

USER GUIDE OF EOBD-FACILE

Version iOS (iPhone/iPad)



www.outilsobdfacile.com

1. Settings for communication with ELM327 WiFi

From Settings Menu then WiFi, configure your network with the following data:

Select SSID (network name):

- **WiFiOBD**
- Si asked please enter the password **12345678**

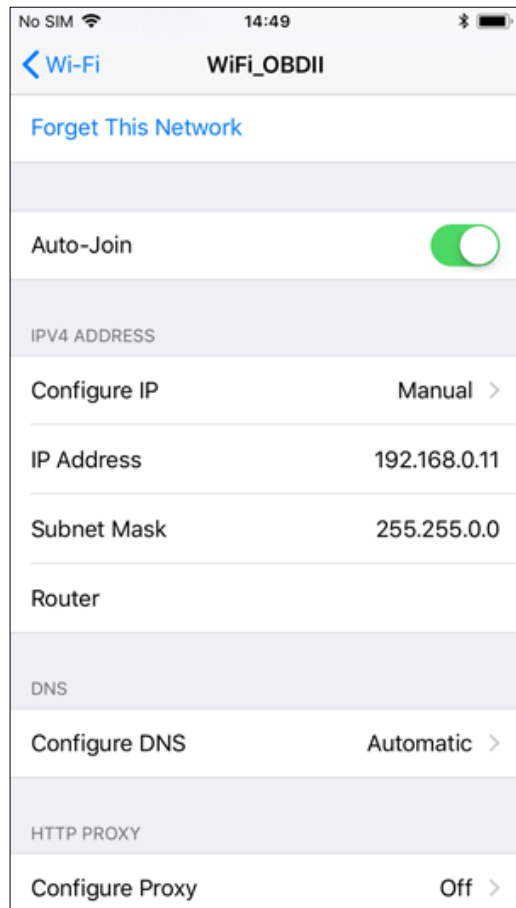
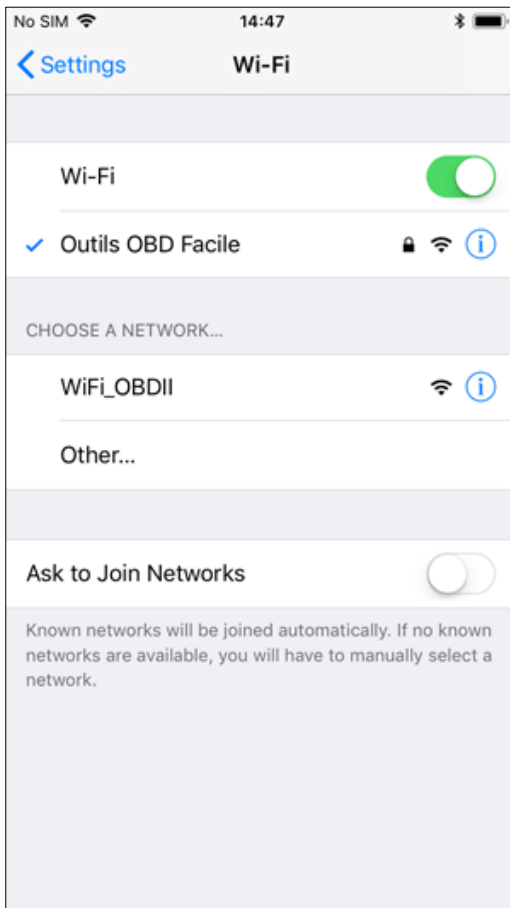
Setting up with:

IP Address

- Static
- IP Address **192.168.0.11**
- Sub Network Mask: **255.255.0.0**

Proxy HTTP

- Disabled



Depending on the interface you own the settings may be different. IP Address and network name may be different. In this case please contact your seller to know the exact settings.

Notice: When you will be connected to the WiFiOBD network you will not have access to the internet with your WiFi hotspot. All data will be downloaded through the GSM network.

2. Connect klavkarr interface with Bluetooth



Please check that the Bluetooth is active inside the settings of your smartphone/tablet (Menu Settings then Bluetooth).

Start EOBD-Facile and check the settings of EOBD-Facile to connect with Klavkarr Bluetooth interface (Menu Settings/Interface)

Start the connection, a list of Bluetooth devices will appear. Select the device starting with KLAV-



Buy a klavkarr interface:

If you do not have any electronic interface to make a diagnosis, please visit our website to buy a Klavkarr interface

<https://www.boutiqueobdfacile.com>

Important notice:

1. EOBD-Facile only will work with Bluetooth Low Energy (4.0) klavkarr interface. You shall have at least an iPhone 4S or an iPad of 3rd generation.
2. EOBD-Facile have been designed to communicate in Bluetooth only with klavkarr interface. ELM327 interface using a Bluetooth communication cannot be paired and used with EOBD-Facile.
3. klavkarr interface will automatically activate your license. No in app purchase is required.

