

# KINCROME<sup>®</sup>C

PROFESSIONAL QUALITY TOOLS

## OBD2 SCAN TOOL SEMI PRO



**Caution:** Do not operate this scan tool without reading and understanding all instructions

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## General Notice

For your own safety and the safety of others, and to prevent damage to the equipment and vehicles, read this Manual thoroughly before operating your code reader. The safety messages presented below and throughout this user's Manual are reminders to the operator to exercise extreme care when using this device. Always refer to and follow safety messages and test procedures provided by vehicle manufacturer. Read, understand and follow all safety messages and instructions in this manual.

## Safety Precautions and Warnings

To prevent personal injury or damage to vehicles and/or the scan tool, read this instruction Manual first and observe the following safety precautions at a minimum whenever working on a vehicle:

Always perform automotive testing in a safe environment. Wear safety eye protection that meets ANSI standards. Keep clothing, hair, hands, tools, test equipment, etc. away from all moving 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.

Put the transmission in PARK (for automatic transmission) or NEUTRAL (for Manual transmission) and make sure the parking brake is engaged.

Keep a fire extinguisher suitable for gasoline/chemical/ electrical fires nearby. 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.

## Warranty and Service

### Limited One Year Warranty

We warrant to our customers that this product will be free from all defects in materials and workmanship for a period of one (1) year from the date of the original purchase, subject to the following terms and conditions:

- 1) The sole responsibility of our company under the Warranty is limited to either the repair or, at the option of our company, replacement of the scan tool at no charge with Proof of Purchase. The sales receipt may be used for this purpose.
- 2) This warranty does not apply to damages caused by improper use, accident, flood, lightning, or if the product was altered or repaired Center.
- 3) We shall not be liable for any incidental or consequential damages arising from the use, misuse, or mounting of the scan tool. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.



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# 1 General Information

## 1.1 On-Board Diagnostics (OBD2)

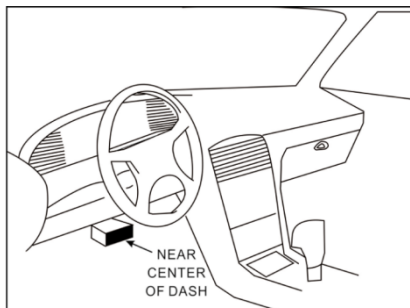
The first generation of On-Board Diagnostics (called OBD I) was developed by the California Air Resources Board (ARB) and implemented in 1988 to monitor some of the emission control components on vehicles. As technology evolved and the desire to improve the On-Board Diagnostic system increased, a new generation of On-Board Diagnostic system was developed. This second generation of On-Board Diagnostic regulations is called "OBD II". The OBD II system is designed to monitor emission control systems and key engine components by performing either continuous or periodic tests of specific components and vehicle conditions. When a problem is detected, the OBD II system turns on a warning lamp (MIL) on the vehicle instrument panel to alert the driver typically by the phrase of "Check Engine" or "Service Engine Soon".

The system will also store important information about the detected malfunction so that a technician can accurately find and fix the problem. Here below follow three pieces of such valuable information:

- 1) Whether the Malfunction Indicator Light (MIL) is commanded 'on' or 'off';
- 2) Which, if any, Diagnostic Trouble Codes (DTCs) are stored;
- 3) Readiness Monitor status.

## 1.2 Location of the Data Link Connector (DLC)

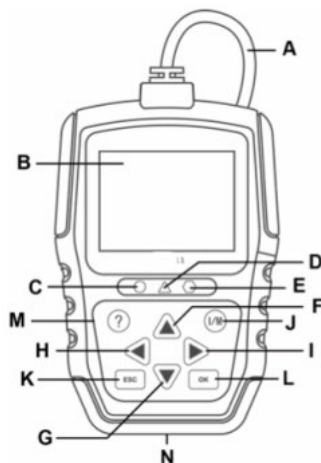
The DLC (Data Link Connector or Diagnostic Link Connector) is the standardized 16-cavity connector where diagnostic code readers interface with the vehicle's on-board computer. The DLC is usually located 12 inches from the center of the instrument panel (dash), under or around the driver's side for most vehicles. If Data Link Connector is not located under dashboard, a label should be there telling location. For some Asian and European vehicles, the DLC is located behind the ashtray and the ashtray must be removed to access the connector. If the DLC cannot be found, refer to the vehicle's service Manual for the location.



## 2 Use the scan tool

### 2.1 Tool Descriptions

This section illustrates external features, ports and connectors of the code reader.



**A OBDII Cable**- provides communication for vehicle DLC.

**B LCD Display** - shows menus, test results and operation tips.

**C Green LED Display**- indicates the engine system is working normally (all monitors on the vehicles are active and performing their diagnostic testing), and no DTCs are found.

**D Yellow LED Display**- shows the tool finds a possible problem. Pending DTCs exist or/and some of the vehicle's emission monitors have not run their diagnostic testing.

