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Contents

1. Product Overview

EVT511 EV Battery Airtightness Detector (LP) is the latest high-accuracy nondestructive testing equipment developed by Launch. It mainly uses compressed air as the medium to apply specific pressure to the inner cavity or surface of the battery to be tested and then uses sensitive sensors to detect the variations of pressure to determine the leakage of the battery pack. It can improve customer testing efficiency and product quality with pollution-free, quick, and accurate testing characteristics in the new energy industry.

1.1 Product Features

- High sensitivity pressure sensing significantly improves test accuracy and stability.
- 10-inch touch screen visually displays the test progress and data.
- Display the progress time of each stage during the test.
- The pressure dial and the test curve will display on the same screen in real-time.
- The system automatically memorizes the last test parameters, which is convenient for the next test modification and improves efficiency.
- Parameters such as workpiece number, volume, pressure, time of each stage, leakage limit can be preset.
- The detector will prompt audible and visual alarms to ensure safety when the test is abnormal or failed.

1.2 Main Function and Test Range

Mainly used for the Airtightness testing of battery packs.

1.3 System Components

The detector consists of main unit, AC power cord and air pipe.

The main unit includes display screen, data processing unit, data acquisition unit and panel operation unit.

1.4 Environmental conditions for use

NO CORROSIVE, NO EXPLOSIVE, NO ELECTRICAL BREAKDOWN AIR OR CONDUCTIVE DUST.

1.5 Working conditions

Temperature: -10~55 ℃

Humidity: 0-90%

2. Precautions for Safe Use

2.1 Safe Working Period & Production Date

The designed safe working period for this detector is 5 years, please refer to the factory inspection list for the production date.

2.2 General Rule

Please follow the user manual to use this detector.

2.3 Common Incorrect Operation

1） Tools for connecting is not well insulated.
2） Operating without following the user manual.

2.4 Damage Probably Caused By Incorrect Operation

1） Short circuit accident: Tools is not well insulated, or battery pack positive and negative electrodes are too close.
2） Failure to follow the correct operation method will cause the device not working properly.

2.5 Emergency Treatment In Exceptional Cases

Disconnect the detector power supply and test cables.

2.6 Precautions In Exceptional Circumstances

If the operator uses tools without well insulation or improper operate to cause short circuit, please separate the cables immediately.

2.7 Other Safety Alerts

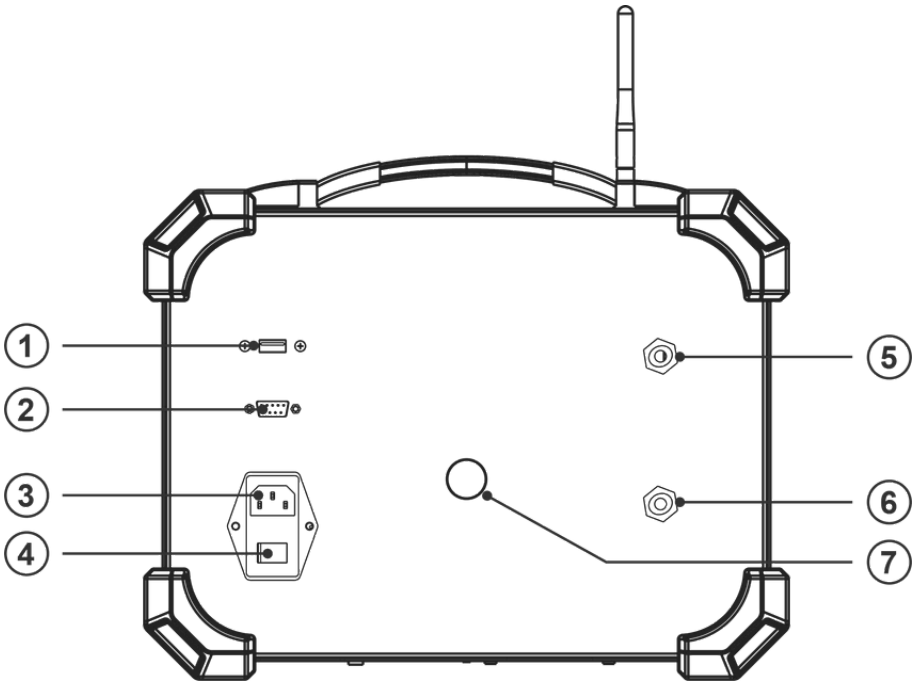
Strict compliance with safety operating norms and correct operating procedure.

