

JDiag Electronics Technology Co.,Ltd.

Web: www.jdiagtool.com

Tel: +86-755-21005135

Email: info@jdiagtool.com

**Address: 5rd Floor, B2 Building, Jinda Science and Technology Park B,
Longkou Community, Dalang Street, Longhua District, Shenzhen, China**

CE FC RoHS  

Made In China



MOTOSYS

USER'S MANUAL

Intelligent Motorcycle Diagnostics



M400

Catalogs

Safety Precautions and Warnings.....	01
Product Descriptions	02
Exterior Description	02
Product Parameters	03
Operating Instructions.....	03
Connection Steps	03
Motorcycle Diagnostics	04
Live Data	05
Read Freeze Frame	05
Read Fault Codes.....	05
Clearing Fault Code	06
Vehicle Info	06
ABS System Diagnosis.....	06
Numerical Analysis	07
Actuator Testing.....	07
Special Function	08
ECU Reset	08
Injector Test	09
Endoscopic Functions.....	10
Battery Diagnostics	11
Quick Test.....	12
Standard Test	13
Standard Test	13
Start Test.....	13
Charging Test	14
Load Test	14
Battery Settings	14
Relay Detection	15
Analog Signal Output	15
Help	17
Upgrade	20
Language Settings	20
Unit Settings.....	20
Device Information.....	21
System Settings	21
After Sales & Service	22

Safety Precautions and Warnings

To prevent personal injury or unnecessary damage while using the tool, please read this Owner's Manual carefully first and observe at least the following safety precautions when using the vehicle:

- Always perform motorbike testing in a safe environment.
- Do not attempt to operate or observe the tool while driving a vehicle, Operating or observing the tool will cause driver distraction and could cause a fatal accident.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all rotating or hot engine parts.
- Operate the vehicle in a well-ventilated work area. Exhaust gases are poisonous.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These Components create hazardous voltages when the engine is running.
- Keep a fire extinguisher suitable for gasoline /chemical / electrical fires nearby.
- Don't connect or disconnect any test equipments while the ignition is ON or the engine is running.
- Keep the scan tool dry, clean free from oil/ water or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool when necessary.

Product Descriptions

The content of this manual is edited based on the product V2.28 version.

This product is based on Android 10 operating system, using 4-core high-speed processor, extremely fast and smooth; equipped with 8-inch TFT capacitive touch screen, simple and easy to operate. It can detect electric control system faults of most motorcycle models in Asia, Europe, America and China.

1. Diagnostic Functions: Read Fault Code, Clearing Fault Code, Read ECU version information, Viewing Data Streams, CO Idle Speed Adjustment, Freezing Data.

2. Special Functions: ABS System Test, ECU Reset, Injector Test, Battery Test, Relay Test, Analog Signal Output, Help And So On.

Exterior Description



- ❶ **TPU soft rubber sheath**
- ❷ **Display:** 8-inch touchscreen with 800x1280 resolution
- ❸ **LED Indicator:** Red for charging indicator, green for communication indicator
- ❹ **DC Power Interface:** 12V DC power interface, provide 12V DC power supply and charging for the device
- ❺ **USB Interface:** For adapting external devices
- ❻ **DB15 PIN Connector:** Connects to motorcycle for diagnostic purposes via an adapter cable.
- ❼ **Type-C Interface:** Adapted to external U disk and charging
- ❽ **TF Card Slot:** Insert TF card to expand storage
- ❾ **On/Off Button:** For turning on and off the motorcycle and locking or waking up the screen.

Product Parameters

Operating System: Android 10

CPU Type: Quad-core high-speed processor

Storage Capacity: 8GB

Extended Memory Card: Maximum support 128G

Screen Size: 8.0 inch TFT, RGB

Resolution: 800*1280

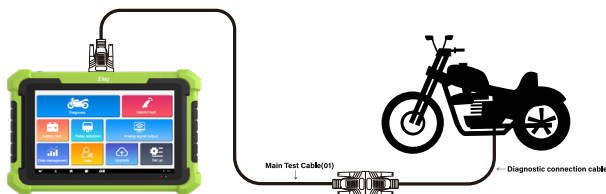
Operation Mode: Touch (Capacitive)

Wireless: Support wifi6, 4.0 Bluetooth

Battery: 3.7V 4000 mAh

Connection Steps

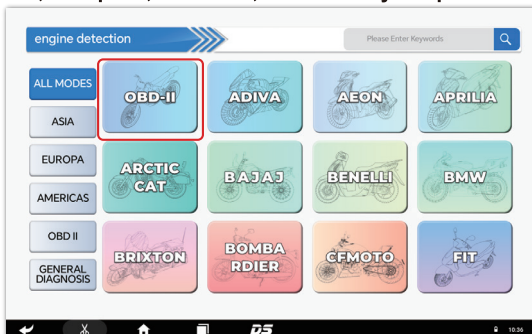
Locate the motorcycle's diagnostic jack, the location of the jack varies from motorcycle to motorcycle, most jacks are next to the engine, some pedals are under the pedal cover or under the seat. Connect the M400PRO to the motorcycle diagnostic port with the appropriate cable. Initial use requires an internet connection to activate the device, and the device can only be used after successful activation.