**E Red LED Display** -indicates there are some problems in one or more of the vehicle's systems. In this case, the MIL lamp on the instrument panel is on.

**F UP Key** - quick access to the Read Codes function before going to diagnostic menu and moves selection up. When looking up DTC, it is used to change value of selected character.

**G DOWN Key** - Quick access to the Clear Codes function before going to diagnostic menu and moves selection down. When looking up DTC, it is used to change value of selected character.

**H LEFT SCROLL Key**-goes to previous character when looking up DTCs. Scrolls back and forth through codes found and through different screens of data. Also it is used to make selection of PIDs when viewing custom PID list, and to view PID graphs.

**I RIGHT SCROLL Key**-goes to next character when looking up DTCs. Scrolls back and forth through codes found and through different screens of data. Also it is used to cancel all selections of PIDs when viewing custom PID list.

**J One Click I/M Readiness Key** -quick checks state emissions readiness and drive cycle verification.

**K ESC Key** - cancels an action and returns to previous screen or level.

**L OK Key** - confirms an action or movement and moves to next level.

**M ? Key** - accesses to the Help function and it is also used to update the code reader when long pressed.

**N USB Port** – provides a USB connection between the code reader and PC or laptop.

## 2.2 Accessory Descriptions

This section lists the accessories that go with the code reader. If you find any of the following items missing from your package, contact your local dealer for assistance.

- 1 **User's Guide** - provides operation instructions for the usage of the code reader.
- 2 **USB Cable**- provides connection between the code reader and a computer to upgrade the tool.

## 2.3 Technical Specifications

**Display:** 2.4"TFT color display

**Working Temperature:** 0 to 60 °C (32 to 140°F)

**Storage Temperature:** -20 to 70°C (-4 to 158°F)

**Power Supply:** 8-18VDC vehicle power

**Supported Protocols:** J1850-PWM, J1850-VPW, ISO9141, KWP2000 (ISO 14230), and CAN (Control Area Network ISO 11898)

**Dimensions (L\*W\*H):** 125\*80\*24mm

**Weight:** 0.35kg

## 3 Getting Started

### 3.1 Connecting to Vehicle



Connect the end of the diagnostic cable to the DLC connector in the car.



### 3.2 Providing Power to Code Reader

Before using the code reader, make sure to provide power to the code reader.

The unit operates on any of the following sources:

- 12-volt vehicle power
- USB connection to personal computer

### 3.2.1 Connecting to Vehicle Power

The code reader normally powers on whenever it is connected to the data link connector (DLC).

To connect to vehicle power:

1. Turn the ignition off.
2. Locate the data link connector (DLC). The DLC is generally located under the dash on the driver side of the vehicle.
3. Connect the code reader with the DLC.
4. Switch the ignition key to the ON position.
5. The code reader automatically boots up.

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**IMPORTANT**

Never try to provide power for the code reader from USB connection when the code reader is communicating with a vehicle.

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### 3.2.2 Connecting to Personal Computer with USB Cable

The code reader also receives power through the USB port when it is connected to a PC for updating software and transferring saved files.

To connect to PC:

1. Insert the small end of the USB cable to the USB port at the right side of the code reader and the large end to a computer.
2. Press the power switch of the code reader to power it on.

## 3.3 Application Overview

When the code reader boots up, the Home screen opens. This screen shows all applications loaded on the unit.

Following applications are preloaded into the code reader:

- **OBDII/EOBD** – leads to OBDII screens for all 9 generic OBD system tests.
- **DTC Lookup** – leads to screens for diagnostic trouble code lookup.
- **Review** – leads to screens for access to tested data files.
- **Print Data** – leads to screens for access to printing function
- **Battery** – leads to screen that tests and displays voltage of battery of vehicle.
- **Setup** – leads to screens for adjusting default settings to meet your own preference when using the code reader.



OBDII/EOBD



DTC Lookup



Review



Print Data



Battery



Setup

## 4 OBDII/EOBD Diagnostics

When **Diagnostics** application is selected from Home screen, the code reader starts to detect the communication protocol automatically. Once the connection has been established, a menu that lists all the tests available on the identified vehicle displays. Menu options typically include:

- Read Codes
- Freeze Frame Data
- Erase Codes
- Live Data
- I/M Readiness
- O2 Sensor Test
- On-board Monitor Test
- Component Test
- Vehicle Information
- Modules Present
- Unit of measure

### 4.1 Read Codes

Read Codes menu lets you read stored codes, pending codes and permanent codes found in the control unit. Typical menu options include:

- Stored Codes
- Pending Codes
- Permanent Codes

To read codes from a vehicle:

1. Press the **Read** hot key to directly read the codes from home screen. Or scroll with the **UP/DOWN** key to highlight **Read Codes** from Diagnostic Menu and press the **OK** key.
2. Select **Stored Codes/Pending Codes/ Permanent Codes** and press the **OK** key to confirm.
3. A code list including code number and its description displays.

