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Important Safety Precautions

Important: To avoid personal injury, property damage, or accidental damage to the product, read all of the information in this section before using the product.

- Never collide, throw, or puncture X-431 Diagun IV, and avoid falling, extruding and bending it.
- Do not insert foreign objects into or place heavy objects on your device. Sensitive components inside might cause damage.
- Do not use X-431 Diagun IV in exceptionally cold or hot, dusty, damp or dry environments.
- In places using X-431 Diagun IV may cause interference or generate a potential risk, please turn it off.
- X-431 Diagun IV is a sealed unit. There are no end-user serviceable parts inside. All internal repairs must be done by an authorized repair facility or qualified technician. If there is any inquiry, please contact the dealer.
- Never place X-431 Diagun IV into apparatus with strong electromagnetic field.
- Keep X-431 Diagun IV far away from magnetic devices because its radiations can damage the screen and erase the data stored on X-431 Diagun IV.
- DANGER: Do not attempt to replace the internal rechargeable lithium battery. Contact the dealer for factory replacement.
- CAUTION: Please use the included battery and charger. Risk of explosion if the battery is replaced with an incorrect type.
- Do not disconnect power abruptly when X-431 Diagun IV is being formatted or in process of uploading or downloading. Or else it may result in program error.
- Do not delete unknown files or change the name of files or directories that were not created by you, otherwise your X-431 Diagun IV software might fail to work.
- Be aware that accessing network resources can leave your X-431 Diagun IV vulnerable to computer viruses, hackers, spyware, and other malicious activities that might damage your device, software or data. It is your responsibility to ensure that you have adequate protection in the forms of firewalls, antivirus software, and anti-spyware software and keep such software up to date.

Precautions on Using X-431 Diagun IV

Before using this test equipment, please read the following safety information carefully.

- Always perform automotive testing in a safe environment.

- If the VCI connector remains unused for a long period of time, it is suggested to unplug the connector from vehicle's DLC to conserve battery power.
- Wear an ANSI-approved eye shield when testing or repairing vehicles.
- The vehicle shall be tested in a well ventilated work area, as engines produce various poisonous compounds (hydrocarbon, carbon monoxide, nitrogen oxides, etc.)
- Do not connect or disconnect any test equipment while the ignition is on or the engine is running.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while testing.
- Keep the test equipment dry, clean, free from oil, water or grease. Use a mild detergent on a clean cloth to clear 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.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Before starting the engine, put the gear lever in the Neutral position (for manual transmission) or in the Park (for automatic transmission) position to avoid injury.
- To avoid damaging the test equipment or generating false data, please make sure the vehicle battery is fully charged and the connection to the vehicle DLC (Data Link Connector) is clear and secure.
- Automotive batteries contain sulfuric acid that is harmful to skin. In operation, direct contact with the automotive batteries should be avoided. Keep the ignition sources away from the battery at all times.

Precautions on Operating Vehicle's ECU

- Do not disconnect battery or any wiring cables in the vehicle when the ignition switch is on, as this could avoid damage to the sensors or the ECU.
- Do not place any magnetic objects near the ECU. Disconnect the power supply to the ECU before performing any welding operations on the vehicle.
- Use extreme caution when performing any operations near the ECU or sensors. Ground yourself when you disassemble PROM, otherwise ECU and sensors can be damaged by static electricity.
- When reconnecting the ECU harness connector, be sure it is attached firmly, otherwise electronic elements, such as ICs inside the ECU, can be damaged.

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1 Introductions

1.1 Product Profile

X-431 Diagun IV is an slim evolutionary vehicle diagnostic tool. Featuring a quad-core 1.1GHz processor, and a 5.5 inch capacitive screen, X-431 Diagun IV delivers diagnostic functionality which helps to diagnose vehicle issues more efficiently.

In addition, X-431 Diagun IV supports Wi-Fi connection, one-click update, diagnostic feedback and all kinds of service functions (including oil lamp reset etc).

1.2 Features

1. Diagnostics:

A. Diagnose

- ♦ Diagnose the electronic control systems of prevailing vehicle models covering Asian, European, American and Chinese. Diagnosis functions include: Read DTCs, Clear DTCs and Read data stream etc.
- ♦ Specially designed for Android platform with clear and user-friendly interface.
- ♦ Via Bluetooth, it is simple for the VCI connector to communicate with X-431 Diagun IV.

B. Reset: Includes all kinds of maintenance resets.

C. One-click Update: lets you update diagnostic software and APK more efficiently.

2. Browser: built-in Wi-Fi module makes surfing on the internet freely.
3. Email: allows you to send and receive emails.
4. Settings: to configure your personalized X-431 Diagun IV through it.
5. Applications: other android based applications can be customized to install or uninstall.

1.3 Knowledge of X-431 Diagun IV

1.3.1 X-431 Diagun IV whole set

There are two main components to the X-431 Diagun IV system:

- **X-431 Diagun IV Handset** -- the central system (for details, please refer to Chapter 1.3.1.)

- **VCI Connector** -- the Vehicle Communication Interface for accessing vehicle data

1.3.2 X-431 Diagun IV handset

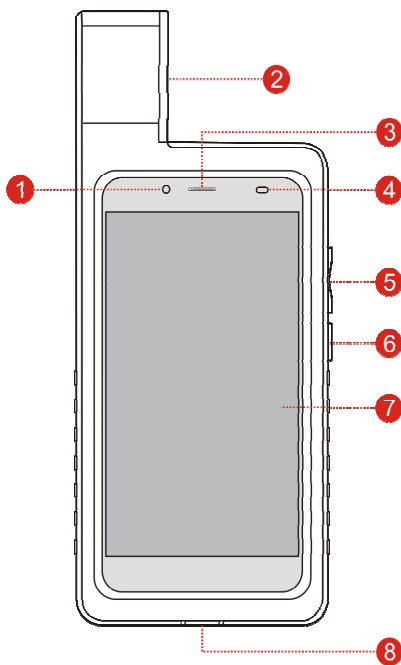


Fig. 1-1 X-431 Diagun IV handset

1	Front camera	
2	Slot for VCI connector	For housing the VCI connector.
3	Speakers	
4	Ambient light sensor	
5	VOLUME +/- Key	To adjust the volume. To print the screen, hold and press the POWER and VOLUME – key until a

snapshot pops up on the screen. The captured snapshot is saved in the "Screenshots" folder.

6	POWER/Screen lock key	In Off mode, press it to turn X-431 Diagun IV on; In On mode, turn X-431 Diagun IV off with long press or lock screen with short press.
7	LCD screen	
8	USB/Charging port	To connect to the power adaptor for charging the X-431 Diagun IV handset.

