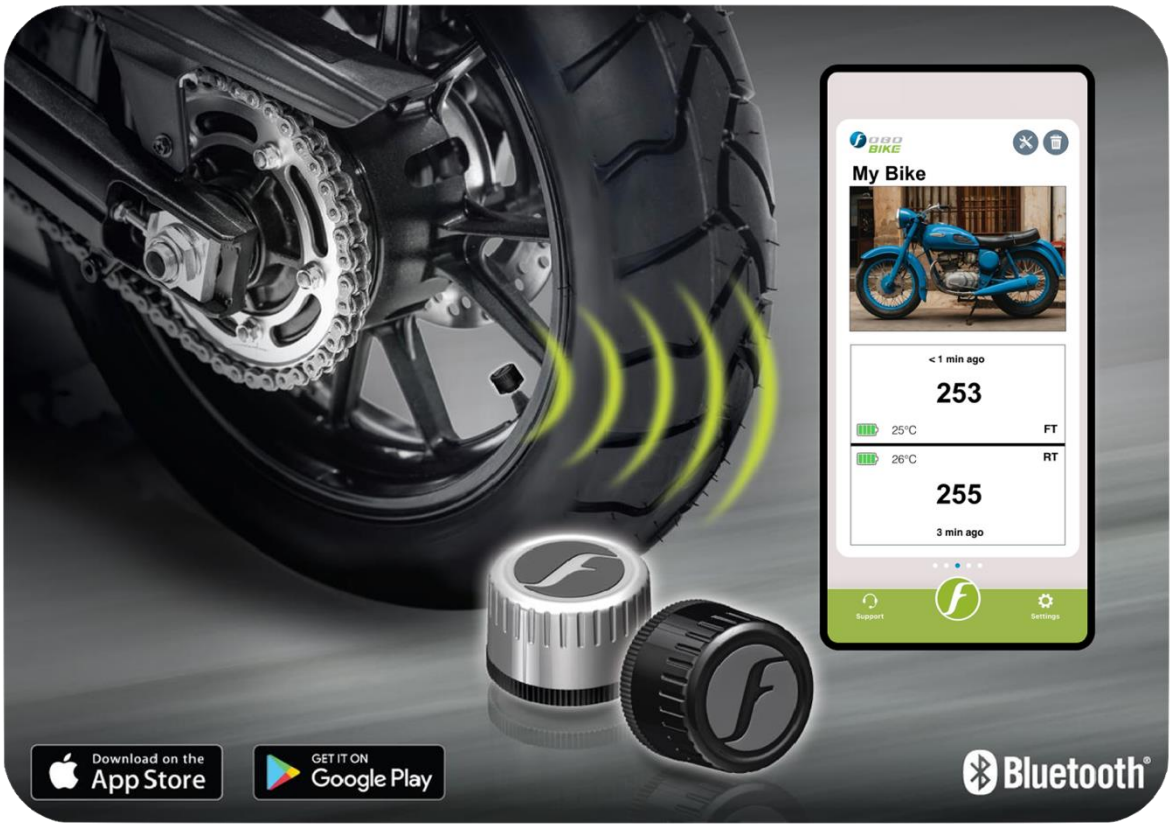


FOBO TPMS (BIKE)

User Manual

v.2.1.0

(For iOS 13 and Android 8.0 or later)

Contents

11.4 What Law Governs This Warranty

1 Introduction

FOBO Bike is a SMART Tire Pressure Monitoring System (TPMS) for every biker. With its patented technologies, it provides the following features/functions:

- View on demand tire pressure & temperature,
- Monitors tire pressure in real time while riding or when in Bluetooth range,
- Detects slow or fast leak and alerts users to anomalies,
- Sends instant audio, haptic and text alerts on a smartphone/smart watch/Bluetooth headset,
- Easy to install without running wires, drilling holes, and tedious programming.

FOBO Bike uses Bluetooth 5.0 technology for connectivity to compatible smart phones and smart watches. With low power consumption of Bluetooth 5.0, the sensor is designed to last up to 1 year on a CR1632. **(NOTE: Battery life may vary according to usage and climatic temperature. Operating under extreme cold may drastically reduce battery life).** The TPMS also uses award winning automotive grade pressure sensor that is sensitive to finer pressure change than its predecessor.

Please ensure that your smartphone has Bluetooth Smart Ready (Bluetooth 4.0 or above)
capability to use FOBO Bike. Currently the FOBO Bike's companion app, FOBO TPMS, works best with iOS 13 and Android 8.0 or later.

Before starting to use FOBO Bike, please download FOBO TPMS app onto your smartphone from Google Play Store or Apple App Store.

FOBO Bike is a product designed and produced by Salutica Allied Solutions Sdn. Bhd. ("Salutica"), a Malaysian company with its address at No. 3, Jalan Zarib 6, Kawasan Perindustrian Zarib, 31500 Lahat, Ipoh, Perak, Malaysia.

2 About FOBO Bike

FOBO Bike monitors your bike tires non-stop around the clock. Most riders have encountered situations where they need to rush for an urgent appointment only to be stranded by a flat tire. A conventional Tire Pressure Monitoring Systems (TPMS) for bikes could not alert you in advance conveniently because it requires the use of a separate receiver.

With FOBO Bike, you will get an alert as soon as the tire pressure drops below a certain pre-set level and if your smartphone is within the Bluetooth range (~30m) and app is running in the background. This alert gives you time to get the deflated tire fixed before you need to use your bike.

FOBO Bike system consists of 2 sensors, and the FOBO TPMS app. It requires a compatible smartphone and the FOBO TPMS app for installation.

Replace your tire valve caps with the FOBO Bike sensors and pair them according to the
app's simple on-screen instruction.

NOTE: Under certain conditions the signals from FOBO Bike sensors may be blocked by surrounding objects or structures. If this occurs, please move around the vehicle to capture signals from all the sensors.

The sensors will measure tire pressure of individual tires and transmit via Bluetooth to your smartphone. In the event of a problem with your tire pressure or temperature, the FOBO TPMS app on your smartphone will alert you. FOBO TPMS app can monitor concurrently up to 19 wheels. You will receive data from the tire pressure sensors for all your bikes through a touch of your finger.

If you would like to share your bike with family members or friends and ensure that are protected by properly inflated tires, you can allow others to access your FOBO Bike sensors with permission through the FOBO Share function in a few easy steps. With FOBO Share, the other user (Sharee) just needs to download the FOBO TPMS app and get your authorization to receive alerts (if pressure or temperature is above or below the pre-set limits) and view pressure and temperature data on their own smartphones immediately.

DISCLAIMER: FOBO BIKE IS NOT A DEVICE THAT PREVENTS ACCIDENTS. IT IS ALSO NOT A DEVICE THAT PREVENTS TIRES FROM BECOMING DEFLATED OR OVERINFLATED. FOBO BIKE IS NOT A SUBSTITUTE FOR SAFE TIRE MAINTENANCE PRACTICES. PLEASE CONTINUE TO TAKE PRECAUTIONARY MEASURES WHILE RIDING AND TAKE FULL RESPONSIBILITY OF YOUR VEHICLE'S TIRE CONDITION TO ENSURE SAFETY WHILE RIDING. YOU SHOULD CONTINUE TO PRACTICE PROPER TIRE CARE AND SCHEDULED TIRE MAINTENANCE.

3 Importance of Tire Care

It is extremely important to ensure bike tires are properly inflated for safety while riding. However, many riders tend to neglect proper tire care and maintenance. The bike tires are the only contact points between the bike and the road. The weight of the bike and rider are supported by the air pressure inside the tires. Improperly inflated bike tires may cause
serious accidents on the road.

When bike tires are underinflated, a rider may feel instability while taking a corner or lack
of response when manoeuvring the bike. On top of that, underinflated tires reduce the bike's braking distance. The additional rolling resistance may cause build-up of heat which may lead to the de-lamination of the tire materials as well as damage to the tire's sidewall thus increasing the chances of a tire blow-out. Underinflated tires will also cause accelerated wear on the tire and uneven tire wear. Gas mileage will also be affected due to additional rolling resistance when riding with underinflated tires.

On the other hand, an overinflated bike tire will cause accelerated wear on the centre portion of the tire resulting in uneven tire wear. It would also result in a harsher ride and makes the tire more susceptible to damage when going over potholes or debris on the road.

What is the optimum tire pressure? There are a lot of information about this subject in Internet forums and web articles. A quick guide for better understanding of tire pressure
below: -

1) Bike manufacturers recommend the optimum tire pressure for their bike models. They may recommend different tire pressure for front and rear tires so please follow the recommendation in the bike user manual. These recommended pressures usually meant for comfort riding and optimum performance of the bike. It is not advisable to go below the recommended pressure level.

2) The bike manufacturer recommended tire pressure is “cold pressure”. When you ride your bike to the gas station, the friction on the road will heat up your bike tires within a few minutes. Typically, there will 1 psi (~7kPa) increase in air pressure for every 10-degree F (5.6-degree C) rise in temperature, and vice versa for decrease in air pressure. It is advisable to inflate the tire pressure with this compensated pressure above the recommended pressure.

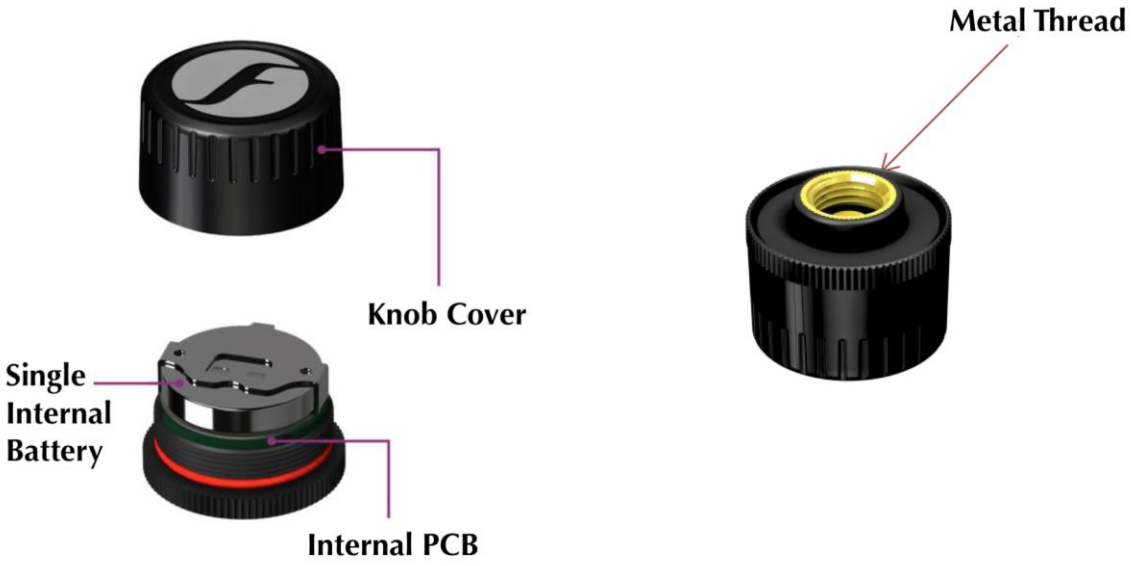
3) Air pressure in tires is affected by changes in temperature. Check and adjust your tire pressure whenever there is a drastic change in environment temperature, e.g. change of seasons.

4) A tire will normally lose its pressure through natural causes unless accelerated by a puncture, faulty valve or damaged wheels. It is advisable to change the tire valves or at least check the valves condition every time you change a new set of tires. Under normal condition, a set of tires could deflate at a rate of up to 2 psi per month. It is good practice to check your tire pressure regularly and top up to the optimum pressure.

5) Every bike tire has a maximum inflation pressure. It is not advisable to inflate to the maximum inflation pressure of the tire. Follow the bike manufacturer’s recommended tire pressure instead.

4 Product Description of FOBO Bike

4.1 Tire Sensor Unit



Knob Cover
Waterproof cover. Please ensure the red silicon ring is intact to prevent water from getting into electronics compartment.

Single Internal Battery
CR1632 coin cell battery. When replacing battery, please ensure the "+" sign of the battery is facing up, away from PCB.

Internal PCB
Internal electronics circuit (The pressure sensor chip is mounted within this PCBA, and it senses the tire pressure against a built-in vacuum, resulting in an Absolute Pressure reading. The internal firmware will then subtract the sea-level pressure of 101.3 kPa (14.7 psi) from this reading. This final reading which will be shown in the app can be termed as:

i) Tire **Absolute Pressure minus sea level pressure**, or
ii) Gage Pressure reference to sea-level altitude.

With this formulation, FOBO Bike sensor will read the same pressure value for any given time, irrespective of altitude (assuming a constant temperature). This will ensure the correct tire footprint per vehicle manufacturer's pressure recommendation, for all altitude above sea-level, given a constant temperature.

As a corollary, a tire with a FOBO reading of, say 40 psi at an altitude of 5000ft, will read the same 40 psi when driven to sea-level, given a constant temperature. However, it will read higher due to the warmer temperature at sea-level and may need some air release if the temperature difference is great. Tire pressure generally will increase 1 psi (~7kPa) for every 10-degree F (5.6-degree C) rise in temperature.

FOBO wishes to highlight the above formulation is for usage at sea-level and above and will not be accurate for use otherwise. In practice, this should not be an issue as the lowest area on earth will result in an insignificant error of 0.3 psi (~2 kPa).

For users who wish to retain 'Gage Pressure Reading', the FOBO TPMS has a Gage Pressure, adjusted to local altitude using cell towers or individual phone barometer if available.

FOBO Bike sensor units are designed to be robust and operate reliably 24x7 to provide tire information around the clock. It is designed to be waterproof (IP57) and by our special use of custom engineering plastics, it will be able to withstand road salts or other common automotive chemicals (petrol, engine oil, bike wash shampoo etc.).

Our designers have designed the sensors to ensure that there is no air leakage as it replaces the tire's original valve cap. There is no need to screw on the sensor extremely tight. Apply a reasonable hand twist force to ensure the sensor is securely installed and should be able to be removed by hand with ease.

Note that the sensor position is fixed during installation. When installing the sensors, please follow the on-screen prompt of the FOBO TPMS app. Do not screw on the tire sensors until instructed by the FOBO TPMS app. After installation, in the event the tire sensors positions are mixed up, usually after performing a tire rotation maintenance, you can easily re-position the sensors to their correct position by selecting 'Rotate Tires' on the FOBO TPMS app and follow the on-screen instructions. This eliminates the need to remove the tire sensors physically.

A missing or damaged sensor can be replaced easily, through the FOBO TPMS app. You will need to purchase a replacement sensor which you can do so online at: www.my-fobo.com.

NOTE: Battery life span up to 1 year is an estimate based on normal use at 23 °C. Battery life may vary according to usage and climatic temperature.

Battery life span will change due to the following reasons:

1) Frequent change of pressure threshold setting in the app.
2) Disabling & enabling of sensors.
3) Release & pairing.
4) Removal & screw-on of sensors.
5) Operating under extreme cold/hot temperature.
6) Testing of product.
7) Rotation.
8) Trigger alert or let activated alerts unattended.
9) Multiple removal and screw-on of sensors for equalizing all tire pressures.

All these activities will drain a battery very fast and affect the battery life span.

4.2 Sensor Lock Nuts and Wrench

FOBO Bike sensors are tied to a FOBO account after installation. They are not re- usable or transferable without the owner consent. This is a theft deterrent feature to discourage theft.

As an additional anti-theft feature, all FOBO Bike package comes with lock-nuts and a special wrench. FOBO Bike sensor functionality is not affected if you do not use the lock-nuts.

The lock nuts and wrench are made of custom engineering plastics that can withstand road salts and common automotive chemicals (gasoline, engine oil, bike wash shampoo, etc.).