### 4.2 Erase Codes

There are two ways to erase codes:

- Press the **Erase** hot key to erase codes from home screen.
  - Traditional way: select Erase Codes from the diagnostic menu.
1. Press the **Erase** hot key to directly erase the codes from the home menu. Or use the **UP/DOWN** key to highlight **Erase Codes** from Diagnostic Menu and press the **OK** key.
  2. Follow the on-screen instructions and answer questions about the vehicle being tested to complete the procedure.
  3. Check the codes again. If any codes remain, repeat the **Erase Codes** steps.

### 4.3 Live Data

Live Data menu lets you view, record and playback real time PID data from the electronic control module.

Menu options typically include:

- View Data
- Record Data
- Playback Data

### 4.3.1 View Data

The **View Data** function allows real time viewing of the vehicle's electronic control unit's PID data, including sensor data, operation of switches, solenoids and relays.

Menu options typically include:

- Complete Data
- Custom Data
- Unit of measure (Please refer to Chapter 7 **System Setup**)

#### 4.3.1.1 Complete Data Set

**Complete Data Set** displays all supported PIDs of the vehicle being tested.

To view all live PID data:

1. Use the **UP/DOWN** key to highlight **Live Data** from Diagnostic Menu and press the **OK** key.
2. Select **View Data** or **Complete Data Set** from the list and press **OK** key to confirm.
3. Press the **OK** key to view PID graph if the PID gives a numeric reading.

#### 4.3.1.2 Custom Data List

Custom Data List menu lets you to minimize the number of PIDs on the data list and focus on any suspicious or symptom-specific data parameters.

To create a custom data list:

1. Select **Custom List** from the menu and press the **OK** key.
2. Use the **RIGHT** key to select or deselect a line or press **LEFT** key to deselect all if needed.  
Press the **OK** key to confirm and **ESC** key to cancel.

### 4.3.2 Record Data

The **Record Data** function is used to record PIDs to help diagnose intermittent drivability problems that cannot be determined by any other method.

Menu options typically include:

- Complete Data
- Custom Data
- Unit of measure (Please refer to Chapter 7 **System Setup**)

#### NOTE

There are two types of trigger methods used.

• Manual Trigger---triggers recording whenever operators press the OK key.

• DTC trigger--- automatically triggers recording when a code is detected by vehicle. DTC Trigger is not available on all vehicles. Some vehicles need to be driven for a long period of time to store a code after a drivability fault occurs. If DTC trigger is selected to make a recording, there might not be drastic change in the data before and after trigger.

#### **⚠ CAUTION**

Do not operate the code reader while driving; always have two persons in vehicle when recording – one to drive and the other to operate the code reader.

To record data:

1. Select Record data from the menu and press the **OK** key.
2. Refer to **View Data** to set up **Complete Data Set** or **Customer Data Set** to record.
3. If the recording is to be overwritten, selected **Yes**; if data is not to be overwritten, pick **No** to return to Select Memory screen and choose another one.
4. If **Manual Trigger** is selected, following screen displays:
5. If **DTC Trigger** is picked, following screen displays:

6. Press the **OK** key to start recording or wait codes to trigger.

### NOTE

Different vehicles communicate at different speeds and support a different number of PIDs. Therefore, the maximum number of frames that can be recorded varies. The code reader keeps recording data until

- the memory is full.
- the operator presses the **ESC** key.

7. After recording, the code reader displays a prompt to **Playback**.

8. Select **YES** to view recorded data; pick **NO** or press the **ESC** key to return to **Record Data**.

## 4.3.3 Playback Data

The **Playback Data** is used to playback recorded PID data.

To playback data:

1. Scroll with the up and down arrow key to select **Playback Data** from the Menu.
2. Use the **UP/DOWN** key to select a memory area that is marked with an asterisk (\*) and press the **OK** to confirm.

## 4.4 View Freeze Frame

Freeze Frame menu displays freeze frame data, a snapshot of critical vehicle operating conditions automatically recorded by the on-board computer at the time of the DTC set. It is a good function to help determine what caused the fault.

To view freeze frame data:

1. Select **View Freeze Frame** from the Diagnostic Menu. Details of freeze frame data displays.
2. Use the **up and down** arrow keys to scroll through data to select lines and **left and right** arrow keys to scroll back and forth through different screens of data. If no freeze frame detected, the message "No freeze frame data stored!" is displayed.
3. Use the **ESC** key to return to Diagnostic Menu.

## 4.5 Read I/M Readiness Status Data

I/M Readiness option allows to view a snapshot of the operations for the emission system on OBDII/EOBD vehicles.