1.3.3 VCI connector (Only applies to 12V passenger cars)

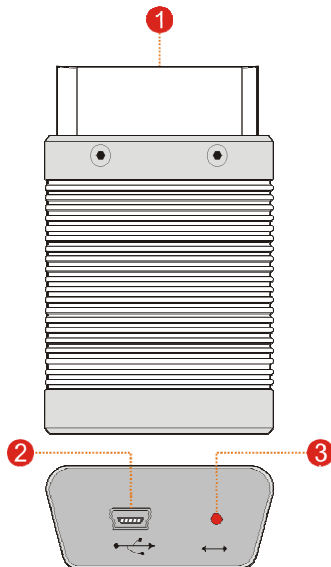


Fig. 1-2 VCI connector

1	OBD-16 diagnostic connector	To connect on vehicle's OBD2 DLC.
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2	Mini USB port	For connecting the USB cable to the tablet to perform vehicle diagnosis. (Note: This port is disabled for X-431 Diagun IV.)
3	Mode indicator	<ul style="list-style-type: none"> • It illuminates red when the VCI connector is connected to the vehicle's DLC. • Blue indicates the VCI connector is working in Bluetooth mode.

1.4 Technical Parameters

X-431 Diagun IV:

Operating system	Android 7.0
Processor	Quad core 1.1 GHz
Memory	1GB
Storage	16GB (Expandable up to 64GB)
LCD screen	5.5 inch IPS screen with a resolution of 1280 x 720 pixels
Camera	Front-facing 2MP camera + rear-facing 8MP camera
Battery	2500mh rechargeable polymer lithium battery
Connectivity	<ul style="list-style-type: none"> • Wi-Fi: WLAN 802.11b/g/n • Bluetooth: Bluetooth 4.1
Working temperature	0°C ~ 45°C
Storage temperature	-10°C ~ 50°C

VCI connector:

Working voltage	9 ~18V
Working temperature	-10°C ~ 55°C
Storage temperature	-20°C ~ 70°C
Relative humidity	20% ~ 90%

1.5 Package List



While opening X-431 Diagon IV package for the first time, please carefully check the following components. Common accessories for each X-431 Diagon IV are same, but for different destinations, the accessories of X-431 Diagon IV may vary. Please consult from the local agency or check the package list supplied with X-431 Diagon IV together.

- X-431 Diagon IV handset
- VCI connector (For connecting OBD II vehicles)
- Password envelope (A piece of paper bearing Product S/N and Activation Code for product registration)
- OBD II extension cable (For connecting the VCI connector to OBD II vehicle)
- OBD I adaptor (For connecting the non-16pin diagnostic connector and the VCI connector)
- Power adaptor (For charging the X-431 Diagon IV handset)
- Non-16pin connectors (For connecting non-OBD II vehicle)

2 Preparations

2.1 Charging X-431 Diagun IV

1. Plug one end of the included power adaptor into the USB port of the X-431 Diagun IV.
2. Connect the other end to the AC outlet.

If  appears on the screen, it indicates it is being charged. If the logo changes into , it indicates that the battery is fully charged. Unplug the power adaptor from X-431 Diagun IV.


2.2 Using your battery

- If the battery remains unused for a long period of time or the battery is completely discharged, it is normal that the tool will not power on while being charged. Please charge it for a period of 5 minutes and then turn it on.
- Please use the included power adaptor to charge your tool. No responsibility can be assumed for any damage or loss caused as a result of using power adaptors other than the one supplied.
- While X-431 Diagun IV has low battery, a beep will sound. If it is very low, X-431 Diagun IV will be switched off automatically.

2.3 Power on/off

2.3.1 Power on

Press [POWER] to turn the tool on.

 Note: If it is the first time you have used this tool or the tool remains idle for a long period of time, the tool could fail to turn on. Please charge the tool for a minimum of 5 minutes and attempt to turn on again.

2.3.2 Power off

Press [POWER] for 3 seconds, an option menu will pop up on the screen. Tap "Power off" to turn the tool off.

2.4 Tips on finger operations



Single-tap: To select an item or launch a program.



Double-tap: To zoom in so that the text on a webpage appears in a column that fits your device's screen.



Long press: Tap and hold on the current interface or area until a contextual menu pops up on the screen, and then release it.



Slide: To jump to different pages.




Drag: Tap the application icon and drop it to other location.



Spread apart/pinch together: To zoom in manually, place two fingers on the screen and then spread them apart. To zoom out, place two fingers apart on the screen and then pinch them together.

2.5 Lock & unlock the screen

Many screen lock modes are available on X-431 Diagun IV.


 **Note:** You are recommended to set screen lock as “None” since X-431 Diagun IV is a frequently used diagnostic tool.

2.5.1 Lock the screen

- ♦ When it is ON, press [POWER] once to lock the screen;
- ♦ The system will lock the screen automatically after X-431 Diagun IV remains idle over the preset standby time.





2.5.2 Unlock the screen

Press [POWER] to activate the screen and drag the lock to “Unlock” position.

 **Note:** If you define as unlock using the pattern, you have to draw the right target pattern to unlock it.

2.6 Screen layout

There are four on-screen buttons available on the bottom of the screen.

BACK	Tap  to return to the previous screen.
HOME	Tap  to navigate to the Android's home screen.
Recent Apps	Tap  to view the recently launched applications.
Screenshot	Tap  to capture the current screen.

2.7 Notification panel

The notification bar is used to display some activities, such as new message, to do list and running tasks. You can also open the notification bar to view the reminder or activity notification.

2.8 Customize your desktop


2.8.1 Create a widget on the desktop

Tap and hold the desired application or widget, and then drag it to the target position.


2.8.2 Move items on the desktop

Tap and hold the item to be moved, and drag and drop it to the target location.


2.8.3 Delete items from the desktop

 **Warning:** Deleting an icon will uninstall the corresponding application. Please be careful to do so.

1. Tap and hold the item to be moved until it is shaken.
2. Drag it on the trash icon and release it.

 **Note:** If no trash icon appears on the top of the screen, it indicates that the application cannot be uninstalled.

2.8.4 Adjust brightness

 **Tips:** Reducing the brightness of the screen is helpful to save the power of X-431 Diagun IV.

1. On the home screen, tap Settings > Display > Brightness level.
2. Drag the slider to adjust it.

2.8.5 Set standby time


If no activities are made within the defined standby period, the screen will be locked automatically and the system enters sleep mode to save power.

1. On the home screen, tap Settings > Display > Sleep.
2. Choose the desired sleep time.


2.9 Set screen lock

This function is designed to lock the screen and buttons to avoid accidental operations while X-431 Diagon IV keeps unused.

1. On the home screen, tap Settings > Security > Screen lock.
2. Choose the desired screen lock mode and follow the on-screen instructions to finish your setting.

 Note: You are recommended to set screen lock as “None” since X-431 Diagon IV is a frequently used diagnostic tool.


3 Wi-Fi Setting

 Note: If you don't need to use Wi-Fi for a while, you can turn it off to conserve battery life.

X-431 Diagon IV has built-in Wi-Fi that can be used to get online. Once you're online, you can register your X-431 Diagon IV, surf the Internet, get apps, send email, launch the remote diagnosis, and check for software updates etc.

3.1 Connect to a Wi-Fi network

1. On the home screen, tap **Settings -> WLAN**.
2. Slide the Wi-Fi switch to ON, X-431 Diagon IV will start searching for available wireless networks.
3. Select a wireless network,
 - If the chosen network is open, X-431 Diagon IV will connect automatically;
 - If the selected network is encrypted, a network password will need to be entered.
4. When "Connected" appears, it indicates the Wi-Fi connection is complete.

 Note: When Wi-Fi is not required, this should be disabled to conserve battery power.

