14) Programming the wheel circumference for the speed function : **WHEEL CIRCONF**
• 'Mode Control' increases the circumference of 1cm. After 230 cm, it returns to 140 cm
In order to measure correctly the circumference of a wheel, push the car so that the wheel makes a complete turn and measure the displacement on the ground : It's the circumference to program

---

16) Programming the fuel gauge : **FUEL PROG xx L** where 'xx' is the step (in liters) to program.
'Mode Control' memorizes the step displayed with the current 'lsb' value read by the processor.
The step 'xx' goes from 00 (empty tank) to 60 (maximum capacity) by steps of 04 liters.
The 'lsb' value must go from 220-200 (empty tank) and decrease to 150-130 (full tank)
A value of 255 lsb indicates an error of measurement : gauge misconnected or bad ground…
• **Empty** the tank **completely** for the 00L step and be sure that FUEL PROG 00L is displayed
• **Pulse** on 'Mode Control' memorizes this first step of 0 liters

• **Pulse** on 'Change Page' to pass to the next step : 4 liters. FUEL PROG 04L is displayed
• **Add** 4 liters in the tank
• **Pulse** on 'Mode Control' memorizes this step of 4 liters

• **Pulse** on 'Change Page' to pass to the next step : 8 liters. FUEL PROG 08L is displayed
Etc… until you cannot add any fuel in the tank because it is full.

• **Memorise** all the steps from your full tank up to 60L without adding fuel

Then, Push on 'Mode Control' during 1 second to save parameters and exit from config.

---

17) Programming the gear box indicator : **GEAR PROG y** where 'y' is the gear to program
'Mode Control' memorizes the engaged gear with the current value 'lsb' read by the processor.
The gear 'y' goes from 'R' (reverse), to 'N' (neutral) then from 1 to 7
The 'lsb' value must go from 0-5 (in reverse) and growing up to 170 (in 5th or 6th or 7th gear)
A value which stays always at 0 indicates a box sensor misconnected or not powered…
• **Engage reverse gear** when GEAR PROG R is displayed (engine must be stopped)
• **Pulse** on 'Mode Control' memorizes this reverse gear

• **Pulse** on 'Change Page' will display GEAR PROG N
• **Place the gear box in neutral**
• **Pulse** on 'Mode Control' memorizes the neutral

• **Pulse** on 'Change Page' will display GEAR PROG 1
• **Engage the 1st gear**
• **Pulse** on 'Mode Control' memorizes the 1st gear

Etc… until the last gear of your gear box…
• **Memorise** the 6th and/or the 7th gear even if they don't exist on your gear box with your last engaged gear.

Then, Push on 'Mode Control' during 1 second to save parameters and exit from config.

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INSTRUCTIONS MANUAL for dashboard MOD7 Evo1

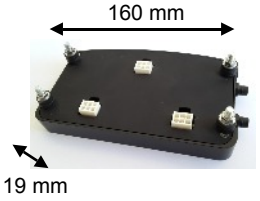
Thank you for purchasing this instrumentation MOD7CE® for your racing car.
We hope you will be pleased to advise you about …
You are eager to try it, so jump to page 3 to begin installation.

This dashboard **MOD7 Evo1** is the first dashboard for racing car in the world which has been defined in consultation with subscribers of the Facebook page 'MOD7 RACING'.
It fits to the needs of the users who voted.
We hope that it will correspond as well, to your requirements !

Package contents for dashboard MOD7 Evo1 :

• 1 **Dashboard MOD7 Evo1** equipped with 4 anti-vibrations pads fixing
• 2 Harnesses with a 6 way connector
• 1 Steering wheel button twisted harness with a 4 way connector
• 1 Speed magnetic sensor + 1 magnet
• 1 Instructions manual

Technical Specifications of the Dashboard MOD7 Evo1 :



350grs

Using range : 0°C --> 70°C

Sealing : no

Volts Voltage : 10v --> 15v

Conso : 2,8W (@ 14volts)

Spark plugs with resistance

- **Maximum values :** Memorizes the maximum values of all functions (except gauge)
  Displays them after the engine shutdown. Possible recall of these max valuers at power on

