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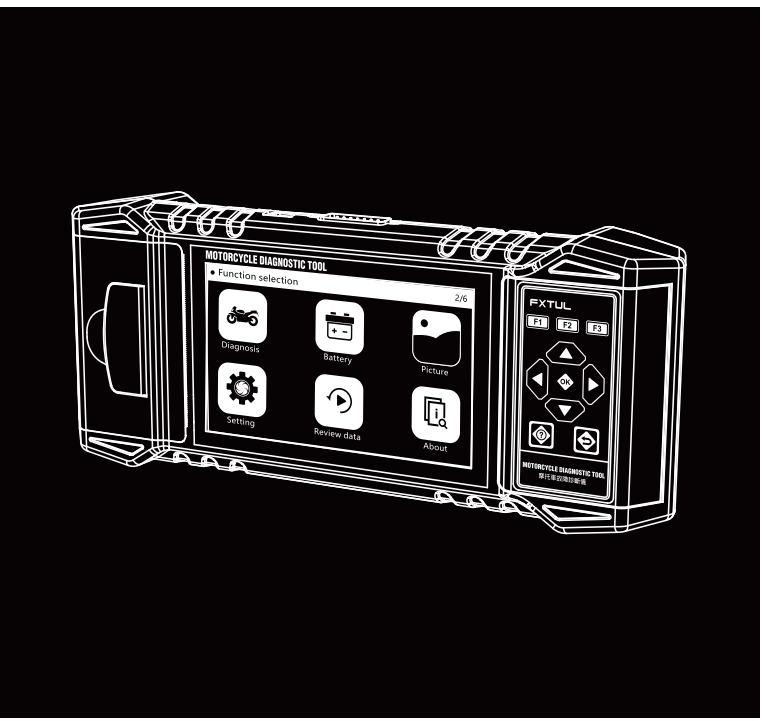
USER MANUAL



摩托车故障诊断仪

M5/M6

MOTORCYCLE DIAGNOSTIC TOOL

FXTUL

www.fxtul.com
sales@fxtul.com
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TABLE OF CONTENTS

FUNCTIONS

- The motorcycle diagnostic tool is equipped with a 5.0–inch RGB display screen with a resolution of “800*480”. The interface display is more abundant and clear, and users can choose their own theme color, with the option of both dark and light themes.
- It has faster processing speed, smoother interface refresh rate, stronger data processing.
- It comes equipped with features such as a printer, image viewer, data logging and playback, battery testing, error reporting and feedback, and more.
- Diagnostic Functionality.

DIAGNOSE

System Diagnosis Features

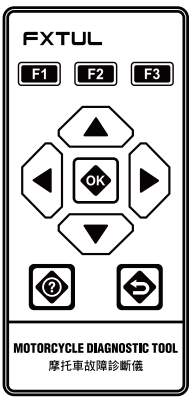
- Supports full system scanning and identification of current vehicle model, and reports on the assembly status of each system and whether any fault codes are present.
- Allows browsing of the assembly status and fault code descriptions for the entire vehicle system, and generates paper reports for printing.
- Supports one–click clearing of all fault codes in the entire system.
- The data stream waveform graph automatically adapts to the data without the need for manual adjustment of amplitude, and allows for viewing of specific data streams rather than displaying all data streams at once.

Supported Diagnostic Functions

- The diagnostic tool supports engine, ABS, tire pressure, anti–theft, and other systems.
- Supported functions for single system:
  - Reading system information;
  - Reading fault codes;
  - Clearing fault codes;

- Reading data streams;
- Reading freeze frames;
- Actuator testing;
- Service functions (including CO idle speed adjustment, throttle position learning, etc.).

BUTTON DIAGRAM



Navigation Buttons

	▲▼◀▶	[Up]、[Down]、[Left]、[Right]

Function Buttons

OK	[OK]	?	[Help]	⇦	[Cancel]

Custom Function Buttons

F1 F2 F3	The specific functions of the custom buttons depend on the on-screen instructions and user interface.

Hidden Buttons

[Screenshot] (long press F1)	
[Record] (long press F2)	[Print] (long press F3)

FEATURES

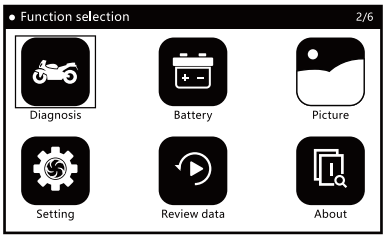


Figure 1 – Main interface

1. Diagnostic

- Select the correct diagnostic program based on the vehicle brand information.
- To initiate the vehicle diagnostic process, choose the specific vehicle model based on its information, such as the model type, year of production, engine type, etc.

