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› [FOXWELL](#) /

› FOXWELL BT630 & NT630 Pro User Manual

FOXWELL BT630, NT630 Pro

FOXWELL BT630 & NT630 Pro User Manual

Comprehensive Guide for Your Bluetooth Battery Monitor and OBD2 Scanner

1. INTRODUCTION

This manual provides detailed instructions for the operation, maintenance, and troubleshooting of your FOXWELL BT630 Bluetooth Battery Monitor with Shunt and FOXWELL NT630 Pro OBD2 Scanner Battery Tester. These devices are designed to provide comprehensive battery monitoring and vehicle diagnostic capabilities for a wide range of applications, including RVs, EVs, marine systems, off-grid setups, and various vehicles.

2. PRODUCT OVERVIEW

The FOXWELL BT630 is a high-precision Bluetooth battery monitor designed for real-time tracking of battery parameters. The FOXWELL NT630 Pro is a versatile OBD2 scanner and battery tester, offering advanced diagnostic functions for vehicle systems.

2.1. Components

- **FOXWELL BT630 Bluetooth Battery Monitor:** Main unit with integrated shunt for current and voltage measurement.
- **FOXWELL NT630 Pro OBD2 Scanner:** Handheld diagnostic tool with display and control buttons.
- **Connection Cables:** For connecting the NT630 Pro to the vehicle's OBD2 port and the BT630 to the battery system.
- **Battery Clamps:** For direct battery connection with the NT630 Pro.



Figure 2.1: Overview of the FOXWELL BT630 Bluetooth Battery Monitor (right) and NT630 Pro OBD2 Scanner (left) with included accessories. The BT630 features a transparent housing showing internal components, while the NT630 Pro is a handheld device with a screen and buttons.

3. FEATURES AND CAPABILITIES

3.1. FOXWELL BT630 Bluetooth Battery Monitor

- **Real-Time Bluetooth Monitoring:** Seamless integration with BMS apps via stable Bluetooth connectivity.
- **Wide Range Monitoring:** Supports high-current monitoring up to 600A and wide voltage range tracking from 10V to 120V.
- **Key Metrics Display:** Displays 9 critical metrics in clear graphs: SOC%, Voltage, Current, Remaining Capacity, Power, Temperature, Estimated Runtime, and Charge/Discharge History.
- **Comprehensive Safety Protection:** Features 8-layer safety protection (over/under-voltage, charge/discharge overcurrent, overpower, over-temperature, low-temperature, low SOC) with customizable alerts and power cutoff (requires external relay).
- **Dual-Calibration Precision:** Automatic error calibration using a long-term model database and a built-in high-precision shunt ($\pm 0.4\%$ error) for accurate readings.
- **Low Power Consumption:** Ultra-low 0.4W power consumption design extends battery runtime.
- **Long-Term Tracking:** Visualized data graphs detect hidden risks and trends up to 30 days in advance.

NT630 PLUS UPGRADE VERSION

Add 12V Battery Test BMS Rest



Figure 3.1: The FOXWELL BT630 mobile application interface displaying real-time battery metrics such as State of Charge (SoC), Voltage, Current, Temperature, and Power.

SAFER EVERY USE



Figure 3.2: Diagram illustrating the 8 security protection features of the FOXWELL BT630, including safeguards against low/over voltage, overcurrent, overpower, and temperature extremes.

