USER GUIDE

inCarDoc iOS

OVERVIEW

Use Smartphone for Quick View of the Car and Engine Main Parameters:

✓Read real-time parameters:
speed, rotation, timings, economy

✓Read diagnostic trouble codes

✓Clean trouble codes
(turn off Check Engine, MIL)

Supported parameters	
InCarDoc adapter support	✓
Support compatible BLE adapters	✓
Wi-Fi adapters support	✓
Read and interpret trouble codes (DTC memory)	✓
Clear error codes including Check Engine Light (MIL) and others	✓
Read parameters in real-time (if supported by the car):	✓
• Engine RPM	✓
• Calculated engine load	✓
• Engine coolant temperature	✓
• Fuel System Status	✓
• Speed of Vehicle	✓
• Absolute air pressure	✓
• Ignition timing	✓
• Inlet air temperature	✓
• Mass air flow	✓
• Throttle position	✓
• Lambda Sensor (correction or the motor)	✓
• Fuel pressure	✓
• And another parameters - depending on the car	✓
Chart drawing for real-time data	✓
Reading VIN chassis number	✓
Real-time parameters recording	✓$
Read, display, and record multiple parameters simultaneously	✓$
Recording parameters in background mode	✓$
View and send recorded parameter traces	✓$
GPS support	✓$
Fuel Economy parameters	✓
Upload to InCarDoc.com server	✓$
Autoconnection or/and Reconnection	✓
Send DTC data and General info	✓
Console for advanced users experiments with OBD-II and adapter commands	✓
Consumption of fuel per time	✓
Widget tab for Dynamic single parameter	✓
Create Combined commands	✓$
Fueling records	✓
Tech inspections (Maintenance) records	✓

✓$ features available
at In-App Purchases.

Available at App Store

CONTENTS

Requirements

Car

American cars since 1996,
European since 2003,
Diesel since 2004,
Japanese since 2005.

OBD scan tool hardware

iOS application requires **OBD-II adapters:**
Wi-Fi adapters or Bluetooth/BLE adapters: inCarDoc, V-Gate BLE, V-Gate 2, Lonauto, Kiwi3 BLE adapters.

Mobile device

InCarDoc for iPhone requires:
- iOS 12.0 and higher;
- iPhone 6 and newer.

OBD II Hardware

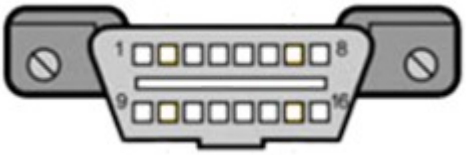
Please, note that **InCarDoc** iOS supports OBD-II Wi-Fi, inCarDoc, V-Gate BLE, Kiwi3 BLE adapters.

The easiest way to get the adapter is to search internet using keywords **ELM327 Wi-Fi, OBD-II Wi-Fi, InCarDoc, Lonauto, V-Gate BLE or Kiwi3 BLE Adapter.**

Pay attention: Use only **quality** adapters. Low-quality quality adapters can negatively affect the correct operation of the car and the application as a whole.

InCarDoc

Starting Using

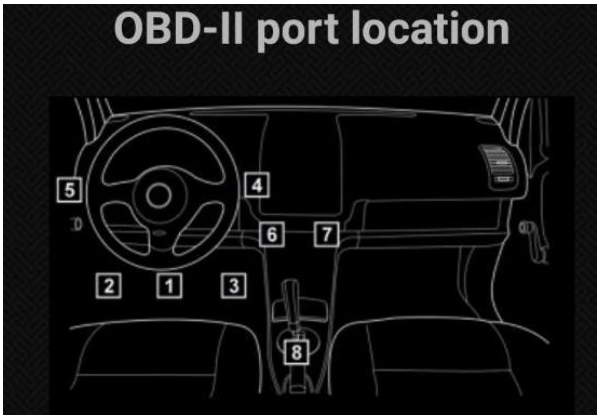


Before starting usage the application make sure that your car supports OBD-II standard.

To learn whether your car supports OBD-II standard, you may examine the 16 pin-out DLC – Diagnostic Link Connector of a trapezoidal shape.

The DLC connector can be in a specific central position in the vehicle, is usually located within 16 inches of the steering wheel.

The manufacturer may place the OBD-II port in one of eight EPA-defined locations.



The connector may be either open or covered with an easily removable cover labelled (“OBD-II”, “Diagnose,” etc.). Each pin of the connector has a different purpose.