3. Connect to the vehicle



The first step is to perform connection between the interface and the App. Once you have plugged your interface to the standard OBD connector (16 pins), tap on the “Connect” icon (from the home screen) to launch the connection.

Application will scan the vehicle configuration to know which ECU are present and what they are capable of.



The 16 pins OBD connector is mandatory located inside the vehicle.

You don't find your connector? Check our website, it includes a database of vehicle connector position with photos and text to help you:

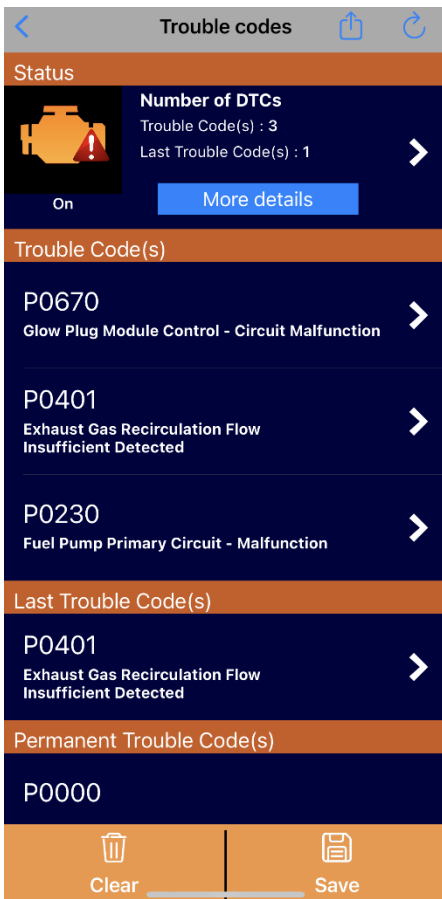
<https://www.outilsobdfacile.com/location-plug-connector-obd.php>

You don't manage to connect?

- Is the ignition of the vehicle ON (all dashboard lamp should be ON)?
- Does the ELM327's LED blink? Did you set up the WiFi settings correctly?
- Did you check if your vehicle is compatible with OBDII or EOBD? Visit our website to consult our list of compatible vehicles

<https://www.outilsobdfacile.com/vehicle-list-compatible-obd2.php>

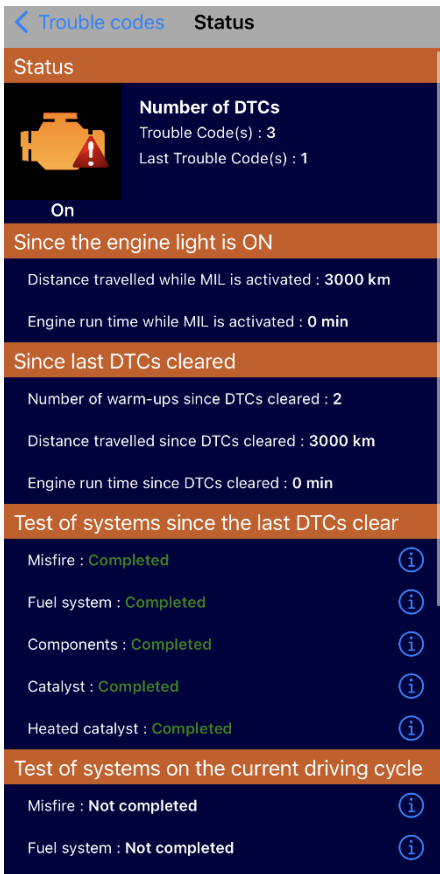
4. Status and trouble codes



Status is useful to know the current state of electronic diagnostics done in the vehicle. It will report the number of trouble codes, the distance and time made since the DTC is present.

Data troubles codes are classified into 3 types:

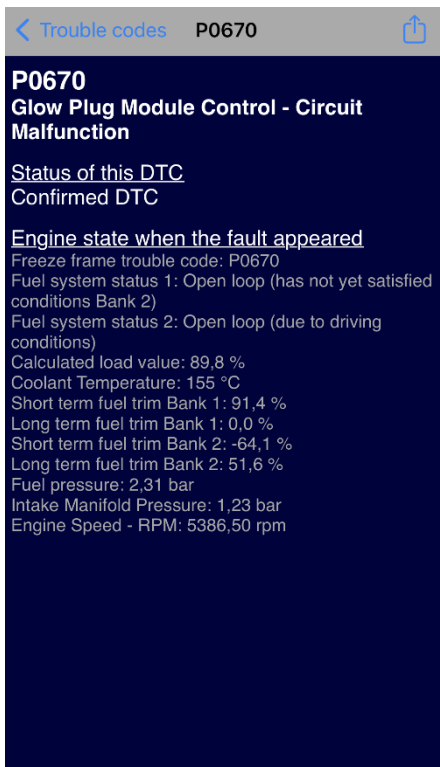
- **Trouble Code:** DTC has been detected and confirmed by the ECU several times and is declared as relevant
- **Last Trouble Code:** DTC has been detected once and is not yet relevant.
- **Permanent Trouble Code:** DTC has been detected on the vehicle but is not present anymore. Permanent Trouble Code cannot be erased. They are useful to know the history of the vehicle.



