WIRELESS TIRE PRESSURE AND TEMPERATURE MONITORING SYSTEM

TPMS

Monitors up to **6** tires in real time

Instruction Manual
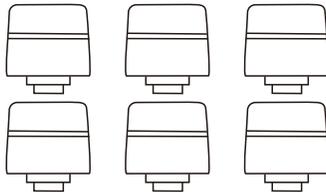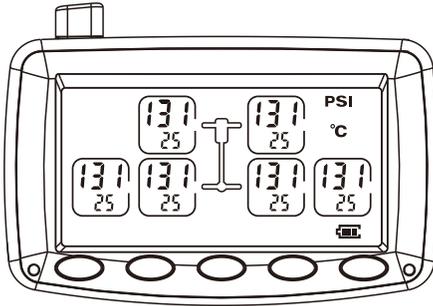### Model no.: TM508T6/SC

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1. TPMS MAIN FEATURES

1.1 Product Introduction:

Thanks for choosing our TPMS product, this system is consists of one displayer and 6 sensors to monitor the tyre pressure and temperature. Sensors collect the tyre data and send to the monitor in wireless transmission, the monitor displays the data, and alarms according to the user's actual setting for the pressure and temperature to avoid accident.

This system can improve driving comfort and fuel economy, prolong tyre life to enhance power performance.

1.2 Cautions:

Please read the instruction manual carefully before using this system.

1. Monitor should be installed in the proper position where it does not affect normal driving.
2. The monitor should be well fixed to avoid falling off during driving.
3. After the sensor installation, it is highly recommended to check for any air leakage, soap bubbles can be used on the tyre valves to check leakage.
4. When tyre temperature and pressure rise over the alert setting during driving, please stop the vehicle to cool the tyres and avoid brake failure or flat tyre.
5. If there is pressure going up or down suddenly, please get off to check if there is leakage or other problem.
6. Flat tyre often happens when there is high pressure, fuel consumption will increase when there is low pressure.
7. This system can effectively monitor tyre pressure and temperature, but cannot prevent traffic accident. Regular tyre checking and using good quality tyres are necessary and important.
8. Pay attention to safety when checking tryre pressure and temperature while driving.
9. After the system is installed correctly, the driver does not need to stare at the monitor all the time while driving. Alerts will be issued when abnormal conditions are detected in the tyres.

1.3 Installation:

1. The monitor will be in sleep mode to conserve battery when no movement is detected within 15 mins, it will be awake once there is movement on the vehicle. If the sensor data has not been displayed at the beginning, it will be displayed when the data is changed soon.
2. The wireless data transmission between monitor and sensors is effective within a long distance, and have many interference functions.
3. Tyre pressure and temperature will have a little inflation or reduction due to the air expansion and contraction.
4. Tyre pressure would decrease when there is natural leakage which happens in most normal tyres. TPMS does not affect the normal leakage.
5. Please contact with our distributor if there is installation problem.

2. PRODUCT FEATURES

2-1. Monitor Features:

- Reliable and easy to install.
- Large LCD screen.
- Built-in rechargeable lithium battery.
- Vibration awakening.
- Automatical backlight.
- Configurable high/low pressure warnings.
- Configurable high temperature warnings.
- Visible and audible alerts.
- Selectable pressure units(BAR, PSI).
- Temperature unit selectable(°C/°F)
- Monitors up to 6 tyres.
- Individual pressure alert for each axle.
- Selectable display for one or two trailers.
- Long range between monitor and sensors.
- Awake sensor to program ID code.

2-2. Sensor Features

- Internal valve sensor, adjustable sensor mounting angle.
- Water resistant.
- Sensors batteries will last up to five years.
- Sensors transmit pressure and temperature data every 5 minutes.
- Fast leakage alert.
- Individually coded sensors.

