TPMS CONFIGURATION USER GUIDE

SCAN ME

TPMS CONFIGURATION – CONTENTS (19-05-2025

Page.

TPMS Overview

The TPMS is an additional tool to aid the driver by monitoring the tyre pressures whilst the vehicle is in motion. The TPMS is not a substitute for using a tyre gauge when checking tyre condition or pressures, when performing journey pre-start checks.

This App provides the user with the graphical user interface (***GUI***) to configure the Tyre Pressure Monitoring System (***TPMS***)

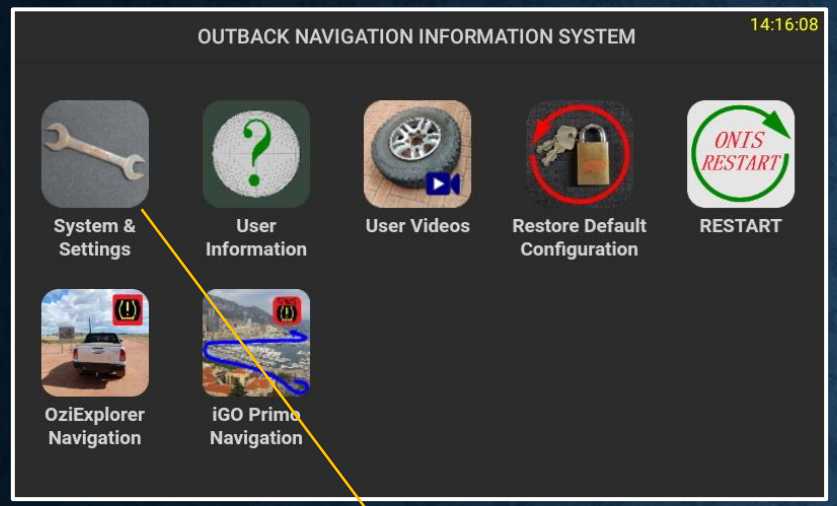
Typically the only configuration required outside of the default settings are the wheel sensor bluetooth bindings.
These bindings are performed by ***GPS Integrated Solutions*** (***GPSIS)*** during the ***Outback Navigation Information System*** (***ONIS***) build process, but will be required to be performed by the user / owner if a sensor(s) has been changed.

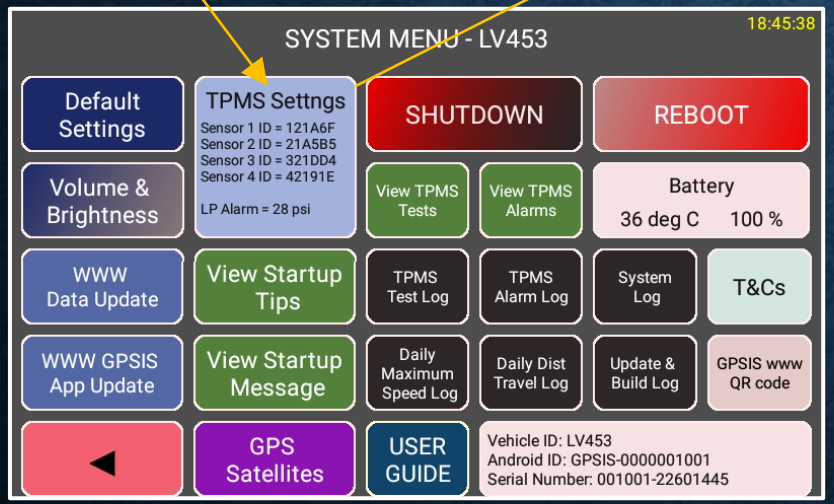
Enabling or disabling of the TPMS monitoring in the navigation App is performed in the ***System & Settings*** App from the ***Main Menu***.

