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- Other product names used herein are for identification purposes only and may be trademarks of their respective owners. LAUNCH disclaims any and all rights in those marks.
- There is a possibility that this unit is inapplicable to some of the vehicle models or systems listed in the diagnostic section due to different countries, areas, and/or years. Do not hesitate to contact LAUNCH if you come across such questions. We are to help you solve the problem as soon as possible

Precautions on Operating Vehicle's ECU

- Do not disconnect the vehicle inner consumer when the ignition switch is on. High voltage transients may encounters at the moment of disconnecting, and thus may damage sensors and ECU.
- Protect the computer from magnetic object (such as wireless speaker)
- Do cut off the power supply of ECU system before welding on the vehicle.
- Pay more attention to ECU and sensors when operation is next to them.
- Ground yourself when you disassemble PROM, otherwise ECU and sensors will be damaged by static.
- Do not use the pointer ohm meter instead of DMM for testing ECU and sensor without special requirement.
- Do not test electric devices in relation with ECU with a test lamp unless otherwise expressly provided.
- Do wear a metal ground strip that one end around your wrist and the other to the vehicle body when you get in and out the vehicle.

● Do connect ECU harness connector firmly, otherwise electro elements, such as IC inside ECU, will be damaged.

Precautions on Operation

● The appliance is a sophisticated electronic device, never have it clashed when in use.
● Make sure the appliance is properly connected to the DIAGNOSTIC CONNECTOR to avoid communication interruptions.
● Do not insert and pull out CF card when the appliance is working.
● Put the stylus into the slot at the back of X-431 main unit after operation, and place the cables, connectors and other accessories into box.
● Handle with care and avoid crashing.

Safety Precautions

● Automotive batteries contain sulfuric acid that is harmful to skin. In operation, direct contact with the automotive batteries should be avoided. Pay attention not to splash the sulfuric acid into eyes. Keep ignition sources away from the battery at all times.
● Engines produce various poisonous compounds (hydrocarbon, carbon monoxide, azote oxid, etc,) which should be avoided.
● Avoid contacting high temperature assembly such as water tank and vent-pipe as the temperature of the running engine is very high.
● Before starting engine, put the speed lever in the neutral position or in the P position to avoid injury.
● Wear an ANSI-approved eye shield when testing or repairing vehicles.
● If you are using the battery as a power source, connect the RED (+) battery clip to the positive of the vehicle battery and the BLACK (-) battery clip to the negative.

Contents

1 Introduction

X-431Diagun is a newly developed wireless diagnostic computer with full color display screen. It is a highly integrated product with automotive electronic technology application and information network technology. "Portable Vehicle Fault Diagnosis Technology" is an advanced vehicle diagnosis technology first created and advocated by LAUNCH and represents the highest level of vehicle diagnosis technology in the world, it leads the development trend and offers the best solutions. X-431Diagun can test almost all the domestic cars and the imported ones from Asia, Europe and America. X-431Diagun diagnoses two cars at a time, compares and analyzes the data to find the fault. It features high quality test, upgrading fast any where at any time and synchronized with the newest international models. It's more credible in quality and performance when compared with other products. The printer, connected with X-431Diagun through USB port, prints the diagnosis result in real time and the TF card with large capacity stores the diagnosis result. Compared with other diagnostic tools, it has better quality and performance. It features smart design, portable, full color touch screen, easy to operate, supporting multiple languages and wide-range use. Besides, wireless connection and data transfer are realized by Bluetooth for easy use.

2 X-431Diagun

2.1 X-431Diagun Component Descriptions

X-431Diagun includes: X-431Diagun main unit (right) and X-431Diagun connector (left)-see fig.2-1. X-431Diagun main unit communicates with X-431Diagun connector via wireless Blue Tooth (also supports wire connection).

Figure 2-1X-431Diagun External View

2.2 Port and Indicator Descriptions

Figure 2-2 is for each port and indicator of X-431Diagun:

Figure 2-2 X-431Diagun main unit ports and indicators

Diagram 2-1 X-431Diagun ports and indicators

	Power button		Earphone Hole
	TF card slot		Diagnostic Interface
	Lanyard eyelet		Diagnostic Connector
	Blue tooth LED (blue)		Power LED (red)
	12PIN port		Stylus holder
	Touch screen		

2.3 X-431Diagun General Components

Diagram 2-2 is for each component

No.	Name	Description	Picture
1	X-431Diagun main unit	Main unit screen contains operation buttons, test result and help.	
2	X-431Diagun connector	Diagnostic box with OBD -16 pin connector	

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3	X-431Diagun main unit diagnostic cable	to connect X-431Diagun main unit and X-431Diagun connector	
4	Diagnostic adaptor	16 PIN extension cable for X-431Diagun connector	
5	Stylus	for clicking operation on X-431Diagun	
6	Battery Charger	for main unit charge by transforming AC 100-240V to DC 5V	
7	TF card	to store diagnostic program and data	
8	TF card reader	to read and store data, and for online update when connected to PC	
9	USB cable	connect X-431Diagun main unit to PC, and for online update by wire connection	
10	Printer cable	connect X-431Diagun main unit to the printer	
11	non-16PIN diagnostic connector (Several)	Diagnostic connector for special models (Optional)	(Optional)

