

# OBD Comfort Modul (OCM) manual

## Bluetooth version

### **v0.7.5**

Opel (Vauxhall) Astra H & Zafira B

By using the module, its user acknowledges that the OCM module can only be fitted to Opel Astra H or Opel Zafira B cars, adding additional convenience and functions to the car's factory capabilities. The module does not have an official permit, therefore we recommend its use only on a road closed to traffic, at your own risk. The manufacturers of the module will use their best endeavors to ensure that the basic operation of the vehicle is not adversely affected by the operation of the vehicle, but it cannot be ruled out that the module will adversely affect the driving experience under certain conditions.

# 1 Beszerelés és indítás

**ATTENTION!** It is strongly recommended to remove the OCM module when the car is switched off before servicing the car, especially if the battery is disconnected!

## 1.1 Installation steps

As a first step, **make sure the ignition key is off!**

### Opel Astra H

- Remove the cover under the parking brake (the panel is held towards the rear seats by two snaps, these must be snapped out and the cover can be removed)
- Properly position the device box (there is a suitable cavity in the direction of the parking brake and the shift lever)
- The 16-pin connector must be connected to the car's factory service connector. Pay attention to the shape of the connector, it can only be connected in one way (trapezoid).
- After connection, the plastic cover can be placed back (place the gear lever end first, then snap the patches back)

Alternatively, the module can be placed in any suitable part of the car where GMLAN, + 12V and ground cables are available. To do this, please consult a car electrician.



### Opel Zafira B

- After opening the cover under the gearbox, the service connector is accessible on the center console.

- The housing of the device does not fit between the connector and the plastic cover, the easiest way is to remove the plastic from the PTO box cover, snap the OBD connector and place it in the PTO box together with the cable. The housing of the OCM module can now be accommodated.

For alternative solutions (eg installation behind the central display, etc.), consult a car electrician.



## 1.2 Phone APP

The Android phone app is accessible at Google Play Store, but the link is available in the product website ([www.ocmhungary.hu](http://www.ocmhungary.hu)), or by scanning the QR code from the OCM box.

Notes:

- The APP works on Android 6+ phones and tablets, uses a portrait screen, required permissions are „Bluetooth” and „GPS location” (to draw the map)
- The APP does not transmit any information about either the user or car data.
- Bluetooth communication works stably while sitting in the car. Under ideal conditions, the connection between the APP and the car can be up to 30 meters away, but this is greatly affected by landmarks and other disturbing radio broadcasts

## Security, Bluetooth pairing

The basic functions (eg OPC clock sweep) and settings take effect the next time the ignition is switched on, there is nothing to do with them. However, for security reasons, there are two steps left:

### 1. Pair your phone with the Bluetooth receiver

The OCM module can be found as "OCM4" in the phone's finder (this cannot be changed)

## the default PIN code is 9876

Changing the PIN numbers is not possible, because this Bluetooth „authentication“ is not an acceptable solution nowadays. The Bluetooth protocol let the client to do infinite number of tries and the PIN code is a 4 digit number so we rather created a more sophisticated solution. The PIN authentication is mandatory for the communication, though. So, as the first step, please do the pairing with the Bluetooth receiver.

### 2. Pair the APP with the OCM module

In order to avoid that one could connect to any OCM modules, the first time the user need to prove that they are sitting in the car.

1. Please get in the car, turn on the ignition and start the APP. The APP may ask you to turn on Bluetooth. Then follow the instructions in the APP (step on the brake pedal then release).
2. The phone APP and the OCM module that is connected to the car, are exchanging a custom key for the secure communication.
3. The car's settings and data are automatically transferred to your phone. You only need to repeat the above procedure when replacing your phone or re-install the APP.

#### Remark

In the following parts of the document, if the ⓘ symbol appears in the title description of a function, that function can be customized using the telephone APP (and requires BT module, obviously).

## 2 Basic functions

### 2.1 Display temperature, charge, speed



The desired data is shown on the display that normally shows the odometer and the daily counter.

You can toggle between the functions by turning the volume key on the steering wheel up and down (the scroll key must be up and down within half a second).

Of course, the volume up and down buttons perform their original function as well.