3. Technical Features

Parameter	Description
Model	EVT511
Test Power	20W (Max)
Test Method	Pressure (positive pressure)
Test Pressure Range	0~30Kpa
Sensor Resolution	1Pa
Sensor Resolution	±5pa
Display	10-inch LCD touch screen
Communication Port	RS485 / USB
Data Storage	Internal memory/download via USB disk
Power Supply	AC 90~264V
Air Supply	0.1 ~ 1.0 Mpa dry compressed air
Air Inlet Port	φ6mm air pipe
Test Port	φ6mm air pipe
Work Temperature	-10 ~ 55°C
Work Humidity	10% ~ 90% @25°C, without condensation
Dimension	349.0*329.0*366.5 mm
W eig ht	4.0kg

4. Operating Instructions

4.1 Panel Description



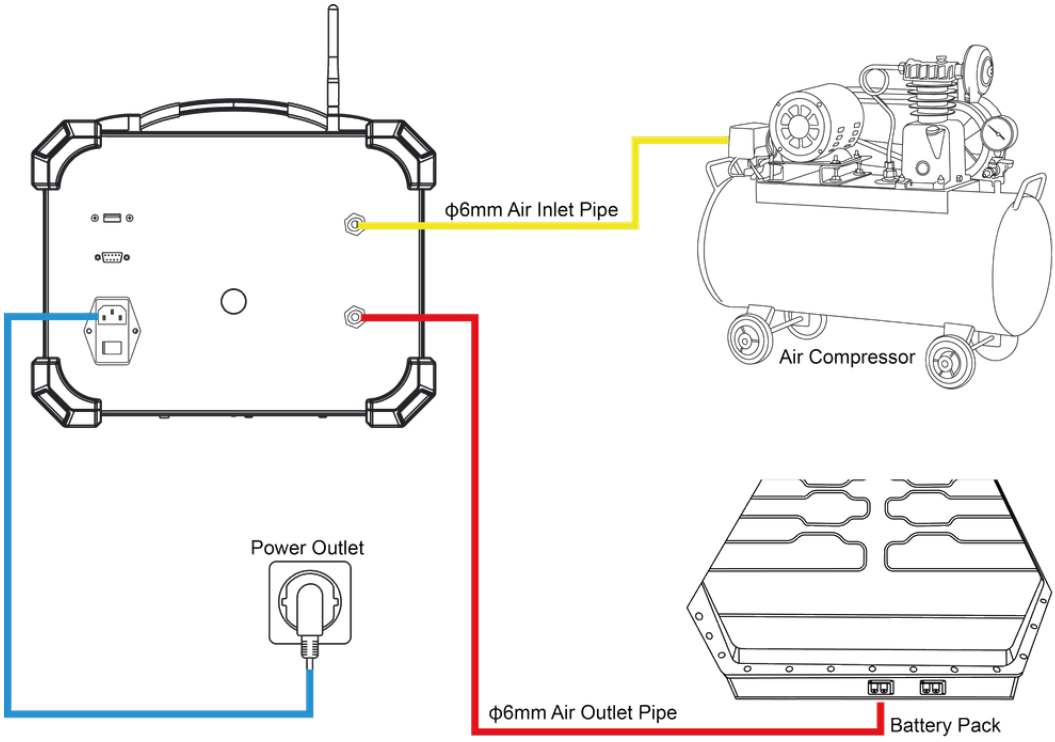
No.	Name	Description
1	I/O Port	For data download.
2	RS485 Port	For data copy and transmit.
3	Power socket	90~264V power input.
4	Power Switch	Detector turn on/off.
5	Air Inlet Port	Air supply inlet.
6	Air Outlet Port	Connect to battery pack.
7	Air Pressure Observation port	To observe the air pressure values.