(Motorcycle diagnostic system)

Motorcycle Diagnostics

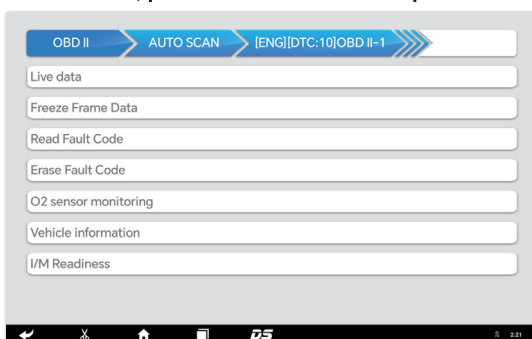
1. Enter the [Diagnostic] function, where we can select all models, universal EFI, Chinese models, Asian, European, American, etc. A variety of options to choose from.



2. OBDII, for example, click [OBD II], the user can choose to automatically scan or select the corresponding system for diagnosis.



3. Select Auto Scan, after entering the system, you can see that there are Viewing Data Streams, Freeze Frame, Read Fault Code, Clearing Fault Code, and Vehicle Information, etc. Depending on different brands of motorcycle systems are not the same, the data scanned will be different, please refer to the actual operation interface.



4. Read the data stream, you can select all or manually select according to the data you want to view.

Live data		
<input type="checkbox"/> Parameter name	Value	Units
<input type="checkbox"/> 1. Number of faults	10	----
<input type="checkbox"/> 2. MIL	ON	----
<input type="checkbox"/> 3. Status of Fuel system Bank 1	01	[F2]
<input type="checkbox"/> 4. Status of Fuel system Bank 2	00	[F2]
<input type="checkbox"/> 5. Load value in percent of the max.load	0	%
<input type="checkbox"/> 6. Engine temperature	-35	°C

The list
 Dash board
 Graph
 Top
 Freeze
 Record
 Play back

DS 5 2:38

5. Read Freeze Frame

OBD II		
<input type="checkbox"/> Parameter name	Value	Units
<input type="checkbox"/> 1. Load value in percent of the max.load	0	%
<input type="checkbox"/> 2. Short term fuel trim B1	0	%
<input type="checkbox"/> 3. Engine speed	3.75	rpm

The list
 Dash board
 Graph
 Top
 Freeze
 Record
 Play back

DS 5 2:38

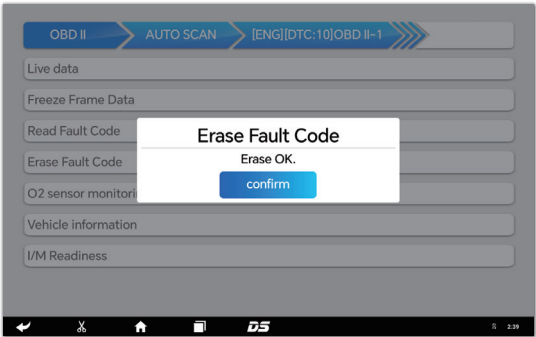
6. Read fault codes

Current Fault Code			
DTC number	DTC description	State	Maintenance Guide
P0685	ECM/PCM power relay control circuit open/short to GND	----	
P0122	Throttle/Pedal Position Sensor/Switch A Circuit Low Input	----	
P0108	Manifold Absolute Pressure/Barometric Pressure Circuit High Input	----	
P0113	Intake Air Temperature Circuit High Input	----	
P0505	Idle air bypass volume control range exception	----	
P0201	Cylinder Circuit 1-Injector Malfunction	----	
P0132	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)	----	
P0627	Fuel pump control unit Switch circuit malfunction	----	
P0335	Crankshaft Position Sensor A Circuit Malfunction	----	
P0118	Engine Coolant Temperature Circuit High Input	----	