- **Tachometer** (main function always displayed)
  Bargraph format from 800 to 9000 rpm with a rectangle for 200 rpm
  Digital display from 0 to 9900 rpm with 100 rpm accuracy
  Coefficient divider for the rpm pulses of the ECU : 1, 2, 3 or 4
  Programmable red zone for the bargraph from 4600 to 9000 rpm

- **Shift Light** with 5 leds : green x2, orange x1, red x2
  Sequential turn on and then flashing when all are lighted
  Each led can be programmed to turn on from 3000 to 9900 rpm with 100 rpm accuracy
  3 operating modes : 5 leds (all), 2 leds (only the red ones) or 0 led (inhibition)

- **Engine water Temperature** (main function always displayed) from 0 to 140°C (+/- 2°C)
  Uses the original sensor of the car. May use a CTN sensor from MOD7 (option)
  Possible adjustment of the displayed value from -30°C to +30°C
  Programmable alert (Orange led AL1) from 70 to 120°C

- **Engine oil Temperature** from 0 to 150°C (+/- 5°C)
  Uses the original sensor of the car or a VDO sensor (not supplied)
  Possible adjustment of the displayed value from -30°C to +30°C
  Programmable alert (Red led AL2) from 100 to 140°C

- **Engine oil Pressure** from 0 to 9.0 bars (+/- 0,1 bar)
  Uses a 10 bars VDO sensor (not supplied) or may use the original sensor of the car…
  Programmable alert (Blue led AL3) from 0.0 to 2.0 bars

- **FUEL GAUGE** (Displayed on the road page in 3 functions mode)
  You need to choose between Fuel Gauge or Gear Box Indicator (same processor input)
  Uses the original gauge of the fuel tank. Programmable by step of 4 liters

- **GEAR BOX INDICATOR** (main function always displayed in 2 functions + GBI mode)
  You need to choose between Gear Box Indicator or Fuel Gauge (same processor input)
  Read the potentiometric rotative sensor or the sequential gear box
  Programmable for gear 'R', 'N' and from 1 to 5, 6 or 7

- **SPEED** up to 400 km/h with 1 km/h accuracy
  Takes information from an 'Ils' sensor, switched by a magnet (all supplied)
  Programmable wheel circumference form 140cm to 230cm

- **Color 4.3" TFT screen with programmable home message**
  Choose between day mode (white background) or night mode (black background)

- **Led Alert :** 'STOP' (Red) : connected to the low oil pressure sensor of the engine

SETTINGS of the dashboard MOD7 Evo1 :

When you turn the contact on, the **dashboard MOD7 Evo1** generates an initialization sequence : The display turns on after 4 sec, the bargraph goes up and then down while trying the 5 leds of the Shift Light, your message is displayed during 2sec, then the different functions are displayed.

At this moment, as the engine is stopped, you can access to the 'Config' menu :
- **Push and Hold during 1sec** the 'Mode Control'.
  A blue rectangle named 'Config' appears, with the 1st function to be configured and its value.

General action on the 2 buttons while in 'Config' mode :
- **Each short press** on the 'Change Page' button passes to the next parameter
- **Each long press of 1 sec.** on the 'Change Page' button returns to the previous parameter
- **Each short press** on the 'Mode Control' button increases the value of the displayed parameter
- **A long press of 1 sec.** on the 'Mode Control' button exits from 'Config' and saves parameters

1) Choose between Fuel Gauge / Gear box indicator : **FUEL=01 GBI=02**
- 'Mode Control' changes 01 to 02 et vice versa.
  01 will allow you to program and display the fuel gauge (see paragraph 16)
  02 will allow you to program and display the value of the gear box (see paragraph 17)

2) Programming the beginning of the red zone of the bargraph : **RPM ZONE ROUGE**
- 'Mode Control' increases the value of 100 rpm. After 9000 rpm, it returns to 4600 rpm

3) to 7) Programming the rpm turn on values for leds 1 to 5 : **RPM SHIFT LED1, 2, 3, 4 or 5**
- 'Mode Control' increases the value of 100 rpm. After 9900 rpm, it returns to 3000 rpm

