

User Manual

CarAlgo Solution

Turn your vehicle into a smart car

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1. Introduction

Welcome to the CarAlgo universe.

CarAlgo is a connected solution that transforms your vehicle into a smart car through an OBD-II dongle and a dedicated mobile application.

Our goal is simple:

- Gain better insights into your vehicle's health.
- Improve the safety of your journeys.
- Reduce your maintenance and fuel costs.

CarAlgo is designed for all drivers: individuals, fleet managers, and car enthusiasts.

2. CarAlgo Pack Contents

The standard CarAlgo pack includes:

- 1 CarAlgo OBD-II Dongle (device to be plugged into the vehicle).
- 1 Quick Installation Guide (available online).
- Access to the CarAlgo mobile app (iOS and Android).
- Online technical support.



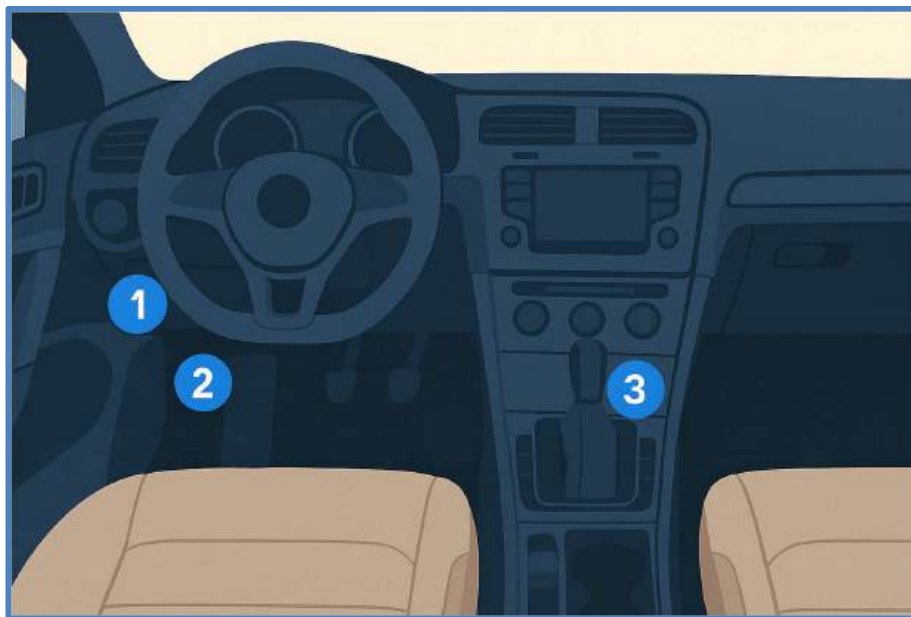
Tip: Before installation, make sure all the items are included in the pack.

3. Installing the CarAlgo Dongle

3.1 Locating the OBD-II Port

The OBD-II port has been mandatory on all European vehicles since 2001 (petrol) and 2004 (diesel). It is usually located:

- Under the dashboard, on the driver's side.
- Sometimes behind the fuse box cover or in the center console.



For more details, please refer to the installation manual available at <https://caralgo.com/manuel-installation> or watch the tutorial video at https://caralgo.com/media/Installation_CarAlgo.mp4.

3.2 Connecting the Dongle

1. Switch off the vehicle's ignition.
2. Remove the protective cover of the OBD-II port if necessary.
3. Plug the CarAlgo Dongle into the port.
4. Check that the blue LED indicator is blinking (on some vehicles, you may need to switch on the ignition to power the Dongle).

3.3 Installation Check

- The Dongle must be firmly connected, without forcing.
- If the indicator light does not turn on, refer to the Troubleshooting & FAQ section.

Warning: Never force the connection when plugging in. If the port resists, check the connector's orientation.

4. Installing and Configuring the CarAlgo App

4.1 Download

Download the CarAlgo app by scanning the QR code below:

- iOS : App Store



- Android : Google Play



4.2 Account Creation

During registration, enter:

- Your email address
- A password
- The Dongle serial number (shown on the label, scannable via the barcode, or included in the purchase confirmation email)



4.3 Pairing with the Dongle

1. Enable Bluetooth on your smartphone.
2. Open the CarAlgo app.
3. Allow pairing when prompted by the app.

4.4 Required Permissions

Location (including background use): Essential for the app to record and display your trips. You can enable Private Mode at any time to disable geolocation.

Bluetooth: Required for connecting the Dongle to your smartphone and collecting vehicle usage data.

Notifications: To receive alerts and important information.

4.5 Vehicle Configuration:

1. Select “Add a vehicle.”
2. The app automatically detects the connected Dongle.
3. The VIN is retrieved and the vehicle identified.
4. Registration details are matched through the national vehicle database.
5. The vehicle is configured with the appropriate dataset.
6. Initial usage data is collected and displayed on the home screen.



