

# TIRE INSIGHT

Bluetooth Low Energy TPMS Retrofit Kit  
User Manual

VS-80R002

**TIRE INSIGHT**  
[www.cubautoparts.com](http://www.cubautoparts.com)



# Bluetooth Low Energy TPMS Retrofit Kit User Manual

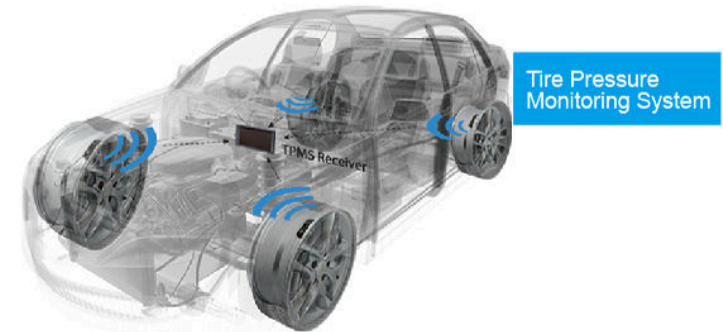
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### 1. Product Introduction

By means of the Bluetooth Low Energy Tire Pressure Monitoring System Retrofit Kit (hereinafter referred to as BLE TPMS), the driver receives real-time tire pressure and temperature information while driving. When the system detects an abnormal status, it will alarm the driver actively and will show the abnormal data and its respective tire location in the BLE TPMS APP (hereinafter referred to as APP).

The BLE TPMS includes four sensors. It can be connected wirelessly to a smart phone via Bluetooth technology. The BLE TPMS sensor detects the tire data and transmits it to the coupled smart phone. This shows the data of the corresponding tire on the BLE TPMS APP and the driver can access the data in real-time.



### 2. Notice

#### Product Warning

1. Do not operate the APP while driving. The company is exempt from all consequences related to the driver's careless driving and improper operation.
2. The system works with the wireless transmission of signals. In some special environments, frequency interference, wrong operation or wrong installation may weaken or interrupt the signal transmission. If an insulation adhesive of the windshield contains metallic materials, the signal reception may be affected. When an alarm sounds and shows abnormal data, please drive the vehicle away from the current location (there may be a signal interference in the surroundings) or drive the vehicle to a tire shop for checking.

3. If the battery status of the TPMS sensor is low, please go as soon as possible to a service station to get the sensor checked. If necessary, replace the sensor. You will assume all risks and responsibilities for this.
4. The addition of tire sealants will cause functional loss of the TPMS sensor.
5. Do not bring the TPMS sensor into contact with chemicals as they may damage the sensor and prevent it from work functioning properly.
6. Please close any other APPs or websites which are not in use when using the BLE APP. Data receiving conditions on the APP will probably be affected by the system loading of the smart phone.

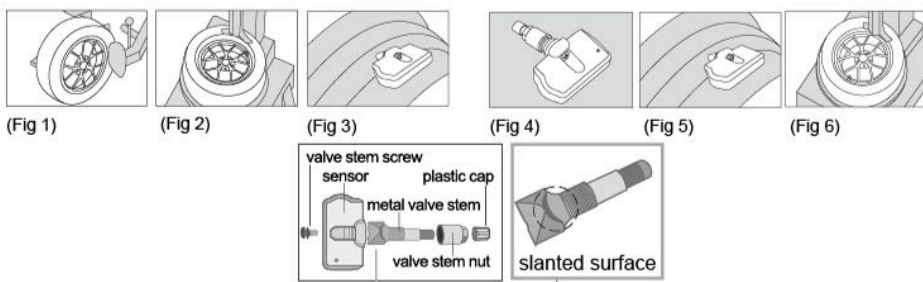
### 3. BLE TPMS Specification

BLE Sensor Specification	
Operating Voltage	3V
Operating Humidity	95% MAX
Operating Current	< 15 mA at DC 3V
Storage Temperature	-40°C to 85 °C
Operating Temperature	-20°C to 85 °C
Monitored Pressure Range	0 to 92 psi (0 to 640 kPa)
Monitored Temperature Range	-20 °C to 85 °C
Operating Frequency	2.4GHz
Transmission Power	4 dBm MAX
Battery Life	Estimated 3 years (under normal operating condition)
Battery Capacity	540 mAh
Weight	45 ± 3 g (including valve)

### 4. BLE TPMS Sensor Installation

**Note: Please write down the sensor IDs for their respective positions and have them handy for the relearn (see Manual Relearn, Page 12).**

- (Fig 1) Loosen the tire. Fix both sides of the tire and press, and make it bulge.
- (Fig 2) Remove the tire. The valve faces the mounting arm in the one o'clock direction, remove the tire.
- (Fig 3) Remove the sensor. Loosen the fixing screw, allow the sensor separate from the valve and release the nut to take it apart from the valve. After a new sensor replacement, it is recommended to replace the stem valve, or at least the grommet and valve core. The slanted surface of the stem valve must face toward the rim surface.
- (Fig 4) Insert the sensor, metal valve stem and valve screw into the wheel. Hold the assembly in place with the hand and loosely screw it into place so the sensor drop angle can be adjusted afterward. From the outer side of the wheel, place the valve stem nut.
- (Fig 5) After the sensor drop angle has been adjusted, tighten the valve screw with a torque of 1.4 to 2.0 Nm. The sensor must be placed as close as possible to the rim surface.
- (Fig 6) When mounting the tire please pay attention that you do not damage the sensor. Finally, proceed to balance the complete wheel.



After installation, please download the APP to your smart phone, and proceed with all settings. (Please check Sections 6 and 7 of this manual)

**Note :** When exchanging a sensor, it is recommended to use a new stem valve.

## 5. APP Download and Installation

### 5.1 Operation System Required

The TPMS system supports both Android & iOS smart phones.

APP Download	Operation System	Compatible Mobile Phone
APPLE APP Store	iOS 8.0.2 or later	from iPhone 5, 5S, 6, 6 Plus or later
Android Google Play Store	Android 4.4 or later	Android Smart Phone

### 5.2 How to download

Search in the Google Play or Apple APP Stores using the keyword "Cub Elecparts BLE" in order to find and download the free APP.



Open the APP after the installation is completed. Turn on the Bluetooth in order to activate the APP. A screen as below will be shown if the Bluetooth has not been activated.