4.2 Detector Connection

1. Air Supply Connection：Connect the 0.1~1.0 Mpa dry and clean air source to the air inlet port of the detector through the φ6mm air pipe

2. AC Input Connection：Use the provided power cord to connect the detector to 90~264V AC power supply.

3. Battery Pack Connection：Connect the battery pack and detector's air outlet port with a φ6mm air pipe. Ensure the airtightness of the connection.



Connecting Diagram

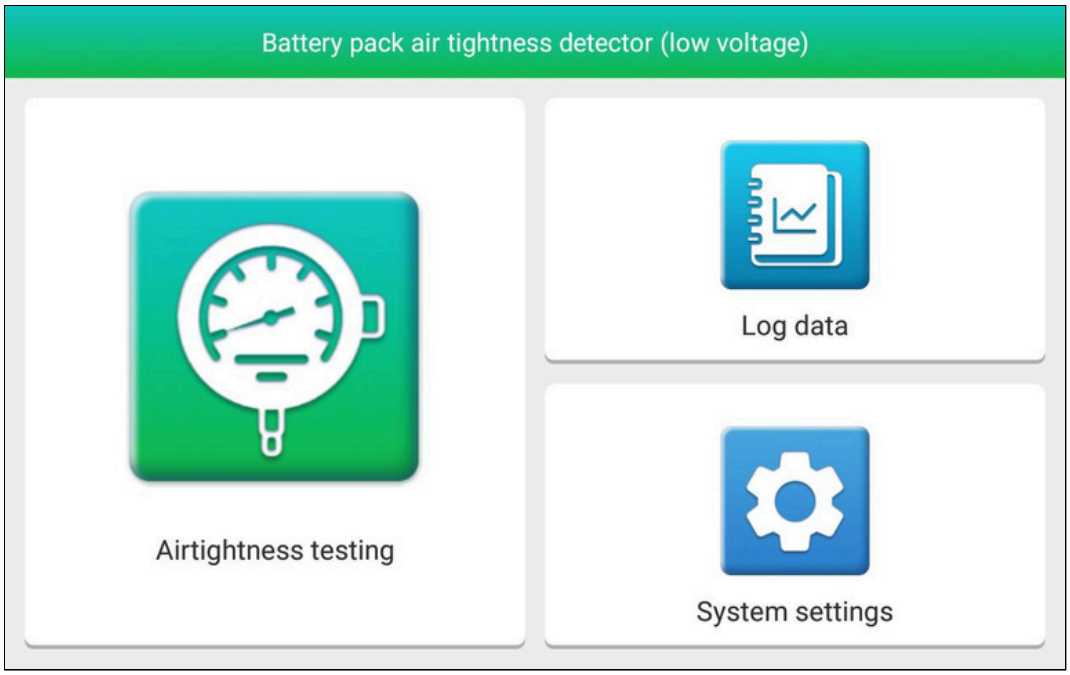
4.3 Main Unit Operation

4.3.1 Welcome Screen

Turn on the power switch to start the detector. The screen will display the welcome page firstly.

