

**THEBIGDEALS<sup>®</sup>**

**OBDII/EOBD CAN Code Reader T001OBD  
USER MANUAL**

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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 warrants to its 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.

## 1. General Information

### 1.1 On-Board Diagnostics (OBD) II

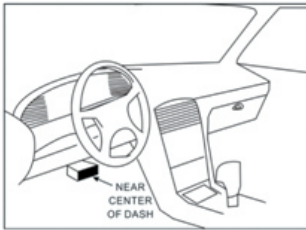
The first generation of On-Board Diagnostics (called OBD I) was developed by the California Air Resources Board (ARB) and implemented in 1988 to monitor some of the emission control components on vehicles. As technology evolved and the desire to improve the On-Board Diagnostic system increased, a new 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

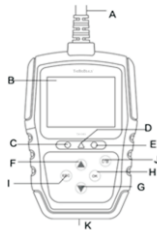
The DLC (Data Link Connector or Diagnostic Link Connector) is the standardized 16-cavity connector where diagnostic code readers interface with the vehicle's on-board computer. The DLC is usually located 12 inches from the center of the instrument panel (dash), under or around the driver's side for most 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. OBD II 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. OK Key** - confirms an action or movement and moves to next level.
- I. ESC Key** - cancels an action and returns to previous screen or level.
- J. One Click I/M Readiness Key** -quick checks state emissions readiness and drive cycle verification.
- K. 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

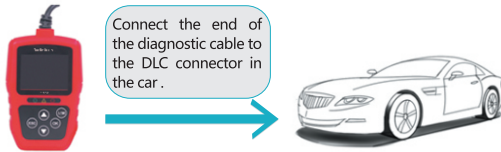
- Display:** 2.4" TFT color display
- Working Temperature:** 0 to 60 °C (32 to 140°F)
- Storage Temperature:** -20 to 70°C (-4 to 158°F)
- Power Supply:** 8-18V vehicle power
- Supported Protocols:** J1859-PWM, J1850-VPW, ISO9141, KWP2000 (ISO 14230), and CAN (Control Area Network ISO 11898)
- Dimensions (L\*W\*H):** 125\*80\*24mm
- Weight:** 0.5kg

### 2.4 Accessories Included

- User manual
- USB cable
- OBDII/EOBD Code Reader

## 3. Getting Started

### 3.1 Connecting to Vehicle



### 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

### IMPORTANT

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

#### 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:

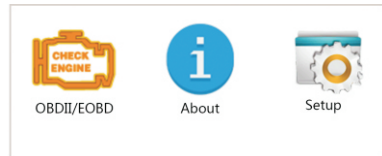
- 1) Insert the small end of the USB cable to the USB port at the right side of the code reader and the large end to a computer.
- 2) Press the power switch of the code reader to power it on.

### 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.
- **About**– leads to screen that shows information about the code reader.
- **Setup** – leads to screens for adjusting default settings to meet your own preference when using the code reader.



## 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 of the tests available on the identified vehicle displays. Menu options typically include:

- Read Codes
- Freeze Frame Data
- Erase Codes
- Live Data
- I/M Readiness
- Vehicle Information
- Unit of measure

## 4.1 Read Codes

Read Codes menu lets you read stored codes, pending codes and permanent does 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 scrol 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:

### 4.3.1 Complete Data Set

The Complete Data Set function allows real time viewing of the vehicle's electronic control unit's PID data, including sensor data, operation of switches, solenoids and relays. 8. Select YES to view the definition of each parameter; pick ESC key to return to the previous menu.

### 4.3.2 Unit of Measure

Unit of Measure allows you to switch from English and Metric. vv

## 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.

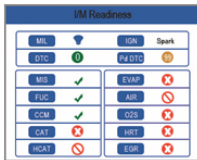
There are two types of I/M Readiness tests:

- 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 OBD II monitors supported by the code reader.