**Turn On Bluetooth to Allow  
"TPMS" to Connect to  
Accessories**

Settings

OK

Please make sure that the "Location Services" are activated in iOS smart phones. They can be found under "Settings/Privacy".

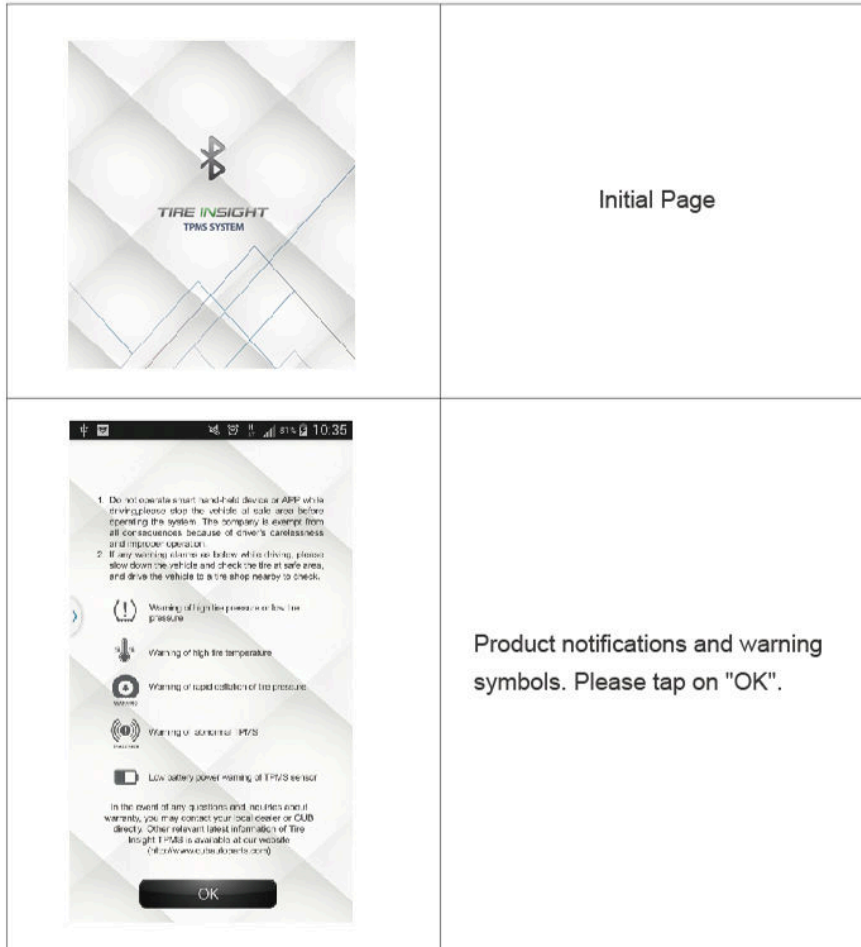
### TPMS

Location Service Disabled To enable, please go to phone Settings, select Privacy and turn on Location Services for this app.

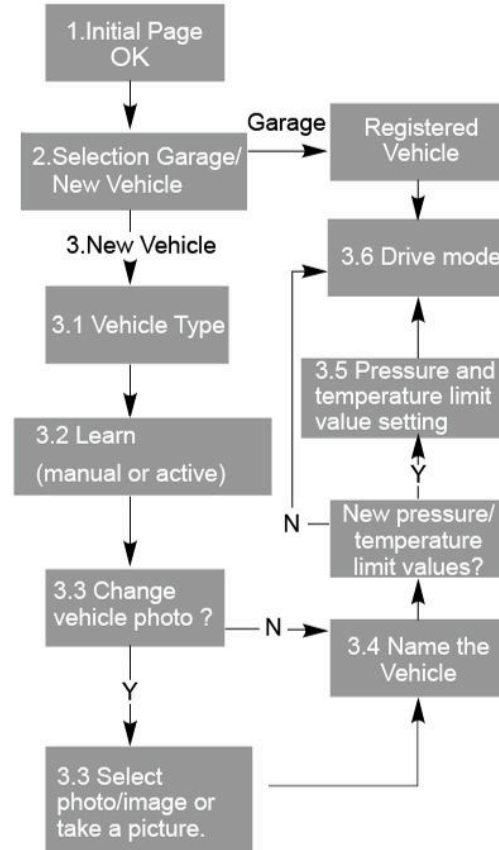
Confirm

## 6. Basic Settings ( Android / iOS )

Tap on the Tire Insight BLE APP.



## New Vehicle Adding Procedure



1. Tap on the Tire Insight BLE APP and then on "OK".

2. Select Garage or New vehicle:  
New vehicle = add a new vehicle  
Garage = registered vehicle - change to drive mode.
3. Add new vehicles
  - 3.1 Select the new vehicle type:
    - 3.1.1. Motorcycle: 2 wheels
    - 3.1.2. Trailer: 2 wheels
    - 3.1.3. Passenger car: 4 wheels
    - 3.1.4. Trailer: 4 wheels
    - 3.1.5. Light truck: 6 wheels
    - 3.1.6. Passenger car (4 wheels) + trailer (2 wheels)
    - 3.1.7. Passenger car (4 wheels) + trailer (4 wheels)
  - 3.2 There are two possible relearn modes:
    - 3.2.1. Manual Relearn
    - 3.2.2. Active Relearn
  - 3.3 After relearning, you can set a vehicle picture.  
There are three options:
    - 3.3.1. Take a photo with the camera
    - 3.3.2. Select a picture from the gallery
    - 3.3.3. Use a default image
  - 3.4 Name the new vehicle
  - 3.5 Set the tire pressure and temperature monitoring range
  - 3.6 After the settings have been completed, the APP will display the drive mode

## Default Vehicle Photos



Motorcycle 2 wheels



Trailer: 2 wheels



Passenger Car: 4 wheels



Trailer: 4 wheels



Light truck: 6 wheels (2 wheels on the front axle, 4 wheels on the rear axle)