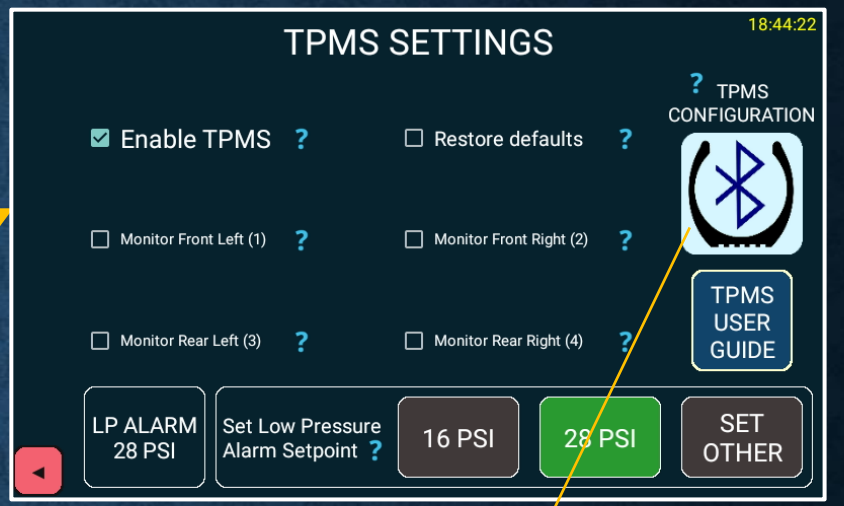
TPMS Overview

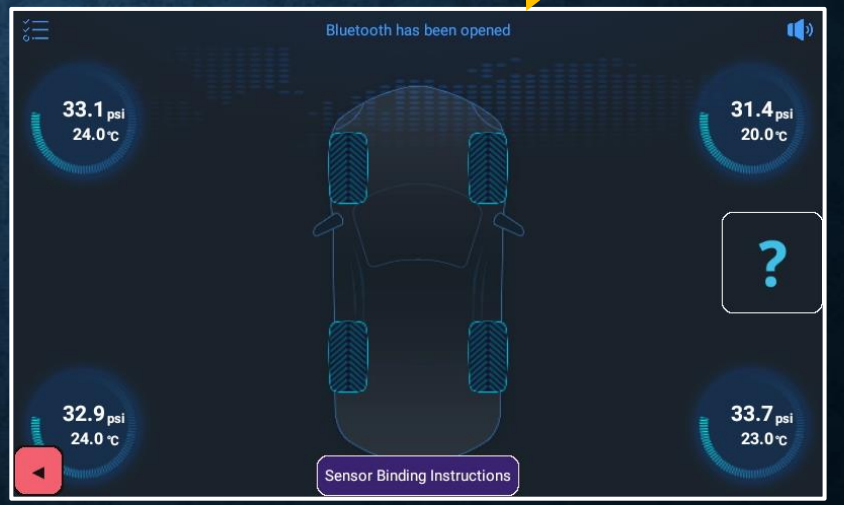
STARTING THE TPMS

Starting the TPMS









STARTING THE TPMS

ENABLING & DISABLING THE TPMS

TPMS App

Press on any blue ? To display information.

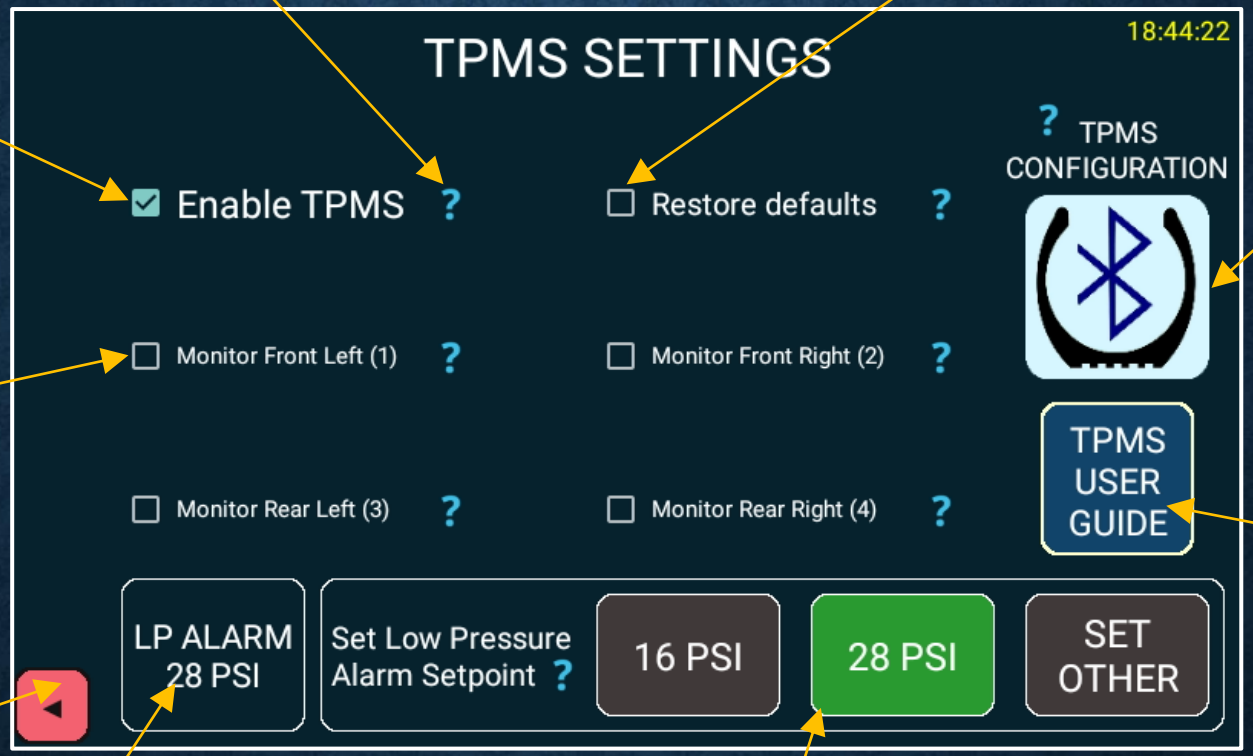
If TPMS will NOT start, restore the default settings.

Check or uncheck the box to enable or disable the TPMS.

Start the TPMS configuration App where the wheel sensors can be bound (refer to page 10).

Check or uncheck the box to enable or disable an individual wheel sensor from being monitored in the navigation App.

Open the user guide.



Exit the ***TPMS Configuration*** App.

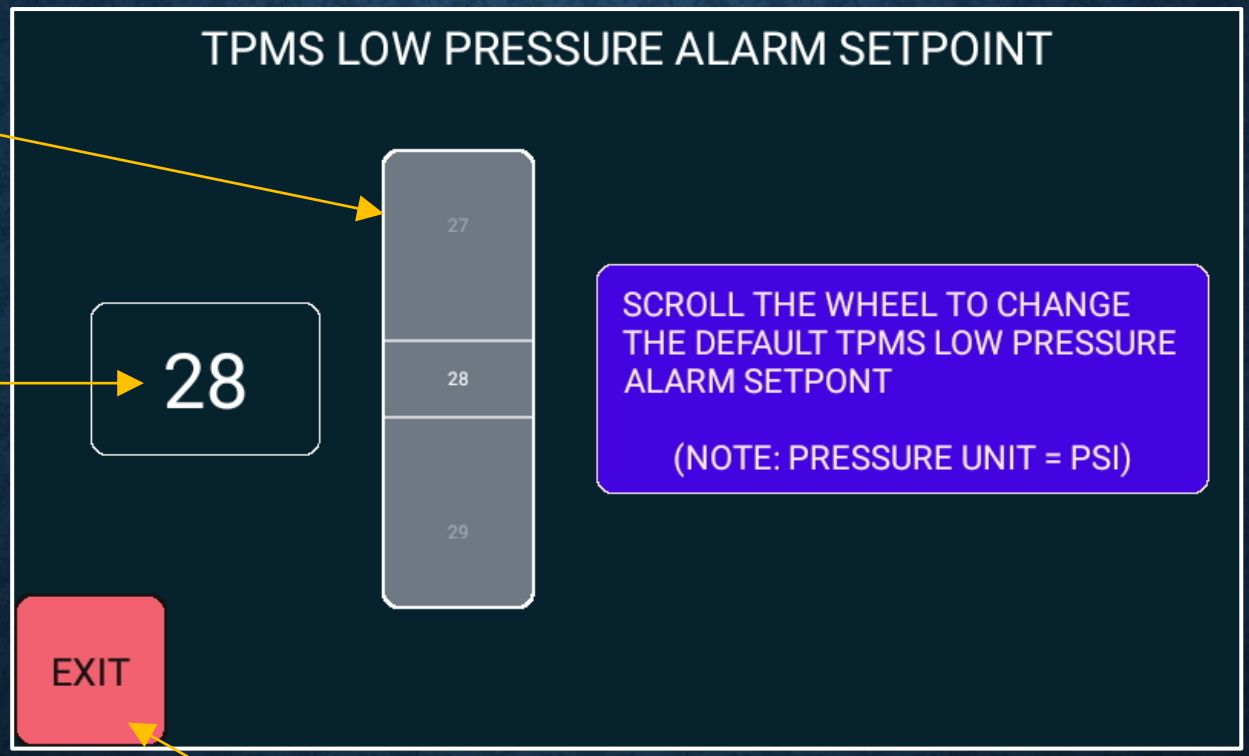
Displays the current “Low Pressure” alarm setpoint.

