

Autel BT506

Autel MaxiBAS BT506 Auto Battery & Electrical System Analysis Tool User Manual

Model: BT506

1. INTRODUCTION

The Autel MaxiBAS BT506 is a sophisticated battery and electrical system analysis tool designed for testing 6V and 12V automotive batteries, as well as 12V and 24V cranking/charging systems. Utilizing Adaptive Conductance technology, this device provides accurate and reliable diagnostic results for various battery types, ensuring optimal vehicle performance and longevity. This manual provides detailed instructions for the proper setup, operation, and maintenance of your BT506 device.



Figure 1.1: Autel MaxiBAS BT506 Battery and Electrical System Tester.

2. KEY FEATURES

- **Comprehensive Battery Analysis:** Tests 6V and 12V batteries (100-2000 CCA) including Flooded, AGM, AGM Spiral, EFB, and GEL types.
- **Cranking and Charging System Tests:** Evaluates 12V and 24V vehicle cranking and charging systems.
- **Adaptive Conductance Technology:** Advanced analysis method for enhanced accuracy, reducing misdiagnosis and retest rates.
- **In-Vehicle and Out-of-Vehicle Testing:** Supports diagnostics for batteries installed in vehicles and standalone batteries.
- **Broad Compatibility:** Works with iOS and Android smartphones via Bluetooth, and integrates with 98% of Autel wireless diagnostic scanners.
- **Multiple Standards Support:** Compatible with CCA, CA, SAE, EN, IEC, DIN, JIS, and MCA standards.

3. SETUP

3.1 Package Contents

Verify that all components are present:

- Autel MaxiBAS BT506 Unit
- Battery Clamps (Red and Black)
- User Manual (this document)

3.2 App Installation and Connection

The BT506 operates via a dedicated mobile application or by connecting to compatible Autel diagnostic scanners.

1. For Smartphone Use:

- Download the free Autel MaxiBAS app from the Apple App Store (for iOS) or Google Play Store (for Android).
- Ensure Bluetooth is enabled on your smartphone.
- Power on the BT506 unit. The 'STATUS' indicator should illuminate.
- Open the MaxiBAS app and follow the on-screen instructions to pair your BT506 device via Bluetooth. You may need to log in with your Autel ID.

2. For Autel Scanner Use:

- The BT506 is compatible with most Autel wireless scanners (e.g., MK808BT, MK808TS, MP808TS, MS906S, MS909, Ultra).
- Connect the BT506 to your Autel scanner via Bluetooth. Refer to your scanner's manual for specific pairing instructions.
- Access the built-in "Battery Test" application on your scanner to perform diagnostic operations.

Autel MaxiBAS BT506

Compatible with Autel Tablets or Phones



MK808BT/MK808BT Pro/MX808TS/MX808S-TS/MK808TS
MS906S/MS906TS/MS906BT/MK906BT/MS906 Pro/MS906 Pro-TS/
MK906 Pro/MK906 Pro-TS
D808TS/DS808S-TS/MP808TS/MP808S-TS/MP808BT/ MP808BT Pro
MK908 II/MK908 Pro II/Maxisys Elite/Maxisys Elite 11/ MS909/
MS919/Ultra/Ultra Lite
MS908/MS908 Pro/MS908S/MS908SPro/MS908S11



Figure 3.1: Steps for downloading the app and pairing the BT506 device.

		Autel BT609 	Autel BT608 	Autel BT508 	Autel BT506 
DIAGNOSTICS	All System Diagnostics With AutoSCAN	•	•	• (One vehicle brand ONLY)	X
	All Maintenance Service Resets	•	X	X	X
	Diagnostic Software Update	Annual update fee	No annual update fee	Charge for additional vehicle brands and annual update	X
FEATURES	CCA Range	100-3000 CCA	100-3000 CCA	100-2000 CCA	100-2000 CCA
	Battery Type	Flooded, AGM, AGM Spiral, EFB, GEL	Flooded, AGM, AGM Spiral, EFB, GEL	Flooded, AGM, AGM Spiral, EFB, GEL	Flooded, AGM, AGM Spiral, EFB, GEL
	Battery Ratings	CCA, CA, MCA, JIS, DIN, SAE, IEC, EN, EN2, BCI, GB	CCA, CA, MCA, JIS, DIN, SAE, IEC, EN, EN2, BCI, GB	CCA, CA, MCA, JIS, DIN, SAE, IEC, EN, EN2, BCI, GB	CCA, CA, MCA, JIS, DIN, SAE, IEC, EN, EN2, BCI, GB
	Battery Voltage	6V, 12V	6V, 12V	6V, 12V	6V, 12V
	Electrical System	12V, 24V	12V, 24V	12V, 24V	12V, 24V
	Voltage Range	1.5-36V	1.5-36V	1.5V-36V	1.5V-36V
	Temperature Compensation	•	•	X	X
	Battery Registration	53 vehicle makes	53 vehicle makes	53 vehicle makes	X
	Electrical Reset	•	•	•	X
	System Detection	AutoVIN, VINScan, Plate Scan	AutoVIN, VINScan, Plate Scan	AutoVIN	X
	Battery Location Diagrams	•	•	•	•
	Battery Health Report	•	•	•	X
	Built-in Printer	X	•	X	X
	Email Report	•	•	•	•
	Cloud-base Service	•	•	•	•
	Multimeter	Optional	Optional	X	X
	Amp clamp	Optional	Optional	X	X
SOFTWARE	Operating System	Android 9.0	Android 9.0	X	X
HARDWARE	Screen	7.0-inch Touchscreen 1280*800	5.5-inch Touchscreen 720*1280	X	X
	Processor	Cortex-A35 Quad-core, 1.5Ghz	Cortex-A35 Quad-core, 1.5Ghz	Cortex-M4	Cortex-M4
	Memory / RAM	64GB / 2GB	32GB / 2GB	X	X
	Battery	6000mAh, 6H	3000mAh, 6H	X	X
	Camera	8mp	8mp	X	X

