AUTEL®

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IMPORTANT SAFETY INSTRUCTION

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Safety Information
For your own safety and the safety of others, and to prevent damage to the equipment and vehicles upon which it is used, it is important that the safety instructions presented throughout this manual be read and understood by all persons operating or coming into contact with the equipment.

There are various procedures, techniques, tools, and parts for servicing vehicles, as well as in the skill of the individual doing the work. Because of the vast number of test applications and variations in the products that can be tested with this instrument, we cannot possibly anticipate or provide advice or safety messages to cover every situation.

It is the automotive technician's responsibility to be knowledgeable of the system being tested. It is essential to use proper service methods and test procedures. It is important to perform tests in an appropriate and acceptable manner that does not endanger your safety, the safety of others in the work area, the equipment being used, or the vehicle being tested.

Before using the equipment, always refer to and follow the safety messages and applicable test procedures provided by the manufacturer of the vehicle or equipment being tested. Use the equipment only as described in this manual. Read, understand, and follow all safety messages and instructions in this manual.

Safety Messages
Safety messages are provided to help prevent personal injury and equipment damage. All safety messages are introduced by a signal word indicating the hazard level.

⚠ **DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury to the operator or to bystanders.

⚠ **WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.

Safety Instructions
The safety messages herein cover situations Autel is aware of. Autel cannot know, evaluate or advise you as to all of the possible hazards. You must be certain that any condition or service procedure encountered does not jeopardize your personal safety.

⚠ **DANGER:** When an engine is operating, keep the service area WELL VENTILATED or attach a building exhaust removal system to the engine exhaust system. Engines produce carbon monoxide, an odorless, poisonous gas that causes slower reaction time and can lead to serious personal injury or loss of life.

⚠ **WARNINGS:**

- Always perform automotive testing in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- 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, for exhaust gases are poisonous.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while testing.
- Be extra cautious when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Keep a fire extinguisher suitable for gasoline, chemical, and electrical fires nearby.
- Do not connect or disconnect any test equipment while the ignition is on or the engine is running.
- Keep the test equipment dry, clean, free from oil, water or grease. Use a mild detergent in a clean cloth to clean the outside of the equipment as necessary.
- Do not drive the vehicle and operate the test equipment at the same time. Any distraction may cause an accident.
- Refer to the service manual for the vehicle being serviced and adhere to all diagnostic procedures and precautions. Failure to do so may result in personal injury or damage to the test equipment.
- To avoid damaging the test equipment or generating false data, make sure the vehicle battery is fully charged and the connection to the vehicle DLC is clean and secure.
- Do not place the test equipment on the distributor of the vehicle. Strong electro-magnetic interference can damage the equipment.