American cars since 1996,
European since 2003,
Diesel since 2004,
Japanese since 2005 have OBD-II systems*.

* Some cars have OBD-II system but they do not support OBD-II protocol, like Opel Vectra 1996–1997. In such cases it is necessary to use a scanner, designed to work with the factory protocols of that particular brand of the car – for example, this applies to Opel Vectra 1996-1997 of the European market. You will need to determine specific OBD-II protocol that is used.

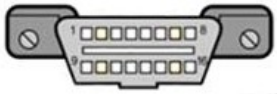
In some cases, having a 16-pin connector does not guarantee that the vehicle is OBD-II compliant.

It is also useful to see all the identification plate on the car – there may be signs "OBD-II compliant" (supports OBD-II), or "OBD-II certified".

As another way to find out if your vehicle is supported – read technical documentation of your vehicle (but not in the general direction to the car brand / model!). You may also internet search using keywords – your car brand / model.

InCarDoc

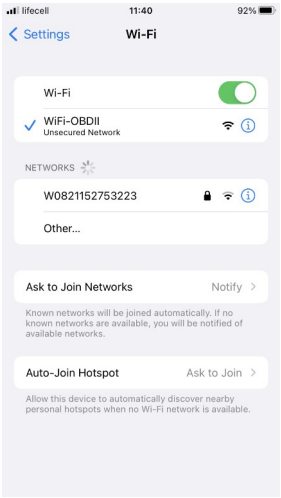
Launching and Configuration

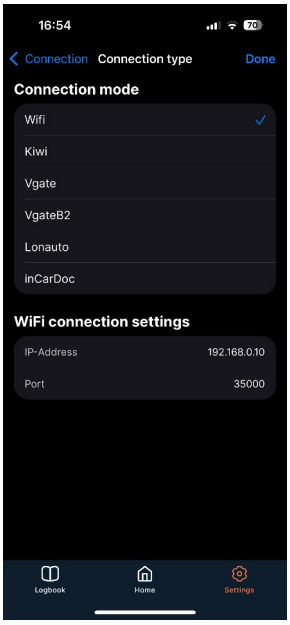


Plug your OBD Device (OBD-II Adapter: InCarDoc, Vgate, Kiwi, WiFi etc.) to your car`s OBDII diagnostic port.

The OBD-II port is usually located within 16 inches of the steering wheel.

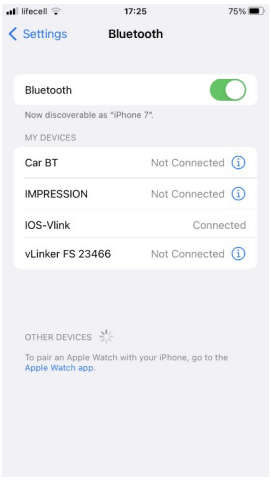
Start car's engine.

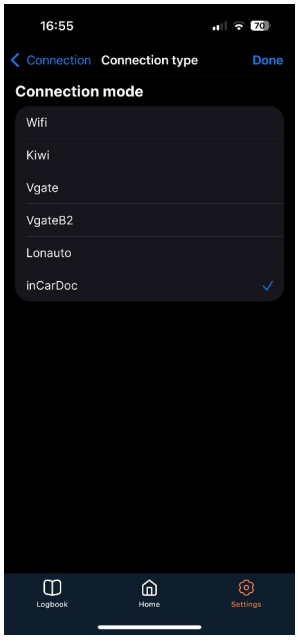




For Wi-Fi adapters:

1. Go to the system Settings on your iPhone.
2. Open WiFi setup menu.
3. Turn On WiFi and connect to OBD-II adapter from Wi-Fi list.
4. Launch inCarDoc application and open **Settings**> **Connection**> **Connection type** and select **Wi-Fi**.
5. WiFi settings is configured by default:
   IP Address: 192.168.0.10
   Port: 35000
6. Go to the Home screen and tap the **Connect** button.

