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iCarsoft CR MAX

iCarsoft CR MAX 2025 Bidirectional Scan Tool User Manual

Model: CR MAX

1. INTRODUCTION

This manual provides detailed instructions for the operation and maintenance of your iCarsoft CR MAX 2025 Bidirectional Scan Tool. This device is designed to assist with comprehensive vehicle diagnostics, offering a wide range of service functions, special functions, and full system active tests. Please read this manual thoroughly before using the device to ensure proper and safe operation.

2. PACKAGE CONTENTS

Upon opening your iCarsoft CR MAX package, please verify that all the following items are included:

- 1x iCarsoft CR MAX Main Device
- 1x 38 Pin Adapter for Mercedes-Benz vehicles
- 1x 20 Pin Adapter for BMW vehicles
- 1x Durable Carry Case
- 1x External Power Adapter
- 1x Main Cable (OBD-II connection)
- 1x PC Connecting Cable (USB)
- 1x User's Manual
- 1x Quick Guide

Package Include



Figure 2.1: The image displays the complete contents of the iCarsoft CR MAX package, including the diagnostic tool, various cables, power adaptor, and a protective carry case.

3. SETUP

3.1 Initial Device Activation and Updates

1. **Power On:** Connect the external power adaptor to the CR MAX device and a power outlet. Press the power button to turn on the device.
2. **Wi-Fi Connection:** Navigate to the 'Settings' menu on the device. Select 'Wi-Fi' and connect to an available wireless network. A stable internet connection is crucial for software updates.
3. **Software Update:** After connecting to Wi-Fi, go to the 'Upgrade' section. The device will check for available software and firmware updates. It is highly recommended to download and install all updates before initial use to ensure compatibility and access to the latest features and vehicle models. This process may take some time depending on your internet speed.

3.2 Connecting to a Vehicle

1. **Locate OBD-II Port:** The OBD-II port is typically located under the dashboard on the driver's side of the vehicle.

2. **Connect Main Cable:** Plug the main diagnostic cable into the vehicle's OBD-II port.
3. **Connect to CR MAX:** Connect the other end of the main diagnostic cable to the CR MAX device.
4. **Use Adapters (if necessary):** For older Mercedes-Benz (38-pin) or BMW (20-pin) vehicles, use the provided specific adapter cables between the vehicle's diagnostic port and the main diagnostic cable.
5. **Ignition On:** Turn the vehicle's ignition to the 'ON' position (engine off).

4. OPERATING INSTRUCTIONS

4.1 Vehicle Identification

The CR MAX supports automatic VIN identification. Once connected to the vehicle, the device will attempt to automatically detect the vehicle's VIN and model information. If automatic detection fails or is not supported for your vehicle, you can manually enter the vehicle details.

4.2 Full OBD Diagnostic Functions

After successful vehicle identification, select 'Diagnostics' from the main menu to access comprehensive OBD-II functions:

- **Read/Clear Codes:** Retrieve and erase Diagnostic Trouble Codes (DTCs) from all available vehicle systems.
- **I/M Readiness:** Check the status of emission-related monitoring systems.
- **Freeze Frame Data:** View a snapshot of vehicle operating conditions at the time an emission-related fault occurred.
- **O2 Sensor Test:** Retrieve O2 sensor monitoring test results.
- **On-Board Monitoring Test:** Retrieve results for emission-related powertrain components and systems.
- **EVAP System Test:** Initiate a test of the evaporative emission system.
- **Live Data Stream:** Display real-time data parameters from various sensors and modules. The device supports 4-in-1 graphic display for enhanced data visualization, allowing up to 118 data points.
- **DTC Library:** Access a built-in database for quick reference of DTC definitions.
- **Vehicle Health Reports:** Generate comprehensive reports summarizing the vehicle's diagnostic status.

Widely Vehicles Coverage

Support Protocols:

IS09141-2, JS014230-2,
IS015765, K/L-Line

SAE-J1850 VPW,
SAE-J1850PWM, IS011898
(Highspeed, Middlespeed,
Lowspeed and Singlewire
CAN, fault-tolerant CAN)

SAE J2610, GM UART UART
Echo Byte Protocol

Honda Diag-H Protocol,
TP2.0, TP1.6



**Faster Data
Transmission**



**Reduce the
Risk of Missed
Errors**



**Increase the
Diagnostic
Accuracy**

Figure 4.1: The CR MAX interface showing key diagnostic features such as automatic VIN identification, full system scanning, and live data graphing capabilities.

4.3 Maintenance Services (49+)

The CR MAX offers over 49 common maintenance and reset functions. Access these by selecting 'Service' from the main menu. The availability of specific services depends on the vehicle's ECU and system configuration.