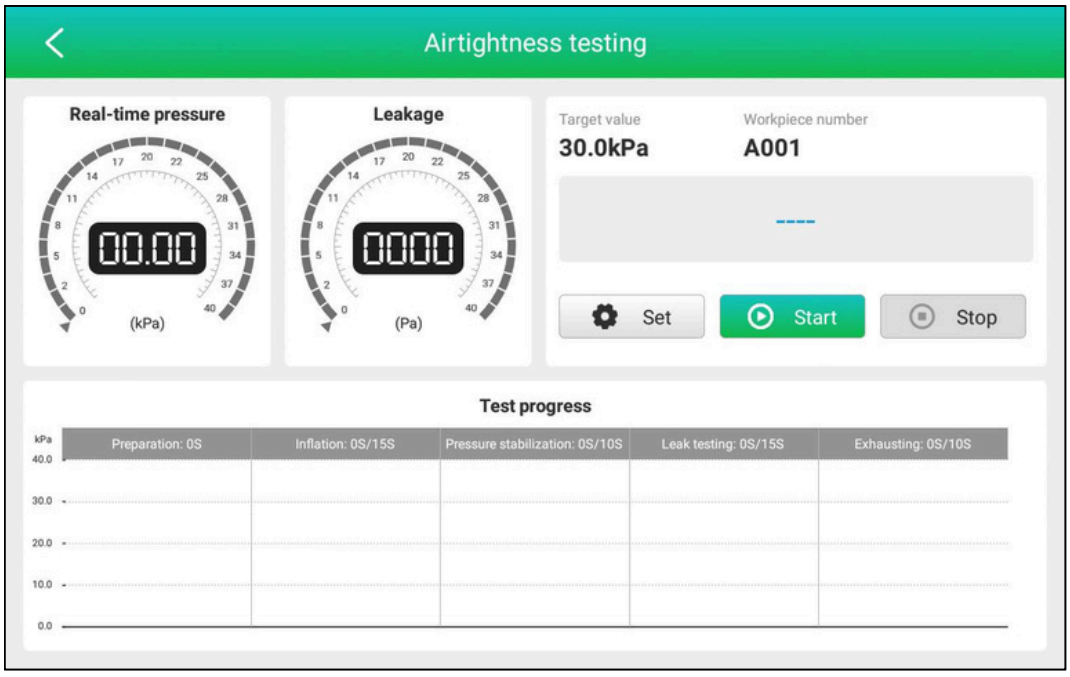
4.3.2 Main Menu

Enter the main interface after startup. The functional modules of the main interface include airtightness testing, log data and system settings.

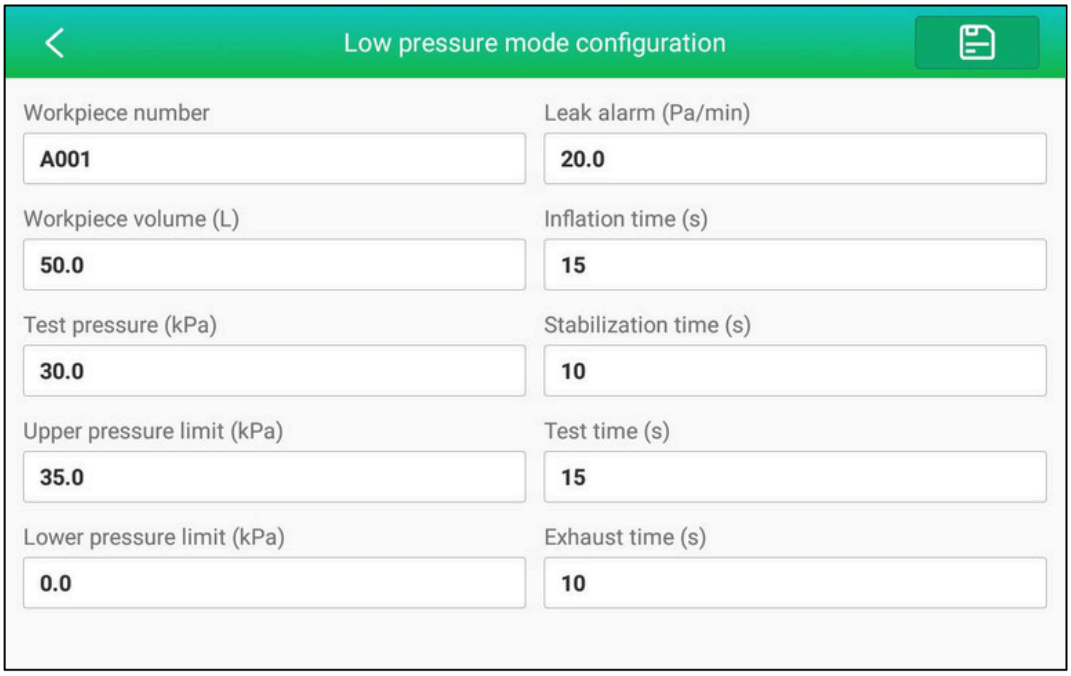


4.3.3 Airtightness testing

Tap **Airtightness testing** onthemaininterfacetoenterthetestinterface.Airtightnesstesting parameters can be preset.