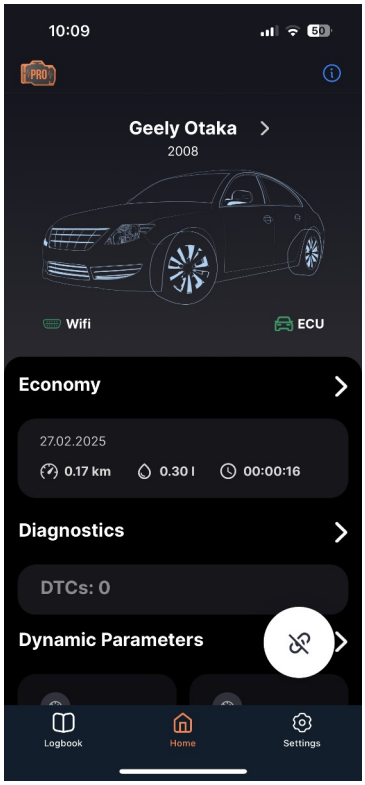




For Bluetooth adapters:

1. Go to the system Settings on your iPhone and turn On Bluetooth.
2. Launch application and open **Settings**> **Connection**> **Connection type** and select appropriate connection mode: iCarDoc, Vgate etc.
   If there is no suitable type of Bluetooth adapter, select inCarDoc.
3. Go to the Home screen of the application and tap the **Connect** button.

InCarDoc
General Information



After you've set up the adapter and configured the app you may start using it.

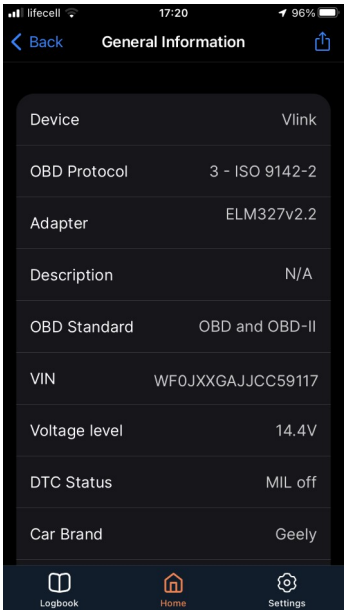
On the Home screen of the InCarDoc App the following options are available:

«Economy»
«Diagnostics»
«Dynamic Parameters»
«General Information»
«Console» (if "ON" in the Settings>Tools)

On the Bottom bar of the InCarDoc App, the following navigation options are available:

«Logbook»
«Home»
«Settings»

4.1.1. General Information allows you to review and check the general information about the devices and vehicle at the current moment:

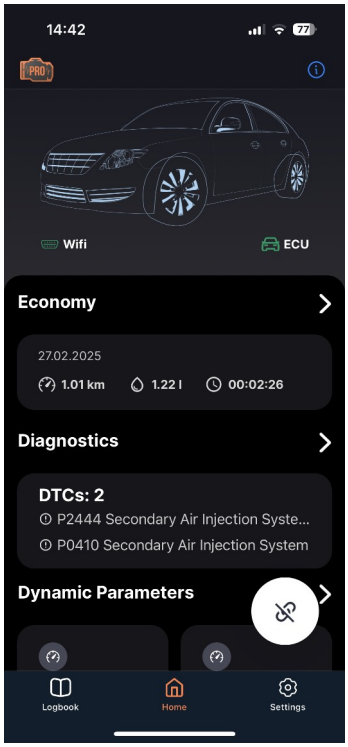


- Device – adapter name
- OBD Protocol
- Adapter – adapter type and version
- Description
- OBD Standard
- VIN (Vehicle Identification Number)
- Voltage level – battery charge level
- DTC Status – MIL off/on
- Available Commands with **Supported PID**s

Some fields can be empty if you have not created a car profile (Settings> My car> '+' button).

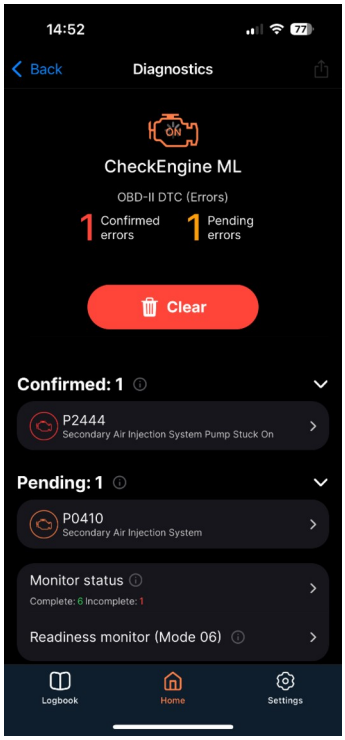
You can see also your car parameters that you've filled at the **Settings** (proceed to Settings> My car and select car).