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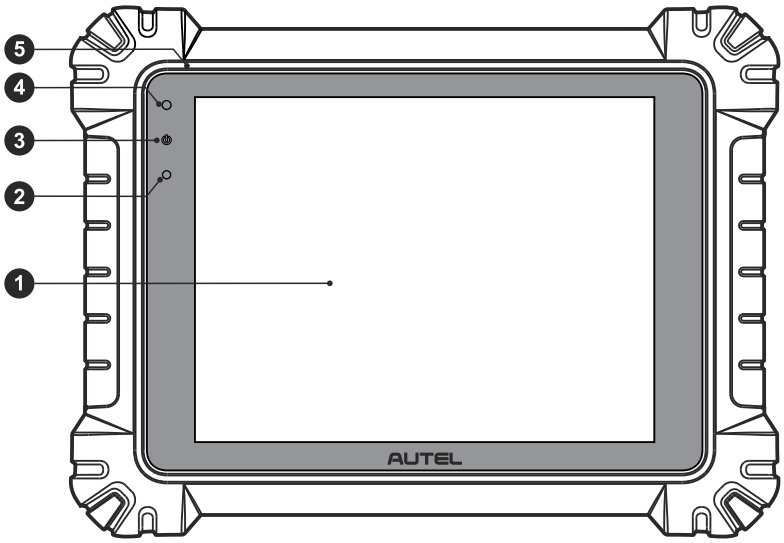
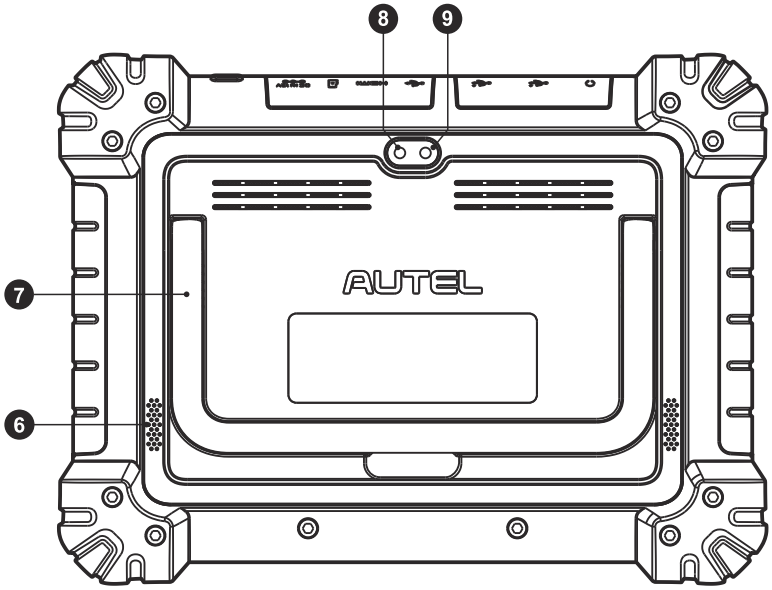
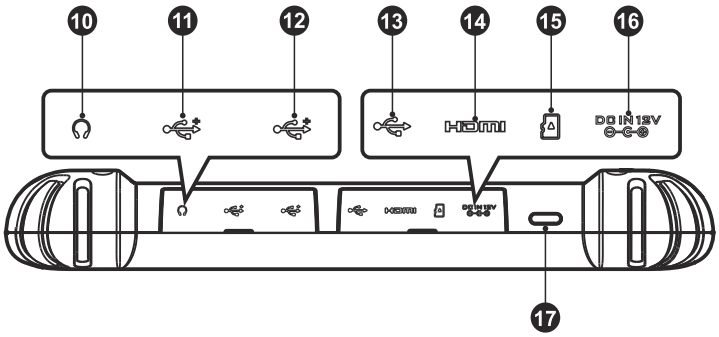
MAXISYS MS909EV







DESCRIPTIONS

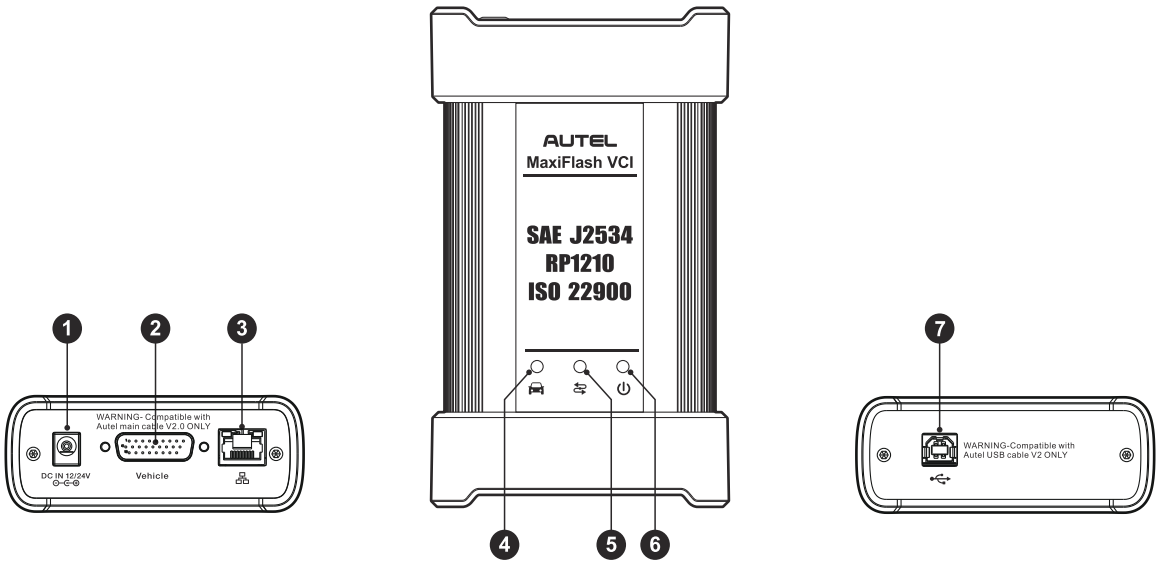
The MaxiSys® MS909EV is a new generation of intelligent diagnostics system for electric, gas and diesel, and hybrid vehicles. It supports high-voltage system testing and analysis, allowing you to quickly read detailed battery pack data. Equipped with the new EVDiag Box, MS909EV supports the testing of battery packs.