Available displays:

#### 1. Engine temperature display

The engine temperature is displayed continuously unless other alarm conditions occur (eg battery charge is too low or too high).

The display shows Cxx\* or Cxxx\* (depending on whether the temperature is below or above 100 degrees) or Fxx\* (for negative temperatures, eg. during a cold start in winter), where x is the engine temperature in degrees Celsius.

#### 2. Battery charge display

The battery charge status (the voltage charged by the generator) is displayed continuously, unless other alarm conditions occur (eg. the motor temperature is too high).

The display shows Axxx\*, where the first two digits show the integer and the third digit shows the fraction part, eg. A138 = 13.8V.

#### 3. Speed display

It is also possible to display the current speed in digital form. Its appearance is 000xxx, where x indicates the current speed. You will see this continuously if no alarm condition occurs.

Note: If the speed function is displayed and you press the mode selection, you will see "OFF" for approx. For 5 seconds, which indicates that the extra functions are switched off, the factory status (total km and daily counter) is displayed.

#### 4. Factory display („OFF“)

The car's factory display shows the total mileage and daily odometer.

\* Some MY2004 cars' odometer is not capable of letters display, therefore it is possible that the "C" is replaced by "12" And instead of "A" "10" is displayed.

## 2.2 Alerting

### **Engine high temperature alarm** ⓘ

When the motor temperature reaches the set maximum limit, the alarm is triggered automatically. In this case, the display always shows the motor temperature, the function cannot be changed until the motor temperature has returned below the set maximum value.

An audible signal is also activated when the limit is reached (upwards), the audible signal can be acknowledged with any steering buttons. The next time the alarm sounds, the temperature returns to the normal range and then meet the upper threshold again.

It's the Owner's task to know the opening temperature of the thermostat to avoid false alarms. The maximum temperature value is pre-set in the OCM module software, please adjust it accordingly. The display shows the "normal" Cxxx value.

The default is 112 degrees for gasoline engines and 105 degrees for diesel engines, but can be set to 90-115 degrees in the app (or can be turned off completely).

### **Engine warm-up monitor** ⓘ

An optional function is the engine warm-up monitor. This is just an estimate. After the cooling water temperature reaches the appropriate temperature, the module waits for 6 minutes, expecting the oil also warmed up sufficiently. Then it beeps and flashes the cooling water temperature for 5 seconds in the standard Cxxx format. This gives an estimate of the total engine warm-up, but is not a guarantee.

The "appropriate temperature" depends on what is set for the high temperature alarm. If you set the high temperature alarm to 110 degrees or higher, the warm-up reference will be 80 degrees, otherwise it will be 70 degrees. If you turn off the high temperature alarm, you can still use the warm-up monitor, it will work according to the latest setting.

### **Battery charge monitor is too low or too high**

If the charge drops below 13.2V or rises above 14.6V at any time with the engine running, the display automatically switches to the battery charge screen (silent alarm). The function change is not possible until the charge returns to normal (then the originally set function will be restored).

This type of alarm does not emit sound.

### **Security package** ⓘ

When switched on, it warns you with a short horn signal when one of the doors is open and the car is locked with the remote control (works with cars with REC modules). When the alarm sounds, the windows will automatically close (only in cars with factory alarm).

## 2.3 Kényelmi funkciók

### **Volume helper** ①

It “amplifies” the effect of the steering wheel volume keys (approximately doubles each keystrokes), meaning you can increase or decrease the volume of the headunit faster.

If the volume helper is active, the volume is decreased by 10 unit in case of a reverse gear, in order to help the Driver to hear surrounding noises and park radar signal. Only available for Bluetooth module.

### **OPC „pointer sweep”** ①

Like in the OPC cars, all the icons in the clock group flash when the ignition is switched on, and the speed, RPM and fuel level indicators "sweep" to the right as a visual element.

An alternative (“Noon”) is for the indicators to stop at the “dawn point” for a moment (can be set via Bluetooth).

### **Reversing functions** ①

When the car is in reverse, the center brake light flashes, draw the attention of the passers-by to the reversing vehicle. When you step on the brake, the flashing stops and the center brake light comes on continuously together with the other two rear brake lights (same as the original function).

This function only works for cars with a REC controller.