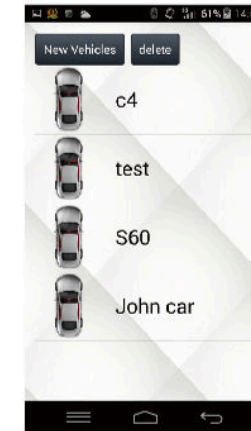
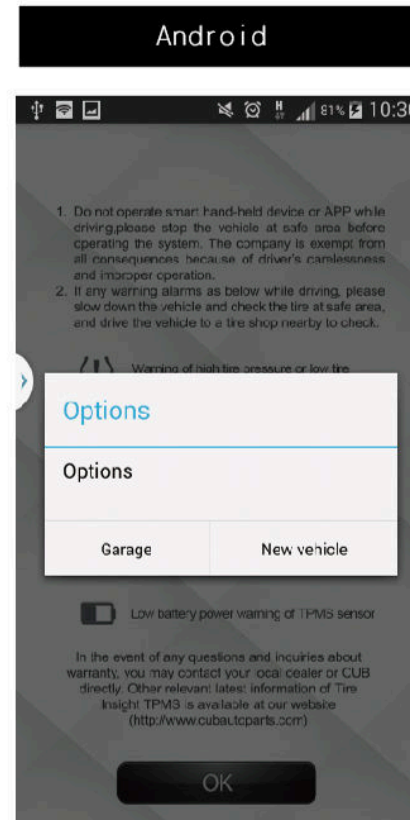
Passenger Car: 4 wheels + Trailer: 2 wheels



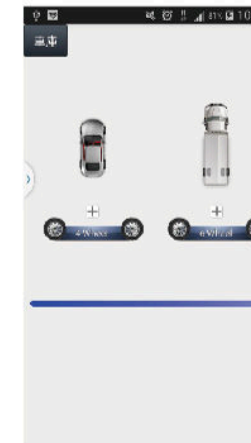
Passenger Car: 4 wheels + Trailer: 4 wheels

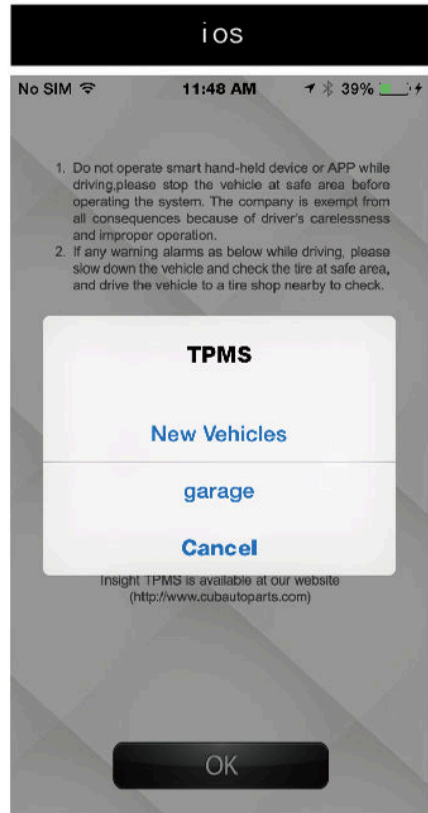


Tap on "Garage" and select your previously saved vehicle, then go to the "Drive" mode.



Or, tap on "New vehicle" and follow the settings.





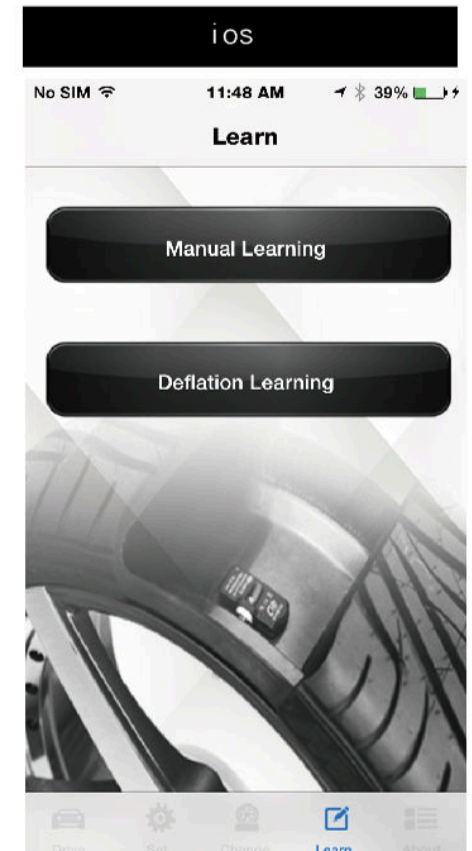
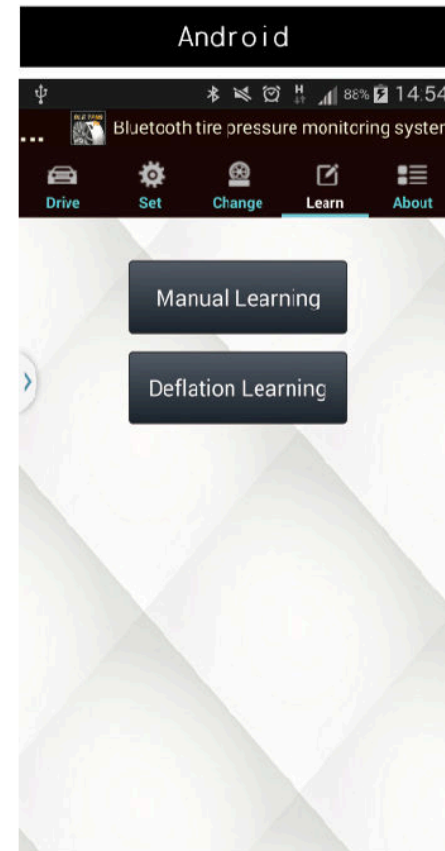
Tap on "Garage" and select your previously saved vehicle, then go to the "Drive" mode.



Or, tap on "New vehicle" and follow the settings.



