FOXWELL NT301 Plus

FOXWELL NT301 Plus User Manual

Brand: FOXWELL | Model: NT301 Plus

1. INTRODUCTION AND OVERVIEW

The FOXWELL NT301 Plus is a versatile 2-in-1 diagnostic tool designed for automotive enthusiasts and professionals. It combines the full functionality of an OBD2/EOBD code reader with a comprehensive 12V battery tester, providing an efficient solution for diagnosing vehicle issues and monitoring battery health. This manual provides detailed instructions for setting up, operating, and maintaining your NT301 Plus device.

Image: The FOXWELL NT301 Plus device, an orange and black handheld unit with a screen and buttons, shown alongside its black zippered storage case. This image illustrates the primary components included with the product.

2. PRODUCT FEATURES

- **Dual Functionality:** Combines full OBD2/EOBD diagnostic capabilities with 12V battery health, cranking, and charging system tests.

- **Comprehensive OBD2 Functions:** Reads and clears diagnostic trouble codes (DTCs), views live data, freeze frame data, I/M readiness status, O2 sensor test, EVAP system test, and on-board monitor test.

- **Advanced Battery Testing:** Accurately assesses battery health (SOH, SOC, Voltage, Current, Rating), performs cranking tests to check starter motor function, and charging tests to evaluate alternator performance.

- **Wide Battery Compatibility:** Supports various 12V battery types including regular flooded, AGM flat plate, AGM spiral, GEL, and EFB batteries with CCA ratings from 100 to 2000.

- **One-Click I/M Readiness:** Quickly checks emission readiness status for smog inspection.

- **User-Friendly Design:** Features a 2.8-inch TFT color screen, intuitive navigation buttons, and audible/visual indicators for ease of use.

- **Broad Vehicle Compatibility:** Works with standard OBD2 compliant vehicles with 12V batteries from 1996 (USA) to present, including cars, light-duty trucks, diesels, SUVs, minivans, hybrids, golf carts, motorcycles, mowers, pickup trucks, boats, and ATVs.

Image: A visual representation highlighting the versatile capabilities of the NT301 Plus, including checking battery status, performing home emissions checks, diagnosing and performing minor maintenance, and reading fault codes to determine check engine light urgency.

Image: This graphic illustrates how the NT301 Plus acts as a "Professional CEL Doctor," showing common car problems like a flashing engine light, ignition coil failure, or sudden breakdowns, and listing the diagnostic functions available: Check Engine, Reset Monitor, Pass Smog Check, O2 Sensor Test, Battery Test, EVAP Leak Test, DTC Lookup, Data Record/Print, and Live Data Graph.

3. PACKAGE CONTENTS

Upon opening your FOXWELL NT301 Plus package, please verify that all the following items are included:

- FOXWELL NT301 Plus Main Unit
- OBD2 Diagnostic Cable
- Battery Test Clamps (Red and Black)
- Storage Case
- User Manual (this document)

4. SETUP

4.1 Powering the Device

The NT301 Plus is powered directly from the vehicle's OBD2 port or via the battery test clamps.

- **Via OBD2 Port:** Locate the 16-pin Data Link Connector (DLC) in your vehicle, usually under the dashboard on the driver's side. Plug the NT301 Plus's OBD2 cable into the vehicle's DLC. The device will power on automatically.

- **Via Battery Clamps:** For battery testing functions, connect the red clamp to the positive (+) terminal of the 12V battery and the black clamp to the negative (-) terminal. The device will power on.

4.2 Initial Setup and Language Selection

Upon first power-up, you may be prompted to select a language. Use the navigation buttons to select your preferred language and press the **ENTER** button to confirm.

4.3 Software Updates

It is recommended to regularly update the device software to ensure optimal performance and access to the latest vehicle data and features. Visit the official FOXWELL website for detailed instructions on how to update your NT301 Plus.

5. OPERATING INSTRUCTIONS

5.1 General Navigation

The NT301 Plus features a user-friendly interface with dedicated buttons:

- **READ:** Initiates reading of diagnostic trouble codes.
- **ERASE:** Clears diagnostic trouble codes and turns off the Malfunction Indicator Lamp (MIL).
- **I/M:** Performs a one-click I/M Readiness check for emissions.
- **BACK:** Returns to the previous screen or menu.
- **HELP:** Provides context-sensitive help or definitions.
- **ENTER:** Confirms a selection or enters a menu.
- **Directional Buttons (Up/Down/Left/Right):** Navigate through menus and data.