2.4 X-431Diagun Specifications

Operating System: WIN CE 5.0
CPU: 400 MHz ARM9
Memory Card: 1G TF Card
Main Unit: Universal Serial Bus/USB
Main Unit Power: DC5V
X-431 Diagun Connector: DC12V/24V
Printer Interface: USB
Display Screen: 480X272, 4.3-inch LCD with touch screen
Rechargeable Battery: 1530 mAh
Bluetooth: theoretically 100m, suggest 15-20m
Upgrading Interface: USB
Support wire communication
Extendible external memory

2.5 X-431Diagun Start

2.5.1 Power on

Press [POWER] key at the top right corner of the main unit top. Main unit screen will display initializing interface, as shown on the left.

Note: Power off by pressing [POWER] key for 5 seconds at least.

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Operate following the tips on the screen after the progress bar was read, as shown on the left.
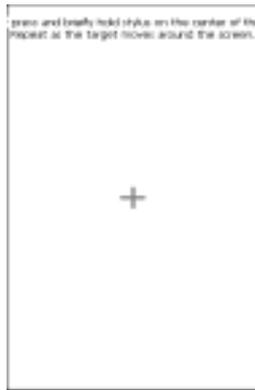
2.5.2 Calibrate Touch Screen

Click the touch screen in the above figure to enter into 'Calibrate Touch Screen' interface, as shown on the left. Click the cross cursor on the screen accurately by order, once it changes, you complete a calibration. If you don't want to calibrate, press the power key to skip the calibrating interface.

Note: If you click the cross cursor inaccurately, it will repeated on the screen until the calibration completed.

The screen will display interface as shown on the left after the touch screen was calibrated. You can click to enter the system desktop, or wait for 30 seconds to enter automatically.

Note: You can also calibrate the touch screen by clicking "Start Menu ![icon] *-Control Panel- stylus-calibrate".*
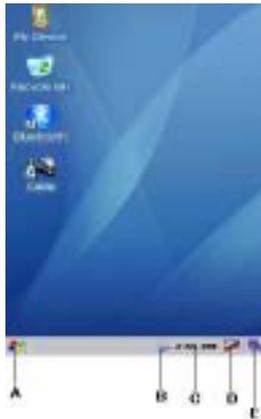
2.5.3 Taskbar

Taskbar locates at the bottom of X-431Diagun system desktop, as shown on the left.
A 'Start' Button: the same way as on Windows98/XP.
B 'Network Connection' Icon: display network connection state (when connected to PC).
C Time: double-click it with stylus to set time, date and time zone.
D 'Soft Keyboard' Icon: display or hide the soft keyboard, when the soft keyboard is activated, there are two input options: Manual input and English input.
E 'Switch' Icon: click to display the desktop, and switch among different interfaces.

2.6 Charge

Two options to charge X-431Diagun: one is to use the charger (see the **No.6** of Diagram **2-2 in** chapter **2.3** for details); the other is to use an external power supply (DLC) via wire connection.

2.6.1 Description of the Power Indicator State

Charge through the charger
Charge it under conditions of power off, power on and stand-by mode. The power indicator (green light) stays on when charging and off when the battery is full.

Note: It is better to charge in stand-by mode for charging saturation.

(How to set 'standby': click the start menu ' *" , a dialogue box will be popped up, click "Suspend", or press the power key on the main unit; press the power key again to resume the normal state and actuate the screen)*

Charge through DLC
Charge it under conditions of power off, power on and stand-by mode. The power indicator (green light) always on when charging and off when the battery is full.

2.6.2 Description of the Battery State

1. The appliance could be turned on either being connected to the charger or an external power supply. " " icon would then appear in the taskbar, Power Properties interface shows 'charging', as shown below:

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Note: Click the start menu ' *"at the bottom left of the interface to find "control panel". With a new window pops up, double click "Power", and the power properties interface appears. You can also double click the icon for 'battery' in the taskbar to open the Power Properties interface, as shown above.*

2. When using the appliance without connecting to an external power supply, if the battery power is more than 40%, you could not find the icon of battery in the taskbar, the Power Properties interface then indicates battery is in normal states, and shows actual battery power.

3. When using the appliance without connecting an external power supply, the icon " " appears in the taskbar if the battery power is lower than 40% and above 10%. The Power Properties interface indicates the battery is running low and shows the actual battery power.

4. When using the appliance without connecting to an external power supply, if the battery power is less than 10% , a dialogue box will be popped up and the icon " " appears in the taskbar. The Power Properties interface indicates the battery power is too low and shows the current battery power.

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3 Use X-431Diagun to diagnose vehicles

3.1 Automotive Diagnosis Preparation and Connection

3.1.1 X-431Diagun preparations

1.   General Test Condition
● Ignition switch on.
● Battery voltage of the vehicle should be 11-14V or 18-30V, and the rated working voltage of X-431Diagun Connector is 12V or 24V.
● Throttle should be closed.
● Ignition timing and idle speed should be within specification range, water and transmission oil temperature is in normal working range (water temperature is 90 – 110°C and transmission oil temperature is 50 – 80°C).