As each led has its own rpm turn on value, select a gap of 100, 200, 500, 1000 rpm between 2 leds

8) Programming the adjustment value for water temperature : **ADJ WATER TEMP**
- 'Mode Control' increases this value of 1°C. After +30°C, it jumps to -30°C and then go to 0°

Before modifying this value : (in normal run mode), you have to run the engine until the fan triggers. At this moment, read the water temperature on the dashboard screen and compare it to the value given in the specifications of your car and calculate the gap to program the adjustment value. Examples : If the normal trigger value of the fan is 92°C and if the dashboard displays 84°C, you must set an adjustment value of +8°C. If the dashboard displays 105°C, you must set -13°C

9) Programming the Alert 1 led (red) : **ALERT WATER TP**
- 'Mode Control' increases the alert value of 2°C, After 120°C, it returns to 70°C

Program this alert from 8 to 10°C above the trigger temperature of the fan of the coolant circuit

10) Programming the adjustment value for oil temperature : **ADJ OIL TEMP**
- 'Mode Control' increases this value of 1°C. After +30°C, it jumps to -30°C and then go to 0°

This value depends on your sensor, your oil and your car. Drive a little before changing it

11) Programming the Alert 2 led (orange) : **ALERT OIL TEMP**
- 'Mode Control' increases the alert value of 2°C, After 140°C, it returns to 100°C

Program this alert from 10 to 15°C above the normal oil temperature

12) Programming the Alert 3 led (blue) : **ALERT OIL PRES**
- 'Mode Control' increases the oil low pressure value of 0,1 bar. After 2.0 bars it returns to 0

As this warning led is independent of the 'STOP' warning. Try to program it near 1,2 or 1,5 bars

13) Programming the tachometer coefficient : **RPM PULSE NB**
- 'Mode Control' increases the value from 2 to 3, then from 3 to 4, then returns to 1, …

Program to 01 if the rpm value is too low with 02, 03 is for a 6 cylinders, 04 is for a V8 engine… The 02 coefficient is normally used to divide by 2 the number of pulses from ECU for the tachometer

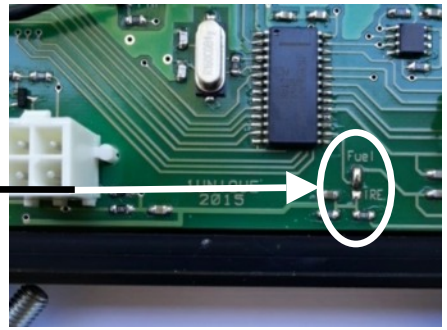
FUEL GAUGE or GEAR BOX INDICATOR (GBI) :

The **dashboard MOD7 Evo1** is able to display either the remaining fuel quantity or the engaged gear.
Note : Factory setting is to display the fuel gauge function, except if you've personally asked us for the activation of the gear box indicator function…

If your car is not equipped with a sequential gear box, the gear cannot be displayed
If your have already a separate GBI for your gear box, then use the fuel gauge function
- **Isolate** the brown wire coming from the connector 2 as well as the brown and black wires coming from connector 3 (because they do not serve anyway)
- **Connect** the GREEN wire to the cursor of the gauge in the fuel tank .

In order to display the engaged gear of your sequential gear box on the **MOD7 Evo1** :
(In this case, you cannot use the fuel gauge function) :
- **Isolate** the green wire normaly used for the fuel gauge (because it will not serve)
- **Verify** if the gear box potentiometric sensor is already powered (or not) :
  - **Verify** (while contact is on) with a multimeter that it receives the ground at one end and a +5v at the other end. In this cas, **Isolate** the brown and black wires coming from connector 3 (because they do not serve))
  - If not supplied in +5v, **you must remove** all the wires on the gear sensor. Then, **Connect** the BROWN wire (dashboard +5v output) and the BLACK wire (ground) of the dashboard to the 2 opposite terminals of the gear sensor (scheme on page 4).
- **Turn off** the contact and **Connect** the BROWN wire coming from connector 2 to the output of the gear box sensor.

