

BUUBO BM410

BUUBO BM410 Car Battery Tester User Manual

Model: BM410

1. INTRODUCTION

The BUUBO BM410 Car Battery Tester is a versatile diagnostic tool designed to assess the health and performance of 12V and 24V automotive batteries, as well as the vehicle's charging and cranking systems. This manual provides detailed instructions for safe and effective use of the device.

2. SAFETY INFORMATION

Always observe the following safety precautions when working with automotive batteries:

- Wear appropriate eye protection and gloves.
- Ensure adequate ventilation to prevent accumulation of explosive gases.
- Avoid sparks or open flames near the battery.
- Do not touch battery acid. If contact occurs, flush immediately with water and seek medical attention.
- Connect the tester correctly: **red clamp to positive (+) terminal, black clamp to negative (-) terminal**. The BM410 features reverse connection protection, but correct connection is always recommended.
- Keep children and unauthorized personnel away from the work area.

3. PRODUCT OVERVIEW

The BUUBO BM410 is a compact and easy-to-use battery tester. It features an LED display for clear indication of test results and robust alligator clips for secure connection.



Image Description: An overhead view of the BUUBO BM410 Car Battery Tester. Key components are labeled: Cables, LED Display, Battery Condition indicators, Alternator States indicators, BUUBO logo, Positive Clip (red), and Negative Clip (black). This image illustrates the physical layout of the device.

The device automatically identifies 12V or 24V systems, simplifying operation. It supports two primary modes: battery loaded in the car and unloaded battery testing.

Car Battery Tester BM410 & BM310

SUPPORT

12V & 24V

LED Lights



Image Description: A graphic highlighting the features of the Car Battery Tester BM410 & BM310. It explicitly states 'SUPPORT 12V & 24V' and 'LED Lights', emphasizing the device's compatibility with different voltage systems and its visual indicators.

4. SETUP

Before performing any test, ensure the vehicle is turned off and the ignition is in the OFF position, unless otherwise specified for a particular test.

1. **Clean Battery Terminals:** Ensure the battery terminals are clean and free from corrosion for accurate readings.
2. **Connect Clamps:** Attach the **red (+) clamp** to the positive battery terminal and the **black (-) clamp** to the negative battery terminal. The device will power on automatically.