Once it is connected successfully, tap the Wi-Fi network from the list to view its name, link speed, security type, IP address etc.

When this tool is in range, it will connect to the previously linked network automatically.

3.2 Disconnect from a Wi-Fi network

1. On the home screen, tap **Settings -> WLAN**.
2. Tap the network with a **Connected** status, then tap "Disconnect".

4 Initial Use & Vehicle Connection

4.1 Diagnosis Flowchart

For new users, please follow the operation chart shown in Fig. 4-1 to get familiar with and start using X-431 Diagun IV.

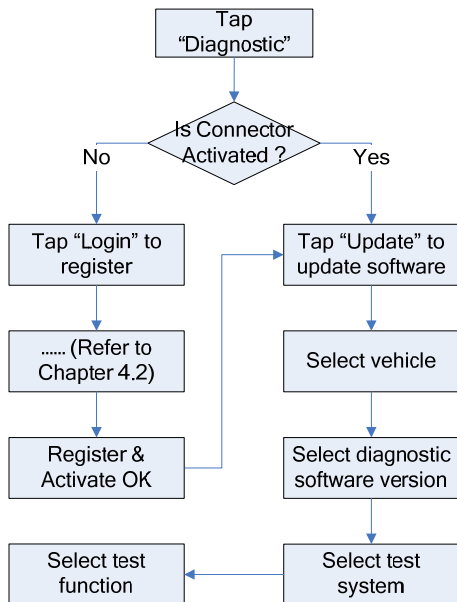


Fig. 4-1

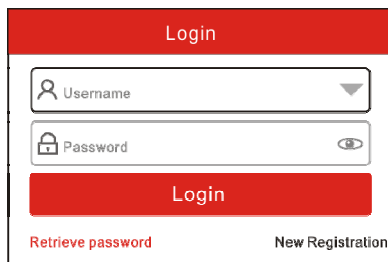
4.2 Initial Use

During initial use, tap the X-431 Diagun IV icon on the home screen to launch it and enter the main menu screen.

By default, all software is pre-installed on the X-431 Diagun IV and can be used to diagnose vehicles even if you do not experience the product registration. To enable you to get one-click update and enjoy more functions and better service, you are recommended to make app sign-up and product activation for the first time.

4.2.1 User registration

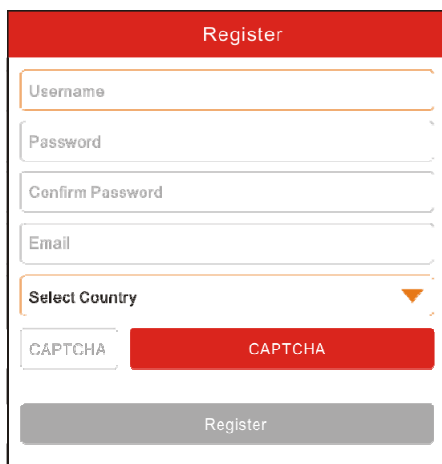
Tap "Login" on the upper right corner of the main menu screen:



The image shows a mobile application login screen. At the top, there is a red header with the word "Login" in white. Below the header, there are two input fields: "Username" with a person icon and a dropdown arrow, and "Password" with a lock icon and a toggle eye icon. A prominent red button labeled "Login" is centered below the fields. At the bottom, there are two links: "Retrieve password" on the left and "New Registration" on the right.


Fig. 4-2

1. If you are a new user, tap "New Registration". See Fig. 4-3.



The image shows a mobile application registration screen. At the top, there is a red header with the word "Register" in white. Below the header, there are five input fields: "Username", "Password", "Confirm Password", "Email", and "Select Country" with a dropdown arrow. Below these fields, there are two "CAPTCHA" fields, each with a red button labeled "CAPTCHA". At the bottom, there is a large grey button labeled "Register".

Fig. 4-3

 Note: To obtain better service, you need to provide real information.

- A. Create App account: In Fig. 4-3, fill in the information in each field and then tap "Register", a screen similar to the following will appear:

Fig. 4-4

- B. Activate the VCI connector: In Fig. 4-4, input the Serial Number and Activation Code, which can be found in the password envelope.

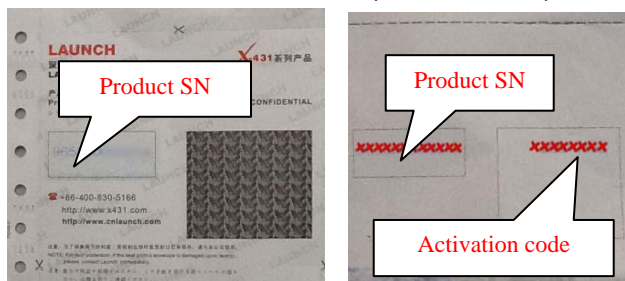



Fig. 4-5

-  **Note:** To exit and activate it later, tap “Skip”. In this case, you can activate your connector by tapping “Activate Connector” in “Personal Center”. For details, please refer to Chapter 9.3 Activate Connector.

- C. Download diagnostic software: Tap “Activate”, a dialog box similar to Fig. 4-6 will appear:

Fig. 4-6

To download the diagnostic software, tap “Yes” to enter the software download page. Tap “No” to download it later.

On the download page, tap “Update” to start downloading. It may take several minutes to finish it, please be patient to wait. To pause downloading, tap “Pause”. To resume it, tap “Continue”.

Once download is complete, the system will install the software package automatically.

2. If you have registered to be a member, input your name and password, and then tap the “Login” button to enter the main menu screen directly.

Note: X-431 Diagun IV has an auto-save function. Once the username and password are correctly entered, the system will automatically store it. Next time you login the system, you will not be asked to input the account manually.

3. If you forgot the password, tap “Retrieve Password”, and then follow the on-screen instructions to retrieve it.

Fig. 4-7

4.2.2 Function menu

It mainly includes the following items:

Name	Description
Diagnose	Configures X-431 Diagun IV to operate as a

	diagnostic tool.
Special Function	To perform some maintenance items, including electronic throttle position reset, ABS bleeding, oil lamp reset etc.
Feedback Diagnosis	This option allows you to feed back the diagnostic reports/software bugs to us for troubleshooting and analysis.
Software Upgrade	To update vehicle diagnostic software. If you keep signed in, a pop-up message will appear on the screen once a newer version is detected.
Maintenance Help	To browse the FAQ, Quick Start Guide, User Manual and How-To videos.
Personal Center	To manage, activate your VCI connector, diagnostic report or personal information etc.

4.3 Connections

4.3.1 Preparation

Normal testing conditions

- Turn on the vehicle power supply.
- Vehicle battery voltage range should be 9-14 Volts.
- Throttle should be in a closed position.

Select the VCI connector

If X-431 Diagun IV is testing vehicles equipped with universal OBD II diagnostic socket, please use the included VCI connector. (For vehicles with non-OBD II diagnostic socket, a non-16 pin connector is required.)

4.3.2 DLC location

The DLC (Data Link Connector) is typically a standard 16-pin connector where diagnostic tools interface with a vehicle's on-board control modules. The DLC is usually located 12 inches from the center of the instrument panel, under or around the driver's side for most vehicles. See Fig. 4-7 for DLC location of different vehicles. If DLC is not located under dashboard, a label should be there telling location. For some Asian and European vehicles, the DLC is located behind the ashtray and the ashtray must be removed to access the connector. If the DLC cannot be found, refer to the vehicle's service manual.