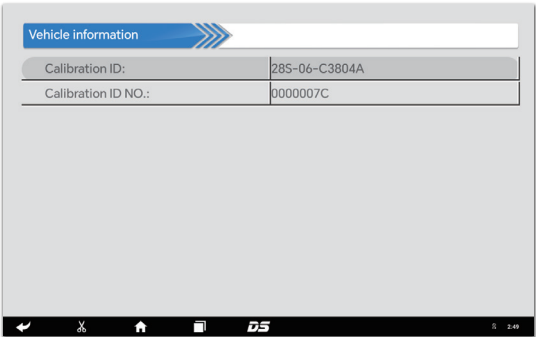
Clear DTC
 re-read

DS 5 2:38

7.Clearing Fault Code

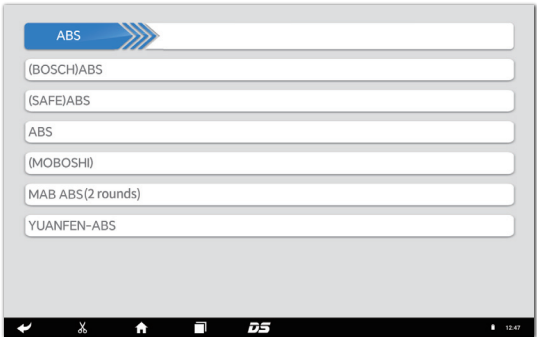


9.Vehicle Info



ABS System Diagnosis

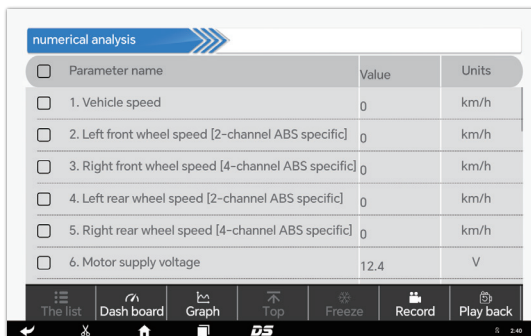
Select [Diagnostics] → [General EFI] → [ABS System Diagnostics], enter the main page of [ABS System Diagnostics], and select the corresponding brand name.



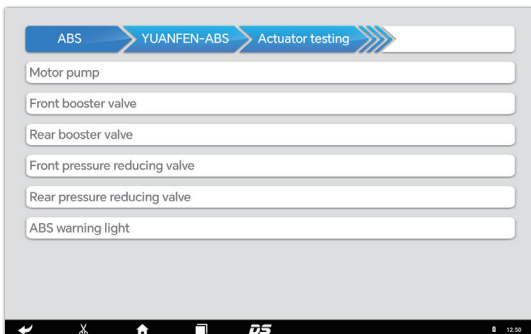
1.Take Yuanfeng ABS as an example, choose to enter the [ABS System Diagnostics], and then select [Yuanfeng ABS], you can view the functions in the ABS system.



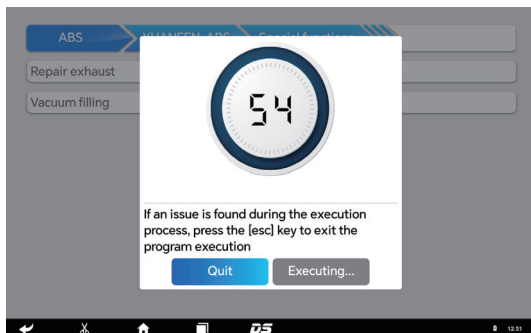
2. Numerical Analysis



3.Actuator Testing



4.Special Function

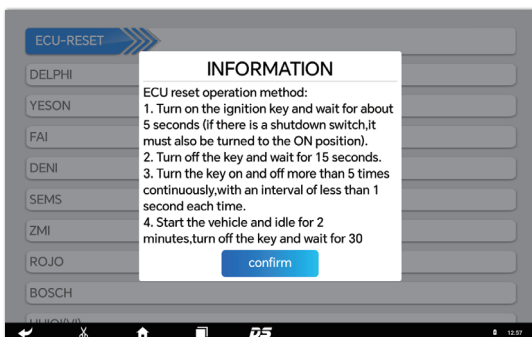


ECU Reset

1. Enter the ECU reset function, which can be based on the motorcycle ECU system options corresponding to the option.

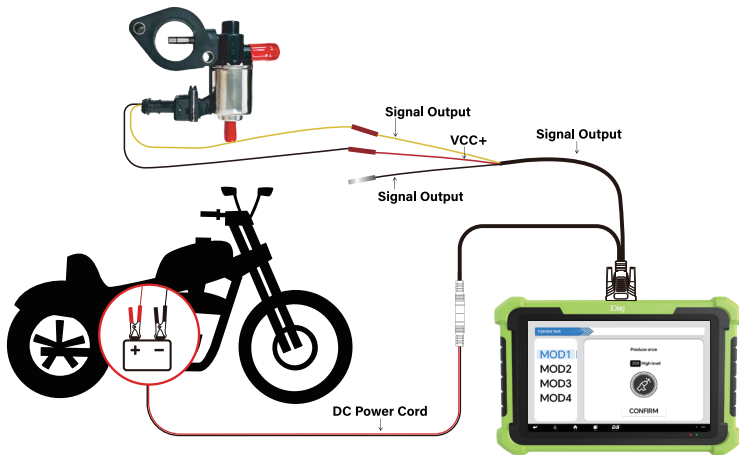


2. Take DELPHI as an example, click DELPHI, the device will pop up ECU reset operation method, according to the prompt step operation can be completed ECU reset.



