Autel TS501 PRO

Autel MaxiTPMS TS501 PRO TPMS Diagnostic and Service Tool Instruction Manual

1. INTRODUCTION

The Autel MaxiTPMS TS501 PRO is a professional-grade tool designed for comprehensive Tire Pressure Monitoring System (TPMS) service. This device allows users to activate, diagnose, program Autel MX-Sensors, and perform TPMS relearn procedures efficiently. It supports a wide range of vehicle models and offers lifetime software updates to ensure compatibility with the latest automotive technologies.
This manual provides detailed instructions for operating your TS501 PRO, ensuring safe and effective use for all your TPMS maintenance needs.

2. WHAT'S IN THE BOX

Upon unboxing your Autel MaxiTPMS TS501 PRO, verify that all the following items are included:

- MaxiTPMS TS501 PRO Main Unit
- Carrying Case
- OBDII Cable
- USB Cable
- AC Adapter
- Wrench Magnet
- Quick Guide

Figure 2.1: The complete packing list for the TS501 PRO, including the main unit, cables, adapter, and documentation.

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Video 2.1: An unboxing video demonstrating the contents of the Autel MaxiTPMS TS501 PRO package.

3. SAFETY INFORMATION

Always adhere to standard automotive safety practices when using this tool. Ensure the vehicle is parked on a level surface with the parking brake engaged. Consult your vehicle's service manual for specific TPMS procedures and safety guidelines. For compatibility inquiries, it is recommended to contact Autel support with your vehicle's VIN.

4. LEGAL DISCLAIMER

The Autel MaxiTPMS TS501 PRO is designed exclusively for programming Autel MX-Sensors. It does not support programming of TPMS sensors from other brands. Any attempt to program non-Autel sensors may result in malfunction or damage.

5. SETUP

5.1 Initial Charging

Before first use, fully charge the device using the provided AC adapter and USB cable. The device contains a 3.7 Volt Lithium Polymer battery.

5.2 Software Updates

It is crucial to update the device software immediately after purchase and regularly thereafter to ensure optimal performance and compatibility with the latest vehicle models and sensor types. Updates are provided free for the lifetime of the product.

1. Connect the TS501 PRO to a computer using the USB cable.
2. Follow the on-screen prompts on the device and your computer to initiate the update process.
3. Ensure a stable internet connection during the update.

Figure 5.1: The TS501 PRO supports lifetime free software updates via USB to expand vehicle coverage and add new functions.

6. OPERATING THE MAXITPMS TS501 PRO

The TS501 PRO features a 320 x 240 TFT color display and intuitive navigation buttons for ease of use.

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Video 6.1: A detailed guide on how to use the Autel TS501 TPMS Tool for various functions.

6.1 Activating TPMS Sensors

The TS501 PRO can wirelessly activate all OEM and universal TPMS sensors to retrieve sensor data such as Sensor ID, Tire Pressure, Tire Temperature, Sensor Battery, Sensor Position, and Frequency.

1. Select the appropriate vehicle make, model, and year on the device.
2. Place the TS501 PRO near the tire valve stem (within 1 inch of the antenna).
3. Press the 'Trigger' button to activate the sensor.
4. The device will display the sensor data upon successful activation. Repeat for each sensor.

Figure 6.1: Steps for activating a TPMS sensor and viewing its data on the TS501 PRO display.

6.2 Programming Autel MX-Sensors

The TS501 PRO supports two methods for programming Autel MX-Sensors (315/433MHz):

1. **Auto Create:** This method allows the device to automatically generate new sensor IDs and program them into 1-16 MX-Sensors simultaneously. This is efficient for new sensor installations.

2. **Copy by OBD:** This method allows the device to read the existing sensor IDs from the vehicle's ECU via the OBDII port and then copy these IDs into new MX-Sensors. This is ideal for replacing faulty sensors while retaining the original IDs, often eliminating the need for a relearn procedure.

Figure 6.2: Illustration of the two programming options for Autel MX-Sensors: Auto Create and Copy by OBD.

6.3 Relearning TPMS Sensors

After replacing or programming sensors, a relearn procedure is necessary to link the new sensor IDs to the vehicle's ECU and turn off the TPMS warning light. The TS501 PRO offers three relearn methods:

1. **Stationary Relearn:** Requires the vehicle to be stationary while the tool guides you through the process.
2. **Automatic Relearn:** Some vehicles support automatic relearn, which typically involves driving the vehicle for a certain period after sensor replacement.
3. **OBD Relearn:** The tool connects to the vehicle's OBDII port to directly write new sensor IDs to the ECU. This method often includes on-screen guidance.

Figure 6.3: The three primary methods for relearning TPMS sensors using the TS501 PRO.