Select to set to 16, 28 or any other PSI low Pressure alarm Setpoint. (refer to page 7)

Set Other PSI

Scroll the wheel the change the value.

Displays the new value in PSI.



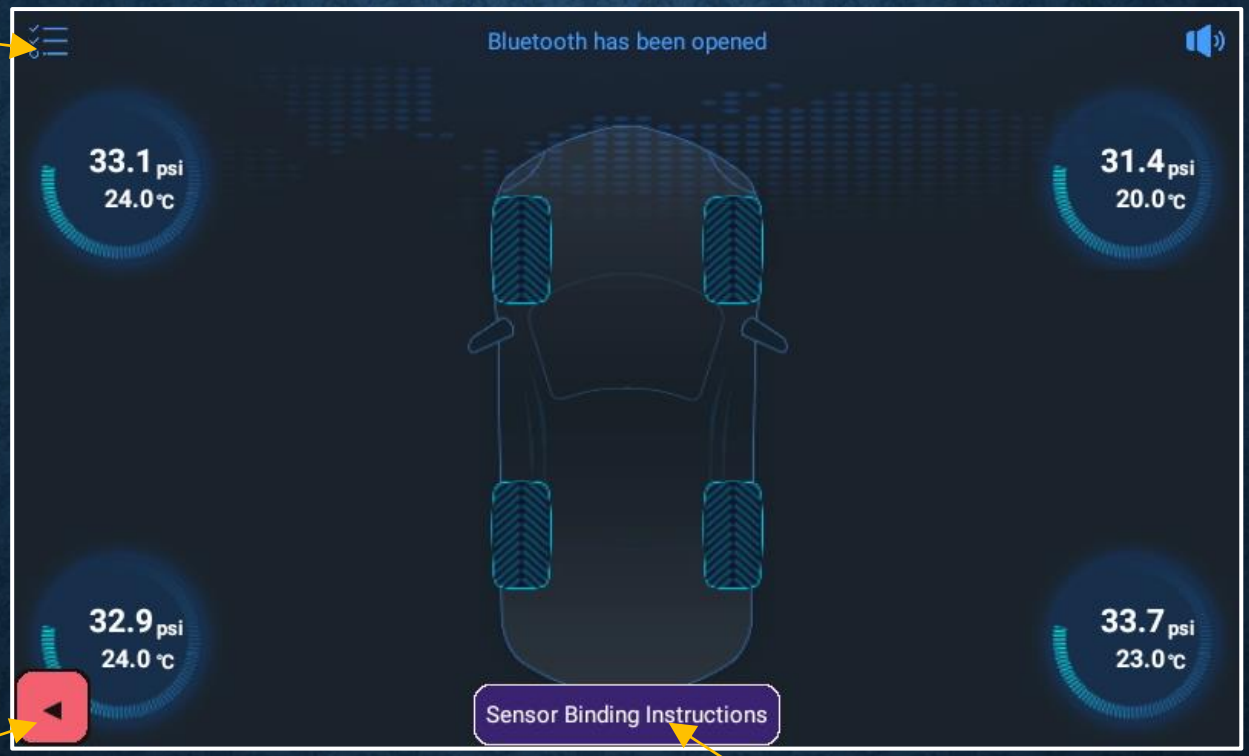
Exit the menu and save the selected value as the new “Low Pressure” alarm setpoint.

ENABLING & DISABLING THE TPMS

TPMS APP

TPMS App

Swipe to the right to display setting options.



Exit the ***TPMS Configuration*** App.

Select to display wheel sensor binding instructions. If the TPMS Monitoring App is working correctly, the text will toggle between green and white every.

TPMS APP

SETTINGS MENU

Settings Menu

Go back to the main screen.

This function is not available in the ***ONIS***.

