



[Manuals.plus](#) /

› [iCarsoft](#) /

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iCarsoft MB V3.0 Diagnostic Tool User Manual

Model: MB V3.0 | Brand: iCarsoft

1. INTRODUCTION

The iCarsoft MB V3.0 is a professional multi-system car diagnostic tool designed specifically for Mercedes-Benz, Sprinter, and Smart vehicles. This device allows users to read and clear trouble codes, view live data, perform actuation tests, and access various diagnostic functions for a comprehensive understanding of vehicle health. It supports OBDII/EOBD ten modes of operation, making it a versatile tool for automotive diagnostics.



Figure 1.1: The iCarsoft MB V3.0 diagnostic tool, showcasing its display and compact design.

This image displays the iCarsoft MB V3.0 diagnostic tool, highlighting its screen interface and the overall professional appearance. The device is shown against a backdrop that includes a car, emphasizing its automotive application.

2. PRODUCT OVERVIEW AND COMPONENTS

The MB V3.0 features a 4.0-inch TFT LCD display for clear readability and intuitive navigation. The device is equipped with silicone keys for ease of use and durability. Key components include the main unit, the OBD-II connector cable, and various control buttons.

2.1 Physical Layout

- **Display Screen:** 4.0" TFT LCD (480x320 pixels) for displaying diagnostic information.
- **Function Keys (F1, F2):** Programmable or context-sensitive keys.
- **Directional Pad:** Used for navigating through menus and options (Up, Down, Left, Right).
- **ENTER Button:** Confirms selections.

- **BACK Button:** Returns to the previous screen or menu.
- **OBD-II Connector:** Standard 16-pin connector for vehicle communication.



Figure 2.1: Rear view of the iCarsoft MB V3.0 device.

This image shows the back of the iCarsoft MB V3.0 diagnostic tool, where important product information such as the serial number, operating conditions, and regulatory compliance marks (FC, CE, RoHS) are visible.



Figure 2.2: Dimensions of the iCarsoft MB V3.0.

This image illustrates the physical dimensions of the iCarsoft MB V3.0 diagnostic tool, providing measurements for its length, width, and height, which are approximately 206mm (8.11 inches) in length, 104.1mm (4.1 inches) in height, and 32.6mm (1.28 inches) in thickness.

3. SETUP AND INITIAL USE

3.1 Connecting to the Vehicle

1. Locate the vehicle's OBD-II diagnostic port, typically found under the dashboard on the driver's side.
2. Ensure the vehicle's ignition is in the OFF position.
3. Connect the iCarsoft MB V3.0's OBD-II cable to the vehicle's diagnostic port.
4. Turn the vehicle's ignition to the ON position (engine off). The device will power on automatically.

3.2 Initial Device Setup

Upon first use or after a software update, the device may prompt for initial setup configurations. The device supports multi-lingual functions, allowing you to select your preferred language.

3.3 Vehicle Identification

The MB V3.0 supports automatic VIN (Vehicle Identification Number) recognition. If automatic VIN detection fails, you may need to manually input the VIN or select the vehicle model from a list. Ensure accurate selection for proper diagnostic functionality.

4. OPERATING THE DEVICE

The iCarsoft MB V3.0 offers various diagnostic functions accessible through its main menu. Use the directional pad to navigate and the ENTER button to select options.

4.1 Main Menu Options

- **Diagnosis:** Access vehicle-specific diagnostic functions, including reading and clearing trouble codes from various control modules (e.g., Engine, ABS, SRS, Transmission).
- **Service:** Perform maintenance service functions (if applicable for the vehicle model).
- **Voltage:** Monitor battery voltage.
- **Review:** Review previously saved diagnostic data.
- **DTC LibMap:** Access a library of Diagnostic Trouble Codes for detailed explanations.
- **Setup:** Configure device settings, such as language and unit measurements.
- **Help:** Provides on-screen assistance.
- **About:** Displays device information, including software version.

4.2 Diagnostic Functions

Within the 'Diagnosis' menu, you can perform the following key operations:

- **Read Codes:** Displays current, pending, and historic Diagnostic Trouble Codes (DTCs) present in the vehicle's control modules.
- **Erase Codes:** Clears all DTCs from the vehicle's control modules. Ensure underlying issues are resolved before clearing codes to prevent recurrence.
- **Live Data:** Displays real-time data streams from various sensors and components. This data can be viewed in text format.
- **Quick Test:** Initiates a comprehensive scan of all accessible control modules for error codes. Be aware that this function may run a long stream of tests.
- **Actuation Test:** Allows for testing specific components by sending commands to the vehicle's ECUs. This can be used to verify the functionality of actuators like door lock modules or AC components.