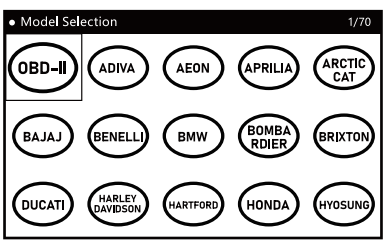


Figure 2 – Diagnostic Brand Selection

1.1 Quick Test

- The **"Quick Test"** function scans all the assembled ECUs in the vehicle and quickly retrieves their fault information, while generating a fault report.

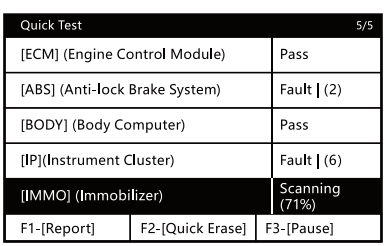


Figure 3 – Quick Test Mode

- NOTE: The **“Quick Test”** function is only applicable to vehicles with all on–board ECUs integrated into a single diagnostic socket/interface. For vehicles with independent diagnostic interfaces for each ECU, it is recommended to use the **“Control Unit”** mode for diagnostic purposes.

1.2 Control Unit

- The **“Control Unit”** function lists all the possible ECUs that may be assembled in the vehicle, allowing the user to manually select a specif–ic ECU for testing. Upon completion of the testing process, a fault code report can be generated.

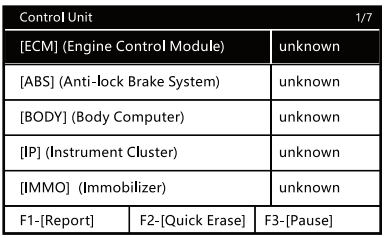


Figure 4 – Control Unit Mode

- System Status Indication:

  “Unknown”: System status is unknown whether it is installed or not.

  “Installed”: System is installed but fault codes have not been read.

  “Not Installed”: System is not installed.

  “Passed”: System is installed and there are no fault codes.

  “Fault | (*)...”: System is installed and there are (*) fault codes present.

1.3 Diagnostic Report

- The **“Diagnostic Report”** function records and generates a report of the fault code information obtained during the user’s diagnostic process. The user can view the diagnostic report by pressing the **“Report”** button and can also print the report using the **“Print”** button.

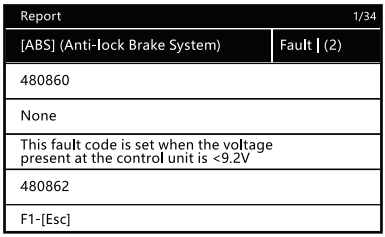


Figure 5 – Diagnostic Report

1.4 One-Click Clearing

- The **"One-Click Clearing"** function allows the user to clear all fault code information recorded during the diagnostic process with a single click of the **"Quick Clear"** button.

1.5 System Diagnosis

- The **"System Diagnosis"** function performs a system diagnosis of the specified system selected by the user.

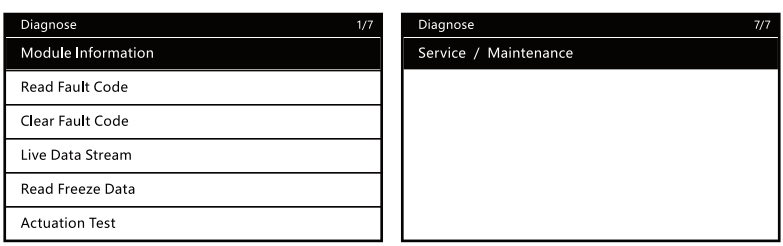


Figure 6 – System Diagnosis

1.5.1 Module Information

- The **"Module Information"** function displays the ECU's self-attribute information, including software version number, hardware version number, production date, serial number, etc.

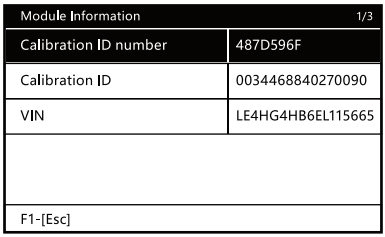


Figure 7 – Module Information

1.5.2 Reading Fault Codes

- The “Reading Fault Codes” function is used to read and display the current system fault information.

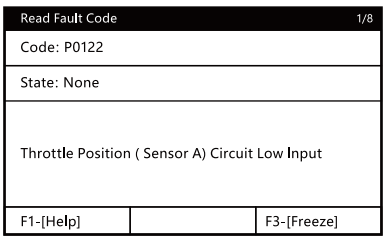


Figure 8 – Fault Code Information

1.5.3 Clearing Fault Codes

- The “Clearing Fault Codes” function is used by the user to clear the system fault codes and eliminate the fault indicator light after completing the diagnosis and repair of the fault problem.

1.5.4 Reading Data Streams

- The “Reading Data Streams” function allows the user to view the real–time working status of various sensors in the vehicle, in order to understand the vehicle’s operating conditions and assist in trouble–shooting and fault analysis.