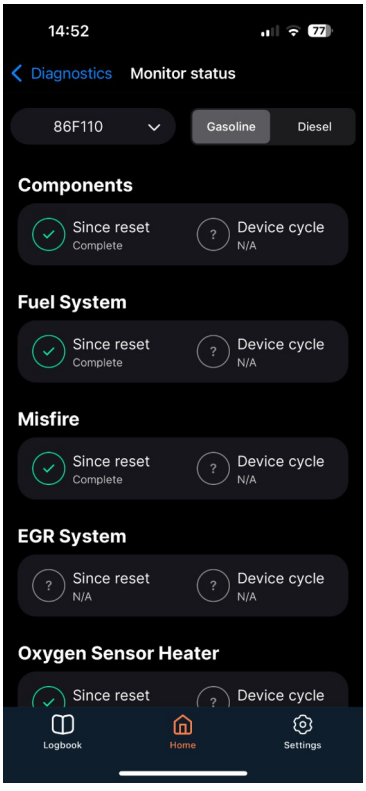
InCarDoc
Diagnostics

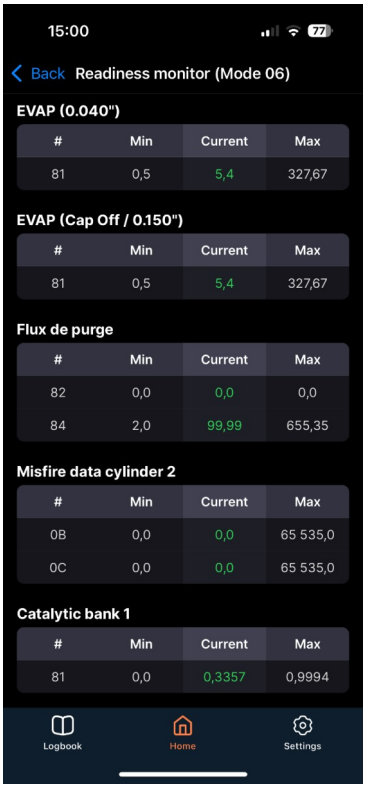


4.1.2. Diagnostics option

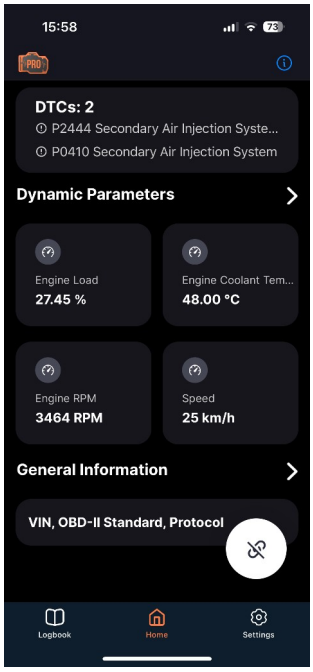
- **Displays error codes** (if there is any).
- Gives the possibility to **Clear** the errors.
- **Monitor status** – OBD II equipped vehicles follow standardized protocols when reporting monitor status to scan tools or emissions inspection devices such as the (NYVIP2) equipment. When a particular monitor does not apply to the vehicle being tested, the monitor is reported as unsupported.
- **Mode 06** is an advanced diagnostic functionality mode included as part of the onboard diagnostic standard (OBD2). The purpose of this service is to allow to access to the results for on-board diagnostic monitoring tests of specific components/systems that are continuously monitored (e.g. misfire monitoring) and non-monitored (e.g. catalyst system).
- **Share** option allows to share diagnostic trouble codes by selected type of sending or save information to Logbook (only for PRO version).

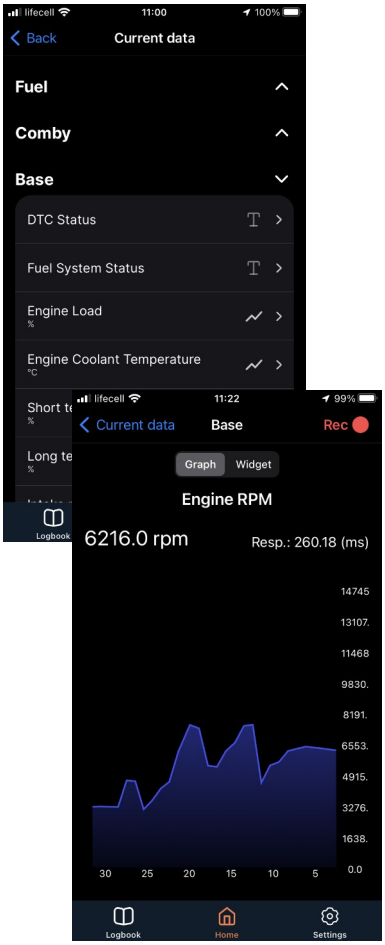






InCarDoc
Dynamic Parameters





4.1.3. Dynamic Parameters option displays the list of dynamic data read from the car engine.

While clicking the command name one will see the detailed information with its real time value.