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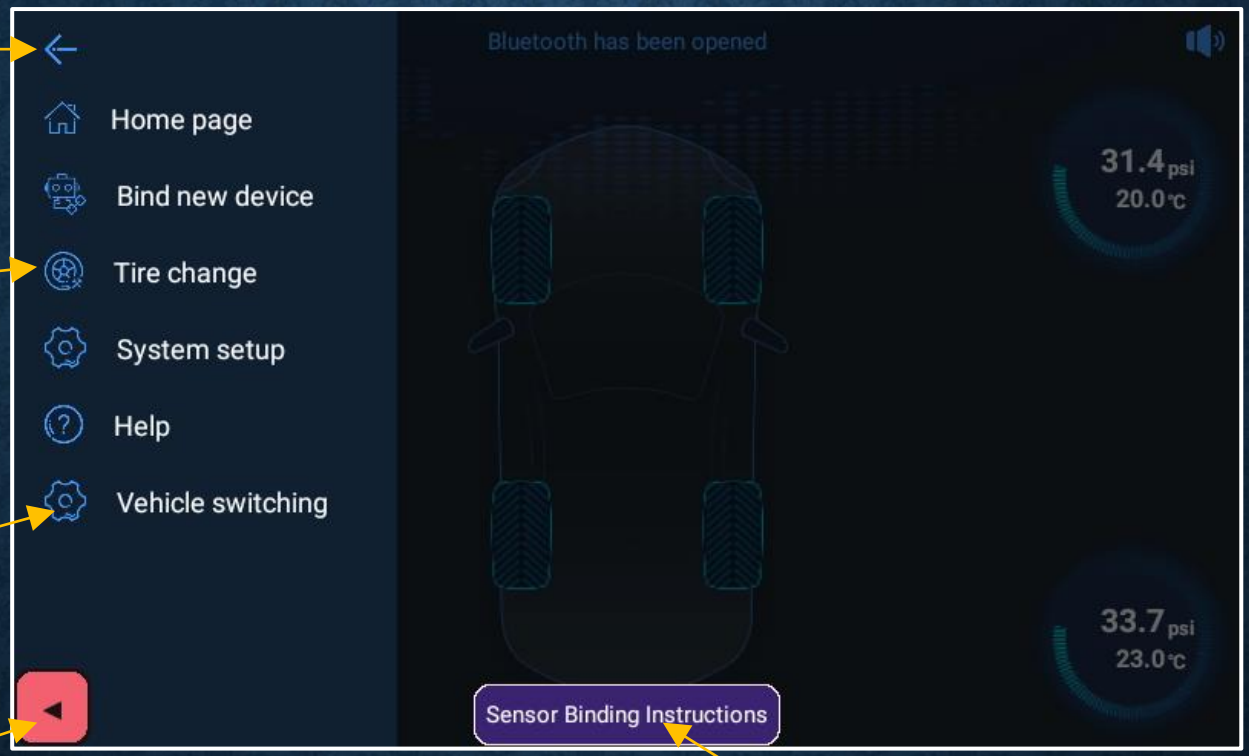


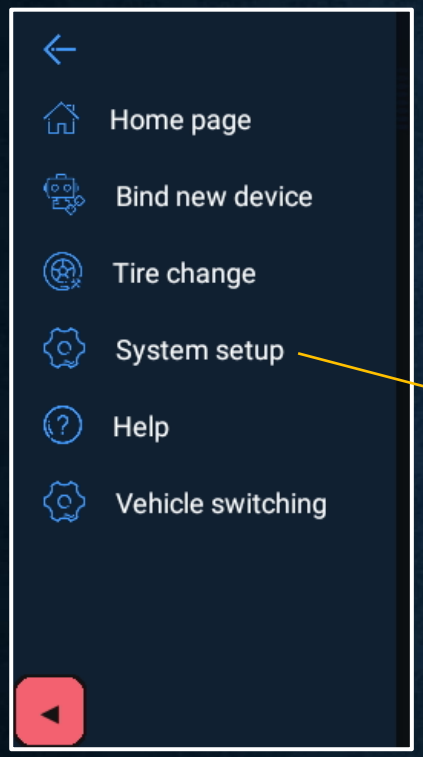
Exit the ***TPMS Configuration*** App.

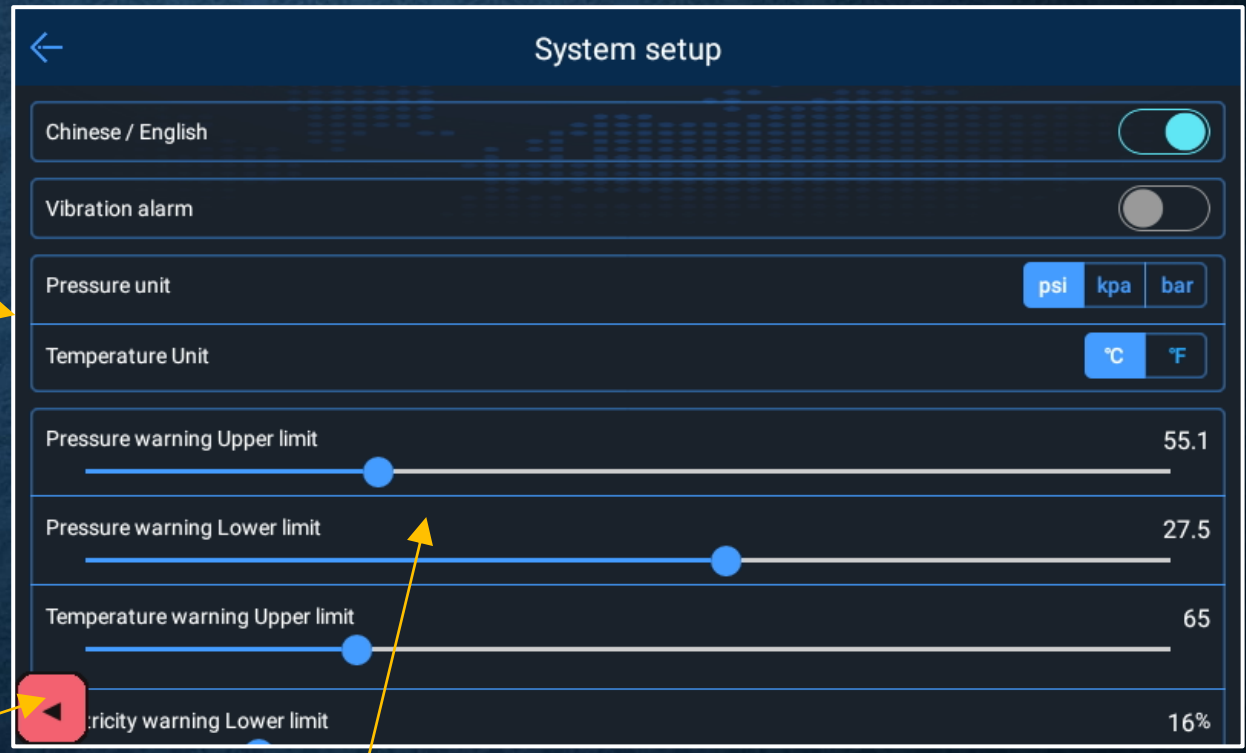
Select to display wheel sensor binding instructions.