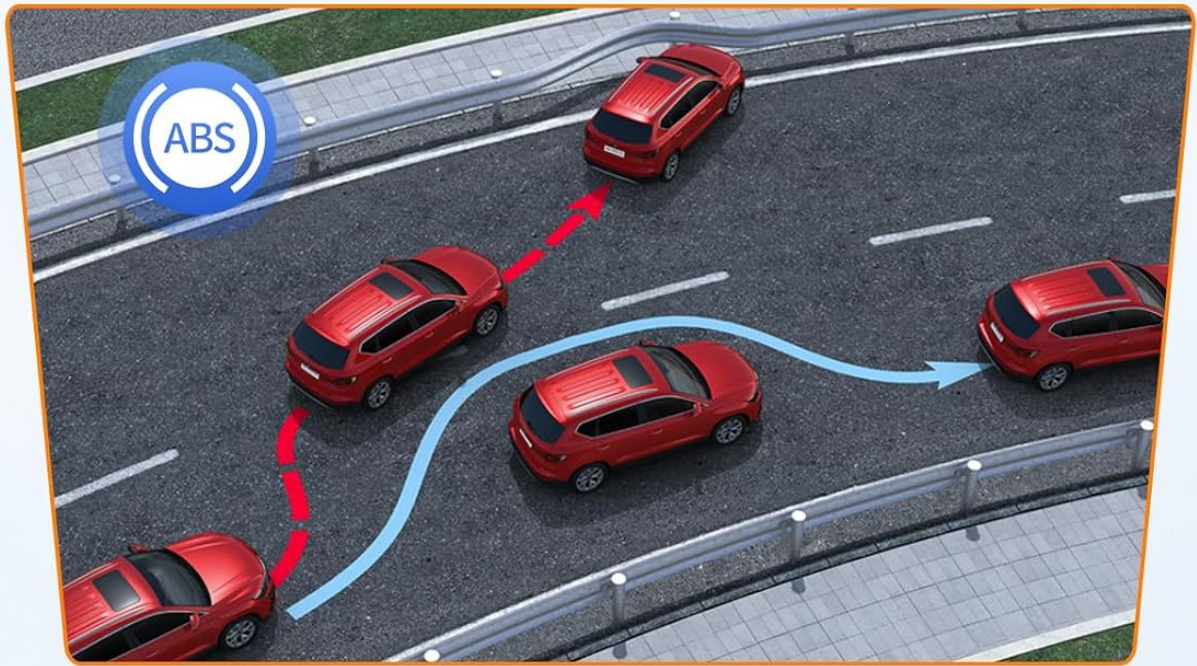
3.2. FOXWELL NT630 Pro OBD2 Scanner

- **ABS & SRS Diagnostics:** Reads and clears codes, displays live data, ECU information, and performs active tests for Anti-lock Braking System (ABS) and Supplemental Restraint System (SRS).
- **Battery Test Functions:** Includes 12V battery test, cranking test, and charging test.
- **Service Reset Functions:** Supports various service resets such as ABS Bleeding, Oil Reset, Electronic Parking Brake (EPB), Steering Angle Sensor (SAS), and Battery Management System (BMS) reset.
- **Wider Application:** Compatible with light trucks, boats, golf cars, cars, motorcycles, and ATVs.
- **Upgraded Clamps:** Features upgraded battery clamps for 99.9% accuracy and enhanced safety.

HOT SERVICE RESET



Figure 3.3: The FOXWELL NT630 Pro demonstrating various service reset functions, including ABS Bleeding, Oil Reset, EPB, SAS, and BMS.



ABS & SRS DIAGNOSTICS

Read Code | Clear Code | Live Data | ECU Information | Active Test



Figure 3.4: Visual representation of the FOXWELL NT630 Pro's ABS and SRS diagnostic capabilities, showing code reading, clearing, live data, and active tests.

WIDER APPLICATION FOR BATTERY TESTING

Models Supported



Light truck



Boat



Golf Car



Car



Motorcycle



ATV

UPGRADED CLAMP

- 99.9% Accuracy & More Safe

99.9%



Figure 3.5: The FOXWELL NT630 Pro's compatibility across various vehicle types for battery testing, including light trucks, boats, golf cars, cars, motorcycles, and ATVs, highlighting its upgraded clamps.

4. SETUP AND INSTALLATION

4.1. FOXWELL BT630 Installation

1. **Prepare the Battery System:** Ensure the battery system is de-energized before installation.
2. **Connect the Shunt:** Install the BT630 shunt in series with the negative terminal of your battery bank. Follow the wiring diagram provided with the product for correct current flow direction.

3. **Connect Voltage Sense Wires:** Connect the voltage sense wires to the positive and negative terminals of the battery bank.
4. **Power On:** Re-energize the battery system. The BT630 will power on automatically.
5. **Download App:** Download the FOXWELL BMS app from your device's app store.
6. **Pair via Bluetooth:** Open the app and follow the on-screen instructions to pair with your BT630 device via Bluetooth.

4.2. FOXWELL NT630 Pro Connection

1. **Vehicle Connection (OBD2):** Locate the vehicle's OBD2 port (usually under the dashboard). Connect the NT630 Pro's OBD2 cable to this port. The device will power on automatically.
2. **Battery Connection (Battery Test):** For direct battery testing, connect the red clamp to the positive (+) battery terminal and the black clamp to the negative (-) battery terminal.