For PRO version **Record** functionality is available for Dynamic Parameters. You can click to Rec button and the data from Dynamic Parameter will be saved to Logbook.

'**Comby**' functionality is available for PRO. You can create combination up to 6 PIDs to view their dynamics in comparison.

Keep in mind that not every vehicles ECU supports all of the functions and not every OBD-II diagnostic scanner can use all of these modes:

- **PID 03** Fuel system status. At the value "Closed Loop" the system works in the feedback mode at that time the data from Oxygen Sensor are used for correction of the fuel supply. At the value "Open Loop" the data from Oxygen Sensor are NOT used for correction of the fuel supply;
- **PID 04** Calculated Load;
- **PID 05** Coolant temperature;
- **PID 06/08** Short Term Fuel Trim Bank 1/2;
- **PID 07/09** Long Term Fuel Trim Bank 1/2;
- **PID 0A** Fuel pressure;
- **PID 0B** Manifold pressure;
- **PID 0C** Engine speed - RPM;
- **PID 0D** Vehicle speed;
- **PID 0E** Ignition Timing Advance;
- **PID 0F** Intake Air Temperature;
- **PID 10** Air Flow;
- **PID 11** Throttle position;
- **PID 12** Secondary Air Status;
- **PID 12** Location of O2 sensors;
- **PID 13-1B** O2 Sensor 1/2/3/4 Bank 1/2 Volts.

Getting saved status of the current parameters of the control system at the time of the fault codes occurrence (**Mode 2** Freeze Frame).

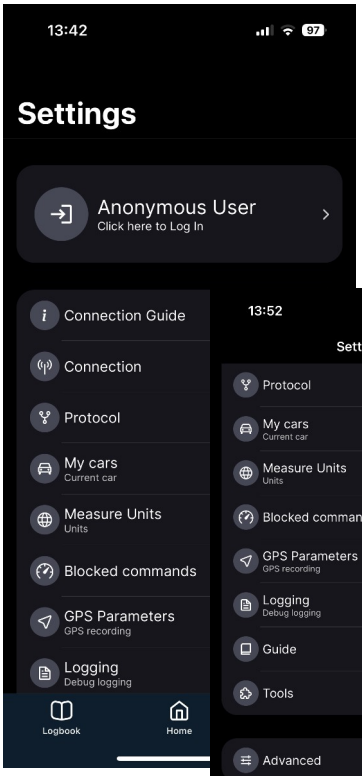
Mode 3 Read Diagnostic Trouble Codes (DTCs).

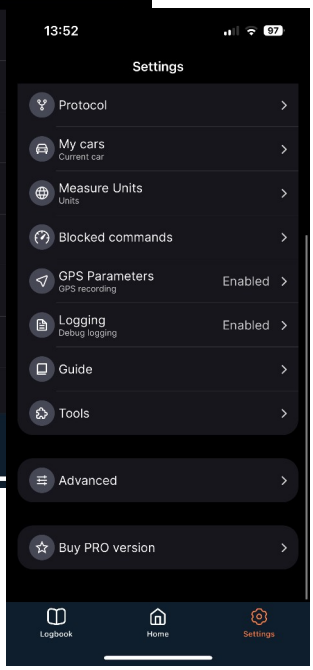
Mode 4 Reset DTC's and Freeze Frame data – clear error codes, status of the current parameters, Oxygen sensor tests results, test monitors data.

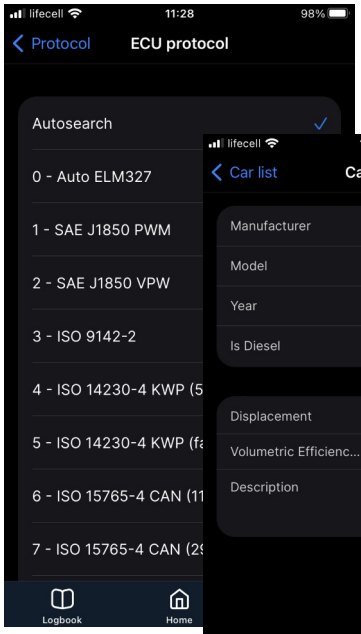
Mode 7 Show pending Diagnostic Trouble Codes.