Image: A close-up of the FOXWELL NT301 Plus device, highlighting its compact design, 2.8-inch TFT color screen, DTC Lookup feature, 99.99% accuracy, upgraded clamps, One-Key Smog Test button, and unique signal indicators (OK, Warn, Compatible).

5.2 OBD2/EOBD Diagnostic Functions

Connect the NT301 Plus to the vehicle's OBD2 port. The main menu will display options for OBD/EOBD functions.

- **Read Codes:** Select "Read Codes" to display current, pending, and permanent Diagnostic Trouble Codes (DTCs). Each code will be accompanied by a brief description.

- **Erase Codes:** After repairs are made, select "Erase Codes" to clear the DTCs and turn off the Malfunction Indicator Lamp (MIL). Ensure the ignition is on and the engine is off before erasing codes.

- **I/M Readiness:** Press the dedicated **I/M** button or select "I/M Readiness" from the menu to check the status of emission-related monitors. This indicates if the vehicle is ready for a smog test.

- **Live Data:** View real-time data parameters from the vehicle's sensors, such as engine RPM, vehicle speed, coolant temperature, and more. Data can be displayed in text or graph format.

- **Freeze Frame:** When an emission-related fault occurs, the ECU records certain vehicle parameters at that moment. Select "Freeze Frame" to view this snapshot data.

- **O2 Sensor Test:** Retrieves O2 sensor monitoring test results for the most recently completed tests from the vehicle's on-board computer.

- **EVAP System Test:** Initiates a leak test for the vehicle's Evaporative Emission Control System.

- **DTC Lookup:** Provides detailed definitions for generic and manufacturer-specific Diagnostic Trouble Codes.

5.3 12V Battery Test Functions

Connect the NT301 Plus to the vehicle's 12V battery using the provided clamps. From the main menu, select "Battery" to access battery testing options.

Image: The screen of the FOXWELL NT301 Plus displaying results from a 12V battery test, including Battery Result (GOOD-RECHARGE), measured Volts, CCA Rating, SOH (State of Health), and SOC (State of Charge). It also shows graphical representations of Cranking Test and Charging Test results, along with a list of multiple battery types supported (Regular flooded, AGM flat plate, AGM spiral, GEL).

- **Battery Test:** This function analyzes the overall health of the battery. The device will prompt you to input the battery type (e.g., Regular Flooded, AGM, GEL, EFB) and its Cold Cranking Amps (CCA) rating. The results will display:
  - **SOH (State of Health):** Indicates the battery's remaining capacity relative to its original capacity.
  - **SOC (State of Charge):** Shows the current charge level of the battery.
  - **Voltage:** The current voltage of the battery.
  - **Current:** The current flowing through the battery during the test.
  - **Rating:** The measured CCA value.
  - **Analysis Result:** Provides a clear status like "Good Battery," "Good-Recharge," "Replace Battery," etc.

- **Cranking Test:** This test evaluates the starter motor's performance. Follow the on-screen prompts to start the vehicle. The device will measure the cranking voltage and time, indicating if the starter motor is drawing too much current or if the battery voltage drops too low during cranking.

- **Charging Test:** This function assesses the vehicle's charging system (alternator). Follow the on-screen prompts to rev the engine. The device will measure the charging voltage under various loads, ensuring the alternator is providing adequate and stable voltage to charge the battery and power the vehicle's electrical systems.

Image: A detailed overview of the FOXWELL NT301 Plus's additional functions, including supported battery types (Regular Flooded, EFB, AGM Flat Plate, GEL, AGM Spiral), measuring standards (CCA, BCI, CA, MCA, JIS, DIN, EN, SAE, IEC, GB with ranges from 100-2000), supported vehicle models (Car, Motorcycle, Pickup Truck, Golf Car, Boat, ATV), and working temperature range (-20°C to 65°C / -4°F to 140°F).

6. Maintenance

- **Cleaning:** Use a soft, damp cloth to clean the device. Do not use abrasive cleaners or solvents.

- **Storage:** Store the NT301 Plus in its provided storage case in a dry, cool environment, away from direct sunlight and extreme temperatures.