If you've asked us for the activation of the GBI function when you've ordered the dashboard, you've nothing else to do, ortherwise :
- **Open** the dashboard **MOD7 Evo1** by removing the 4 'silentblocs' and the 2 M3 screws.
- **Locate** the 'jumper' (see the right picture) and slide with a soldering iron, the solder bubble from 'Fuel' to 'IRE'
- **Close** the case of the dashboard **MOD7 Evo1** with its 2 screws and 4 fixation silentblocs.



INSTALLATION of the SPEED SENSOR : (see diagram on page 4)

- **Paste** the cylindrical magnet on the half-transmission shaft near the gearbox output. **Use** a good epoxy glue and even a non-metallic clamp.
- **Install** the 'PLA' speed sensor on an aluminium bracket (don't use steel) attached at one end to the engine block.
- **Connect** one of the sensor wires to the GRAY wire of dashboard **MOD7 Evo1**
- **Connect** the other wire to the BLACK ground wire of the dashboard (ground)

Cautions and Warnings :

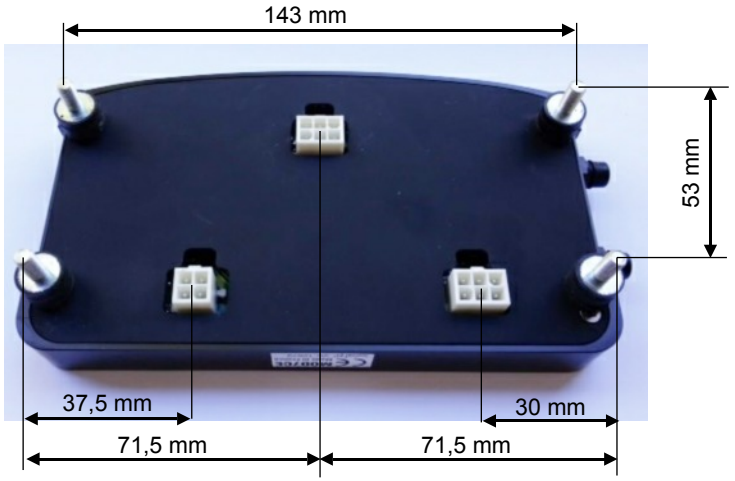
- The dashboard **MOD7 Evo1** is only reserved for use in racing cars.
  It is not approved for a road use.
- The **dashboard MOD7 Evo1** is intended to be used inside the car (unsealed).
- The **dashboard MOD7 Evo1** is only designed to equip injection powered cars with a non multiplex harness, and equiped with a 12v battery.
  A battery voltage above 16v might cause irreparable damages to the product.
- The **dashboard MOD7 Evo1** needs eventually some sensors witch are not supplied
  At first, you can use the existing sensors of the car (temperature and pressure).
  The displayed values may be incorrect or false but there is no risk to try them.