No.	Abbreviation	Name
1	Misfire Monitor	Misfire Monitor
2	Fuel System Mon	Fuel System Monitor
3	Comp. Component	Comprehensive Components Monitor
4	Catalyst Mon	Catalyst Monitor

5	Htd Catalyst	Heated Catalyst Monitor
6	Evap System Mon	Evaporative System Monitor
7	Sec Air System	Secondary Air System Monitor
8	A/C Refrig Mon	Air Conditioning Refrigerant Monitor
9	Oxygen Sens Mon	Oxygen Sensor Monitor
10	Oxygen SensHtr	Oxygen Sensor Heater Monitor
11	EGR System Mon	Exhaust Gas Recirculation System Monitor

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

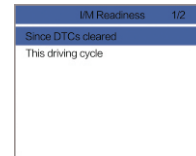
- **Green**- two long beeps.
- **Yellow**- short, long, short beeps.
- **Red**- four short beeps.

## 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



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

Since DTCs cleared	
MIS	OK
FUEL	OK
CCM	OK
CAT	INC
HCAT	N/A
EVAP	INC

or

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

## 4.6 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 OBD II compliant vehicles.

CVNs are calculated values required by OBD II 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.

## 4.7 Unit of Measure

he 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 On-Board Monitor Test 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. 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

## 5.1 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.

## 5.2 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 card (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.

### 5.2.1 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.

### 5.2.2 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.

### 5.2.3 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.

### 5.2.4 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.

### 5.3 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.



## 5.4 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.

## 5.5 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.

## 5.6 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

### 5.6.1 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.

### 5.6.2 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.

### 5.6.3 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 and down arrow keys to select the desired LED lampsto check. The LED should turn on/off according to the selected commands.
- 3)To quit the test, press the ESC key.

## 5.7 Update Mode

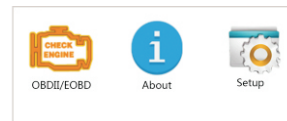
This function allows you enter the update model automatically. For details, please refer to 9.1.

## 6. Tool Information

Selecting 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 UP/DOWN key to highlight About from home menu and press the OK key.
- 2)A screen with detailed information of the code reader displays.



## 7. Leasy Introduction

### 7.1 Updating the Code Reader

To update the code reader, you need following tools:

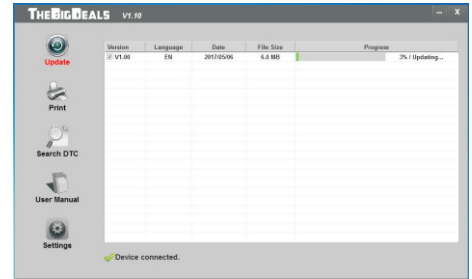
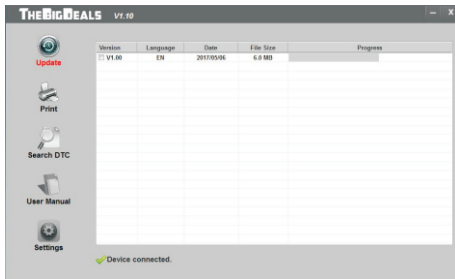
- OBDII/EOBD Code Reader
- Update Tool leasy
- PC or laptop with USB Ports and Internet explorer
- USB cable

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 PIII 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 <http://www.vickiwong.com/html/SERVICE/Download/> and save the applications and files in computer disk.
- 2) Unzip the update tool file. Follow instructions on computer
- 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 the I/M key, then connect the scan tool to computer with the USB cable provided. Please make sure to press the I/M key before connecting the device with computer and do not release it until the update client identifies the scan tool automatically.
- 6) When the tool enters the Update Mode, the application would detect the tool automatically.



- 7) A Update Finished Message displays when the update is completed.

### 7.2 Searching DTC

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

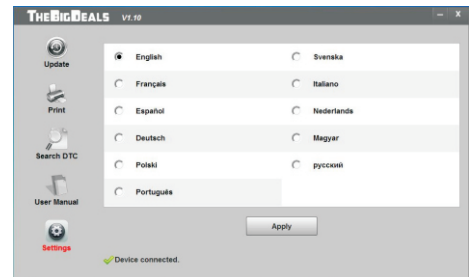
- 1) Click the Search DTC Button from the menu.
- 2) Input the valid code number and the definition of the code will be highlighted on the screen.

### 7.3 User Manual

Here is a pdf format user manual.

### 7.4 Update Tool Settings

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



### NOTE

After entering update mode successfully, there are two different ways for you to update the device. The update tool leasy will detect these local files automatically and display them in a list. Ticking one of them will lead to an update process, which eliminates the need to download any file.