3. SYSTEM COMPONENTS
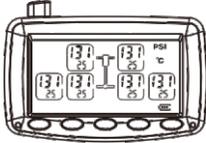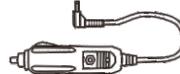
Monitor
(1pc)

Monitor Holder
(1pc)

Suction Cup
(1pc)

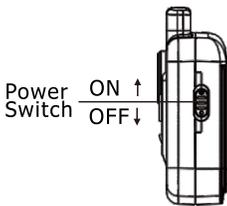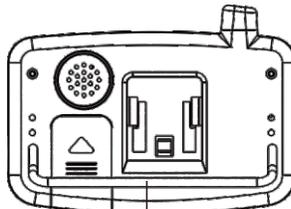Power Cable
(1pc)

*Sensors
(6pc)

Wrench
(1pc)

Power Adaptor
(1pc)

3-1. Monitor Components and Icons

Power Switch ON ↑ OFF ↓

Monitor Holder

Power Socket

Antenna

PSI
BAR
°C
°F
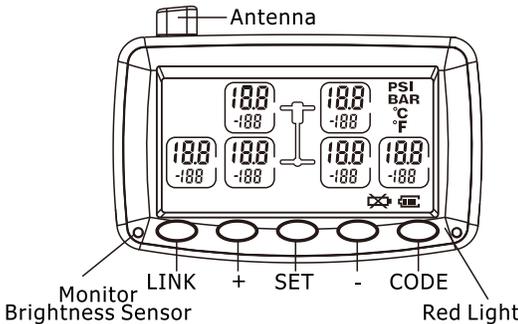
Icon	Description
🔋⊠	Sensor Low Battery Indicator
🔋	Monitor Battery Indicator

Pressure Unit : BAR or PSI, user-selectable
Temperature Unit : °C or °F, user-selectable

Monitor Brightness Sensor

LINK   +   SET   -   CODE

Red Light

4. PROGRAMMING ID CODE

4-1. First Time Set Up

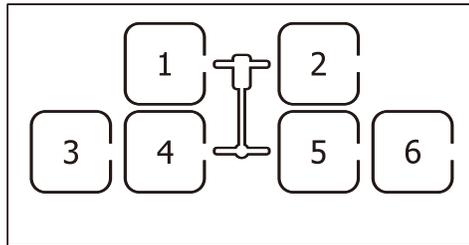Before you use the TPMS for the first time, you should program the sensor codes. There are 3 options available:
Inflating code, LF (low frequency) coding, Input sensor code.
Note: It is recommended to label the sensors positions of the tires.

Record the sensors and tire positions as follows:

4-2. Inflating code

1. In standby mode, press and hold the **CODE** button for 3 seconds, release after the first beep to enter the coding mode. **FFFFFF** will be displayed for un-programming tyre (see the picture below). Or six hex digital displayed for programmed sensor.
2. One of the tyre icon will flash, press "**+**" or "**-**" to select the desired tyre. Mount the sensor to the tire valve, the sensor will send its ID code to the monitor automatically (see picture below). A beep will be issued and the tyre position is stored together with the ID code.
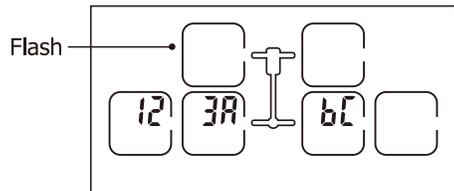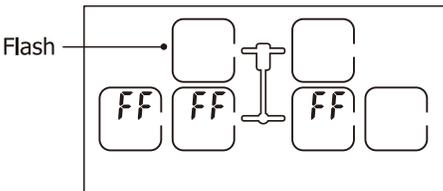
3. The tyre icon and ID code will keep flashing. Press "**+**" or "**-**" to select other tyre and repeater for the other tyres.

4. After all the sensors' code are programmed to the monitor, press the **CODE** button for 3 seconds, release when hear a **BEEP** to save and exit.

5. The monitor will be back to working mode if there is no operation within 1 minute in coding mode.

4-3. LF (low frequency) coding (Recommended)

1. In standby mode, press and hold the **CODE** button for 3 seconds, release it after the beep to enter the LF coding mode. A flashing tire icon is displayed together with the letters **FFF FFF** for un-programmed tire or sensor's ID code for programmed tire.

2. Press the **+** or **-** button to select the desired tire.

3. Place the sensor close to the monitor and press the **CODE** button, a red light will be lit on the monitor.

4. Once received the code, the monitor will issue a long beep and the tire position is stored together with sensor's **ID** code. The tire icon on the monitor will keep flashing after the code is received successfully.