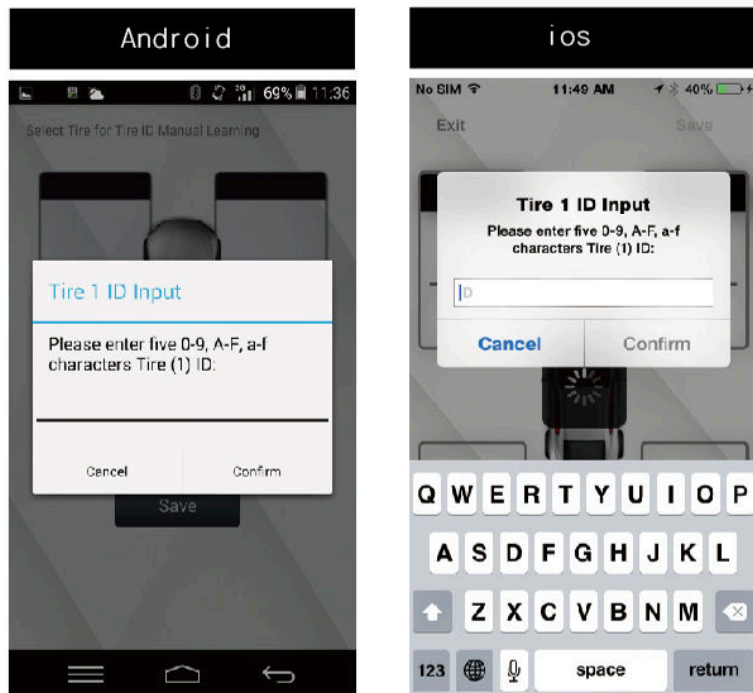
After the vehicle selection, the APP will go to the "Learn" mode.



## Relearn Modes

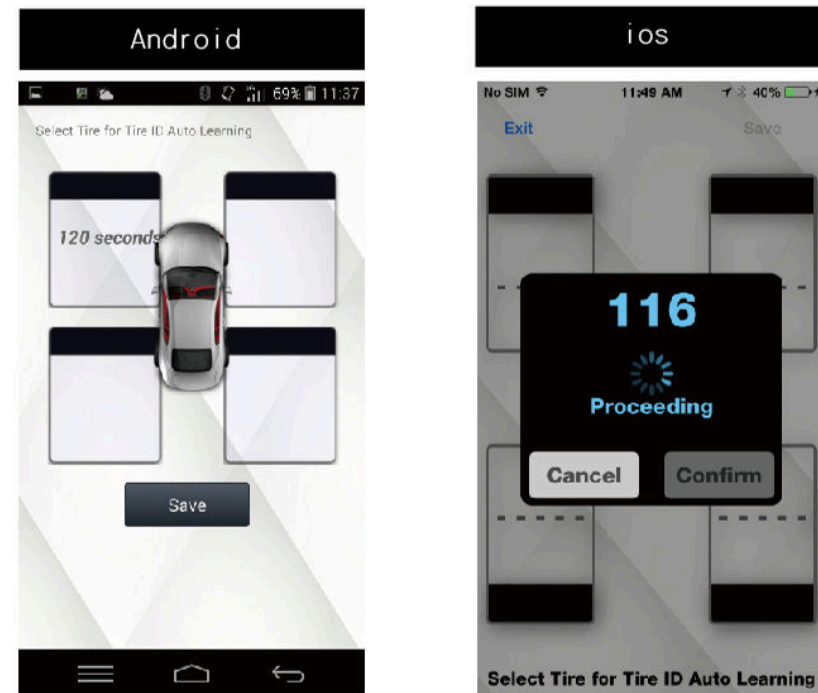
### Manual Relearn:

Select a tire position and key in the ID, which was previously written down separately, for that respective position. Please key in a 5-character-long ID; it can contain "0~9", "A~F" and "a~f". Then tap on "Confirm".



### Active Learning:

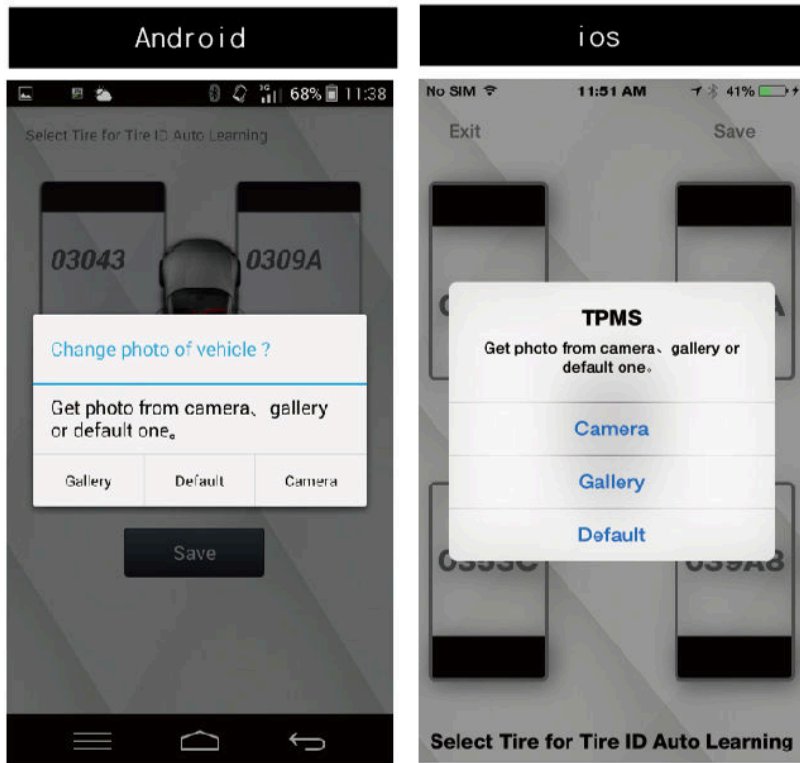
Select the tire position Front Left (FL) and release air from the respective tire for around 20 seconds. The APP will register the sensor signal while "Learning" is shown on the smart phone screen. Then, tap on "OK" to end this step or on "Cancel" to interrupt it. You have a maximum time of 120 seconds to complete the relearn at each tire. Follow the same procedure for the rest of tires. After the completion of the relearn procedure, tap on "Save".