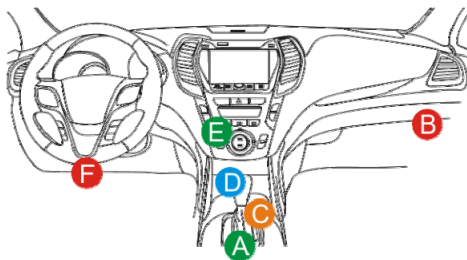


Fig. 4-8

4.3.3 Vehicle connection

The method used to connect the VCI connector to a vehicle's DLC depends on the vehicle's configuration as follows:

- A vehicle equipped with an OBD II management system supplies both communication and 12V power through a standardized DLC.
- A vehicle not equipped with an OBD II management system supplies communication through a DLC connection, and in some cases supplies 12V power through the cigarette lighter receptacle or a connection to the vehicle battery.

Follow the steps mentioned below to connect OBD II vehicle:

1. Locate vehicle's DLC socket.
2. Plug the VCI connector into the vehicle's DLC socket (It is suggested to use the OBD II extension cable to connect the VCI connector and DLC socket).
3. Choose one of the two ways to obtain power from:
 - A. Power adaptor: Connect one end of the included power adaptor to DC IN port of X-431 Diagun IV handset, and the other end to AC outlet.
 - B. Internal battery pack

For non-OBDII vehicle, proceed as follows:


1. Locate vehicle's DLC socket.
2. Select the corresponding non-16pin connector.
3. Plug the non-16pin end of the connector into the DLC socket, then connect the other end to the OBD I adaptor, and then tighten the captive screws.
4. Connect the other end of the adaptor to the included VCI connector.
5. To supply power to OBD I adaptor from:
 - A. Cigarette Lighter cable(optional): Connect one end of the cigarette lighter cable to vehicle's cigarette lighter receptacle, and the other end to the power jack of OBD I adaptor.
 - B. Battery Clamps Cable(optional): Connect one end of the battery clamps

cable to vehicle's battery, and the other end to the power jack of OBD I adaptor.

4.4 Bluetooth Setting

Enter X-431 Diagon IV Bluetooth setting screen ("Settings" -> "Bluetooth"), slide the Bluetooth switch to ON and X-431 Diagon IV will start searching available Bluetooth device, tap the desired connector to pair.

By default, the Bluetooth name is 98729*****00 (where ***** stands for 5 digits.).

 Note: In case no Bluetooth setting is done before diagnostic software is launched, you can also configure it while using the software. For details on Bluetooth connection, please refer to Chapter 4.5 "Start diagnosing".

5 Start Diagnostics

Follow the steps mentioned below to start a new diagnostic session.
Tap “Diagnostic”, and then tap a corresponding diagnostic software logo.
Take Demo as an example to demonstrate how to diagnose a vehicle.

1). Tap the “DEMO”, a screen similar to the following appears:

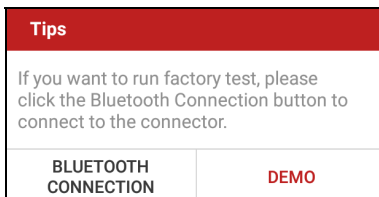


Fig. 5-1

2). Tap “Demo” to ignore Bluetooth connection and jump to the test item selection screen. (Note: No Bluetooth connection is required for DEMO program.)

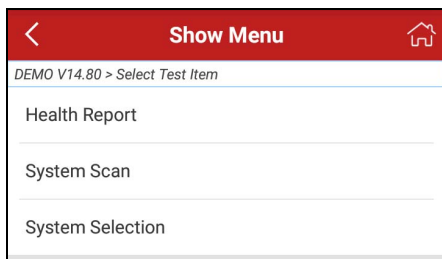


Fig. 5-2

5.1 Health Report (Quick Test)

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

Tap “Health Report”, the system start scanning the ECUs. Once the scanning is complete, a screen similar to the following appears:

DEMO V14.80 > Health Report

System Name	Result
ECM(Engine Control Module)	Fault 4
TCM(Transmission Control Module)	Fault 3
ABS(Anti-lock Braking System)	Fault 2
SRS(Supplemental Inflatable Restraint System)	Fault 3
BCM(Body Control Module)	Fault 3
IMM(Immobilizer)	Fault 3
BMS(Battery Manager System)	OK
TPMS(Tire Pressure Monitoring System)	Fault 2

Clear DTC Fault Report

Fig. 5-3

In Fig. 5-3, the tested system with fault code appears in red and the system with OK displays in black (normally).

Tap the desired system to enter the test function selection page. For detailed operations on test function, please refer to Chapter 5.3.

On-screen Buttons:

Clear DTC: Tap to clear the existing diagnostic trouble codes. See Chapter 5.1.2.

Fault Report: Tap to view the health report in details. See Chapter 5.1.1.

5.1.1 View fault report

This function allows you to view the health report in details.

Fault	Normal
ECM(Engine Control Module)	DTC (4) >
TCM(Transmission Control Module)	DTC (3) >
ABS(Anti-lock Braking System)	DTC (2) >
SRS(Supplemental Inflatable Restraint System)	DTC (3) >
BCM(Body Control Module)	DTC (3) >
IMM(Immobilizer)	DTC (3) >
TPMS(Tire Pressure Monitoring System)	DTC (2) >
SAS(Steering Angle System)	DTC (3) >

Search Report Help

Fig. 5-4

In Fig. 5-4:

The systems that have been found OK are shown in black under the Normal tab.

The tested systems with faults are listed under the Fault tab and the number of DTC is displayed in red next to the system. Tap > to view the detailed DTC information of the current system.

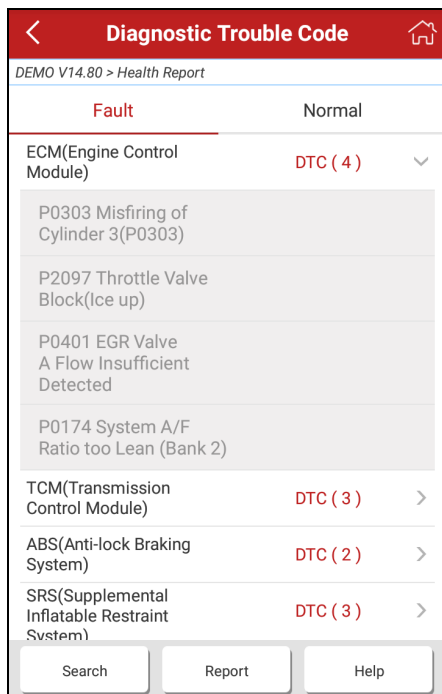


Fig. 5-5

On-screen Buttons:

Search: Highlight a certain DTC item, and then tap it to launch the browser to search for more detailed information about the selected DTC online.

Report: To save the current data in text format. All reports are saved under the tab "Report" in "My Report" from "Personal Center" menu. For details on report operations, please refer to Chapter 9.1 "My Report".