### **High beam blink functions** ①

In the event of a reflector flash, the module will also flash the fog lights if the car has a fog lamp. Only available with REC module cars.

You can also choose a short light play, in which case it is enough to pull the high beam blink lever briefly, the car will show a small light play.

An optional combination is also possible, in which case below 50km/h speed the fog light flashes and above 50km/h the light play is executed.

### **Gearshift assistant** ①

When the selectable speed value (1500 - 3000) is reached, the child airbag icon will flash to warn of switching on. The warning disappears when the set value is reached + 300 rpm.

### **Speed door lock** ①

When switched on, the doors close automatically when the car reaches 20 km/h and open when the ignition key is removed. Higher-equipped cars have a similar function, please use either the factory or OCM function, but not the two together!

The function can also be activated or deactivated by pressing the central locking open-close button twice within one second on the center console.

### **Lightfun, follow-me-home and welcome light** ⓘ

Using the remote key to open and close the so-called Lightfun (light play) function can be selected (see opening and closing functions later). The lights are fully customisable with the help of the phone APP (you can even adjust the flashing and switching off of the lights one by one).

A home or welcome light can also be assigned to open and close. The user-defined lights illuminate the specified time (10-20-30 seconds, separately adjustable for opening and closing), providing ambient lighting in a dark place to help you approach or leave the car. All index lamps, park lights, front dipped beam + rear brake lamps, or fog lamps + rear brake lamps can be lit in this case.

### **Daytime Running Lights (DRL)** ⓘ

The Vauxhall Astra H / Zafira B is able to do some DRL functions, but setting these is a bit inconvenient and not all combinations are possible. The OCM module can „simulate“ a DRL, so when the park lights are off, it switches on the front fog lights and if the head lamp / park light turns on, the front fog lights will be switched off. (Certainly, if the Driver switches on the fog lights by the dash switch, it takes precedence.)

## **2.4 (Remote) Opening, Closing**



If the car is opened from the remote control, the module records the number of keystrokes and offers added functions accordingly.

The number of openings should not be interpreted within a given time. For example, if you press open and then again after 5 minutes, OCM will take this as 2 openings. By default, if you press close after opening or open after closing, counting starts again from 1.

The car's factory functions are not affected by the set value (eg. alarm, door locking, comfort window movement).

The following functions can be assigned to any number of open events:

- None (only the car's factory functions work)
- Lightfun 1 (user adjustable light play)
- Lightfun 2 (the optional light play for high beam flash)
- Windows down
- Side indexes light up for approx. 5 seconds
- Short horn signal
- Trunk opening (depends on equipment level of the vehicle)

- Welcome light

The following functions can be assigned to close events:

- None (only the car's factory functions work)
- Lightfun 1 (user adjustable light play)
- Lightfun 2 (optional light play for distance flash)
- Windows up
- The side indexes light up for approx. 5 seconds
- Short horn signal
- Follow-me-home (goodbye) light

## **H Astra TT (cabriolet)**

For Astra H TT cars the remote „double click” is available. „Double click” means two consecutive push of the open or close button on the remote, minimum 0.5 seconds and maximum 1.5 seconds in between. With the double click, the roof can be opened or closed without the need to continuous push of the buttons.

# **3 Using the Android APP**

## **3.1 Startup**

By default, the APP does not automatically connect to the OCM module at startup. If you see "Not connected" and the "Connect" button in the upper left corner, the phone is not connected. Press the "Connect" button. After a short time (the phone may take a few seconds to detect nearby BT devices), a list will appear with a good chance that only one "OCM4" can be selected. Please select to connect to the OCM. If the list is empty, you may need to get closer to the car or turn on the Bluetooth feature on your phone. If you have successfully connected to the OCM at least once, you can select the "Auto" slider instead of the "Connect" button, from that point the APP will always try to connect automatically. Note: If you use the Auto function and the OCM is not available, the APP (not the phone) may become very slow, so use this function with caution.