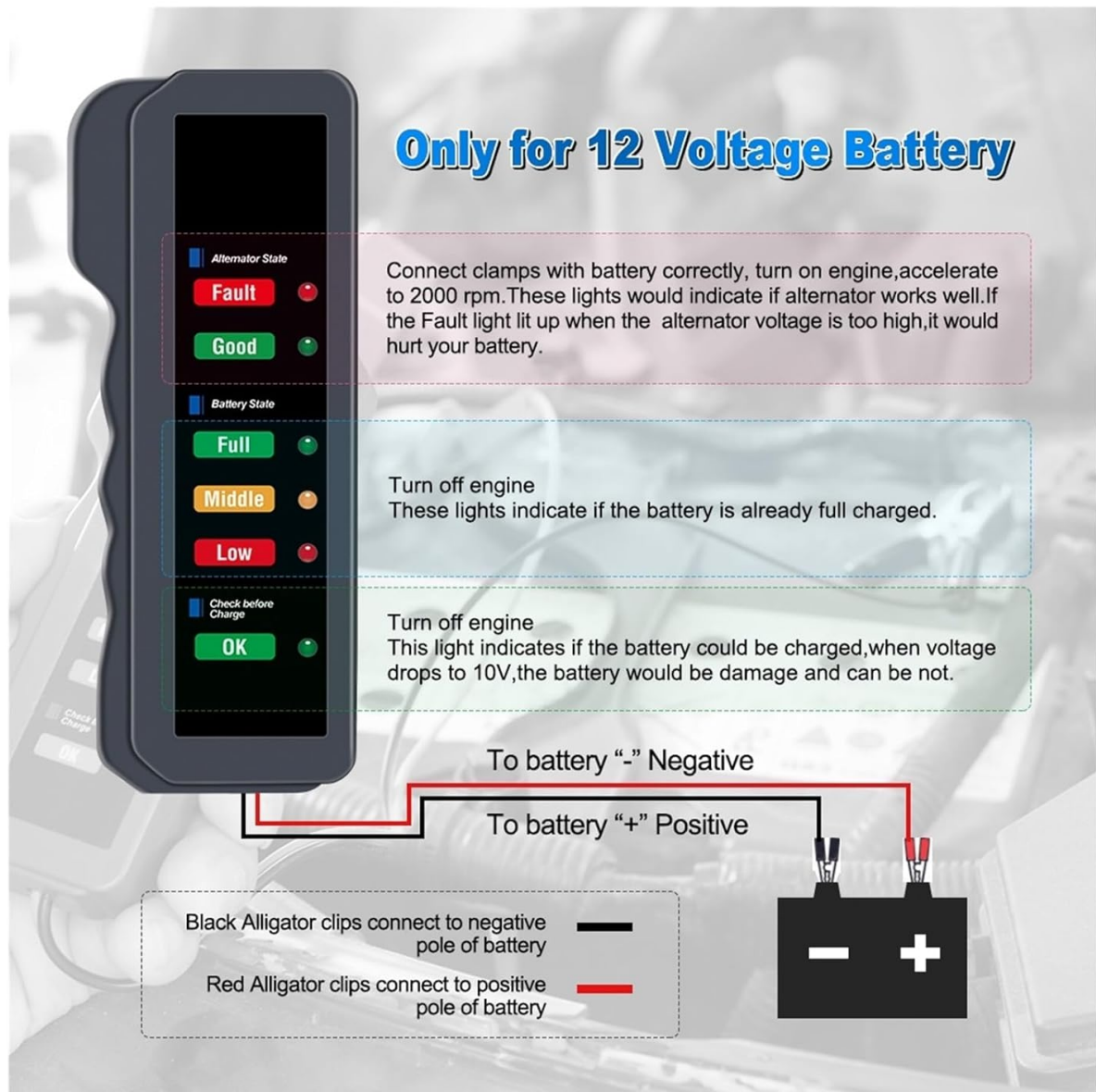


Image Description: A detailed diagram illustrating the correct connection of the battery tester to a car battery. It shows the red alligator clip connecting to the positive (+) terminal and the black alligator clip connecting to the negative (-) terminal. Text labels indicate 'To battery “-” Negative' and 'To battery “+” Positive'. This image is essential for proper setup.

5. OPERATING INSTRUCTIONS

The BM410 offers several diagnostic functions. Use the 'LOADING TEST' and 'BATTERY TEST' switch to select the desired mode.