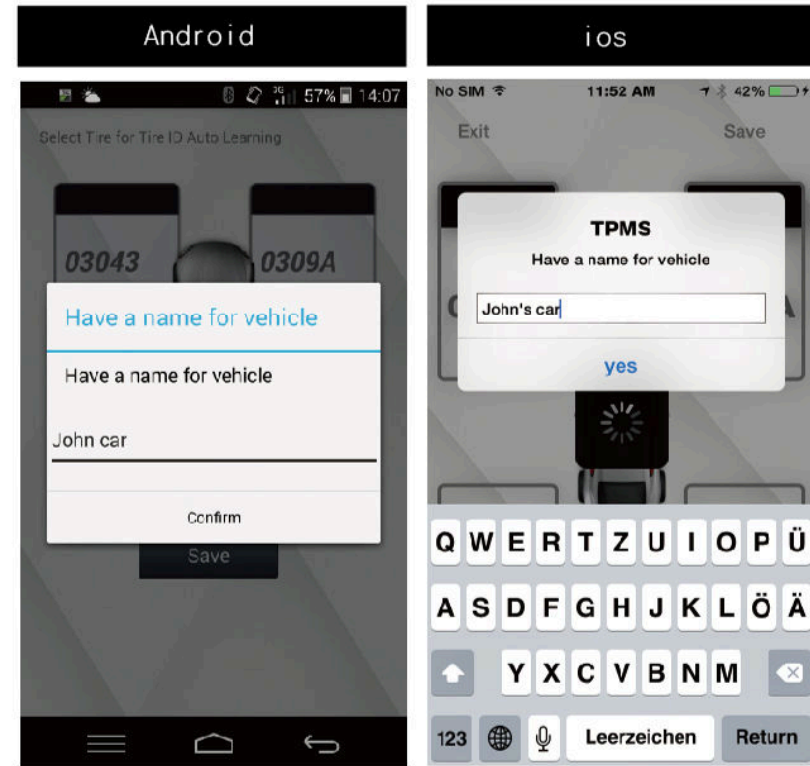


Afterward you have the option of selecting an image for the vehicle:

1. Take a new picture with the smart phone camera
2. From the gallery
3. Default image

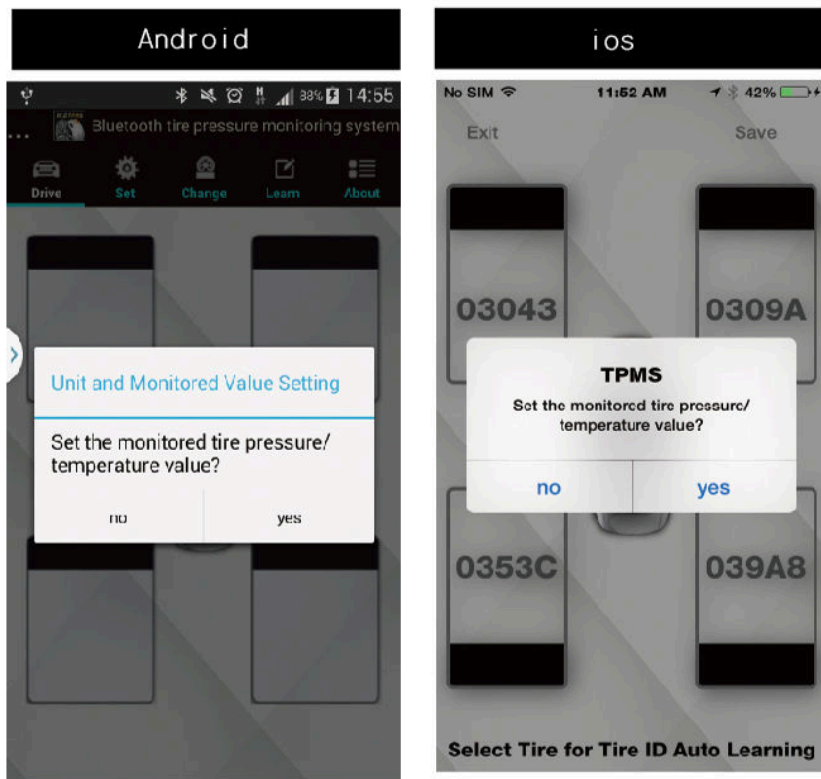


Enter the vehicle's name and tap on "save".



Tap on "Yes" to set the pressure and temperature monitoring range. Tap on "No" if you choose to set the default values.

Finally, go to the "Drive" mode.



## Menu Bar:

The menu bar location depends on the operating system: in Android, it will be displayed at the top, while in iOS, it will be shown at the bottom of the screen.

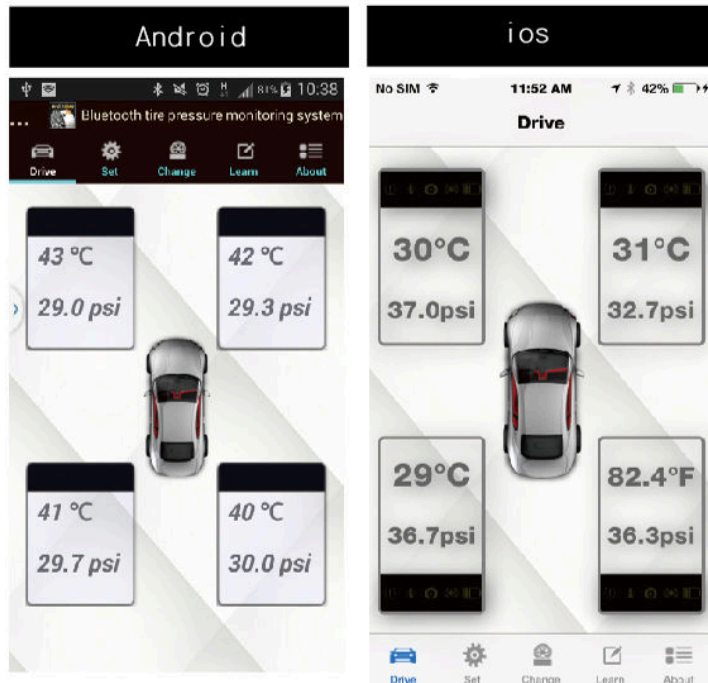
**Drive:** Displays tire pressure and temperature for all tires and the respective warning symbols.

**Set:** Monitoring value settings.

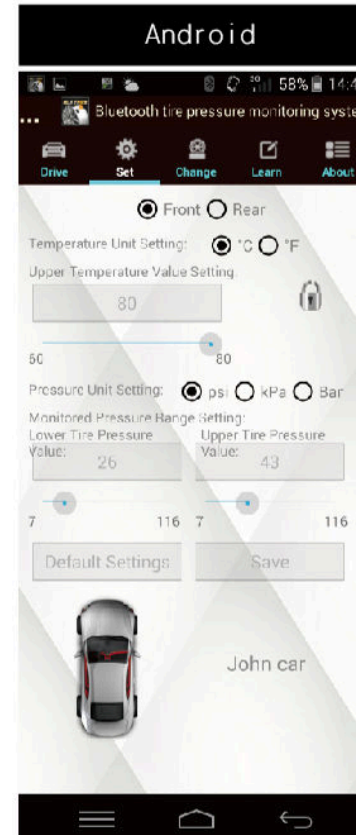
**Change:** Tire rotation settings.

