

TOPDON

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MADE IN CHINA



ArtiDiag800

Professional Diagnostic Tool
USER MANUAL

TOPDON



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Welcome

Thank you for purchasing TOPDON automotive diagnostic tool ArtiDiag800. Please patiently read and understand this user manual prior to the operation.

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About

TOPDON ArtiDiag800 is an ideal diagnostic tablet designed to work on all available electronic systems. Beyond OBD2 diagnostics, the user can expect the AutoVIN technology to accelerate diagnostic work, and use the well laid-out interface to run loads of reset services for effective vehicle maintenance.

Package List

- ArtiDiag800
- OBDII Diagnostic Cable
- 5V DC Charging Cable
- Power Adaptor
- Carry Case
- Quick User Guide
- User Manual

Compatibility

TOPDON ArtiDiag800 is compatible with the following protocols:

- KWP2000
- ISO9141
- J1850 VPW
- J1850 PWM
- CAN (Controller Area Network)
- And more

Notice

ArtiDiag800 may automatically reset while being disturbed by strong static electricity. THIS IS A NORMAL REACTION.

This Product Manual is subject to change without written notice.

Read the instruction carefully and use the unit properly before operating. Failure to do so may cause damage and/or personal injury, which will void the product warranty.

General Information of OBDII (On-Board Diagnostics II)

The OBDII system is designed to monitor emission control systems and key engine components by performing either continuous or periodic tests of specific components and vehicle conditions, which will offer three pieces of such valuable information:

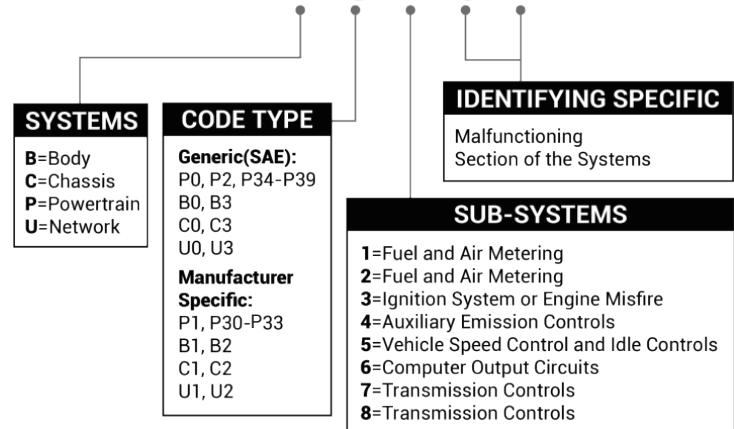
- Whether the Malfunction Indicator Light (MIL) is commanded "on" or "off";
- Which, if any, Diagnostic Trouble Codes (DTCs) are stored;
- Readiness Monitor status.

Diagnostic Trouble Codes (DTCs)

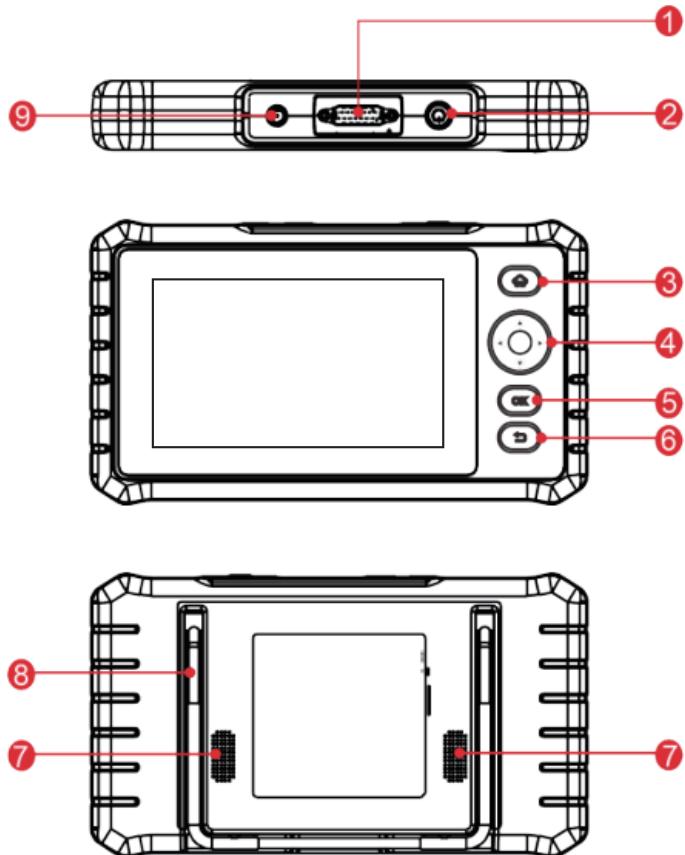
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DTC Example

