# How to install your TireGuard TPMS

Before setting the monitor and installing the sensors, make sure you have inflated the vehicle's tyres to your required pressures.
There is no need to charge the monitor battery, I have done that already.
I have also already changed the units from American to decimal.

**1) Fit batteries onto sensors:**

- Unscrew the black cap on sender and slide in the battery with its flat + side up.
- Slightly wet just the cap rim and tighten with moderate force, about as much as you would use to re-seal a cooldrink bottle.
- (But WAIT!: Do not screw on the sensors yet. You first have to tell the Monitor what the normal pressure for each wheel is.)

**2) Switch-on Monitor by pressing the Middle Button.**

- You are now in *Monitor Mode*. You will see the following:
- The outline of a vehicle with the front, left position/wheel marked with a dark circle.
- You will see _ _ _ Bar on the top line.
- If you keep pressing the right button, the _ _ _ Bar will change to_ _ _°C for that left front wheel position.
- The marker will then move to the right front position/wheel showing Bar and then °C.
- The *Monitor Mode* will be the screen you see when driving.
- It will show your own wheels' readings after you have finished the full installation process in the following steps.

**3) Set Normal Pressure:**

- Press Centre button and hold down till the beep.
- This is the *Set Mode*.
- Left Front setting will show, likely 8 bar.
- Change the setting to 0.1 bar lower than the correct pressure for that wheel.
- e.g. if the normal pressure for your front wheel is 2 bar, set it to 1.90 bar.
- Press Left button and hold to reduce set pressure.
- Right button click to go back up by 0.01 bar increments after you overshot the mark.
- If you hit the number, you must be a video game ace.
- When you have the correct reading for that wheel, press Centre button once to move to right front wheel, will likely show 8 bar, reduce.
- Change with Left and Right button.
- Press centre button repeatedly to move to the position where you would like the left rear wheel icon, reduce and so on.
- Exit by holding Centre button till the beep. (You are now back in *Monitor Mode*)

**4) Register External wheel sensors on the monitor:**

- First remove the dust caps on wheel valves and clean the threads with a rag.
- No dust caps? Seriously consider getting new valves fitted.
- Ensure there is no damage on valves' edges. From now on it must keep air inside.
- Get the shortest stem valves while you are at it.
- Otherwise just check closely for any damage to the thread and tip of the valve holder.
- Check tyre pressure cold with a meter you trust and correct to what you would like them at.
- Consider that car manufacturers like to specify higher pressures than necessary or comfortable to be on the safe side.

**5) To register active sensors to the monitor:**

- Press Left and Right buttons simultaneously and hold down till it beeps.
- Top of display should show three dashes. The LED shines Red and Left Front wheel position flickers. You are now in the *Learn Mode*.
- Screw a sensor to the Left Front wheel valve.
- (Again, moistening the tip of the valve stem is good for the rubber seal)
- (Or pump up a wheel with Internal Sensor.)
- Go easy, you now have much more leverage than on a dust cap.
- The LED should be Green and display should show a reading within a few seconds, likely around 0.1 bar below real pressure.
- Do not worry about the difference, I will discuss that later.
- I test all sensors and batch them for almost identical readings to a kit.
- Check that the External sensors do not impact against the wheel when the valve stem flexes under centrifugal force or corrugations.
- If it can touch the rim, have shorter or solid metal valve stems fitted.
- Press Right button once to move to Right Front position, fit a sensor.
- Remembering where you placed the marker for the Left Rear wheel, (in *Set Mode*), repeatedly press the Right button to reach that position.
- Fit Left Rear sensor/sender, Right once, fit Right Rear sensor/sender.
- Continue like this if you are fitting a trailer at this stage. (You can always add more sensor positions later.)
- Exit by pressing Both Left and Right buttons and holding till it beeps.
- You are now back in *Monitor Mode*. Only positions with installed sensors will now show.

**6) Internal Sensors are installed at a Tyre Shop.**

- Stand by with monitor in *Learn Mode* while tyre is being pumped up.
- LED turns green when sensor is registered.
- Just when the next tyre is ready to be pumped, Press Right to move to that wheel/position.
- LED turns green when sensor is registered.
- Wait till next tyre is ready to be pumped, move right to that position and wait for LED to turn green.
- After last wheel is registered, hold L + R to the beep to exit. You are now back *Monitor Mode*.

**7) Mounting the monitor:**

- Mount with the included 'Velcro' adhesive strips to an unobtrusive spot on the dashboard.
- First clean both surfaces with methylated spirits or another dissolvent.
- Alternatively, just pop the monitor in a nook within view.
- There is no need to check the monitor screen while driving. It beeps and blinks pretty loud if a reading is out of range.

**8) Notes on Pressure Reading:**

- Reported pressures are generally on the conservative side, under-reading by an average of 0.1 bar.
- This is normal and within manufacturer tolerances.
- The sensors/senders are accurate in terms of repeatability, but are not calibrated.
- The reported pressures are now normal for your car.
- If a sensor reading is too far out for your liking, exchange with one of your spare sensors,
- or send it back to me for a new one, specifying your kit's variance from real pressure.
- I test that all sensors work over a distance of 20m (with aerial not protruding) and group them for similar readings.

**9) To reset a position of sensor:**

- Press L&R together till the beep. (to go to *Learn Mode*)
- Press L or R to get to position.
- Hold Centre button till the reading disappears and LED turns Red.
- Fit new sensor. Monitor beeps, LED turns Green and shows a "reading".
- Press L&R together till it beeps, to exit *Learn Mode*. (You are now back in *Monitor Mode*)
- The monitor goes into sleep mode after 10min of no movement.
- It wakes up at the slightest movement, but the initial readings will be the last received before sleep.
- It updates soon enough as the sensors transmit changes to the readings.

10) **Sleep Mode:**

- The monitor goes into *sleep mode* after 10min of no movement.
- It wakes up at the slightest movement, but the initial readings will be the last received before sleep.
- It updates soon enough as the sensors transmit changes to the readings.
- The sensor only radios a report once a reading has changed markedly.

**11) Answers to Frequently asked questions (FAQ's):**

- Do not leave the monitor plugged into the cigarette lighter socket charger (as most lighters turns off with the engine).
- A charge lasts a month or more and the monitor will give a low battery warning.
- If the TireGuard Monitor shows a "No5" (no sensor) warning for the car wheel, it means that the monitor has not received a report from the sensor lately.
- Test the operation by removing that specific sensor and after 10 seconds, screwing it back into position.
- A "sensor" warning indicates a weak sensor battery.
- If the TireGuard gives a " No5" (no sensor) or "sensor" (+Battery icon) warning for a trailer wheel, it can mean that the radio signal is impeded.
- Improve reception by extending the aerial. Then test by screwing off a sender. (Try not to touch the metal part of the aerial, as it is sensitive to static electricity).
- Alternatively mount the monitor higher up, perhaps on its side above the rear view mirror.
- The CR1632 Lithium-Manganese batteries should read 3.3V+ when new.
- Replace if below 3.1V.
- TireGuard sensors last well on normal rubber tyre valve holders, provided they cannot impact the wheel rim when the valve holder flexes under centrifugal of harmonic loads. (Corrugated roads).
- Many off-road users get an extra valve installed in their wheel rims for the sensor to tuck it out of harms way.
- One just have to be careful of clearance to the brake calipers, especially on the front wheels.

## Safe Journey!