Injector Test

1. Connect the injector, take the injector of FAI as an example, it needs external power supply, refer to the following figure for the connection:



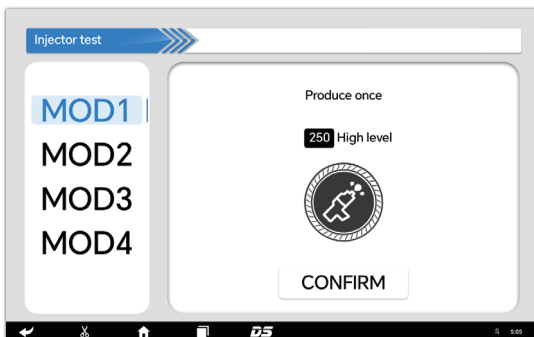
2. Enter [Injector Inspection], there are four inspection modes to choose from:

Mode 1: Click “Confirm ”, and the device will output one pulse signal with a pulse width of 250ms.

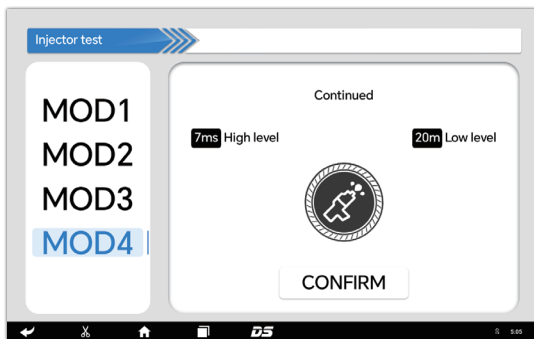
Mode 2: By clicking “Confirm”, the device will output 50 pulses with a pulse width of 7ms.

Mode 3: By clicking “Confirm”, the device will output 100 pulses with a pulse width of 4ms.

Mode 4: By clicking “Confirm”, the device will continuously output pulse signals, each with a width of 7ms.



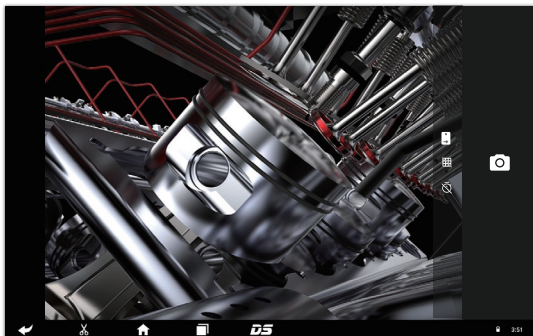
3. Take [Mode 4] as an example, connect the injector correctly, select [Mode 4], and then click OK, the device will output a pulse signal to drive the injector.



Endoscopic Functions

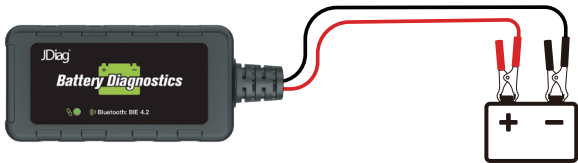
Equipped with a high-definition borescope lens, the high-definition imaging and flexible bending can be used to observe wear and tear or anomalies inside closed or complex structures (e.g., engines, piping, mechanical components).

Plug the endoscope probe cable into the USB socket on the main unit, slide from bottom to top in the main interface, and open the [Camera] function to use the endoscope to view the overhauled vehicle.

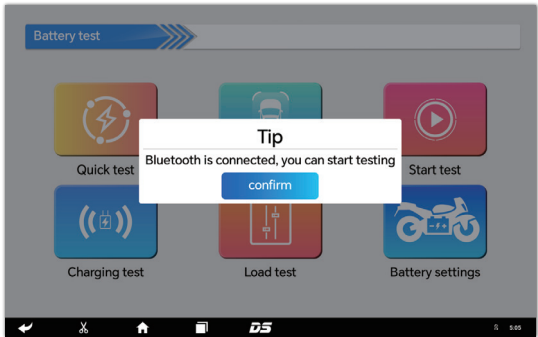


Battery Diagnostics

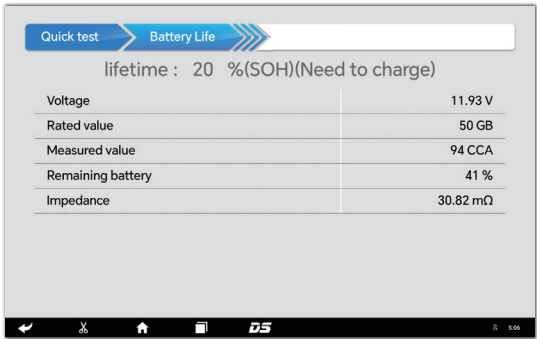
1. Connect the red and black clamps directly to the battery lead post for diagnosis, with the red clamp connecting to the positive terminal and the black clamp connecting to the negative terminal.