## **3.2 Basic usage**

Car data is displayed at start-up. The validity of the displayed data depends on the last time the APP was connected to the car (the data will not be updated if you have not connected the phone), the date of the last update will be displayed on the screen. The APP sync the settings data in every 10 minutes, while the engine data is sent in approx. Every 10 seconds if the engine is running. Data sync can be initiated manually by pressing the small button next to "Data". (The last sync time should update in a few seconds). If GPS and Internet is available at the time of the last synchronization, the last position of the car is also displayed on the phone on a map.

Some data is also updated in real time (within Bluetooth range if connected): Door status, ignition and parking brake status. So if the phone is connected when you leave the car, you can see later if the doors were closed, the parking brake was set etc.

## **Displayed data**

Above the image of the car, the custom name is displayed, below it is the fuel level, the charge status and the last status of the doors.

Below the data panel contains:

- Time of last data exchange
- Ignition status
- Doors condition
- Outside temperature
- Odometer
- Fuel level (% or liters)
- Battery voltage
- Parking brake status
- The GPS position of the car on the map

Additional settings can be accessed using the icons at the bottom of the screen. These are:

- Car Icon - Main Page
- Map icon - Shows the automatically recorded distances taken (TEST version!)
- Gear - Customize the OCM
- Lamp icon - Open the Lightfun editor

## **3.3 Trip data**

Click on the icon to view travel information. These are automatically collected by OCM using the following method:

- At the start of the car, it will check how much time has elapsed since the previous key was removed. If more than an hour has elapsed, a new trip begins, otherwise the previous trip is continued
- Upon pulling out the car key, the trip is pause
- Trip data is sent to to the APP during data sync
- Recorded data: Date / time, km clock position and petrol level gauge position. Very small (<1 km) trips are not recorded. If the car's internal time is set incorrectly, it will show incorrect date values.
- Upon refueling, the trip is closed any way

## **3.4 OCM settings**

By clicking on the gear icon, you can display 4 sub-screens by clicking on the turquoise labels.

### **Basic settings**

- High Temperature Alarm: Never or between 90 and 115 selected value
- Warm-up monitor

- Pointer Sweep: None, OPC, Noon
- When reversing: Flashing center brake light, Extra light, or both
- For light horn: Also fog lights, Light play 2, Both
- Shift Assistant: None / values selected from 1500 to 3000
- Volume helper
- Security package
- Speed-lock doors

### **(Remote) opening and closing**

Functions that can be assigned to the first-second-third opening and closing.

### **Light settings**

- Welcome light (opening) duration: 10, 20 or 30 seconds
- Duration of home light (closing): 10, 20 or 30 seconds
- Type of greeting and escort: Index, position indicator, dimmed, fog light

### **App settings**

- Car Name: Any name that appears on the main screen
- Fuel tank size: If specified, print fuel values in liters, otherwise as a percentage

## **3.5 Lightfun Editor**

Accessible by tapping on the „lamp“ icon.

### **Listing & Sending**

- By default, we see a list to choose from and send to the car, from there the car will play a new „Lightfun 1“. Of course, the user can also create their own light plays, which will also appear in the list.
- The “x1” button sets the number of repetitions, meaning that the car can play a set of light play more than once. This must be selected before "Send 1" and then press "Send 1".
- **The "Default" button will clear the user's own list and only OCM's own list will be displayed again. Attention, the button does not ask for confirmation!**
- Clicking the "New" button will bring up the editing interface.

### **Create your own Lightfun (custom light play)**

- The buttons corresponding to the lights are shown at the bottom. When they are pressed once, they become colored, which means that they are selected. Select all the lights you want to see lit at once and press the "Add" button. The selected row (or rows) will be added to the list. The resolution of the light play is 0.2 seconds. If you want to flash a lamp longer than this, add it to the order list several times.

Pro tip: Close each Lightfun with an “empty” line, eg. do not select a light and press the “Add” button. Without it, the last selected lights will continue to light for about 4-5 seconds.

- You can delete it from the list by selecting a row and clicking the "Remove" button. Press the button repeatedly to delete items before the last deleted item (no selection required).
- Use the "Save" button to save the Lightfun playbook under a new name, or overwrite an existing one if you re-enter the same name. It will then be added to the list and sent to the car.
- The "Close" button hides the editing interface. But until you close the APP, you can return to the editor, the order list will only disappear when you close it.
- An already saved Lightfun „playbook” cannot be re-edited.