I/M Readiness is a useful function used to check if all monitors are OK or N/A. The vehicle's computer performs tests on the emission system during normal driving conditions. After a specific amount of drive time (each monitor has specific driving conditions and time required), the computer's monitors decide if the vehicles emission system is working correctly.

When the monitor's status is:

- OK - vehicle was driven enough to complete the monitor.
- INC (Incomplete) - vehicle was not driven enough to complete the monitor.
- N/A (Not Applicable) - vehicle does not support that monitor.

There are two types of I/M Readiness tests:

- Since DTCs Cleared - shows status of the monitors since the DTCs were last cleared.
- This Drive Cycle - shows status of monitors since the start of the current drive cycle.

Below is a list of abbreviations and names of OBD2 monitors supported by the code reader.

| No. | Abbreviation | Name                                     |
|-----|--------------|------------------------------------------|
| 1   | MIS          | Misfire Monitor                          |
| 2   | FUE          | Fuel System Monitor                      |
| 3   | CCM          | Comprehensive Components Monitor         |
| 4   | CAT          | Catalyst Monitor                         |
| 5   | HCAT         | Heated Catalyst Monitor                  |
| 6   | EVAP         | Evaporative System Monitor               |
| 7   | AIR          | Air Conditioning Refrigerant Monitor     |
| 8   | O2S          | Oxygen Sensor Monitor                    |
| 9   | HRT          | Oxygen Sensor Heater Monitor             |
| 10  | EGR          | Exhaust Gas Recirculation System Monitor |

There are two ways to retrieve I/M Readiness Status data:

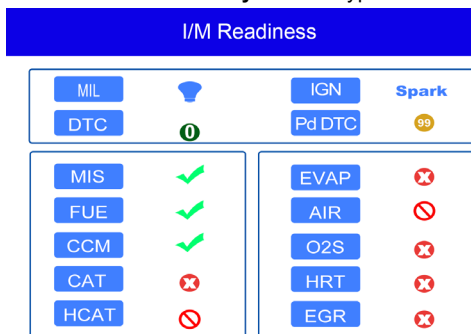
- One-click I/M readiness key
- Typical way: select I/M Readiness from Diagnostic Menu

### NOTE

- To review I/M Readiness status, make sure that the ignition key is switched to ON with the engine off.
- Not all monitors are supported by all vehicles.

To retrieve I/M Readiness Status data by one-click I/M readiness key:

1. Press the **One-Click I/M Readiness Key** on the keypad and the following screen displays.



2. Colored LED and build-in beeper provide both visual and audible reminders for emission check and DTCs. Below is the interpretation of the LED and build-in beeper.

When the LED is:

- **Green** - Indicates that engine systems are "OK" and working properly (the number of monitors equipped with the vehicle which have run and performed their self-diagnostic testing is in the allowed range. MIL is off). No stored and pending DTCs exist. The vehicle is ready for an Emissions Test.
- **Yellow** - The tool finds a possible problem. It indicates the following two conditions:
  - (1) Pending DTCs exist. Please check the I/M Readiness test result screen and use the Read Codes function to view detailed codes information.
  - (2) Some of the vehicle's emission monitors have not working properly. If the I/M Readiness screen shows no DTC (including pending DTC), but the Yellow LED is still illuminated, it indicates a "Monitor Has Not Run" status.

- **Red** - Indicates some problems exist with one or more of the vehicle's system, and the vehicle is not ready for an Emissions Test. As well there are DTCs found. The MIL lamp on the vehicle's instrument panel will light steady. The problem that is causing the illumination of Red LED should be fixed before an Emissions Test or driving the vehicle further.

The built-in beeper works with the colored LED simultaneous, as an assistance to reflect the I/M Readiness test results:

- **Green** - Two long beeps.
- **Yellow** - Short, long, short beeps.
- **Red** - Four short beeps.

### NOTE

- The built-in beeper which makes different tones corresponding to different LED indicators is invaluable when the test is performed while driving or in bright areas where LED illumination may not be visible.

To retrieve I/M Readiness Status data by typical way:

1. Scroll with **UP/DOWN** key to highlight **I/M Readiness** from Diagnostic Menu and press the **OK** key. If vehicle supports both types of monitors, a screen for monitor type selection displays. Select a monitor type and press the **OK** key.
2. If the vehicle is tested supports both types of monitors, following screen displays.

| I/M Readiness      | 1/2 |
|--------------------|-----|
| Since DTCS cleared |     |
| This driving cycle |     |
|                    |     |

3. Depending on readiness test, one of these 2 screens will be present. Use the **up and down** arrow key to scroll through data. Press the **ESC** key to exit.

| This driving cycle | 1   |
|--------------------|-----|
| MIS                | OK  |
| FUEL               | OK  |
| CCM                | OK  |
| CAT                | INC |
| HCAT               | N/A |
| EVAP               | OK  |
| AIR                | N/A |
|                    |     |