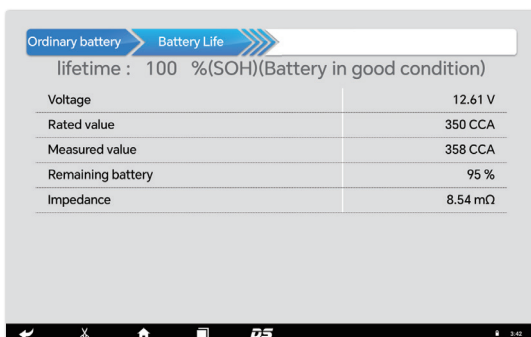
2. Enter the [Battery Test] function and wait for the device to connect to the battery diagnostic box.



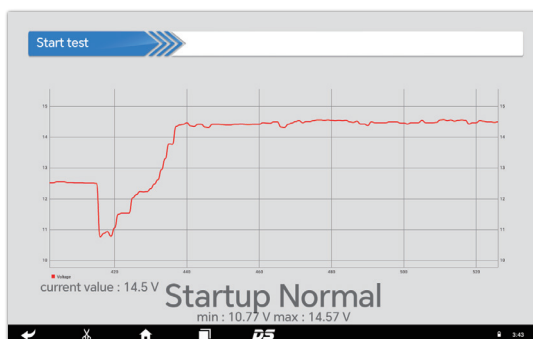
3. Select [Quick Test] and enter the corresponding battery parameters according to the device prompts to quickly diagnose the battery health status.



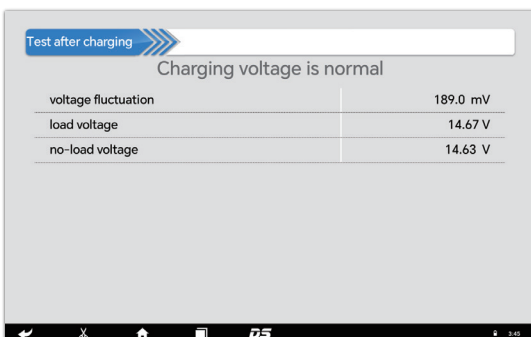
4. Select [Standard Test], choose the corresponding type and parameters according to the battery type, and operate according to the prompts to analyze the health status of the battery.



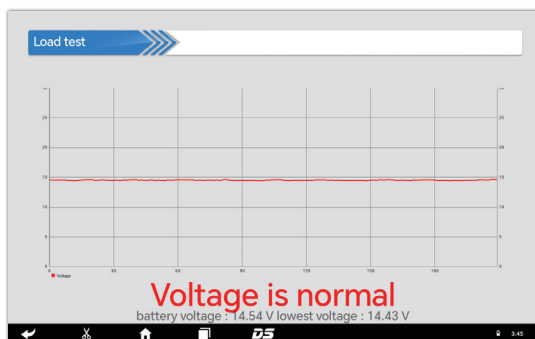
5. Select [Start Test], start the engine according to the device prompt operation, complete the operation, you can quickly diagnose the test results.



6. Select [Charging Test], adjust the engine speed according to the operation of the device prompts, complete the operation, you can quickly diagnose the test results.



7. Select [Load Test], operate according to the device prompts to open or close the load, complete the operation, you can quickly diagnose the test results.

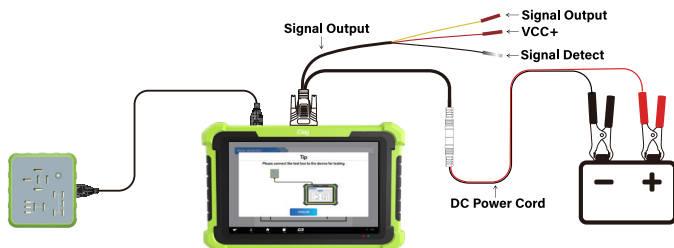


8. Select [Battery Settings], built-in a variety of locomotive battery models to choose from, you can quickly select the battery corresponding model for testing.