P0202



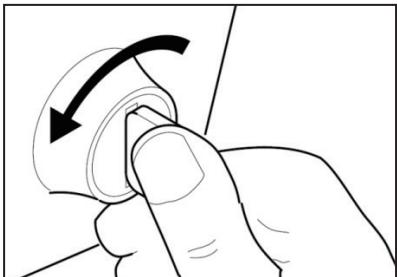
Product Descriptions



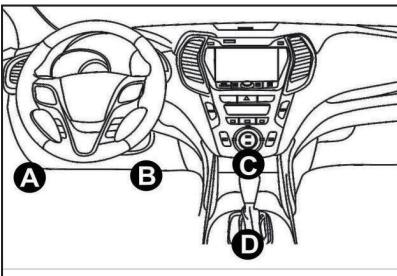
NO.	Name	Descriptions
1	DB-15 Diagnostic Connector	To connect to the diagnostic cable.
2	Power/Lock Button	<ul style="list-style-type: none">Hold the button for 5 seconds to turn the tablet on.Hold the button for 3 seconds to turn the tablet off.Press the button to wake up the screen or turn off the screen.
3	Home Button	To return to the Home Menu
4	▲ Key	Move up for selection.
	▼ Key	Move down for selection.
	◀ Key	Move left for selection. Or skip to the previous page when more than one page is displayed.
	▶ Key	Move right for selection. Or skip to the next page when more than one page is displayed.
5	OK Button	To confirm the current operation.
6	Return Button	Exit, or return to the previous menu.
7	Loudspeakers	Convert an audio signal into a corresponding sound.
8	Foldable Stand	Keep the tablet standing at desk, or use it to hang the tablet on the driving wheel.
9	5V DC Charging Port	To charge the tablet.

Preparation & Connection

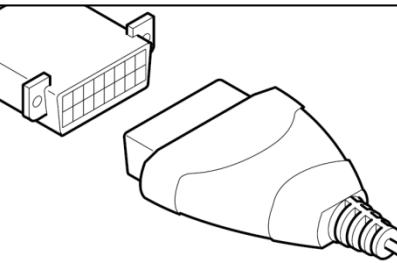
1. Turn the ignition off.



2. Locate the vehicle's DLC socket.

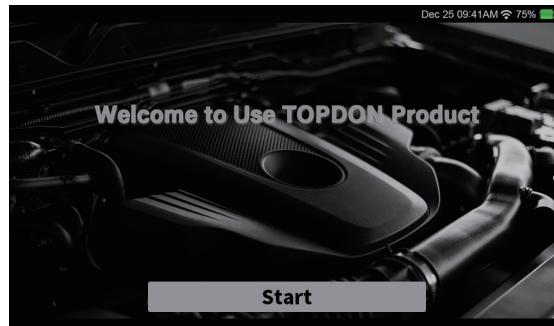


3. Plug the diagnostic cable into the vehicle's DLC socket.



4. Turn the ignition on. The engine can be off or running.

5. Hold the power button for 5 seconds to turn the TOPDON ArtiDiag800 on. The tablet will start initializing and enter the welcome interface.



*Note: Don't connect or disconnect any test equipment with the ignition on or engine running.

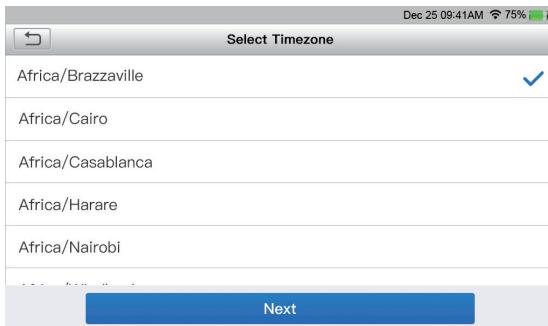
6. Language Setting

Select the tool language in the following interface:



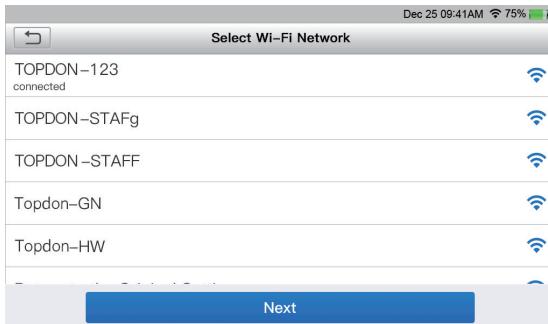
7. Choose Time Zone

Choose the time zone of your current location. The system will automatically configure the time according to the time zone you selected.