5. Note: Once these steps are complete, CarAlgo is fully operational.

5. Daily Use

5.1 Dongle Wake-up and Sleep Mode

To ensure low power consumption (< 1 mA when idle), the Dongle automatically switches to sleep mode when the vehicle is stationary with the engine off for more than 2 minutes.

It wakes up when it detects:

- Movement via the accelerometer
- CAN communication
- Engine start

5.2 Connection

- When the Dongle wakes up, it automatically connects to the app, even in the background.
- You do not need to open the app for each trip.
- If the smartphone is absent or turned off, the Dongle stores the data locally and synchronizes it at the next connection.

Important: The Dongle does not include a GPS module. Trip geolocation relies on the smartphone. Without the smartphone, trips will still be recorded, but only with the available vehicle data (distance traveled, fuel consumed, start/end date and time, driving and eco-driving scores).

5.3 Start of the Trip

The trip begins when vehicle movement is detected with the engine running.

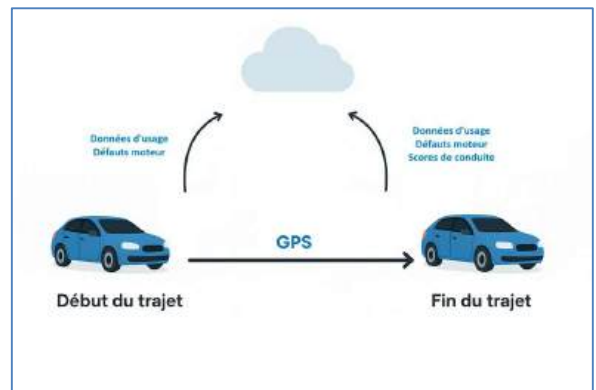
At the start of the trip, the Dongle:

- Collects usage data included in the dataset
- Performs a vehicle diagnostic
- Sends the data to the app, then to the Cloud for analysis

5.4 End of the Trip

At the end of the trip (extended stop, engine off), the Dongle:

- Collects the final usage data
- Performs a vehicle diagnostic
- Calculates driving and eco-driving scores
- Sends the data to the app, then to the Cloud for analysis



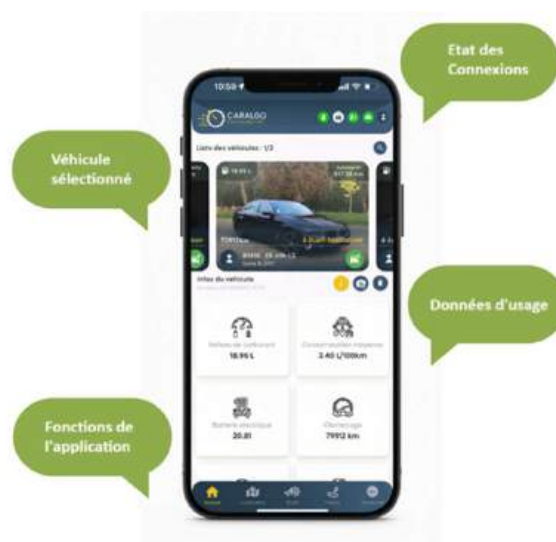
5.5 Application Screens (Overview)

The CarAlgo app includes 5 main screens:

- Home (Dashboard)
- Location
- Tools
- Trips
- Profile & Settings

5.6 Home Screen (Dashboard)

The app can manage multiple vehicles. The home screen displays the dashboard of the selected vehicle. A horizontal swipe allows you to switch from one vehicle to another.



Note: Each vehicle must have its own Dongle. A single Dongle cannot be paired with two vehicles at the same time. However, it can occasionally be used to diagnose another vehicle without going through the full installation process.

Main Icons and Status Indicators

	Enabled	Disabled
Privacy Mode		
CAN Communication (Dongle ↔ Vehicle)		
Bluetooth Communication (Dongle ↔ Smartphone)		
Smartphone ↔ Cloud Connection		

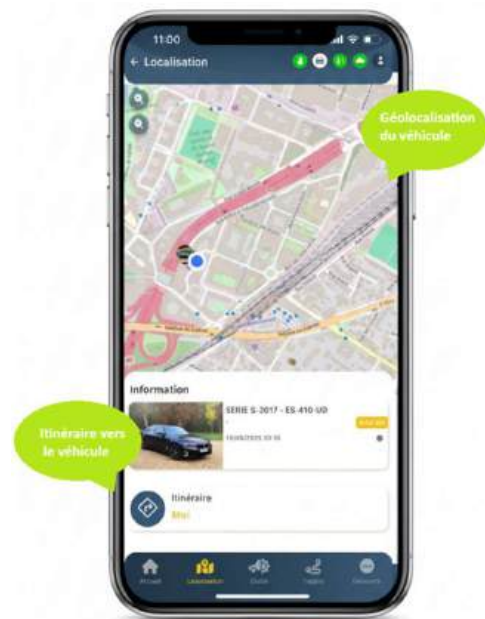
Displayed Elements

- Vehicle usage data as listed below:

Mileage 65 320 km	Fuel level 12 litres	Maintenance due 23 jours
Battery level when stopped 12,5 V	Battery level while driving 13,4 V	Electric battery 35%
Average consumption 6,5 L/100km	Driving score 73%	Ecodrives score 81%

5.7 Location Screen

Allows you to locate your vehicle on the map and get walking directions to reach it.