Figure 3.2: The BT506 is compatible with a wide range of Autel diagnostic tools and mobile devices.

4. OPERATING INSTRUCTIONS

Before performing any tests, ensure the BT506 is properly connected to your smartphone or Autel scanner.

4.1 Connecting to the Battery

1. Ensure the vehicle ignition is off and all electrical accessories are turned off.
2. Connect the red clamp to the positive (+) terminal of the battery.
3. Connect the black clamp to the negative (-) terminal of the battery.
4. Ensure a secure connection. The BT506 has polarity protection to prevent damage from incorrect connections.

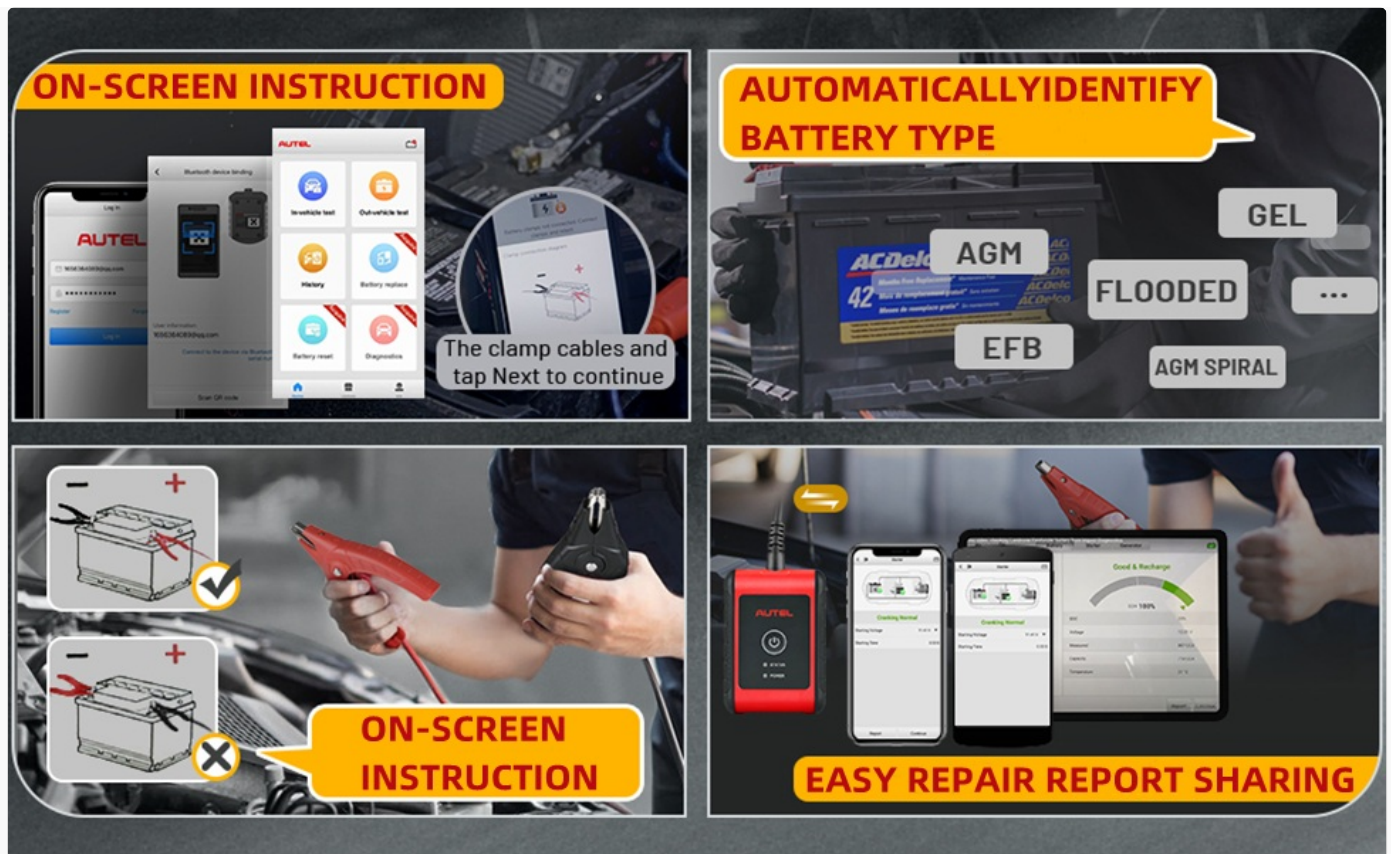


Figure 4.1: On-screen instructions guide the user through connecting the battery clamps and automatically identifying the battery type.

4.2 Performing Tests

The BT506 supports three primary test types: Battery Test, Cranking Test, and Generator Test.

Autel MaxiBAS BT506

Know Everything about Your Vehicle Battery and Charging System



Battery Test



Starter Test



Generator Test

- In-Vehicle & Out-of Vehicle Test
- 6V-12 BatteryTest(100-2000 CCA)
- 12-24V Starter & GeneratorTest
- Advanced Adaptive Conductance
- Support 11 Battery Standards
- Compatible with 5Types Battery
- Work with VCI200 to Become BT508
- Automatic Battery Identify



FREE SMARTPHONE APP DOWNLOAD



Download the free and easy-to-use mobile app, available for iOS and Android devices

Figure 4.2: The BT506 offers Battery, Starter, and Generator test functions.

4.2.1 Battery Test

This test evaluates the overall health of the battery, including State of Charge (SOC), voltage, and measured capacity.

1. From the app/scanner interface, select "Battery Test."
2. Choose between "In-Vehicle Test" or "Out-of-Vehicle Test."