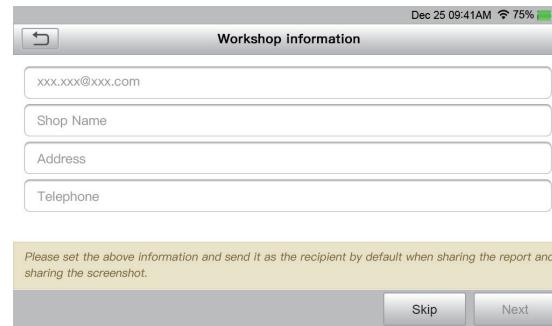
8. Connect Wi-Fi

The system will automatically search all available Wi-Fi networks. You can choose the Wi-Fi needed.



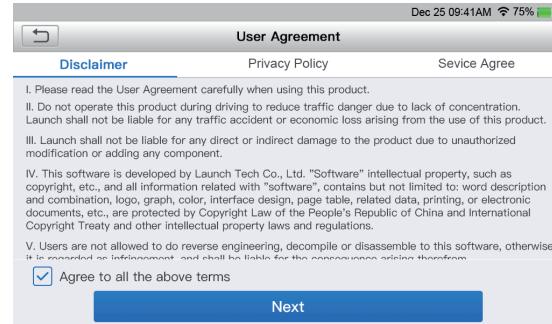
9. Create an Account

You need to register an account with your valid e-mail address. Or you can directly log in by using the account available if you already have one.



10. User Agreement

Please read all the terms and conditions of the user agreement carefully. Check "Agree all the above terms", and tap "Next" to complete the registration process.



It will automatically jump to the Home Menu.

Operation Introduction

TOPDON ArtiDiag800 has 8 major modules, including Diagnose, I/M, OBD II, Services, Battery Voltage, Upgrade, Data, and Settings.



1. Diagnosis

TOPDON ArtiDiag800 supports Smart Diagnosis and Manual Diagnosis covering OBDII diagnosis, full system diagnosis for most modern vehicles worldwide.

A diagnostic report will be automatically generated after the diagnosis.

1.1 Smart Diagnosis (Auto-Detect)

Power on the ArtiDiag800. Tap "Settings", and make sure the "Auto Detection after Switch On" is on.

Connect to the DLC's port, and then turn the ignition key on. The ArtiDiag800 will enter the Smart Diagnosis mode automatically.

1.1.1 Once the system successfully obtains the VIN (Vehicle Identification Number) information of the vehicle, it will continue scanning the vehicle systems. A diagnostic report will be automatically generated after the scanning is completed.

1.1.2 If the tablet fails to access the VIN information, the screen will display as follows:



Input the VIN, and tap "OK", the system will automatically identify the vehicle model.

If the vehicle VIN is successfully decoded, it will perform Smart Diagnosis until a diagnostic report is automatically generated. Otherwise it will enter the Manual Diagnosis mode.

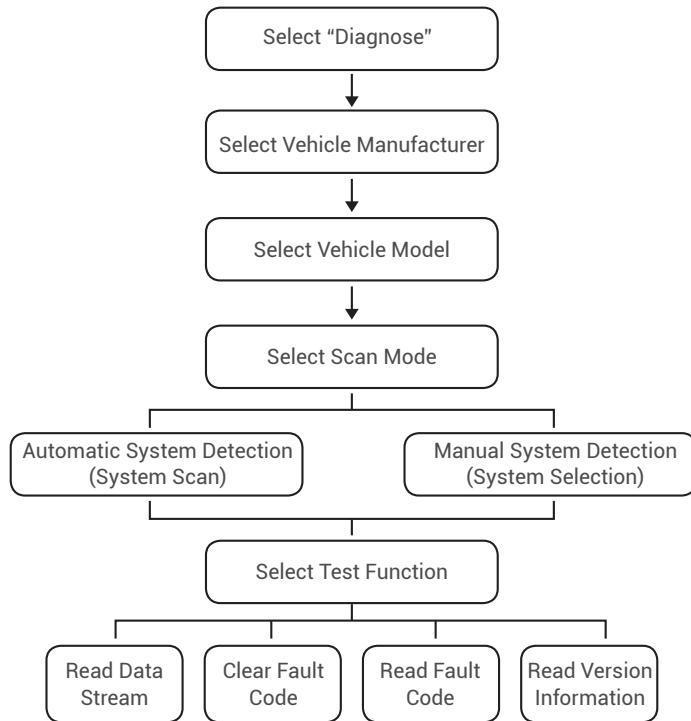
*Note:

- A highly stable and solid network connection is recommended for successful VIN access.
- VIN characters may be capital letters A through Z and numbers 1 through 0; however, the letters I, O and Q would never be used in order to avoid misreading. No signs or spaces are allowed in the VIN.