2.   Select Test Connector
X-431Diagun is armed with an OBD   16PIN connector. Select the corresponding connector (optional) when testing a vehicle with non-OBD 16PIN DLC.

3.1.2 TF Card Installation
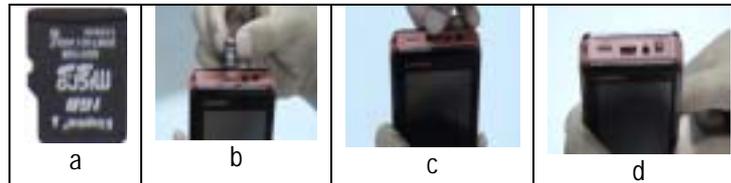
Figure 3-1 TF Card Installation

Installation steps:
  1)   Take out the TF card from the packing box, as shown in Figure 3-1a.
  2)   Insert the TF card into the X-431Diagun TF card slot

perpendicularly. Make sure is fully inserted in the right place and with the face printed "micro" upward, refer to Figure 3-1b, 3-2c and 3-3d.

Note: You can hear a clicking sound if you insert the TF card in the right place. Press the card slightly, it will be ejected automatically.

3.1.3 Connect X-431Diagun

X-431Diagun could also diagnose two cars at a time by connecting two X-431Diagun connectors (one(with #1 at back) is standard supplied and another(with #2 at back) is optional), #1 communicates by wireless Bluetooth and #2 communicates by wire, so, wire and wireless connections are the two connection options.

Wire Connection Procedure of X-431Diagun:
- Insert the TF card into the slot;
- Link one end (20PIN Male) of the X-431Diagun main unit diagnostic cable with X-431Diagun main unit diagnose interface;
- Link the other end (12PIN connector) of X-431Diagun main unit diagnostic cable with one end (12PIN port) of selected X-431Diagnun connector.
- Find out the vehicle's DLC;
- Connect the other end of X-431Diagun diagnosis connector to the vehicle's DLC.

Wireless Connection Procedure of X-431Diagun
- Insert the TF card into the slot;
- Find out the vehicle's DLC;
- Plug the X-431Diagun diagnosis connector into the vehicle's DLC

Note:
1. The Bluetooth indicator on the X-431Diagun diagnostic connector is off when wire diagnoses is carried out.
2. Connector #1 supports both connection modes while connector #2 (optional) only supports wire connection.

Figure 3-2 wire/wireless connection

1–2. Tested car   3. X-431Diagun Diagnostic connector #1   w/ Bluetooth   4. X-431Diagun Diagnostic connector #2   w/o Bluetooth 5. X-431Diagun main unit   6-7. DLC

Note: If battery power of X-431Diagun main unit is running low, follow the below methods for power supply:
1. *Supply power via DLC: connect the main unit to the diagnosis connector by wire connection.*
2. *Supply power via the charger: insert one end (20PIN Male) of the charger into the diagnostic port of X-431Diagun main unit and plug the other end in AC 100-240V power socket.*

3.2 Begin to Diagnose Vehicle

Vehicle makes, models and systems tested by X-431Diagun update every day. Please visit http://www.x431.com for the updates and download diagnose program of the latest version.

3.2.1 Diagnostic Program

After connecting X-431Diagun (see chapter 3.1.3 for details), turn it on and press '⊙' button at the top right corner of the main unit to enter into calibration interface (see chapter **2.5.2**). After that, with the Wince interface displayed, double click the icon "Wireless Diagnosis" on the desktop to operate X-431Diagun, as shown in the left figure.

Vehicle Make interface will appear as shown on the left.

Button Descriptions:
[RETURN]: return back to the previous interface.
[PREVPAGE]: show the previous page. This button is invalid and in gray if there is only one page or the first page currently.
[NEXTPAGE]: show the next page. This button is invalid and in gray if there is only one page or the last page currently.
[HISTORY]: view driving management record (the recorded datastream and waveform).
[SETTING]: select language.

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Here we will take the wireless connection and Benz demo program for example to introduce how to actuate automotive diagnosis.

Click [SETING] at the bottom right of the interface as shown in the above figure. Select English and click [OK].

Button description:
[<-->]: For Bluetooth communication matching (communication fails if the Bluetooth indicator flashes, then click this button to start matching, the communications resumes normal if the indicator stays on).
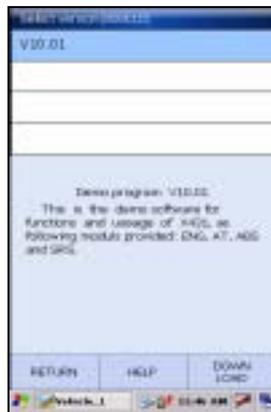
Click Benz logo in the Make menu. The screen will display 'Select version' interface for Benz demo diagnosis program, select the version you need.

Note: The operations of other makes and models, and systems are the same as Benz. See relevant system operation introduction for details, and here we only take Benz demo program for example.

Button Descriptions:
[RETURN]: return back to the previous interface.
[HELP]: view the help information
[DONWLOAD]: continues to test.

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3.3 How to Diagnose

Select version "V10.01", and click [Download] to enter the diagnosis screen, as shown on the left.

