KONNWEI KW590

KONNWEI KW590 OBD2 Scanner User Manual

Comprehensive Instructions for Vehicle Diagnostics

1. INTRODUCTION

The KONNWEI KW590 is a universal OBD2 diagnostic scanner designed to assist vehicle owners and technicians in quickly identifying and resolving engine-related issues. This device is compatible with all 1996 and newer OBDII compliant vehicles, including those from the United States, Europe, and Asia. It provides essential diagnostic functions such as reading and clearing fault codes, viewing live data, and performing I/M readiness tests.

This manual provides detailed instructions on how to set up, operate, maintain, and troubleshoot your KW590 scanner to ensure optimal performance and accurate diagnostics.

Figure 1.1: KONNWEI KW590 OBD2 Scanner with its diagnostic cable, USB cable, and a display of compatible car brands.

2. IMPORTANT SAFETY INFORMATION

- Always perform automotive testing in a safe environment.

- Wear eye protection and safety clothing when testing.

- Keep clothing, hair, hands, tools, test equipment, etc., away from all moving or hot engine parts.

- Operate the vehicle in a well-ventilated work area; exhaust gases are poisonous.

- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.

- Be extremely cautious when working around the ignition coil, distributor cap, ignition wires, and spark plugs. These components create hazardous voltages when the engine is running.

- The KW590 scanner operates only with a 12V vehicle battery. Do not connect it to other voltage sources.

- Ensure the vehicle's ignition is OFF before connecting or disconnecting the scanner.

- This device is designed for gasoline-powered 12V vehicles only. It is not compatible with diesel vehicles.

3. Package Contents

Upon opening the package, please verify that all the following items are included:

- 1 x KONNWEI KW590 OBDII/EOBD Scanner Unit
- 1 x OBDII Diagnostic Cable (16-pin)
- 1 x USB Cable
- 1 x User Manual (This document)

Figure 3.1: Contents of the KONNWEI KW590 package, showing the scanner, OBDII cable, USB cable, and user manual.

4. Product Overview

The KW590 scanner features a compact design with an easy-to-read backlit LCD screen and intuitive button controls. It is

powered directly from the vehicle's OBDII port, eliminating the need for external batteries or chargers during operation.

Figure 4.1: Front view of the KW590 scanner, highlighting the LCD display, ESC, ENTER, and navigation buttons.

4.1 Device Components

- **LCD Display:** 2.8-inch backlit screen for displaying diagnostic information.
- **ESC Button:** Exits current menu or cancels an operation.
- **ENTER Button:** Confirms a selection or enters a menu.
- **Up/Down Arrow Buttons:** Navigates through menu options and data.
- **OBDII Connector:** 16-pin connector for linking to the vehicle's Data Link Connector (DLC).
- **USB Port:** For connecting to a computer for software updates and data printing.

Figure 4.2: Side view of the KW590 scanner, showing the mini-USB port for PC connection.

5. SETUP AND CONNECTION

Follow these steps to connect the KW590 scanner to your vehicle:

1. Locate the vehicle's 16-pin Data Link Connector (DLC). This is usually located under the dashboard on the driver's side.

2. Ensure the vehicle's ignition is in the OFF position.

3. Plug the OBDII diagnostic cable into the vehicle's DLC. Ensure a secure connection.

4. Once connected, turn the vehicle's ignition to the ON position (engine can be off or running, depending on the test). The scanner will automatically power on and display the main menu.

Figure 5.1: The KW590 scanner connected to a vehicle's OBDII port, ready for operation.

6. OPERATING INSTRUCTIONS

The KW590 scanner offers various diagnostic functions accessible through its main menu. Use the Up/Down arrow buttons to navigate and the ENTER button to select.

Figure 6.1: The main Diagnostic Menu of the KW590 scanner.

6.1 Key Functions

- **Read Codes:** Retrieves Diagnostic Trouble Codes (DTCs) from the vehicle's computer. This includes generic (P0, P2, P3, U0) and manufacturer-specific (P1, P3, U1) codes. The scanner displays the DTC definitions directly on the screen.

- **Erase Codes:** Clears DTCs from the vehicle's computer and turns off the Check Engine Light (MIL). This also resets monitors. **Caution:** Clearing codes without addressing the underlying issue will likely result in the codes reappearing.

- **Live Data:** Displays real-time data stream from the vehicle's sensors, such as engine RPM, vehicle speed, O2 sensor readings, etc.

- **View Freeze Frame Data:** Shows a snapshot of the vehicle's operating conditions at the moment an emission-related fault occurred.