1.2 Manual Diagnosis

If the tablet cannot obtain or analyze the VIN information, you can also perform Manual Diagnosis. In this mode, you need to execute the menu-driven command and follow the on-screen instruction to proceed.

Refer to the flowchart illustrated as below to run the manual system diagnostics.



*Note:

- Before diagnosing, please make sure the corresponding vehicle manufacturer software has been installed in the scanner.
- The diagnostic menu may vary by the vehicle's make, model and year.

Take "Demo" as an example to demonstrate how to manually diagnose a vehicle.
Tap "OK" to continue.



The following screen will appear:



1.2.1 Health Report (Quick Test)

This function enables you to quickly access all electronic control units of the vehicle and generate a detailed report about vehicle health.

Tap "Health Report", the system starts scanning the ECUs. Once the scanning is complete, the following screen will appear:

Diagnostic Trouble Code	
PCM(Powertrain Control Module)	Abnormal 3
ABS(Anti-lock Braking System)	Abnormal 1
RCM(Restrain Control Module)	Abnormal 1
BCM(Body Control Module)	Abnormal 1
TCM(Transmission Control Module)	Abnormal 1
IMM(Immobilizer)	Abnormal 1
BMS(Battery Manager System)	
Clear Code Report	

The system with fault codes will be displayed in red (). The system with no fault codes will be displayed in green ().

*Explanation of terms:

- Tap ▼ to display the details of DTCs existing in the current system.
- Tap ▲ to hide it.
- > : To select other test functions.
- Report: To save the diagnostic result as a report.
- Clear DTC: To clear the existing diagnostic trouble codes.

1.2.2 System Scan (Automatic System Detection)

This function will scan the vehicle test system automatically.

Tap "System Scan". The following screen will appear:

Select Test Item	
DEMO V15.01>Select Item	
System Name	Result
Scanning System...	67%
IMM(Immobilizer)	Scanning...
ECM(Engine Control Module)	Fault 4
TCM(Transmission Control Module)	Fault 4
Pause	

1.2.3 System Selection (Manual System Detection)

This function allows you manually select the system and perform the related diagnostic functions.

Tap "System Selection", and then select the desired system (take "ECM" for example). The following screen will appear:

Show Menu	
DEMO V15.01>System Sca...CM/Engine Control Module	
version Information	
Read Fault Code	
Clear Fault Code	
Read Data Stream	

a. Version Information

This function can read the version information of system mode, vehicle VIN, software and ECU.

b. Read Fault Code

This function displays the detailed information of DTC records retrieved from the vehicle's control system.

The following screen will appear:

Diagnostic Trouble Code	
P0401	EGR Valve A Flow Insufficient Detected
P1291	Injector High Side Short To GND Or VBATT (Bank1)
P2073	Manifold Absolute Pressure/ Mass Air Flow-Throttle correlation at idle
P2097	Throttle Valve Block(ice up)
Report	

*Explanation of terms:

- Freeze Frame: A snapshot of critical parameter values at the time the DTC occurs.
- Help: To view the help information.
- Code Search: To search for more information about the current DTC online.
- Report: To save the current data in text format. All diagnostic reports can be accessed from "Data" -> "Diagnostic Report".

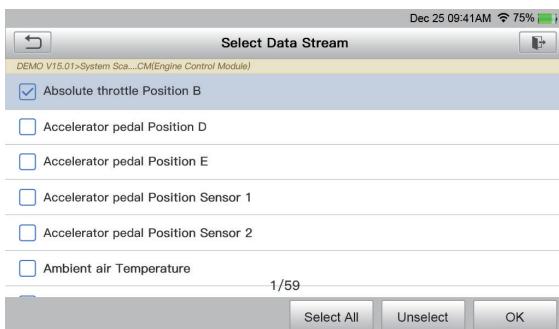
c. Clear Fault Code

This function can erase the codes from the vehicle. Please make sure the vehicle's ignition key is in the ON position with the engine off before the operation.

d. Read Data Stream

This option retrieves and displays live data and parameters from the vehicle's ECU.

The following screen will appear:



After selecting the desired items, tap "OK" to enter the data stream reading page.