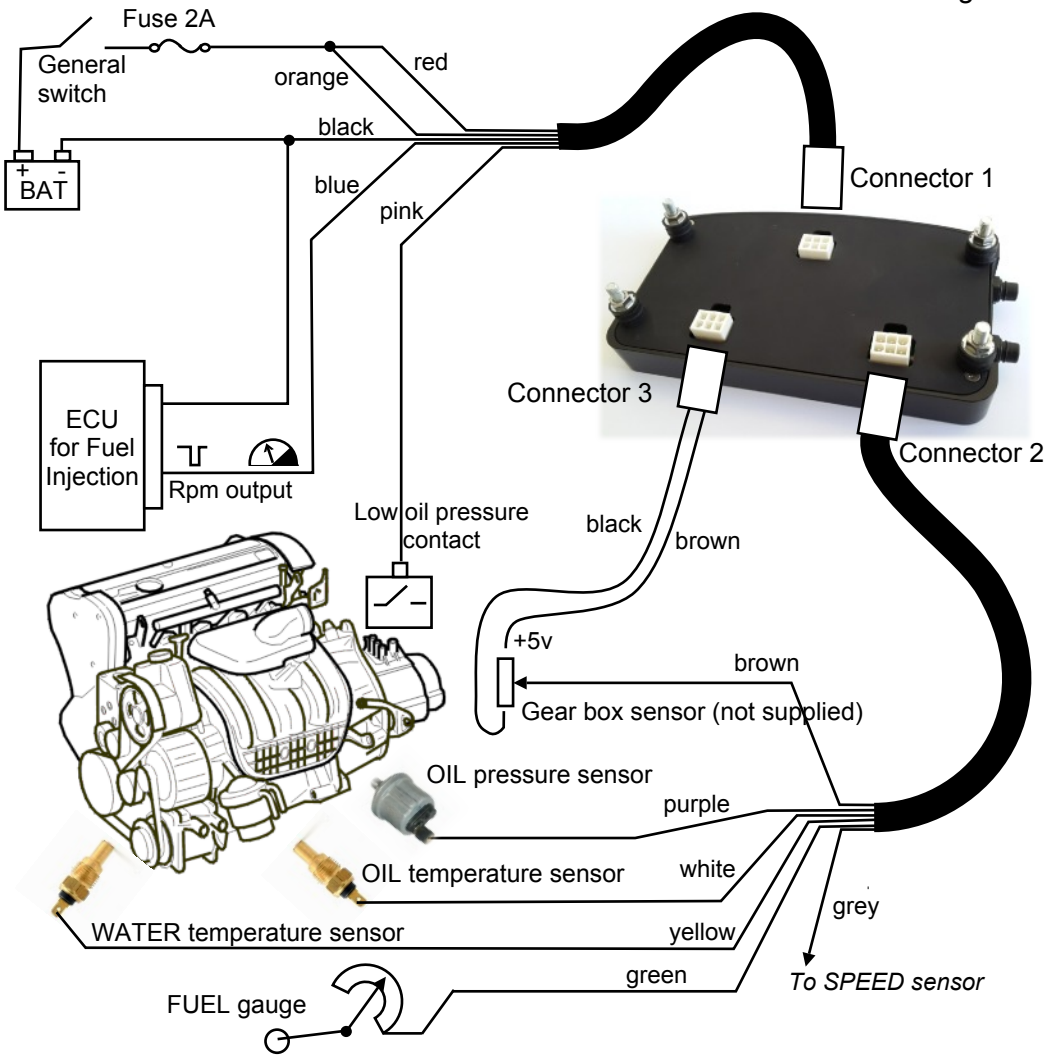
Safety Warnings for installation and during wiring :
- Switch off the ignition and disconnect the ground terminal of the battery
- Keep the wiring harness far from hot spots of the engine (i.e. temperature)
- Install a fuse of 1 or 2A on the '+' power wire

Warnings for reliability :
- Use the mounting system supplied with dashboard ('silentbloc' x4 parts)
- Make sure that the positive power supply will stay below 16 volts
- Do not pull on wires or harness and Do not spray the counter even at low pressure
- Do not open the dashboard

Fixing the Dashboard MOD7 Evo1 :

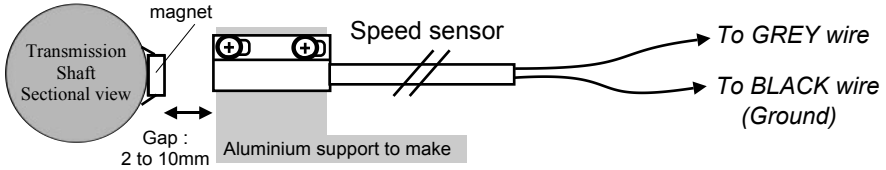
- **Choose** the best place for your **dashboard MOD7 Evo1** in order to see the full screen
  The best place is at the location of the counter if you've the remote control button
  Replace them with a sheet of carbon or aluminium black painted.
  An other good place is directly on the steering column, closer to you.
- **Drill** your support with 4 holes of 5mm diameter for the 4 silentblocs (see picture)
- **Drill** your baseplate or support with 3 holes of 20mm diameter to pass the wires
- **Fix** the dashboard on your support using the 4 silentblocs.