The MaxiSys MS909EV has three main components:

- MaxiSys Tablet — the central processor and monitor for the system
- VCI — the vehicle communication interface
- EVDiag Box — the battery pack communication interface

1. 9.7” TFT-LCD Capacitive Touchscreen
2. Ambient Light Sensor — detects ambient brightness
3. Power LED
4. Front Camera
5. Microphone
6. Speaker
7. Collapsible Stand — extends from the back to allow hands-free viewing of the tablet
8. Rear Camera
9. Camera Flash
10. Headphone Jack
11. USB Port
12. USB Port
13. Mini USB Port
14. HDMI (High-Definition Multimedia Interface) Port
15. Mini SD Card Slot
16. DC Power Supply Input Port
17. Power/Lock Button — long press to turn on and off the tablet, or tap to lock the screen

MAXISYS MS909EV



MaxiFlash VCI

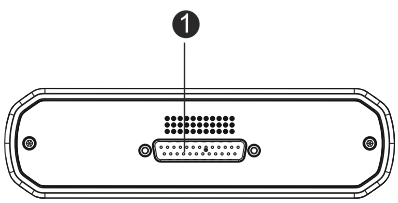
1. DC Power Supply Input Port
2. Vehicle Data Connector
3. Ethernet Port
4. Vehicle LED — flashes green when the device is communicating with the vehicle
5. Connection LED — refer to Table 1-1 Connection LED Description for details
6. Power LED — refer to Table 1-2 Power LED Description for details
7. USB Port

Table 1-1 Connection LED Description

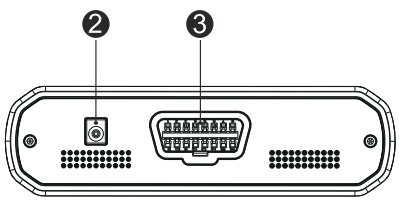
LED	Color	Description
Connection	Green	Lights solid green when connected with the tablet via the USB cable.
	Cyan	Lights solid cyan (blue/green) when connected via Wi-Fi.
	Blue	Lights solid blue when connected via Bluetooth.

Table 1-2 Power LED Description

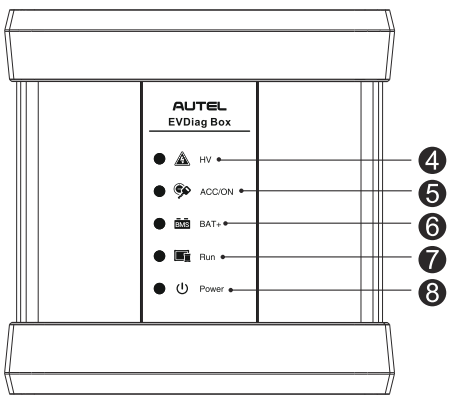
LED	Color	Description
Power	Yellow	Lights solid yellow automatically at power up when VCI is self-testing.
	Green	Lights solid green when powered on.
	Red	• Lights solid red when system failure has occurred. • Flashes red when VCI is upgrading.



1. DB25 Connector
2. DC Power Supply Input Port
3. OBDII Connector
4. HV LED — flashes yellow when the device is connected to the battery pack during high voltage output
5. ACC/ON LED — lights green when the ACC/ON ignition signal output is normal



6. BAT+ LED — lights green when the power output is normal
7. Run LED — lights blue when communicating with the tablet
8. Power LED — refer to Table 1-3 Power LED Description for details



EVDiag Box

Table 1-3 Power LED Description

LED	Color	Description
Power	Green	Lights green when operating normally.
	Red	• Flashes red when upgrading. • Lights red when upgrade has failed.

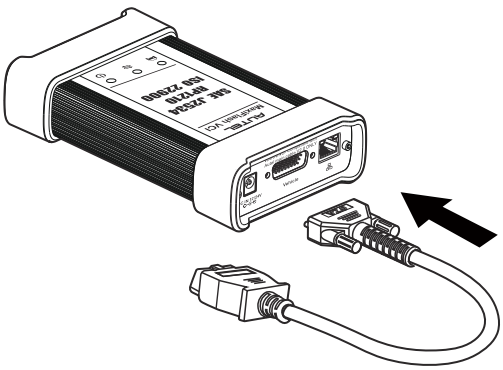
GETTING STARTED

IMPORTANT: *Before operating or maintaining this unit, please read these instructions carefully, paying extra attention to the safety warnings and precautions. Use this unit correctly and with care. Failure to do so may cause damage and/or personal injury and will void the product warranty.*