Tip: The list of faults will be displayed according to the chronological order. Please focus your attention on the first fault, other faults may be the consequence of the first one

It is possible to save diagnostic result with the tool bar button. Saved diagnostic will be available through the History menu.

Notice: The application has a database which contains many DTC description (more than 5000) but this list is not exhaustive. If the description is not present inside the application database, the following text will be displayed "Description not available". In this case make a research on the internet to find the description associated to the Pcode displayed.



For each troubles code read by the application, details can be available, tap on the DTC to display the associated screen.

On the left picture, we can see details for DTC P0670. Engine state when the fault has appeared is the same data that can be found with Freeze frame (see next chapter).

You can also share or save this data with the help of the button on the top right of screen

Notice: Following vehicle, information available can be more or less precise. Engine state when the fault has appeared is only available with Premium Access.

5. Erase trouble codes



Erasement should be done once the repair has been made. A warning message will be displayed asking to confirm that operation. This operation will erase all data link to diagnostic.

Important notice:

1. Erasure of data trouble code must be done with the engine stopped. If the engine is running the application will display an error message and the erasure will fail.
2. Vehicles equipped with electronic key should, most of the time, be switched in diagnosis mode to be able to perform the erasure.

6. Freeze frames

Freeze frames (Frame 0)	
O-02-00 Freeze frame trouble code	P0670
O-03-00 Fuel system status 1	Open loop (has not yet satisfied conditions Bank 2)
O-03-01 Fuel system status 2	Open loop (due to driving conditions)
O-04-00 Calculated load value	89,8 %
O-05-00 Coolant Temperature	155 °C
O-06-00 Short term fuel trim Bank 1	91,4 %
O-07-00 Long term fuel trim Bank 1	0,0 %
O-08-00 Short term fuel trim Bank 2	-64,1 %
O-09-00 Long term fuel trim Bank 2	51,6 %
O-0A-00 Fuel pressure	2,31 bar
O-0B-00 Intake Manifold Pressure	1,23 bar
O-0C-00 Engine Speed - RPM	5386,50 rpm

Freeze frames are a “picture” of the engine state when the default has been detected. It can be very useful.

By default, EOBD-Facile application will display information linked to the first frame (frame 0). If currently you have 3 defaults recorded inside your ECU, scan frame 0, 1 and 2 to see the associated freeze data for each default.

Select the frame to display with the “Frame” button at the top right of the screen.

7. Oxygen sensor

Oxygen sensor		Sensor
1: Bank 1 Sensor 1		
O-01 Rich to lean sensor threshold voltage		
Value	0,005	
Min	0,005	
Max	0,005	
Units	Volt	
O-02 Lean to rich sensor threshold voltage		
Value	0,010	
Min	0,005	
Max	0,320	
Units	Volt	
S-31 Manufacturer specific		
Value	0,04	
Min	0,04	
Max	0,64	
Units	seconds	
T-01 Rich to lean sensor threshold voltage		
Value	0,3650	
Min	0,3650	
Max	0,3650	
Units	Volt	
T-05 Rich to lean sensor switch time		
Value	72	
Min	0	
Max	100	
Units	ms	

On gasoline vehicle Oxygen sensors are in charge of calculating the fuel trim adjustment (air-fuel ration). They are very important for a correct engine performance.

Those are monitored by the electronic unit and it is possible to know if they work in the range defined by the manufacturer.

Select the sensor you wish to display with the top right button called "Sensor". Most of the recent vehicles have at least 2 sensors fitted on the exhaust pipe.

8. Systems - Monitoring

Systems		
O-01 Exhaust Gas Sensor Monitor Bank 1 – Sensor 1		
01 - Rich to lean sensor threshold voltage		
Value	0,3650	
Min	0,3650	
Max	0,3650	
Units	Volt	
05 - Rich to lean sensor switch time		
Value	72	
Min	0	
Max	100	
Units	ms	
85 - Manufacturer specific		
Value	150	
Min	75	
Max	65535	
Units	Count(s)	
O-02 Exhaust Gas Sensor Monitor Bank 1 – Sensor 2		
01 - Rich to lean sensor threshold voltage		
Value	0,0	
Min	0,1	
Max	6553,5	
Units		

This screen display all systems monitored by the electronic unit.

Following the vehicle's configuration, you can access to data concerning: Fuel, EGR, PM, Air, EVAP...