To use the lock nuts, you must first install the lock nut to the tire valve (with the bump facing tire rim). Screw in the lock nut all the way down and ensure that there is still a **minimum of 5 thread count** on the tire valve for the sensor unit to be screwed on. If there is insufficient thread for the tire sensor, it may lead to air leakage. A solution for this would be to change the tire

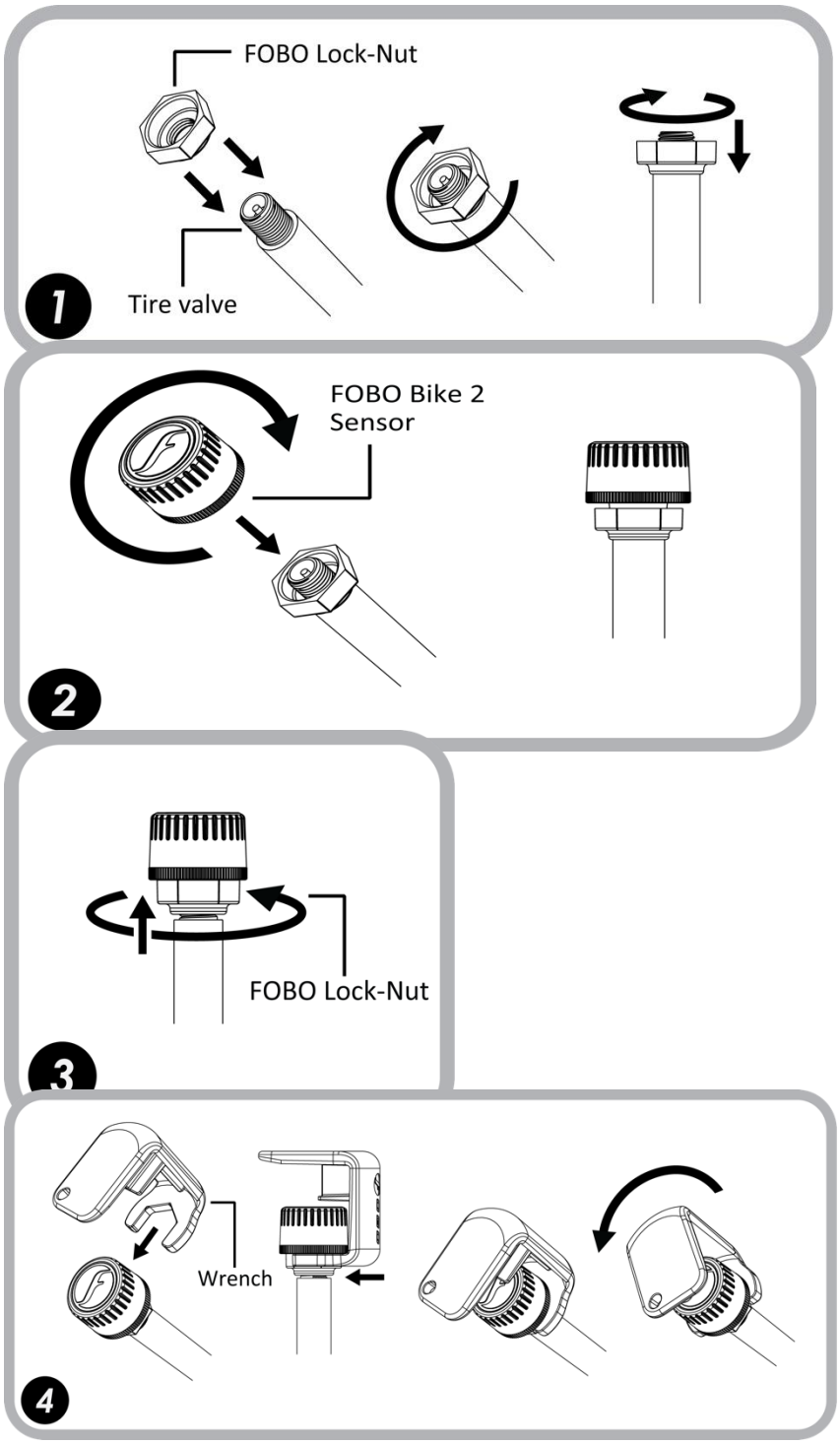
valve to one with a longer thread. Next, screw in the tire sensor unit until it is reasonably tight. Then use your finger to unscrew the lock nut outwards (i.e. anti-clockwise) until it pushes against the bottom of the sensor unit. Use the wrench to tighten the lock nut. The resultant friction force will make it difficult to remove the sensor unit without loosening the lock nut. Hold the valve stem with one hand and tighten the lock nut with the wrench on another hand. This is to avoid the valve from twisting making it unable to tighten the lock nut.

WARNING: Do not apply too much force to tighten the lock-nut. You may face difficulty to loosen the lock nut.

NOTE: If your tire valve is too short, you shouldn't use the lock nut as this will block the sensors from being completely screwed on the tire valve and causes air leak. Our sensors are designed to work on a tire valve with a minimum of 5 thread counts. Use the key chain provided to keep the wrench together with your bike keys, so that you don't have to worry about misplaced wrench when you need to remove the sensors when refilling air to your tires.

It is recommended to apply some soap water (on the tire valve installed with FOBO Bike sensor) after installing a sensor to check for any leakage.

Step by Step Diagram How to Use FOBO BIKE Lock-Nut and Wrench



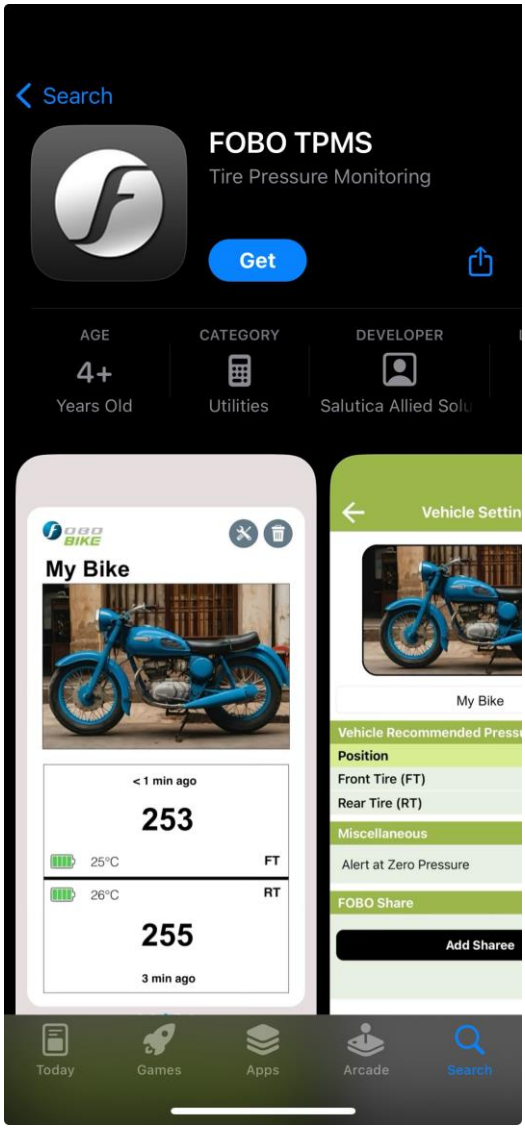
5 Using FOBO Bike

5.1 Installing FOBO TPMS App

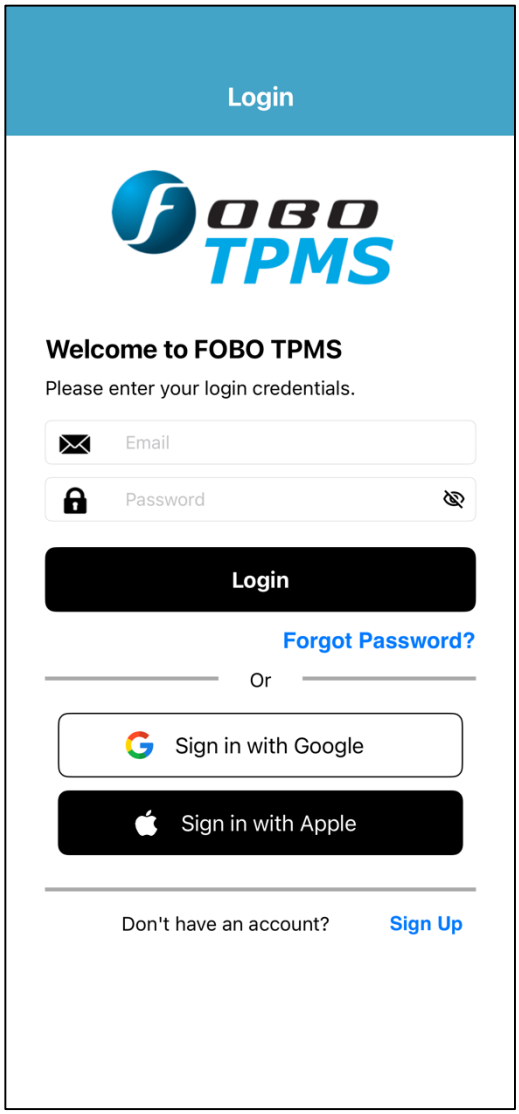
You are required to have a smartphone with minimum **Bluetooth 4.0** (Bluetooth Smart) capability to use FOBO TPMS app. The smartphone also must be running on iOS 13 and Android 8.0 or later. Follow the steps below to install FOBO TPMS app: -

Step 1: Download FOBO TPMS app onto your smartphone.

- For iPhone users, download from Apple's App Store.
- For Android users, download from Google Play store.
- Search for "FOBO TPMS".



Step 2: Launch FOBO TPMS app and sign in using Google or your personal email address.



Follow the below steps if you choose to login using your personal email address:

- Key in your Email and Password and the press “Login” button.
- You will be brought to the FOBO TPMS app’s “Home” screen.

Note:

- Please remember the password you entered while creating an account. You can click on “Forgot Password” option on the “Login” page to get instructions on how to reset password.
- If you do not receive any email (to reset password) from FOBO Admin after 15 minutes (with a good Internet connection), please write in to fobo@salutica.com.my. FOBO representative will be in touch with you to solve the issue.

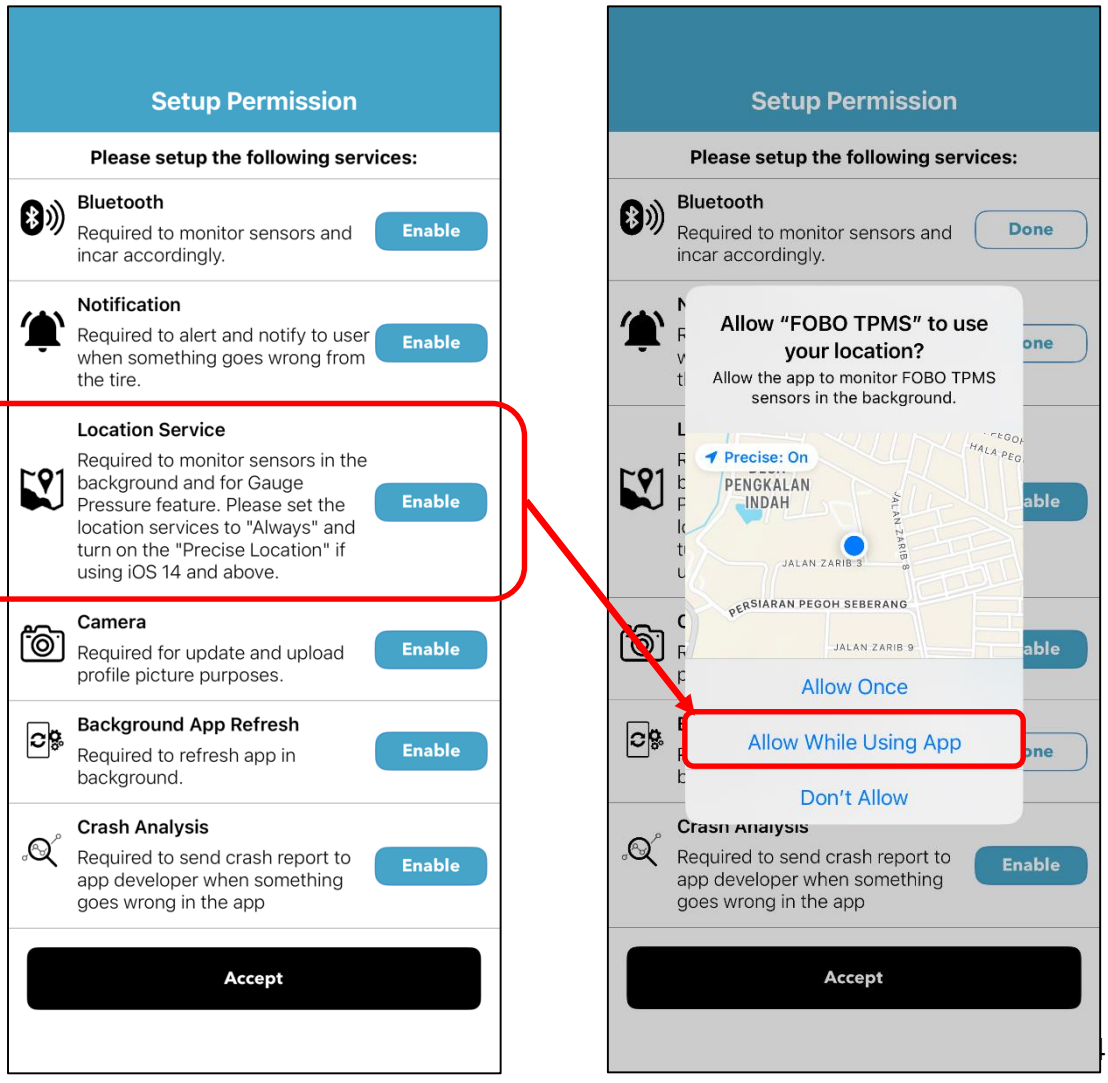
IMPORTANT:

FOBO Bike sensors are locked to your FOBO account as an anti-theft deterrent. Stolen sensors cannot be used by anyone else other than the FOBO account owner.

Location service is required to be enabled for the FOBO TPMS app (FOBO TPMS app does not use the GPS function to track your location). The location service on the iOS / Android system has other functionality that the FOBO TPMS app uses to operate properly. It will ensure FOBO TPMS functions as designed, mainly for alert functions, and for the gauge pressure feature to work as required by users living at high altitudes. FOBO TPMS is designed to be a low energy system and does not drain your smartphone battery excessively.

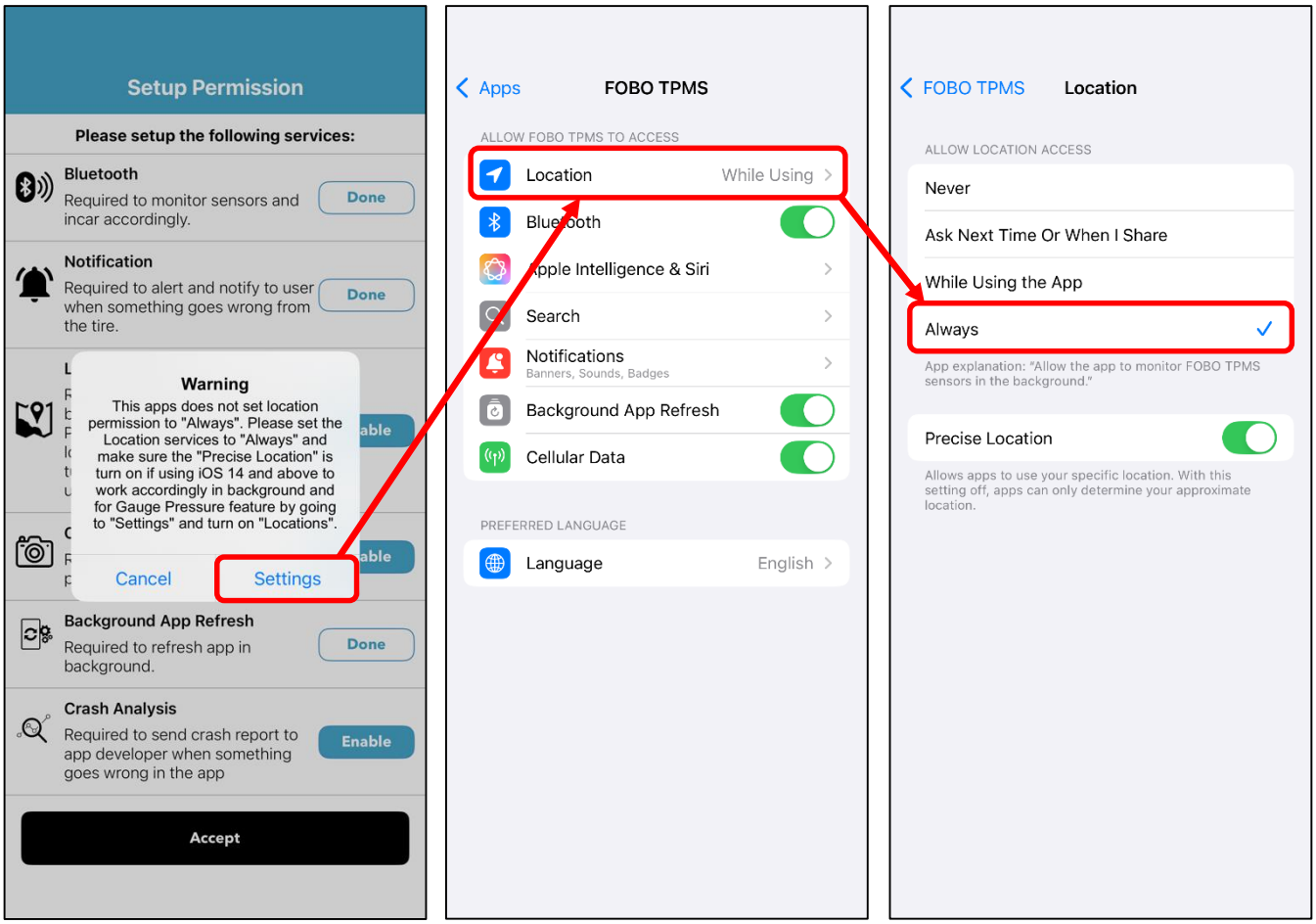
By submitting your information to sign up as a new user account, you acknowledge your acceptance to the terms and conditions of our Software Licensing Agreement and Privacy Policy.

Step 3: You need to enable certain permissions for the app to function properly. The key permissions required are the Bluetooth Permission (necessary for scanning sensors) and the Location Service Permission (required for detecting the sensor beacons).



On iOS, the "Always" location permission is required for detecting sensor beacons because beacon detection relies on Bluetooth scanning, which must run in the background. Apple restricts background Bluetooth scanning unless the app has "Always" location access, ensuring that app can monitor beacons even when the app is terminated.

If you only grant "Allow While Using the App" permission, the app won't be able to monitor beacons in the background or in a terminated state, potentially causing missed detection events when entering or leaving a sensor's region.



WARNING!

If the Bluetooth and Location permissions are not properly enabled, the app will be unable to scan the sensor in the background. As a result, in the event of a tire issue, the app will not receive sensor readings while running in the background, and notifications will not be triggered.

5.2 Installing FOBO Bike Sensors

NOTE:

Do not install the sensors to the bike tire valves until prompted by the FOBO TPMS app's on-screen instruction.

To minimize the risk of potential electrostatic discharge (ESD) attack, please hold the tire rim when screwing the sensors on to the tire valves. ESD may cause damage to the sensor or impair its function.