Note: The diagnosis screen of different makes contains the tested models, systems, diagnosis connector and DLC location. The operations are similar.

Button Descriptions:
[RETURN]: return back to the previous interface.
[HOME]: Exit and return back to the homepage   Vehicle Make interface when program abnormality occurs.
[HELP]: show the help information.
[PRINT]: print the test result (should be connected to an external printer with USB port).

Click [Engine] on the tested system menu.

Note: The test method for different systems is similar. Here we take [Engine] for example.

After clicking, "Communication is Initialized" screen will appear as shown on the left.

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After successful communication, the screen enter the function menu of the diagnostic system automatically, as shown on the left:
1) Read fault code
2) Erase fault code
3) Read data stream
4) Actuation test

3.3.1 Read Fault Code

Click [Read fault code] to perform this function. The test result will be displayed on the screen, as shown on the left.

Button Description:
[PRINT]: prints the test result. (should be connected to an external printer with USB port)

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Print Fault Code
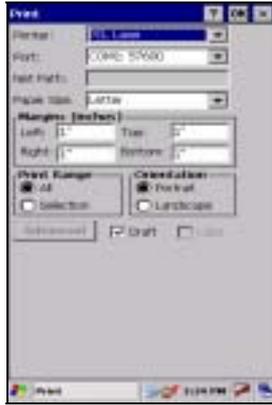
Click [print] button on the above figure, the interface will show as left.

Note: Make sure to connect with printer before printing, otherwise, the interface as shown on the left won't display.

Printer connection: Link one end (20PIN Male) of the printer cable with diagnostic port on X-431Diagun main unit, and the other end (USB connector) to the USB port on the printer.
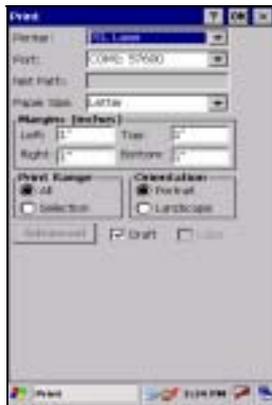
In Printer interface, select printer and port, as shown on the left. Click [OK] to print the fault code.

Note: Select the correct printer and port to match the printer due to different printer types used by users.

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If there is no fault code from the tested system, the screen will show as in the left figure.

Button Description:
[OK]: returns the function menu of the diagnostic system.

3.3.2 Erase Fault Code

Click [Erase fault code] on the function menu to erase the fault code, as shown on the left.

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After clicking, it starts to erase fault code, "clear fault code succeed" will appear if succeed, or "No fault code" will appear on the screen if all the fault codes have been cleared or no fault code in the tested system.

Button Description:
[OK]: returns to the function menu of the diagnostic system.

3.3.3 Read Datastream

Click [Read datastream] on the function menu to read the datastream from ECU, as shown on the left.

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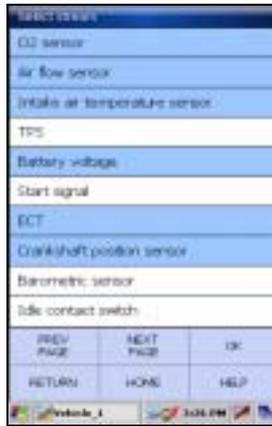
The selected datastream items display with blue, as shown on the left.

Button Descriptions:
[NEXTPAGE]: display the datastream item on the next page.
[OK]: display the dynamic data of the selected datastream.
[RETURN]: return back to the previous interface.

Click [OK], the dynamic data of the selected datastream item would be displayed, as shown on the left.

Click [RECORD] to save dynamic datastream in a specific duration, click [Stop] to complete the record.

Button Descriptions:
[GRAPH]: display the waveform of a single datastream item.
[RECORD]: record dynamic datastream in a specific duration (the button will shift to [Stop] after clicking it).
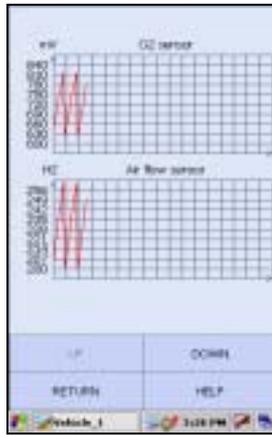
With the datastream screen displayed, click to select the datastream, and click [GRAPH] to view the datastream waveform (not more than two in a screen) as shown on the left.

3.3.4 Actuation Test

The purpose of this function is to control the operation of an on-board system, test or component.

Click [Actuation test] on the function menu, as shown on the left.

Note: Here take [Cylinder 1# injector] for example.

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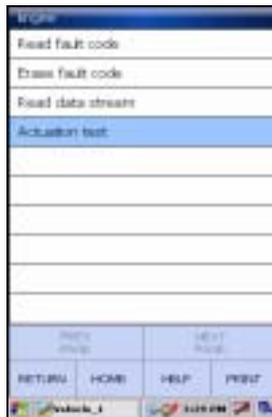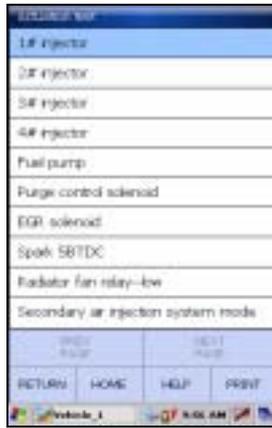
Click [1# injector] as shown on the left.