**Learn:** Manual or active relearn of the sensors.

**About:** Shows product and system information.



## 7. Set



Unlock the system settings by tapping on the lock icon at the right side of the screen and change the units and monitoring ranges for the front and rear axles. Then, tap on "Save" in order to save all changes. Tapping on "Default Settings" will set all values back to default.

1. Pressure units: Bar, kPa, psi
2. Temperature units: °C, °F
3. Upper tire pressure value: psi: 7 - 92

kPa: 50 - 637 (default = 300)

Bar: 0.5 - 6.37

Lower tire pressure value:

psi: 7 - 92

kPa: 50 - 637 (default = 300)

Bar: 0.5 - 6.37

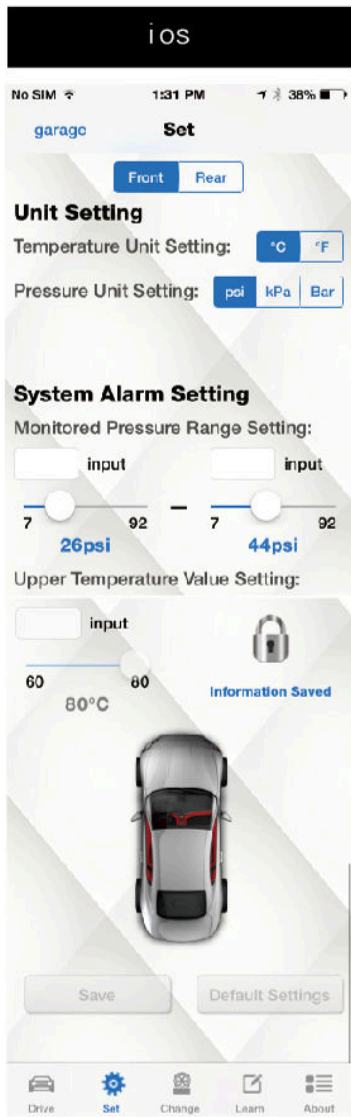
Upper tire temperature value:

C: 60 - 80 (default = 80)

F: 140 - 176

Note 1: Default values recommended by the manufacturer for correct pressure can be found at the B-pillar or on the fuel tank lid of the car or in the instruction manual.

Note 2: Tap on the vehicle symbol in order to change the image.

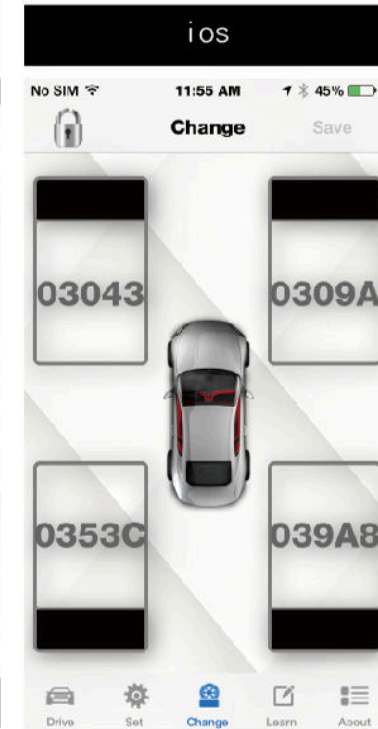
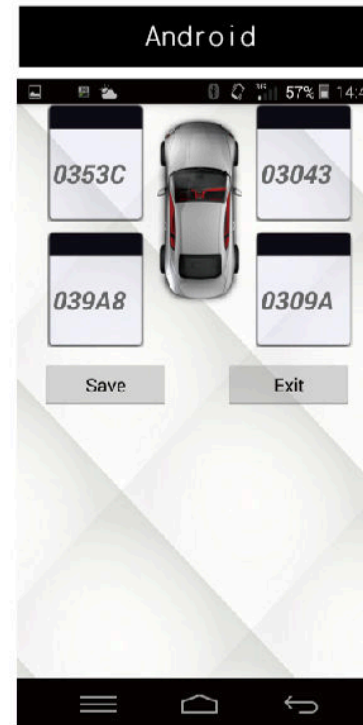


Unit Description :

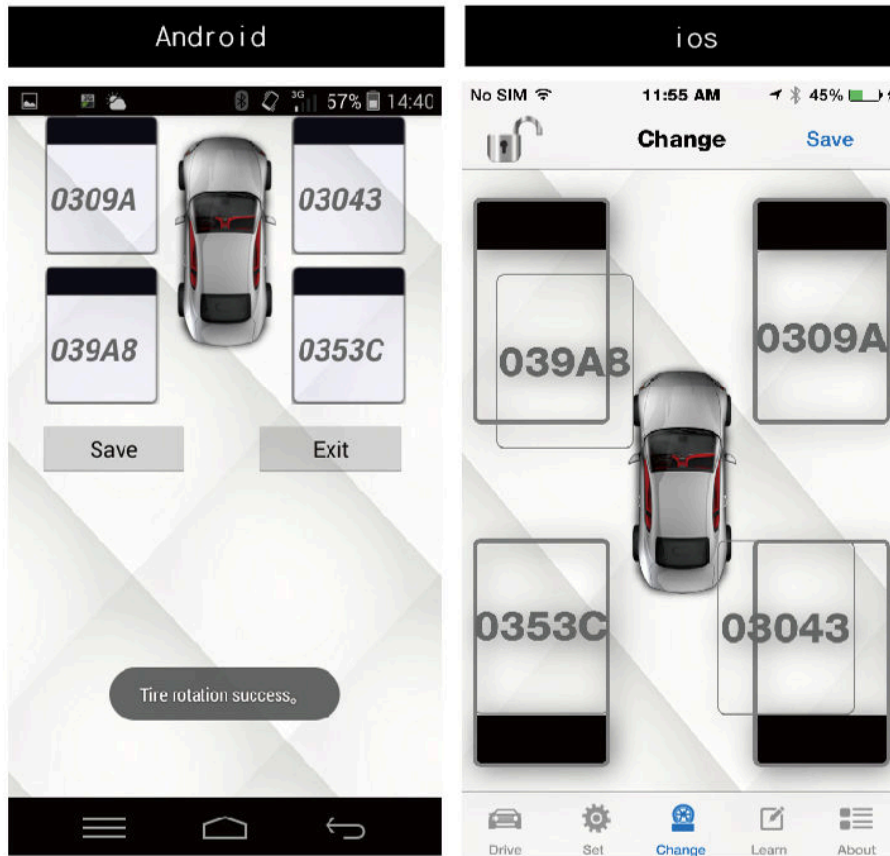
kPa	Pressure reading in Kilopascal
psi	Pressure reading in pound per square inch
Bar	Pressure reading in Bar
°C	Temperature reading in degrees Celsius
°F	Temperature reading in degrees Fahrenheit

8. Change

Unlock the screen by tapping on the lock. Now you can change the tire positions as follows.