You can check that each system work inside the range defined by the manufacturer. If the value is inside the tolerance it will be displayed in green. Value displayed in red are out of range.

9. Consistency

This function allows checking if the vehicle sensor's values are inside a “plausible” range. This function should be used with engine started.

Software will scan all the sensors to report sensors which can be damaged

For example: a temperature sensor reporting -40°C is due to a short circuit to the ground of the sensor itself or a default of harness.

10. Diagnosis report

This function allows to make a complete diagnosis of the vehicle. The report can be saved and/or print to see it later.

To generate a report, please follow the below steps:

- 1.** Fill the vehicle information
- 2.** Select ECU to include to the report
- 3.** Select diagnostic's data to include to the report



This screen shows a report generated with a vehicle which have faults

It is possible with the tool bar to perform actions like:

1. Print the report
2. Add a comment
3. Save the report

Report generated are available inside the History menu.

Notice: Printing report need to have a printer compatible with iOS

Tip: If your printer is not available during the diagnosis, it is possible to save the report to print it later

11. Measures with table

Sensor ID	Sensor Name	Selected
O-04-00	Calculated load value	
O-05-00	Coolant Temperature	
O-0B-00	Intake Manifold Pressure	✓
O-0C-00	Engine Speed - RPM	
O-0D-00	Vehicle Speed	✓
O-0F-00	Intake air temperature	✓
O-10-00	Maf air flow	✓
O-1E-00	Auxiliary input status	
O-1F-00	Time since engine start	
O-21-00	Distance travelled while MIL is a...	✓
O-23-00	Fuel rail pressure	
O-2F-00	Fuel level input	
O-30-00	Number of warm-ups since DTC...	✓
O-31-00	Distance travelled since DTCs cl...	
O-33-00	Barometric pressure	✓
O-42-00	Control module voltage	

It's possible to read vehicle sensor in real time.

Following the vehicle configuration (Fuel type, model year), the below list of sensors will be more or less important.

Select which one you want to display and start reading by taping on the “play” button on the top right of the screen

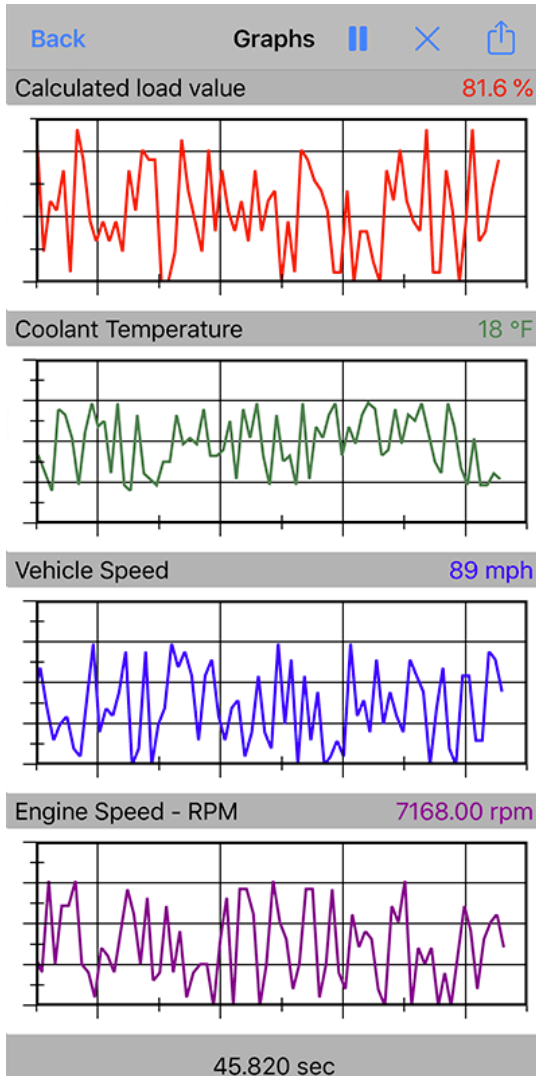
Notice: Reading is done sequentially (one by one), so more you select sensor less the refresh period will be.

Sensor ID	Sensor Name	Value
O-0B-00	Intake Manifold Pressure	0,56 bar
O-0D-00	Vehicle Speed	228 km/h
O-0F-00	Intake air temperature	81 °C
O-10-00	Maf air flow	324,88 g/s
O-21-00	Distance travelled while MIL is activated	22965 km
O-30-00	Number of warm-ups since DTCs cleared	104
O-33-00	Barometric pressure	1,27 bar

This screen shows the 4 previously selected values displayed.

Data will be refresh continuously until you leave the screen by taping on the back button.