Installing FOBO Bike sensors on more than one bike which are closely parked may cause cross interference to the Bluetooth signals. Please install FOBO Bike sensor on one bike at a time.

WARNING!

Please ensure sufficient clearance between installed FOBO Bike sensor and any part of the bike. There is a risk of damage to the sensor or ripping off valve from the rim or sudden air leak if clearance is insufficient; the valve may deflect under strenuous vibration.

Ensure sensor clearance with vehicle parts is 10 mm (3/8") and 3 mm (1/8") for installation on a rubber valve and a metal valve, respectively. **(For metal valve only, the most definitive test is to push the motorcycle which has been installed with the sensors for a short distance forward or backward to ensure that the closest part such as the brake calliper does not knock or touch the mounted sensors.)**

RUBBER VALVE: FOBO strongly recommends use of sensors with only metal
valves as many as user finds that it is difficult to determine the fitness conditions of rubber valves. Use of sensors with rubber valves can cause a leak of tire blowout which it turns leads to sudden loss of control of the vehicles that subsequently leads to an accident and serious injuries. If user chooses to use rubber valves, users must regularly check if the valves are fit to use. FOBO is not liable for any untoward consequences.

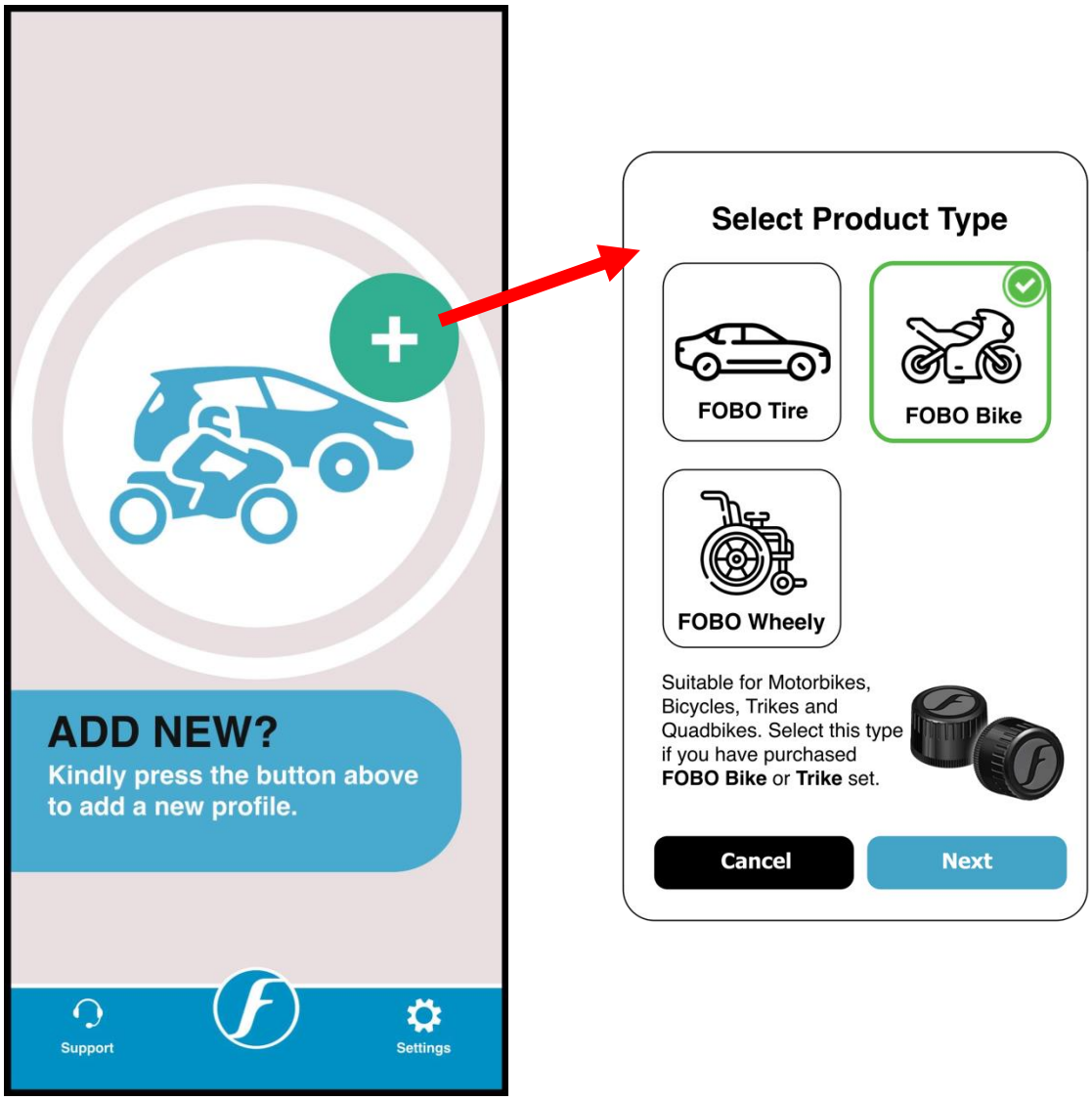
We highly recommend using Metal valves; T-valves and short metal valves are
available on our web-store. Follow the below link to purchase:

https://my-fobo.com/accessories

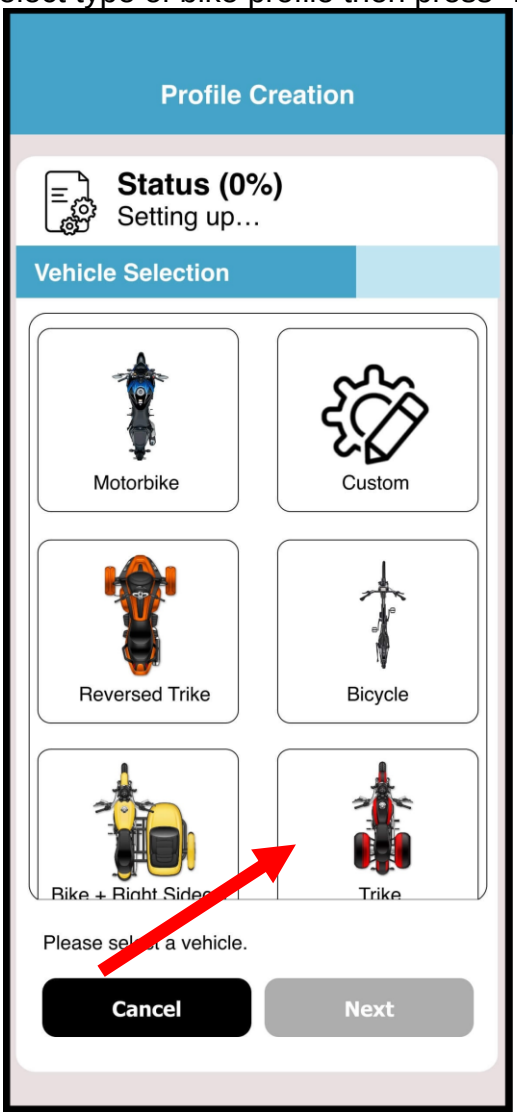
To begin using FOBO TPMS, firstly ensure that the FOBO TPMS app is downloaded, and you have already login to the app (see section 5.1 above for installation and login).

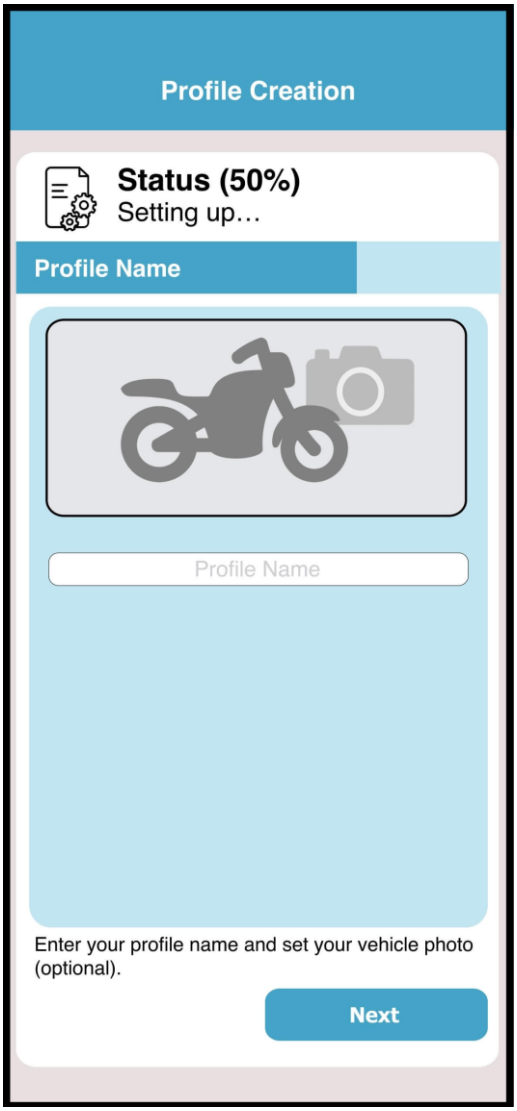
Follow the steps below to pair FOBO Bike sensor to your smartphone: -

1) Turn on your smartphone's Bluetooth and Internet connection.
2) Open the FOBO TPMS app.
3) Allow all the permissions when prompted by the app.
4) Press on the plus "+" button on the FOBO TPMS app "Home" page.
5) Select "FOBO Bike" product.



6) Select type of bike profile then press “Next”.

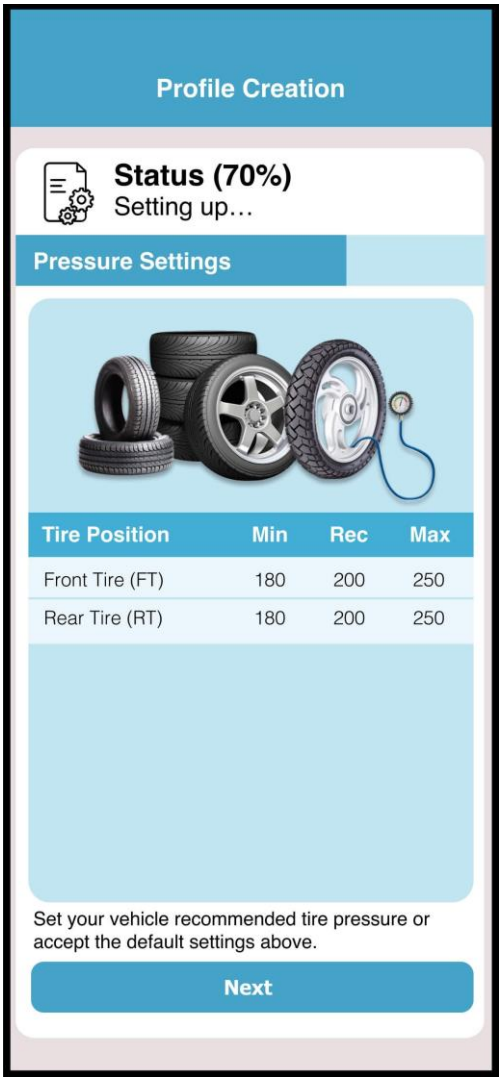




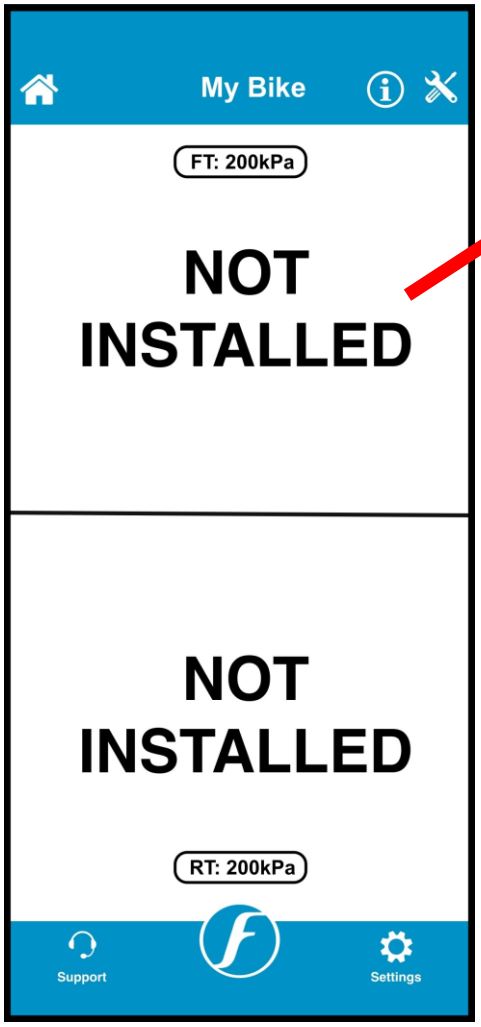
7) Tap on the profile picture box and take a picture of your bike or choose from the Gallery (optional).

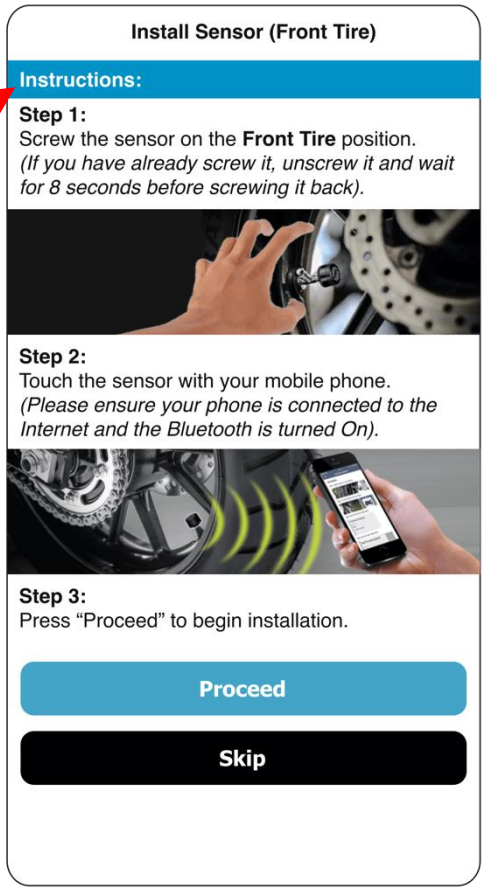
8) Key in the name you would like to identify your bike, then press “Next”.

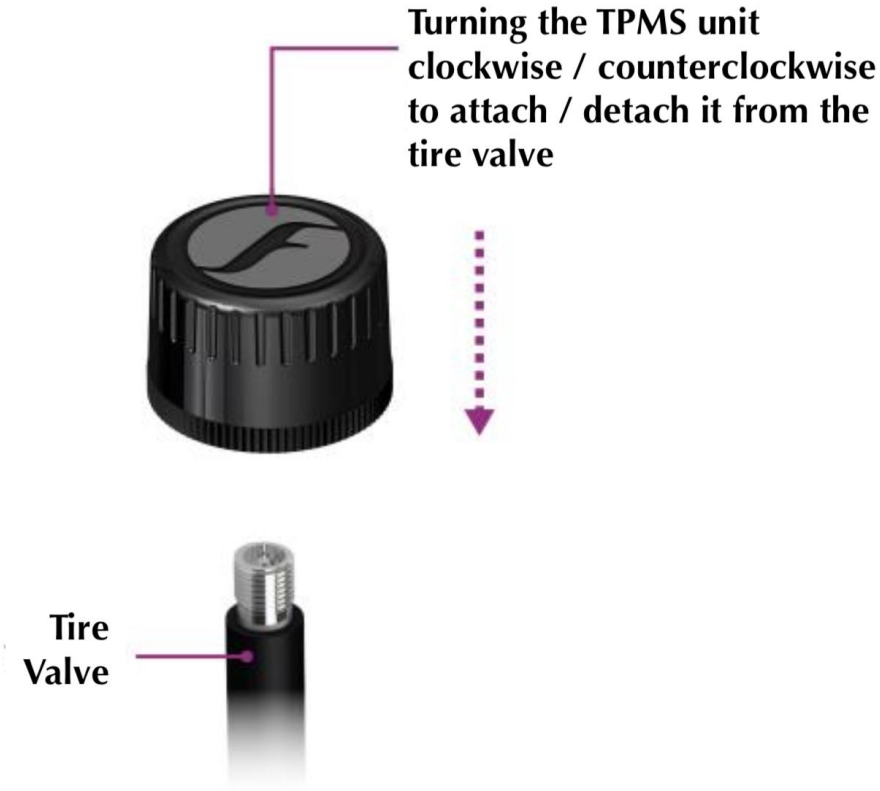
9) Select bike manufacturer recommended tire pressure. You may refer to the bike owner’s manual for the recommended tire pressure. Press the “Next” button.



10) You will be prompted to install the sensor. Follow the instruction on the screen. Screw FOBO Bike sensor on to tire valve only when you are prompted. Make sure your smartphone is nearby or touching the sensor to detect signal from the sensor unit. If you had screwed in the sensor before instructed by the app, remove the sensor completely and screw it back in again. Keep other sensors far while installing a sensor on tire valve.