Use drag and drop to exchange the ID boxes for the wheels that you want to rotate. When finished, tap on "Save" and then on the lock to close it.



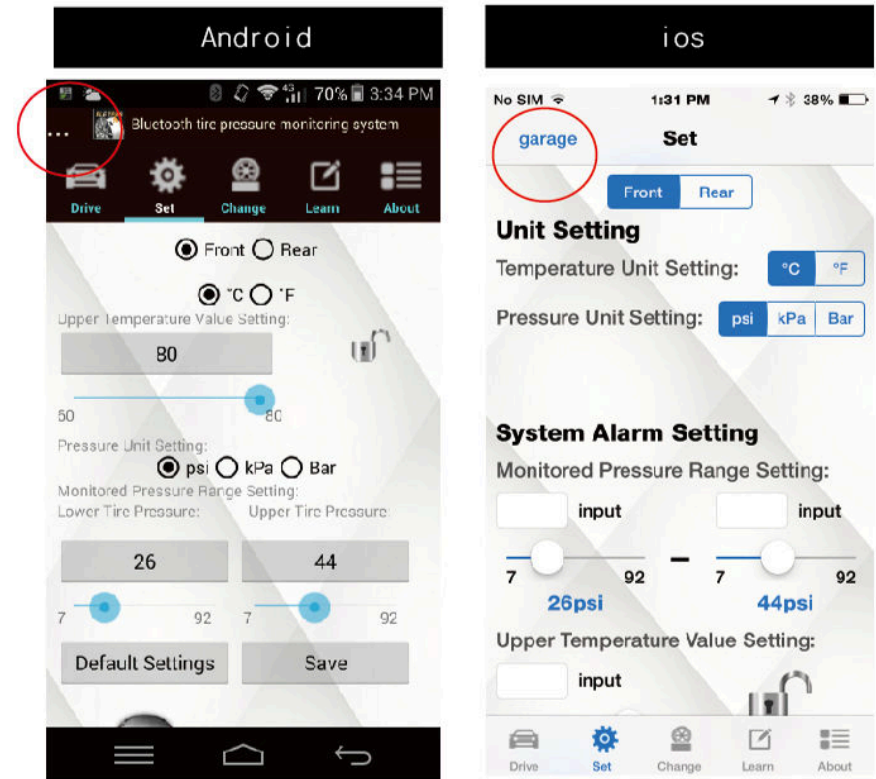
## 9. Additional Function

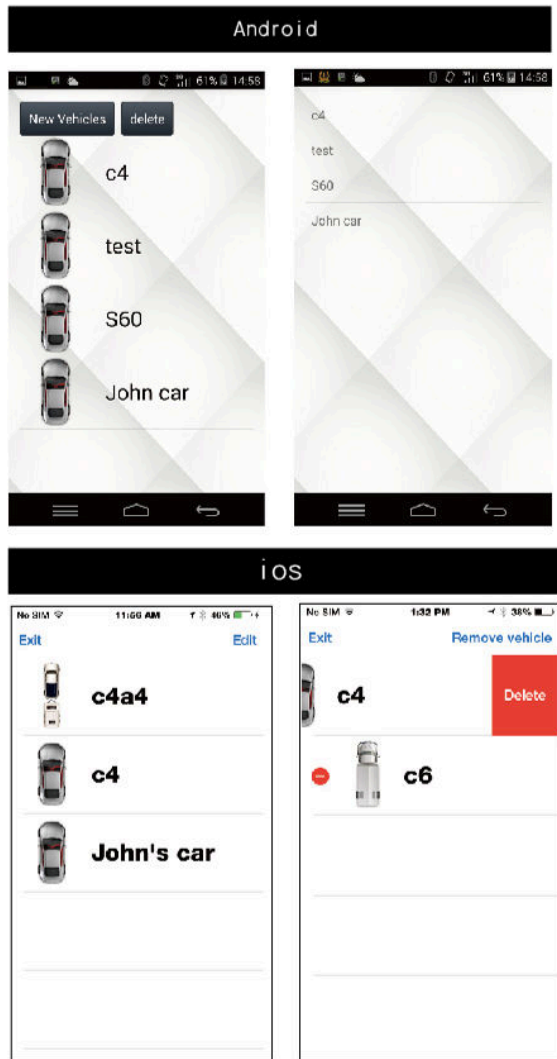
### Garage

The symbol "..." at the top left corner of the Android APP contains three additional functions:

1. Garage: Tap here to show a menu of all saved vehicles
2. New Vehicle: For adding new vehicles or deleting previously saved ones
3. Close: For closing the APP.