5. OPERATING INSTRUCTIONS

5.1. Using the FOXWELL BT630 App

- **Dashboard View:** Upon connecting, the app's main screen will display real-time battery parameters (SOC%, Voltage, Current, etc.).
- **Historical Data:** Navigate to the "History" or "Chart" section to view past performance and trends.
- **Settings:** Access settings to configure alerts, set battery capacity, and customize other parameters.
- **Safety Alerts:** The app will provide notifications for any detected over/under conditions based on your configured thresholds.

5.2. Using the FOXWELL NT630 Pro

1. **Main Menu Navigation:** Use the arrow keys to navigate through the main menu options (e.g., AUTOSCAN, ABS&Airbag, Battery Test, OBDII, History, EPB).
2. **Performing a Battery Test:** Select "Battery Test" from the main menu. Choose the type of test (e.g., 12V Battery Test, Cranking Test, Charging Test) and follow the on-screen prompts.
3. **ABS & SRS Diagnostics:** Select "ABS&Airbag" to access diagnostic functions. Choose to read codes, clear codes, view live data, or perform active tests.
4. **OBDII Functions:** Select "OBDII" for standard engine diagnostics, including reading/clearing generic trouble codes, viewing freeze frame data, and I/M readiness status.
5. **Service Functions:** Select specific service functions (e.g., EPB, Oil Reset) and follow the instructions to perform the reset.

6. MAINTENANCE

- **Cleaning:** Wipe the devices with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the devices in a cool, dry place away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Periodically check the FOXWELL official website for firmware updates for the NT630 Pro and app updates for the BT630 to ensure optimal performance and compatibility.
- **Cable Inspection:** Regularly inspect all cables and connectors for signs of wear or damage. Replace if necessary.

7. TROUBLESHOOTING

7.1. FOXWELL BT630 Issues

- **Device Not Powering On:** Ensure the BT630 is correctly wired to the battery system and the battery has sufficient voltage (10-120V).
- **Bluetooth Connection Issues:** Ensure Bluetooth is enabled on your mobile device. Restart the app and the BT630 (by temporarily disconnecting and reconnecting power). Ensure no other devices are actively connected to the BT630.
- **Inaccurate Readings:** Verify all wiring connections are secure and correct. Perform a manual calibration if the automatic calibration does not resolve the issue. Ensure the shunt is installed correctly in the negative line.

7.2. FOXWELL NT630 Pro Issues

- **Device Not Powering On (OBD2):** Check the vehicle's OBD2 port for power. Ensure the vehicle's ignition is on.
- **Communication Error:** Verify the OBD2 cable is securely connected to both the NT630 Pro and the vehicle. Ensure the vehicle's ignition is on. Try connecting to a different vehicle if possible to rule out vehicle-specific issues.
- **Battery Test Errors:** Ensure battery clamps are securely connected to the correct battery terminals (red to positive, black to negative). Ensure battery voltage is within the testable range.

If problems persist, please refer to the support section for further assistance.

8. SPECIFICATIONS

Feature	Specification
Product Name	FOXWELL BT630 Bluetooth Battery Monitor & NT630 Pro OBD2 Scanner
BT630 Voltage Range	10V - 120V
BT630 Current Range	Up to 600A
BT630 Shunt Accuracy	±0.4%
BT630 Power Consumption	0.4W (Ultra-low)
NT630 Pro Battery Test	12V Batteries
Connectivity	Bluetooth (BT630), OBD2 (NT630 Pro)
Operating Temperature	Not specified (typical automotive range)
Storage Temperature	Not specified (typical automotive range)

9. WARRANTY INFORMATION

FOXWELL products are manufactured to the highest quality standards. This product comes with a standard manufacturer's warranty against defects in materials and workmanship. Please retain your proof of purchase for warranty claims. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official FOXWELL website.

10. CUSTOMER SUPPORT

For technical assistance, troubleshooting, or any inquiries regarding your FOXWELL BT630 or NT630 Pro, please contact FOXWELL customer support. You can typically find contact information on the official FOXWELL website or within the product packaging.

- **Online Support:** Visit the official FOXWELL website for FAQs, knowledge base articles, and support forums.
- **Email Support:** Contact support via email for detailed inquiries.
- **Phone Support:** Check the website for available phone support hours and numbers.