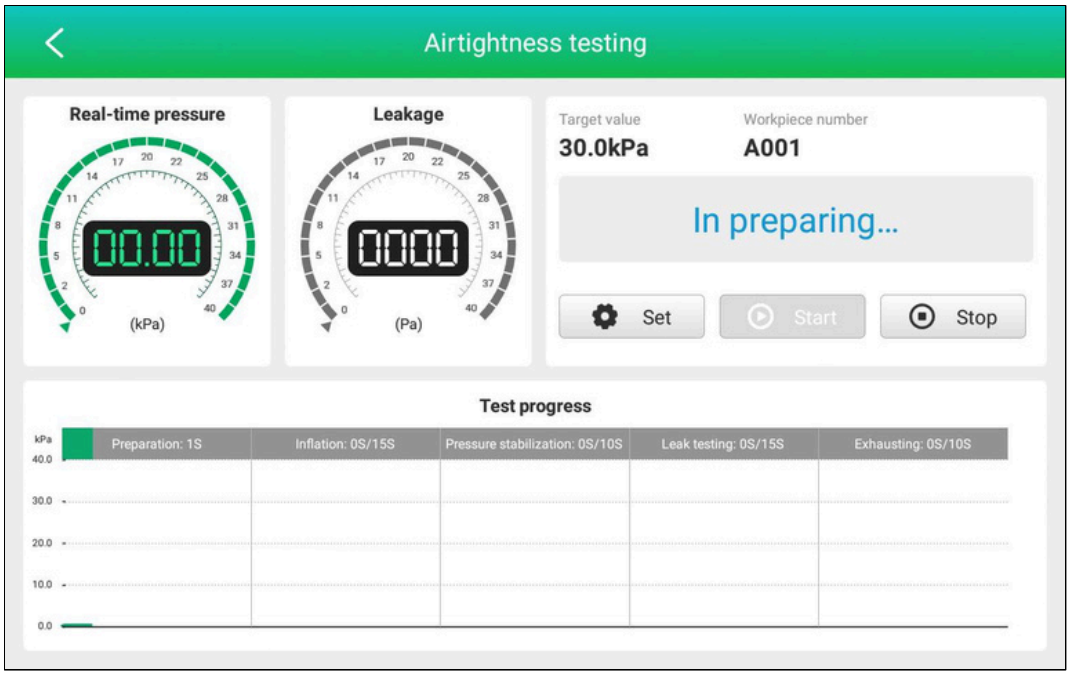
Tap **Set** button to enter the low pressure mode configuration interface for parameter setting. After completing the parameter settings, click the button "to save the current settings.



No.	Name	Description
1	Workpiecenumber	Namethebatterypack,caninputtheactualID.
2	WorkpieceVolume	Thebatterypackvolume,inputtheactualvalue.
3	TestPressure	Setthetargetpressureforinflation.
4		The upper limit of the test range. It will be displayed on the real-time UpperPressurelimit pressuredial.(*Note:Thesetvalue≤30kpsunderthelowpressure mode*).
5	LowerPressurelimit	Thelowerlimitofthetestrange.Itwillbedisplayedonthereal-time pressure dial.
6	LeakAlarm	Airtightness determine condition Alarmvalue≥actualleakagevalue→Qualified Alarm value＜actual leakage value → Unqualified
7	InflationTime	Theinflationtimecanbesetaccordingtothebatterypacksize.
8	StabilizationTime	Aholdingtimethatthedetectorwillstopinflatingandwaitforpressure change.
9	TestTime	Thetesttimethatthedetectorstartstodetectthechangeinthe leakage value after the holding Time.
10	ExhaustTime	Timetoexhaustgasafterthetestiscomplete.