- **Cable Care:** Ensure the OBD2 cable and battery clamps are not kinked or damaged. Inspect them regularly for wear and tear.

- **Software Updates:** As mentioned in the setup section, regularly check the FOXWELL official website for software updates to ensure your device has the latest features and vehicle compatibility.

Easy To Carry
Allow you to carry the scan tool at anywhere and anytime

Image: A person carrying the FOXWELL branded storage case, emphasizing the product's portability and ease of transport for diagnostic tasks.

7. TROUBLESHOOTING

If you encounter issues with your NT301 Plus, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Device does not power on.	Loose connection to OBD2 port/battery; vehicle ignition off; vehicle battery dead.	Ensure secure connection. Turn ignition to ON position. Check vehicle battery.
"Link Error" or "Communication Error" message.	Faulty connection; vehicle not OBD2 compliant; vehicle's ECU not responding.	Verify cable connection. Confirm vehicle is OBD2 compliant (1996+ in USA). Try on another vehicle.
Incorrect battery test results.	Incorrect battery type/CCA entered; poor clamp connection; battery terminals corroded.	Double-check battery information. Clean battery terminals and ensure firm clamp connection.
Device freezes or becomes unresponsive.	Software glitch; temporary communication issue.	Disconnect and reconnect the device. Perform a software update if available.

If the problem persists, please refer to the official FOXWELL support resources or contact their customer service.

8. Specifications

- **Display:** 2.8-inch TFT Color Screen

- **Operating Temperature:** -20°C to 65°C (-4°F to 140°F)

- **Storage Temperature:** -30°C to 70°C (-22°F to 158°F)

- **Input Voltage:** 8V-18V (from vehicle OBD2 port or 12V battery)

- **Supported Battery CCA Range:** 100-2000 CCA

- **Supported Battery Types:** Regular Flooded, AGM Flat Plate, AGM Spiral, GEL, EFB

- **Supported Test Standards:** CCA, BCI, CA, MCA, JIS, DIN, EN, SAE, IEC, GB

- **Vehicle Compatibility:** Standard OBD2 compliant vehicles with 12V batteries from 1996 (USA) to present, including cars, light-duty trucks, 12V diesels, SUVs, minivans, hybrids, Golf Carts, Motorcycles, Mowers, Pickup trucks, Boats, and ATVs.

9. Warranty and Support

For detailed warranty information, please refer to the warranty card included with your product packaging or visit the official FOXWELL website. For technical support, product inquiries, or assistance with software updates, please contact FOXWELL customer service through their official channels. Keep your purchase receipt for warranty claims. Official FOXWELL Website: www.foxwelltech.com

Related Documents - NT301 Plus

Инструкция пользователя FOXWELL NT301 OBDII/EOBD Код Ридер
Полное руководство пользователя для автомобильного сканера FOXWELL NT301. Охватывает установку, эксплуатацию, диагностику, настройки и информацию по безопасности.

NTWonder Software Update Guide for FOXWELL NT301 Code Reader
Learn how to update your FOXWELL NT301 OBD2 code reader using the NTWonder software. This guide covers system requirements, connection, and update procedures for automotive diagnostics.

[FOXWELL NT301 CAN OBDII/EOBD Code Reader User Guide](#)

Comprehensive user guide for the FOXWELL NT301 CAN OBDII/EOBD Code Reader, detailing features, operations, setup, and troubleshooting for automotive diagnostics.

[FOXWELL NT301 OBDII/EOBD Code Reader User Manual](#)

Comprehensive user guide for the FOXWELL NT301 OBDII/EOBD Code Reader, covering setup, operations, safety, and troubleshooting for automotive diagnostics.

[Foxwell NT301 OBDII/EOBD Code Reader Benutzerhandbuch](#)

Dieses Handbuch bietet detaillierte Anleitungen zur Verwendung des Foxwell NT301 OBDII/EOBD Code Readers, einschließlich Sicherheitshinweisen, Bedienung und Fehlerbehebung für Fahrzeugdiagnosen.

[Foxwell NT301 OBDII/EOBD Code Reader User Guide](#)

Comprehensive user guide for the Foxwell NT301 OBDII/EOBD Code Reader, detailing its features, operation, safety instructions, and diagnostic capabilities for automotive vehicles.