Speed sensor + Magnet :

Warning : *Sensor is fragile. Avoid hitting the sensor during installation*



Wiring of the Dashboard MOD7 Evo1 :

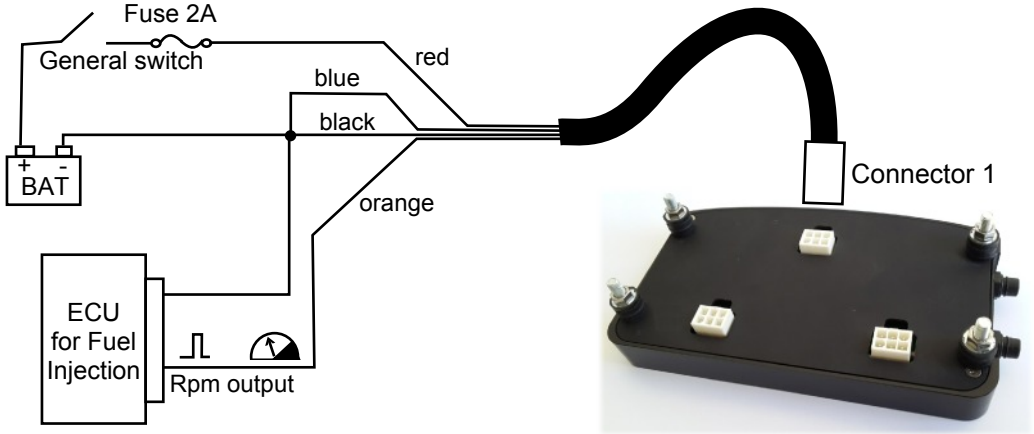
- **Connect** the different wires to the vehicle as shown in the diagram on page 4
- **Insert** and **Lock** at first, the principal connector 1 that provides power
- **Switch on the contact** to check that the dashboard displays the home page (after 4 sec.)
- **Start the engine**. The **dashboard MOD7 Evo1** must display the tachometer
  If the tachometer is not working well (unstable rpm or the leds flashing sometimes even if the engine is running at low speed), then change the wiring for ORANGE & BLUE wires from A - wiring to B - wiring (see below)
- **To display the amount of fuel in the tank**, the dashboard must convert the resistance of the origin gauge according to a calibration. For this, the original gauge has 2 wires (in most common cases) or 3 wires (in this case, **you must cut the positive tied wire** and isolate it) :
- **Connect** the wire of the cursor of the fuel gauge to the GREEN wire of the dashboard
- **Connect** the ground wire of the fuel gauge to the BLACK wire of the dashboard (grounded)
- **Insert** and **Lock** the connector 2 for the analog functions
- **Verify** that the engine water temperature, the oil temperature and pressure are working well.
- **Insert** and **Lock** the connector 3 coming from the remote control button (if option)
- **Verify** that the left button is working in the same way than the 'Change Page' button.

A - **WIRING** (normal case to be tested at first)

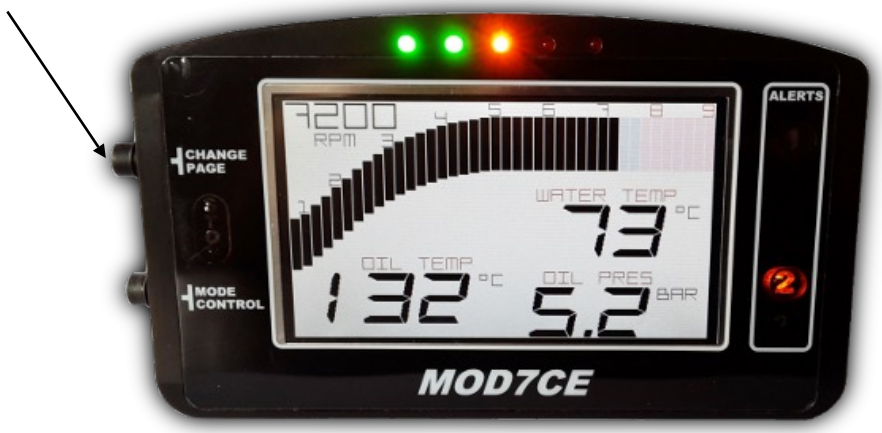
For a Rpm output that gives negative pulses (ground pulse)
- **BLUE wire connected to the rpm output of the ECU**
- **ORANGE wire to the +12v** after general switch (like the red wire)