Or

| Since DTCs cleared |  | 1   |
|--------------------|--|-----|
| MIL                |  | ON  |
| MIS                |  | OK  |
| FUEL               |  | OK  |
| CCM                |  | OK  |
| CAT                |  | INC |
| HCAT               |  | N/A |
| EVAP               |  | INC |
|                    |  |     |

## 4.6 O2 Monitor Test

To retrieve O2 monitor data:

1. Use the **UP/DOWN** key to highlight **O2 Monitor Test** from Diagnostic Menu and press the **OK** key. Use the **UP/DOWN** key to highlight an O2 sensor and press the **OK** key to confirm.
2. Use the **UP/DOWN** arrow keys to scroll through data to select lines and **LEFT/RIGHT** arrow keys to scroll back and forth through different screens of data.
3. Press **OK** key to view data of selection.
4. Press the **ESC** key to exit and return.

## 4.7 On-Board Monitor Test

The On-Board Monitor Test function is useful after servicing or after clearing a vehicle ECU's memory. It receives test results for emission-related powertrain components and systems that are not continuously monitored for Non-CAN vehicles. And for CAN vehicles, it receives test data for emission-related powertrain components and systems that are and are not continuously monitored. It is vehicle manufacturer who is responsible for assigning test and component IDs.

### NOTE

*Test results do not necessarily indicate a faulty component or system.*

To request on-board monitor test results:

1. Use the **UP/DOWN** key to highlight **On-Board Monitor Test** from Diagnostic Menu and press the **OK** key.
2. Depending on the protocol the vehicle used, one of these 2 screens shows.

| On-Board Monitor Test |  | 1/25 |
|-----------------------|--|------|
| EGR MON.B1S1          |  |      |
| EGR MON.B1S2          |  |      |
| EGR MON.B2S1          |  |      |
| EGR MON.B2S2          |  |      |
| Catalyst Mon.B1       |  |      |
| Catalyst Mon.B2       |  |      |
| EGR Monitor Bank 1    |  |      |
|                       |  |      |

Or

| On-Board Monitor Test               | 3/5 |
|-------------------------------------|-----|
| Oxygen Sensor Monitors and Const... |     |
| O2 Sensor Heater System Time to...  |     |
| Exhaust Gas Recirculation System... |     |
| Ehancad Evaporative System Monit... |     |
| Catalyst Efficiency Monitor         |     |
|                                     |     |

3. Use the **UP/DOWN** key to highlight a test group and press the **OK** key to confirm. A screen with details of the selected sensor displays. Use the **UP/DOWN** arrow key to scroll through data to select lines and **LEFT/RIGHT** arrow key to scroll back and forth through different screens of data.
4. Press the **ESC** key to exit and return.

## 4.8 Component Test

Component Test allows the code reader to control operation of vehicle components, tests or systems.

### NOTE

- Some manufacturers do not allow tools to control vehicle systems.
- The manufacturer sets the criteria to automatically stop test. Refer to appropriate vehicle service Manual before using this function.

To perform a component test:

- Use the **UP/DOWN** key to highlight **Component Test** from Diagnostic Menu and press the **OK** key.
1. Use the **UP/DOWN** key to highlight a system or component, press the **OK** key to start test and the code reader displays the message "Command Sent!".
2. Press the **ESC** key to exit and return.

## 4.9 Request Vehicle Information

Vehicle Information allows to request the vehicle's VIN number, calibration ID(s) which identifies software version in vehicle control module(s), calibration verification numbers (CVN(s)) and in-use performance tracking on model year 2000 and newer OBD2 compliant vehicles. CVNs are calculated values required by OBD2 regulations. They are reported to check if emission-related calibrations have been changed. Multiple CVNs may be reported for a control module. It may take several minutes to do the CVN calculation. In-use performance tracking tracks performance of key readiness monitors.

### NOTE

Available options will vary depending on the vehicle under test.

To request vehicle information:

1. Use the **UP/DOWN** key to highlight **Vehicle Info.** from Diagnostic Menu and press the **OK** key. Follow on-screen instruction and send the command to read vehicle information.
2. Use the **UP/DOWN** key to highlight an available option and press the **OK** key. A screen with details of the selected option displays.
3. Press the **ESC** key to exit and return.

## 4.10 Modules Present

The code reader identifies module IDs and communication protocols for OBD2 modules in the vehicle.

To view module IDs and communication types:

1. Use the **UP/DOWN** key to highlight **Modules Present** from Diagnostic Menu and press the **OK** key.
2. A screen with the module IDs and protocols displays.
3. Press the **ESC** key to exit and return.

## 5. DTC Lookup

DTC Lookup menus allows to request DTC definitions stored in the code reader.