Other categories		Battery Life
lifetime :		100 %(SOH)(Battery in good condition)
Voltage		12.69 V
Rated value		315 CCA
Measured value		336 CCA
Remaining battery		100 %
Impedance		9.07 mΩ

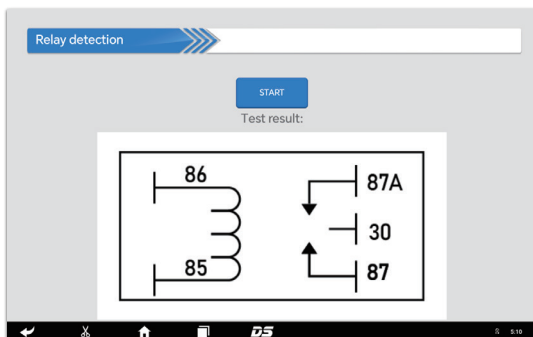
Relay Detection

1. This feature requires the DB15 connector to remain connected to the 12V input power supply to ensure proper operation. you can connect the motorcycle power supply using the DB15 PIN main power cord and adapter cable.



2.Connect the relay box to the device using a double-ended Type-C, then plug in the relay.

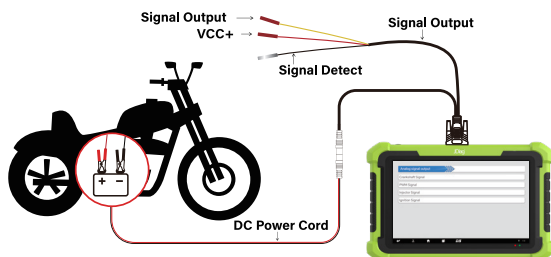
3.Click [Start]



Analog signal output

1.Connect the [Signal Output] to the DB15 connector, this function requires the DB15 connector to remain connected to the 12V input power supply to ensure proper operation, you can use the [DC Power Cord] to connect the motorcycle battery to supply power to the DB15 connector.

2. The yellow cable is the signal output cable, the red cable is the power cable, and the black cable is the signal detection cable.



3. Crankshaft signal function: signal type and output 9,11,17,22,23,34 and other pulse signals with adjustable engine speed.

Crankshaft Signal

Engine speed + - 1000 (RPM)

Signal type + - 9 Pules

CONFIRM OUTPUT

4. PWM signal function: the signal type can output adjustable frequency and duty cycle, generally test two-wire solenoid valve.

PWM Signal

Frequency + - 500 (Hz)

duty cycle + - 50 (%)

CONFIRM OUTPUT

5. Injector signal function: the signal type can output adjustable injection time and engine rpm, professional test injector.

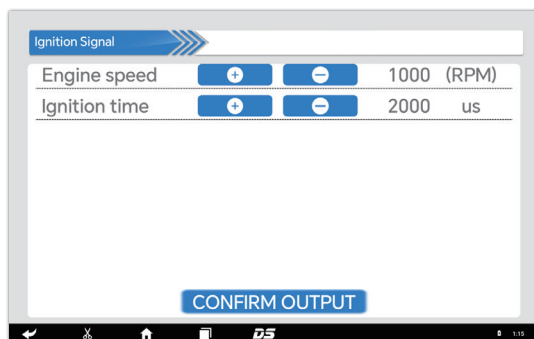
Injector Signal

Engine speed + - 1000 (RPM)

Injection time + - 2500 us

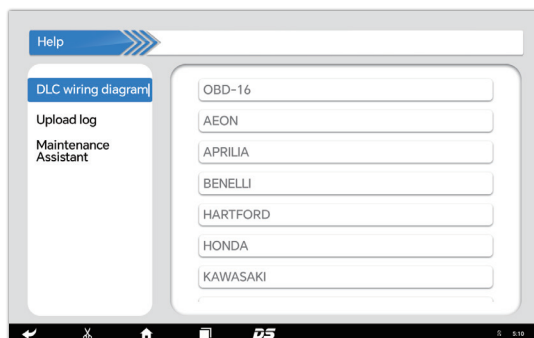
CONFIRM OUTPUT

6. Ignition signal: signal type fixed ignition time and adjustable engine speed, (professional test ignition coil).

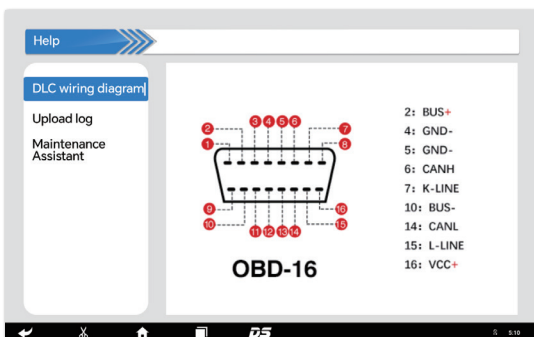


Help

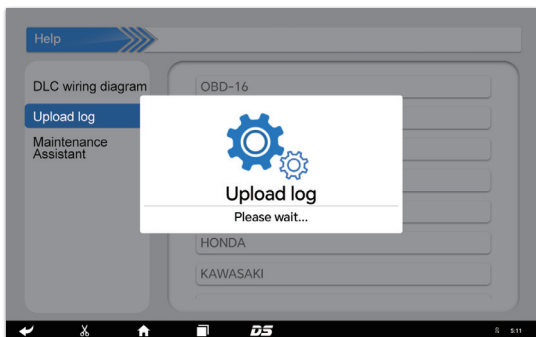
1. [Help] is a powerful maintenance library and maintenance guide function.