My Bike
FT: 200kPa
NOT INSTALLED
NOT INSTALLED
RT: 200kPa
Support
Settings


Install Sensor (Front Tire)
Instructions:
Step 1:
Screw the sensor on the Front Tire position.
(If you have already screw it, unscrew it and wait for 8 seconds before screwing it back).
Step 2:
Touch the sensor with your mobile phone.
(Please ensure your phone is connected to the Internet and the Bluetooth is turned On).
Step 3:
Press "Proceed" to begin installation.
Proceed
Skip



CAUTION:

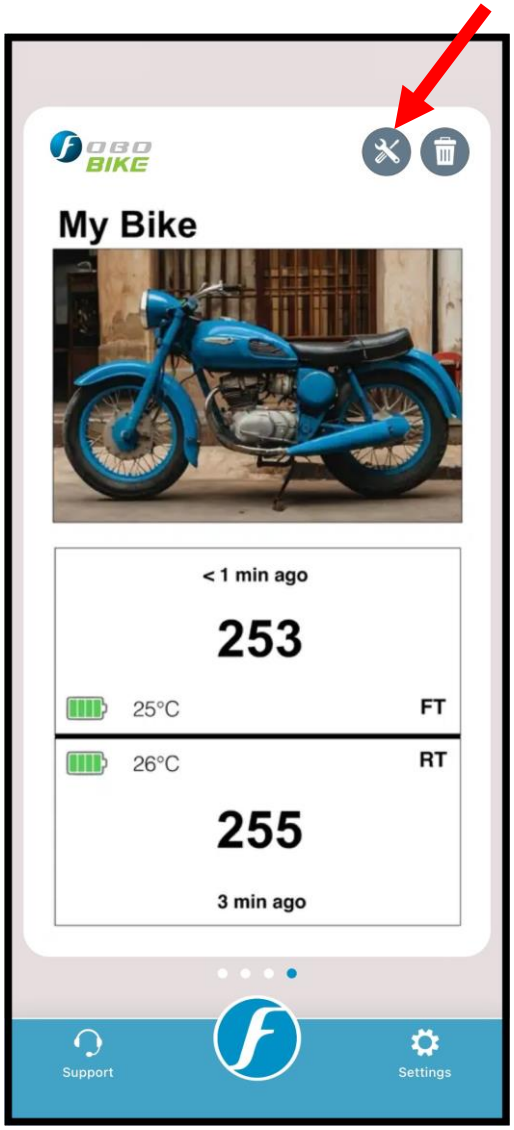
Motor vehicles of all kinds (cars, trucks, motor scooters and motorcycles) come with a very wide array of rims, wheels, and tires, with an even larger choice of aftermarket products. It is impossible for us to test every combination and check the fitment of the FOBO sensor. In some instances, when the FOBO sensor is screwed onto the valve stem, it might extend slightly beyond the face of the rim/wheel. If the rim/wheel comes close to or strikes an object, such as a curb, a pothole, the guide rail for an automatic car wash, or a component on the vehicle (such as the brake system on a motorcycle), the FOBO sensor or the valve stem itself might become damaged. This can cause the FOBO to provide improper readings or might cause a loss of air pressure. We recommend that you carefully assess the fitment of your rims, wheels, tires and the FOBO on your vehicle. If you have any concerns, consult with your tire shop or auto mechanic. A shorter valve stem might be considered to mitigate the situation.

5.3 Setting Up Multiple Users (FOBO Share)

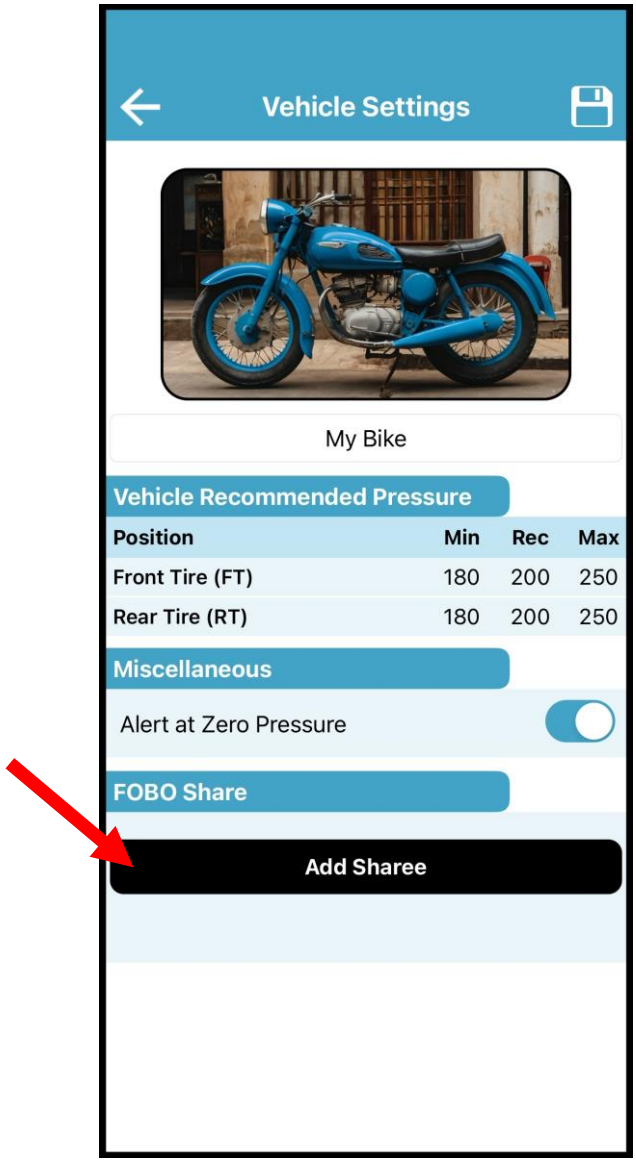
In FOBO TPMS app, you can share your bike profile with your family members and friends. You can share your profile with up to 100 users by using the app's FOBO Share function. All that is required is that these other persons download the FOBO TPMS app (they will also need an iOS / Android smartphone with Bluetooth 4.0 that is running on iOS 13 and Android 8.0 or later) on their smartphone and activate the account.

Follow the below steps to share your bike profile with other users: -

1. Ensure that the user to be shared (recipient) has downloaded the FOBO TPMS app and activated the account.
2. Ensure that the recipient's smartphone has Bluetooth and Internet connection turned on.
3. On your bike status screen, click on the "Settings" icon.

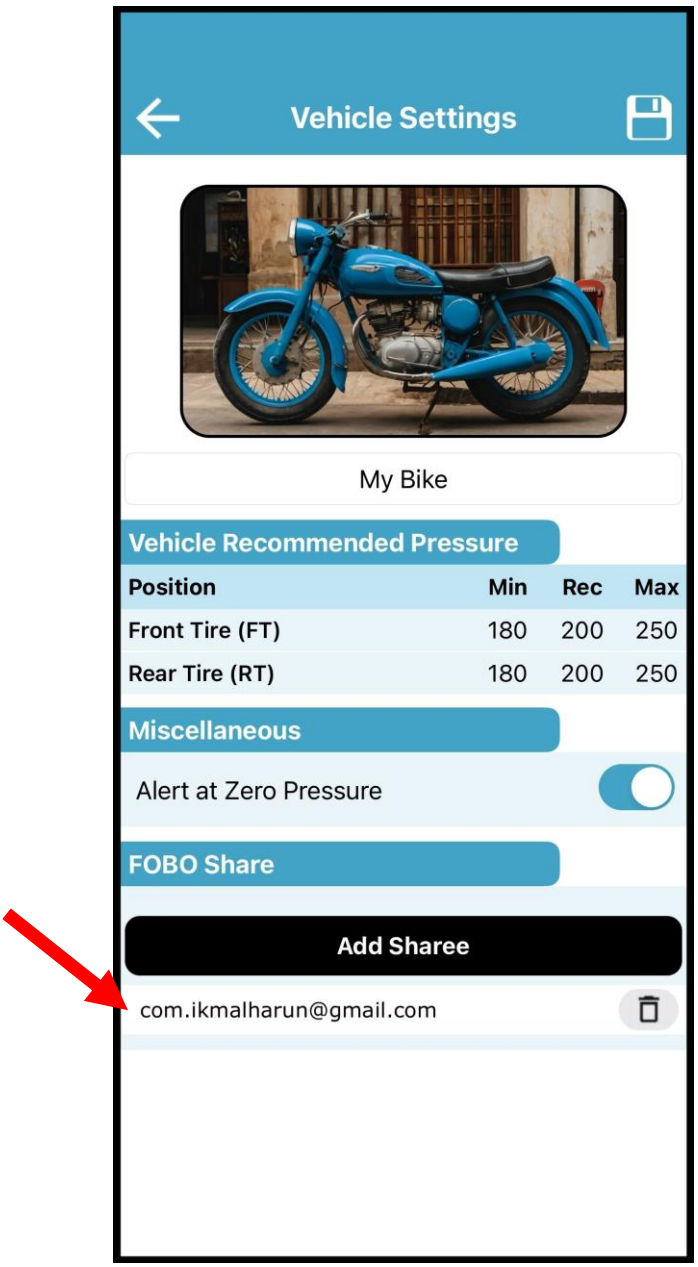


4. Click on the "Add Sharee" button and complete the action by using any of the available option.



5. Once recipient clicks on the link, the shared profile will appear on his / her smartphone under FOBO TPMS app. Sharee will start to receive all the data from shared FOBO Bike sensors on his/her smartphone, when he / she (Sharee) or Master is within the Bluetooth range of the sensors.

6. Sharee Email will appear under Master Account on the “Vehicle Settings” page.



NOTE: Please ensure good Internet connection for FOBO TPMS app to connect to the FOBO cloud server.

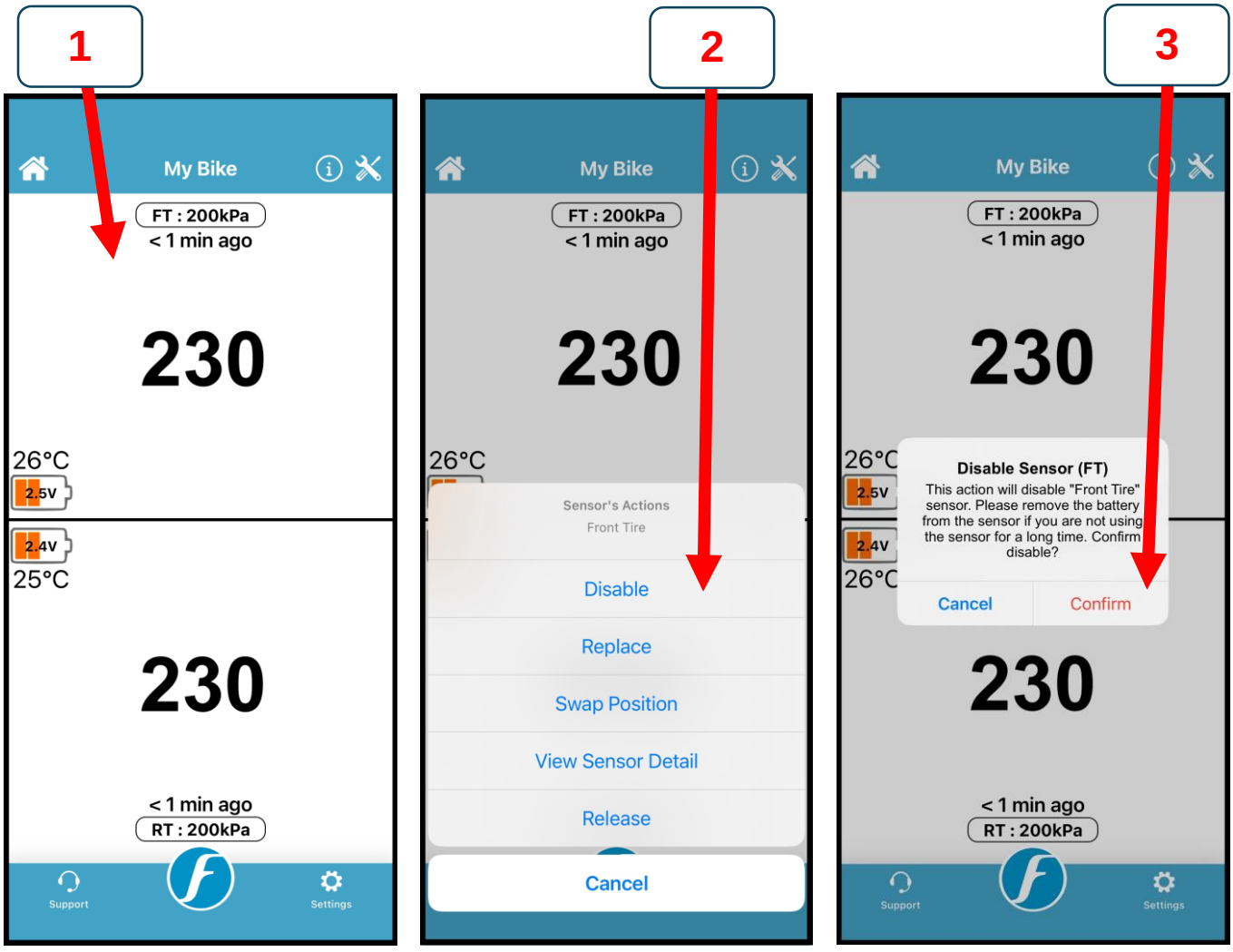
Note that shared users will not be able to change settings (name, pressure limits, etc.) on your FOBO TPMS profile using their smartphones. They can only view the readings. At the FOBO TPMS app “Home” page, a shared bike will depict a “FOBO Share” logo to distinguish a shared bike from your own bike.

5.4 Disable, Release, Replace and Swap Sensor

You may want to disable a sensor in the app due to physically missing sensor or damaged sensor. Disabling and releasing the missing or damaged sensor in the app will stop monitoring the sensor.

To Disable a Sensor:

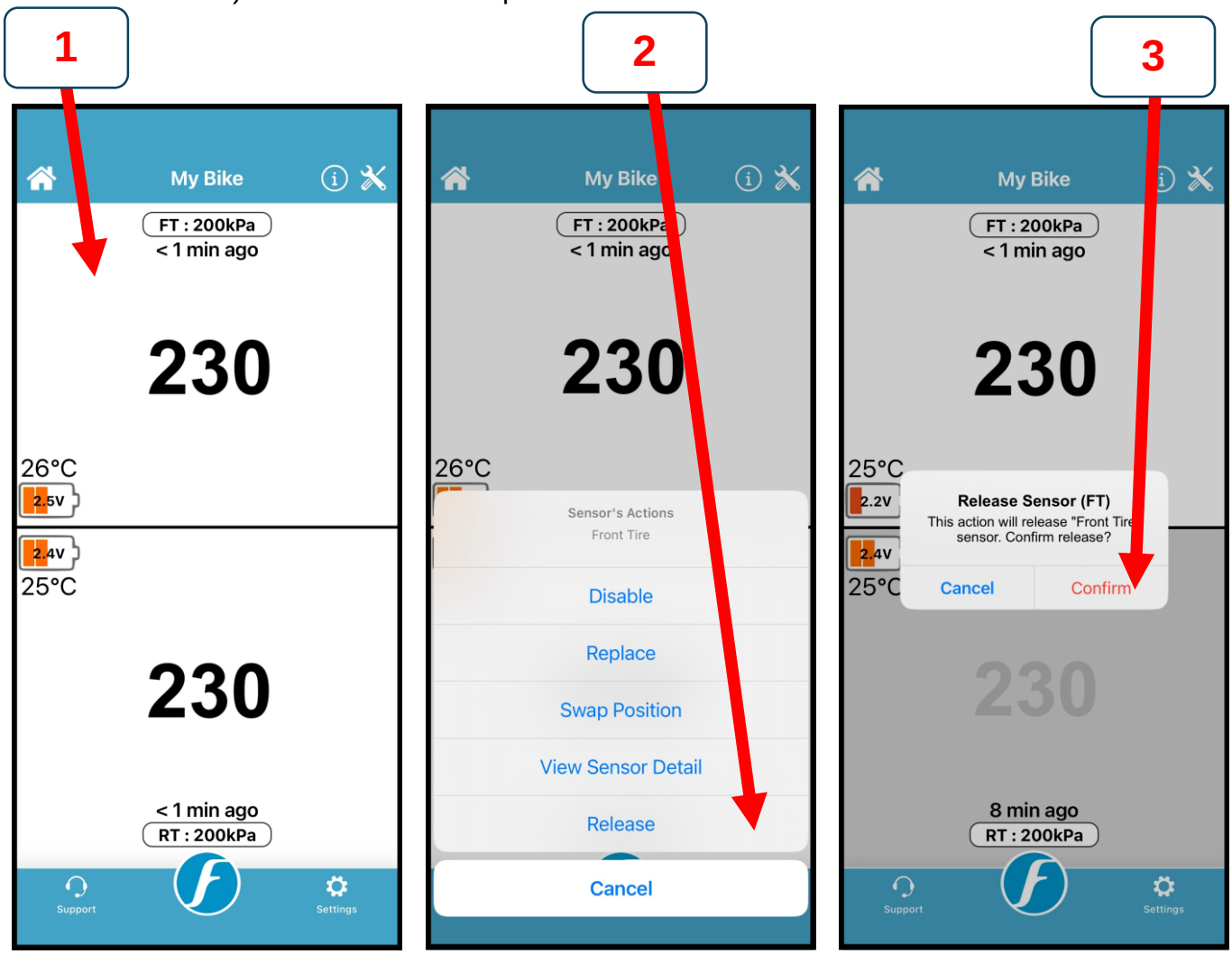
1) Long press on the box corresponding to the tire position you want to disable.
2) Press on the “Disable” option.
3) Press “Confirm” to proceed with the action.



Note: Please ensure you are connected to the Internet otherwise app will not perform the action and it will display an error message. You can enable back the same sensor by following the same process.