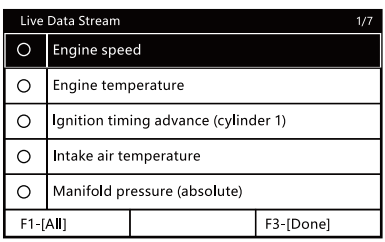


Figure 9 – Data Stream Selection

Live Data Stream		1/7
Engine speed	0.00	rpm
Engine temperature	80	deg C
Ignition timing advance (cylinder 1)	6.00	deg
Intake air temperature	25	deg C
Manifold pressure (absolute)	101	kPa
F1-[Wave]		

Figure 10 – Data Stream Display

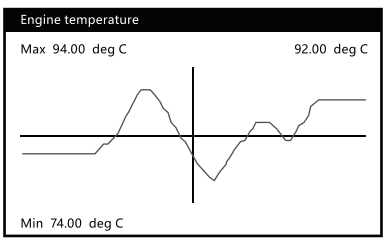


Figure 11 — Data Flow Waveform

1.5.5 Reading Freeze Frames

- The “Reading Freeze Frames” function displays the moment when fault codes occur during the vehicle’s operation, along with data information from sensors related to the vehicle’s operating environment, allowing the user to understand the vehicle’s state and conditions when a fault occurs.

Read Freeze Data		1/4
Engine speed	0.00	rpm
Engine temperature	80	deg C
Fault code	P0122	
Intake air temperature	25	deg C
F1-[Ecs]		

Figure 12 — Freeze frame information

1.5.6 Actuator Testing

- The “Actuator Testing” function allows the user to test the vehicle’s related actuators, in order to quickly identify faulty components by understanding their current working status.

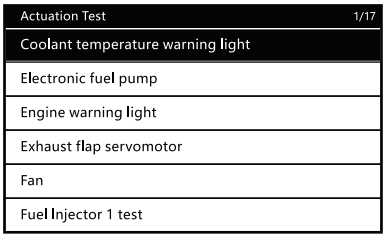


Figure 13 – Actuator Testing List (example)

1.5.7 Service and Maintenance

- The **“Service and Maintenance”** function is used by the user to reset the service information, calibrate actuators, and perform module service after the vehicle undergoes maintenance and repairs.

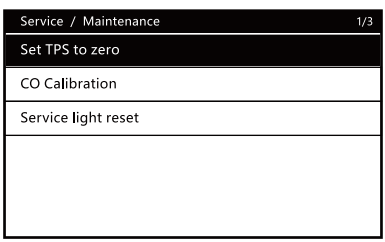


Figure 14 – Service and Maintenance List (example)

1.5.8 Information Printing

- The **“Information Printing”** function allows the user to print paper–based information by pressing the **“Print”** button on screens such as diagnostic reports, module information, fault codes, data streams, etc.
- After entering personal / vehicle information, the user can print a paper–based report.

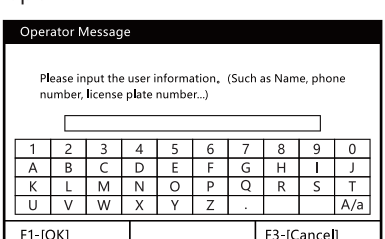


Figure 15 – User / Vehicle Information Input

1.5.9 Event Recording

- The **“Event Recording”** function allows the user to record events by pressing the **“Record”** button on screens such as module information, fault codes, data streams, etc. The recorded events can be replayed using the **“Playback”** function.

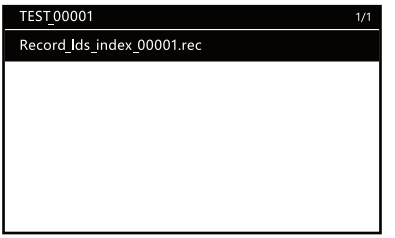


Figure 16 – Event Recording

2. Battery

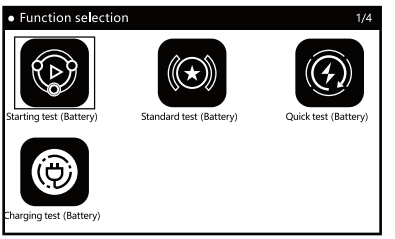


Figure 17 — Battery Test

2.1 Cranking Test

- The **“Cranking Test”** function determines the current status of the vehicle’s battery by viewing the voltage change waveform during the vehicle’s ignition and start–up process.

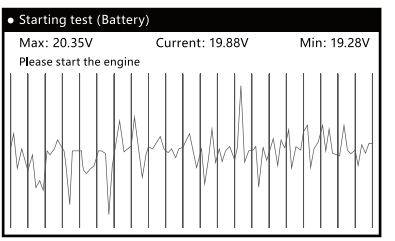


Figure 18 – Cranking Test

2.2 Standard Testing

- Select **“Standard Test”** and press [OK] to choose the battery type and testing mode.