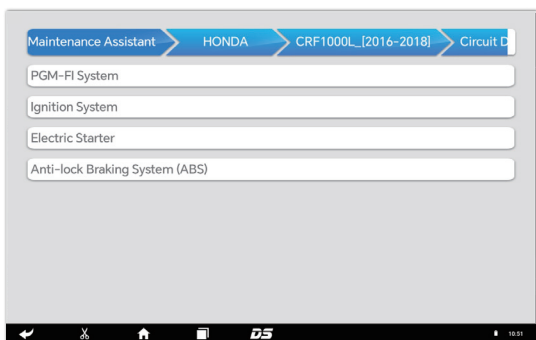
2. [DLC Wiring Diagram], you can view the detailed pin definition.

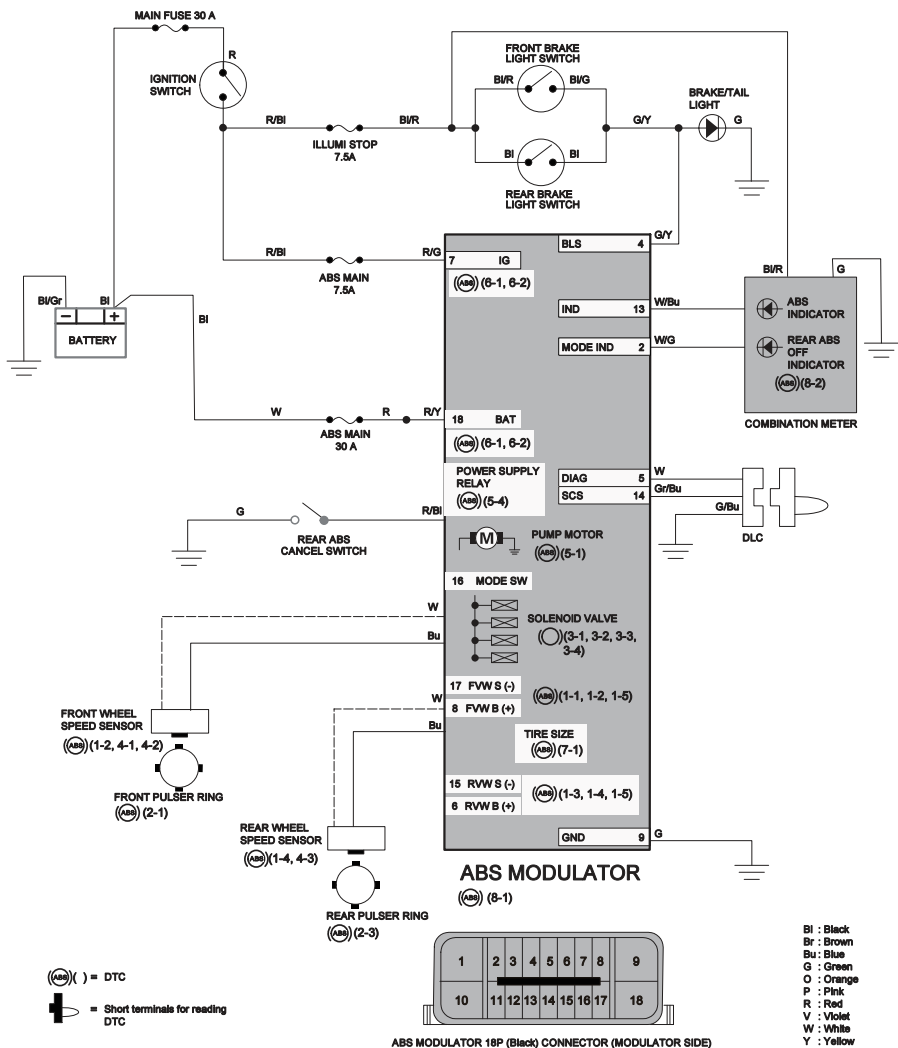


3. [Upload Log] If you encounter various problems during the use, you can use the log to upload and submit it to the technician to analyze and solve the problem.



