Autel Autel MaxiCOM Ultra Lite with MaxiFlash VCI

Autel MaxiCOM Ultra Lite Diagnostic Scanner User Manual

Model: Autel MaxiCOM Ultra Lite with MaxiFlash VCI

1. Introduction

The Autel MaxiCOM Ultra Lite is a professional automotive diagnostic scan tool designed for comprehensive vehicle analysis and maintenance. It combines advanced features and high-end hardware to provide efficient and accurate diagnostics for a wide range of vehicle makes and models. This manual provides essential information for setting up, operating, and maintaining your device.



Figure 1.1: Autel MaxiCOM Ultra Lite Diagnostic Scanner and included accessories.

2. What's in the Box

Verify that all items listed below are present in your package:

- Autel MaxiCOM Ultra Lite Scanner
- MaxiFlash VCI
- Docking Station
- Main Cable V2.0
- Autel USB Cable V2.0
- AC/DC External Power Adapter
- Clamp Cable
- USB to Ethernet Adapter
- Spare Fuse 6x30mm (2pcs)

- Auxiliary Power Outlet Adapter
- Quick Reference Guide
- Packing List
- Soft Cloth
- Carrying Case (650x185x430)

3. Setup Guide

Follow these steps to set up your MaxiCOM Ultra Lite scanner for first-time use:

1. **Unpacking:** Carefully remove all components from the carrying case.
2. **Charging the Device:** Connect the AC/DC External Power Adapter to the MaxiCOM Ultra Lite scanner and a power outlet. Ensure the device is fully charged before initial use.
3. **Connecting the VCI:**
    - Connect the MaxiFlash VCI to the vehicle's OBDII port using the Main Cable V2.0.
    - The VCI can connect to the main unit via USB, Bluetooth, or Wi-Fi. For initial setup, a USB connection is recommended.
4. **Power On:** Press and hold the power button on the MaxiCOM Ultra Lite scanner to turn it on.
5. **Initial Configuration:** Follow the on-screen prompts to select your language, time zone, and connect to a Wi-Fi network.
6. **Software Updates:** It is crucial to perform all available software updates after connecting to Wi-Fi. Navigate to the "Update" section on the main menu. Autel provides 2 years of free software updates for this device.
7. **VCI Firmware Update:** Ensure the MaxiFlash VCI firmware is also updated to the latest version for optimal performance and compatibility.



Figure 3.1: The MaxiCOM Ultra Lite main unit, MaxiFlash VCI, and docking station.

4. Operating Instructions

The Autel MaxiCOM Ultra Lite offers a comprehensive suite of diagnostic and service functions. Below are key operational aspects:

4.1. Vehicle Diagnostics (OE-Level All System Scan)

The scanner can perform OE-level diagnostics on all available vehicle systems and subsystems. This includes reading and clearing DTCs (Diagnostic Trouble Codes), viewing live data, and performing active tests.

- **Auto Scan 2.0:** This feature allows for rapid scanning of all vehicle modules. Average scanning speeds are significantly improved (e.g., GM < 8s, BMW/VAG/Ford < 10s).
- **Topology Mapping 2.0:** Provides a visual, color-coded display of all vehicle systems' relationships and their status. This helps in quickly identifying faulty modules and understanding communication structures.



Figure 4.1: Feature comparison highlighting the Ultra Lite's capabilities.



Figure 4.2: Overview of ECU Programming and Coding capabilities.



Figure 4.3: Motor TruSpeed Repair and Topology Mapping in action.

4.2. ECU Programming & Coding

The MaxiCOM Ultra Lite supports advanced ECU programming for Mercedes and BMW vehicles. This allows technicians to:

- Program blank ECUs.
- Replace existing software.
- Fix software issues.
- Modify OE parameters.
- Reprogram adaptive data.

Online coding enables adapting data for modules and customizing hidden functions or disabling unwanted settings**Note:** ECU Programming is currently available only for BENZ/BMW.

4.3. Motor TruSpeed Repair

This intelligent diagnostic feature helps quickly locate issues by providing access to Technical Service Bulletins (TSB), Component Locations, DTCs, Maintenance Schedules, Repair Procedures, Specifications, Wiring Diagrams, OEM Position Statements, and ADAS-related repair details. It guides users through troubleshooting faults efficiently. **Note:** Motor TruSpeed Repair is an optional paid subscription service.

4.4. Service Functions (40+ Services)

The device includes over 40 common service functions for various vehicle systems. These include, but are not limited to:

- Oil Reset Service
- TPMS Service (Tire Pressure Monitoring System)
- EPB Service (Electronic Parking Brake)
- ABS Service (Anti-lock Braking System)
- SAS Service (Steering Angle Sensor)
- DPF Regeneration Service (Diesel Particulate Filter)
- BMS Service (Battery Management System)
- Injector Coding
- Throttle Adaptation
- Suspension Calibration
- Headlamp Adjustment
- Cylinder Deactivation
- IMMO-Basic (Immobilizer)
- TEC Learn
- A/F Setting
- Clutch Adaptation
- Airbag Reset

Note: The availability of specific functions may vary by vehicle make, model, and year. Refer to Autel's official website or contact support for detailed compatibility information.