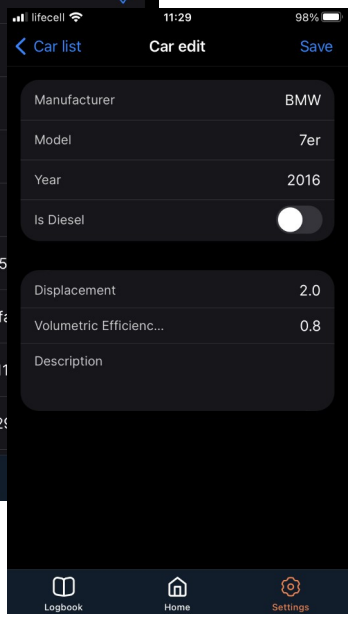
Mode 9 Request vehicle information.

InCarDoc
Settings









4.2. Settings option

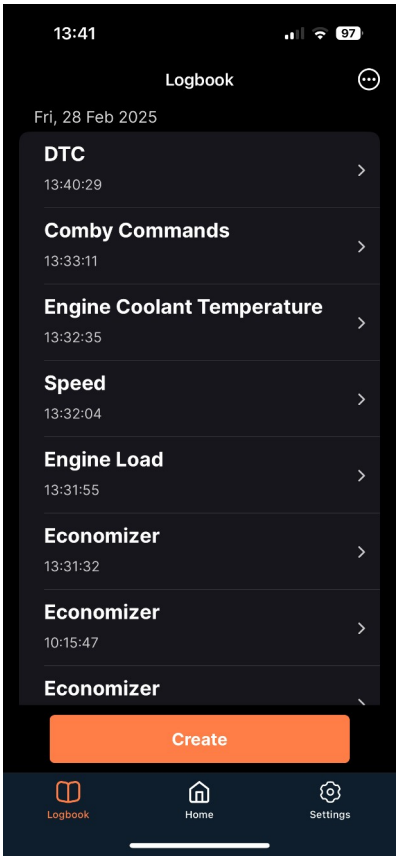
Settings option will help you to configure the application.

For a quick start it is enough to configure **Wi-Fi or Bluetooth.**

For more accurate tuning in **Settings** you can change:

- **Connection Guide** contains instruction with helpful tips for easy the connection process and allows to change connection mode.
- **Connection**> **Autoconnection** option allows to connect to the OBD-II adapter automatically after app launch.
- **Connection**> **Reconnection** allows to reconnect in case of connection loss.
- **Protocol**> **ECU Protocol –** recommended to set Autosearch, but if you know the ECU protocol of your car, you can choose from the list.
- **Protocol**> **Save OBD protocol** saves the last protocol, which has been successfully connected (for faster connection to your car in the next time).
- **My cars** allows to create a personal car profile (Car Brand, Model, Year, Engine Capacity).
- **Measure Units** allows to select **Imperial** (miles/hour) or **Metric** (km/h) system.
- **Blocked commands** for advanced users allows to disable selected PIDs and commands.
- **GPS Parameter** allows to displayed trip correctly on the maps (PRO version only).
- **Logging**> **Send** allows to share problems with support team to resolve it (recommended to enable **Debug logging** for quick solving of the potential problems).
- **Guides** contains two guides with useful recommendations on how to work with the application.
- **Tools**> **Console** section for advanced users allows to send commands from Console.
- **Advanced** contains options to make using the application more comfortable (Enable/Disable Connect button prompts, Enable/Disable sleep mode for the application, select light/dark theme etc.)
- **Buy PRO version** allows to update Free version to PRO to activate additional features of the application.

InCarDoc Logbook



4.3. Logbook

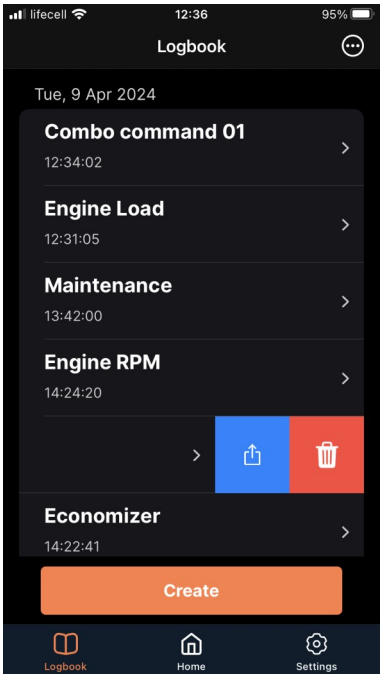
The **Logbook** allows users to create and save **Maintenance** and **Fueling** records for later review of the information.

