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› FOXWELL BT301 12V Car Battery Tester User Manual

FOXWELL BT301

FOXWELL BT301 12V Car Battery Tester User Manual

Model: BT301 | Brand: FOXWELL

1. INTRODUCTION

The FOXWELL BT301 is an advanced 12V car battery tester designed for comprehensive diagnostics of automotive batteries, cranking systems, and charging systems. This device provides accurate and reliable results for various battery types, including regular flooded, AGM flat plate/spiral, EFB, and GEL batteries. It is an upgraded version of the BT100, offering enhanced performance and user-friendly operation for both professional technicians and DIY enthusiasts.

2. WHAT'S IN THE BOX

Upon opening your FOXWELL BT301 package, please ensure all the following items are present:

- 1x FOXWELL BT301 Automotive 12V Battery Tester
- 1x User's Manual (this document)
- 1x Carrying Bag



Image: The FOXWELL BT301 battery tester, user manual, and carrying bag, illustrating the contents of the package.

3. SETUP AND INITIAL CONNECTION

Before using the FOXWELL BT301, ensure your vehicle's ignition is off. The device is powered directly by the vehicle's battery.

1. **Connect the Clamps:** Identify the positive (+) and negative (-) terminals on your vehicle's 12V battery. Connect the

red clamp of the BT301 to the positive (+) battery terminal and the black clamp to the negative (-) battery terminal. Ensure a secure connection by rocking the clamps back and forth if necessary.

2. **Power On:** Once correctly connected, the BT301 will automatically power on and display the main menu. If a "CHECK CONNECTION" message appears, re-secure the clamps.



Image: The FOXWELL BT301 battery tester with its red and black clamps connected to a car battery, ready for operation.

4. OPERATING INSTRUCTIONS

The BT301 offers three primary testing functions: Battery Test, Cranking Test, and Charging System Test. Navigate the

menu using the arrow keys and confirm selections with the "ENTER" button.

4.1. Battery Test

This test assesses the overall health of your battery, including its voltage, measured CCA, rated CCA, State of Health (SOH), and State of Charge (SOC).

1. From the main menu, select "BATTERY" and press "ENTER".
2. Choose the battery location: "IN VEHICLE" or "OUT OF VEHICLE".
3. Select the battery type (e.g., Regular, EFB, AGM, GEL) and the battery standard (e.g., CCA, CA, MCA, JIS, DIN, IEC, EN, SAE).
4. Enter the rated CCA (Cold Cranking Amps) value of your battery, typically found on the battery label.
5. The tester will display the battery test results, indicating its condition (e.g., "GOOD BATTERY", "CHARGE & RETEST", "REPLACE BATTERY").

Test, Diagnose, Decide
All in Seconds



Image: The FOXWELL BT301 screen showing a "GOOD BATTERY" result with detailed voltage, measured CCA, rating, SOH, and SOC values.

4.2. Cranking Test

This test evaluates the starter system of your vehicle by measuring the cranking voltage and time.

1. From the main menu, select "CRANKING" and press "ENTER".
2. The screen will prompt "PLEASE START ENGINE".

3. Start your vehicle's engine. The tester will automatically record the cranking data.
4. The results will display "CRANKING NORMAL" or indicate issues like "LOW VOLTAGE" or "NO START".

