Autel BT506

Autel MaxiBAS BT506 Battery Tester User Manual

Model: AM127 / BT506

1. Introduction

The Autel MaxiBAS BT506 is a professional battery and electrical system analysis tool designed for both in-vehicle and out-of-vehicle testing. Utilizing advanced Adaptive Conductance technology, it provides highly accurate and quick diagnostics for 6V and 12V batteries (100-2000 CCA) and 12V-24V cranking/charging systems. This compact and user-friendly device is an essential tool for automotive workshops and DIY enthusiasts alike.

2. Package Contents

- MaxiBAS BT506 Battery Tester Unit
- Battery Clamps (Red for Positive, Black for Negative)
- Quick Start Guide



Figure 2.1: Autel MaxiBAS BT506 Battery Tester with its packaging and clamps.

3. Setup and Initial Use

The BT506 operates via a dedicated mobile application, available for both iOS and Android devices. Follow these steps for initial setup:

1. **Download the App:** Scan the QR code provided in the Quick Start Guide or search for "Battery Tester" in your device's app store.
2. **Log In/Register:** Open the app and log in with your existing Autel account. If you do not have an account, you can create one directly within the app.
3. **Pair the Tester:**
    - Press and hold the power button on the BT506 tester to turn it on.
    - Within the app, follow the on-screen instructions to pair the BT506 via Bluetooth. This typically involves scanning the QR code located on the back of the tester.

- Confirm the displayed information and tap to bind and complete the registration process.

4. **Firmware Update:** Ensure the tester's firmware is up to date through the "BAS Manager" section in the app.



Figure 3.1: The BT506 can be connected to a wireless Autel scanner or a smartphone for operation.

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Video 3.1: Official Autel video demonstrating the setup and initial use of the BT506, including app pairing and basic operations.

4. Operating Instructions

The MaxiBAS BT506 offers comprehensive testing capabilities for various automotive electrical components.

4.1 Battery Test (In-Vehicle & Out-of-Vehicle)

The BT506 supports testing of 6V and 12V batteries with CCA ratings from 100 to 2000. It is compatible with Flooded, AGM, AGM Spiral, EFB, and GEL battery types, and various standards including CCA, CA, SAE, EN, IEC, DIN, JIS, and MCA.

1. **Connect Clamps:** Attach the red clamp to the positive (+) battery terminal and the black clamp to the negative (-) battery terminal. The clamps are polarity protected, meaning no damage will occur if connected incorrectly, though the tester will alert you.
2. **Select Test Type:** In the app, choose either "In-vehicle test" or "Out-of-vehicle test" based on your testing scenario.
3. **Input Battery Information:** Enter the battery voltage, type, standard (e.g., CCA), and capacity as indicated on the battery label.
4. **Start Test:** Tap "Start Testing" to initiate the battery analysis. The app will display results including State of Health (SOH), State of Charge (SOC), voltage, measured capacity, and temperature.