To Release a Sensor:

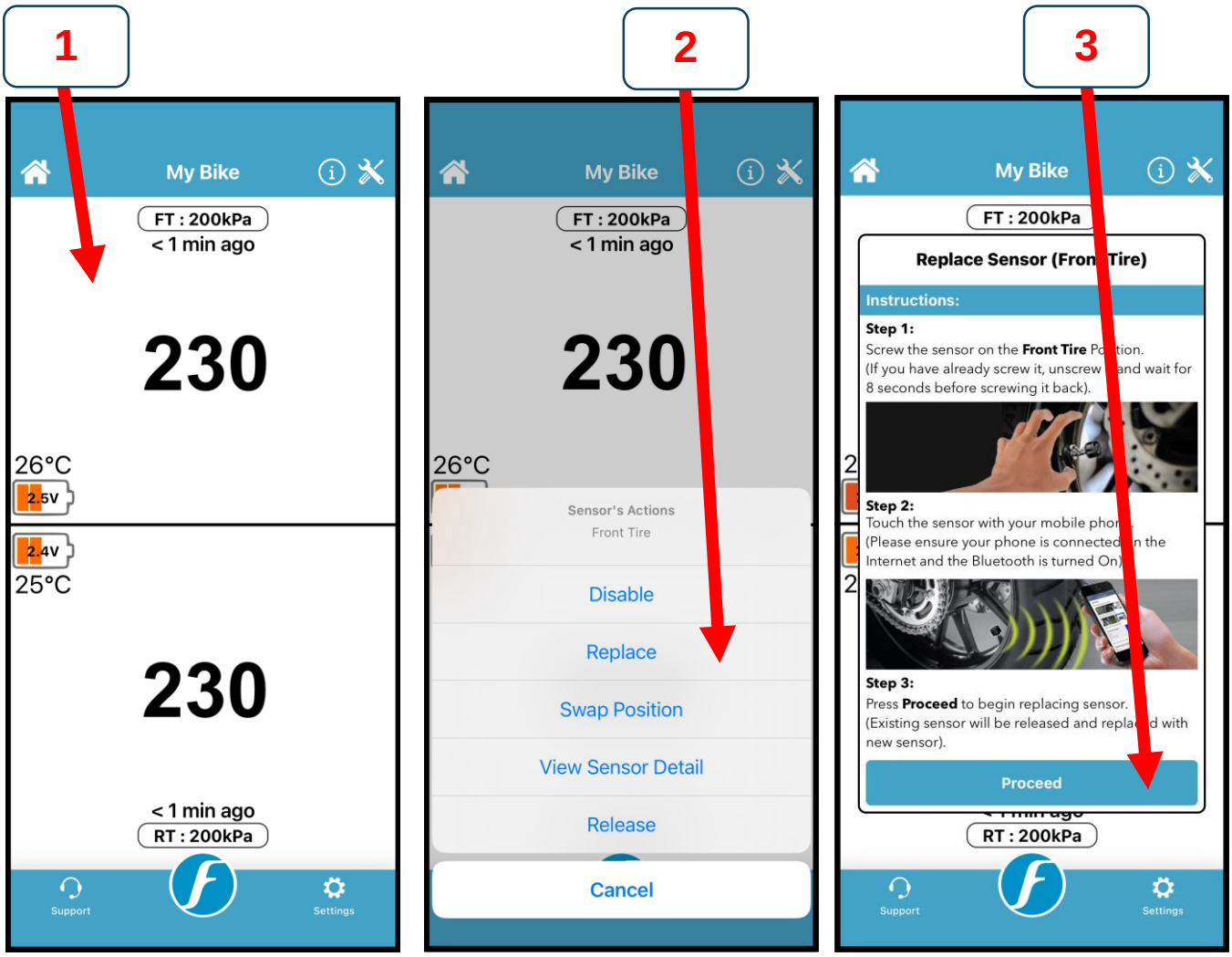
1) Long press on the box corresponding to the tire position you want to release.
2) Press on the “Release” option.
3) Press “Confirm” to proceed with the action.



Note: Please ensure you are connected to the Internet otherwise app will not perform the action and it will display an error message.

To Replace a Sensor:

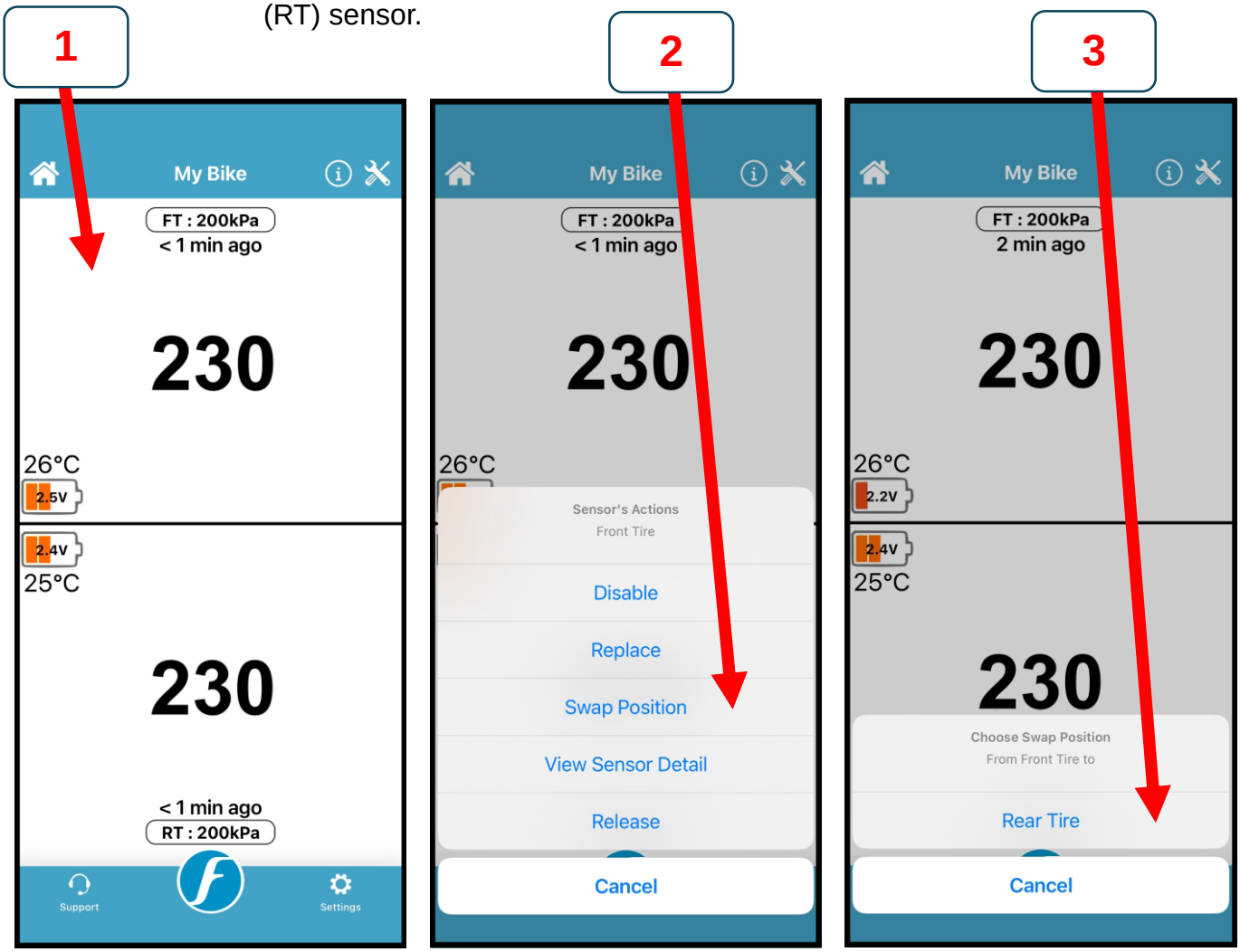
1) Long press on the box corresponding to the tire position you want to replace.
2) Press on the “Replace” option.
3) Press “Proceed” to proceed with the action.



Note: Please ensure you are connected to the Internet otherwise app will not perform the action and it will display an error message.

To Swap a Sensor:

1) Long press on the box corresponding to the tire position you want to swap position.
2) Press on the “Swap Position” option.
3) Choose the new position of a sensor from the list (in the below screenshots, we are swapping position Front Tire (FT) with Rear Tire (RT) sensor.

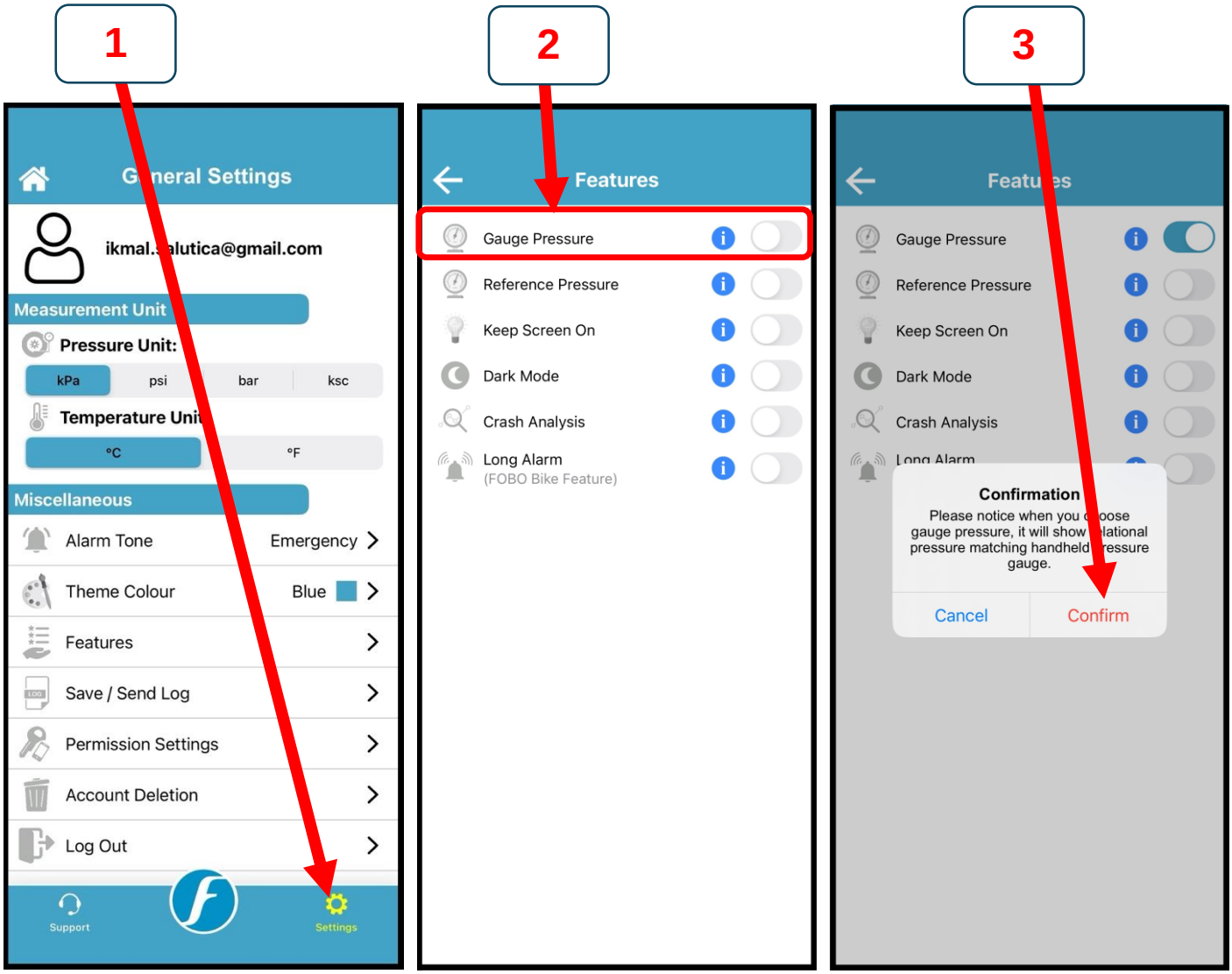


Note: Please ensure you are connected to the Internet otherwise app will not perform the action and it will display an error message.

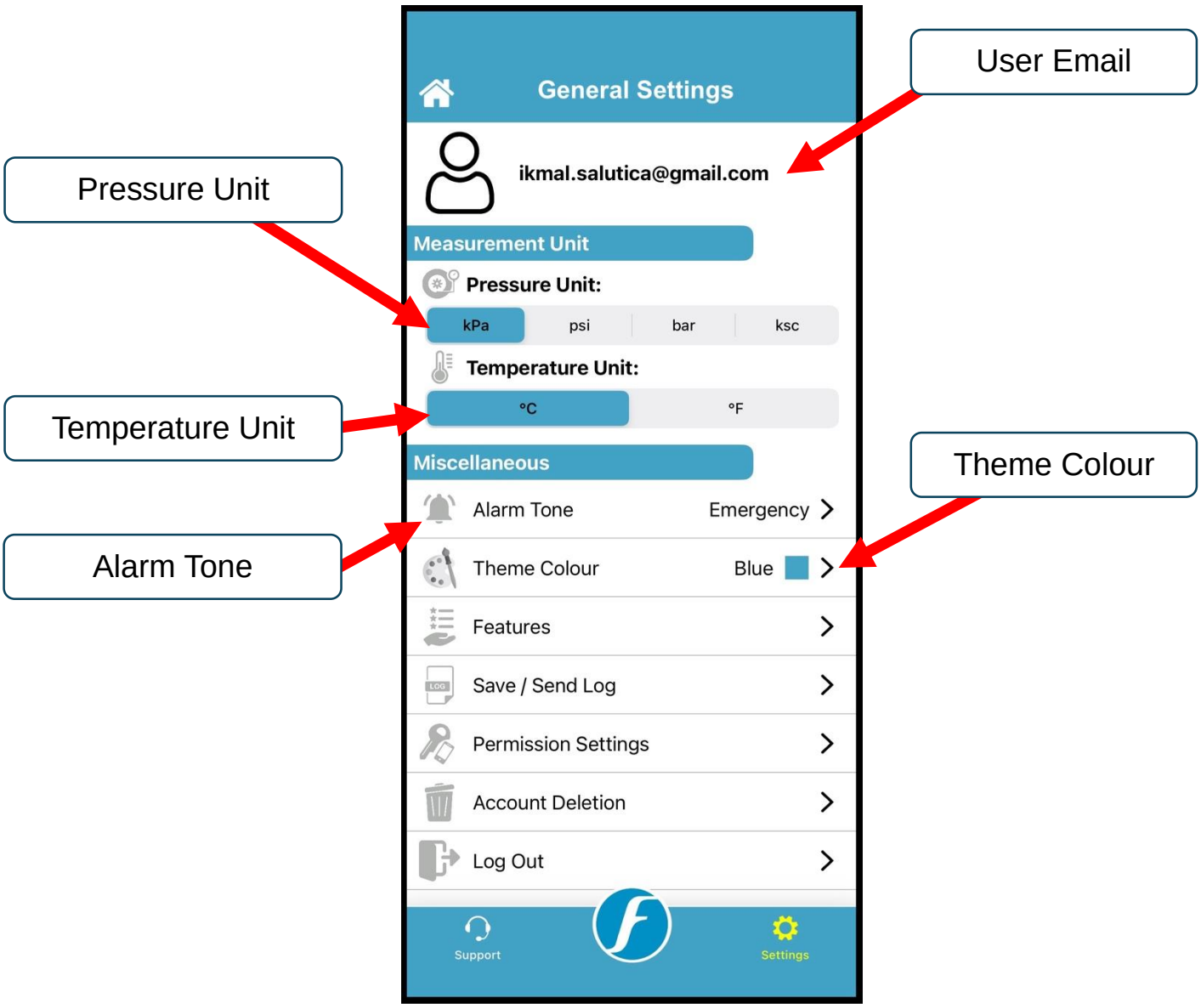
5.5 Gauge Pressure

For users who wish to retain “Gauge Pressure Reading”, the FOBO TPMS app has a Gauge Pressure feature, adjusted to local altitude using cell towers or individual phone barometer if available. This Gauge Pressure button can be accessed from the app.

1) Press on the “Settings” tab located at the bottom right of the “Home” page.
2) Turn On / Off “Gauge Pressure by using the toggle button.



5.6 General Settings Page



Pressure Unit Select pressure unit (kPa, psi, bar, ksc).

Temperature Unit Select temperature unit (°C, °F).

Alarm Tone Select alert ringtone type.

Theme Colour Select theme colour.

Features Open up to show additional features.

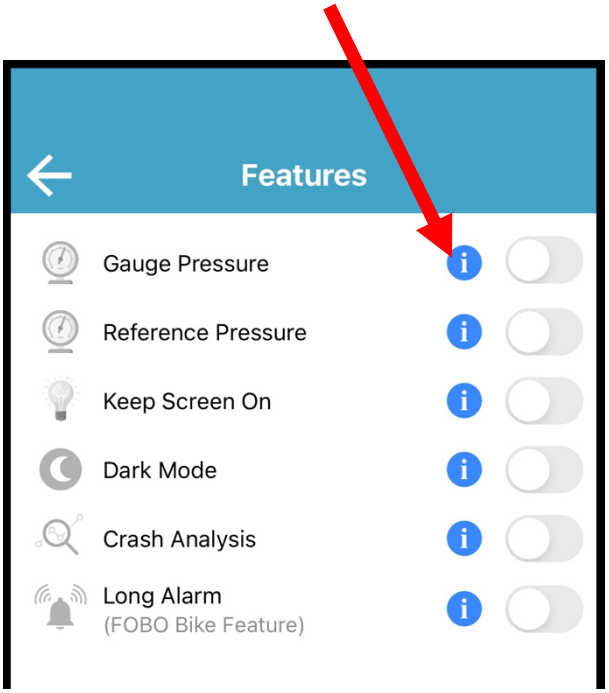
Permission Settings Display list of permissions require for the app.

Account Deletion Remove your account from the FOBO database entirely.