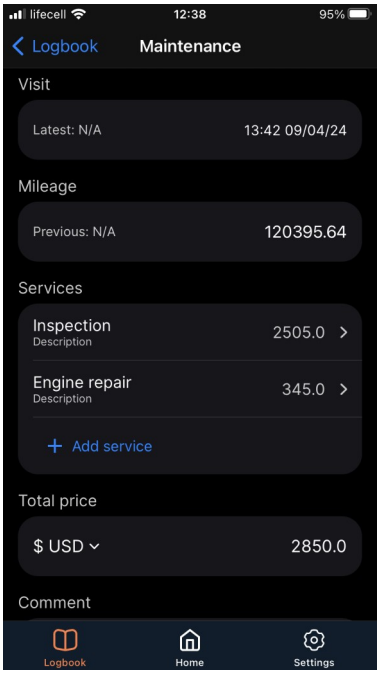
To add a records, click the **Create** button and select the required record type – Maintenance or Fueling.

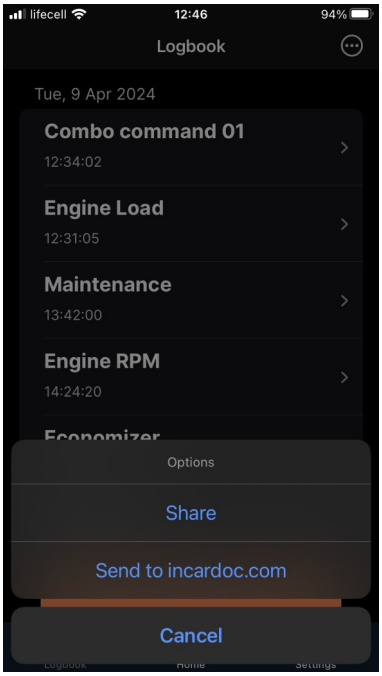
The Logbook also displays records you made from General Information, Economizer, Dynamic Parameters (Pro), Diagnostics (Pro), 'Comby' (Pro) while using the application.

Also, you can **share** or **delete** records from Logbook.

Please note: option to **Record** and view recorded information in full is available only for the **Pro** version of the application.







Questions

1. Does my car support OBD-II standard?

Following factors designate that you car support OBD-II:

- 16 pin-out DLC - Diagnostic Link Connector of a trapezoidal shape.
- All OBD-II cars have a connector. American cars since 1996, European since 2003, Diesel since 2004, Japanese since 2005 have OBD-II systems.
  More information about OBD port you can find on **page 6**.
- read technical documentation of your vehicle (but not in the general direction to the car brand/model!).
- identification plate on the car – there may be signs "OBD-II compliant" (supports OBD-II), or "OBD-II certified" .

2. Diagnostic connector (OBD-II port). What is this? How to find diagnostic connector (OBD-II port location) in the car?

16-pin DLC – Diagnostic Link Connector (OBD-II Port), usually located in the centre of the car. It should be within 16 inches of the steering wheel. The manufacturer can locate the DTL in one of the eight locations defined by EPA. Each pin of the connector has a different purpose.

See also Settings> Guide> Initial Guide> OBD-II Port location.

3. What is DTC?

OBD-II supports SAE J2012 standard which comprises the corresponding trouble codes – Diagnostic trouble codes (DTC's). The OBD-II codes has united format consisting of a Latin letter and 4 digits (sometimes letters instead).

These codes are used by some manufacturers to identify vehicle problems.

The codes are divided into two groups – generic and extended codes. Generic ones are strictly standardized and their decoding is always the same for all the OBD-II cars, but vehicle manufacturers also may use manufacturer specific DTC codes that are different from the Generic codes – extended codes. Foreign vehicles may also use DTC codes different from the generic DTC codes. It's important to remember that codes depend on the cars construction, model and manufacturer.

Questions

4. How do I connect my mobile device and Application to my car?

1. **Plug** your **OBD Wi-Fi or BLE Adapter** to your car's OBD-II diagnostic port.
2. **Start car's engine.**
3. In the case of **Bluetooth** connection (InCarDoc, Lonauto, V-Gate, Kiwi3, ...), make sure that **Bluetooth is enabled** in the system Settings of your iPhone.