12. Measures with graphic mode



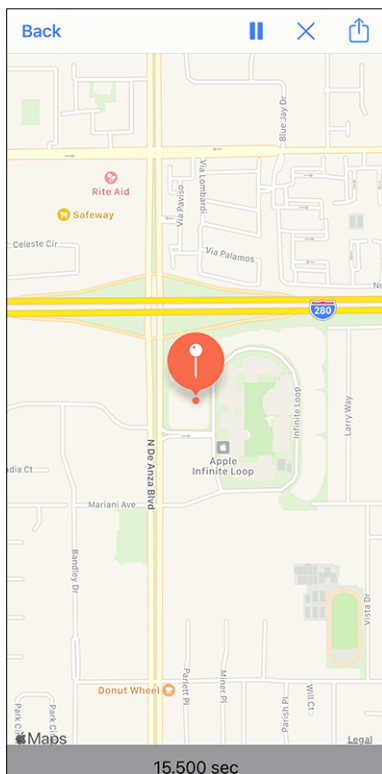
It's also possible to see real time data with a graph.

First select sensor you wish to display on the chart. 4 ways can be simultaneity displayed.

At the same time our application will record data's value inside a csv file. This file can be reviewed later with a spreadsheet or with our software EOBD-Facile for PC Windows.

When you will stop the record, a popup will be showed to ask you if you want to save this record into a file. Cancel or give a name to the file. This function can be disabled into the application's settings.

13. Measures with GPS mode

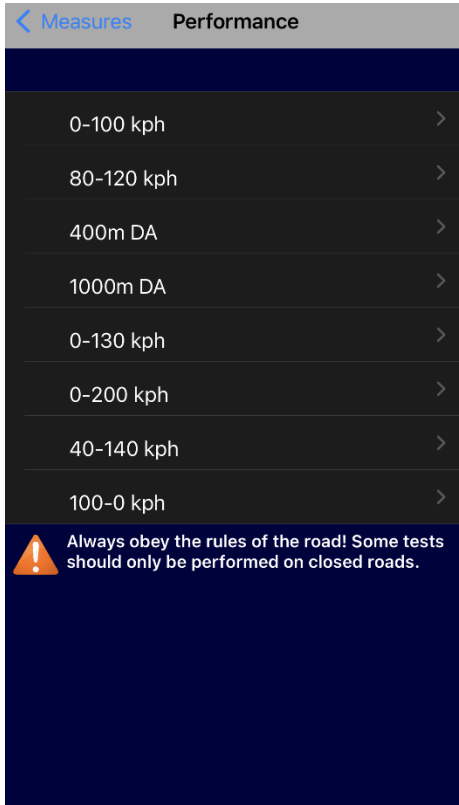


GPS mode works as the Graphic mode. Select sensor you want to display then launch the record with the “start” button.

Your current position will be updated in real time and a kml file will be generated.

The kml file generated can be reviewed with other software as Google Earth. It will show your trip and the associated data's vehicle linked to the position of the vehicle.

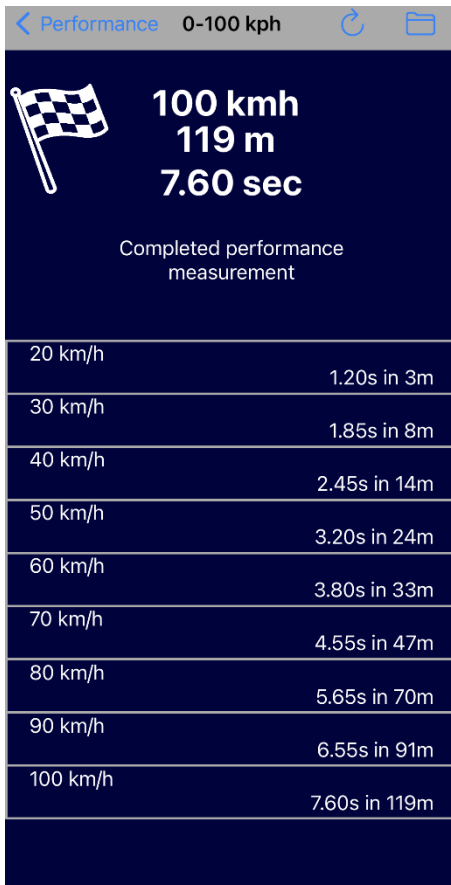
14. Performance measurement



Performance measurement will allow you to check your vehicle acceleration time like you can find in automotive magazine.

Here you can see the 8 measurements available for imperial units. If you change the application settings, measure test will be

Notice: The 4 last measurements are only available with the Plus Edition.



This screenshot shows a measure done with 0-100 km/h test.

During the test, chronometer will start and stop by itself automatically.

Once you have finished, a summary table will be displayed to see intermediate time at different moment of the test.