SETTINGS MENU

SYSTEM SETUP

System Setup





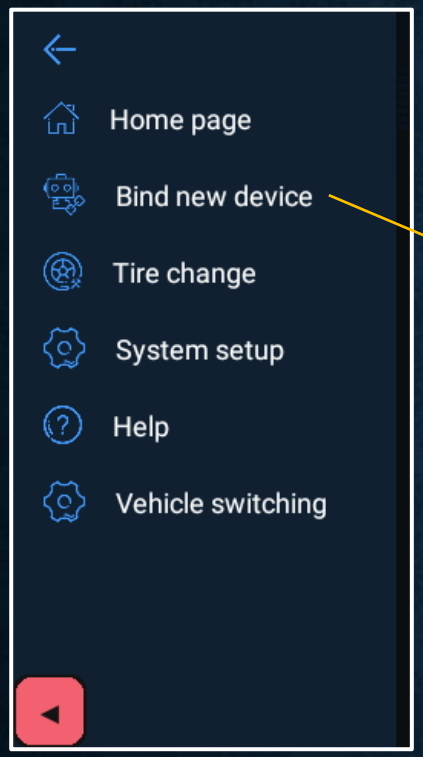
Go back to main screen.

Scroll screen up and down to display settings.

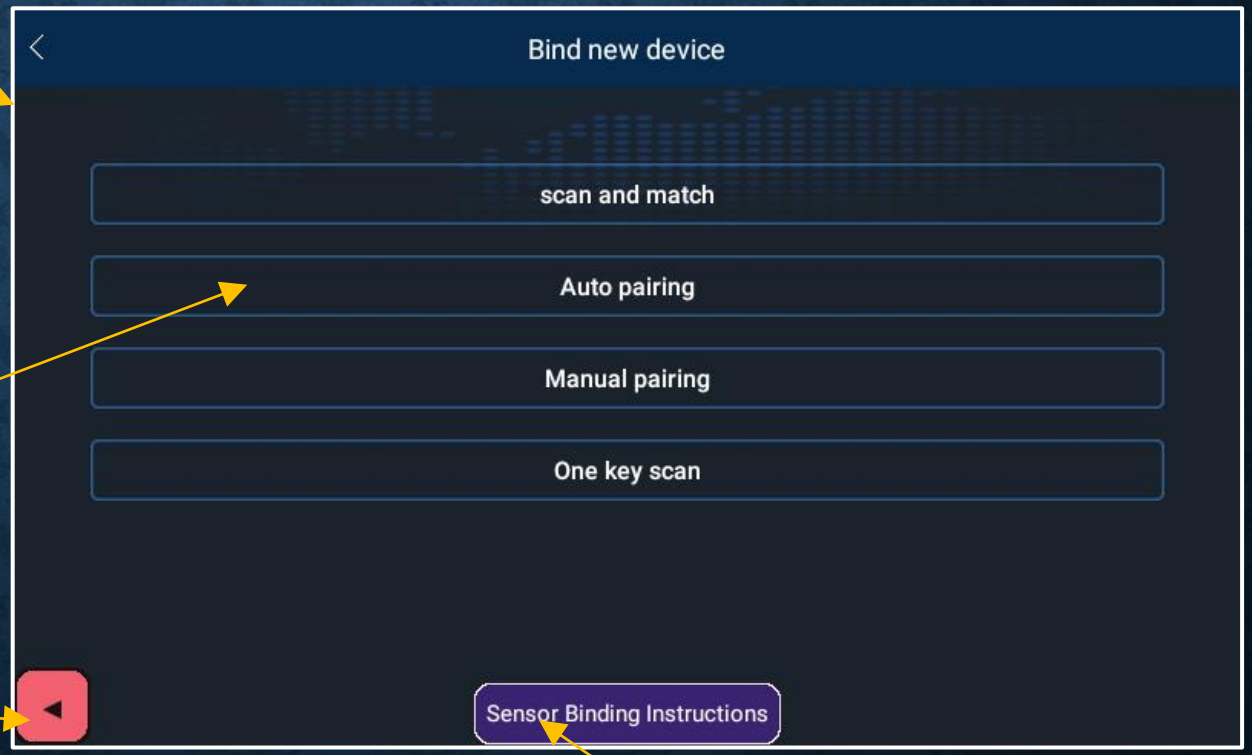
SYSTEM SETUP

BIND NEW WHEEL SENSOR

Bind New Wheel Sensor



Select
“Auto Pairing”



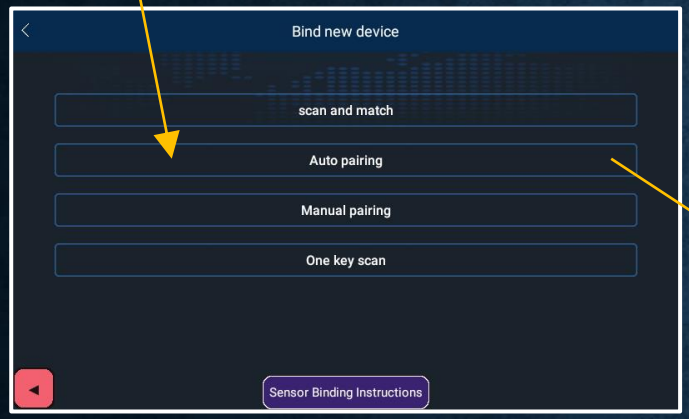
Go back to
main screen.