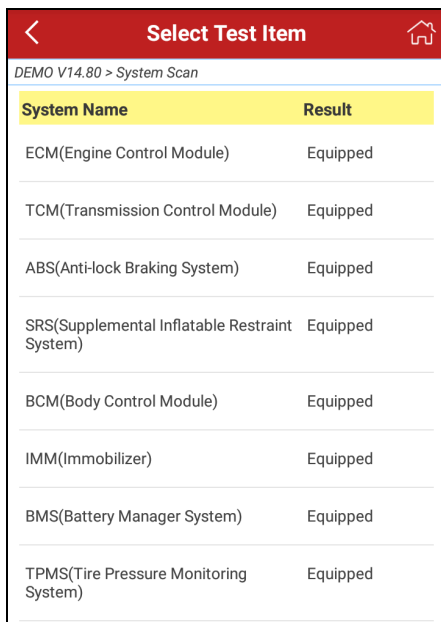
5.1.2 Clear DTC

This function lets you clear the existing diagnostic trouble codes in health report. Tap "Clear DTC", a confirmation dialog box appears. Tap "Yes" to clear all the diagnostic trouble codes. Tap "No" to abort it.

5.2 System Scan

This option allows you to quickly scan which systems are installed on the vehicle.

In Fig. 5-2, tap “System Scan”, the system start scanning the systems. Once the scanning is complete, the screen will display the result. See Fig. 5-6.



The screenshot shows a mobile application interface titled "Select Test Item". At the top, there is a red header bar with a back arrow on the left, the title "Select Test Item" in the center, and a home icon on the right. Below the header, the text "DEMO V14.80 > System Scan" is displayed. The main content is a table with two columns: "System Name" and "Result". The table lists eight systems, all of which are marked as "Equipped".

System Name	Result
ECM(Engine Control Module)	Equipped
TCM(Transmission Control Module)	Equipped
ABS(Anti-lock Braking System)	Equipped
SRS(Supplemental Inflatable Restraint System)	Equipped
BCM(Body Control Module)	Equipped
IMM(Immobilizer)	Equipped
BMS(Battery Manager System)	Equipped
TPMS(Tire Pressure Monitoring System)	Equipped

Fig. 5-6

In Fig. 5-3, tap the desired system to advance to the test function selection page. For detailed operations on test function, please refer to Chapter 5.3.

5.3 System Selection

This option allows you manually select the test system and function step by step.

In Fig. 5-2, tap “System Selection”, the screen displays as follows:

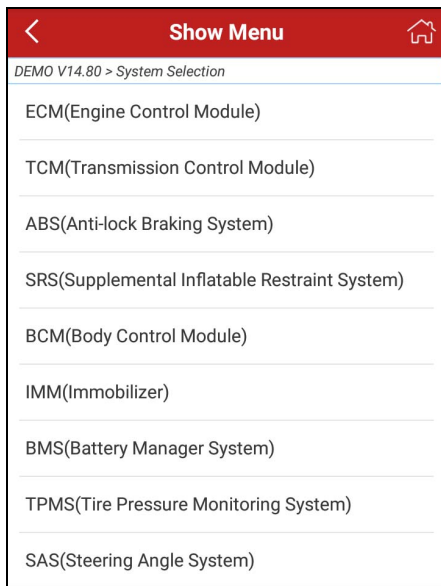


Fig. 5-7

Swipe the screen from the bottom to view the vehicle system on the next page. Tap the desired system (take “ECM” for example) to jump to the test function page.

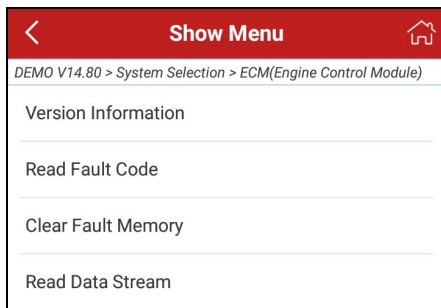


Fig. 5-8

Note: Different vehicle has different diagnostic menus.

5.3.1 Version Information

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

5.3.2 Read Fault Code

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

In Fig. 5-8, tap "Read DTC", the screen will display the diagnostic result.

DTC	Description	State	Query
P0303	Misfiring of Cylinder 3(P0303)		🔍
P2097	Throttle Valve Block(Ice up)		🔍
P0401	EGR Valve A Flow Insufficient Detected		🔍
P0174	System A/F Ratio too Lean (Bank 2)		🔍

Fig. 5-9

On-screen Buttons:

Search: Highlight a certain DTC item, and then tap it to search for more information about the selected DTC online.

Report: To save the current data in text format. All reports are saved under the tab "Diagnostic Report" in "My Report" from "Personal Center" menu. For details on report operations, please refer to Chapter 9.1 "My Report".

Freeze Frame: When an emission-related fault occurs, certain vehicle conditions are recorded by the on-board computer. This information is referred to as freeze frame data. Freeze frame data includes a snapshot of critical parameter values at the time the DTC is set.

5.3.3 Clear Fault Memory

After reading the retrieved codes from the vehicle and certain repairs have been carried out, you can use this function to erase the codes from the vehicle. Before performing this function, please be sure the vehicle's ignition key is in the ON position with the engine off.

In Fig. 5-8, tap "Clear Fault Memory", a confirmation dialog box pops up on the screen. Tap "Yes", the system will automatically delete the currently existing

trouble code.

 **Note:** The trouble code will not disappear until the trouble was completely cleared.

5.3.4 Read Data Stream

This option retrieves and displays live data and parameters from the vehicle's ECU. In Fig. 5-8, tap "Read Data Stream", the system will display data stream items.

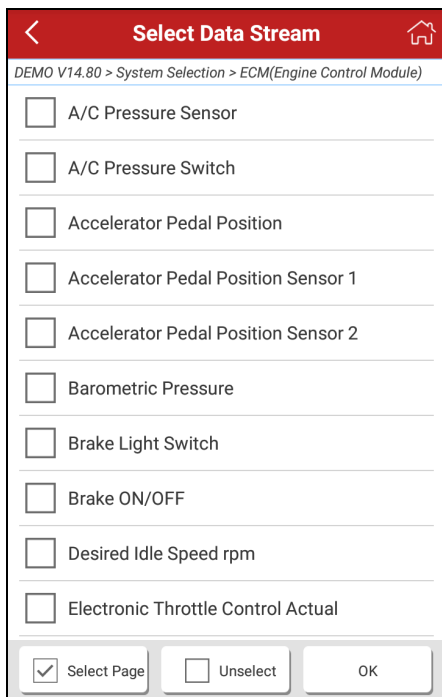


Fig. 5-10

On-screen Buttons:

Select Page: Tap it to select all items of the current page. To select certain data stream item, just check the box before the item name.

Unselect: Tap it to deselect all data stream items.

OK: Tap it to confirm and jump to the next step.

After selecting the desired items, tap "Confirm" to enter the data stream reading

page.