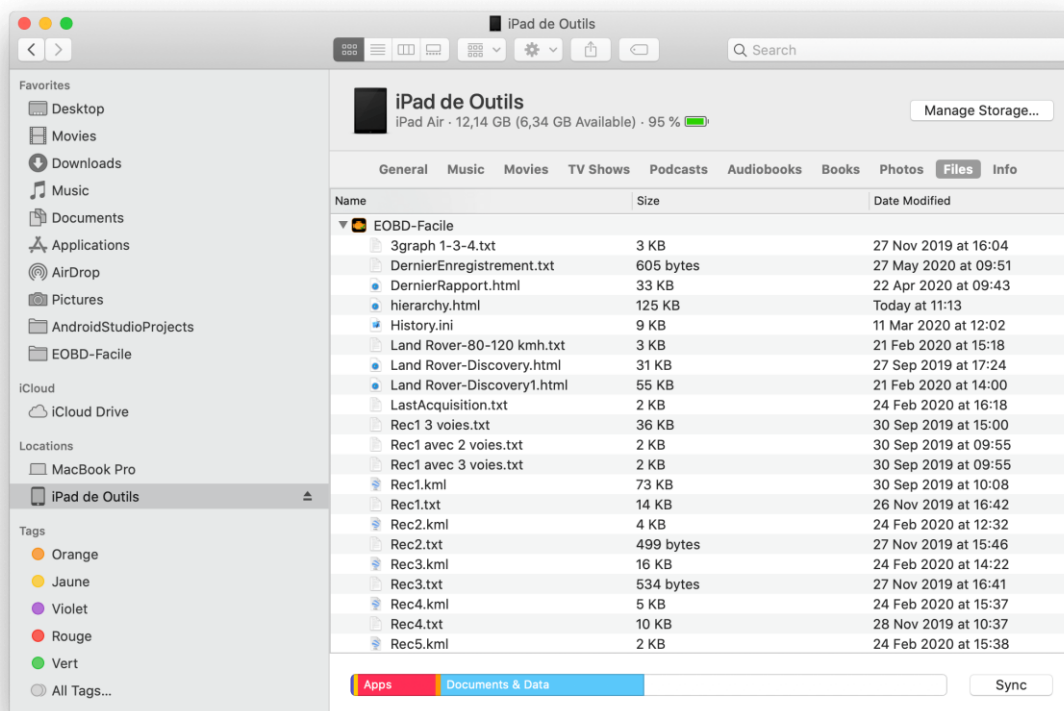
You can record this result by taping on the folder icon at the top right of the screen. A file will be generated with a csv format (like once graphical function). This file can be upload or share (See next chapter).

Notice: The measure resolution will depend of your car, it will start at about 0.10s to 0.25s (from 4 to 10 measures per second).

15. Download record done on your computer with iTunes

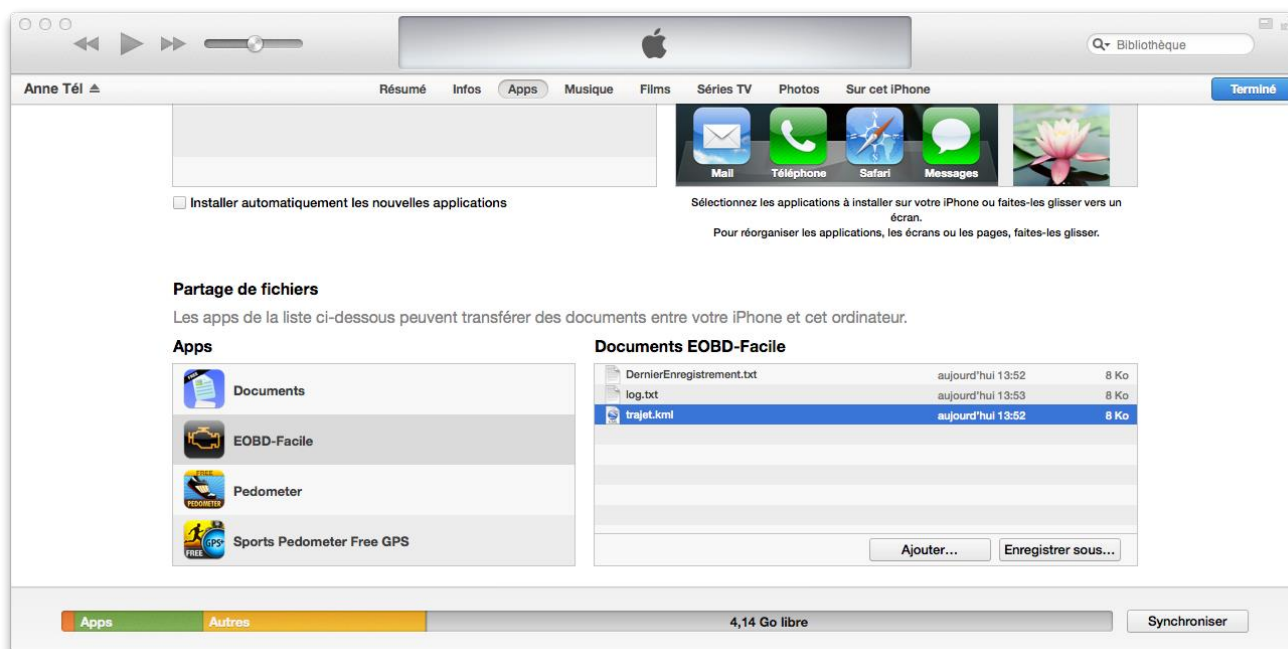
With Finder (From macOS 10.15)