AUTUATION TEST



Figure 4.1: Actuation Test menu on the MB V3.0.

This image shows the 'Actuation Test' screen of the iCarsoft MB V3.0, listing various components that can be tested, such as ABS, Safety Belt Warning Lamp, Anti-Theft Indicator, and Brake PAD Wear. This function allows users to actively check the operation of specific vehicle systems.



Figure 4.2: Monitor Overview screen.

This image displays the 'Monitor Overview' screen on the iCarsoft MB V3.0, providing a summary of the vehicle's diagnostic readiness monitors, including MIL Status, Codes Found, Monitor Completed, and Protocol Type (CAN).

4.3 OBDII/EOBD Ten Modes of Operation

The MB V3.0 supports all ten modes of OBDII/EOBD operation, providing comprehensive engine diagnostics:

1. Mode 01 - Request Current Powertrain Diagnostic Data
2. Mode 02 - Request Powertrain Freeze Frame Data
3. Mode 03 - Request Emission-Related Diagnostic Trouble Codes
4. Mode 04 - Clear/Reset Emission-Related Diagnostic Information
5. Mode 05 - Request Oxygen Sensor Monitoring Test Results
6. Mode 06 - Request On-Board Monitoring Test Results for Non-Continuously Monitored Systems
7. Mode 07 - Request Emission-Related Diagnostic Trouble Codes Detected During Current or Last Completed Driving Cycle
8. Mode 08 - Request Control of On-Board System, Test or Component
9. Mode 09 - Request Vehicle Information
10. Mode 0A - Request Emission-Related Diagnostic Trouble Codes with Permanent Status

5. MAINTENANCE

5.1 Cleaning the Device

To maintain the device's performance and appearance, clean it regularly with a soft, dry cloth. Avoid using abrasive cleaners or solvents that could damage the casing or screen.

5.2 Software Updates

iCarsoft provides lifetime free software updates for the MB V3.0. Regularly updating the device ensures compatibility with newer vehicle models and access to the latest diagnostic features and bug fixes. Updates typically require connecting the device to a computer running Windows 7 or later and using the iCarsoft update tool.

5.3 Hardware Repair

The product includes lifetime free hardware repair. For any hardware issues, please contact iCarsoft customer support for assistance and repair procedures.

6. TROUBLESHOOTING

This section addresses common issues you might encounter while using the iCarsoft MB V3.0.

6.1 Device Not Powering On

- Ensure the OBD-II cable is securely connected to both the device and the vehicle's diagnostic port.
- Verify the vehicle's ignition is in the ON position (engine off).
- Check the vehicle's battery voltage. Low battery voltage can prevent the device from powering on or functioning correctly.

6.2 Communication Errors

- Confirm the vehicle's VIN or model selection is correct if manual input was required.
- Ensure the vehicle's ignition is ON.
- Try connecting the device to a different compatible vehicle to rule out a vehicle-specific issue.
- Update the device software to the latest version.

6.3 Unexpected Behavior During Quick Test

The 'Quick Test' function performs a comprehensive scan. If the device exhibits unexpected behavior or triggers alarms (e.g., repeated beeping), it may be due to the extensive nature of the test interacting with specific vehicle systems. If this occurs, try to clear faults or allow the test to complete. For specific concerns, consult the DTC Library or contact support.

6.4 Specific Diagnostic Functions Not Working

Some advanced functions, such as DPF regeneration or specific module tests, may not be supported on all vehicle years or models. Refer to the iCarsoft website or contact support for detailed compatibility information for your specific vehicle.

7. SPECIFICATIONS

Feature	Specification
Display	4.0" TFT LCD, 480*320 Pixels
Operating System (for updates)	Windows 7
Operating Voltage	9V - 18V
Operating Temperature	0°C - 50°C (32°F - 122°F)
Storage Temperature	-20°C - 70°C (-4°F - 158°F)
Power Consumption	1.8W (Typical)
Current Consumption	150mA (Typical)

Feature	Specification
Dimensions (L x W x H)	8.11" x 4.1" x 1.28" (206mm x 104.1mm x 32.6mm)
Item Weight	1.74 pounds

8. WARRANTY AND SUPPORT

The iCarsoft MB V3.0 comes with a 1-year warranty. In addition, iCarsoft offers lifetime free software updates and lifetime free hardware repair for this device.

8.1 Customer Support

For technical assistance, troubleshooting, or warranty claims, please contact iCarsoft customer support. They provide prompt replies from professional engineers.

Visit the official iCarsoft website for the latest software updates, user manuals, and support contact information:
www.icarsoft.com