Name	Value	Standard	Unit
A/C Pressure Sensor	1061.83	0-1000	Kpa
A/C Pressure Switch	Closed (High)		
Accelerator Pedal Position	38.28	0-100	%
Accelerator Pedal Position Sensor 1	19.68	0-5	V
Accelerator Pedal Position Sensor 2	19.68	0-10	V
Barometric Pressure	79.17	80-110	Kpa
Brake Light Switch	Off		
Brake ON/OFF	Off 1/2		

Record

Saved data Report Help

Fig. 5-11

Notes:

1. If the value of the data stream item is out of the range of the standard (reference) value, the whole line will display in red. If it complies with the reference value, it displays in black (normal mode).
2. The indicator 1/X shown on the bottom of the screen stands for the current page/total page number. Swipe the screen from the right/left to advance/return to the next/previous page.

On-screen Buttons:

Record: Tap to start recording diagnostic data for future playback and analysis. The saved file follows the naming rule: It begins with vehicle type, and then the record starting time and ends with .x431 (To differentiate between files, please configure the accurate system time). The file is stored in "My Report" under

“Personal Center” menu. For details on playback operations, please refer to Chapter 9.1 “My Report”.

To stop reading the data stream, tap before the recording progress bar.

Saved data: Tap to access to “My Reports”.

Report: Tap to save the current waveform as a diagnostic record.

There are 3 types of display modes available for data viewing, allowing you to view various types of parameters in the most suitable way.

✓ Value – this is the default mode which displays the parameters in texts and shows in list format.

The following display modes are under Graph tab.

✓ Graph – displays the parameters in waveform graphs. Refer to Fig. 5-12.

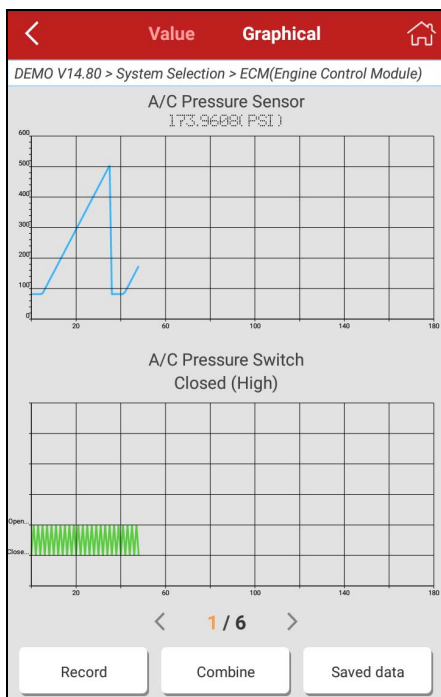


Fig. 5-12

✓ Combine – this option is mostly used in graph merge status for data

comparison. In this case, different items are marked in different colors. See Fig. 5-13.

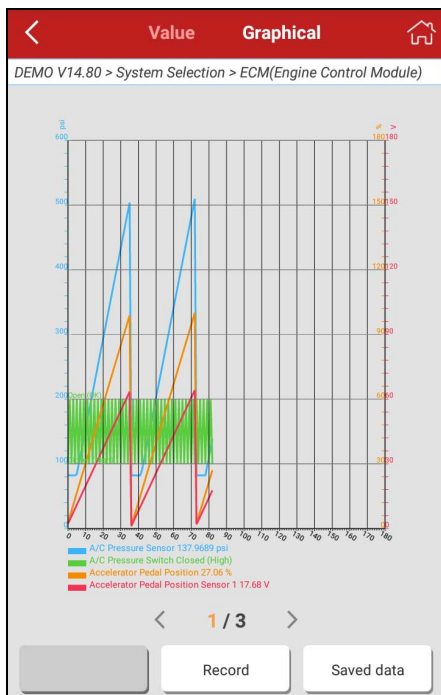


Fig. 5-13

On-screen Buttons:

Record: Tap to start recording diagnostic data for future playback and analysis. The saved file follows the naming rule: It begins with vehicle type, and then the record starting time and ends with .x431 (To differentiate between files, please configure the accurate system time). The file is stored in “My Report” under “Personal Center” menu. For details on playback operations, please refer to Chapter 9.1 “My Report”.

To stop reading the data stream, tap before the recording progress bar.

Saved data: Tap to access to “My reports”.

6 Reset

The Reset section is specially designed to provide you quick access to the vehicle systems for various scheduled service and maintenance performances. All resetting operations are driven by executive commands. Just by following the on-screen prompts to select appropriate execution options, input correct values or data, and perform necessary actions, the system will guide you through the complete performance.

The most commonly performed service functions contain:

- Oil Reset Service
- Steering Angle Calibration
- Electronic Parking Brake Reset
- Battery Register / Battery Maintenance
- ABS Bleeding
- Electronic Throttle Position Reset / Learn
- Diesel Particulate Filter (DPF) Regeneration
- Tire Pressure Monitor System Reset

Oil Reset Service

This function can be performed in the following cases:

1. If the service lamp is on, you must provide service for the car. After service, you need to reset the driving mileage or driving time so that the service lamp turns off and the system enables the new service cycle.
2. After changing engine oil or electric appliances that monitor oil life, you need to reset the service lamp.

Steering Angle Calibration

1. To reset the steering angle, first find the relative zero point position for the car to drive in straight line. Taking this position as reference, the ECU can calculate the accurate angle for left and right steering.
2. After replacing the steering angle position sensor, replacing steering mechanical parts (such as steering gearbox, steering column, end tie rod, steering knuckle), performing four-wheel alignment, or recovering car body, you must reset the steering angle.

Electronic Parking Brake Reset

1. If the brake pad wears the brake pad sense line, the brake pad sense line sends a signal sense line to the on-board computer to replace the brake pad. After replacing the brake pad, you must reset the brake pad. Otherwise, the car alarms.
2. Reset must be performed in the following cases:
 - a) The brake pad and brake pad wear sensor are replaced.
 - b) The brake pad indicator lamp is on.
 - c) The brake pad sensor circuit is short, which is recovered.
 - d) The servo motor is replaced.

Electronic Throttle Position Reset/Learn

This function enables you to initialize the throttle actuators so that the “learned” values stored on ECU are returned to the default state. Doing so can accurately regulate throttle (or idle engine) operations to control the amount of air intake.

Throttle matching must be performed in the following cases:

- a) The ECU is replaced and the ECU does not yet store throttle working features.
- b) The ECU is disconnected from power and the ECU memory is lost.
- c) The throttle assembly is replaced.
- d) The intake pipe is replaced or removed, which affects idle speed control by ECU and throttle body.
- e) The throttle is cleaned. Although the idle throttle potentiometer features remain unchanged, with the same throttle opening, the air inflow has changed and idle speed control features have changed.

Battery Register/Battery Maintenance

This function enables you to perform a resetting operation on the monitoring unit of vehicle battery, in which the original low battery fault information will be cleared and battery matching will be done.

Battery matching must be performed in the following cases:

- a) Main battery is replaced. Battery matching must be performed to clear original low battery information and prevent the related control module from detecting false information. If the related control module detects false information, it will invalidate some electric auxiliary functions, such as automatic start & stop function, sunroof without one-key trigger function, power window without automatic function.
- b) Battery monitoring sensor. Battery matching is performed to re-match the control module and motoring sensor to detect battery power usage more

accurately, which can avoid an error message displaying on the instrument panel.