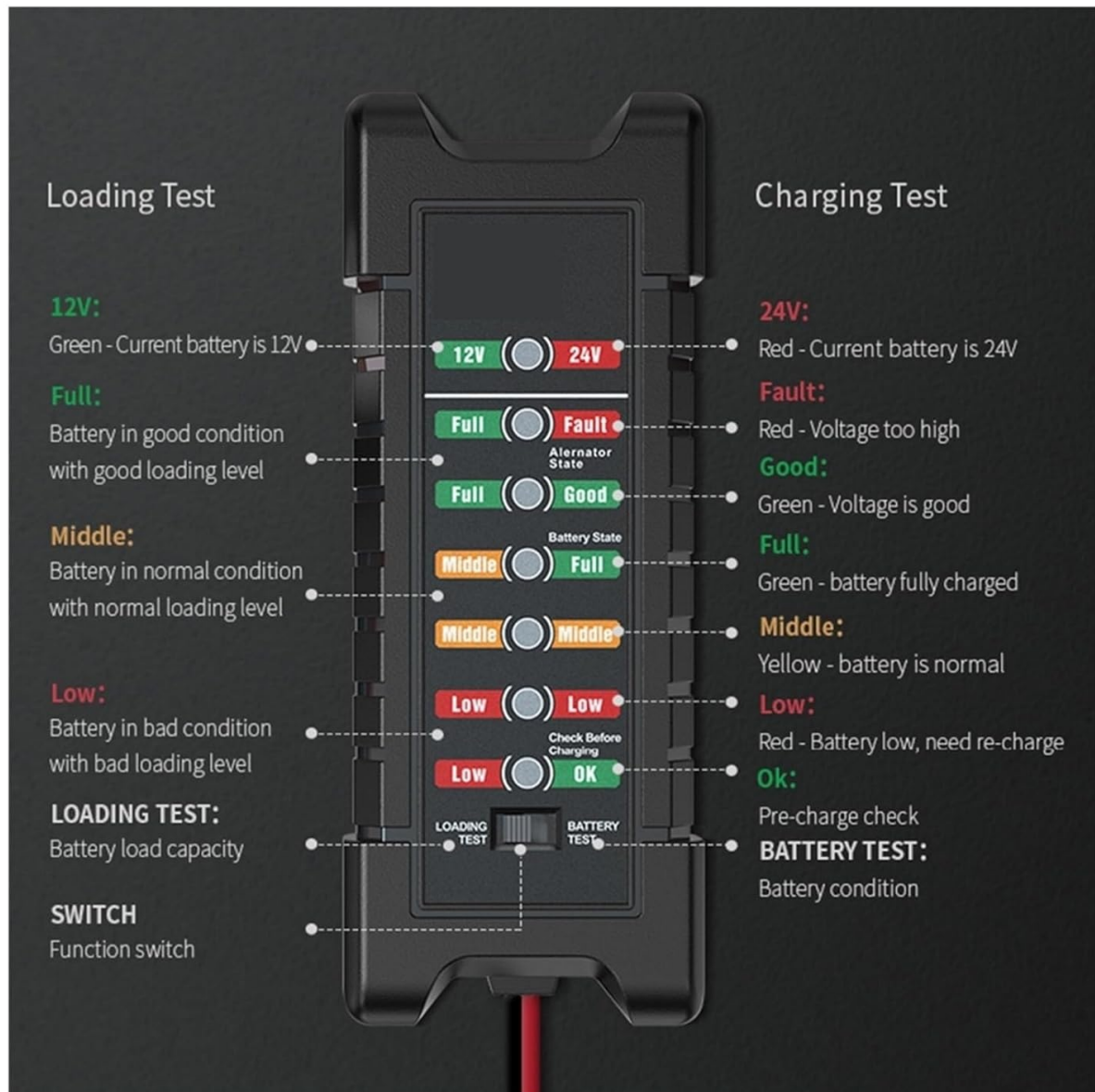


Image Description: A close-up view of the BUUBO BM410's LED display, detailing the indicators for both 'Loading Test' and 'Charging Test'. It shows different LED states (Full, Middle, Low, OK, Fault, Good) and their corresponding meanings for 12V and 24V systems, along with the function switch.

5.1. Battery Test (Load Test)

This test assesses the battery's ability to hold a charge under a simulated load.

1. Ensure the tester is connected to the battery.
2. Set the switch to 'BATTERY TEST'.
3. Observe the 'Battery State' LEDs.

5.2. Charging System Test

This test evaluates the vehicle's charging system, including the alternator.

1. Ensure the tester is connected to the battery.
2. Start the vehicle's engine.
3. Accelerate the engine to approximately 2000 RPM.
4. Observe the 'Alternator State' LEDs. A 'Good' indication means the charging circuit is normal. A 'Fault'

indication (especially if the alternator voltage is too high) suggests a potential issue that could damage the battery.

5.3. Pre-Charging Check

This check determines if a battery can accept a charge.

1. Ensure the tester is connected to the battery.
2. Turn off the engine.
3. Observe the 'Check Before Charging' LED. An 'OK' light indicates the battery can be charged. If the voltage drops below 10V, the battery may be damaged and unable to accept a charge.

6. UNDERSTANDING LED INDICATORS

The BM410 uses a series of LED lights to provide clear and immediate feedback on the battery and charging system status.

6.1. Battery State Indicators (for Battery Test)

- **Full (Green):** Battery is in good condition with good loading level.
- **Middle (Yellow):** Battery is in normal condition with normal loading level.
- **Low (Red):** Battery is in bad condition with bad loading level.

6.2. Alternator State Indicators (for Charging System Test)

- **Good (Green):** Alternator is functioning correctly, and the charging circuit is normal.
- **Fault (Red):** Indicates an issue with the alternator or charging system. This could mean the voltage is too high or too low.

6.3. Check Before Charging Indicator

- **OK (Green):** Battery can be charged.
- **Low (Red):** Battery is too low and may need re-charge, or is potentially damaged if voltage is below 10V.

6.4. Voltage Indicators (12V/24V)

- **12V (Green):** Current battery is 12V.
- **24V (Red):** Current battery is 24V.

7. TROUBLESHOOTING

If you encounter issues while using the BM410, consider the following:

- **No Power/No Display:** Ensure the clamps are securely connected to the correct battery terminals. Check for corrosion on battery terminals that might prevent a good connection.
- **Inaccurate Readings:** Ensure battery terminals are clean. The battery should be at a stable temperature for best results.
- **'Fault' on Alternator Test:** This indicates a problem with the vehicle's charging system. Consult a qualified mechanic for further diagnosis.
- **'Low' on Check Before Charging:** If the battery voltage is extremely low (e.g., below 10V), the battery

may be deeply discharged or damaged and might not accept a charge.

8. SPECIFICATIONS

Feature	Specification
Brand	BUUBO
Model	BM410
Voltage Test Range	9V - 30V
Supported Battery Types	12V and 24V Automotive Batteries (including Lithium Battery Testing)
Display	LED Indicators
Protection	Reverse Connection Protection
Conductivity	Pure Copper Wire and Clips
Voltage Precision	Up to 0.1V
Item Model Number	1005001865723007
Item Weight	300 Grams
Package Dimensions	0.39 x 0.39 x 0.39 inches

9. MAINTENANCE

To ensure the longevity and accuracy of your BUUBO BM410 Car Battery Tester:

- Keep the device clean and dry. Wipe with a soft, damp cloth if necessary.
- Store in a cool, dry place away from direct sunlight and extreme temperatures.
- Inspect the cables and clamps regularly for any signs of damage or wear. Replace if necessary.

10. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the product packaging or contact the manufacturer directly. Keep your purchase receipt as proof of purchase.