- **Oil Reset:** Reset the engine oil life system.
- **EPB (Electronic Parking Brake) Reset:** Deactivate and activate the brake control system, assist with brake fluid control, open and close brake pads, and set brakes after disc or pad replacement.
- **SAS (Steering Angle Sensor) Calibration:** Perform calibration for the Steering Angle Sensor.
- **Throttle Relearn:** Initialize the throttle actuators to the default state.
- **DPF (Diesel Particulate Filter) Regeneration:** Manage DPF regeneration, DPF component replacement teach-in, and DPF teach-in after replacing the engine control unit.
- **Battery Management System (BMS) Reset:** Register the new battery replacement to the ECU.
- **ABS Bleeding:** Perform ABS brake bleeding to get a firm brake pad.
- **Injector Coding:** Write new injector codes into the ECU for accurate communication and control.

- **TPMS (Tire Pressure Monitoring System) Reset:** Reset tire pressure and turn off the TPMS warning light.
- **IMMO (Immobilizer) Functions:** Perform key programming and immobilizer system functions.
- **Additional Services:** AdBlue Reset, Clutch Adaptation, Water Pump Activation, Crankshaft Relearn, Gas Particulate Filter Regeneration, High Voltage Battery Diagnostics, Cruise Control Settings, Language Settings, NOx Sensor Reset, Rain Sensor Calibration, Start/Stop System Reset, Turbocharger Calibration, Head-Up Display Settings, Radar/Camera Calibration, Vehicle Setup, Cylinder Shutoff Test, Cylinder Misfire Check, Speed Limit Assist, Control Unit Reset, Oxygen Sensor Calibration, Seatbelt Warning Reset.

Figure 4.2: An overview of some of the 49+ maintenance service functions available on the iCarsoft CR MAX, such as oil reset and DPF regeneration.

4.4 Special Functions (47+)

Beyond standard maintenance, the CR MAX offers over 47 special functions tailored to specific car brands. These include advanced ECU teach-in/learn services and coding capabilities.

- **For Mercedes-Benz, Sprinter, and Smart:** Teach-in of drive authorization system, teach-in for camshaft positions, adjustment of intake valves, oxygen sensor upstream of catalytic converter, replacement of NOx storage catalytic converter, reset learned values of components, NOx sensor downstream of S-C-R catalytic converter, resetting of adjustment values, teach-in in component 'Pedal angle sensor', teach-in of intake port shutoff, write wheel electronics

identification number.

- **For BMW, MINI, and Rolls Royce:** ECU Coding, Active Cruise Control, Camera Reset calibration.
- **For VAG (VW, Audi, Bentley, Bugatti, Lamborghini, MAN LD, Seat, SKODA):** Basic Settings, Coding/Code II, Security Login, Adaptation.
- **For Jaguar and Land Rover:** Yaw Rate Sensor Calibration, Powertrain Configuration Reset, Stepper Motor Initialization, Re-program All Stepper Motors, Reset Air Conditioning Compressor.
- **For Porsche:** Standardizing power windows, Calibration of combination sensor, AHBDA Calibration, Headlight beam adjustment calibration, Calibrate longitudinal acceleration sensor, Calibrate fuel-level sensor, Calibrate rear lid, Calibrate seat occupancy detection, Adaptations, Speed sensor test, Steering column adjustment normalizing run, Swirl-flap actuator.
- **For Volvo and SAAB:** Activating Gear Indication, Oil Pressure Pump Bleeding, Adaptation Of The Fuel/Air Mixing (Fuel Trim), Adaptation Of Oil Level Sensor, Adaptation Of Turbo Control Motor, Adaptation Of Fuel Pressure Control Valve, Adaptation Of The EGR, Calibrate The IMU (Inertial Measurement Unit), Calibrate Brake Pedal Position Sensor, Calibrate Gear Position Sensor.

FULL Bi-directional Control

According to the supported range of different vehicle models, there can be up to 10000+ of testing options available

Command
Received

Oil-1 Pressure Control

Injector Test

Radiator Fan

Sound Horn

Fue-1 Pump

Brake Vacuum

- ▶ Exterior Lights
- ▶ Interior light
- ▶ Acceleration Device
- ▶ Clutch on/Off
- ▶ Operate Mirrors
- ▶ Modulate Throttle
- ▶ ACM Solenoid
- ▶ Doors and Windows
- ▶ Wheel Speed Sensor

And more professional, faster, smarter testing are waiting for you to discover !

Figure 4.3: This image illustrates the extensive list of brand-specific special functions available with the CR MAX, enhancing its diagnostic capabilities for various vehicle manufacturers.

4.5 Bi-directional Actuation Test

The CR MAX 2025 version supports powerful bi-directional actuation tests, allowing the user to send commands to vehicle modules (ECUs, software units, hardware units) to perform specific tests. This helps in quickly identifying fault roots and verifying the functionality of new or repaired components.

- **Examples of Actuation Tests:** ECU Reset test, System check test, Electric fuel pump test, Empty tank test, Oil pressure control valve test, window/mirror/door tests, exterior lights, clutch on/off, acceleration device, modulate throttle, wheel speed sensor, injector test, radiator fan, oil pressure control, sound horn, fuel pump, brake vacuum.

Note: Some brands and models may not support bi-directional testing due to specific protocol limitations. Please consult iCarsoft support for compatibility if needed.