Log Out Log out from this account.

Features Page

You can learn information regarding each feature by pressing the blue coloured (i) information icon beside the feature name.



Gauge Pressure
Refer to Section 5.5 of this User Manual.

Reference Pressure
A temperature-compensated tire pressure referenced back to a standard temperature of 20 degree Celsius.

Keep Screen On
Keep the screen on when app is running in the foreground.

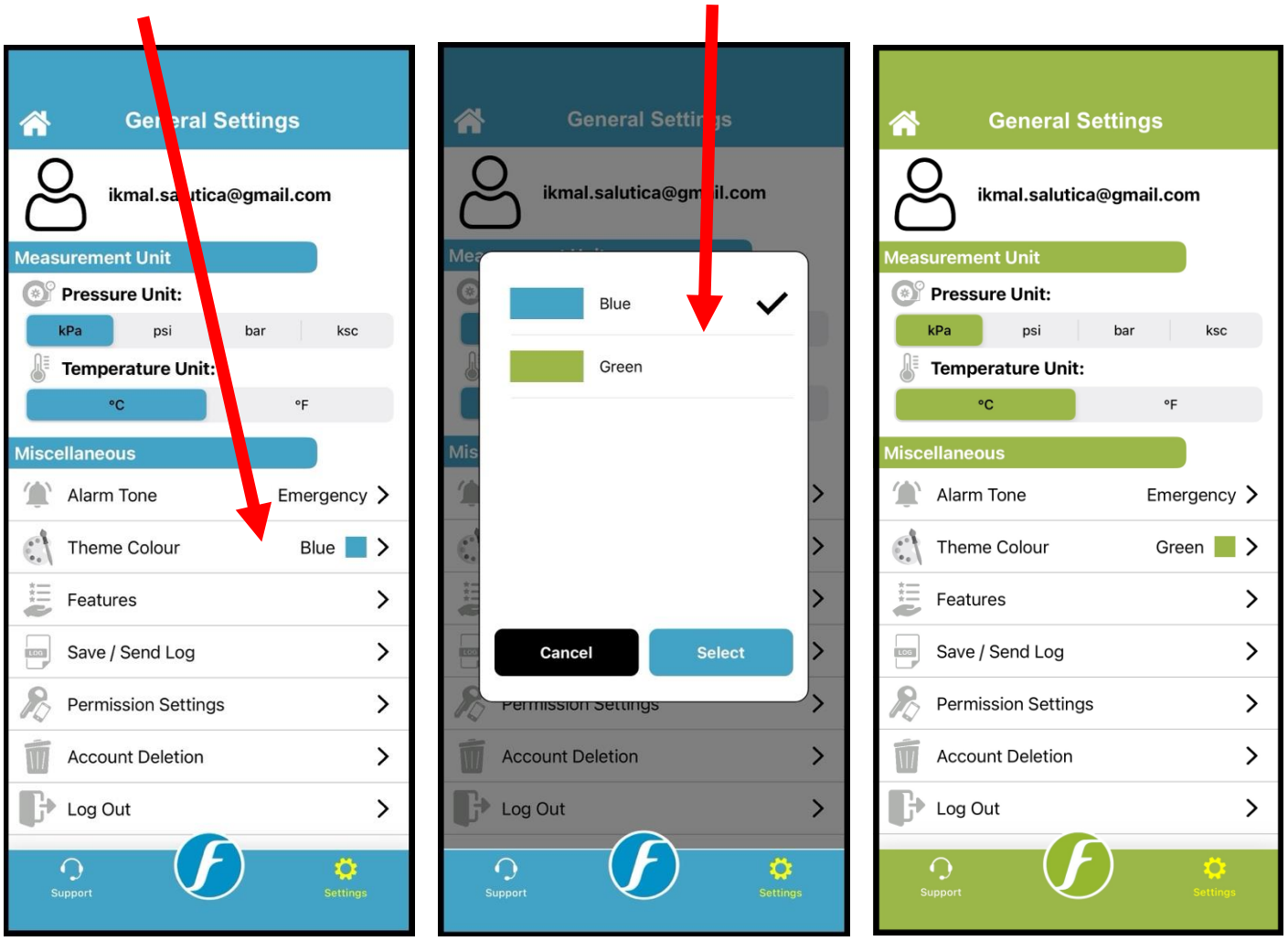
Dark Mode Change the app display to Dark Mode.

Crash Analysis Send anonymous crash report to app developer.

Long Alarm Make the alarm sound longer.

5.7 How to Change the Theme Colour

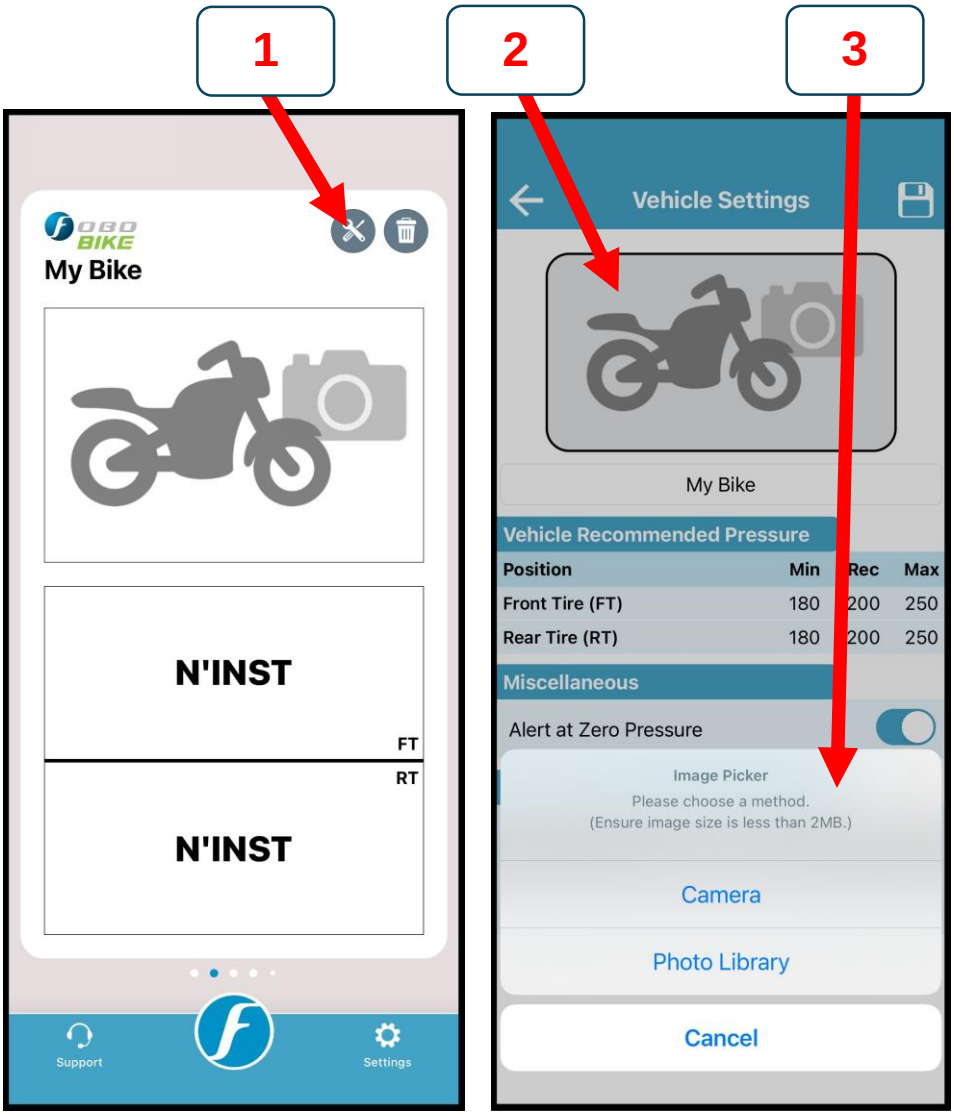
For users who wish to change the app theme colour other than the default blue colour can do so by pressing the “Theme Colour” option in the “General Settings” page and select one of the colours that are available in the list.



5.8 How to Change the Bike Image

User can change the bike image with any other (within specs) image. Refer to the below steps:

1) Press on the “Settings” button to go to the “Vehicle Settings” page.
2) Press on the bike image.
3) Choose a source “Camera” or “Photo Library”.



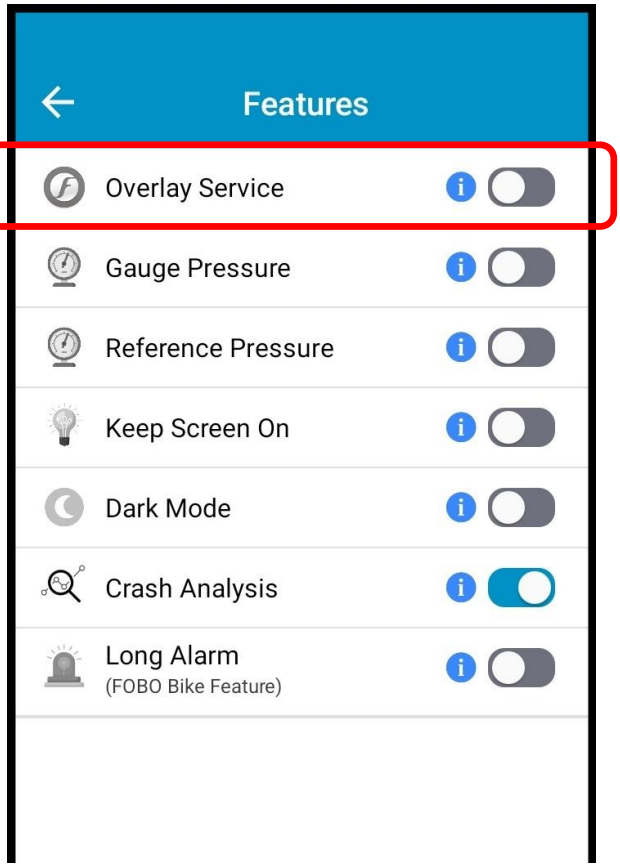
Note: Please ensure you are enable the permissions to allow the app to access your “Camera” and “Photo Library”.

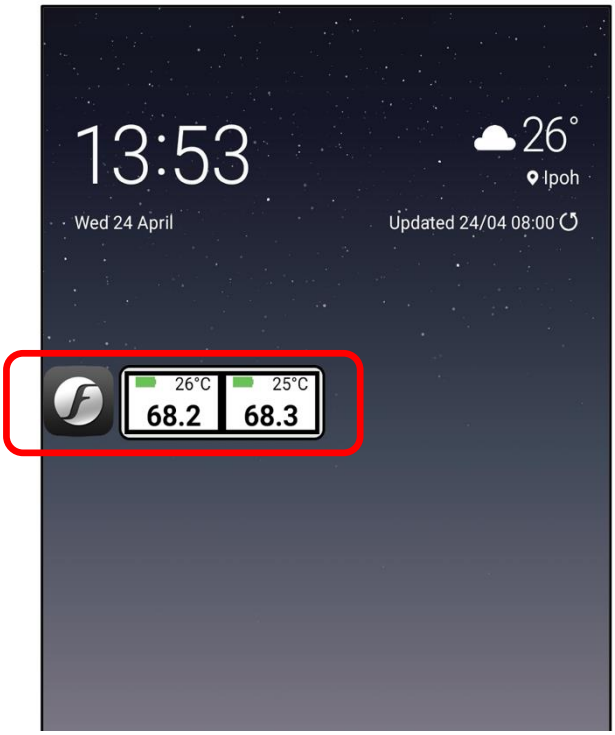
5.9 Overlay Services (Android Only)

“Overlay services” feature is an effective approach which helps the users to get the latest pressure, temperature, and battery readings just by a single click on the FOBO overlay icon which is displayed on the mobile home screen without the need of going into the FOBO TPMS app. User can use any other app in the foreground with live FOBO readings displayed on the screen. **This feature is only available on Android devices.**

To turn on the Overlay Service:

1. Open the FOBO TPMS app.
2. Press on the “Settings” tab (wheel icon at the bottom right of screen) on the “Home” page of the FOBO TPMS app.
3. Press on the “Features”.
4. Turn on the “Overlay Service”.
5. Upon turning on the Overlay Service FOBO overlay icon will appear on the screen.
6. Press on the FOBO overlay icon to get the pressure, temperature and battery readings.

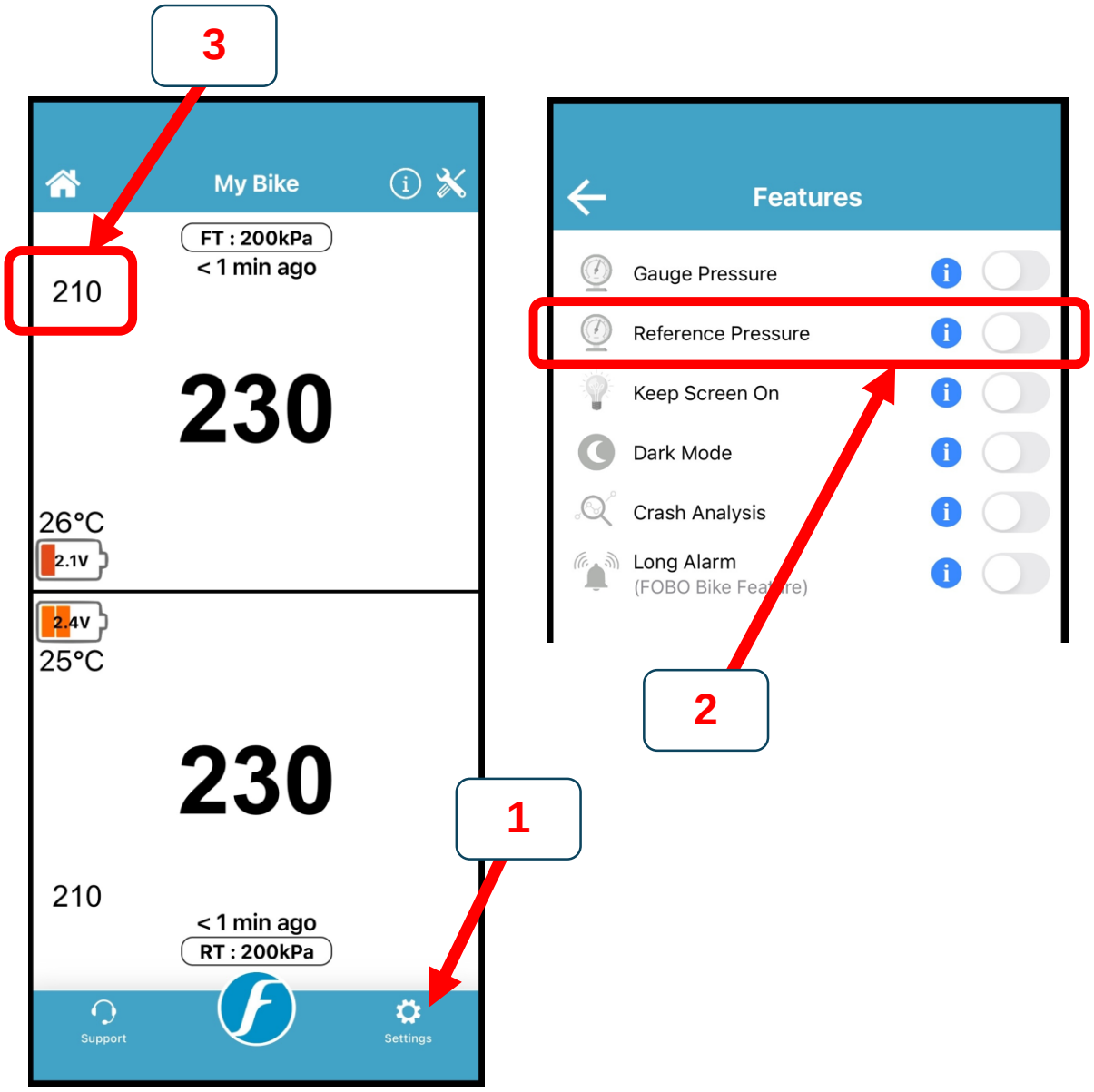




5.10 Reference Pressure

Reference pressure is a temperature-compensated tire pressure referenced back to a standard temperature of 20 degree Celsius. This is useful and serves as a guide for the user to decide on the approximate amount of air needed to inflate the tire during hot season or immediately after a long ride