Note: Click [1# injector] to check if it works normally by the sound from it.

Perform completed, as shown on the left.

Note: If perform fails and [1# injector] cannot work normally, it indicates malfunction in the related components.

3.3.5 Driving Record Administration

View the saved datastream and waveform.

In vehicle make interface as shown on the left., click [HISTORY].

After clicking, the screen displays a document list of datastream recorded in specific durations for the tested vehicle make, as shown on the left.

Click [OK] to view the recorded datastream of the selected model in a specific duration.

Button Description:
[DELETE]: delete a record.

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Click in the box to select parameters in which you want to view the datastream, the selected items will be marked with ' '. You could select "CHAR" or "GRAPH" to view datastream in different form as you want, as shown on the left.
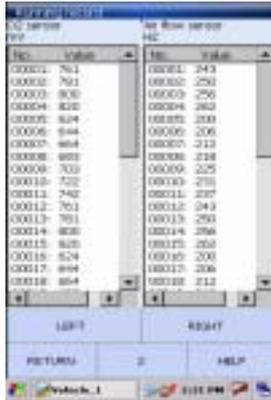
After selecting, click [OK], the recorded dynamic data will appear again, as shown on the left

Button Descriptions:
[Left]: show the hidden datastream on the left.
[Right]: show the hidden datastream on the right.

3.4 Flow chart for diagnose procedure
see next page

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```
                        ┌──────────────────┐
                        │     Power on      │
                        └──────────────────┘
                                 │
                                 ▼
                  ┌────────────────────────────┐
                  │    Calibrate touch screen    │
                  └────────────────────────────┘
                                 │
                                 ▼
        ┌──────────────────────────────────────────┐
        │  Double click X-431Diagun diagnose program │
        └──────────────────────────────────────────┘
                                 │
                                 ▼
          ┌────────────────────────────────────┐
          │   X-431Diagun vehicle maker menu     │
          └────────────────────────────────────┘
```

Select logo of the make   X-431Diagun could diagnose vehicles of different makes and its function are varied, here we only take Benz demo program for example. The operations of other makes, models and systems are the same as Benz. See relevant system operation introduction for details.