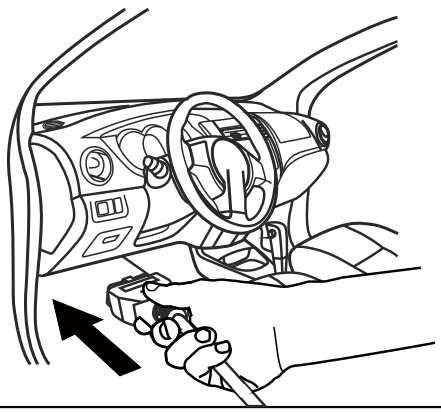
WARNING: *The MaxiFlash VCI is compatible with Autel main cable V2.0 and USB cable V2 only.*

Intelligent EV Diagnostics

1 Connect the main cable V2.0 to the Vehicle Data Connector on the VCI unit and tighten the thumb screws.



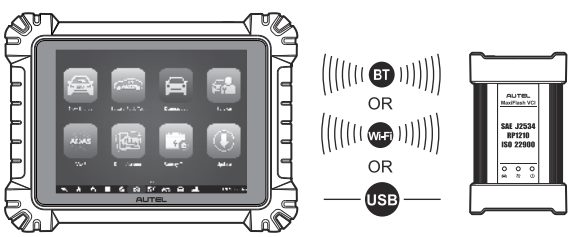
2 Connect the cable's 16-pin adapter to the vehicle's DLC, which is generally located under the vehicle dash.



3 Power up the tablet. Ensure the tablet has a charged battery or is connected to the supplied DC power supply.

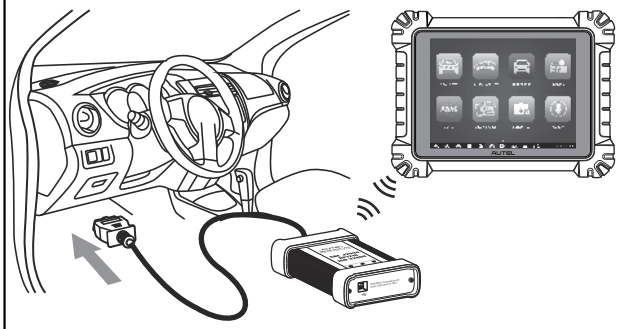


4 Select from Bluetooth, Wi-Fi or USB cable V2 to connect the tablet with the VCI device and establish a communication link. Use only the USB cable connection when programming.



5

When the VCI device is properly connected to the vehicle and the tablet, the VCI status button on the bottom tool bar of the screen shows a green badge, indicating the platform is ready to start vehicle diagnosis.



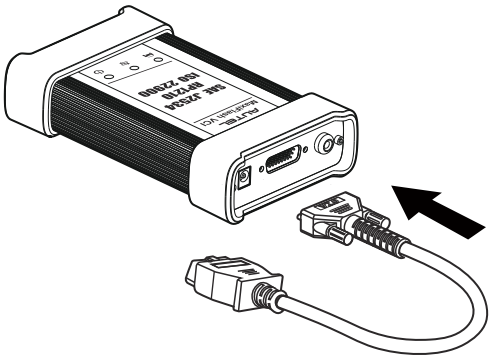
Battery Pack Test

WARNING: *This product must be operated only in accordance with local regulations and by properly qualified personnel. ONLY high voltage technicians and high voltage experts are allowed to perform high voltage related operations.*

IMPORTANT: *Ensure that the battery pack has passed the insulation test. Before performing the test function, be sure to wear proper protective equipment, such as a helmet, protective suit, work shoes, and protective gloves.*

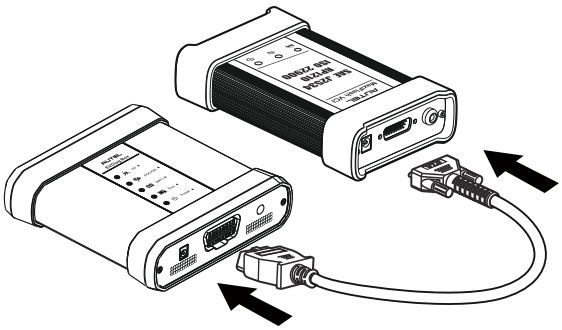
1

Connect the main cable V2.0 to the Vehicle Data Connetor on the VCI and tighten the thumb screws.



2

Connect the cable's 16-pin adapter to the OBDII connector of the EVDiag Box.