B - **VARIANT WIRING** (if the rpm value remains to 000 or if unstable value)

For a Rpm output that gives positive pulses
- **ORANGE wire connected to the rpm output of the ECU**
- **BLUE wire grounded** (like the BLACK wire)



Change the displayed functions (Pulse press)
or
Change the number of active leds for the Shift Light (Long press)



Example of the display in day mode (white background)
in 3 functions mode (without gear box indicator)

Nota : The remote control button acts as the ‘Change Page’ button

Example of the display in night mode (black background)
Example of display in 3 functions mode (with gear box indicator)

Change mode from night to day or day to night (Pulse press if engine OFF)
or
Access to config menu (Long press if engine OFF)

Change mode night <> day :

As long as the engine is stopped and when the functions are displayed, you can change the color of the background of the display screen :

• **Pulse** on ‘Mode Control’ to pass from a white background (day) to a black background (night) and vice versa. This operation restarts (reboots) the dashboard

Change displayed functions / Change pages :

In mode without gear box indicator, the screen displays 3 functions (on 2 pages) :

• Page 1 (Racing or Specials) with Water & Oil Temperatures and Oil Pressure
• Page 2 (Road or PitLane) with Water Temperature, Speed and Fuel Gauge

Change from page 1 to 2 or from page 2 to 1 with a pulse press on ‘Change Page’ button

In mode GBI (gear box indicator), the screen displays 2 functions and the engaged gear

• The top function is always the Water Temperature
• The bottom function is one of Oil Pressure, Oil Temperature or Speed

The change of the bottom function is made with a pulse press on ‘Change Page’ button

Change the number of active leds of the Shift Light :

Under the digital value of RPM is a logo like 5 leds and a number.
This number is the number of active leds of the Shift Light : 5 (all of them), 2 (only the red) or 0

• **Press** ‘Change Page’ button during 1 second to change the number of active leds

Display of the maximum values :

When the engine is running, the dashboard **MOD7 Evo1** displays the current values
When the engine is stopped, the dashboard displays the maximum reached values and the orange led (in the middle of the Shift Light leds) is flashing slowly

These maximum values are memorized even if the contact is turn off
So that, it’s possible to recall them when you turn the contact on while pressing the ‘Change Page’ button until the display lights (approx. 4 seconds). The orange led is also flashing.

Change your personal home message :

You have 12 characters to write the name of your car, or your team, or something else…

• **Pulse** on ‘Mode Control’ when the message is displayed, in the 2 seconds after the bargraph demo returns to 0 to modify the message.
An hyphen ‘-’ appears under the 1st letter of the message.

• **Pulse** on ‘Change Page’ to change the character displayed above the ‘-’.
You can display 0 1 2 3 4 5 6 7 8 9 (space) + - = . o ° A B … Z, and ‘SPORT’
Nota : The word ‘SPORT’ take 4 consecutive characters after the letter ‘Z’.
After the last character of word ‘SPORT’, the displayed character returns to ‘0’

• **Press** on ‘Change Page’ during 1 second also change the displayed character but in the reverse direction (for example to pass from ‘B’ to ‘A’, or from ‘9’ to ‘8’)

• **Pulse** on ‘Mode Control’ to pass to the next character of the message and move the ‘-’.
When the hyphen ‘-’ is pointing the last character at the right end of the screen, a pulse on ‘Mode Control’ ends the message programming and saves it in memory before restarting the dashboard, as well as if you turn the contact on…

Trick of master : Press on ‘Mode Control’ during 1 second to display directly the character ‘ ‘ (space) above the ‘-’. This character (space) is placed between the ‘9’ and the ‘+’.
It is sometimes quicker to increase character from ‘ ‘ rather than return character by character…