

# OBD Auto Doctor

## User Manual for iOS (iPhone and iPad)

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## 1. Introduction

This document is user manual for OBD Auto Doctor app for iOS platform. The app is optimized for iPhone but it will work also on iPad. OBD Auto Doctor is easy-to-use OBD-II car diagnostic software. With the app you can communicate with your car's On-Board Diagnostic system and turn your mobile into a highly capable automotive scanner.

This user manual assumes that you have the app already installed on your device. If you haven't, you can get it from the Apple App Store.

### 1.1 Platform and Hardware Requirements

The app works on all iOS devices (iPhone & iPad) with iOS version 7.0 or newer. This includes iPhone 4, 4S, 5, 5C, 5S, 6, 6 Plus, 6S, 6S Plus, and several iPads. Support for new models will be added after they are released.

### 1.2 Supported Adapters

The app needs separate adapter to be able to communicate with your car. The app supports both Bluetooth 4.0 (e.g. Bluetooth Smart or Bluetooth BLE) adapters and WiFi adapters.

Bluetooth: Kiwi 3 Bluetooth BLE adapter

WiFi: Any ELM327 based WiFi OBD adapter

For more info and links, check <http://www.obdautodoctor.com/obd-adapters>

### 1.3 Vehicle Requirements

The software works with all cars that have OBD-II. In other words, they are OBD-II compliant. If you have a car that is rather old, or from a country that doesn't required OBD-II, then your car will likely not work with the app. Having similar looking connector doesn't guarantee that the car is OBD2 compliant.

As a general guideline, your passenger car is most likely to be OBDII compliant if it was manufactured or registered after:

- USA: 1996
- EU: 2001 (gasoline) or 2004 (diesel)

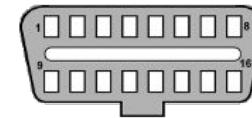
For other countries, please see the online document on our website: <http://www.obdautodoctor.com/faq>

## 2. Establish connection to the car

### 2.1 Attach the Adapter to your car's OBD2 port

- Locate the OBD-II diagnostics connector in your car

Search for 16-pin D-shaped connector that will match the adapter. The connector should be located in or near the dashboard close to the steering wheel. Typical place for the socket is the compartment under the driver's side dashboard.



- Plug in the adapter

After you have located the diagnostic connector, plug in the adapter. Make sure the adapter is tightly attached but don't use too much force.

- Turn ignition key to the 'ON' position or start the engine

The adapter should have some LEDs blinking. Note that some older adapter models might not have any lights. If the adapter has on/off switch, make sure it is turned on.

### 2.2 Verify Connectivity and App Settings

Depending on your adapter connection type, continue to either 2.2.1 Bluetooth Adapter or 2.2.2 WiFi Adapter.

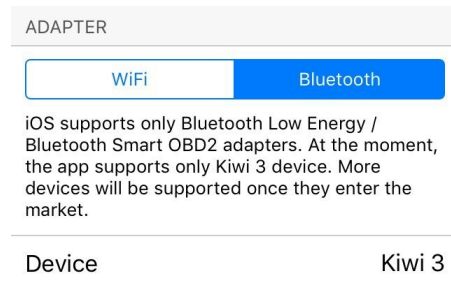
#### 2.2.1 Bluetooth Adapter

- Make sure that Bluetooth is turned on in your device

To verify the status, navigate to your device's **Settings** -> **Bluetooth**.

- Select the correct connection type from the app settings

First, launch OBD Auto Doctor app. Then, navigate to **Extras** tab. Select **Connectivity** from the list. Make sure **Bluetooth** is selected as the connection method. Select your adapter as the Device.



Please note that at the moment, the app supports only Kiwi 3 BLE adapter. More BLE adapters will be supported once they enter the market.

Adapters using Bluetooth version lower than 4.0 can't be supported because of the platform restrictions.

### 2.2.2 WiFi Adapter

- Make sure that Wi-Fi is turned on in your device

To verify the status, navigate to your device's **Settings -> Wi-Fi**.

- Connect to the adapter network

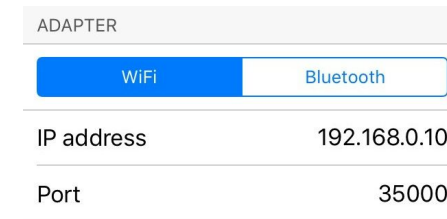
Wait for your adapter to appear in the list of available networks. Tap the adapter network name and wait for the network connection to be established. Refer to the adapter user manual for the correct network name (SSID).