```
              ┌────────────────────────────────┐
              │     Enter into diagnose interface │
              └────────────────────────────────┘
                   │        │        │        │
                   ▼        ▼        ▼        ▼
              ┌──────┐┌──────┐┌──────┐┌──────┐
              │ Read ││Erase ││ Read ││Actua-│
              │fault ││fault ││data- ││ tion │
              │ code ││ code ││stream││ test │
              └──────┘└──────┘└──────┘└──────┘
```

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3.5 How to diagnose two cars at a time

Compare and analyze the datastream of two cars by "Wire connection" and "Wireless connection" with X-431Diagun.

One is connected by "Wire connection" and the other is connected by "Wireless connection". (see chapter **3.1.3** for details)

3.5.1 Read the datastream of the first car

After connecting the first car by wireless connection, double click the icon "Wireless Diagnosis".

The make menu will appear, as shown on the left.

Select Benz and click "OK".

Note:
"Vehicle_1" in the taskbar refers to the first car connected by wireless connection.

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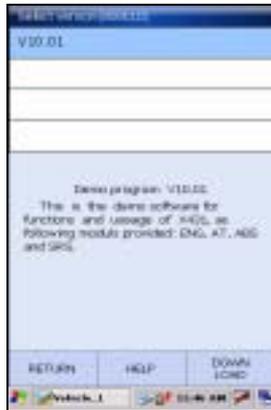
Then, the screen shift to "Diagnostic program version" select menu interface, select version "10.01" and click [OK].

Note: The operations of other makes, models and systems are the same as Benz. See relevant system operation introduction for details, and here we only take Benz demo program for example.

Click [Read data stream] on the function menu to read the datastream from ECU, as shown on the left.

The selected datastream will be highlighted with blue, as shown on the left.

Click [OK] and the dynamic data of the selected datastream items will be displayed on the screen, as shown on the left.

Until now, reading the datastream of the first car completed.

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3.5.2 Read the datastream of the sencod car

Click "switch" icon at the bottom right of the screen(shown on the left) to switch to desktop.

As shown on the left after clicking the 'switch' icon.

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Connect the second car by wire connection and then double click "Wire Diagnosis" on the desktop.

Screen will display 'make menu' interface, as shown on the left.

The following procedure is the same as reading the datastream of the first car (see **3.5.1** for details).

Note:
- *Make sure to select a car with the same make or version as the first car.*
- *The "Vehicle_2" in the taskbar refers to the second car to be diagnosed by wire connection.*

The screen will display dynamic data of the selected datastream item for the second car, as shown on the left.

3.5.3 Comparison and Analysis of Datastream

This function is to compare and analyze the datastream from a faulty car with that from a good one. The two cars must be of the same vehicle make and the same model.

Click "switch" icon at the bottom right of the screen to view datastream of the two cars, so that you can compare and analyze the datastream between the two cars, as shown on the left.

After switching, the screen will display datastream of the first car, as shown on the left.

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4 Update of Diagnostic Software

4.1 User Registration

Registration on www.x431.com provides users with a convenient and quick way to purchase or download software and update online.

First visit www.x431.com.

Click 'Other Area' at the lower position of the screen to enter into the homepage, as show below.

Click [Register] to view terms of services.

Note: The registered user could log onto the member area, and click "product control" to register the newly purchased product. See chapter "Member login".

The terms of service are shown on the screen. After reading and fully understanding, click "I accept" to enter the interface as shown in the figure below. Product serial number, register password and vendor code are required.

Fill in Production Information

The serial No is on the X-431Diagun. The register password (should be kept confidential) is provided in an envelope delivered with the product. The vendor code is attached on the last page of the user's manual. After the information is filled, click "Next step".

Note:

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1) *The dealer is required to record the sold products in the "Dealer administration" area on www.x431.com so that the user can do effective registration later. User should contact the dealer if registration can not be done effectively.*

2) *If the filled serial No. is invalid, the screen will display the message as shown in Figure below. Click "OK" button to return to the previous interface to re-fill the correct numbers.*

Fill in User Information

After the required information is filled correctly (The red textbox must be filled. Please make sure that your e-mail is valid, as we will send the confidential information to your registered e-mail as soon as the registration completed), click "Next step", the screen will display the interface as shown below.

Click "OK", the registration is completed, and the registered username and password are valid.

4.2 Member Login

The user becomes the registered member after registration. Member can log in the website after filled in username, password and user type (customer) in the interface as shown below.

After log in successfully, the screen will display the interface as shown below (download center is the default interface).

[Download Center]: Refer to "software download".
[Purchase Center] & [Update center]: Refer to "software purchase and update"
[Member Info]: Display and renew the current member information.
[Product Register]: Register newly purchased product here.
[Order Management]: Check or cancel the unpaid order.
[Renew Password]: Input the old password correctly before renewing.
[Awarded for complaint]: Users could complain their troubles and feedback
to LAUNCH. Effective complaint will be awarded by LAUNCH
[Logout]: Exit the registration.

4.3 Software Download

The screen will enter the [download center] interface after logging in successfully.

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Note:

1. *Software update of charge free will be provided by LAUNCH for one year. The free period is from the registration date on the website, not the purchase date. That is, during one year after the registration, users could download the corresponding software for free.*

2. *If there is not the latest version in the download center or the latest version can not meet the needs of the users as they are released by other companies, users could buy the version in the purchase center or in the update center (see "software purchase"). In the purchase center, users can buy the software that doesn't install in the download center. In the update center, users can buy the software that is beyond the free download period. After purchase successfully, the purchased software will be added to the download center list automatically.*