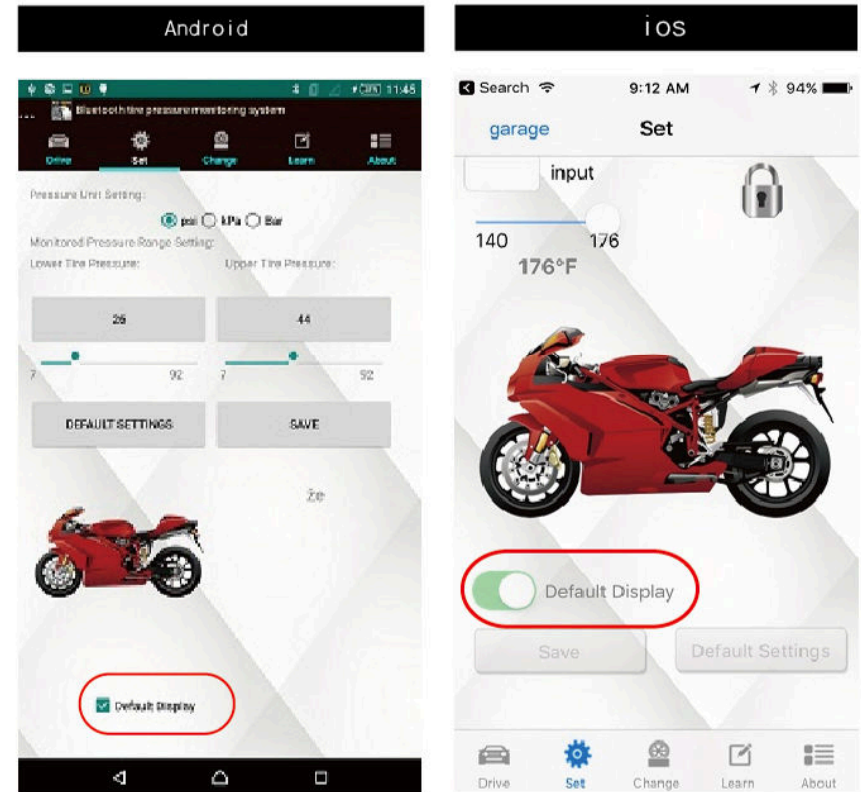
In the iOS APP, the option "Garage" will open two functions, "Garage" and "Remove vehicle".





## Default Display

In order to skip the vehicle selection every time you open the APP, use the option "Default display", located under the image of your selected vehicle in the Menu "Set".








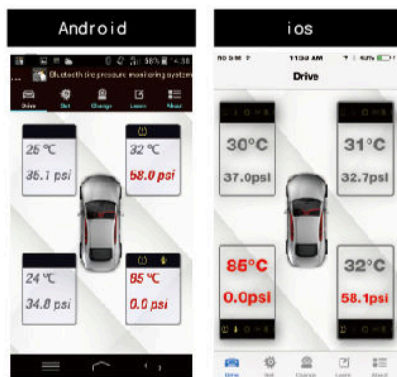
**Note (for Android):** If a vehicle is selected as the default display, the additional functions "Garage" and "New vehicle" will be disappear from the menu "...". In order to display these additional functions again, please deselect the default display.

## 10. Alarms and Warnings

### Symbol Explanation:

If there is an abnormal condition in the tires, the pressure and/or temperature value will be displayed in red color at the respective tire and an alarm will sound. In the Android APP Drive mode, warning messages signify, from left to right: rapid deflation, tire pressure alarm, system error/out of reach, tire temperature alarm and low sensor battery. On the other hand, in the iOS system, they are, in the same order: tire pressure alarm, tire temperature alarm, rapid deflation, system error/out of reach and low sensor battery.

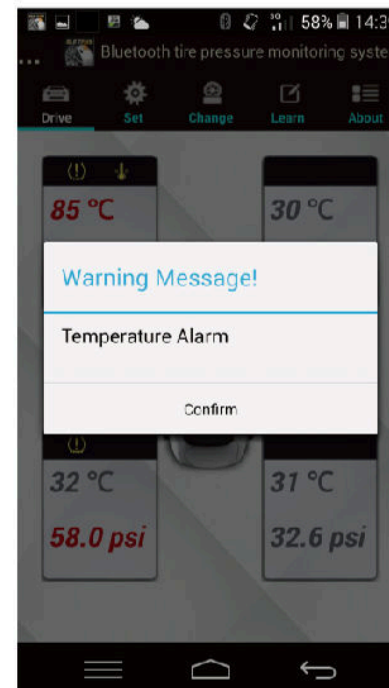
1.  Tire pressure too high or too low: the tire pressure is below or above the monitoring pressure range.
2.  Tire temperature too high: the tire temperature is above the maximum temperature value.
3.  Rapid deflation: the tire is losing air rapidly.
4.  System error/out of reach: the APP cannot receive the sensor signal.
5.  Low sensor battery: the battery of the sensor is low.



In abnormal tire or TPMS system conditions, a warning message will be displayed in the center of the screen. To temporarily close the warning message, tap on "Confirm" (note: please go as soon as possible to the nearest workshop).

The APP also works in background mode.

**Note: If the APP does not receive the signal of a sensor for more than 10 minutes, the warning symbol "System error/out of reach" will be displayed for the respective tire and the alarm will sound. If the APP does not receive any of the four sensor signals within 10 minutes, the APP will interpret that the vehicle has been halted and all pressure and temperature values will disappear at the Drive mode.**



## 11. About (Product Information)

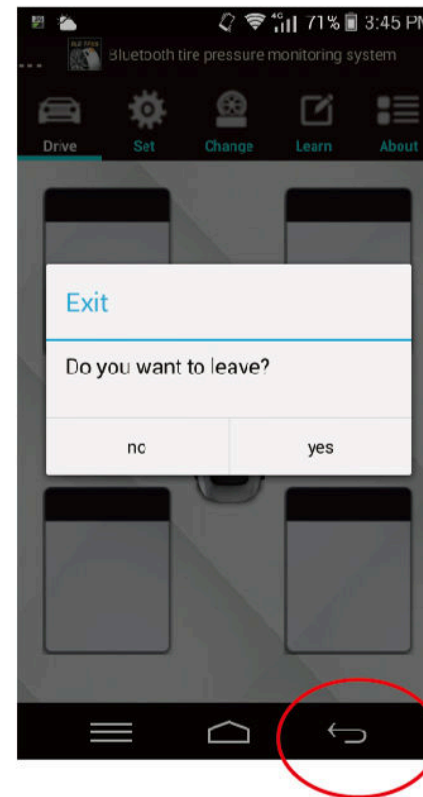


Tapping on "About" will show product and system information and a description of all warning symbols, as well as the web address of the manufacturer.

## 12. Closing the APP

Android: Tap on the back symbol

iOS: Double-click the home button, then swipe the APP screen upward.





### 13. Product warranty

The product warranty follows all legal clauses. As long as the used goods are in violation of the purchase contract and the buyer is not the user, the product warranty is excluded.

Additional product information:

For relevant and updated information about Cub Smart Phone BLE Retrofit Kit, please visit the following websites:

[www.cubautoparts.com](http://www.cubautoparts.com)

[www.TPMSshop.de](http://www.TPMSshop.de)