To Look up DTCs:

1. Use the **LEFT/RIGHT** key to highlight **DTC Lookup** from Home Screen and press the **OK** key.
2. Use the **LEFT/RIGHT** key to select the desired character, then press the **UP/DOWN** key to change the digit you want to enter a valid code number. Press the **OK** key to confirm.
3. A screen with code number and its definition displays. If definition could not be found (SAE or Manufacturer Specific), the code reader displays "DTC definition not found! Please refer to vehicle service manual!" if a P1xxx, C1xxx, B1xxx or U1xxx code is entered, select a vehicle make to look for DTC definitions. Press the **BACK** key to exit.

## 6 Review Data

The Playback option leads to screens for review of recorded test results.

To review recorded data:

1. Use the **LEFT/RIGHT** key to highlight **Review Data** from home screen and press the **OK** key.
2. A screen with a list of test records displays. If no data is recorded, the message "No Data available!" is displayed.
3. Use the **UP/DOWN** key to highlight an optional record and press the **OK** key. Details of the test record displays. View and analysis the recorded information then press **ESC** to exit.

## 7 System Setup

This section illustrates how to program the code reader to meet your specific needs.

When Setup application is selected, a menu with available service options displays. Menu options typically include:

- Language
- Configure monitors
- Unit of measure
- Key Beep Set
- Diag Beep Set
- Tool self-test
- Update Mode
- About

## 7.1 Select Language

Selecting Language opens a screen that allows you to choose system language.

To configure system language:

1. Use the **LEFT/RIGHT** key to highlight **Setup** from home screen and press the **OK** key.
2. A screen of a list of menu options displays.
3. Press the **UP/DOWN** key select a language and press the **OK** key to confirm. Press the **ESC** key to exit and return.

## 7.2 Configure Monitors

This menu allows the users to configure the monitors required to test spark ignition and compression ignition, the number of monitors to pass diagnosis, and restore the default settings. Menu options typically include:

- Spark IGN Required Monitors
- Compression IGN Required Monitors
- Allowed INC Monitors
- Reset Factory Default

There are two different types of monitors: continuous and non-continuous. Continuous monitors are different in design from the non-continuous monitors. Continuous monitors are being constantly tested and evaluated by the car's computer while the car is running. Conversely, the non-continuous monitors require certain conditions to be met before a test or series of tests can be completed.

### Continuous Monitors:

- Misfire
- Fuel System
- Comprehensive Component

### Non-Continuous Monitors:

#### NOTE

Non-continuous monitors are different for spark ignition cars (gasoline engines) and compression ignition cars (diesel engines).

Spark ignition vehicles (Gas)

- Catalyst (CAT)
- Heated Catalyst
- Evaporative (EVAP) System
- Secondary Air System
- Oxygen (O2) Sensor
- Oxygen Sensor Heater
- EGR (Exhaust Gas Recirculation) and/or VVT System

Compression ignition vehicles (Diesel)

- NMHC Catalyst
- NOx/SCR After treatment
- Boost Pressure
- Exhaust Gas Sensor
- PM Filter
- EGR and/or VVT System

To configure monitors:

1. Use the **UP/DOWN** key to highlight **Configure Monitors** from **Setup** menu and press the **OK** key to confirm.

## 7.2.1 Spark IGN Required Monitors

In this menu, the operators can configure monitors for spark ignition cars (gasoline engines).

To configure spark IGN required monitors:

1. Use the **UP/DOWN** key to highlight **Spark IGN Required Monitors** from menu and press the **OK** key to confirm.
2. The custom monitors selection screen displays.
3. Use the **RIGHT** key to select or deselect a monitor or press the **LEFT** key to deselect all the monitors. Press the **OK** key to confirm and **ESC** key to cancel.

### NOTE

The number to the upper right corner of display indicates the total number of optional monitors and sequence of currently selected monitor.

## 7.2.2 Compression IGN Required Monitors

In this menu, the operators can configure monitors for compression ignition cars (diesel engines).

To configure spark compression required monitors:

1. Use the **UP/DOWN** key to highlight **Compression IGN Required Monitors** from the menu and press the **OK** key to confirm.
2. The custom monitors selection screen displays and Use the **RIGHT** key to select or deselect a monitor or press the **LEFT** key to deselect all the monitors. Press the **OK** key to confirm and **ESC** key to cancel.

## 7.2.3 Allowed INC Monitors

Emissions tests vary depending on the geographic or regional area in which the vehicle is registered. This tool provides a more flexible way to meet different standards, which allows the user to select 0, 1, 2, 3 INC monitors in test.

To configure allowed INC monitors:

1. Use the **UP/DOWN** key to highlight **Allowed INC Monitors** from the menu and press the **OK** key to confirm.
2. The custom INC monitors selection screen displays and scroll with the up and down arrow keys to select. Press the **OK** key to confirm and **ESC** key to cancel.

## 7.2.4 Reset Factory Default

This menu will allow the users to restore the default configuration settings in the Configure Monitors menu and delete any customized settings. In this case, it will include all the available monitors for the Spark IGN Required Monitors and Compression IGN Required Monitors. Still the Allowed INC Monitors will be set to 1.