Please note that after you have connected to the adapter network, you will not have access to the Internet via WiFi hotspot. All possible network data transfers will be made using your carrier.

- Select the correct connection type from the app settings

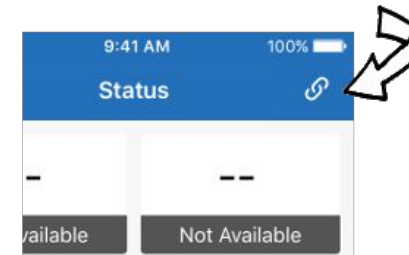
First, launch OBD Auto Doctor app. Then, navigate to **Extras** tab. Select **Connectivity** from the list. Make sure **WiFi** is selected as the connection method.

Verify the IP address and port. The default values are correct for most adapters. Refer to the adapter user manual for the correct values if the default values don't work.



## 2.3 Connect to the Car

- Navigate back from the app settings to the **Status** tab.
- Tap the connect button at the top right corner of the view.



- Wait for the connection to be opened

The app will initialize the adapter and connect to the car. It will scan the vehicle configuration to detect what your car is capable of.

- Start using the app and get to know your car better

## 2.4 Troubleshooting

If you unable to connect your car, please check the following.

- Make sure your that your car is compatible with OBD2.

Check the 1.3 Vehicle Requirements of this document or visit [www.OBDAutoDoctor.com/faq](http://www.OBDAutoDoctor.com/faq) for the more details.

Having similar looking connector doesn't mean the car is OBD2 compliant. OBD2 is mandatory only for passenger cars. If you have utility vehicle or large pickup truck, it might not have OBD2.

- Try connecting having the ignition key in the 'ON' position but the engine not running
- Try connecting while the car is parked and engine is running
- Make sure the adapter is properly attached
- Make sure you are connected to the right Wifi network if you have WiFi adapter

If you still unable to connect your car, please do the troubleshooting within the app. It will enable some logging and give you possibility to send the log to the developers for further help.

- Navigate to **Extras** tab and select **Help**
- Proceed with the troubleshooting steps.

First, try to connect with the **Connect** button. It will turn some logging on.

Second, use the **Send log** button to send the log to the developers. Remember to send the message from the opened email client.

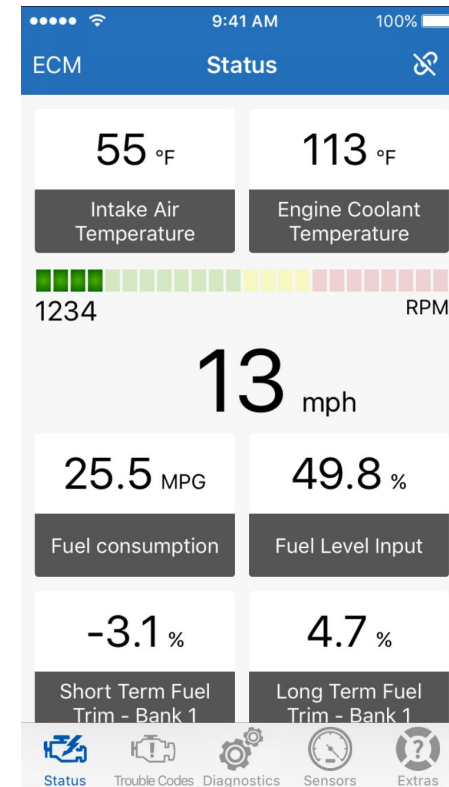
### 3. App Views and Functions

#### 3.1 Status

The Status view displays selected sensor data in real-time. The view is designed so that you can monitor the data while you drive the car. The information is clearly visible for convenient distance so you can keep the device installed in a stand.

**Warning:**

We do not recommend that you drive the car while using the app for your own safety!



On the top left corner of the view is the Engine Control Unit (ECU) selection button. Tap the button (in the image labeled ECM) to open the ECU selection. The list contains all OBD2 compliant control units from your car.

You can customize the visible values. Long press the slot that you want to change. A list of the supported sensors is opened. Pick the sensor that you want from the list. The values can be customized only when the connection to the car is open.

The speed and RPM values are fixed and then can't be changed. Only the slot values can be changed.