Figure 4.4: A selection of the 40+ service functions available.

4.5. Bi-Directional Control (Active Tests)

This feature allows technicians to send commands to vehicle ECUs to test specific components, helping to pinpoint faults more easily. Examples include turning the fuel pump on/off, activating the radiator fan, or cycling the A/C clutch.

4.6. New Added Functions

- **Live Data Fusion:** View, record, and analyze real-time data from multiple vehicle systems simultaneously for more efficient and accurate repairs.
- **WiFi Print Reports:** Print diagnostic reports directly from the device without needing a PC.
- **Autel Cloud Sharing:** Upload reports and share them instantly via QR code, email, or text.
- **Battery Test:** Support for battery testing with the optional BT506 accessory.
- **VAG Guided Functions:** Step-by-step guidance for V-AG vehicles.
- **Endoscope Support:** Compatible with MV108S/MV105S endoscopes for deeper inspection.
- **FCA & Renault SGW:** Support for Secure Gateway modules in FCA vehicles (2018-2025) and Renault.**Note:** FCA

Auto Auth is region-specific (US, Canada, Mexico).

- **Remote Experts:** Access professional help and guidance for complex problems.
- **Demonstration APP:** Allows pre-selecting vehicles, simulating repair processes, and learning repair sequences.



Figure 4.5: Overview of newly added practical functions.

5. Maintenance

Proper maintenance ensures the longevity and optimal performance of your Autel MaxiCOM Ultra Lite scanner:

- **Software Updates:** Regularly check for and install software updates to ensure the latest vehicle coverage, bug fixes, and new features. Updates are crucial for maintaining diagnostic accuracy.
- **Cleaning:** Use the provided soft cloth to clean the screen and exterior of the device. Avoid abrasive cleaners or solvents.
- **Storage:** Store the device in its carrying case in a cool, dry place when not in use to protect it from dust, moisture, and physical damage.

- **Battery Care:** To prolong battery life, avoid fully discharging the battery frequently. Charge the device regularly, even if not in active use.
- **VCI Care:** Keep the MaxiFlash VCI clean and ensure its connectors are free from debris.

6. Troubleshooting

This section addresses common issues you might encounter with your MaxiCOM Ultra Lite scanner:

Problem	Possible Cause	Solution
Device does not power on.	Low or no battery charge; faulty power adapter.	Ensure the device is fully charged. Check power adapter connection and functionality.
VCI not connecting to the main unit.	Loose connection; VCI firmware outdated; Bluetooth/Wi-Fi interference.	Verify USB, Bluetooth, or Wi-Fi connection. Update VCI firmware via the main unit. Ensure no strong interference sources are nearby.
Unable to perform specific diagnostic functions.	Software not updated; function not supported for the specific vehicle; incorrect vehicle selection.	Perform all available software updates. Verify vehicle compatibility for the desired function on Autel's website. Ensure correct vehicle VIN/model is selected.
Slow operation or freezing.	Too many applications running; low storage; software glitch.	Close unnecessary applications. Clear cache or free up storage space. Restart the device. Ensure software is up to date.
"1-year update" displayed instead of "2-year update".	Initial display setting.	Autel will automatically upgrade the device to 2-year free software updates within 3-5 workdays after initial boot-up and account login. Alternatively, send your S/N (12 digits) to Autel customer service for instant upgrade.

7. Specifications

Feature	Detail
Model	Autel MaxiCOM Ultra Lite with MaxiFlash VCI
Operating System	Android 7.0 (Upgraded to Android 10.0 on Ultra Lite)
Processor	Exynos 8895V
Memory (RAM/ROM)	4GB RAM / 256GB ROM (SSD)
Display	12.9-inch LCD Touchscreen, 2732 x 2048 resolution
Battery	18000mAh Lithium Polymer Battery
Cameras	16MP Rear, 5MP Front

Feature	Detail
Connectivity	Dual Wi-Fi (2.4 & 5GHz), USB, Bluetooth
VCI Protocols Supported	CAN-FD, DoIP, D-PDU/J2534/RP1210
Vehicle Coverage	99% of vehicles (updates to 2025 models), 150+ brands
Languages Supported	21+ languages (English, German, Spanish, French, Traditional Chinese, Japanese, Polish, Portuguese, Russian, Italian, Korean, Dutch, Swedish, etc.)
Item Weight	22.5 pounds
Product Dimensions	14.57 x 11.02 x 1.38 inches



Figure 7.1: Key hardware specifications of the Ultra Lite.

8. Warranty and Support

Autel provides comprehensive support for the MaxiCOM Ultra Lite scanner:

- **Warranty:** The scanner comes with a 1-year warranty.
- **Software Updates:** Enjoy 2 years of free software updates. Even after the free update period expires, you can continue to use the software updated before.
- **Professional Support:** Lifetime professional support is available. For language changes or further assistance, contact Autel customer service with your device's S/N (12-digit number, found on the back of the device).



Figure 8.1: All accessories included in the package.

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