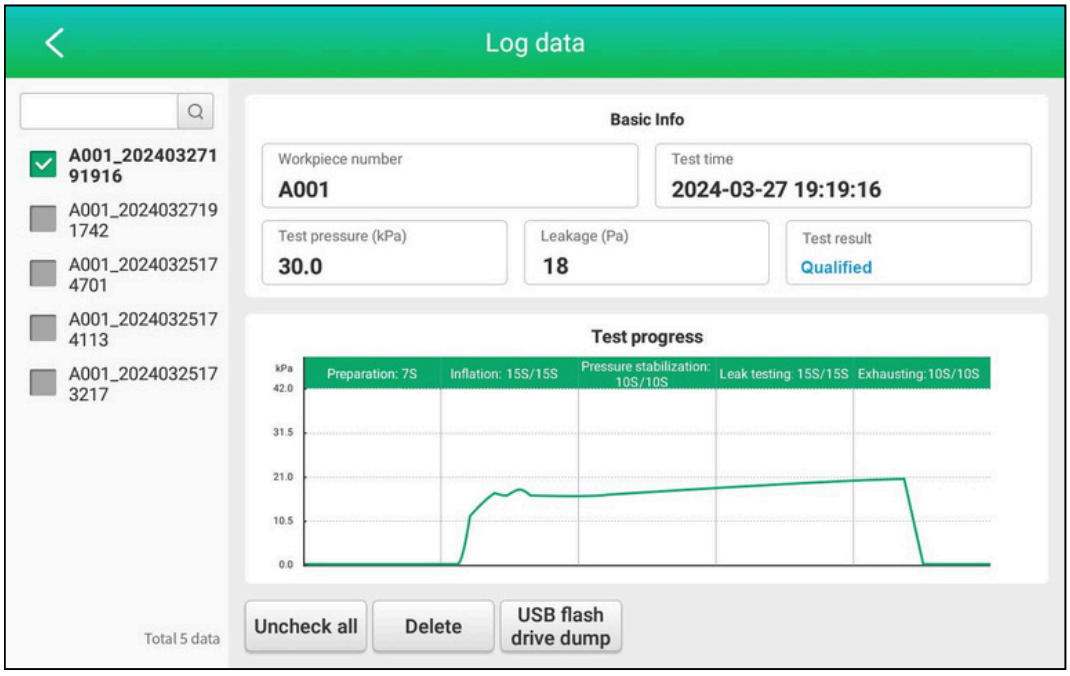
After the parameter setting is completed, tap **Start** to start the test. Users can view the real-time test data on the page and wait for the test result.

Tap **Stop** during the test to end the current test.



4.3.4 Log data

Tap **Log data** on the main interface to read the data. Check a battery pack, insert the USB disk into the USB port on the panel, and tap **USB Flash Drive Dump** to transfer the corresponding data to the USB disk.



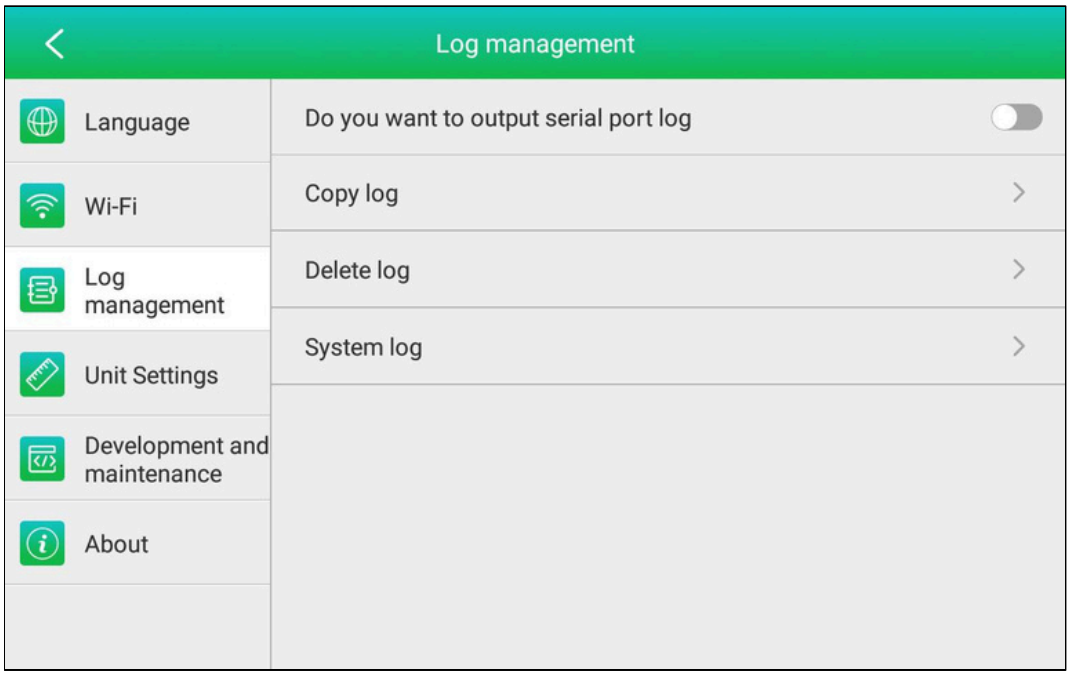
4.3.5 System Settings

Tap **System Settings** on the main interface to enter the system setting interface, which includes Language, Wi-Fi, Log, Develop and About.