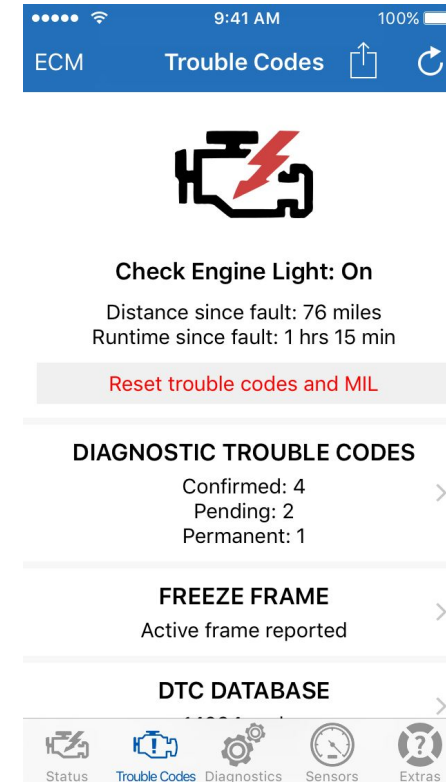
Use the same connect/disconnect button on the top right corner to close the connection after you are done using the app.

## 3.2 Trouble Codes

The Trouble Codes view displays summary of the diagnostic trouble code information. On top, the app shows the Check Engine Light (CEL) or Malfunction Indicator Light (MIL) status. It will also show the distance driven and runtime since the last change. If the MIL is ON, the distance and runtime are since the MIL turned on. If the MIL is OFF, the distance and runtime are since last reset.

You can also reset the diagnostic trouble codes and the MIL within this view. A confirmation dialog is presented for you before actually sending the reset command.

You can send the diagnostic information easily via email. Select the Action button (📧) to open the email client with the info.



### Diagnostic Trouble Codes

Diagnostics Trouble Codes (DTCs) are codes that the vehicle's electronic control unit (ECU) generates when it detects malfunction or other issues.

### Freeze Frame

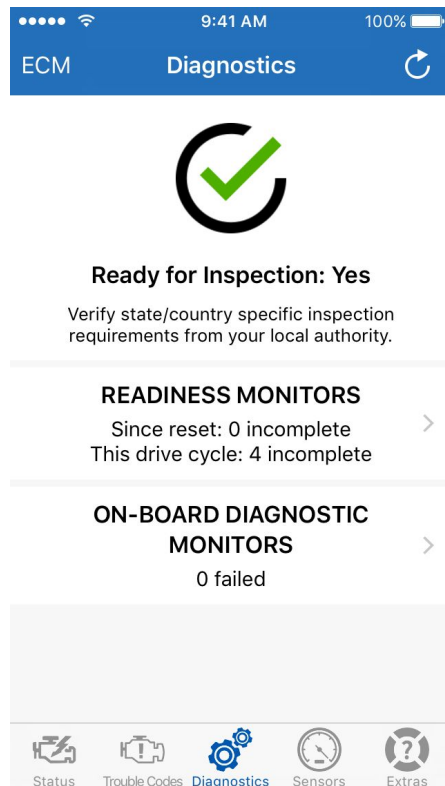
Freeze Frame is a captured recording of the engine's conditions at the time a malfunction is detected. The Freeze Frame contains DTC that caused the malfunction and snapshot of sensor readings.

### DTC Database

The app contains offline trouble code database for searching and browsing all the trouble codes. The DTC database contains over 14000 trouble codes that the software has description for.

### 3.3 Diagnostics

The Diagnostics view displays summary of the diagnostic information. On top, the app shows the readiness status for inspection. If none of the Readiness Monitors are incomplete, the car is ready for inspection. Having single Readiness Monitor incomplete might cause the car to fail inspection. It depends on the car year model and local inspection requirements. Having two or more Readiness Monitors incomplete, will most likely fail the inspection in every country.



#### Readiness Monitors

The readiness monitors self-test car's emission systems.

You can read more about the Readiness Monitors from our website:

<http://www.obdautodoctor.com/scantool-garage/obd-readiness-monitors-explained/>

#### On-Board Diagnostic Monitors

Mode \$06 is an advanced diagnostic functionality mode. It keeps track of how emission control components and other systems and sensors are functioning.

You can read more about the On-Board Diagnostic Monitors from our website:

<http://www.obdautodoctor.com/scantool-garage/using-obd2-mode-06-for-advanced-car-diagnostics/>

### 3.4 Sensors

The Sensors view displays the selected sensor data in real-time. The data is updated only when you are in this view. If you navigate to some other views, the sensors in this view stop updating.

The sensors are updated as fast as the adapter and car are able to provide the data. For typical adapter and car, this means about 10 updates per second. Some combinations are able to provide about 15 updates per second. Low quality adapters or rather old cars might be able to provide data for only 5 sensors per second.