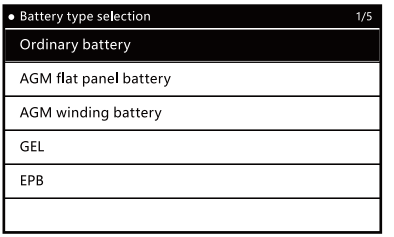


Figure 19 – Battery Type Selection

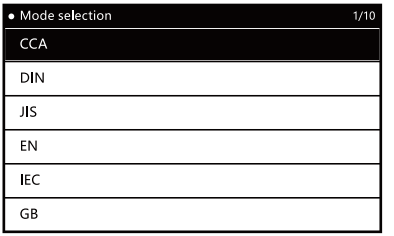


Figure 20 – Testing Mode Selection

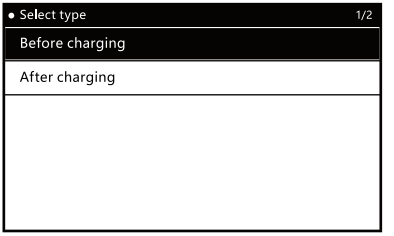


Figure 21– Charging Status Selection

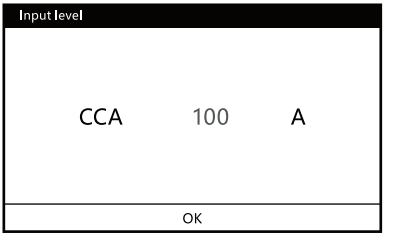


Figure 22 – Input Level

- **NOTE:** The level value can be adjusted using arrow keys.

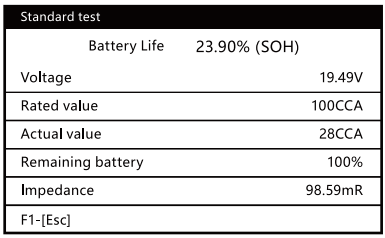


Figure 23 – Test Results

- Note: The test results can be printed on paper by pressing the “Print” button.

2.3 Quick Testing

- The **“Quick Testing”** function follows the same testing process as the **“Standard Testing”**. Users can perform the test according to the prompts displayed on the user interface.

2.4 Charging Testing

- The **“Charging Testing”** function is a simple process that can be performed by following the prompts displayed on the user interface.

3. Picture

- During vehicle testing using the device, you can capture a screenshot of the current screen (such as fault codes, data streams, battery testing results, etc.) by long–pressing the **[F1]** button on any screen. This feature allows you to easily view and edit the images of the recorded actions.

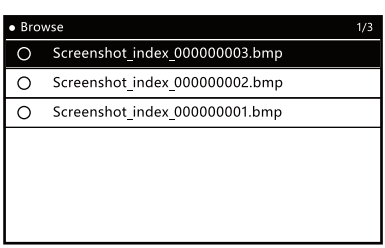


Figure 24 – Image Viewing

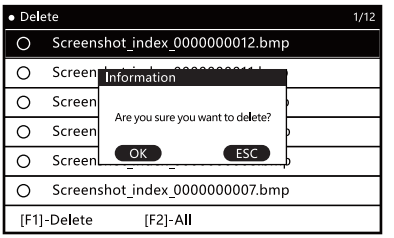


Figure 25 – Image Deletion

4. Settings

- The **“Settings”** function is used for system settings.

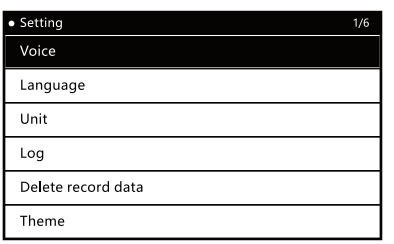


Figure 26 – Setting Options

4.1 Sound Settings

- The **“Sound Settings”** function allows you to turn the device’s beeping sound on or off.

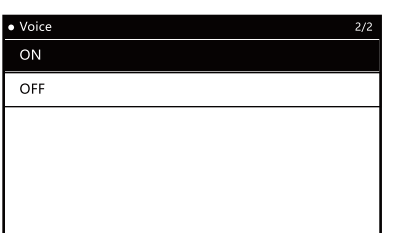


Figure 27 – Sound Settings

4.2 Language Settings

- The **“Language Settings”** function allows you to select the device’s system language according to your preference.

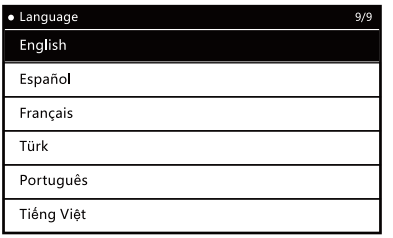


Figure 28 – Available language options

4.3 Unit Settings

- The “Unit Settings” function for selecting the unit of measurement between metric and imperial.