Name	Value
Absolute throttle Position B	15.29 %
Accelerator pedal Position D	19.61 %
Accelerator pedal Position E	21.18 %
Accelerator pedal Position Sensor 1	1.11 v
Accelerator pedal Position Sensor 2	0.57 v
Ambient Air Temperature	(1/5) 21 degree C

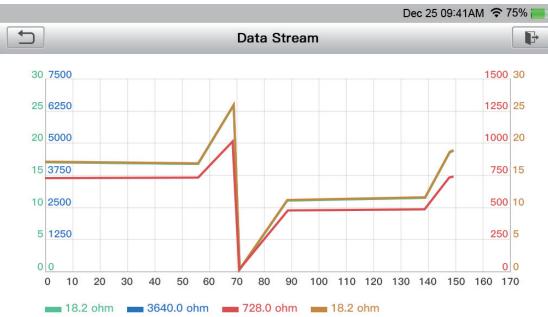
The system will display the selected data streams in 3 modes available:

- 1) Value (default): Shows parameters with numbers and lists.
- 2) Figure: Displays parameters with wave patterns.
- 3) Combine: The graphs can be merged for easier comparisons.

Tap to view the parameters in wave patterns:



Tap "Combine" to merge values in waveform for easier comparisons. Maximum 4 values can be selected at the same time.



Tap "Report" to save the current data as a diagnostic report. All diagnostic reports can be accessed from "Data" -> "Diagnostic Report".

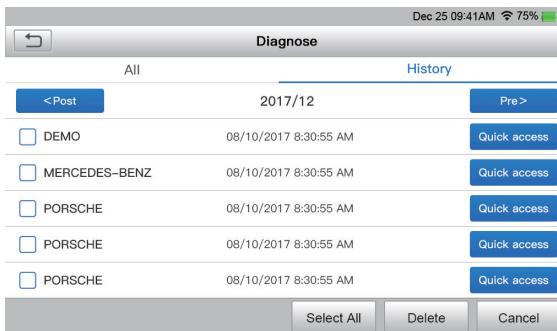
Tap "Record" to record and save the Live Data as valuable information to help troubleshoot and diagnose. All diagnostic records can be accessed from "Data" -> "Diagnostic Record".

1.3 Diagnostic History

The tablet will record every details of diagnostic session.

The History function provides the direct access to the previously tested vehicles. Users can resume from the last operation, without the necessity of starting from scratch.

Tap "History" in the "Diagnose" module. All diagnostic records will be listed on the screen in a date sequence.



2. Maintenance Services

TOPDON ArtiDiag800 features 15 most commonly used maintenance services.

2.1 Maintenance Light Reset

This function enables you to reset the oil service lamp for the engine oil life system, which calculates an optimal oil life change interval depending on the vehicle driving conditions and weather events.

It needs to be performed in the following cases:

- If the service lamp is on, run car diagnostics first for troubleshooting. After that, reset the driving mileage or driving time, so as to turn off the service lamp, and enable a new driving cycle.
- If the service lamp is not on, but you have changed the engine oil or electric appliances that monitor oil life, you need to reset the service lamp.

2.2 Steering Angle Reset

This function can reset the steering angle to zero to keep the car running straight.

It needs to be performed generally after replacing the steering angle position sensor, or after replacing the mechanical parts of the steering system (such as steering gear, steering column, tie rod ball head, steering knuckle), or after completing the four-wheel positioning, body repair, etc.

2.3 Injector Coding

This function can write injector actual code or rewrite code in the ECU to the injector code of the corresponding cylinder, so as to control or correct the cylinder injection quantity accurately.

It needs to be performed in the following cases:

- After the ECU or injector is replaced.

2.4 Battery Matching

This function can reset the monitoring unit of the car battery, by clearing the original breakdown information about the lack of battery power to rematch the battery.

It needs to be performed in the following cases:

- The replacement of the main battery needs to utilize battery matching to clear the former information about the lack of power, thus avoiding false information detected by the relevant control module which may cause the failure of some electronic auxiliary functions. For example, the vehicle automatically stops; the sunroof can't work by one key; electric windows can't open and close automatically.
- The battery monitoring sensor uses the battery matching function to re-match the control module with the monitoring sensor, so as to detect the use of the battery power more accurately, and avoid

receiving wrong information from instrument prompts which will cause false alarms.

2.5 ABS Bleeding

This function enables you to perform tests to check the operating conditions of Anti-lock Braking System (ABS).

It needs to be performed in the following cases:

- When the ABS contains air.
- When the ABS computer, ABS pump, brake master cylinder, brake cylinder, brake line, or brake fluid is replaced.

2.6 Throttle Matching

This function can utilize the car decoder to initialize the throttle actuator so that the learning value of the ECU returns to the initial state. By doing so, the movement of the throttle (or idle motor) can be more accurately controlled, thus adjusting the intake volume.