5.8 Tools Screen

Available features

1. Add a Vehicle: Dongle detection, serial number verification, VIN reading, registration data retrieval, dataset association, and collection of usage data.
2. Fuel Refueling List: Automatically detected by a significant change in fuel level between stop and restart; records date/time, volume added, price per liter, station, and its location.
3. Real-Time Usage Data Reading: The app queries the vehicle via the Dongle (Bluetooth → CAN) to display live values.
4. Telemetry: Export of an Excel file with 100 ms sampling (multiple parameters and vehicle accelerations).
5. Documents: Storage of invoices and vehicle-related documents.
6. Diagnostics (DTC): Reading and clearing engine fault codes, with their meaning.
7. Firmware Update: Updates the Dongle's firmware (new features, fixes).

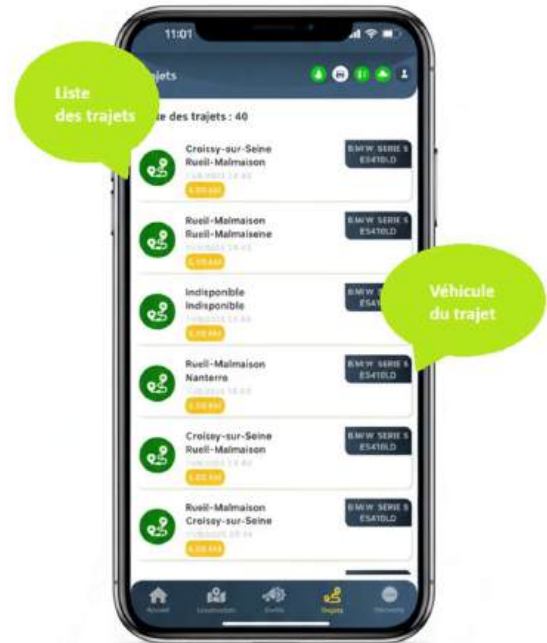


5.9 Trips Screen

Chronological list of trips including:

- Vehicle used for the trip
- Departure location
- Arrival location
- Date/Time
- Distance

***Tip:** If the smartphone was not present during the trip, the departure and arrival locations may be shown as “Unavailable.” However, the vehicle data is still recorded.*



5.10 Profile & Settings Screen

Available functions:

- Profile: User's first name, last name, email, account deletion
- AI Algorithms: Enable/disable eco-driving score, road type, and driving score
- Registered Devices: List of Dongles, serial numbers, model, and associated vehicle
- Language: Select the application language
- Support: CarAlgo support email address and app version
- Logout

***Note:** This screen also allows you to add your photo.*



5.11 Notifications

Types of notifications:

- Fuel Refueling Detection: Automatic detection of fuel level change, recording of date/time and station geolocation. A notification prompts you to enter the amount paid and confirm the number of liters.
- Shock Detection (vehicle stationary): Even in sleep mode, the Dongle detects significant movements. The date/time of the impact are recorded and notified at the next connection.
- Engine Fault Detection: DTCs are read at the beginning and end of each trip.
- Low Battery or Battery Replacement Alert: Diagnostic performed at each engine start.
- Inspection Reminder: Notification at D-30 and D-10 before mandatory technical inspection.
- Maintenance Reminder: Notification at D-30 and D-10 before scheduled maintenance (oil change, filters, etc.).
- Fuel Overconsumption Detection: Alert in case of abnormal variation (e.g., underinflated tires, clogged air filter, injection issues, etc.).



6. Troubleshooting & FAQ

The Dongle does not power on

- 1- Make sure the Dongle is firmly inserted into the OBD port.
- 2- Check with the engine running.
- 3- Verify that the LED indicator is not disabled in the app.
- 4- Test on another vehicle.

Unable to connect the app via Bluetooth

- 1- Ensure you accepted the pairing request.
- 2- Check that Bluetooth is enabled on your smartphone.
- 3- Reset Bluetooth and restart the app.

Tip: Restarting your smartphone often resolves Bluetooth pairing issues.

Unable to connect the app to the Cloud

1. Check that mobile data or Wi-Fi is enabled on your smartphone.

7. Safety and Precautions

Always follow your vehicle manufacturer's safety instructions.

Never handle the device while driving.

The Dongle must remain firmly connected, without forcing.

8. Support and assistance

support@caralgo.com
www.caralgo.com