5. If the monitor does not receive the code within 6 seconds, a double-beep will be issued and the red light goes out. Move the sensor close to the monitor and repeat step 3 and 4.

6. The tire icon and sensor's **ID** code will keep flashing.

7. Press the **+** or **-** button to select the other tire and repeat the above operations for all the tires.

8. The programmed sensors' ID can be saved automatically.

9. After all sensors' ID code are programmed to the monitor, press and hold the **CODE** button for 3 seconds to exit.

Note: If a sensor is coded twice into the same monitor, the previous setting will be deleted automatically.

Flash ⟶ •
FF FF FF

Flash ⟶ •
12 3A bC

Red LED Flash ⟶ ◎

LED turn off ⟶ ●
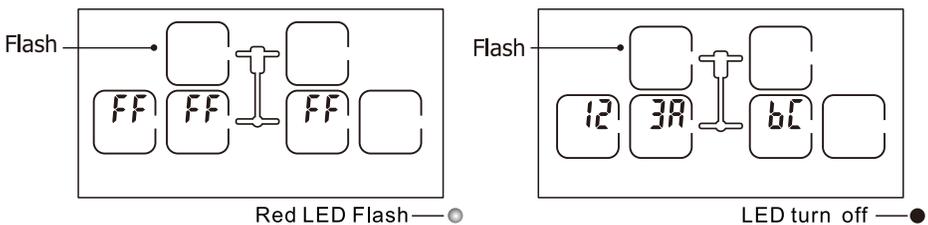
NOTE: Place the LF coding sensor be away from other sensors more than 1m, in case the monitor reads the other sensors' ID.

4-4. Input sensor code:

1. In standby mode, press and hold the **CODE** button for 6 seconds until the second beep, DONOT release after the first beep.
2. Press the "**+**" or "**-**" button to select the desired tire, and press **SET** button to confirm.
3. Press the **CODE** button to scroll through each digit code.
4. Press "**+**" or "**-**" button to change the value of each digit code.
5. Press **SET** button to save the ID code.
6. After all sensors' ID code are input to the monitor, press the **CODE** button for 3 seconds to exit.

4-5. Review sensor code:

1. In standby mode, press and hold the **CODE** button for 3 seconds, release after the first beep to enter the coding mode. A flashing tire and ID code are displayed. Press "**+**" or "**-**" to select the desired tire.
2. If no sensor code is recorded in the monitor, the tire icon will flash and **FFFFFF** will be displayed.

4-6. Delete sensor code:

1. In standby mode, press and hold the **CODE** button for 3 seconds, release after the first beep to enter the coding mode. A flashing tire and ID code are displayed. Press "+" or "-" to select the desired tire.
2. Press and hold the **SET** button for 3 seconds, a beep sound will be issued after the sensor code is deleted successfully. If no further action is made after 3 minutes, the system will return to standby mode. To return to standby mode immediately, press and hold **CODE** button for 3 seconds until a beep is issued.
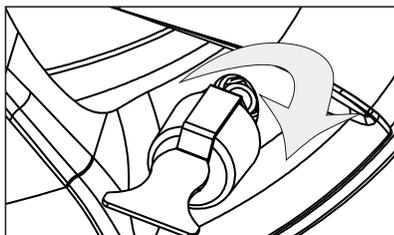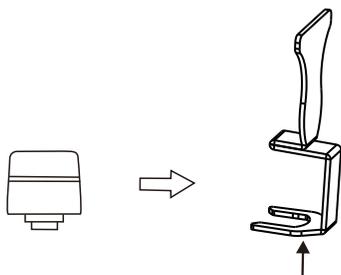
5. INSTALLATION

5-1. Monitor Installation:

1. Install the monitor inside the vehicle cabinet without obstructing the driver's vision of the road.
2. Place the monitor on the dashboard using the triangle metal holder, or mount it onto the windscreen using the suction cup provided.
3. Plug the power adaptor into the cigarette lighter and connect the power cable to the monitor or plug the power cable and connect to the vehicle power.
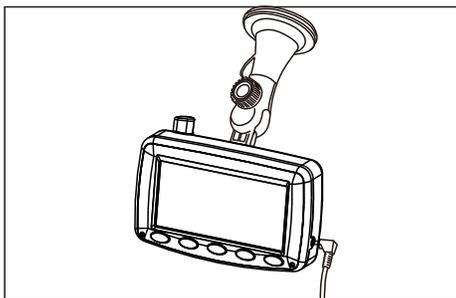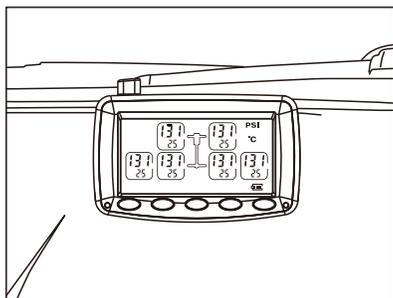
5-2. Sensor Installation

1. Remove the tire valve cap and mount the corresponding sensor on the valve using the provided wrench.
2. The sensor is designed to be difficult to remove without the use of the provided wrench in order to avoid theft.
3. Simply screw the wrench clockwise.

*Please keep the installation tool for future usage because you have to use it when you uninstall or reinstall the sensor.

*Be sure not to over-tighten the cabinet which might damage the sensor.

6. PARAMETER SETTINGS

6-1 Factory Parameter:

Pressure Unit:	PSI
High Pressure:	175PSI (12.1 BAR)
Low Pressure:	100PSI (6.9 BAR)
Temperature Unit:	℃
High Temperature:	70℃ (158℉)

6-2 Factory Default:

To restore the factory default settings, turn on the monitor and press the **SET** button at the same time, the factory default will be restored without changing the ID code information.

6-3 Parameter settings:

In standby mode, press **SET** button for 3 seconds, release after the FIRST beep to enter the setting mode. The sequence is ① "Pressure unit"→ ② "Temperature unit"→③"High pressure alert in 1st axle"→④"Low pressure alert in 1st axle"→⑤"High pressure alert in 2nd axle"→⑥"Low pressure alert in 2nd axle"→⑦"High temperature alert". Press "+" or "-" button to select the setting mode.

When all the parameter is set, press **SET** button for 3 seconds to save and return to working mode. If there is no operation within 1min, the monitor will return to working mode without saving the setting. Or press "+" and "-" to return to working mode without save the setting.
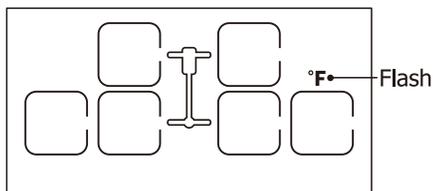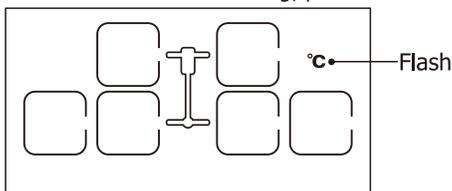
1) Pressure unit setting:

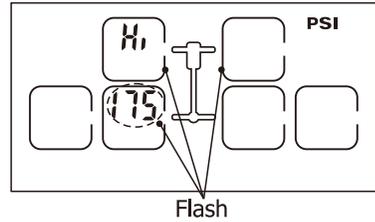While the PSI or BAR is flashing, press "+" or "-" to select .

PSI — Flash

BAR — Flash
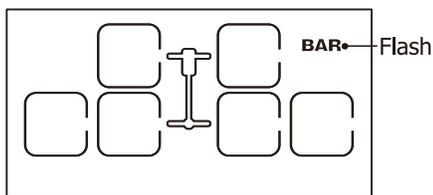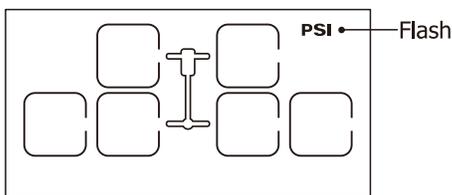
2) Temperature unit setting:

While the ℃ or ℉ is flashing, press "+" or "-" to select .