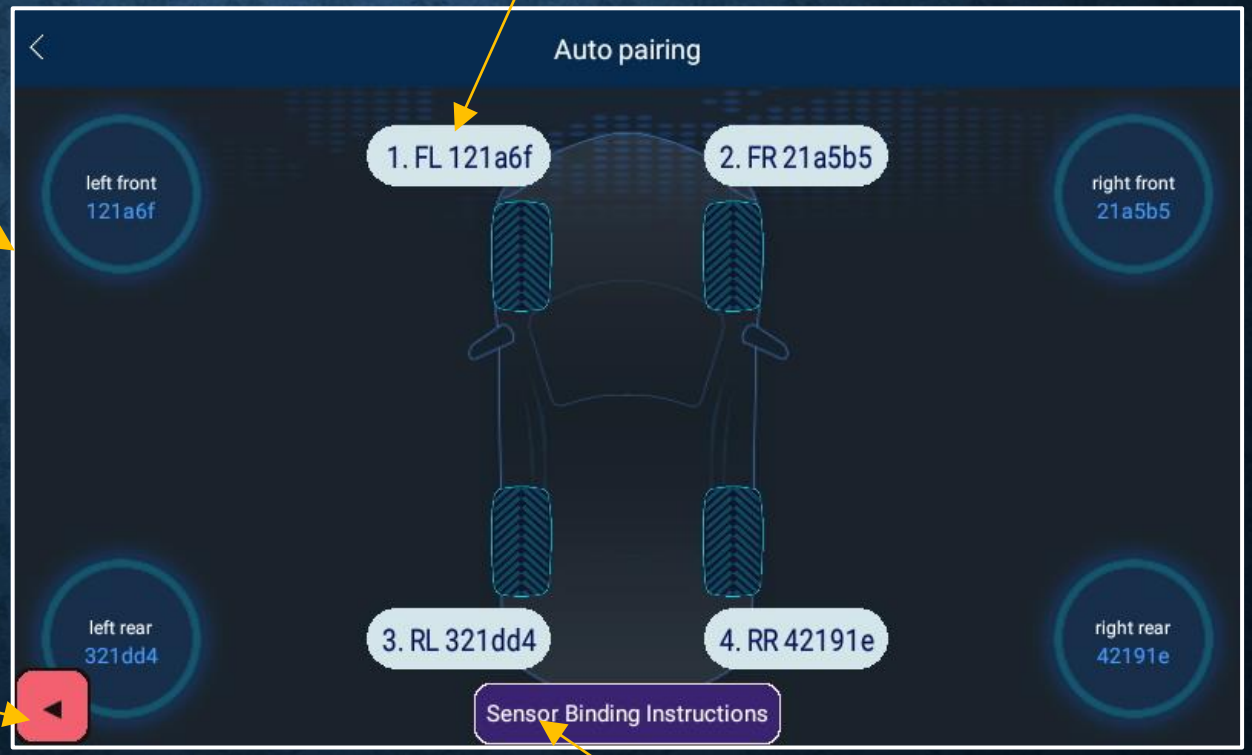
Select to display the binding help information.

Bind New Wheel Sensor

Select Auto pairing.

Displays existing sensor binding ID.



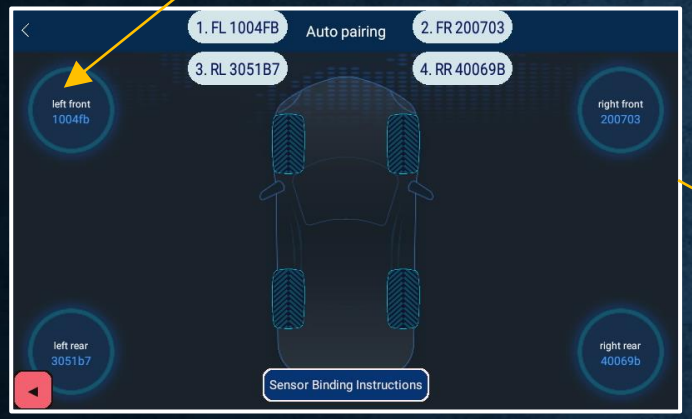


Go back to binding screen.

Select to display the binding help information.

Bind New Wheel Sensor

Select on wheel to begin pairing of new sensor 1.



Searching for new sensor 2.
Remove and replace the sensor to trigger a Bluetooth message.

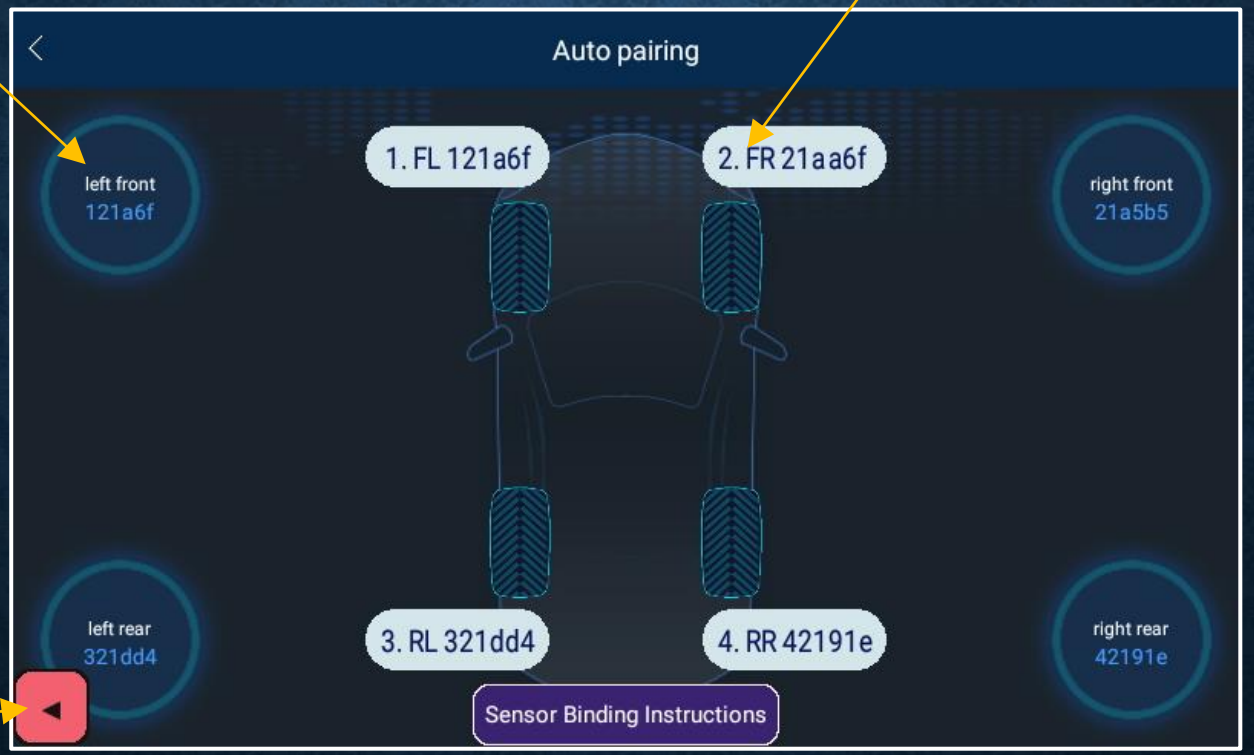
Go back to pairing screen.