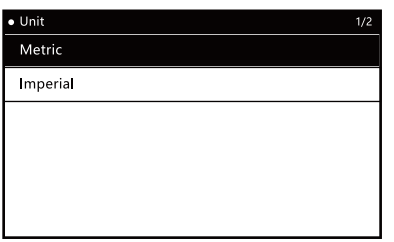


Figure 29 – Available unit options

4.4 Log Settings

- The “Log Settings” function is used for diagnostic logging.

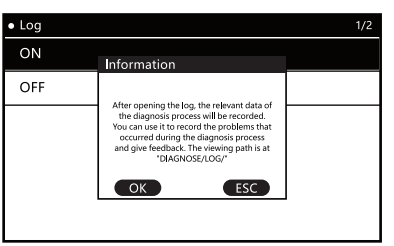


Image 30 – Log Settings

4.5 Record Deletion

- This function allows the user to delete data recorded during device use, including log files and feedback files.

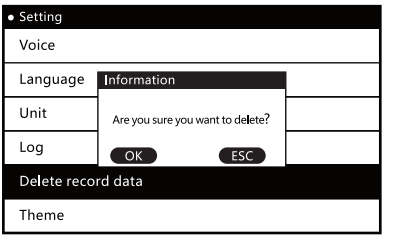


Figure 31 – Record Deletion

4.6 Theme Settings

- This function is for selecting the interface display style (dark/light).

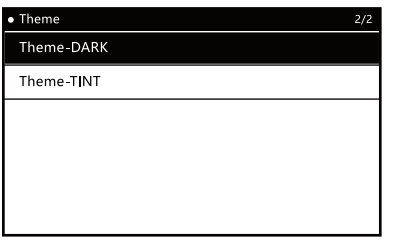


Figure 32 – Theme Settings

5. About

- The “About” function is used to view the current system version and software package version.

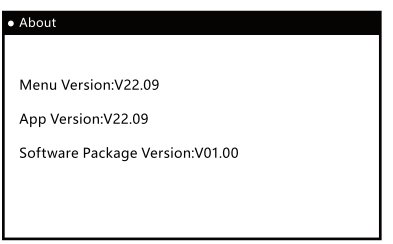


Figure 33

SOFTWARE UPGRADE

- To upgrade the software, connect the device to a computer via USB cable. Wait until the computer recognizes the device and a new drive appears. Open this drive and replace the old version of the “DIAGNOSE” folder with the downloaded new version. Then, restart the device and the upgrade process will be complete.

USER LOG FEEDBACK

- When using the diagnostic tool to diagnose a vehicle, if you encounter difficult problems, you can turn on logging through the “Log Settings” function in the “Settings” menu. During a complete vehicle diagnosis process, relevant data will be recorded and a diagnostic log file will be generated in the DIAGNOSE/LOG/ directory after exiting the diagnostic tool normally, please note that do not disconnect power directly. Please send us the diagnostic log file and a description of the problem encountered so that we can assist you in solving the problem quickly and accurately.

WARRANTY

Thank you for choosing our products, we will provide you with the following services and commitments:

- The warranty period of this product is 3 years.
- After the warranty expires, replacing parts will incur a repair fee.
- Please contact the manufacturer after failure, we will give you the most perfect service in the shortest time.

The following items are not covered by the warranty:

- The wearing parts are not covered by the warranty.
- Products purchased through informal channels.
- Damage caused by use and maintenance not in accordance with the product manual.

目 录

功能特点

- 拥有5.0寸RGB显示屏，分辨率为“800*480”，界面显示更为丰富清晰，用户可自主选择主题颜色（深色或浅色主题）。
- 运行速度更快，界面刷新更流畅，数据处理能力更强，用户体验感更好。
- 具有打印机、图片查看、数据记录与回放、电池检测、错误报告反馈等功能。
- 诊断功能。

诊断

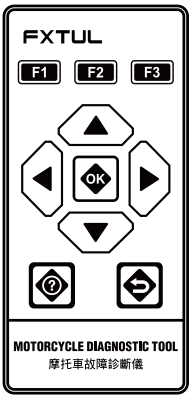
车型系统诊断特点

- 支持当前车型全系统扫描识别并读码，报告车型全系统装配状态及各系统是否存在故障码；
- 支持浏览车型全系统装配状态及故障码描述，并打印纸质报告；
- 支持全系统一键清码；
- 数据流波形图根据数据自动适应，而不需要手动设置幅度等；
- 数据流支持查看指定数据流，而不是全部都显示。

诊断支持的功能

- 支持发动机/ABS/胎压/防盗等系统；
- 单系统下支持：
  - 读取系统信息；
  - 读取故障码；
  - 清除故障码；
  - 读取数据流；
  - 读取冻结帧；
  - 执行器测试；
  - 服务功能(含CO怠速调节/节气门位置学习等)。

按键示意图



导航按键

	▲▼◀▶	[上]、[下]、[左]、[右]

功能按键

OK	[确定]	?	[帮助]	⇦	[取消]

自定义功能按键

F1 F2 F3	自定义功能按键的具体作用需要结合用户界面中的按键说明。

隐藏按键

[截图] (长按F1)	[记录] (长按F2)	[打印] (长按F3)