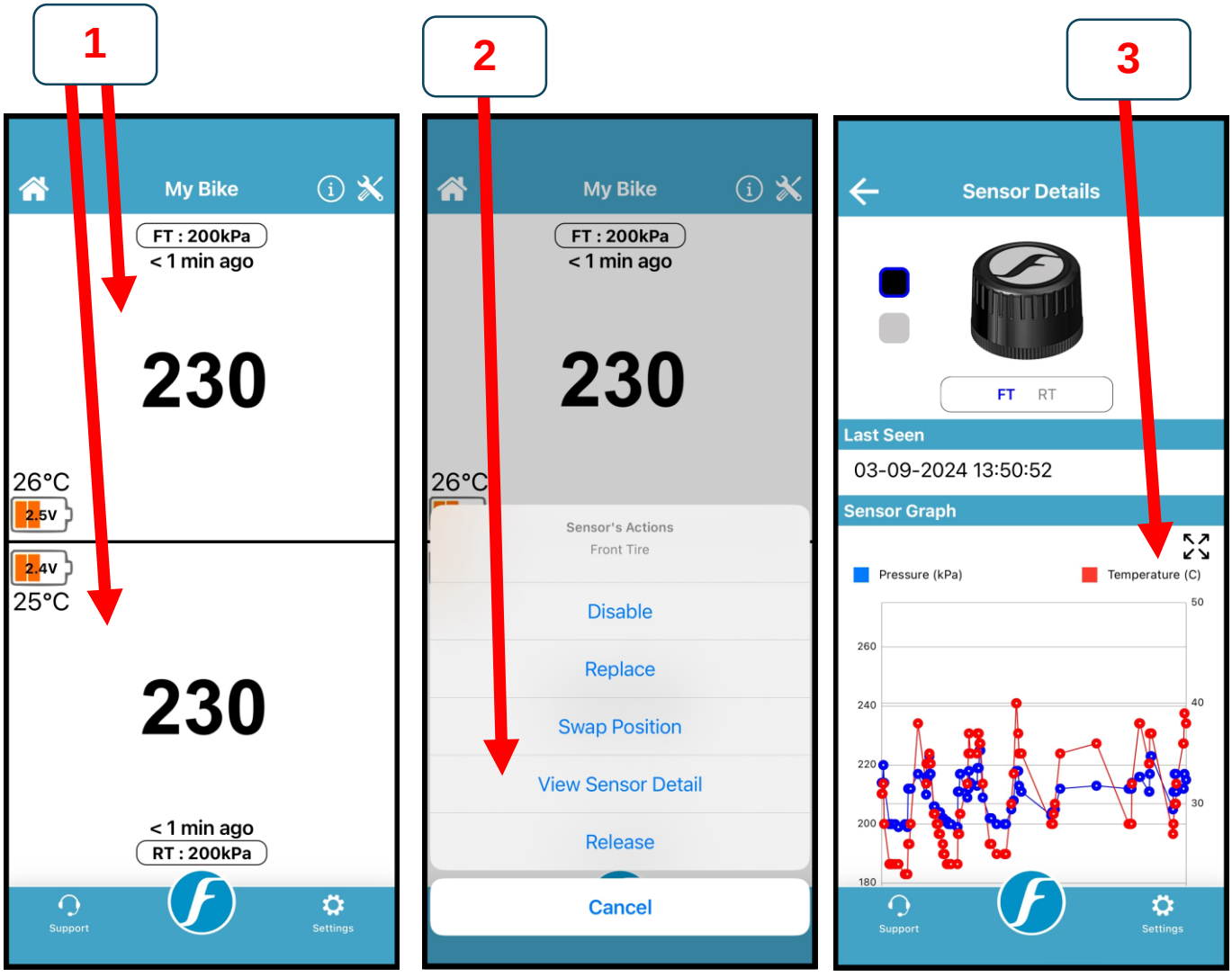
The reference pressure reading is located near the actual pressure reading in smaller font size. User has an option to show / hide the reference pressure reading by going to the “Settings” tab > “Features” > Toggle the “Reference Pressure” switch as shown below.



5.11 Sensor Graph

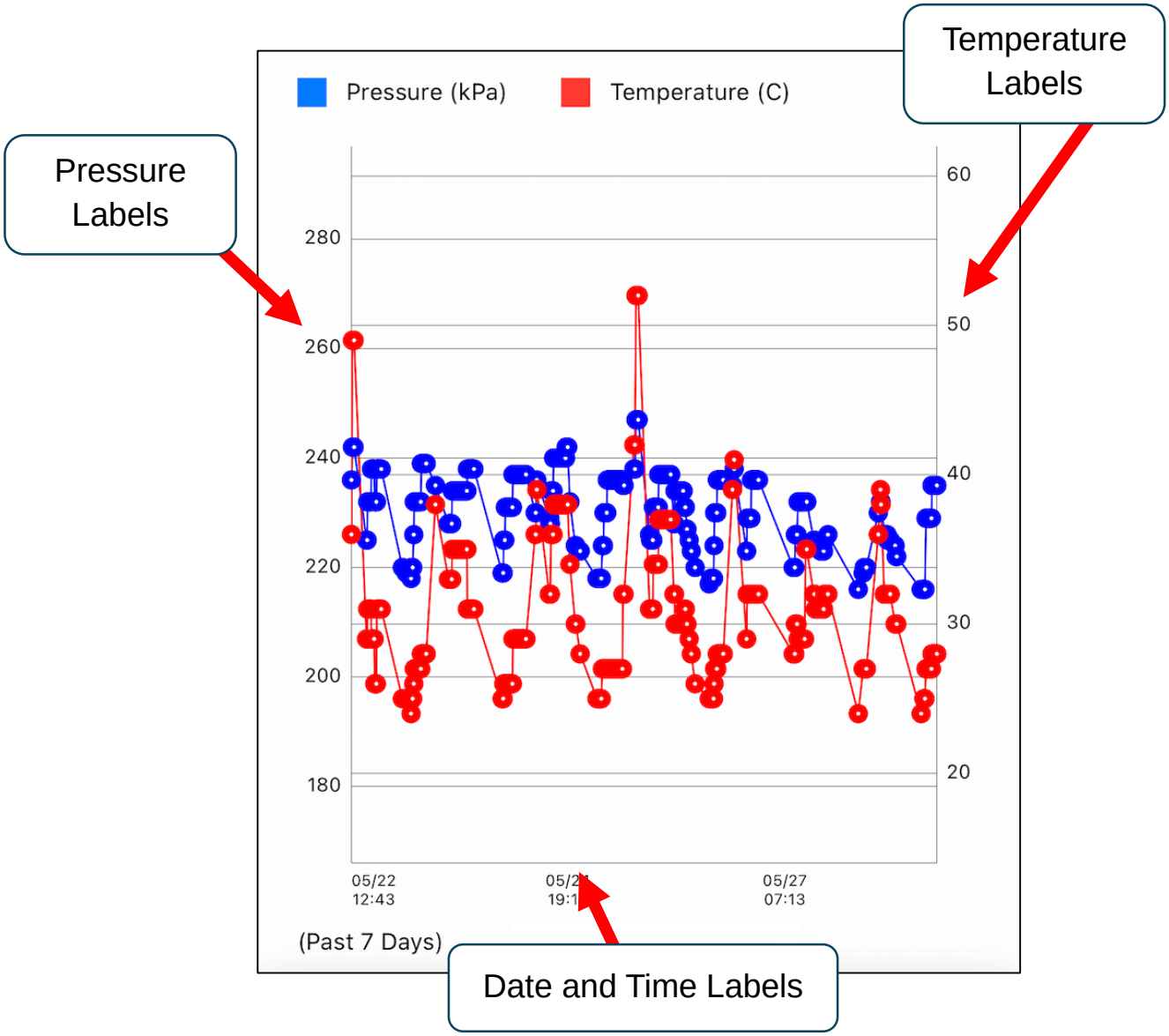
The Sensor Graph is a feature that allows you to visualize your tire pressure and temperature in a line graph form. To view the Sensor Graph:

1) Long press on the desired sensor position (FT or RT).
2) Press on the bike “View Sensor Detail” option.
3) Scroll all the way down.



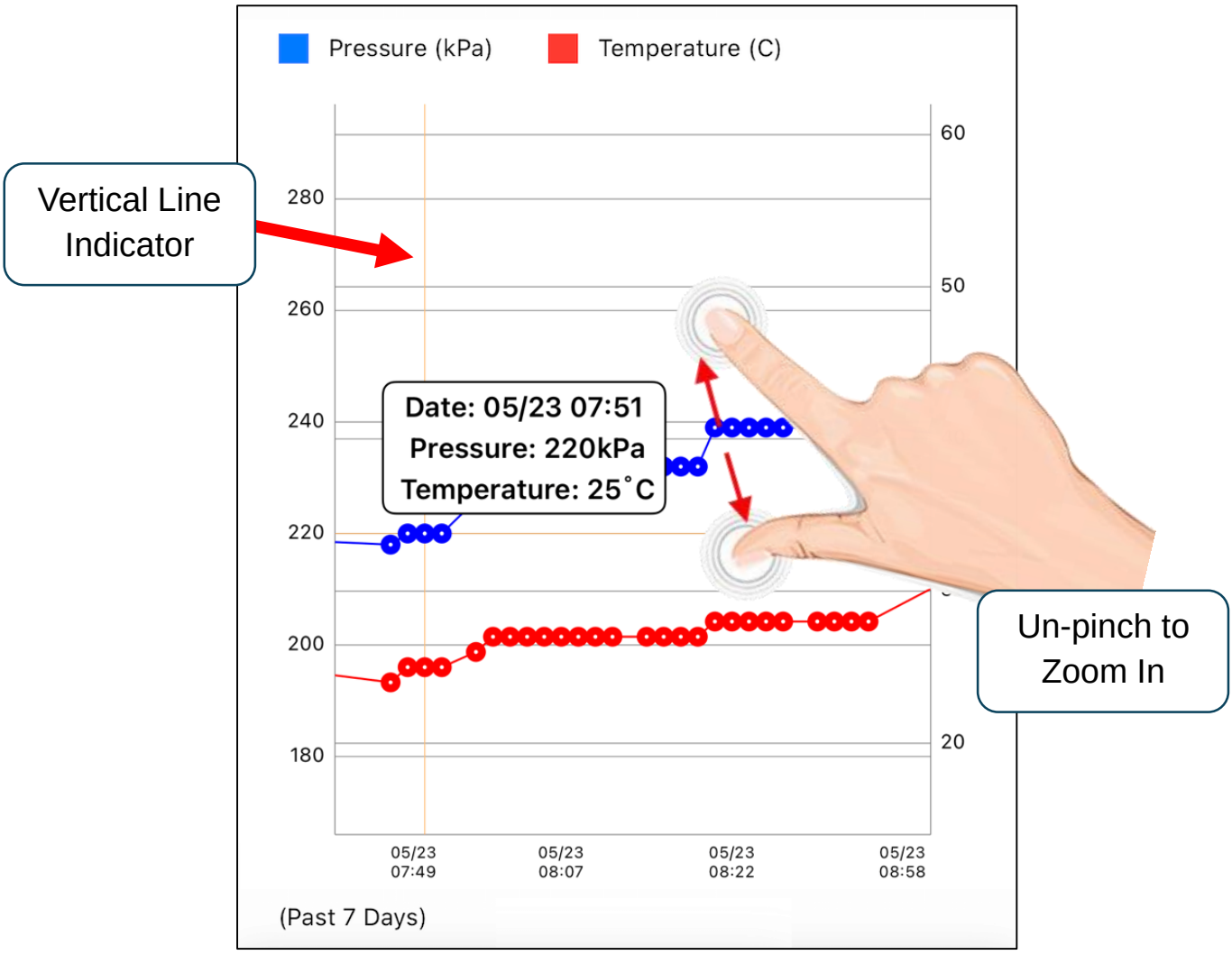
The graph data is originated from your sensor logs. If your sensor logs are empty, or you have recently cleared the logs, or log out from your account, the Sensor Graph will not appear and instead you will see a text displaying “No chart data available”.

The pressure line will be displayed in **BLUE** colour while the temperature line will be shown in **RED** colour. On the left is the pressure labels, on the right is the temperature labels, and at the bottom is the date and time labels.

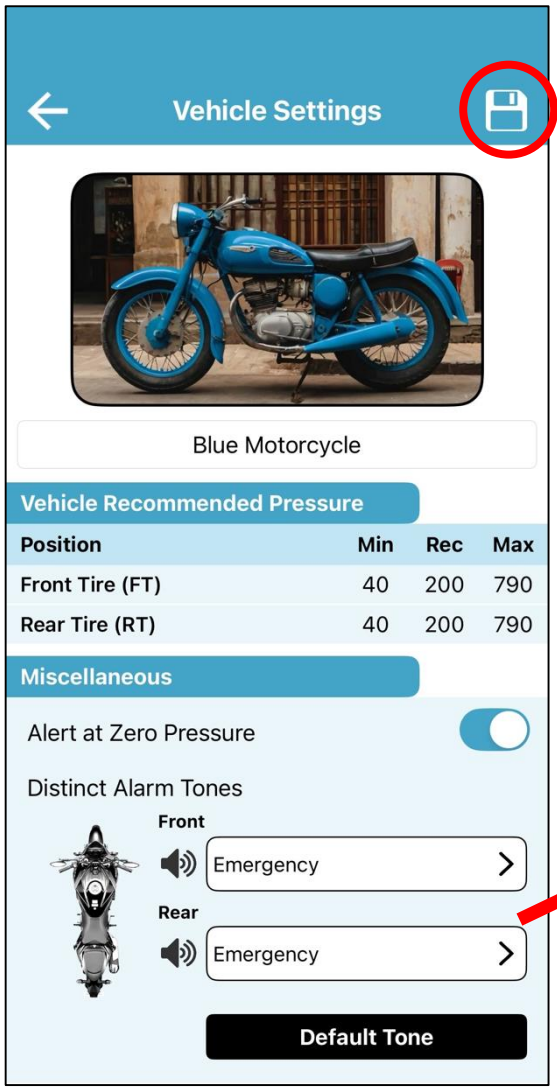


The Sensor Graph will display data from the past 7 days.

1. To zoom in into the graph, “un-pinch” your fingers over the graph.
2. To display the pressure and temperature of a specific graph point, press on any of the blue / red point. An orange vertical line will appear to indicate the data selected is belonging to which date and time.

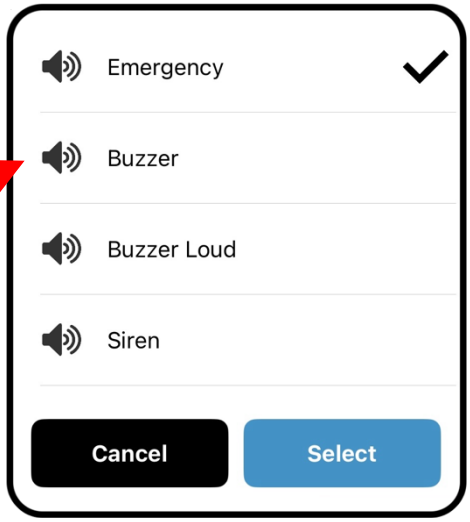


5.12 Distinct Alarm Tone Feature



This feature allows the user to set separate alarm tones for the front and rear tires.
That way, when an alarm goes off, the rider knows exactly which tire needs attention.

Tapping any of the sound settings will open the alarm tone selection screen, where the user can choose a specific tone.
Tap **'Select'** to confirm the choice, then tap the **save icon** (disc) in the top-right corner of the screen to apply the changes.

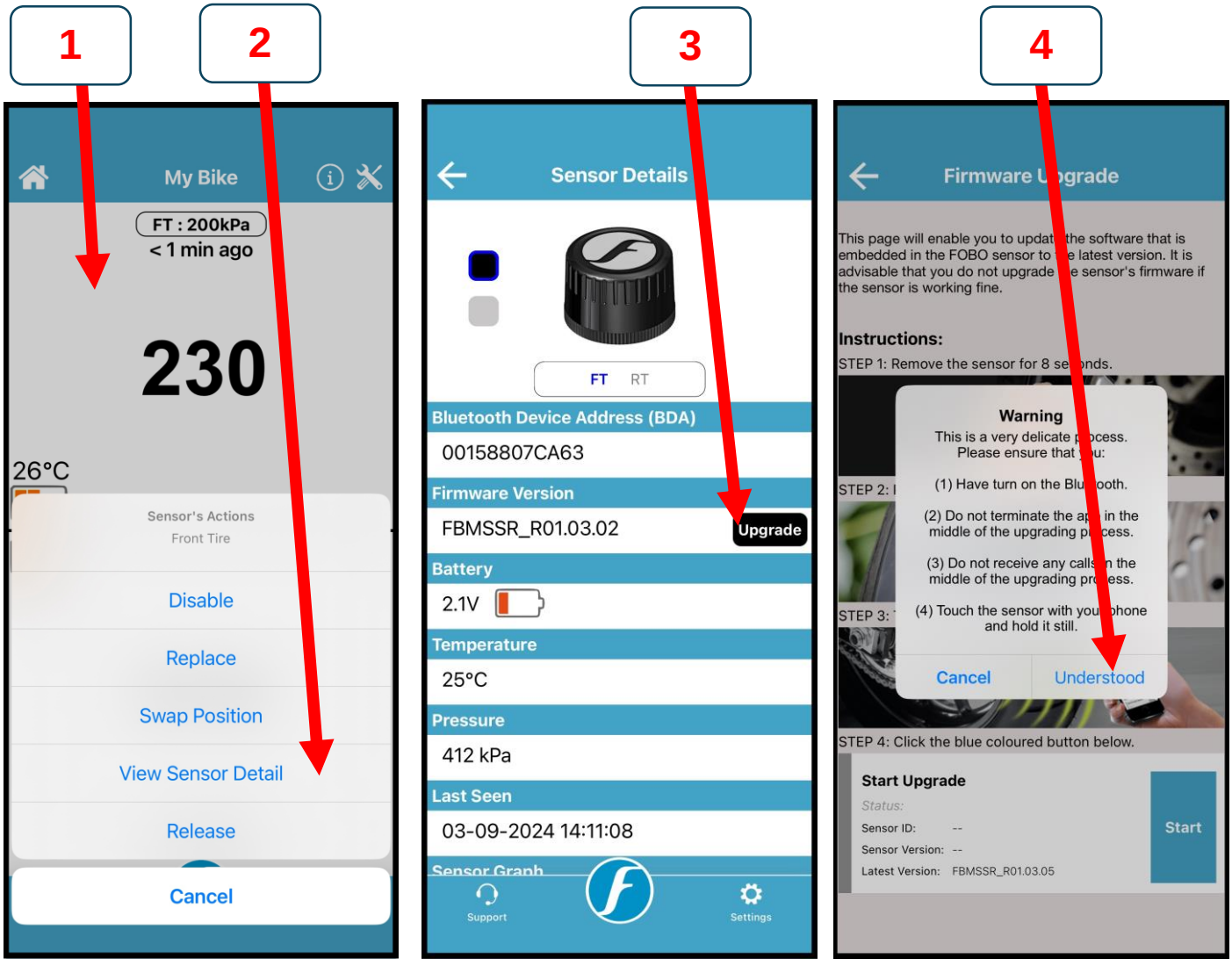


Note: Setting the alarm tone here will override the global alarm tone set in the **General Settings** screen. To restore the global tone, tap the **"Default Tone"** button.