To reset factory default:

1. Use the **UP/DOWN** key to highlight **Reset Factory Default** from the menu and press the **OK** key to confirm.
2. A message prompting to reset factory default displays. Answer **Yes** to confirm the request or answer **No** to abort and return.

## 7.3 Unit of measure

Unit of measure opens a dialog box that allows you to choose between US customary or metric units of measure.

To change the unit setup:

1. Scroll the **UP/DOWN** keys to highlight **Unit of Measure** from Setup menu and press the **OK** key.
2. Press the **UP/DOWN** arrow key select an item and press the **OK** key to save and return.

## 7.4 Key Beep Set

Key beep set opens a dialog box that allows you to turn on/off the built-in speaker for key pressing.

To set the key beep:

1. Use the **UP/DOWN** key to highlight **Key beep set** from Setup menu and press the **OK** key.
2. Press the **UP/DOWN** arrow key select an item and press the **OK** key to save and return.

## 7.5 Diag Beep Set

Key beep set opens a dialog box that allows you to turn on/off the built-in speaker when performing diagnostics.

To set the Diag. beep:

1. Use the **UP/DOWN** key to highlight **Key Beep Set** from Setup menu and press the **OK** key.
2. Press the **UP/DOWN** key to select an item and press the **OK** key to save and return.

## 7.6 Tool Self-test

Key beep set opens a dialog box that allows you to check if the LCD display and the operation of keypad and LED are working correctly. Typical menu includes:

- Display Test
- Keypad Test
- LED Test

### 7.6.1 Display Test

Selecting **Display Test** option opens a screen that allows you to check the functionality of the display.

To test the display:

1. Use the **UP/DOWN** key to highlight **Display Test** from Setup menu and press the **OK** key to start test.
2. Check if there are any missing spots in the LCD screen.
3. To quit the test, press the **ESC** key.

### 7.6.2 Keypad Test

Selecting **Key Test** option opens a screen that allows you to check the functionality of the keypad.

To test the keypad:

1. Use the **UP/DOWN** key to highlight **Keyboard Test** from Setup menu and press the **OK** key.
2. Press any key to start test. Key name or scroll direction should show on display when you press a key. Double press **ESC** to return.

### 7.6.3 LED Test

Selecting **LED Test** option opens a screen that allows you to check the functionality of the LED.

To test the LED:

1. Use the **UP/DOWN** key to highlight **LCD Test** from Setup menu and press the **OK** key to start test.
2. Scroll with the **UP/DOWN** arrow key to select the desired LED lamps to check. The LED should turn on/off according to the selected commands.
3. To quit the test, press the **ESC** key.

## 7.7 Update Mode

This function allows you enter the update model automatically. For details, please refer to **10.1**.

## 8 Battery Information

Selecting **Battery** option opens a screen that tests and displays the voltage of battery.

## 9 Tool Information

Selecting **Setup>About** option opens a screen that shows information about your code reader, such as serial number and software version.

To view information of your code reader:

1. Use the **LEFT/RIGHT** key to highlight **Setup** from home menu and press the **OK** key.



OBDII/EOBD



DTC Lookup



Review



Print Data



Battery



Setup

2. Use the **UP/DOWN** key to highlight **About** menu and press the **OK** key, a screen with detailed information of the code reader displays.

## 10 Updating Software and Printing

### 10.1 Updating the Code Reader

To update the code reader, you need following tools:

- OBD2/EOBD Code Reader
- Update Tool **leasy** (available from <https://www.kincrome.com.au/>)
- PC or laptop with USB Ports and Internet explorer
- USB cable

To be able to use update tool, PC or laptop must meet the following minimum requirements:

- Operation System: All Windows systems, Win 98 to Win 10.
- CPU: Intel P III or better
- RAM: 64MB or better
- Hard Disk Space: 30MB or better

- Display: 800\*600-pixel, 16-byte true color display or better
- Internet Explorer 4.0 or newer

### Update Procedure

1. Download the update tool **leasy** and update files from our website [www.kincrome.com.au](http://www.kincrome.com.au) and save the applications and files in computer disk.
2. Unzip the update tool file. Follow instructions on computer screen to install the tool and driver.
3. Double click the **leasy** desk Top icon to launch the application.



4. Click Setting and select the language you want to update.
5. Press and hold ? key. Hold and do not release the ? key, then connect the USB cable.
6. When the tool enters the Update Mode, the application would detect the tool automatically.
7. Tick the file to update.