Select to display the binding help information.

Bind New Wheel Sensor

New paired sensor 1 will now be shown.

Old sensor ID.
This will be updated to the new ID when the App is restarted.



Go back to pairing screen.

BIND NEW WHEEL SENSOR

FAQ

FAQ

Q. What does the ***TPMS*** acronym mean?
Tyre Pressure Monitoring System.

Q. What does the ***TPMS*** do and how does it work?
The ***TPMS*** uses ***Bluetooth Low Energy (BLE)*** technology to monitor active wheel sensors whilst the vehicle is in motion.
Changes in tyre parameters will be compared against set points in the ***TPMS*** App.
If there is an alarm, the driver will be notified.

Q. How do I enable / disable the ***TPMS monitoring***?
1. Start the "System & Settings" App from the main menu.
2. Select "***TPMS*** Settings".
3. Tick / Untick the "Enable ***TPMS***" checkbox.

Q. Why can't I change settings in the ***TPMS*** settings App whilst the vehicle is in motion?
For safety purposes , we have limited the operations so that changes can only be performed when the vehicle is NOT in motion – Park the vehicle to perform configuration changes.

Q. What alarms does the ***TPMS*** have?
Pressure - low and high as per the settings.
Temperature - low and high as per the settings.
Sensor battery voltage - low as per the settings.

Q. What are the maximum number of wheel sensors for each ***ONIS***?
Each ***ONIS*** unit is limited to a maximum of 4 wheel sensors.

Q. What is the maximum bluetooth range of the wheel sensors?
Typically, the sensors will work well up to 5m. 10 M is achievable.
The ***TPMS*** is not designed to operate on trailers or caravans however we have tested this extensively with excellent results. We do not provide any guarantees for sensor monitoring accuracy, reliability or range.

Q. What is the easiest way to bind a wheel sensor?
1. Remove the ***ONIS*** from the cradle and "Cancel" the power down message.
2. Whilst moving around the vehicle, monitor the ***ONIS*** when the wheels sensors are removed/ replaced.

Q. What is the procedure to bind a wheel sensor?

1. Swipe the left hand bar to view the menu.
2. Select "Bind New Device"
3. Select "Auto Pairing"
4. Tap on the icon of the wheel to be replaced - a 60s countdown timer will start.
5. Unscrew the wheel sensor and then screw it back on - This process may need to be repeated a number of times until the new wheel sensor is found.

If the new sensor is operating correctly, the timer will disappear and the new id will now be displayed.
Existing ID's are displayed on the screen and comparing new ID's to existing, will also establish whether the new sensor has been bound.

Q. How many TPMS wheel sensors must be bound?

At least two sensors must have configured sensor bindings for the TPMS to operate. If less than two sensors are bound, the TPMS app will crash after approximately 5-10 minutes.

Q. How do I disable a wheel sensor monitoring in the TPMS & GPS app?

Manually bind a wheel sensor with 000000 ID.

Q. How do I disable a wheel sensor monitoring in the GPS app?
Untick the "check box" for the wheel to be disabled.

Q. Can I use the ***Tyre Change*** function?
NO, this is not available in the ***ONIS***.

Q. Can use the **Vehicle Switching** function?
NO, this is not available in the ***ONIS***.

Q. When can I use the ***TPMS*** App to monitor my tyres?
The ***TPMS*** App runs in the background (if enabled) when the GPS navigation App has been started from the ***Main Menu***.

Q. When the ***TPMS*** is running in the background, how often are the bluetooth wheel sensor communications checked?
The standard ***ONIS*** build ensures that the sensors are checked within the previous 24 hour period.
ie. If the ***ONIS*** has seen successful bluetooth communications from the wheel sensor, then the screen indicator in the GPS App will be green (navigation App right hand menu).

Q. What does the spinning "blue circle" represent?
When the "blue circles" start to spin, this indicates that one or more sensors are now scanning.
Note: the only way to determine if a specific sensor is scanning is to "tap" the wheel sensor "blue circle" twice & quickly, which then displays the sensor battery voltage.
If the voltage indicates 1.99V, then the sensor has not yet reported back to the App.

Q. How often do the wheel sensors report back to the ***ONIS TPMS*** App?
The bluetooth wheel sensors are "report by exception". This means that any sensor temperature or pressure that changes quickly will be reported back immediately.
The wheel sensors will also report to the ***TPMS*** App around every 3-5 minutes with the pressure, temperature and battery parameters.

Also ensure that no other ***ONIS*** (or any other device) is running the same ***TPMS*** App within 10-15m, as this may affect the bluetooth communications for sensor activity.