It needs to be performed in the following cases:

- After replacing the electronic control unit, the relevant characteristics of the throttle operation have not been stored in the electronic control unit.
- After the electric control unit is powered off, the memory of the electric control unit's memory is lost.
- After replacing the throttle assembly, you need to match the throttle.
- After replacing or disassembling the intake port, the controlling of the idle speed by the coordination between the electronic control unit and the throttle body is affected.
- The intake volume, and the idle control behavior has changed while staying at the same throttle opening position, although the idle throttle potentiometer behavior hasn't changed.

2.7 Electronic Parking Brake Reset

This function helps you to replace and reset the brake pad.

It needs to be performed in the following cases:

- The brake pad and brake pad wear sensor are replaced.
- The brake pad indicator lamp is on.
- The brake pad sensor circuit is short, which is recovered.
- The servo motor is replaced.

2.8 DPF Regeneration

This function can help remove particulate matters from the trap by using combustion oxidation methods to keep the performance of the trap stable.

It needs to be performed in the following cases:

- Replace the exhaust back pressure sensor.
- Disassembly or replacement of the particle trap.
- Removal or replacement of fuel additive nozzles.
- Removal or replacement of catalytic oxidizer.
- The DPF regeneration fault lamp is lit and matched after maintenance.
- Repair and replace the DPF regeneration control module.

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2.9 Anti-theft Matching

This function can match the anti-theft key after replacing the ignition key, ignition switch, instrument cluster, engine control unit (ECU), body control module (BCM), and remote control battery.

2.10 Tire Pressure Reset

This function can reset the tire pressure and turn off the tire pressure fault indicator when the car tire pressure fault indicator light is on.

2.11 Suspension Level Calibration

This function can adjust the vehicle body height sensor for level calibration after replacing the vehicle height sensor or control module in the air suspension system, or when the vehicle level is not correct.

2.12 Headlight Matching

This function can initialize the adaptive headlight system. The headlight system can decide whether to automatically turn on the headlights based on the ambient light intensity, monitor the vehicle's driving speed, body posture, etc., and adjust the headlight lighting angle timely.

2.13 Gearbox Matching

This function can complete the self-learning of the gearbox and improve the shift quality, when the gearbox is disassembled or repaired which may cause the shifting delay or car impact.

2.14 Sunroof Initialization

This function can set the sunroof lock off, close in rain, memory function of sliding / tilting sunroof, outside temperature threshold, etc.

2.15 Tooth Learning

This function can perform tooth learning for the car, to turn off the related Malfunction Indicator Light (MIL).

It needs to be performed in the following cases:

- After the engine ECU, crankshaft position sensor, or crankshaft flywheel is replaced.
- The DTC "tooth not learned" is present.



3. OBDII/EOBD Diagnostics

This function presents a quick way to check for DTCs, isolate the cause of the illuminated Malfunction Indicator Lamp (MIL), check monitor status before emissions certification testing, verify repairs, and perform other services that are emission-related.

Tap "OBD II" in the Home Menu after the tablet is properly connected to the vehicle's DLC port. The tablet will start an automatic check of the vehicle's computer to determine which type of communication protocol it is using, then display the Monitor Status as follows:

Scan Results	
Item	Value
VIN	N/A
MIL Status	Off
DTCs In This ECU	108
Readiness Completed	5
Readiness Not Completed	2
Readiness Not Supported	3

Tap "OK", the following OBDII function list appears.

3.1 Read Codes

This function can identify which section of the emission control system has malfunctioned.

3.2 Erase Codes

This function erases the codes from the vehicle, after retrieving codes from the vehicle and certain repairs have been carried out.

Make sure the vehicle's ignition key is in the ON position with the engine off before the operation.

3.3 I/M Readiness

This function checks whether or not the various emissions-related systems on the vehicle are operating properly, and are ready for Inspection and Maintenance testing.

It can also be used to check the Monitor Run Status, and to confirm if the repair of a car fault has been performed correctly.

3.4 Data Stream

This function retrieves and displays live data and parameters from the vehicle's ECU.

3.5 View Freeze Frame

This function takes the snapshot of the operating conditions when an emission-related fault occurs.

3.6 O2 Sensor Test

This function retrieves O2 sensor monitor test results of the most recently completed tests from the vehicle's on-board computer.

3.7 On-Board Monitor Test

This function retrieves test results for emission-related powertrain components and systems that are not continuously monitored. The test's availability is determined by the vehicle manufacturer.

3.8 EVAP System Test

This function initiates a leak test for the vehicle's EVAP system.