- **I/M Readiness Status:** Checks the readiness of the emission-related monitoring systems. This is useful for determining if the vehicle is ready for an emissions test.

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

- **On-Board Monitor Test:** Retrieves test results for emission-related powertrain components and systems that are not continuously monitored.

- **Vehicle Information (VIN, CIN, CVN):** Retrieves the Vehicle Identification Number, Calibration ID, and Calibration Verification Number.

- **DTC Lookup Library:** Built-in library to look up definitions of DTCs.

Figure 6.2: Example of a fault code (P0209) displayed on the KW590 screen with its description.

6.2 Indicator Lights

The scanner features indicator lights to provide quick status feedback:

Green LED: Indicates that the engine system is running normally.

Red LED: Indicates there are one or more problems with the vehicle's system.

Yellow LED: Indicates there is a pending problem or a system that cannot run diagnostic testing.

7. SOFTWARE UPDATE

The KW590 scanner supports lifetime free software updates via the internet. This ensures you have the latest bug fixes and newly added parameters. To update the software:

1. Download the update tool from the official KONNWEI website (refer to the website address provided in the original packaging or product documentation).
2. Install the update tool on your computer.
3. Connect the KW590 scanner to your computer using the provided USB cable.
4. Launch the update tool and follow the on-screen instructions to download and install the latest firmware onto your device.

8. DATA PRINTING

You can print diagnostic data and reports from your KW590 scanner using a computer. This feature allows you to keep records or share them with a mechanic.

1. Ensure the KW590 scanner is connected to your computer via the USB cable.
2. Open the KONNWEI update/data management software on your computer.
3. Navigate to the data review or print function within the software.
4. Select the data you wish to print and follow the software's instructions to generate and print the report.

9. TROUBLESHOOTING

This section addresses common issues you might encounter while using the KW590 scanner.

Problem	Possible Cause	Solution
Scanner does not power on.	- Loose connection to vehicle's DLC. - Vehicle ignition is off. - Vehicle battery voltage is too low or not 12V. - Vehicle is not OBDII compliant (pre-1996 or non-standard protocol).	- Ensure the OBDII cable is securely connected to the DLC. - Turn the vehicle ignition to the ON position. - Verify the vehicle has a 12V battery and sufficient charge. - Confirm the vehicle is 1996 or newer and OBDII compliant.

Problem	Possible Cause	Solution
"LINK ERROR" message displayed.	○ Communication failure with vehicle. ○ Incorrect protocol selected (though scanner usually auto-detects).	○ Check all connections. ○ Ensure the vehicle's ignition is ON. ○ Try connecting to a different OBDII compliant vehicle to rule out scanner issue. ○ Consult vehicle manual for specific OBDII port details.
Cannot clear codes.	○ Underlying fault still present. ○ Ignition not in ON position.	○ Address the root cause of the fault before attempting to clear codes. ○ Ensure ignition is ON.

10. Specifications

Display:	2.8-inch Backlit LCD
Operating Voltage:	12V DC (from vehicle OBDII port)
Supported Protocols:	SAE J1850 PWM, SAE J1850 VPW, ISO9141-2, ISO14230-4 KWP (5 Baud Init, Fast Init), ISO15765-4 CAN (11bit ID, 29bit ID, 250 Kbaud, 500 Kbaud)
Operating Temperature:	0 to 60°C (32 to 140°F)
Storage Temperature:	-20 to 70°C (-4 to 158°F)
Dimensions:	Approximately 12.5 cm (Length) x 7 cm (Width) x 2 cm (Thickness)
Weight:	Not specified
Supported Languages:	English, Spanish, French, German, Dutch

Figure 10.1: Physical dimensions of the KW590 scanner.

11. WARRANTY AND SUPPORT

11.1 Warranty Information

The KONNWEI KW590 scanner comes with a 12-month quality warranty from the date of purchase. This warranty covers manufacturing defects and malfunctions under normal use. It does not cover damage caused by misuse, accident, unauthorized modification, or improper installation.

Additionally, a 30-day return policy is offered for any reason, allowing customers to return the product within 30 days of purchase if unsatisfied.

11.2 Technical Support

For technical assistance, troubleshooting guidance, or warranty claims, please contact KONNWEI customer support. Refer to the contact information provided in your product packaging or on the official KONNWEI website.

Regular software updates are available free of charge for the lifetime of the product to ensure compatibility with new vehicle models and to provide the latest diagnostic features. Visit the official KONNWEI website for software downloads and support resources.