功能介绍

图1-主界面

1. 诊断

- 根据车辆品牌信息选择正确的诊断程序。
- 根据车辆信息(车型、年款、发动机型号等)选择指定车型后开始车辆诊断。

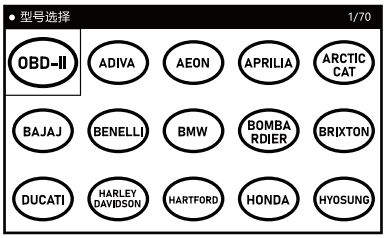


图2–诊断品牌选择

1.1 快速测试

- [**快速测试**]功能将对整车已装配的ECU进行扫描，并快速读取ECU的故障信息，同时生成故障报告。

图3–快速测试模式

- **说明:** 快速测试仅适用于车载ECU都统一集成在一个诊断座/接头的车辆。
  车载ECU使用独立诊断接头的车辆建议使用[**控制单元**]模式进行诊断。

1.2 控制单元

- [**控制单元**]功能将列举整车可能装配的ECU，用户可以手动选择指定的ECU进行检测。检测完成后同样可以生成故障码报告。

图4–控制单元模式

- **系统状态说明:**
  “**未知**” - 系统未知是否装配

“**安装**” - 系统装配但未进行读故障码
“**未安装**” - 系统未装配
“**通过**” - 系统装配并且没有故障码
“**故障|(*)...**” - 系统装配并且存在*个故障码

1.3 诊断报告

- [**诊断报告**]用户诊断过程中读取到的故障码信息将被记录并生成诊断报告。用户可以通过[**报告**]按键查看诊断报告，还可以通过[**打印**]按键进行诊断报告打印。

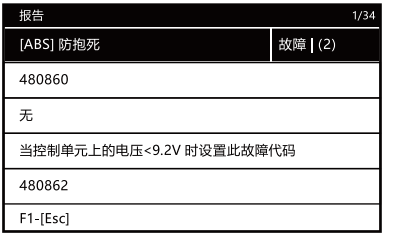


图5–诊断报告

1.4 一键清码

- [**一键清码**]用户诊断过程中记录的故障码信息，可以通过[**快速清除**]按键一键进行整车清码。

1.5 系统诊断

- [**系统诊断**]用户选定指定的系统后，将进行指定系统的系统诊断。

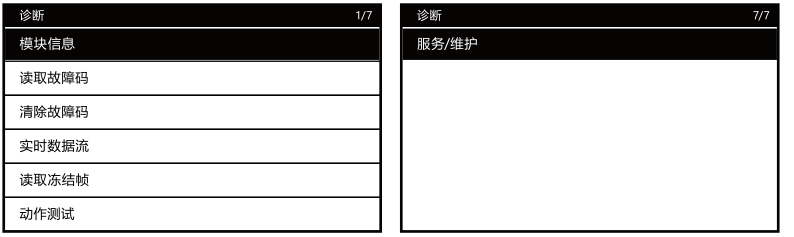


图6–系统诊断

1.5.1 模块信息

- [**模块信息**]功能用于展示ECU自身的属性信息。(包括软件版本号、硬件版

本号、生产日期、序列号等信息）

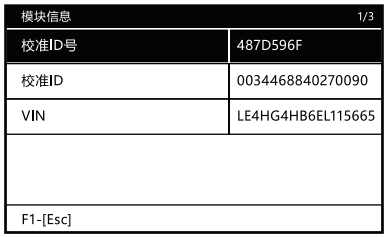


图7–模块信息

1.5.2 读取故障码

- [读取故障码]功能用于读取并展示当前系统故障信息。

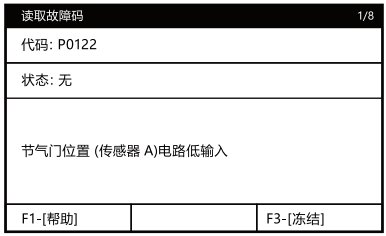


图8–故障码信息

1.5.3 清除故障码

- [清除故障码]用户完成故障问题检修后，使用该功能进行系统清码并消除故障指示灯。

1.5.4 读数据流

- [读数据流]用户使用该功能实时查看车辆各传感器的工作状态，以便了解车辆运行状态，协助进行故障分析及排查。

图9–数据流选择

实时数据流		1/7
发动机转速	0.00	rpm
发动机温度	80	deg C
点火正时提前 (1缸)	6.00	deg
进气温度	25	deg C
歧管压力 (绝对)	101	kPa
F1-[绘图]		