All the software listed in the download center could be downloaded for free. The name of software, the latest version released by LAUNCH currently and the issue date, as well as the latest version which could be downloaded for the product serial No. are provided in the software list.

It's better for users to create a new folder, say named "X-431 update", to include all the downloaded software according to the following procedures.

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Update Tool Download

Users are required to download the update tools before updating. Select language in the drop-down menu, click [download]. The screen will display the interface as shown below.

Click [Save], and save the update tool in the folder "X-431 update".

Download Display Program

Users are required to download display program before updating diagnostic software if the display program fitted for the latest diagnostic software is updated. Select the language in the drop-down menu, and click [download]. Click [Save] on the pop-up menu to save the program in the folder [X-431 update].

Download Diagnostic Program

Select language and version (the default version is the latest version) on the drop-down menu. Click [download], then click [save] on the pop-up menu to

save it in the folder [X-431 update]. Click [view] to learn the detailed information of the version. Users could download the other diagnostic program into the folder [X-431 update]. Up to now, the software that is for update is downloaded completely.

4.4 Software Update

Two methods: Direct update (connect X-431Diagun main unit to PC) and indirect update (connect the card reader with TF card to PC)

4.4.1 Direct Update

X-431Diagun main unit connection and drive program installation

Necessary hardware:
1.   A computer that can access to the internet.
2.   An X-431Diagun main unit and a USB cable.

Necessary software:
ActiveSync, tested model software and update tool (download from www.x431.com)

Connection
The connection between the X-431Diagun main unit and PC is shown below:
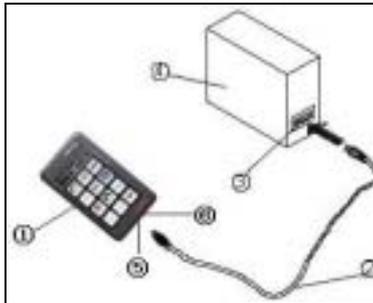
-X-431Diagun main unit   -USB cable   -USB port   -PC
-TF card   -20-PIN diagnostic port

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A.   Insert the TF card into TF card slot of X-431Diagun main unit (for details to see **3.1.2**).
B.   Connect one end of the USB cable   to the X-431Diagun main unit   , and the other end to the USB port of the computer.

ActiveSync Drive Installation
Users are required to install the ActiveSync drive program (could be download from www.x431.com) before performing the direct update, otherwise the computer can not identify the X-431Diagun main unit. (Operating system: Windows Me/2000/XP, Mac OS 9.x/Mac OS X or Linux 2.4.x)

Install ActiveSync in Windows XP:
Startup Windows XP:
Connect the X-431Diagun main unit to the USB port of the computer through a USB cable. Open the folder which stores the program, and double click the icon " " to install it. Now the system is preparing for the installation, as shown below:

Install according to the Wizard, click "Next".
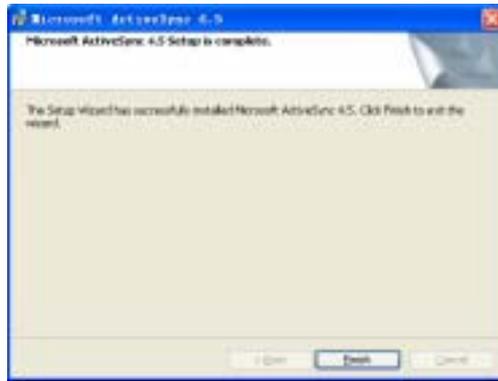
The Installation is completed and click "Finish", as shown above.

Note: After the connection between the X-431Diagun main unit and the computer, the ActiveSync icon in the taskbar is displayed as ' ⊙ "(light), but if the connection is failure, the icon is ' ⊙ "(grey).

Begin to Update Software

Open the folder [X-431 Update], double click the icon " ", and install the X-431Diagun update tool according to the Wizard.

After the installation, the update icon for the X-431Diagun will appear on the desktop.

Double click the update icon for X-431Diagun on the desktop to actuate the update tool. This program will check the update file downloaded by the user automatically, including the files of diagnostic program and display program, as shown below.

Select the update program version on the right, and click [UPDATE]. When update completed, an indication box will pop up. If the update program version doesn't exist on the right, clicking the icon " 🔍 " to open the downloaded update program.

You can click the corresponding icon " 🔍 " to the G disc to view the files stored in the TF card and delete some old software versions if necessary for more available space in TF card.

Click [EXIT] to exit.

4.4.2 Indirect Update

Connect card reader with TF card to PC and install drive program

Necessary hardware:
1)   A computer that can access the internet.
2)   A TF card reader of X-431Diagun and a TF card to be updated.

Necessary software:
Tested model software and update tool (download from www.x431.com)

Connection

1	2	3	4
5	6	7	
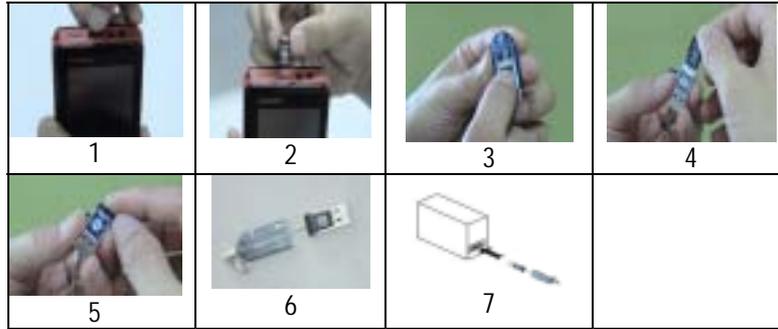
Steps:

a)   Take out the TF card from the X-431Diagun main unit (press the TF card slightly and it will pop up automatically, as shown in Figure 1 and Figure 2);

b)   Insert the TF card into the card reader (as shown in Figure 3, the side printed with words is upward, and insert the TF card into the card reader perpendicularly, as shown in Figure 4, Figure 5 and Figure 6);

c)   Connect the card reader to the USB port of the computer.

Install TF Card Reader Drive Program

You don't need to install the drive program if the operating system of your computer is Windows Me/2000/XP, Mac OS 9.x/Mac OS X or Linux 2.4.x, but have to install if the operating system is Windows98. You can download the installation software from www.x431.com and install it according to the Installation Wizard.

If card reader installation succeeds, the icon "   " will appear in "My computer" automatically.

Note: The way of indirect update is the same as that of direct update, see chapter 4.4.1 for details.

We suggest you to use the second method.

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Interruption may be caused for the following reasons during the update process. Please try again after solving the problem.
1)   TF card reader is poor connected to the computer or the drive program of the TF card is installed incorrectly;
2)   Space on TF is not enough;
3)   Other reasons.

4.5 Purchase and Update Software

If users can't find the software they needed in download center, they should buy the software in the purchase center or updated in the update center. Log on www.x431.com to enter the interface as shown in the figure below.

Click [purchase center], then you can tick the serial number to choose the software.

Take the Transporter & V Class for example. Click [view] that is in the same line with the Transporter& V Class. The screen will display detailed information about the Transporter & V Class diagnostic software.

Click [order] to add the selected software to your shopping cart.