   Choose Settings> Connection type> Connection type and select appropriate connection mode: inCarDoc, Vgate etc. If there is no suitable type of Bluetooth adapter, select inCarDoc.

   No additional configuration connection via Bluetooth is required.

   For the connection proceed to the Home screen and click '**Connect**' button.
4. For **Wi-Fi** connection go to the system settings of your iPhone, enable WiFi and choose Wi-Fi adapter from the WiFi list.
   Go to the InCarDoc Application.

   Choose Settings> Connection type> **WiFi**
   Check WiFi connection settings:
   IP Address: 192.168.0.10
   Port: 35000
   Click 'Done' button

   Return to the Home screen and click '**Connect**' button.

5. Fail to set the Wi-Fi connection with the adapter?

1. Make sure that, OBD II adapter is plugged correctly, the engine is on and adapter's lamp flashes.
2. Do not forget to check/set Wifi connection with OBD-II adapter each time before running app session;
   also note to keep app on-screen during the connection session to prevent from closing WiFi connection.
3. *If everything mentioned is correct, but there is still no connection, try following:*
   Stop all the apps and please try to reset wireless iOS settings:
   - start car's engine again;
   - unplug/plug back adapter in the OBD Port of your car;
   - turn off VPN and other apps that might change IP addresses (if used) on your iPhone;
   - open WiFi settings on your iPhone and remove current Static IP connection to adapter;
   - do search and set DHCP connection with your adapter;
   - **for iOS 14 and up** open Settings on your iPhone and find inCarDoc app, check and allow 'Local network' – switch ON toggle;
   - relaunch inCarDoc app and go Settings> Connection type> and check/set **WiFi**;
   - increase command delay in Settings> Protocol> Command delay> Long (optionally);
   - switch phone to 'flight' mode (optionally);
   - return to the Home screen and click 'Connect' button.

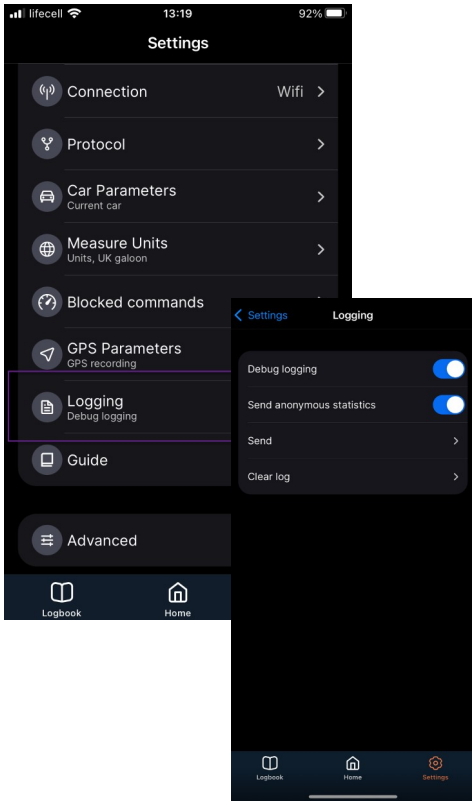
Questions

6. I've got a Wi-Fi or BLE connection but ECU is not defined, what have I do?

It might be that your car doesn't support OBD II, in this case go to **InCarDoc** application.

Settings> Logging> **Send** (where describe your problem) for the Debug logging item should be ON.

Basing on logging the results we will find the solution for you.



7. Does InCarDoc work with my phone?

inCarDoc for iPhone requirements:
- iOS 12.0 and higher version
- iPhone 6 and newer

8. Are there any tips to get the accurate data?

For the data accuracy, we recommend that you avoid simultaneous running multiple programs to read OBD. The driver should insure that there are no other active applications connected to the OBD.

9. What is the principle of the application?

Application reads dynamic and stored parameters of the ECU-compliant (engine control unit) in the vehicles that supports OBD-II standard. Multiple ECU data reading are also available.

10. What parameters I will see using the InCarDoc?

See page **Overview** – a comparative list of all supported parameters and features.

11. How do I upgrade to the InCarDoc Pro-version?

Proceed to Settings and choose 'Buy PRO version'.

Available at App Store

Alarm situations

In case of appearing mistakes during the work with **InCarDoc** which are not described in this user's guide, you should contact the staff of PNN, of technical support department.

e-mail: support.ios@incardoc.com
tel. +38 044 355 3035