Refer to the vehicle's service repair manual to determine the procedures necessary to stop the test.

3.9 Vehicle Info

This function retrieves a list of information (provided by the vehicle manufacturer) from the vehicle's on-board computer.

This information may include:

- VIN (Vehicle Identification Number).
- CID (Calibration ID).
- CVN (Calibration Verification Number).

4. Battery Voltage

This function can measure the current voltage of the vehicle's battery.

5. I/M

This function provides a quick access to the I/M Readiness diagnostics.

6. Upgrade

A number will be displayed upon the "Upgrade" module in the Home Menu indicating a new version of software is available.

It is strongly suggested to update the software on regular basis for more functions and better service.

Once the download is finished, the software packages will be installed automatically.

*Note: It requires a stable and solid network connection.

7. Data

Tap "Data" in the Home Menu. The following screen will appear:



7.1 Diagnostic Record

This module stores the running parameters or waveform graphs the user records.

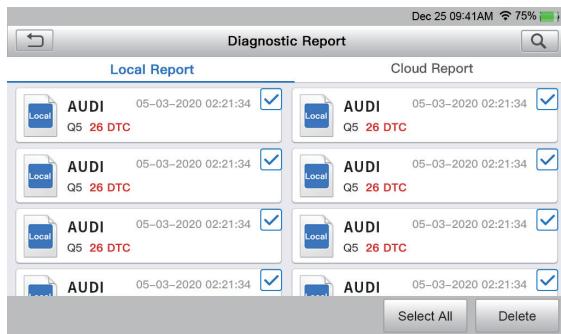
Name	Value
Absolute throttle Position B	15.29 %
Accelerator pedal Position D	19.61 %
Accelerator pedal Position E	21.18 %
Accelerator pedal Position Sensor 1	1.11 v
Accelerator pedal Position Sensor 2	0.57 v

*Explanation of terms:

- Graph: Display parameters in waveform graphs.
- Combine: Merge graphs for data comparison. Items will be in different colors.
- Value (default): Display the parameters as text in a list format.
- Auto Playback: Automatic playback of the selected data stream items. When in Auto Playback mode, the bar will change to "Frame Playback".
- Frame Playback: Frame-by-frame playback of the selected data stream items. When in Frame Playback mode, the bar will change to "Auto Playback".

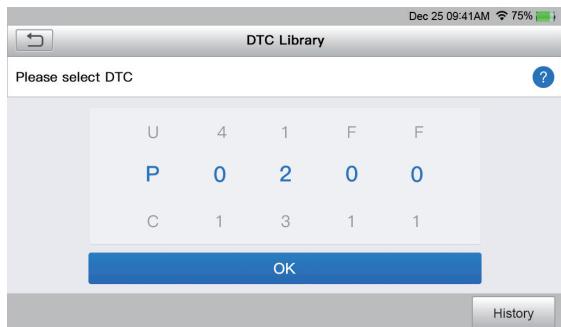
7.2 Diagnostic Report

This module stores all diagnostic reports generated in the process of vehicle diagnostics.



7.3 DTC Library

This function helps you to get the details of the DTC, which will greatly simplify the diagnosis process.



7.4 DLC (Data Link Connector) Location

This function helps you to find the location of the vehicle's DLC.

7.5 Feedback

This function allows you to send the feedback of your diagnostic problems to us for further analysis and troubleshooting.

There are 3 options:

- 1) Diag. Feedback: To send a tested vehicle diagnostic feedback.
- 2) History Feedback: To view all diagnostic feedback records.
- 3) Offline Feedback: To view all diagnostic feedback logs that have failed to be submitted, which will be uploaded again to the remote server automatically once the tablet gets the stable network.

7.6 Image

All screenshots created in the vehicle diagnostic work will be saved in this module.

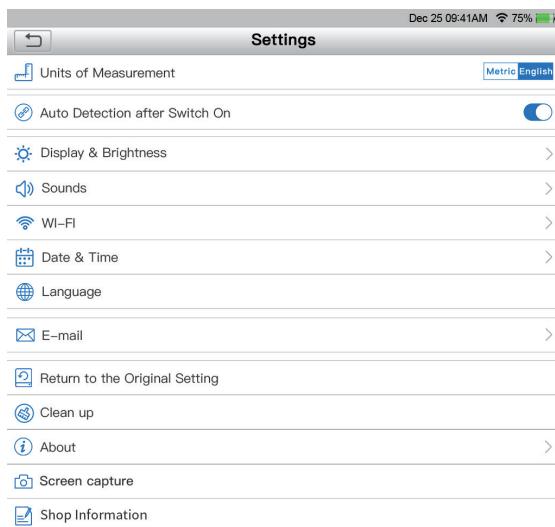
7.1 Firmware Fix

Use this module to upgrade and fix diagnostic firmware.
Do not cut power or switch to other interfaces in the upgrading process.