℃ — Flash

℉ — Flash

3) High pressure alert in 1st axle:

While both tires in the 1**st** axle are flashing, the first tire which displays " **Hi** " and the pressure data are flashing simultaneously, press "+" or "-" to select.

Flash

4) Low pressure alert in 1st axle:

While both tires in the 1**st** axle are flashing, the first tire which displays " **Lo** " and the pressure data are flashing simultaneously, press "+" or "-" to select.
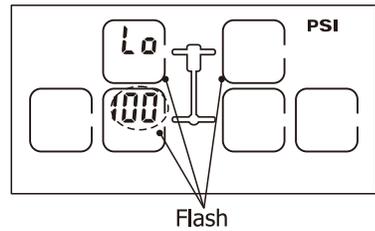
Flash

5) High pressure alert in 2nd axle:

While both tires in the 2**nd** axle are flashing, the first tire which displays " **Hi** " and the pressure data are flashing simultaneously, press "+" or "-" to select.

Flash

6) Low pressure alert in 2nd axle:

While both tires in the 2**nd** axle are flashing, the first tire which displays " **Lo** " and the pressure data are flashing simultaneously, press "+" or "-" to select.
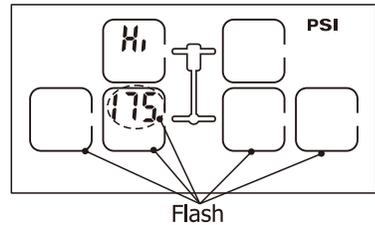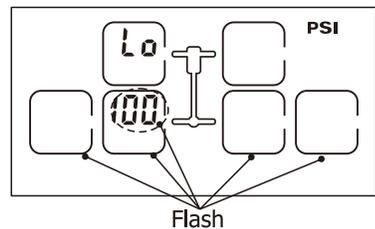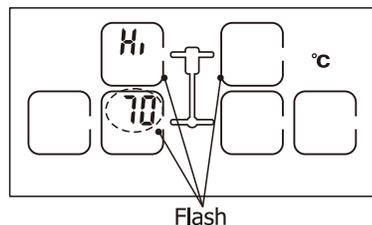
Flash

7) High temperature alert :

While the tire icons are flashing, the first tire will displays " **Hi** " and the temperature data will flash, press "+" or "-" to adjust.
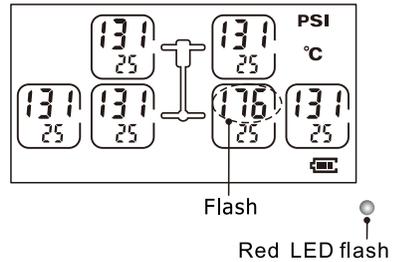
Flash

7. ALERTS

The sensors send pressure and temperature data to the monitor every 5 mins. If any data is out of the pre-defined values, the monitor will issue an audible alarm, the red light will flash and the corresponding tire icon will flash. Press any button to turn off the alarm, however the red light and icon flash will not be turned off until the problem is corrected.
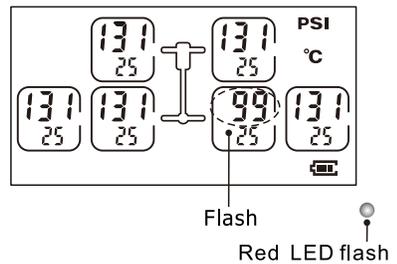
7-1. High pressure alert:

When the sensor detects high pressure in a tire, it will send an alert to the monitor immediately. The pressure data and the corresponding tire icon will flash. The audible alarm will be on together with the flashing red light. Press any button to turn off the alarm, however the red light and icon flash will not be turned off until the problem is corrected.
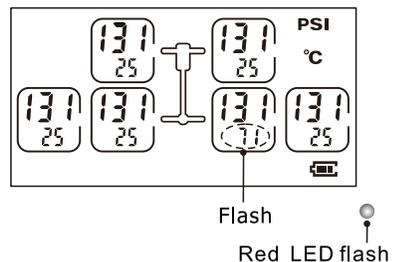
Flash

Red LED flash

7-2. Low pressure alert:

When the sensor detects low pressure in a tire, it will send an alert to the monitor immediately. The pressure data and the corresponding tire icon will flash. The audible alarm will be on together with the flashing red light. Press any button to turn off the alarm, however the red light and icon flash will not be turned off until the problem is corrected.