ABS Bleeding

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

1. When the ABS contains air, the ABS bleeding function must be performed to bleed the brake system to restore ABS brake sensitivity.
2. If the ABS computer, ABS pump, brake master cylinder, brake cylinder, brake line, or brake fluid is replaced, the ABS bleeding function must be performed to bleed the ABS.

Tire Pressure Monitor System Reset

1. After the tire pressure MIL turns on and maintenance is performed, the tire pressure resetting function must be performed to reset tire pressure and turn off the tire pressure MIL.
2. Tire pressure resetting must be performed after maintenance is performed in the following cases: tire pressure is too low, tire leaks, tire pressure monitoring device is replaced or installed, tire is replaced, tire pressure sensor is damaged, and tire is replaced for the car with tire pressure monitoring function.

Diesel Particulate Filter (DPF) Regeneration

DPF regeneration is used to clear PM (Particulate Matter) from the DPF filter through continuous combustion oxidation mode (such as high temperature heating combustion, fuel additive or catalyst reduce PM ignition combustion) to stabilize the filter performance.

DPF regeneration may be performed in the following cases:

- a) The exhaust back pressure sensor is replaced.
- b) The PM trap is removed or replaced.
- c) The fuel additive nozzle is removed or replaced.
- d) The catalytic oxidizer is removed or replaced.
- e) The DPF regeneration MIL is on and maintenance is performed.
- f) The DPF regeneration control module is replaced.

7 Diagnosis Feedback

This item allows you to feedback your diagnostic problems to us for analysis and troubleshooting.

Tap “Diagnostic Feedback”, a pop-up message will appear:

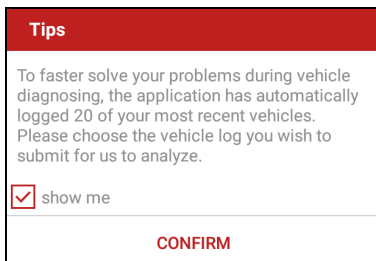


Fig. 7-1

Tap “CONFIRM” to choose the vehicle diagnostic record page.

A). Tap the desired vehicle to enter the diagnostic log selection page.

Select the check box and tap “Submit”. A screen similar to the following will appear:

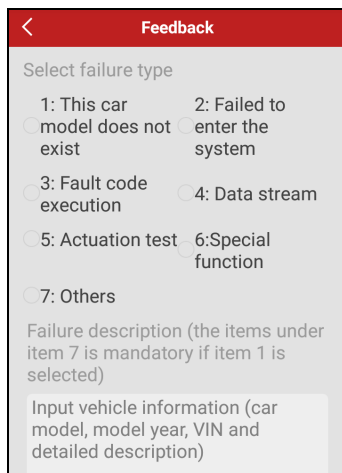


Fig. 7-2

Check the box before the failure type, fill in the detailed failure description in the blank text box and telephone or email address. After inputting, tap "Submit Result" to send it to us.

B). Tap "History", the diagnostic logs marked with different color indicate the process status of the diagnostic feedback. Black/Red/Blue means the diagnostic feedback is fixed/pending/in process respectively.

8 Software Update

Once a newer diagnostic software version is detected, a prompt message will pop up on the screen. To keep synchronized with the latest version, tap “Update now” to enter the update center.

Update			
Your software is currently up to date.		Serial Number	987290001200
Vehicle	Current Version	Update Version	Installation package ...
<input type="checkbox"/> DiagBas-eService App	V1.00.003	V1.00.003	1.3 MB
<input type="checkbox"/> DPU Link Manager Services	V1.00.016	V1.00.016	1.3 MB
<input type="checkbox"/> AUDI	V27.90	V27.90 ▼	38.5 MB
<input type="checkbox"/> AUST FORD	V25.18	V25.18 ▼	1.2 MB
<input type="checkbox"/> AUST FORD	V25.17	V25.17 ▼	1.2 MB
<input type="checkbox"/> AUSTHOLDEN	V43.04	V43.04 ▼	1.5 MB
<input type="checkbox"/> BENZ	V48.50	V48.50 ▼	26.9 MB
<input type="checkbox"/> BMW	V49.55	V49.55 ▼	43.6 MB
<input type="checkbox"/> Select All	Update	Delete	

Fig. 8-1

Tap “Update” to start downloading. Once downloading is finished, the software packages will be installed automatically.

To delete the older version saved on the local storage, select the check box and then tap “Delete”. Once it is successfully removed, the vehicle logo on the diagnostic main menu will disappear at the same time.

Note: Before update, please make sure X-431 Diagun IV has a strong Wi-Fi connection.

9 Personal Center

This function allows users to manage the VCI connector and diagnostic reports, and personal information.

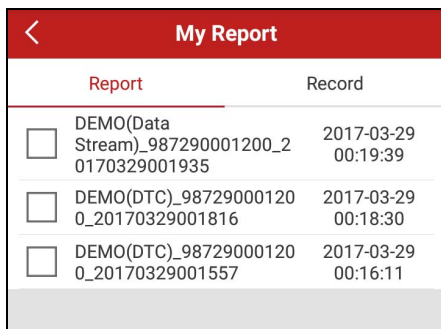
9.1 My report

This option is used to view the diagnostic report generated in process of vehicle diagnosis. Additionally, delete, share operations are also supported.

Tap “**My Report**”, there are total 3 options available.

If user records the running parameters while reading data stream, it will be saved as .x431 file and appear under **Record** tab.

In case the DTC result is saved on Read Trouble Code page, the files will be listed under **Report** tab.



My Report	
Report	Record
<input type="checkbox"/> DEMO(Data Stream)_987290001200_20170329001935	2017-03-29 00:19:39
<input type="checkbox"/> DEMO(DTC)_987290001200_20170329001816	2017-03-29 00:18:30
<input type="checkbox"/> DEMO(DTC)_987290001200_20170329001557	2017-03-29 00:16:11

Fig. 9-1

9.2 My connector

This option is used to manage all your activated connectors.

If several VCI connectors are activated on this tool, a list of connectors will be displayed on the screen. Once you choose the connector that belongs to other account, you have to log out, and then input the right account to continue.

9.3 Activate connector

If the VCI connector has not been activated during the product registration, or if you have lost the bound connector and bought another brand-new one, please use this option to activate it.

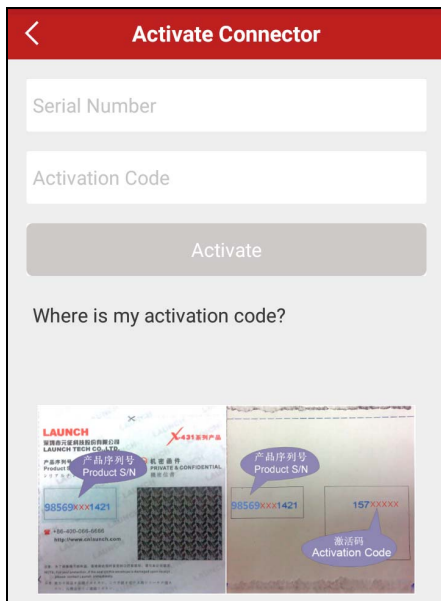


Fig. 9-2

Input the Serial Number and Activation Code, and then tap “Activate” to activate it.