Click [Pay] to buy the software. The bought software will be automatically added to the user's download center. Click [clear] to empty the shopping cart. Click [purchase other] to buy other software.

The operation for update center is the same as for the purchase center. But you can only find software that beyond updated free period in the updated center, while all the available software are listed in the purchase center,

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5 FAQ

X431Diagun is a hi-tech product. But nowadays, automotive technology are making daily advance, and there may be questions during operation. Read the user's manual carefully to get answers whenever you have any question, or contact our Customer Service Center for help.

Here we list some frequently asked questions and answers relating to X431Diagun.

About Online Update

Question: Downloaded diagnostic program package is not listed in the update tool, what is the reason?

Answer: possible causes and solutions:

1. The downloaded diagnostic program and diagnostic update tool should be in the same folder. Please put them in the same folder.

2. The diagnostic update program may have not been fully downloaded. Please download again.

Question: When the updated software is used in vehicle diagnosis, some diagnostic program can not be downloaded successfully from the TF card. Why?

Answer: possible causes and solutions:

1. The Display Program may have not been updated. Please update the Display Program.

2. The diagnostic program for the vehicle may be damaged. Please re-download the diagnostic program and update.

About Hardware

Question: Why the LCD touch screen responds so slowly in cold weather?

Answer: It is because the ambient temperature is close to the lower limit of operating temperature range (0-50   ). In this situation, it is necessary to warm up the machine for 30 minutes before test.

Question: Why there is no character on the backlit screen?

Answer: Check if the power is well connected. Turn off the machine, unplug

it and then plug it again for power supply, one second later, try to turn on the machine.

Question: Why X431Diagun fails in communication with ECU?
Answer: Please check and make sure that the diagnostic connector and diagnostic program are matching the vehicle make.

Question: The screen keeps blank after flashing when the machine is turned on.
Answer: Take out the TF card and re-start the machine to check if there is normal display. If the display is normal when the TF card is taken out, the TF card should be replaced. If the screen is still blank, please contact the local service engineer.

Question: Why can't the data be input after Soft Keyboard is activated?
Answer: The position where the cursor locates can't be edited. Or you have not activated the cursor in the input position, please use the stylus to click the part to edit. You can input the data if the cursor flashes.

Question: Why the saved data disappeared?
Answer: There are two possible causes:
1. Your TF card is damaged.
2. You've changed language, which is related to the data. You may find the data after switching back to the former language.

Question: The screen does not respond or responds incorrectly when click with stylus.
Answer: It is necessary to calibrate the screen. Please see chapter **2.5.2** "Calibrate Touch Screen" for details.

Question: What can I do when the screen is confused?
Answer: Please quit the current application (interface), and run it again. If the problem still exists, please restart the system.

About System Setting
Question: The screen is inactive after the cross cursor appears.

Answer: The system is calibrating the touch screen. The machine will work after the calibration completed. Please see chapter 2.**5.2** "Calibrate Touch Screen" for details.

Question: The screen does not respond or responds incorrectly when click with stylus.
Answer: It is necessary to calibrate the screen. Please see chapter 2.**5.2** "Calibrate Touch Screen" for details.

Question: The time displayed in the bottom right-hand corner of the screen is incorrect. How to adjust it?
Answer: The time was set incorrectly. Please see chapter **2.5.3** "Taskbar".

About Operation
Question: System halts when reading data stream. What is the reason?
Answer: It may be caused by a slackened connector. Please turn off the machine, firmly connect the connector, and switch on the machine again.

Question: The appliance is blank screened after a while during its operation.
Answer: Power saving was set in the power management. Press power key to resume it. Or you can set 'None' or extend the standby time in Power Off interface.

Other questions
Question: Screen of main unit flashes at engine ignition moment.
Answer: Caused by electromagnetic disturbing, and this is normal phenomenon.

Question: Diagnose interrupted during diagnosing process.
Answer: Caused by electromagnetic disturbing or poor connecting.

Question: There is no response when communicating with on-board computer.
Answer: Please confirm the proper voltage of power supply and check if the throttle has been closed, the transmission is in the neutral position, and the

water is in proper temperature.

Question: The systems equipped with the vehicle can not be diagnosed.
Answer: DLC of some early models is separated; refer to User's Manual for details.

Question: The fault code storage is blank.
Answer: Usually, it's the "suquela" for shared circuit. Please locate and analyze the most similar fault code and its circuit.

Question: There is so much fault code.
Answer: Usually, it's caused by poor connection or fault circuit grounding. Please check and confirm if the Year and make selected is correct or not and if the vehicle is equipped with the right system.

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 (12 months) 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.

Order Information

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

2.   Part number
3.   Item description

Customer Service

If you have any questions on the operation of the unit, please contact us:
   Tel: 86-755-84528431/84528822
   E-mail: X431@cnlaunch.com

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, 518112

DIAGUN CONNECTOR SERIAL NO.

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Note:

1. *'Diagun Connector Serial No.' label is attached by manufacturer before shipping.*
2. *Dealer should fill in the Dealer Code when selling the machine to customer and stamp on the code.*
3. *The 'Diagun Connector Serial No.' and "Dealer Code" is useful when updating the software. Refer to the section "Update of Diagnostic Software". Keep the user's manual carefully.*
4. *Dealer should log on **http://www.X431.com** to fill in the Dealer Code and other information in "Dealer administration" area when a product is sold so that customer can do software updating.*

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.*