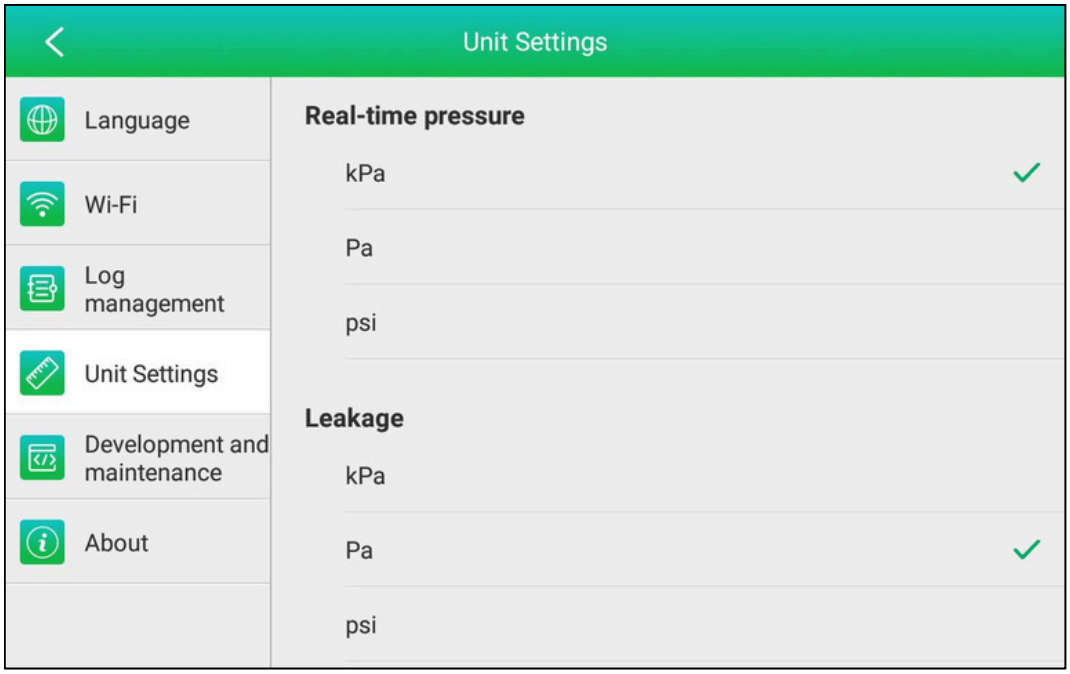
Language: Used to change the system language.

W i-Fi Used to set the Wi-Fi connection of the detector.