5.13 Sensor Firmware Upgrade

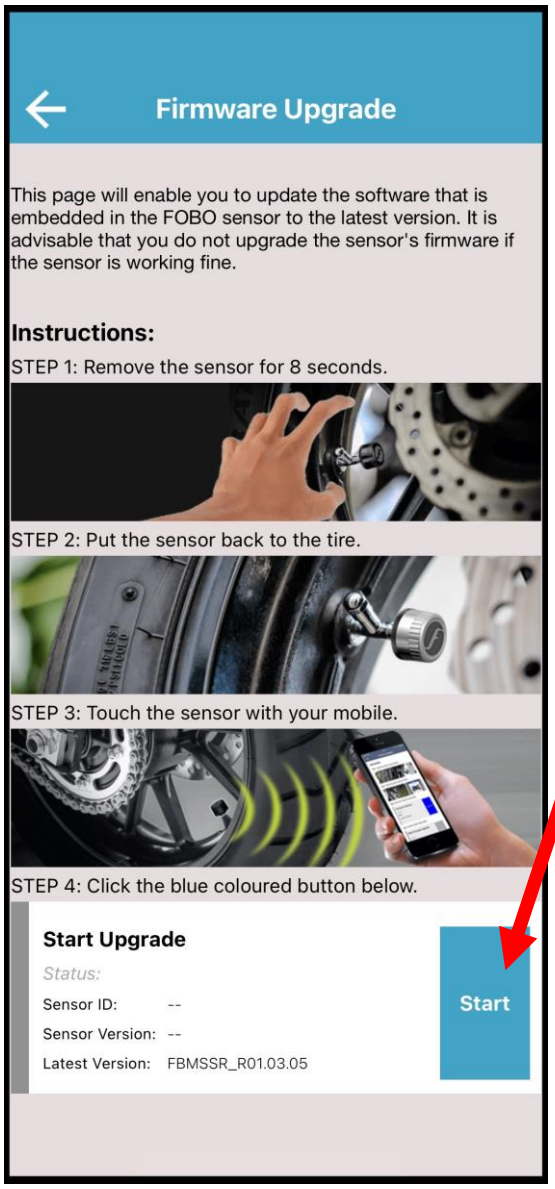
FOBO TPMS app also allows you to upgrade FOBO Bike sensor firmware. Follow the below steps to upgrade sensor firmware:

1. Long press on the desired sensor position (FT or RT).
2. Press on the bike “View Sensor Detail” option.
3. On the “Sensor Details” page, press the “Upgrade” button.
4. Read and follow the instructions carefully on the next page.



Note: Please ensure the sensor has sufficient battery (green colour), otherwise, the firmware upgrading process will fail when the battery is depleted.

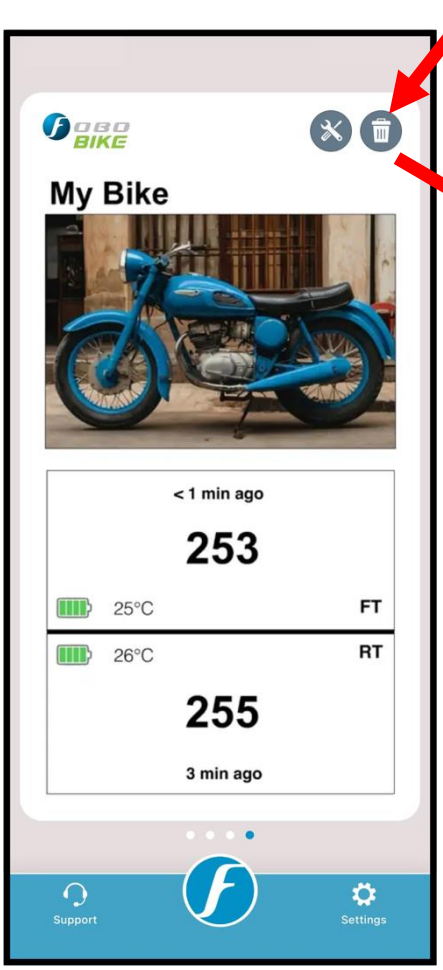
On the “Firmware Upgrade” page, press the “Start” button to initiate the firmware upgrade process.



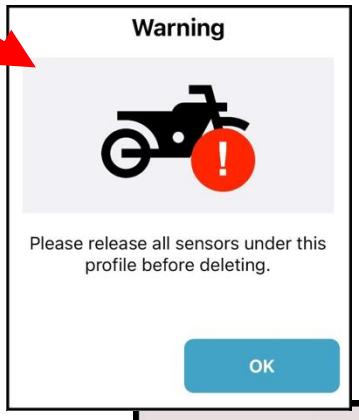
Note: If there is no upgrade available then the app will display a message “The firmware version is the latest version.”

5.14 Delete a Profile

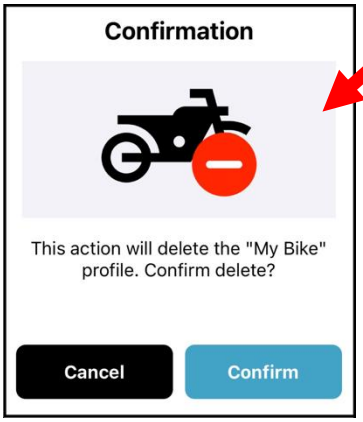
To delete a profile, press on the “Bin” icon as shown in the picture below.

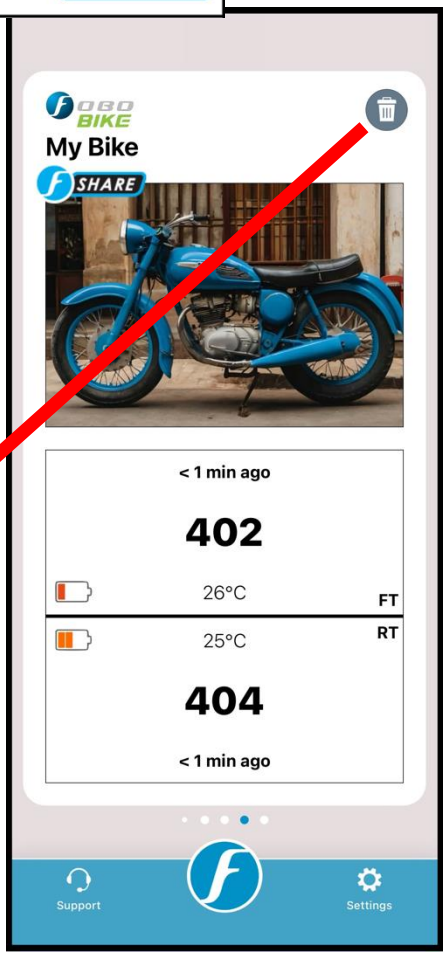


If the profile contains sensor, a warning will appear telling user to release all sensor under the profile first before deletion.



If the profile is a “Share” profile, the profile will be deleted after pressing the “Confirm” button.





6 FOBO TPMS Alert Messages

You will get the following alert messages on your smartphone during the operation of FOBO TPMS under different breached conditions. When you receive an alert, please find a safe location to stop your bike and check the alert messages on the smartphone.

6.1 Pressure Below Preset Limit

You will receive an alert when the tire pressure drops below 8% (first level alert – L1) or 15% (second level alert – L2) or 25 % (third level alert – L3) of the Recommended pressure that you have set or at and below 30kPa (0.3bar/4.35psi). For fuel economy and optimum tire performance, it is recommended to maintain this 8% range so that you can keep your tires inflated optimally. If you find the reminder is too frequent, you may want to check your tire for any leakage. Note that drastic temperature drop may also cause tire pressure drop. Please check your tire pressure and re-inflate during change of seasons.

6.2 Pressure Above Preset Limit

You will receive an alert when the tire pressure increases beyond 25% first level alert – L1) or 35% (second level alert – L2) or 45% third level alert – L3) of the Recommended pressure that you have set or at and below 800kPa (8bar/116psi). For optimum tire performance and grip, you should not overinflate your bike tires. Note that the tire pressure will naturally increase as the bike tires heat up due to friction while driving. However, you should check your tire in the event of an abnormal rise in the tire pressure.

NOTE: IT IS DANGEROUS TO RIDE WITH LOW TIRE PRESSURE AND IT MAY LED TO A BLOW-OUT. PLEASE STOP THE BIKE AND HAVE THE TIRE CHECKED WHEN YOU RECEIVE THIS ALERT.

7 FOBO Bike Sensor (TM1802) Specifications

- **Bluetooth:** v5.0
- **Transmit Conducted Power:** +5.0dBm (sensor)
- **Receiver Sensitivity:** Conducted Sensitivity -97dBm @ 0.1%BER
- **Antenna Return Loss:** Typical -9dB
- **Operating Frequency:** 2.402~2.480 GHz
- **Battery Type:** CR1632 (sensor). Operating life up to 1 year. (NOTE: The
- battery operating life varies according to usage and climate temperature)
- **Operating Temperature**: -40°C to +85°C (sensor), -20°C to +60°C (sensor with common CR1632 batteries)
- **Weight:** 7.6g (sensor –with battery)
- **Sensor Dimension H x D:** 13.8mm x 20.2mm
- **Maximum Pressure:** 800kPa (116psi)
- **ESD:** 8kV air discharge & 4kV direct contact discharge according to CE standard
- **Operating Humidity:** up to 90% non-condensing at 40°C
- **Dust and Waterproof:** IEC60529 compliant to IP57(sensor)
- **Sensor Structural Threshold:** 100N ball pressure intensity test
- **Mechanical & Environmental Reliability Testing Standards:** IEC 60068-2-2, IEC 60068-2-1, ISO 21750, IEC 60068-2-29, IEC 60068-2-5, IEC 60068-2-32, ISO 15184, ISO 2409, SAE J2657, SAEJ113/13

8 Warning

- Take note that FOBO Bike is not meant to function as anti-accident or anti- injury device. FOBO Bike is not a substitute for safe tire maintenance practices. Please take full responsibility of your own safety while riding. And continue to send your bike for regular tire check and maintenance.
- You shall not use the FOBO Bike in any unlawful way that violates any laws.
- Avoid exposing the FOBO Bike sensors to solvent, fire or extreme temperatures.
- FOBO Bike may fail to function properly if the battery is below optimum level. Replace the battery immediately to continue enjoying full features of FOBO Bike.

CAUTION
THERE MAY BE A RISK OF EXPLOSION IF BATTERY IS REPLACED BY
AN INCORRECT TYPE. DISPOSE ALL USED BATTERIES PROPERLY.

9 Regulatory Information

Federal Communication Commission Interference Statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FOR PORTABLE DEVICE USAGE (<20m from body / SAR needed e.g. BT
dongle, smartphone)

Radiation Exposure Statement:

The product complies with the FCC portable RF exposure limit set forth for an
uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

FOR MOBILE DEVICE USAGE (>20cm/low power eg. AP routers)

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Industry Canada Statement:

This device complies with ISED's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d' ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

FOR PORTABLE DEVICE USAGE (<20m from body/SAR needed)

Radiation Exposure Statement:

The product complies with the Canada portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

Déclaration d'exposition aux radiations:

Le produit est conforme aux limites d'exposition pour les appareils portables RF pour les Etats-Unis et le Canada établies pour un environnement non contrôlé. Le produit est sûr pour un fonctionnement tel que décrit dans ce manuel. La réduction aux expositions RF peut être augmentée si l'appareil peut être conserve aussi loin que possible du corps de l'utilisateur ou que le dispositif est réglé sur la puissance de sortie la plus faible si une telle fonction est disponible.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm entre le radiateur et votre corps.

European Union Regulatory Conformance

This equipment is CE marked according to the provisions of the R&TTE Directive (99/5/EC) and follows the essential requirements and other relevant provisions of the Directive 1999/5/EC. This equipment meets the following conformance standards:

EN 300 328, EN62479, EN 301 489-1&17, EN 60950-1

EU Declaration of Conformity

Hereby, Salutica Allied Solutions Sdn. Bhd. declares that this Bluetooth device follows the essential requirements and other relevant provision of Directive 1999/5/EC.

Caution: Changes or modifications to this **FOBO** device not expressly approved by the party responsible for compliance could void the user’s authority to operate it.

Bluetooth Wireless Compatibility:

This **FOBO** device supports the following Bluetooth wireless protocols and profiles:

- Bluetooth core technology v4.0
- Battery Profile (BAS)
- Proximity (PXP)
- Device Information Service (DIS)

Bluetooth Wireless Interoperability:

This **FOBO** device is designed to be interoperating with all Bluetooth wireless products that support compatible profiles and roles including:

- Bluetooth core technology v4.0
- Bluetooth master and slave roles

低功率電波輻射性電機管理辦法

- 第十二條　經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
- 第十四條　低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機 設備之干擾。

10 Intellectual Properties

- FOBO™ is a trademark of Salutica Allied Solutions Sdn Bhd. All rights reserved.

- FOBO™ TPMS incorporates a few patent pending technologies solely owned by Salutica Allied Solutions Sdn Bhd.

- Bluetooth® is a registered trademark owned by Bluetooth SIG Inc.

- iPhone® is a registered trademark of Apple Inc.

11 Limited Warranty & Disclaimer

11.1 Warranty

FOBO Bike comes with a 12-month limited warranty. This Limited Warranty does not cover: 1) products purchased from an unauthorized reseller; 2) products purchased through online auctions; 3) products that are operated in combination with software, peripheral or ancillary equipment such as but not limited to batteries, chargers, adapters, headsets, connector cables, and power supplies ("Ancillary Equipment") not furnished or otherwise certified by Salutica for use with the FOBO products or any damage to the FOBO products or ancillary equipment as a result of such use; 4) damage caused by (a) accident, fire, misuse, neglect, unusual physical or electrical stress, or modification; (b) improper or unauthorized installation, wiring, repair, testing or (c) use of the product outside Salutica's published guidelines; 5) instances in which someone other than Salutica (or its authorized service centres) tests, alters, modifies or services the products in any way; 6) products that have (a) serial numbers or date tags that have been removed or altered, or (b) nonconforming or non-FOBO housings or parts; and 7) consumable spare parts and accessories (unless they are found to be non-functional or broken upon purchase of product).

To obtain any warranty service, you agree to bear all shipping charges of the FOBO Bike device to Salutica's address.

11.2 Disclaimer

SALUTICA MAKES NO OTHER EXPRESS WARRANTY WHETHER WRITTEN OR ORAL AND SALUTICA EXPRESSLY DISCLAIMS ALL WARRANTIES AND CONDITIONS NOT STATED IN THIS LIMITED WARRANTY. TO THE EXTENT ALLOWED BY THE LOCAL LAW OF JURISDICTIONS OUTSIDE MALAYSIA, SALUTICA DISCLAIMS ALL

IMPLIED WARRANTIES OR CONDITIONS, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. FOR ALL TRANSACTIONS OCCURRING IN MALAYSIA, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE IS LIMITED TO THE WARRANTY PERIOD AS PROVIDED BY SALUTICA IN THE MATERIALS RECEIVED AT THE TIME OF PURCHASE.

No warranty is made that the software provided by Salutica will meet your requirements or will work in combination with any hardware or Applications software products provided by third parties, that the operation of the software products will be uninterrupted or error free, or that all defects in the software products will be corrected.

11.3 Limitation of Liability

THE MAXIMUM LIABILITY OF SALUTICA UNDER THIS LIMITED WARRANTY IS EXPRESSLY LIMITED TO THE LESSER OF THE PRICE YOU HAVE PAID FOR THE PRODUCT OR THE COST OF REPAIR OR REPLACEMENT OF THAT PRODUCT OR ANY COMPONENT OR PART THAT MALFUNCTION IN CONDITIONS OF NORMAL USE. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL SALUTICA BE LIABLE FOR ANY DAMAGES CAUSED BY THE FOBO BIKE PRODUCT OR THE FAILURE OF THE PRODUCT TO PERFORM, INCLUDING ANY LOST PROFITS OR SAVINGS OR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. SALUTICA IS NOT LIABLE FOR ANY CLAIM MADE BY A THIRD PARTY OR MADE BY YOU FOR A THIRD PARTY. THIS LIMITATION OF LIABILITY APPLIES WHETHER DAMAGES ARE SOUGHT, OR A CLAIM MADE, UNDER THIS LIMITED WARRANTY OR AS A TORT CLAIM (INCLUDING NEGLIGENCE AND STRICT PRODUCT LIABILITY), A CONTRACT CLAIM, OR ANY OTHER CLAIM. THIS LIMITATION OF LIABILITY CANNOT BE WAIVED OR AMENDED BY ANY PERSON. THIS LIMITATION OF LIABILITY WILL BE EFFECTIVE EVEN IF YOU HAVE ADVISED SALUTICA OR AN AUTHORIZED REPRESENTATIVE OF SALUTICA OF THE POSSIBILITY OF ANY SUCH DAMAGES. THIS LIMITATION OF LIABILITY, HOWEVER, WILL NOT APPLY TO CLAIMS FOR PERSONAL INJURY.

11.4 What Law Governs This Warranty

THIS LIMITED WARRANTY IS GOVERNED BY AND CONSTRUED UNDER THE LAWS OF MALAYSIA.