Q. What is the tyre pressure accuracy of the wheel sensor
The BLE TPMS sensor accuracy should be better than +/- 2 PSI.

Q. Do I need to replace all 4 sensors if one sensor fails?
No, each sensor is individual but purchased as a set of 4, however they ARE dedicated to the wheel location, i.e. RR (sensor 4) will only scan as RR in the ***TPMS*** App.

Q. What are the 4 small hex nuts used in the ***TPMS*** kits?
These are locking nuts to reduce the risk of sensor theft.
They are not required to keep the sensor on the valve stem and the developer has travelled more than 300,000 kms over a 10 year period, without using these lock nuts.
We only recommend you use these nuts if you are in a high risk area of theft.

Q. How can I see the battery voltage of the wheel sensors?
Tap the wheel sensor "blue circle" twice & quickly. The voltage for that sensor will be displayed briefly.
A Voltage of 1.99V indicates that the sensor has not yet communicated with the ***ONIS***.

Q. Can I use my own internal sensors?
NO, the switching function in the ***TPMS*** App is not available in the ***ONIS***.

Q. Why won't my wheel sensor screw on properly?
GPSIS has experienced a small number of wheel sensors that will not screw on to some valve stems.

It Appears that some valve stems have shorter stems and as the wheel sensor is required to screw on to push down the internal valve mechanism, the shorter stem prevents this prior to the sensor sealing on the valve stem.

Q. What type of batteries should I use for the wheel sensors?
To obtain the longest duration of driving time before replacing batteries, ***GPSIS*** only recommend quality button cells are used.
Battery model is a CR1632 3V Lithium button cell.

Do NOT store lithium button cell batteries so that young children can access.

Dispose of old lithium button cell batteries correctly.

FAQ

KNOWN ISSUES, FAULTS & BUGS

KNOWN ISSUES, FAULTS & BUGS *(not covered by warranty)*

Q. What can I do if my sensor binding does not always pickup the sensor when I unscrew the wheel sensor and then screw it back on?

Sometimes this process works on the first instance and sometimes the sensor is required to be unscrewed and then screwed back on a number of times.

If the new sensor is operating correctly, the timer will disappear and the new id will now be displayed.

If the sensor will not bind, but the other wheel sensors will bind, then check the sensor battery voltage.

If the battery is OK, then the sensor may be faulty and will need to be replaced.

Note: Existing ID's are displayed on the screen and comparing new ID's to existing will also establish whether the new sensor has been bound.

Q. Is the ***TPMS*** 100% robust & reliable?

NO, the ***TPMS*** must only be used as an additional tool to aid the driver to monitor the tyre pressures whilst the vehicle is in motion.

The ***TPMS*** is not a substitute for using a tyre gauge when checking tyre condition and pressures when performing journey pre-start checks and a Journey prestart "walk around" should be performed regularly.

The developer has made every effort to ensure that the ***TPMS*** integration into the ***ONIS*** is robust and reliable but any device using wireless technology and batteries can be subject to intermittent faults, failure or communication interference.

Q. Why does a ***TPMS*** sensor take a long time to scan & register?

A TPMS sensor should register with the App (when it is running) using "report by exception" (ie when there is an alarm condition) or typically & approximately every 5-10 minutes.

We have noticed that one particular brand of TPMS sensor reports back on sensors 1,2 &3 every 5 to 10 minutes, but much longer for sensor 4 (Right Rear). This does not affect the operation and if in doubt, perform a tyre deflation test to confirm TPMS alarm operation.

Q. Why does the ***TPMS*** App crash every time start it?
The developer has experienced some instances where the ***TPMS*** could not be started.
In these instances, this was encountered after the configuration of new wheel sensors and it was then found that the ***TPMS*** configuration file had become corrupted.

To rectify this, the user can enter the ***TPMS Settings Mode*** from the ***System & Setting*** App, and then select "Restore ***TPMS*** Defaults"

NOTE:
The ***ONIS*** will be re-booted after the new settings have been reset to default.
All settings and bindings will need to be performed as the default restore will remove these.

Q. Why do I get Intermittent sensor fail audio messages?
The TPMS integration monitors ***TPMS*** alarm condition changes. If the alarm condition reverts back to normal within 2 seconds (fleeting) with no change in tyre condition, then the ***ONIS*** will recognise this as a possible sensor failure and advise the user.
Failed sensors should be tested / replaced to avoid unwanted false alarms.

Q. ***TPMS*** Configuration App popups disappear ?

On occasion, the screen popups (exit and help) in the ***TPMS*** Configuration App may disappear.

To continue, the user must reboot the ***ONIS*** by pressing and holding the ***ONIS*** power button and then selecting "Reboot".

Q. Why does the ***TPMS*** Configuration App not exit correctly back into the previous menu ?

On occasion, the ***TPMS*** Configuration App may not exit back to the main TPMS Monitoring Menu.

If this occurs and the user was binding a wheel sensor, then the binding process must be performed again so that when the user exits, the following message is displayed:

Saving TPMS Settings
Performing Wheel Sensor Task
Please Wait

Q. Why is the ***TPMS*** App showing a alarm (red) when the pressure is OK?
If the ***TPMS*** App is shutdown with an existing alarm, the next time the App starts up it will display and alarm even if the pressure is OK.
This is due to the ***BLE*** sensors being "report by exception"

1. Start the "***TPMS*** Settings" App and wait for the sensor to report back to the ***ONIS*** - this could be anywhere between 3 and 5 minutes.

OR

2. Start the "***TPMS*** Settings" App, remove the sensor from the wheel and wait for the new alarm , and then re-install the sensor and the alarm should clear.

Q. Why do I get a failed sensor fail audio messages at low ambient temperature?
We have experienced continual intermittent ***TPMS*** alarms when the sensors have been at 0 deg Celsius (Peak of Mount Wellington, Tasmania when snowing).
For prolonged periods of 0 deg Celsius or below, we recommend disabling the ***TPMS*** monitoring to avoid false alarms