Connect your device (iPhone/iPad) to your macbook and start Finder. A new drive will appear with the name of the device. Go inside the “Files” sheet and open the folder “EOBD-Facile”

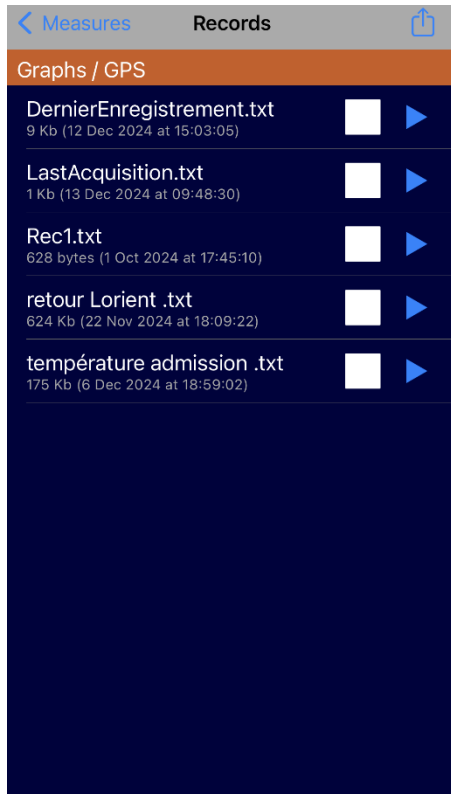


With iTunes (until macOS 10.14)

Connect your device to your computer (MAC or PC) and start iTunes
The file called “trajet.kml” previously created is available inside the « Apps » sheet.
Select the file from the Apps EOBD-Facile.



Within Application



From application, you can use the “Records” screen to manage your records done with the application.

With the action button at the top right of the screen, you will be able

1. Review your records
2. Share your records
3. Rename it
4. Erase records.

17 Select Electronic Unit



Depending on the vehicle you have you can make a diagnostic on several ECUs. You can change the current ECUs you are working on with this icon. Most of the time 2 ECUs are available: PCM (Powertrain Control Module) and TCM (Transmission Control Module).

18 Vehicle's information

Parameter	Value
Protocol	ISO 15765-4 (11 bit ID, 500 Kbaud)
Design OBD requirements	OBD and OBD II
Vehicle Identification Number	VF1SBR7EF32850000
Calibration Identifications	JMB*36761500 JMB*47872611
Calibration Verification Numbers	1791BC82 16E062BE
ECU name	ECM1-EngineControl
Protocol Identification	0

To obtain information about the vehicle and the ECU like protocol, OBD standard, VIN (Vehicle Identification Number).

19 IPT (In Use Performance Tracking)

Metric	Value
OBD Monitoring Conditions Encountered Counts	1024 Count(s)
Ignition Cycle Counter	3337 Count(s)
Catalyst Monitor Completion Counts Bank 1	824 Count(s)
Catalyst Monitor Conditions Encountered Counts Bank 1	945 Count(s)
Catalyst Monitor Completion Counts Bank 2	711 Count(s)
Catalyst Monitor Conditions Encountered Counts Bank 2	945 Count(s)
O2 Sensor Monitor Completion Counts Bank 1	737 Count(s)
O2 Sensor Monitor Conditions Encountered Counts Bank 1	924 Count(s)
O2 Sensor Monitor Completion Counts Bank 2	724 Count(s)

Display all the results of monitoring done during driving cycles.

20 Basic/Plus Edition

Free version of the app allows you to test the compatibility of your vehicle and to read your data trouble codes stored inside Electronic units.

Important Notice: Connection, read and display DTC descriptions work the same way for the Free and the Premium version. If you do not reach to connect your vehicle or you are not able to read DTC, buy the Basic/Plus Edition will not solve your problem.