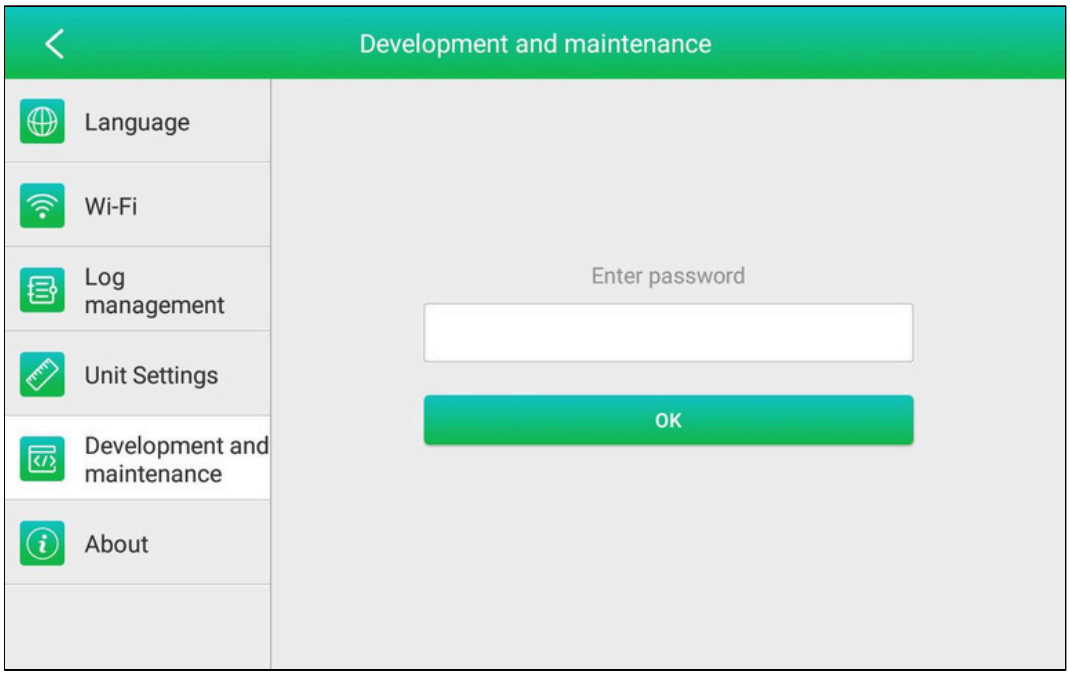
Log management：Used to save and view system logs.



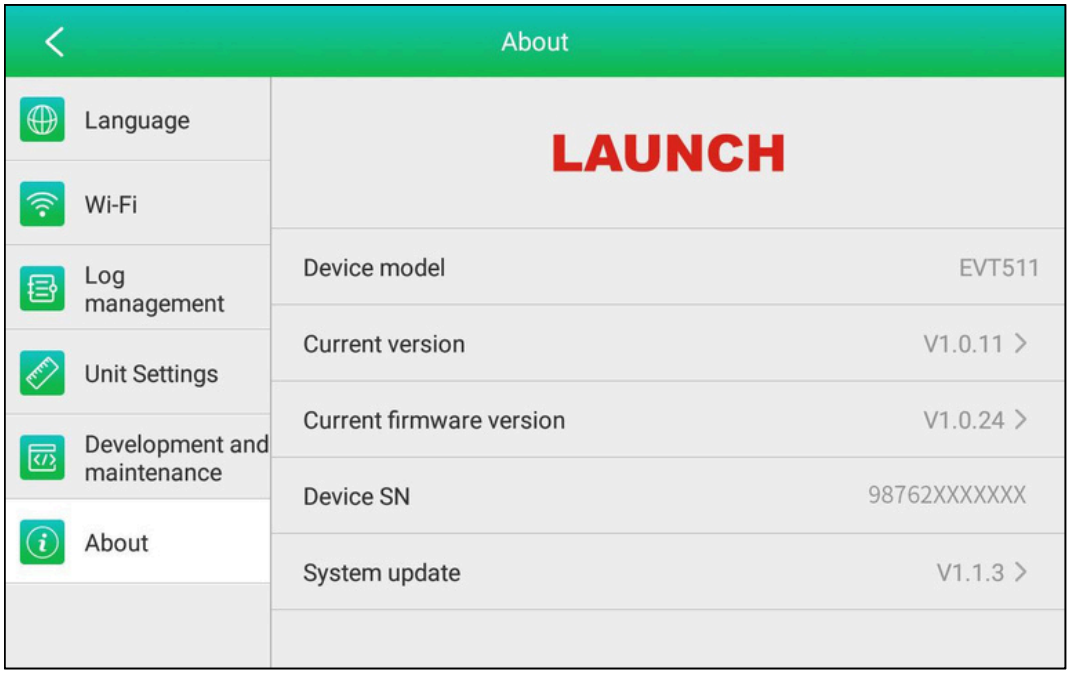
Unit Settings：Used to change the display units.



Develop and maintenance：Only for development and maintenance.



About Used to view system version information, etc.



5. Transport & Storage

1） This detector is equipped with special equipment box for packing, which is has anti-vibration and reliable for transportation.

2） Storage conditions: dry storage room, temperature: -20~70℃, Humidity: 95%Within.

6. Environmental Protection and Others

1） The outer carton of this equipment is made of recyclable material.

2） The main unit and other components are non pollution sources.