Note: The Serial Number and Activation Code can be found from the password envelope.

9.4 Firmware Fix

Use this item to upgrade and fix diagnostic firmware. During fixing, please do not cut power or switch to other interfaces.

9.5 Profile

Use this item to view and configure personal information.

9.6 Change password

This item allows you to modify your login password.

9.7 Settings

This function allows users to manage your personal information, configure system settings and feedback your vehicle issues or diagnostic reports to us for analysis.

9.7.1 Units of Measurement

It is designed to set the measurement unit. Metric System and English System are available.

9.7.2 About

The software version information and disclaimer are included.

9.7.3 Log out

This option allows you to logout the system.


To logout the current user ID, tap “Exit from current account”.

10 Others


10.1 Email

The function allows you to send and receive emails.

10.1.1 Configure an email account

 Note: Before sending or receiving email, you have to set up an email account. In addition, this function requires a stable network connection.

1. On the home screen, tap **Email**.
2. Choose the desired email account type.
3. Input email address and password, tap “Next”.

 Note: If “Manual setup” is selected, please consult your email service provider for detailed parameter setting.

4. Follow the on-screen instructions to proceed until the system prompts you that the account setup has been finished.

10.1.2 Add an email account

1. Tap **Settings** -> **Accounts**.
2. Tap **Add account**.
3. Choose the desired account type.

10.2 Browser

10.2.1 Open browser

On the home screen, tap **Browser** to launch the browser. You can choose the desired homepage or input the website address to browse.

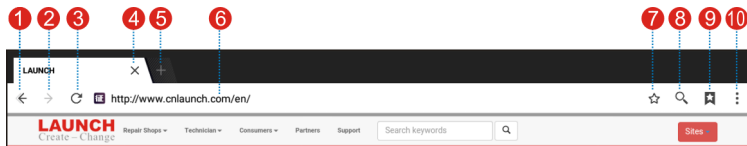


Fig. 10-1

- | | |
|---|---------------------------------------|
| 1 | Return to the previous page. |
| 2 | Advance to the recently visited page. |
| 3 | Refresh the current page. |

4	Close the current page.
5	Create a new tab.
6	Input a web address.
7	Add the current page as bookmark.
8	Open search bar.
9	Open bookmark list.
10	View more options.

10.2.2 Download files

Files, pictures, and applications can be downloaded from the website in browser. For example:

Tap and hold a picture, then choose “Save image” from pop-up menu to download it.

To download a link, tap and hold it, and then choose “Save link”.

To protect your X-431 Diagun IV and personal data, please download applications from trusted sources. To configure it, tap **Settings** -> **Security**, and then slide the Unknown sources switch to off.

10.3 Synchronization

You can transfer media files and APK between the PC and X-431 Diagun IV.

10.3.1 Connect to PC

1. Use the USB cable to connect the X-431 Diagun IV to your PC.
2. Swipe from the top, a message “Connected as a media device” appears.

10.3.2 Run on PC

Perform the following steps:

- Locate the new disc.
- Copy the files.

10.3.3 Install an application


Do the following steps:

1. Tap **Settings** -> **Security**, and set the “Unknown sources” to ON, which allows you to install apps from unknown sources.
2. A dialog box appears on the screen, tap “OK” to confirm.

3. Set the tool as “Connected as a media device”, and copy the APK file from the PC to the tool.

10.4 Clear Cache

Doing so clears all browsing records and accounts and enables X-431 Diagon IV to run smoothly and quickly.

1. Tap **Settings** -> **Apps**.
2. Tap  and select “Sort by size” to arrange all applications in size order.
3. Tap certain application, then tap “Clear Cache” to release the space these cache files are occupied.


11 FAQ

1. How to save power?

- Please turn off the screen while X-431 Diagon IV keeps idle.
- Set a shorter standby time.
- Decrease the brightness of the screen.
- If WLAN connection is not required, please turn it off.
- Disable GPS function if GPS service is not in use.

2. What should I do in case I forgot the screen lock?

You can set screen lock as pattern or password. If you forgot the password, please consult your device provider or reset your device.

 Warning: Resetting may cause data loss. Before use, please make sure important data has been backed up.

3. How to do if the system runs slow?


In this case, please do the followings:

> Check all running applications and stop the unnecessary applications (Steps: Settings -> Apps -> Running -> Tap the desired application and then tap "Stop").

> Check all installed applications, remove the unnecessary applications (Steps: Settings -> Apps -> Downloaded -> Tap the desired application and then tap "Uninstall").

If all steps mentioned above are finished and the system still works slowly. Please try to close the system and reboot your X-431 Diagon IV.

4. How to reset X-431 Diagon IV?

 Resetting may cause data loss. Before doing so, please make sure important data and information has been backed up.

Do the following to reset X-431 Diagon IV:

1. Tap "Settings" --> "Back & Reset";
2. Tap "Factory data reset";
3. Tap "Reset tablet";
4. Tap "Clear all data" to start resetting until the tool automatically reboots.

Warranty

THIS WARRANTY IS EXPRESSLY LIMITED TO PERSONS WHO PURCHASE LAUNCH PRODUCTS FOR PURPOSES OF RESALE OR USE IN THE ORDINARY COURSE OF THE BUYER'S BUSINESS.

LAUNCH electronic product is warranted against defects in materials and workmanship for one year from date of delivery to the user.

This warranty does not cover any part that has been abused, altered, used for a purpose other than for which it was intended, or used in a manner inconsistent with instructions regarding use. The exclusive remedy for any automotive meter found to be defective is repair or replacement, and LAUNCH shall not be liable for any consequential or incidental damages.

Final determination of defects shall be made by LAUNCH in accordance with procedures established by LAUNCH. No agent, employee, or representative of LAUNCH has any authority to bind LAUNCH to any affirmation, representation, or warranty concerning LAUNCH automotive meters, except as stated herein.

Disclaimer

The above warranty is in lieu of any other warranty, expressed or implied, including any warranty of merchantability or fitness for a particular purpose.

Purchase Order

Replaceable and optional parts can be ordered directly from your LAUNCH authorized tool supplier. Your order should include the following information:

Order quantity

Part number

Part name

Customer Service

Any question during the operation, please call 86-755-84528722.

If your unit requires repair service, return it to the manufacturer with a copy of the sales receipt and a note describing the problem. If the unit is determined to be in warranty, it will be repaired or replaced at no charge. If the unit is determined to be out of warranty, it will be repaired for a nominal service charge plus return freight. Send the unit pre-paid to:

Attn: Customer Service Department

LAUNCH TECH. CO., LTD.

Launch Industrial Park,

North of Wuhe Avenue,

Banxuegang, Bantian,
Longgang, Shenzhen, Guangdong
P.R.China, 518129
Launch website: <http://www.cnlaunch.com>
<http://www.x431.com>
<http://www.dbscar.com>

Statement:

LAUNCH reserves the rights to make any change to product designs and specifications without notice. The actual object may differ a little from the descriptions in the manual in physical appearance, color and configuration. We have tried our best to make the descriptions and illustrations in the manual as accurate as possible, and defects are inevitable, if you have any question, please contact local dealer or after-sale service center of LAUNCH, LAUNCH does not bear any responsibility arising from misunderstandings.