	Free	Basic	Plus
Connect to vehicle with ELM327	✓	✓	✓
Check Electronic Unit (ECM, TCM, LPG)	✓	✓	✓
Read status of diagnostic	✓	✓	✓
Read DTC (Data Trouble Codes)	✓	✓	✓
Display DTC description	✓	✓	✓
Read Freeze Frames		✓	✓
Diagnose oxygen sensors		✓	✓
Diagnose systems (EGR, PM, EVAP...)		✓	✓
Clear DTC		✓	✓
Consistency			✓
Generate diagnostic report			✓
Save/Load diagnostic from history			✓
Display sensor values (Table)	✓	✓	✓
Display sensor values (Graphic)		✓	✓
Record sensors values (csv files)		✓	✓
Review sensors values inside application			✓
Display sensor values (GPS)		✓	✓
Record sensors values (kml files)		✓	✓
Performance measurement (4 tests)		✓	✓
Performance measurement (8 tests)			✓
Read vehicle identification number		✓	✓
Read IPT		✓	✓
Terminal		✓	✓

Basic/Plus Edition can only be purchased from App Store. Check your internet access before trying to buy.

Remind: When you are connected to ELM327 WiFi interface, you do not have access to internet through WiFi (only GSM is available).

Premium access unlocks all functions describe upper without any limitation in terms of time or number of use. Application update are available for free.

If you own several devices running on iOS, you can use one Basic/Plus Edition on all of them. Once you have bought the Basic/Plus Edition, go to your others devices and perform restoration (Button Restore inside the buy screen). This is also available in case of replacement of your device.

21 Terminal

This function allows to send custom commands to the interface for the ELM module (AT command) or to make specific OBD requests to the vehicle.

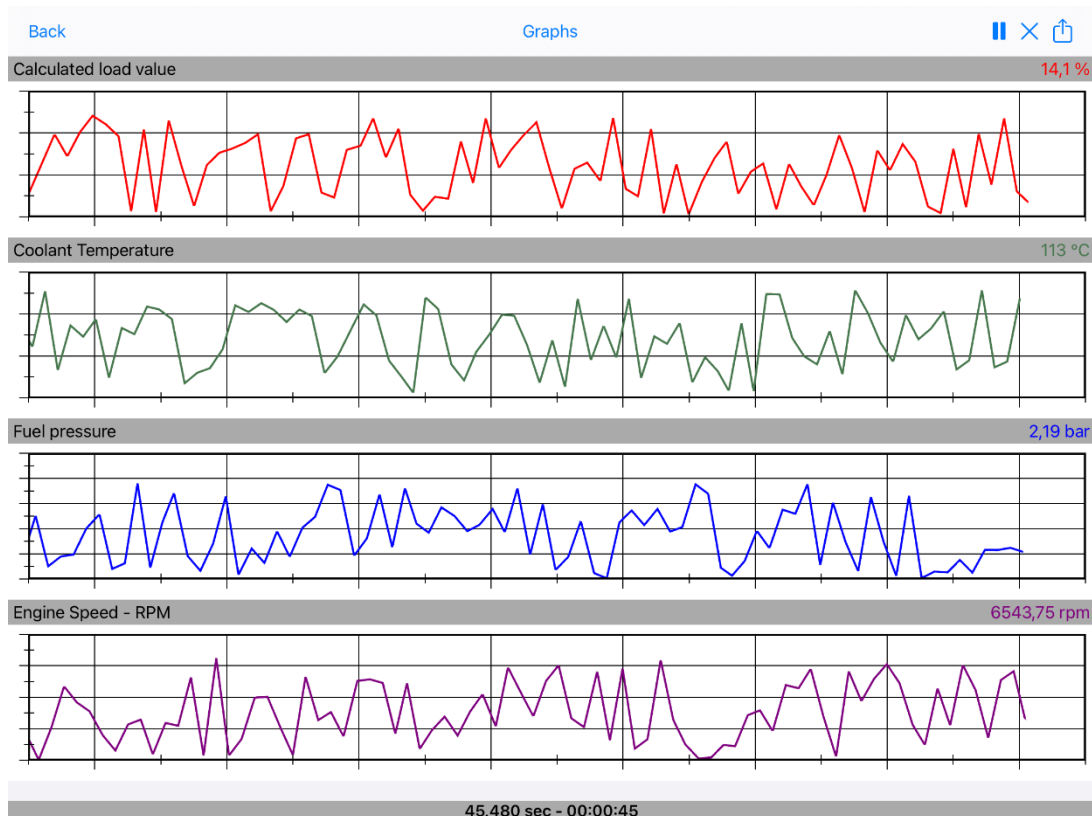
Example: Read the ELM version

- Enter ATI and tap on Send button
- The ELM will display its name “ELM327 v1.4”

For more details on the available commands, see the technical data sheet for the ELM327 interface.

Important notice: Be careful, using this function can create unexpected behavior of the application, please re-connect the vehicle after using it to recover correct synchronization of the application and the ELM327.

22 Ipad



EOBD-Facile works also on iPad. Screens on tablet are even more adapted to display large number of information. Find below an example of how EOBDFacile will display graphs on tablet. All data are available on the same screen.