图10–数据流展示

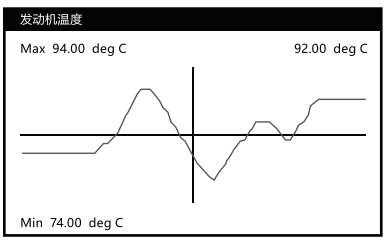


图11–数据流波形

1.5.5 读取冻结帧

- [**读取冻结帧**]功能用于展示车辆运行过程中产生故障码的瞬间，与车辆运行环境相关传感器的数据信息，便于用户了解车辆出现故障时的场景及车辆状态。

读取冻结帧		1/4
发动机转速	0.00	rpm
发动机温度	80	deg C
故障代码	P0122	
进气温度	25	deg C
F1-[Ecs]		

图12–冻结帧信息

1.5.6 动作测试

- [**动作测试**]用户可以使用该功能对车辆相关执行器进行测试，便于用户了解当前元器件的工作状态，以便快速定位故障元器件。

图13–动作测试列表(举例)

1.5.7 服务/维护

- [**服务/维护**]当车辆进行保养维修后，用户需要使用该功能进行服务信息的重置，执行器的标定，模块的服务等工作。

图14–服务维护列表(举例)

1.5.8 信息打印

- [**信息打印**]用户可以在诊断报告、模块信息、故障码、数据流等信息界面，使用[**打印**]按键进行纸质信息打印。
- 用户完成输入个人/车辆信息输入后，即可打印纸质报告。

图15–用户/车辆信息输入

1.5.9 事件记录

- [**事件记录**]用户可以在模块信息、故障码、数据流等界面使用[**记录**]按键进行事件记录，记录的事件可以通过[**回放**]功能进行重复呈现。

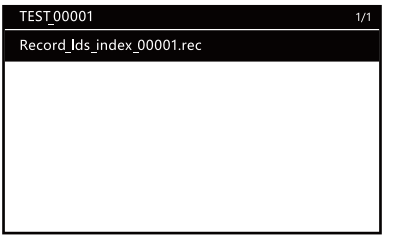


图16–事件记录

2. 电池

图17–电池检测

2.1 启动检测

- [**启动检测**]通过查看车辆启动打火过程中的电压变化波形图，判断当前车辆蓄电池的状态。

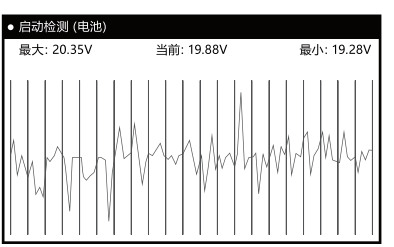


图18–启动检测

2.2 标准检测

- 选择[**标准检测**]，按[OK]按钮可以对电池类型和检测模式进行选择。

图19–电池类型选择

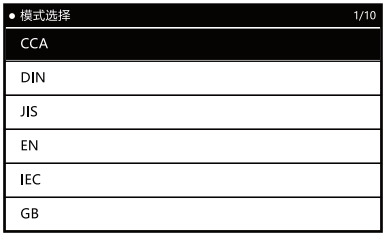


图20–检测模式选择

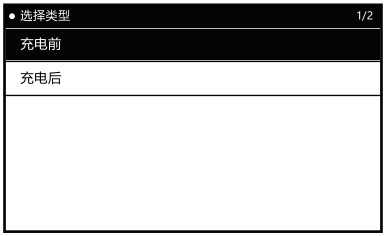


图21–充电状态选择

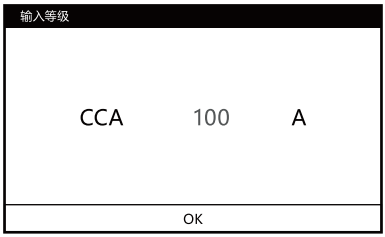


图22–输入等级

- **注: 可通过上下左右键调节等级值。**

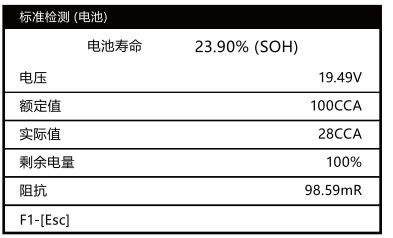


图23–检测结果

- **注: 可以通过[打印]按键打印纸质检测结果。**

2.3 快速检测

- [**快速检测**]检测流程基本同步[**标准检测**]，按照用户界面提示进行操作即可。

2.4 充电检测

- [**充电检测**]检测流程简单，按照用户界面提示进行操作即可。

3. 图片

- [**图片**]用户在使用设备进行车辆检测过程中，可以在任意界面长按[**F1**]按键截取当前设备当前界面的图片（故障码、数据流、电池检测结果等）。该功能可以供用户对上述动作记录的图片进行浏览和编辑。