3. Follow the on-screen prompts to input battery specifications (e.g., CCA rating, battery type) if not automatically detected.
4. The device will perform the test and display results such as SOC, voltage, measured CCA, and repair tips if applicable.

ADAPTIVE CONDUCTANCE



Figure 4.3: Example of battery test results displayed on a smartphone, showing State of Health (SOH), SOC, voltage, and measured capacity.

4.2.2 Cranking Test

The Cranking Test assesses the vehicle's starting system by measuring starting voltage, current, and run-up time.

1. Select "Cranking Test" from the main menu.
2. Follow the on-screen instructions, which typically involve starting the vehicle.
3. The BT506 will analyze the starter's performance and provide a report on the starting system's condition.

4.2.3 Generator Test (Charging System Test)

This test evaluates the alternator's performance and the overall charging system by measuring load voltage/current, no-load voltage/current, and ripple.

1. Select "Generator Test" from the main menu.
2. Follow the on-screen instructions, which may require running the engine at specific RPMs or activating certain electrical loads.

3. The device will provide an intuitive judgment of the charging system and offer maintenance suggestions.



Figure 4.4: Visual representation of Cranking and Generator test processes and their indicators.

4.3 Adaptive Conductance Technology

The BT506 employs Adaptive Conductance, an advanced battery analysis method. This technology significantly improves test accuracy and reliability by:

- Adjusting the battery test algorithm for more precise results.
- Diagnosing almost completely discharged batteries.
- Identifying low-capacity batteries more effectively.
- Reducing the rate of misdiagnosis and the need for charge-and-retest procedures.