[illegible][illegible]

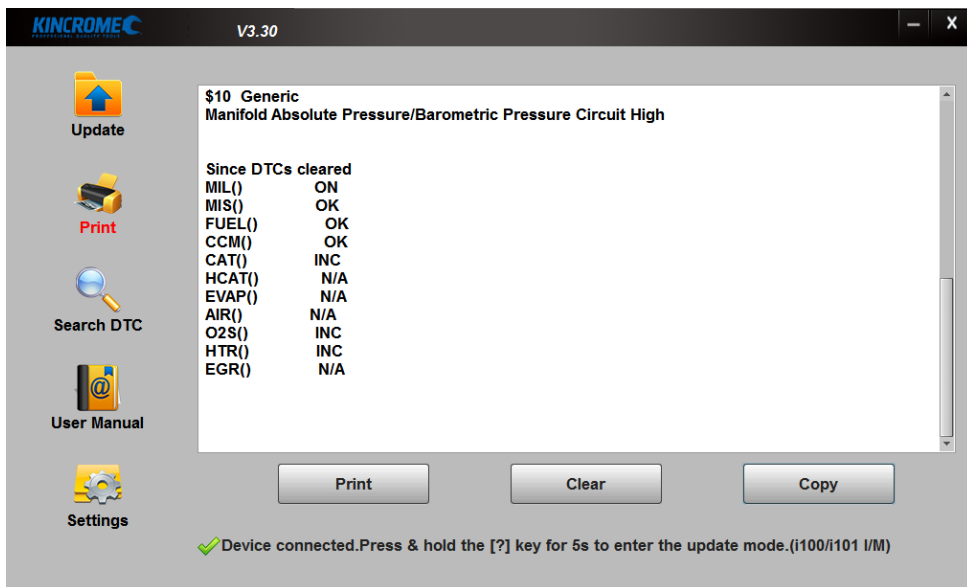
An **Update Finished** Message displays when the update is completed.

## 10.2 Printing

The **Print Data** function is used to print test results through computer. It is not available to perform this function when the device is in Update Mode.

To print test results:

1. Download and launch **leasy**. (available from <https://www.kincrome.com.au/>)
2. Activate the application by clicking the **Print** Button from the menu.
3. Connect the tool to computer with the USB cable supplied to power it on.
4. Use the **LEFT/RIGHT** key to select **Print Data** from home screen of the tool and press the **OK** key to confirm. Use the **UP/DOWN** key to select desired data to print. If all recorded data to be printed, use the **UP/DOWN** key to select **Print All Data**.
5. Press the **OK** key to load data to the edit box of update tool **leasy**. Click the **Clear** key to delete the data and Use **Copy** key to save the data to the clipboard on the computer. It also allows the users to edit the text by moving the cursor to the edit box.



6. With the printer correctly connected, use the **Print** key to print the testing data. Press the **ESC** key to return to home screen.

## 10.3 Searching DTC

Searching DTC option opens a screen that allows you to look up the DTC.

To search DTC:

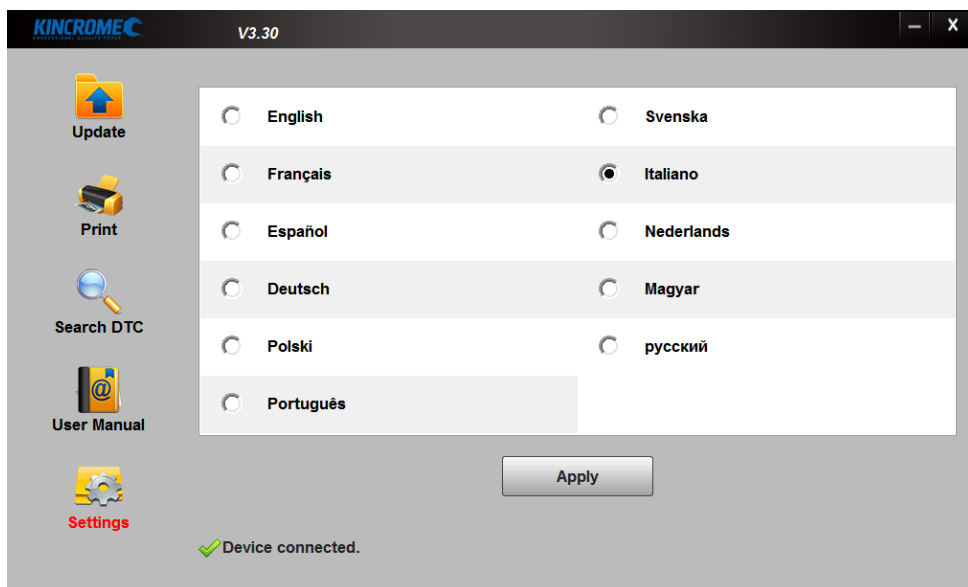
1. Click the **Search DTC** Button from the menu.
2. Input the valid code number and the definition of the code will be highlighted on the screen.

## 10.4 User Manual

Here is a copy of user Manual in PDF format.

## 10.5 Update Tool Settings

Settings option opens a screen that allows you to set the language of the tool.







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