Use the plus sign (+) to add or remove sensors from the view. Only sensors that your car supports can be monitored. See our website for up-to-date list of the sensors that the app supports:

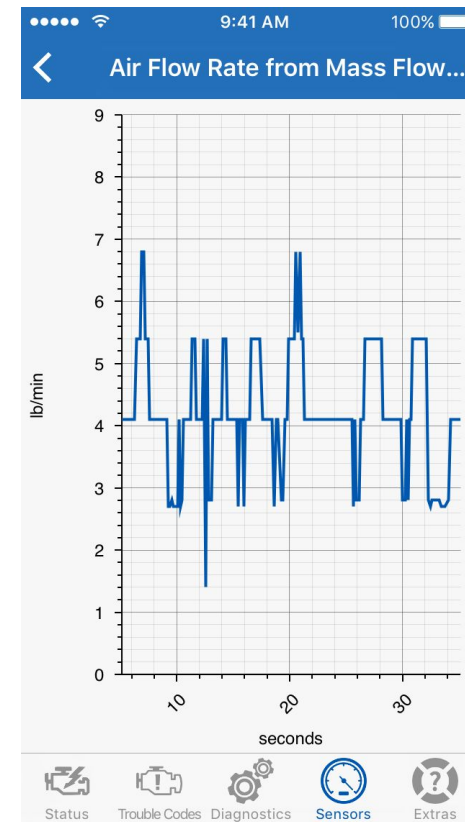
<http://www.obdautodoctor.com/obd-parameters>

You can send the sensor data in csv format as email attachment. Select the Compose button (✉) to open the email client with the attachment. The sensor data log is reset every time this view is entered. So if you navigate to some other view and then come back, the logging starts from beginning. This is to keep the amount of the data within reasonable size.



Let's look at a single sensor item in the list. The sensor name is located at the bottom center. On top of that is the current value. On the left side with a bit smaller font is the average value.

Graphical presentation of a sensor is opened by tapping the sensor. Only sensors with numerical value have the graph. This is also indicated by the small arrow on the right side of the sensor item.



### 3.5

### Extras

Under the Extras tab you will find information about the Electronic Control Unit and Adapter. You will also find the app settings, help and upgrade sections.

#### Electronic Control Unit Information

Electronic Control Unit (ECU) info view will displays information about the ECU. This information includes the OBD requirements the vehicle is certified for, the communication protocol that is used, ECU name and description, Vehicle Identification Number (VIN), Calibration Identifications (CALID), Calibration Verification Numbers (CVN).

## Adapter information

Adapter info view displays information about the OBD adapter in use. This information includes the device name, description and version. The will also show the battery voltage that is reported by the adapter.

## Connectivity Settings

Connectivity settings view has options and preferences related to the connection.

**OBD Protocol:** The app configures the adapter to automatically detect the used protocol. This works with most adapters and car. However, some adapter have difficulties detecting the protocol. That's why you can also set the protocol manually. Pick a non-automatic protocol to force the adapter to try the protocol. If you use the app with other cars, remember to turn it back to the automatic protocol selection.

**Auto-connect after launch:** Option to open the connection automatically after the app is launched.

**Adapter:** First, pick the adapter type you have: WiFi or Bluetooth. Second, configure the adapter options.

## Preferences

Preferences view has options and preferences related to the app behaviour.

**Units of measure:** Metric units follow the SI defined metrical system (for example km/h, celcius). Imperial units follow the English unit system (for example mph, fahrenheit). All the used units are defined in the OBD2 standard and they can't be changed.

**Screen lock:** This option defines the app behavior for screen dimming and locking.

**Sensor data logging:** This option must be enabled if you want to collect data in the Sensors view for sending it via email in the .csv format.

## Vehicle Settings

Vehicle settings view has configuration parameters for the vehicle.

**Fuel:** Fuel type used for consumption calculation.

**Fuel correction factor:** Set only if the consumption reading doesn't match the expected reading. The calculated consumption value will be multiplied by this value.

**Volumetric efficiency:** Set only if you know proper value for the car. This is needed only for MAP based consumption calculations.

**Engine displacement:** This number is the volume of the engine in liters. It's only needed for MAP based consumption calculations.

## Help

The Help contains all kind of help material for you to get started. It will also have Troubleshooting section for sending data logs to the developers.

## About

The About contains information about the app such as version numbers.

## Upgrade

The Upgrade contains options to upgrade the app to the Pro version. The Pro version will unlock all the features of the app. You can also restore your previous purchase from this view. Visit the app website for more info and the differences between the versions:

<http://www.obdautodoctor.com/ios>