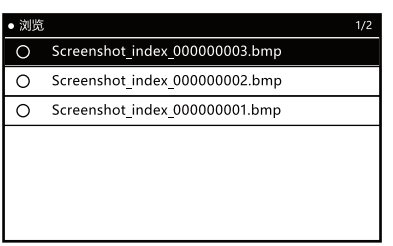


图24–图片浏览

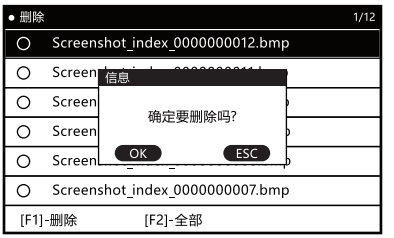


图25–图片删除

4. 设置

- [设置]功能用于用户进行系统设置。

图26–设置选项

4.1 声音设置

- [声音设置]用于开关设备蜂鸣器。

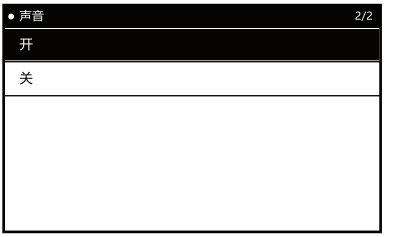


图27–声音设置

4.2 语言设置

- [语言设置]用于用户选择设备系统语言。

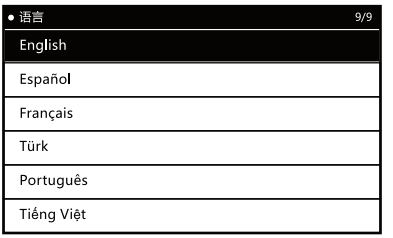


图28–语言设置

4.3 单位设置

- [**单位设置**]用于用户选择单位公英制。

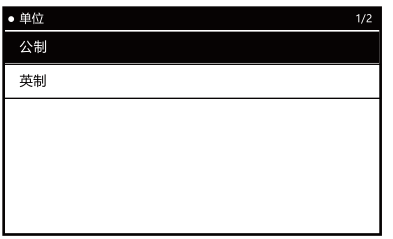


图29–单位设置

4.4 日志设置

- [**日志设置**]用于用户设置诊断日志开关。

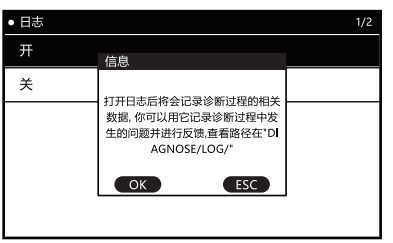


图30–日志设置

4.5 记录删除

- [**记录删除**]用户可以使用该功能删除设备使用过程记录的数据（包括记录文件和日志反馈文件）。

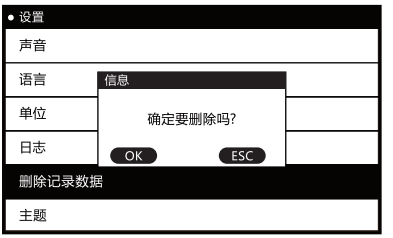


图31–记录删除

4.6 主题设置

- [**主题设置**]用于用户选择界面显示的风格(深色/浅色)。

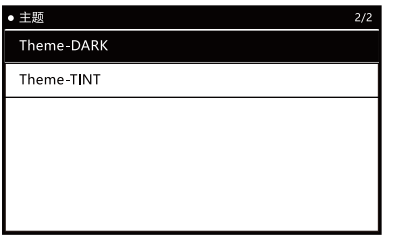


图32–主题设置

5. 关于

- [**关于**]功能用于查看当前系统版本及软件包版本。

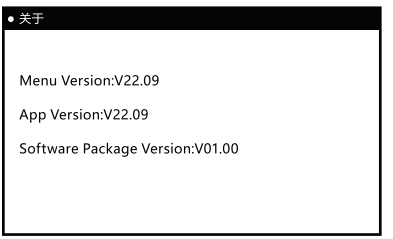


图33

软件升级

- 将设备通过USB线连接到电脑，等待设备被电脑识别后，电脑端会出现一个新的盘符，打开这个盘符，我们将下载好的新版本[DIAGNOSE]升级文件夹替换掉旧版本的[DIAGNOSE]文件夹，然后重新上电即可。

用户Log反馈

- 当用户使用诊断设备进行诊断时，如遇到疑难问题，可以通过[设置]中的[日志设置]功能打开日志记录。然后进行一轮完整的车辆诊断，诊断过程中的相关数据将被记录，完成诊断后正常退出诊断设备(不要直接断电)。诊断设备会在(DIAGNOSE/LOG/)目录下生成对应的诊断Log日志文件。用户可以将遇到的问题以及诊断Log日志文件一同反馈给我们，方便我们快速精准的协助用户解决问题。

售后保修

感谢您选择我们的产品，我们将为您提供以下服务和承诺：

- 本产品保修期为3年。
- 保修期满后，更换零件将收取维修费用。
- 出现故障后，请联系我们，我们将在最短的时间内给您最完善的服务。

以下情况不在保修范围内：

- 易损件不在保修范围内。
- 非正规渠道购买的产品。
- 未按产品说明书要求使用和维护造成的损坏。