB01 Car Battery Tester User Manual

Model: KVB01 | Brand: KAIWEETS

## Introduction

The KAIWEETS KVB01 Car Battery Tester is a versatile diagnostic tool designed to assess the health and performance of 12V and 24V lead-acid batteries. It provides comprehensive analysis including State of Charge (SOC), State of Health (SOH), voltage, internal resistance, and performs loading, cranking, and charging tests.
This tester is compatible with various battery types, including ordinary flooded, VRLA, GEL, AGM, SLA, and SLI batteries. It is suitable for use with almost all automotive batteries found in SUVs, motorcycles, trucks, boats, golf carts, and lawnmowers.

## What's in the Box

- 1 x KAIWEETS KVB01 Battery Tester
- 1 x Carrying Case
- 1 x User Manual
- 1 x 2M Test Leads
- 2 x Copper Clips


Figure 1: Contents of the KAIWEETS KVB01 package, including the tester, case, and test leads with copper clips.

## Setup

1. **Unpack the Tester:** Carefully remove the KAIWEETS KVB01 Battery Tester and its accessories from the carrying case.
2. **Remove Protective Film:** Peel off any protective film from the tester's screen and buttons.
3. **Connect Test Leads:** The 2-meter long test leads are permanently attached to the tester. Ensure the red (positive) and black (negative) copper clips are securely connected to the corresponding battery terminals. The tester is powered directly by the car battery, requiring no internal batteries.


Figure 2: The KVB01 tester displaying its multi-function capabilities, including SOC, SOH, Voltage Test, Resistance Test, Loading Test, Charging Test, and Cranking Test.


Figure 3: The KVB01 Battery Tester connected to a car battery, demonstrating the long test leads that allow for flexible testing inside or outside the vehicle.

## Operating Instructions

The KVB01 features a clear and concise navigation interface, making it user-friendly even for first-time users. Use the arrow buttons to navigate and the 'M ENTER' button to select options.

### 1. Battery Test

This test measures the voltage, internal resistance, State of Charge (SOC), and State of Health (SOH) of the car battery. It helps you know the status of your battery in advance before it dies.

1. Connect the tester to the battery terminals.
2. From the Main Menu, select "BATTERY TEST".
3. Choose the appropriate battery type (e.g., Flooded, VRLA, GEL, AGM, SLA, SLI) and standard (e.g., CCA, IEC, EN).

4. The tester will display the battery's condition, including SOC, SOH, VOLTS, CCA, and RES (internal resistance).
5. The tester will provide suggestions based on the measurement results (e.g., "GOOD", "ATTENTION", "REPLACE", "PLEASE CHARGE").


Figure 4: Screen displaying battery type selection for accurate testing.


Figure 5: The tester showing detailed results of a battery test, including SOC, SOH, voltage, CCA, and resistance, with a "GOOD" status.

## 2. Cranking Test

This test analyzes the battery discharge performance by measuring the actual cranking voltage. It helps determine if the battery can provide sufficient power to start the engine.

1. Connect the tester to the battery.
2. From the Main Menu, select "CRANKING TEST".
3. Follow the on-screen prompts to start the vehicle's engine.
4. The tester will display the dynamic voltage, cranking voltage, and compare it to the standard.


Figure 6: Visual guide for performing a cranking test, showing connection to battery and pressing the engine start button.

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Video 1: Official KAIWEETS Battery Tester KVB01 demonstration, including cranking test. This video shows the process of connecting the tester and performing various tests, including the cranking test, which measures battery discharge performance during engine startup.

### 3. Loading Test

This test analyzes the generator performance under load. It helps ensure your vehicle's charging system can maintain proper voltage when accessories are active.

1. Connect the tester to the battery.
2. From the Main Menu, select "LOADING TEST".
3. Turn on vehicle loads (e.g., headlights, AC, radio) and increase engine speed to 2000-2500 RPM as prompted.
4. The tester will display dynamic voltage, minimum voltage, and compare it to the standard.


Figure 7: The tester screen showing results from a loading test, indicating generator performance.

## 4. Charging Test

This test analyzes the running status of the automobile charging system, including the alternator and voltage regulator.

1. Connect the tester to the battery.
2. From the Main Menu, select "CHARGING TEST".
3. Follow the on-screen prompts to start the engine and maintain specific RPMs.
4. The tester will display dynamic voltage, maximum voltage, and minimum voltage, providing an assessment of the charging system's health.


Figure 8: The tester screen showing results from a charging test, indicating the health of the vehicle's charging system.

## Maintenance

- Keep the tester clean and dry. Wipe with a soft, damp cloth if necessary.
- Store the tester in its provided carrying case when not in use to protect it from dust and damage.
- Ensure the copper clips are clean and free of corrosion for accurate readings.
- Avoid exposing the tester to extreme temperatures or direct sunlight for prolonged periods.

## Troubleshooting

| Issue | Possible Cause | Solution |
| --- | --- | --- |

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|---|---|---|
| "ATTENTION" or "REPLACE" message during Battery Test | Low State of Charge (SOC) or poor State of Health (SOH). | Charge the battery fully and retest. If the issue persists, the battery may need replacement. |
| No display or power | Incorrect connection to battery terminals or battery is completely dead. | Ensure correct polarity (+ to + and - to -). Try connecting to a known good battery. |
| Inaccurate readings | Corroded battery terminals or loose connections. | Clean battery terminals and ensure a firm connection of the copper clips. |
| Tester not responding | Temporary software glitch. | Disconnect from the battery, wait a few seconds, and reconnect. |

## Specifications

| Feature | Detail |
|---|---|
| Product Dimensions | 5.51 x 2.6 x 1.14 inches |
| Item Model Number | KVB01 |
| Item Weight | 0.5 Kilograms (1.1 Pounds) |
| Power Source | Battery Powered (from tested battery) |
| Min. Operating Voltage | 9 Volts (DC) |
| Compatibility | 12V/24V Lead-Acid Batteries (Flooded, VRLA, GEL, AGM, SLA, SLI) |
| Certifications | IEC/EN61010-1 |

## Warranty and Support

KAIWEETS provides 36 months of high-quality service and lifetime technical support for the KVB01 Battery Tester. For any questions or assistance with the product, please feel free to contact KAIWEETS customer service.
The tester incorporates reverse polarity protection to prevent internal circuit burnout if the leads are accidentally connected incorrectly, ensuring user safety.