Professional OE-Level
All System Diagnostic Scanner
All Modules Scanning, Detailed Report/Solution

- Auto Identify VIN & Vehicle Info
- Auto Diagnostic Scan All System
- Professional Maintenance Tests
- Faster & Accurate OBD2 Scan
- Mostly for 3000+ Car Models

Auto-VIN & Deep Scan

Read & Clear Codes

4 in 1 Live & Graphing Data

Lifetime Free Upgrade

Figure 4.4: The CR MAX performing bi-directional control, illustrating its ability to command various vehicle components for testing and diagnosis.

5. MAINTENANCE

5.1 Device Care

- Keep the device clean using a soft, dry cloth. Avoid abrasive cleaners or solvents.
- Store the device in its protective carry case when not in use to prevent damage.

- Avoid exposing the device to extreme temperatures, direct sunlight, or high humidity.

5.2 Software Updates

The iCarsoft CR MAX offers lifetime free software updates. Regularly updating your device ensures access to the latest vehicle models, diagnostic functions, and bug fixes. Connect the device to Wi-Fi and check the 'Upgrade' section periodically for new updates.

5.3 Battery Maintenance

The device is equipped with a 5000mAh Lithium Polymer battery. For optimal battery life:

- Charge the device fully before first use.
- Avoid completely draining the battery frequently.
- If storing the device for an extended period, ensure it is charged to approximately 50-70%.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with the iCarsoft CR MAX.

- **Function Not Working/Supported:** If a specific function does not work or shows 'Not Supported on this Vehicle', first ensure your device software is up to date. Vehicle manufacturers regularly upgrade systems, and an update may resolve the issue. Also, some advanced functions or bi-directional tests may not be supported on all vehicle models or years due to protocol differences. Contact iCarsoft technical support for specific vehicle compatibility inquiries.
- **Connectivity Issues:** Ensure the diagnostic cable is securely connected to both the vehicle's OBD-II port and the CR MAX device. Verify the vehicle's ignition is in the 'ON' position. If using adapters, ensure they are correctly installed.
- **Device Not Powering On:** Check the external power adapter connection and ensure the power outlet is functional. If the battery is completely drained, allow it to charge for a period before attempting to power on again.
- **Slow Performance:** Ensure sufficient free storage space on the device. Performing a factory reset (from settings) can sometimes resolve performance issues, but this will erase user data.
- **Specific Adapter Cable Required:** For certain vehicle models (e.g., some Chrysler, Dodge, Jeep, Fiat, Maserati models from 2018 onwards), a specific adapter cable may be required for full compatibility. Please consult iCarsoft support before purchase if your vehicle falls into these categories.

For issues not covered here, please refer to the Warranty and Support section for contact information.

7. SPECIFICATIONS

Detailed technical specifications for the iCarsoft CR MAX 2025:

- **Model:** CR MAX
- **Operating System:** Android
- **Display:** 7-inch Touchscreen, 1024x600 HD resolution
- **Processor:** 4-Core Chip
- **Storage:** 32GB
- **Battery:** 3.7V 5000mAh Lithium Polymer (approximately 5 hours continuous use)
- **Item Weight:** Approximately 4.75 pounds
- **Package Dimensions:** Approximately 14.37 x 11.1 x 3.5 inches
- **Supported Protocols:** ISO9141-2, ISO14230-2, ISO15765, K/L-Line, Flashing Code, SAE-J1850 VPW, SAE-J1850 PWM, ISO11898, SAE J2610, GM UART, UART Echo Byte Protocol, Honda Diag-H Protocol, TP2.0, TP1.6
- **Vehicle Coverage:** Compatible with most car models since 1996 (USA-based), 2001 (EU-based), and 1996 (Asian-based). Supports over 10,000 vehicles.

- **Languages:** Supports 15+ languages including English, German, French, Dutch, Spanish, Swedish, Russian, Hungarian, Norwegian, Portuguese, Italian, Polish, Danish, Finnish.
- **Manufacturer Part Number:** CR MAX 2025 Upgrade Ver
- **UPC:** 850030851888

Leading-edge Hardware

7"



1024x600
Touchscreen

Quad-core Processor



32GB



Storage

3.7V 5000mAh

5 hours of Continuous Use



Lifetime Free

One-click Upgrade



15+ Multilingual



Figure 7.1: Key hardware specifications of the iCarsoft CR MAX, emphasizing its display, processor, storage, and battery capacity.

8. WARRANTY AND SUPPORT

iCarsoft is committed to providing reliable products and customer satisfaction.

- **Software Updates:** Enjoy lifetime free software upgrades to keep your device current with the latest vehicle data and functions.
- **Warranty:** The iCarsoft CR MAX comes with a 1-year limited warranty from the date of purchase, covering manufacturing defects.
- **Hardware Repair:** iCarsoft offers lifetime free hardware repair services for the device, should it be needed in the future.
- **Technical Support:** For any questions, operational issues, or technical assistance, please contact iCarsoft customer

support. Our technical team is available to provide timely service and guidance. Refer to the official iCarsoft website for the most current contact information.