7.8 FAQ

This module lists some frequently asked questions and answers related to this tablet.

8. Settings



8.1 Units of Measurement

This option can set the measurement unit. Metric System and Imperial System are available.

8.2 Auto Detection after Switch On

This option enables you to determine whether to start an automatic VIN detection once the tool is properly connected to the vehicle's DLC.

8.3 Display & Brightness

This option allows you to set the standby time and screen brightness.

8.4 Sounds

This option allows you to adjust the volume and other sound settings.

8.5 Wi-Fi

This option allows you to set up Wi-Fi networks that can be connected.

8.6 Date & Time

This option allows you to set the system date & time.

8.7 Language

The tool supports multiple languages. You can use this option to set the preferred language.

8.8 E-mail

This option can set up the default email address for receiving the diagnostic reports.

8.9 Return to the Original Setting

This option can reset the tool to the default factory setting.

8.10 Clean Up

This option allows user to clear some cache files and free up the storage space.

8.11 About

This option displays the hardware configuration information of the tool and the license agreement.

8.12 Screen Capture

This option can set the Screen Capture icon to be shown or not on the screen.

8.13 Shop Information

This option allows you to add the information of the workshop, which will be displayed in the diagnostic report.

Technical Specification

Display: 7-inch 1024*600 Touchable Screen

RAM: 2G

ROM: 16GB

OBDII Input Voltage Range: 9~18V

Charging: 5V DC, or through connection to vehicle's DLC

Working Temperature: 32°F to 122°F (0°C to 50°C)

Storage Temperature: -4°F to 158°F (-20°C to 70°C)

Dimension: 9.69*5.49*1.34 inches (246*139.5*34 mm)

Weight: 21.16 oz (599.88 g)

Warnings

- ✓ Always perform automotive testing in a safe environment.
- ✓ DO NOT smoke near the vehicle during testing.
- ✓ DO NOT place the diagnostic tool near the engine or exhaust pipe to avoid damage from high temperatures.
- ✓ DO NOT wear loose clothing or jewelry when working on an engine.
- ✓ DO NOT connect or disconnect any test equipment while the ignition is on or the engine is running.
- ✓ DO NOT disassemble the code reader.
- ✓ Engine parts will become hot when the engine is running. To prevent severe burns, avoid contact with hot engine parts.
- ✓ When an engine is running, it produces carbon monoxide, a toxic and poisonous gas. Operate the vehicle ONLY in a well-ventilated area.
- ✓ Wear safety eye protection that meets ANSI standards.

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Cautions

- ✓ Please ensure that the vehicle battery is fully charged and the scanner is firmly connected to the vehicle DLC to avoid erroneous data generated by the scanner and diagnostic systems.
- ✓ Please do not use the diagnostic tool during driving.
- ✓ Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- ✓ Keep the scanner dry, clean, free from oil/water, or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.
- ✓ Keep the scanner out of the reach of children.

FAQ

Q: System halts when reading the data stream. What is the reason?
A: It may be caused by a slackened connector. Please turn off the tablet, firmly connect the connector, and switch it on again.

Q: Screen flashes at engine ignition start.
A: Normally caused by an electromagnetic disturbing.

Q: There is no response when communicating with the on-board computer.
A: Please confirm the proper voltage of the power supply and check the following:

- Whether the throttle has been closed;
- Whether the transmission is in the proper position;
- Whether the water is in the proper temperature.

Q: What to do if the system fails to start auto VIN detection?
A: Please check the following possible causes:

- Whether the tool is properly connected to the vehicle's DLC.
- Whether the "Automatic detection on Connect" switch is OFF. If yes, slide it to ON.

Q: Why are there so many fault codes?
A: Usually it's caused by a poor connection or fault circuit grounding.

Q: How to upgrade the system software?
A:

1. Power the tool on and ensure a stable internet connection.
2. Tap "Setting" on the Home Menu, select "About" -> "Version", and tap "Detect the System Version" to enter the system upgrading page.
3. Follow the on-screen instructions step by step to finish the process. It may take a while to finish the upgrade depending on the internet speed. The tool will automatically restart and enters the Home Menu when the upgrade is finished.

Q: What if the tablet cannot be turned on even after recharging?
A: Please recharge the tablet for at least 3 hours until the power LED lights up.

EN

FCC Statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received, including interference that may cause undesired operation.