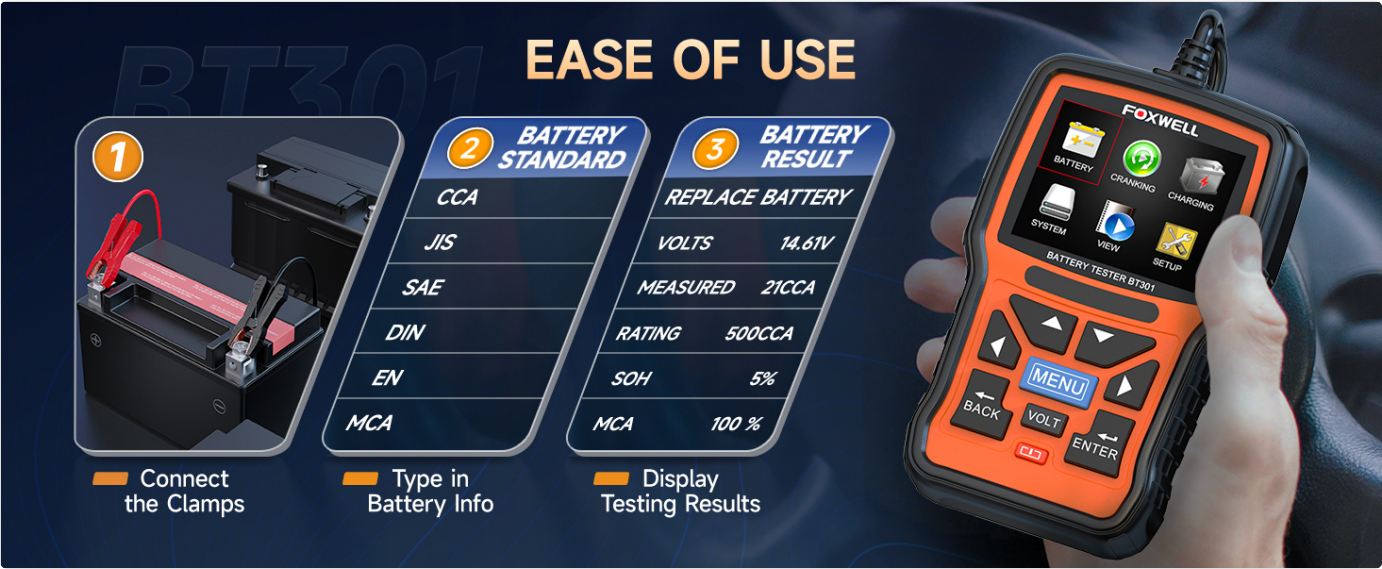


Image: A close-up of a vehicle's engine start/stop button, indicating the action required for the cranking test.

4.3. Charging System Test

This test checks the alternator's output and the overall charging system performance.

1. From the main menu, select "CHARGING" and press "ENTER".
2. Ensure the engine is running. The tester will measure the no-load and loaded voltage, and ripple peak.
3. The results will indicate if the charging system is functioning normally or if there are issues such as "LOW OUTPUT" or "HIGH OUTPUT".



Image: A view of an alternator within a car's engine bay, representing the component tested during the charging system analysis.

4.4. Data Logging and Review

The BT301 automatically logs recent test data, allowing you to review past results without needing to re-perform tests immediately.

- From the main menu, select "VIEW" and press "ENTER" to access stored test results.
- Use the arrow keys to scroll through different test records and view detailed information.

5. MAINTENANCE

To ensure the longevity and accurate performance of your FOXWELL BT301, follow these maintenance guidelines:

- **Cleaning:** Wipe the device and cables with a soft, damp cloth after each use. Do not use abrasive cleaners or solvents.
- **Storage:** Store the tester in its provided carrying bag in a dry, cool environment, away from direct sunlight and extreme temperatures.
- **Cable Inspection:** Regularly inspect the test leads and clamps for any signs of damage, fraying, or corrosion. Replace if necessary to ensure proper conductivity and safety.
- **Software Updates:** Check the FOXWELL official website periodically for any available software updates to ensure optimal performance and compatibility with new battery technologies.

6. TROUBLESHOOTING

If you encounter issues with your FOXWELL BT301, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Device does not power on.	Poor connection to battery terminals; Battery voltage too low.	Ensure clamps are securely connected to the correct battery terminals. Check battery voltage with a voltmeter; if below 8V, charge the battery before testing.
"CHECK CONNECTION" message displayed.	Loose or corroded connections.	Clean battery terminals and re-attach clamps firmly. Rock clamps to ensure good contact.
Inaccurate test results.	Incorrect battery type/standard/CCA entered; Battery not fully charged; Extreme temperatures.	Verify entered battery parameters match the battery specifications. Ensure battery is adequately charged. Perform tests in moderate temperatures if possible.
Screen freezes or becomes unresponsive.	Temporary software glitch.	Disconnect the tester from the battery, wait a few seconds, and reconnect. If the issue persists, contact customer support.

7. SPECIFICATIONS

Key technical specifications for the FOXWELL BT301 12V Car Battery Tester:

- **Brand:** FOXWELL
- **Model:** BT301
- **Power Source:** Corded Electric (powered by vehicle battery)
- **Color:** Orange
- **Minimum Operating Voltage:** 6 Volts (DC)
- **Measurement Type:** Voltmeter
- **Item Weight:** 1.37 pounds
- **Package Dimensions:** 8.74 x 6.65 x 3.43 inches
- **Supported Battery Types:** Regular Flooded, AGM Flat Plate, AGM Spiral, EFB, GEL
- **CCA Testing Range:** 100-2000 CCA

8. WARRANTY AND SUPPORT

FOXWELL stands behind the quality of its products. For warranty information, technical support, or any product-related inquiries, please refer to the following:

- **Warranty:** Please consult the warranty card included with your product or visit the official FOXWELL website for detailed warranty terms and conditions.
- **Customer Support:** For assistance with product usage, troubleshooting, or replacement parts, please contact FOXWELL customer support through their official website or the contact information provided in the product packaging.
- **Online Resources:** Additional FAQs and support resources may be available on the FOXWELL brand store page on Amazon or their official website.

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