Flash

Red LED flash

7-3. High temperature alert:

When the sensor detects high temperature in a tire, it will send an alert to the monitor immediately. The temperture data and the corresponding tire icon will flash. The audible alarm will be on together with the flashing red light. Press any button to turn off the alarm, however the red light and icon flash will not be turned off until the problem is corrected.

Flash

Red LED flash

· 10 ·

7-4. **Fast leakage alert**:

When the sensor detects fast leakage in a tire,it will send an alert to the monitor immediately.The alarm will continue BE ------ the corresponding tire icon will flash and the pressure data on LCD will decrease quickly. The audible alarm will be on together with the flashing red light. Press any button to turn off the alarm, however the red light and icon flash will not be turned off until the problem is corrected.
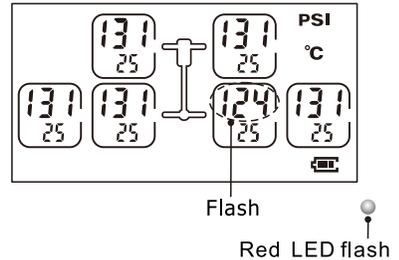
Flash

Red LED flash

7-5. **Sensor Low Battery Alert:**

When the sensor detects low battery level, it will send an alert to the monitor immediately.The low battery icon will show on LCD and the corresponding tire icons will flash. The audible alarm will be on together with the flashing red light. Press any button to turn off the alarm. However the flashing red light and icons will continue until the problem is corrected.

Flash

Red LED flash
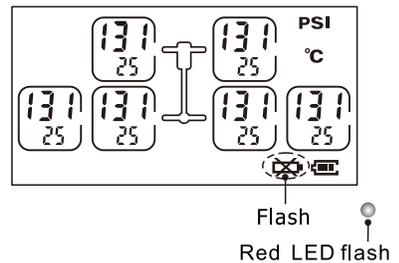
8. OTHER FUNCTIONS

8-1. Normal Scrolling Display:
In normal working mode, the tires pressure and temperature will be displayed simultaneously.

8-2. Power saving and wake up:
When the vehicle is stopped, the monitor will be in sleep mode to save power. User can shake the monitor lightly or press any button to wake up the monitor.

8-3. Backlight:
The monitor has a built in light and motion sensor, the backlight will turn on when it detects the vehicle is in motion and there is dark enough. When there is light enough, the monitor will turn off the backlight. To turn off the backlight, press and hold the "+" button for 3 seconds.

8-4. Charging the Monitor
When the lithium battery inside the monitor is fully charged, it is capable of 60 hours. When the icon "▭" appears, a recharge is required. Keep the monitor turned on while charging.

Note: Please charge the monitor under temperature 0~45℃.

9. SPECIFICATIONS

9-1. Monitor

Operational Temperature	-20°C ~ 80°C
Storage Temperature	-30°C ~ 85°C
Charger Input Voltage	DC 8 ~ 30V
Transmission Frequency	433.92MHz
Size	116(L) x 68(W) x 25(H) mm
Weight	138g

9-2. Sensors

Operation Temperature	-40°C ~ 120°C
Storage Temperature	-40°C ~ 125°C
Pressure Range	0~188psi(0~13 bar)
Pressure Accuracy	±1.5 psi(± 0.1 bar)
Temperature Accuracy	± 3°C
Transmission Power	<10dBm
Transmission Frequency	433.92MHz
Battery Life	5years
Size	29(φ) x 32(H) mm
Weight	42.5g

10. CAUTIONS

1. The monitor should be installed inside the vehicle where it does not affect normal driving.
2. The monitor should be well fixed to avoid falling off during driving.
3. After the sensor installation, it is highly recommended to check for any air leakage.
4. This TPMS can effective monitors tire pressure and temperatures but cannot prevent traffic accidents regular tire inspection and maintenance is still necessary.
5. After the system is installed correctly, the driver does not need to stare at the monitor all the time while driving. Alerts will be issued when abnormal conditions are found in the tires.

Information in this manual is subject to change without notice.