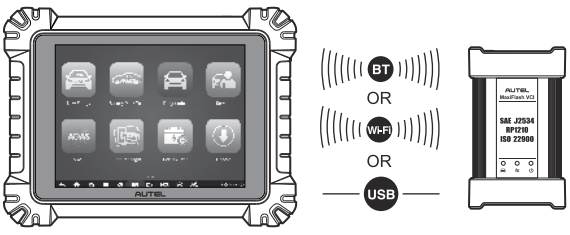
3

Power up the tablet. Ensure that the tablet battery is charged or that it is connected to the supplied DC power supply.



4

Select from Bluetooth, Wi-Fi or USB cable V2 to connect the tablet with the VCI and establish a communication link. Use only the USB cable connection when programming.



5

Tap **Battery Pack Test** on the MaxiSys Job Menu. Follow the onscreen instructions to confirm the relevant technical certifications and complete preparation.



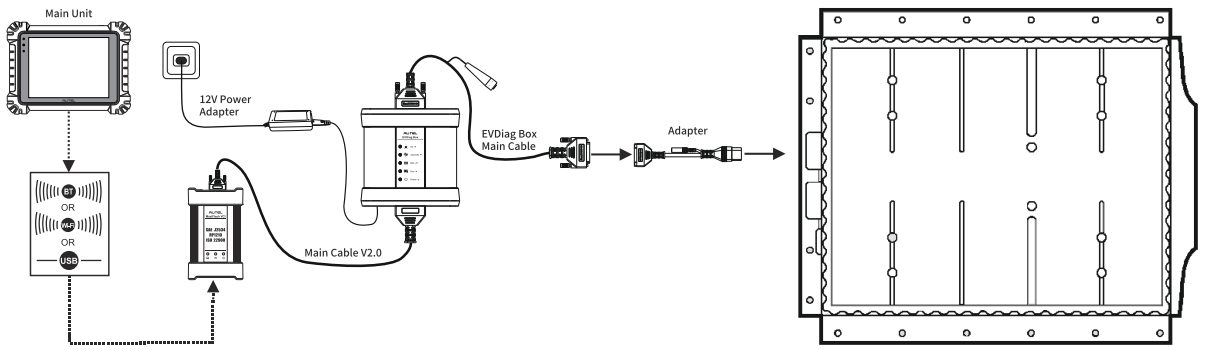
6

Follow the onscreen instructions to select the test vehicle, including its make, area, model, capacity, etc.

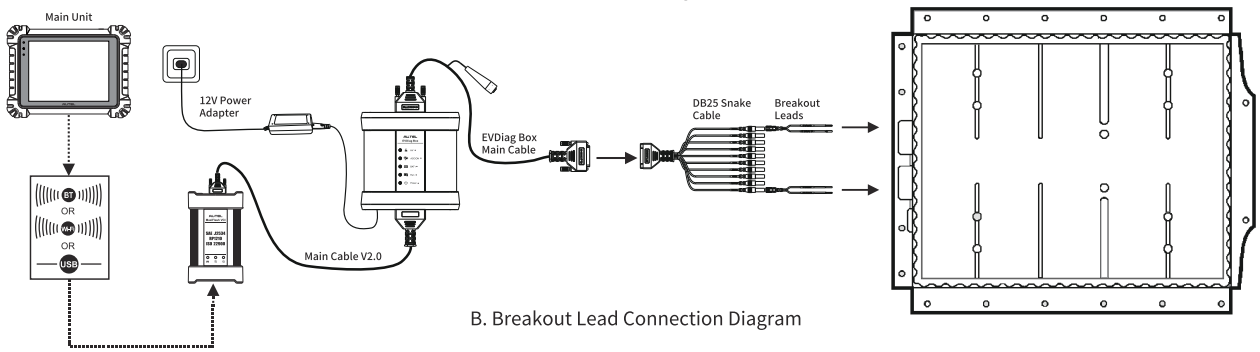


7

Follow the onscreen cable connection diagram to connect the EVDiag Box to the battery pack.



A. Adapter Connection Diagram



B. Breakout Lead Connection Diagram

NOTE: *The required adapter or breakout leads may vary by vehicle. Please make the correct connection according to your actual situation.*

8

Power up the EVDiag Box. Ensure the EVDiag Box is connected to the DC power supply. Tap the **OK** button on the tablet's Connection Diagram screen to connect the tablet with the EVDiag Box and establish a communication link. The Main Menu screen will appear once the link has been established.



9

Tap **Battery Pack Information** on the Main Menu screen. The screen will display the data obtained from the battery pack, including the SOC, voltage, current, pack voltage delta, and temperature.