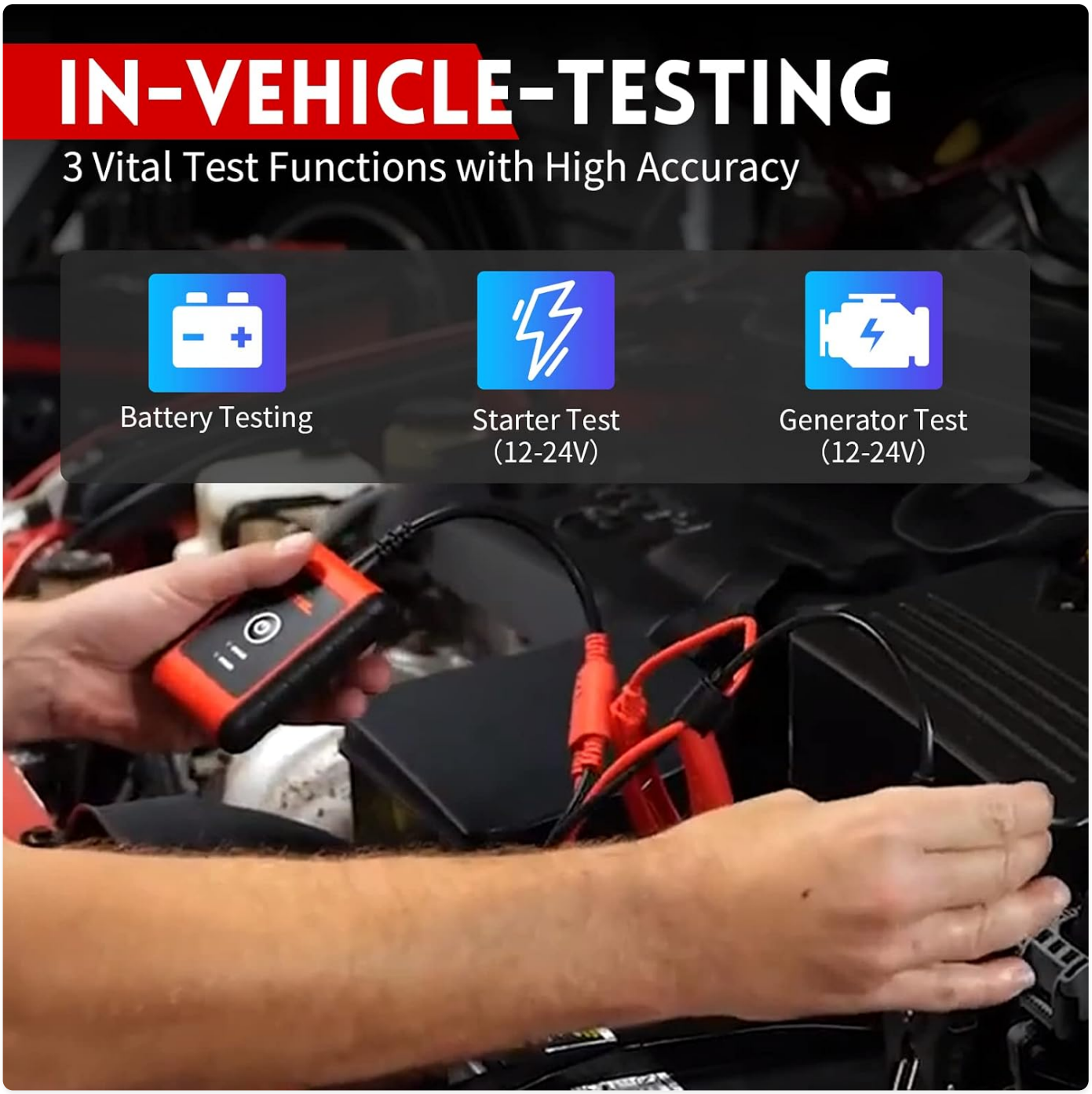


Figure 4.1: Performing an in-vehicle battery test with the BT506.



Figure 4.2: Performing an out-of-vehicle battery test with results shown on the connected smartphone.

4.2 Cranking System Test (12V-24V)

This test evaluates the vehicle's starter performance.

1. **Prepare Vehicle:** Follow the app's instructions to turn off electrical accessories, turn off the ignition, and close all vehicle doors.
2. **Start Engine:** When prompted by the app, start the engine and let it idle.
3. **View Results:** The app will display the cranking test results, including starting voltage and starting time.

4.3 Charging System Test (12V-24V)

This test assesses the alternator's ability to charge the battery and power the vehicle's electrical systems.

1. **Follow Prompts:** The app will guide you through the test, which may involve turning off the ignition and electric appliances.
2. **View Results:** The test results will include ripple voltage, no-load voltage, and load voltage, indicating the

alternator's condition.



Figure 4.3: Display of starter and generator test results on the app.

5. Advanced Features (with VCI V200P Upgrade)

With an additional purchase of the Autel VCI V200P, the BT506 can be upgraded to the BT508, unlocking advanced functionalities:

- **Battery Change:** Step-by-step guidance for battery replacement, including battery type suggestion, preparation, replacement steps, new battery test, and battery registration.
- **One-touch Battery Registration:** For over 53 car brands.
- **BMS Reset:** And some electric appliance resets (e.g., power windows, sunroof).
- **Battery Usage History:** For BMW vehicles.
- **All System Diagnostics:** Supports diagnostics for an optional one vehicle brand.



Figure 5.1: Advanced features available when upgrading the BT506 with the VCI V200P.

6. Maintenance

To ensure the longevity and optimal performance of your Autel MaxiBAS BT506, follow these general maintenance guidelines:

- **Cleaning:** Regularly wipe the device and clamps with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Storage:** Store the tester in a cool, dry place away from direct sunlight and extreme temperatures. Ensure the clamps are clean and free of corrosion before storage.
- **Cable Care:** Do not pull on the cables to disconnect the clamps. Always grasp the clamp body. Inspect cables for any signs of damage before each use.

7. Troubleshooting

If you encounter issues with your Autel MaxiBAS BT506, consider the following:

- **No Power/Connection:** Ensure the clamps are securely connected to the battery terminals. The device is powered by the battery being tested. Check the LED indicators on the tester for status (Power, Status).
- **Incorrect Polarity:** The BT506 features polarity protection. If clamps are reversed, the tester's LEDs will flash red to alert you, but no damage will occur. Correct the connection and retest.
- **App Connectivity Issues:** Verify Bluetooth is enabled on your smartphone/tablet. Ensure the app is updated to the latest version. Try restarting both the tester and your device.
- **Inaccurate Readings:** Ensure battery terminals are clean and free of corrosion. Corroded terminals can affect test accuracy.

For persistent issues, refer to the detailed user manual within the app or contact Autel customer support.

8. Specifications

Feature	Detail
Model Number	AM127
Power Source	Battery Powered (from vehicle/battery being tested)
Color	Red
Item Weight	16 ounces (1 Pound)
Package Dimensions	9.92 x 7.8 x 2.6 inches
Battery Compatibility	6V, 12V (100-2000 CCA) Flooded, AGM, AGM Spiral, EFB, GEL
System Compatibility	12V-24V Cranking/Charging Systems
Connectivity	Bluetooth (App-based operation)

9. Warranty and Support

The Autel MaxiBAS BT506 is a 100% original product directly from the Autel Factory, backed by Autel headquarters. For warranty information, technical support, or any inquiries, please visit the official Autel website or contact their customer service.
Official Website: www.autel.com

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