USER-ORIENTED EASIEST OPERATION

FAST & EASY OPERATION

POLARITY PROTECTION

EASY REPAIR REPORT SHARING

AUTOMATICALLY IDENTIFY BATTERY TYPE

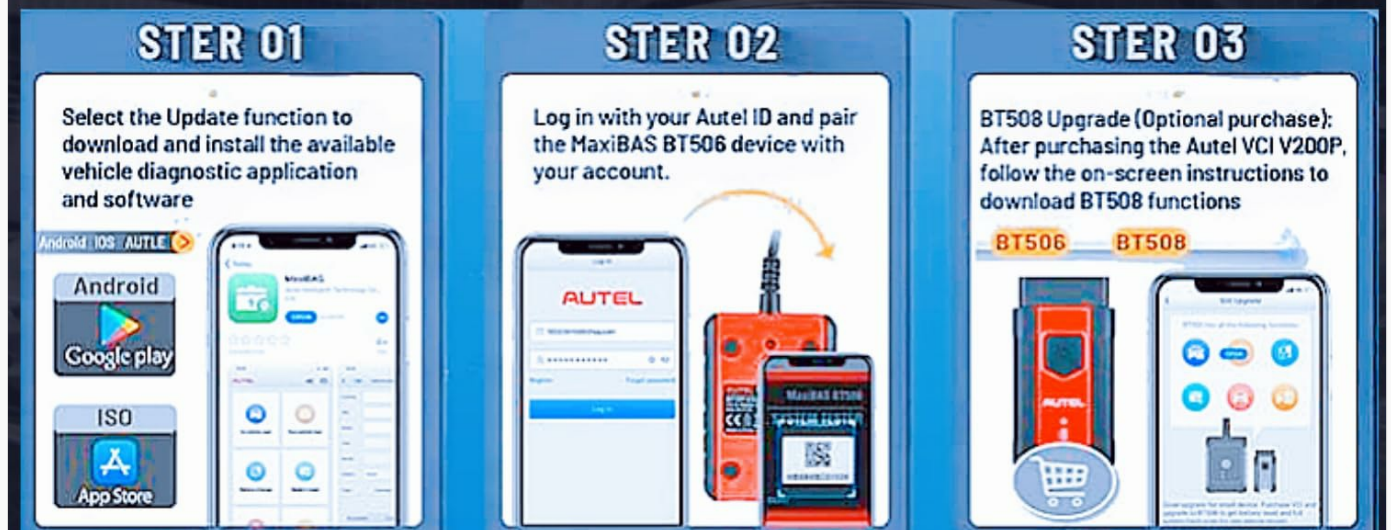


Figure 4.5: Adaptive Conductance technology enhances test accuracy and reduces misdiagnosis rates.

4.4 Supported Battery Types and Standards

The BT506 is versatile, supporting a wide range of battery types and international testing standards:

- **Battery Types:** Flooded, AGM, AGM Spiral, EFB, GEL.
- **Testing Standards:** CCA, CA, SAE, EN, IEC, DIN, JIS, MCA.

ABUNDANT BATTERY TYPES

Battery Types



FLOODED



AGM SPIRAL



AGM



EPB



GEL

100-2000 CCA

Test 6 Volt and 12 Volt Batteries

Cranking/Charging

Systems Test 12 Volt and 24 Volt

Battery Standards

AAC

CA

SAE

EN

IEC

DIN

IEC

MCA

BCI

JIS

GB

Figure 4.6: The BT506 supports various battery types and international testing standards.

5. MAINTENANCE

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

- **Cleaning:** Wipe the device and clamps with a soft, dry cloth after each use. Avoid using abrasive cleaners or solvents.
- **Storage:** Store the device in a dry, cool environment, away from direct sunlight and extreme temperatures. Keep the clamps clean and free of corrosion.
- **Software Updates:** Regularly check for and install software updates for the MaxiBAS app or your Autel scanner to ensure optimal performance and access to the latest features.
- **Cable Inspection:** Periodically inspect the battery cables and clamps for any signs of wear, damage, or corrosion. Replace if necessary.

6. TROUBLESHOOTING

If you encounter issues with your Autel MaxiBAS BT506, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	No power from battery; internal fault.	Ensure clamps are securely connected to a charged battery. If still no power, contact support.
Bluetooth connection fails.	Bluetooth off; device not discoverable; interference.	Ensure Bluetooth is enabled on your smartphone/scanner. Restart both devices. Move closer to the BT506.
Inaccurate test results.	Poor clamp connection; incorrect battery type/CCA input; battery too discharged.	Verify secure clamp connections. Double-check battery information. Charge the battery if it is extremely low.
App crashes or freezes.	Outdated app version; software conflict.	Update the MaxiBAS app to the latest version. Restart your smartphone/scanner.
Device not charging (if applicable).	Faulty cable/charger; internal battery issue.	Use a different USB-C cable and power adapter. If the issue persists, contact Autel support.

7. SPECIFICATIONS

Specification	Detail
Product Dimensions	4.21 x 2.95 x 1.02 inches
Item Weight	1.2 Pounds
Model Number	BT506
Brand	Autel
Power Source	Battery Powered (via vehicle battery)
Battery Voltage Range	6V, 12V
Cranking/Charging System Voltage	12V, 24V
CCA Range	100-2000 CCA
Supported Battery Types	Flooded, AGM, AGM Spiral, EFB, GEL
Supported Standards	CCA, CA, SAE, EN, IEC, DIN, JIS, MCA
Connectivity	Bluetooth

8. WARRANTY AND SUPPORT

Autel products are designed for reliability and performance. For warranty information, please refer to the warranty card included with your product or visit the official Autel website. For technical support, product inquiries, or service, please contact Autel customer support through their official channels.

Autel Official Website: www.autel.com

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question