6.4 TPMS System Diagnostics

The TS501 PRO can connect to the vehicle's OBDII port to diagnose the TPMS system. This includes reading and clearing Diagnostic Trouble Codes (DTCs) and providing on-screen descriptions.

Figure 6.4: The TS501 PRO can read and clear TPMS DTCs, providing a complete health check of the system.

6.5 Tire Type/Pressure Selection and Frequency Test

The tool allows for selection of tire type and pressure settings, which can be crucial if the TPMS warning light persists due to system configuration faults. It also features a frequency test to check sensor signal and battery status.

Figure 6.5: The TS501 PRO's interface for selecting tire type/pressure and conducting signal tests.

7. MAINTENANCE

7.1 Software Updates

Regularly update your TS501 PRO software to ensure access to the latest vehicle coverage, functions, and optimizations. Lifetime free updates are available via USB connection to a computer.

7.2 Battery Care

To prolong battery life, avoid fully discharging the device frequently. Store the device in a cool, dry place when not in use. The device uses a rechargeable Lithium Polymer battery.

7.3 General Care

The TS501 PRO is designed to be resistant to grease and water. However, it is recommended to keep the device clean and dry. Use a soft cloth to wipe the screen and casing. Avoid using abrasive cleaners or solvents.

8. TROUBLESHOOTING

If you encounter issues with your TS501 PRO, consider the following common solutions:

- **Device Not Powering On:** Ensure the device is fully charged. Connect it to the AC adapter for at least 30 minutes.
- **Communication Errors:** Verify that the OBDII cable is securely connected to both the device and the vehicle's OBDII port. Ensure the vehicle's ignition is in the ON position.
- **Sensor Not Activating/Reading:** Confirm the sensor is within range (1 inch of the antenna). Check the sensor's battery status if possible. Ensure the correct vehicle make, model, and year are selected on the device.
- **TPMS Warning Light Remains On:** After sensor replacement or programming, a relearn procedure is often required. Follow the on-screen instructions for Stationary, Automatic, or OBD Relearn.
- **Software-Related Issues:** Perform a software update to ensure the device has the latest firmware and vehicle data.

For further assistance, refer to the device's built-in help function or contact Autel customer support.
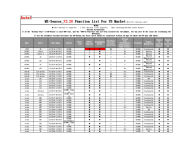
9. SPECIFICATIONS

Feature	Specification
Brand	Autel
Model	TS501 PRO
Product Dimensions	12"L x 8.8"W x 3.8"H
Operating System	320 x 240 TFT color display
Automotive Fit Type	Universal Fit
Item Weight	2 pounds
Batteries	1 Lithium Polymer battery (included)
Voltage	3.7 Volts

10. WARRANTY AND SUPPORT

The Autel MaxiTPMS TS501 PRO comes with a 1-Year Warranty and a 30-Day Money Back Policy. Additionally, lifetime services are available. For technical support or service inquiries, please contact Autelonline at Autelonline@outlook.com.

Related Documents - TS501 PRO

	Autel TS508 QuickStart Guide A quick start guide for the Autel TS508 TPMS tool, covering basic and complete functions, sensor programming, and relearn procedures.
	Autel MaxiTPMS Tools Catalog 2018: Advanced TPMS Diagnostic Solutions Discover the comprehensive Autel MaxiTPMS 2018 catalog, featuring advanced TPMS service tools like the TS508, TS608, and MS906TS. Explore programmable MX-Sensors, accessory kits, and warranty information for professional automotive diagnostics.
	Autel ITS600 & TBE200 Quick Start Guide: TPMS Connection, Diagnostics, Programming & Relearn A quick start guide for Autel's ITS600 and TBE200 devices, covering connection, diagnostics, programming, and relearn procedures for TPMS systems. Includes vehicle health reports and maintenance suggestions.
	Autel MX-Sensor Programmable Universal TPMS Sensor Installation Guide Comprehensive installation guide for the Autel MX-Sensor, a programmable universal TPMS sensor available for 433MHz and 315MHz frequencies with metal and rubber valves. Includes safety instructions, warranty information, and detailed step-by-step installation procedures.
	Autel MX-Sensor V2.20 Function List for US Market A comprehensive function list for Autel's MX-Sensor V2.20, detailing compatibility and features for various vehicle makes and models in the US market. Includes information on OBD-II function status, programming, relearn types, and sensor support by manufacturer.
	Autel MaxiTPMS ITS600 CV: Manuale d'Uso per Diagnostica TPMS Professionale Guida completa al MaxiTPMS ITS600 CV di Autel. Scopri le funzionalità per la diagnostica, programmazione e gestione dei sistemi TPMS su veicoli commerciali (CV) e leggeri (LCV). Include istruzioni dettagliate e precauzioni di sicurezza.