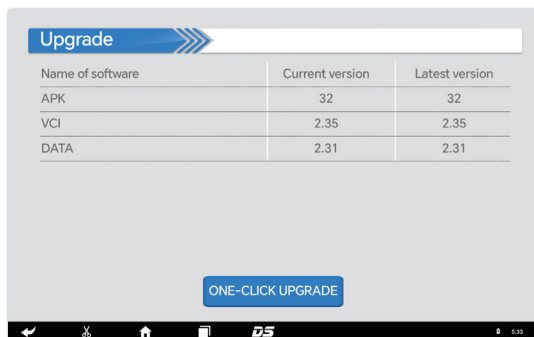
4. [Maintenance Assistant] you can select the corresponding option to view the wiring diagram, the following figure to view (ABS) wiring diagram as an example.





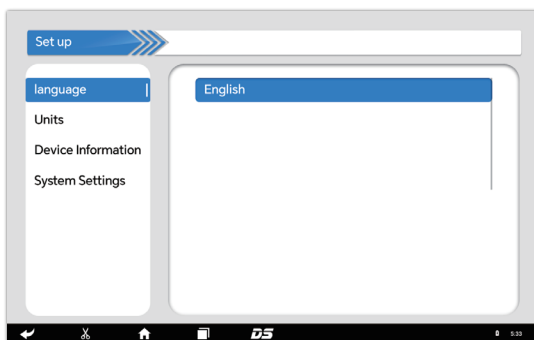
Upgrade

1. The system APK will automatically detect the version, if there is any update you can click one click to upgrade.

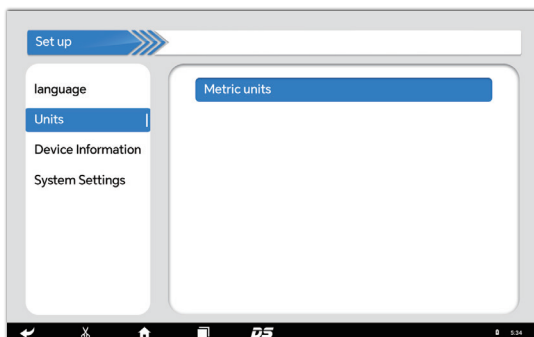


Language Settings

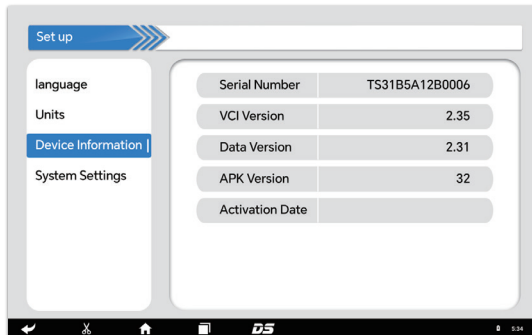
1. Click [Settings] → [Language] to set the desired language.



2. Click [Settings] → [Units] to set the units.

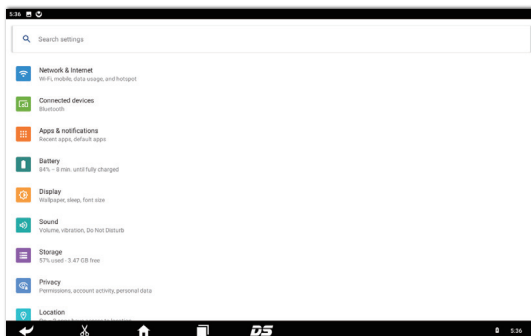


2. Click [Settings] → [Device Information] to view device information.



System Settings

1. Tap [Settings] → [System Settings], through the system settings, you can set the network, Bluetooth, storage, display and sound and other commonly used functions:



After Sales & Service

One year warranty

JDiag Technology promises to provide warranty service for 1 year from the date of original purchase, if the product is purchased from an official source, the following conditions must be met:

- 1) The warranty is limited to repair or replacement of new equipment at no additional cost, provided that the official sales invoice or a copy of the invoice is provided.
- 2) The warranty does not cover the unauthorized disassembly of this product due to flooding, lightning strikes, or outside repair shops not authorized by the company. The personnel have repaired it and considered damage caused by improper use.
- 3) JDiag Technology is not responsible for any damages caused by use, misuse or installation and testing. Some countries' limitations on the duration of implied warranties are not allowed, so the above limitations may not apply to you.
- 4) All information in this manual is based on the latest and effective information at the time of publication, and there is no guarantee of its accuracy or completeness. JDiag Technology reserves the right to make changes at any time without notice.

Service Process

If you have any questions in the process of using this product, please contact your local authorized distributor directly, or visit our official website for consultation.

For repairs or returns, please contact the dealer or contact your sales representative directly.