sphere

Tire Pressure Monitoring System | Mata 1 & Mata 1E

www.coastrv.com.au

Product Manual

Welcome

Thank you for purchasing Sphere TPMS! Sphere TPMS is an innovative safety accessory which provides drivers with information for tire pressure and tire temperature. The product warns the user of leakage, high/low tire pressure, low sensor battery, high tire temperature while driving. Sphere TPMS also helps drivers maintain sufficient levels of tire pressure for safer driving and reduced tire wear.
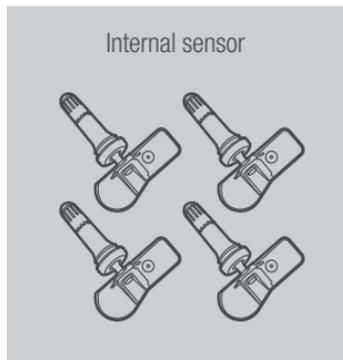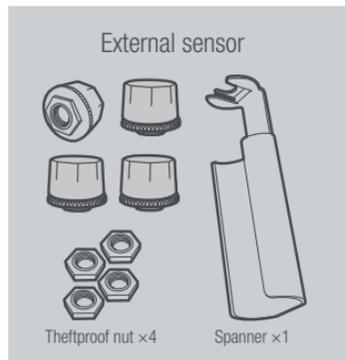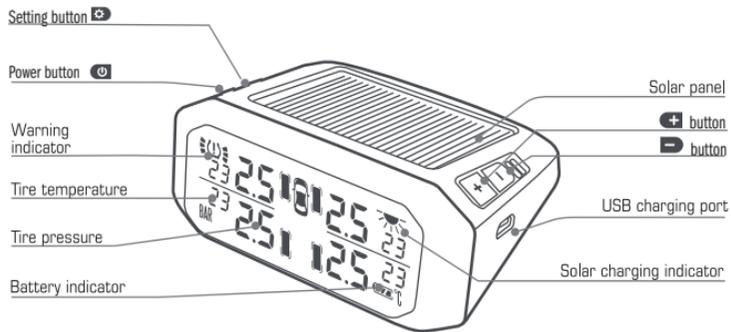
⚠ For your Safety

Before using the product, please read and follow the manual instructions carefully.

1. This product must be correctly installed before use. Avoid damaging the sensor and the wheel when installing. Internal sensors should be installed according to manual instructions by a professional auto-technician.
2. Installation or use of this product cannot substitute the user's regular maintenance and self-check of auto parts.
3. Do not handle this product while driving. Failure to concentrate on driving may result in serious consequences.
4. This product is a safety accessory and cannot prevent puncture or tire leakage. Please react promptly to the product warning signals and resolve abnormal tire conditions before getting back on the road.
5. The user is responsible for safe driving, taking care of their vehicle, and ensuring the correct installation and use of the product. Sinotek assumes no liability for damages and losses.
6. Whenever the position of a tire is changed (tire rotation), the sensor must be set to the correct position on the display (see Tire Swap function on page 9).
7. All sensors are already paired to the display in the factory. Users DO NOT need to pair the sensors to use this product for the first time.

Table of Contents

1 | Package Contents

Setting button ⚙
Power button ⏻
Warning indicator
Tire temperature
Tire pressure
Battery indicator

Solar panel
➕ button
➤ button
USB charging port
Solar charging indicator

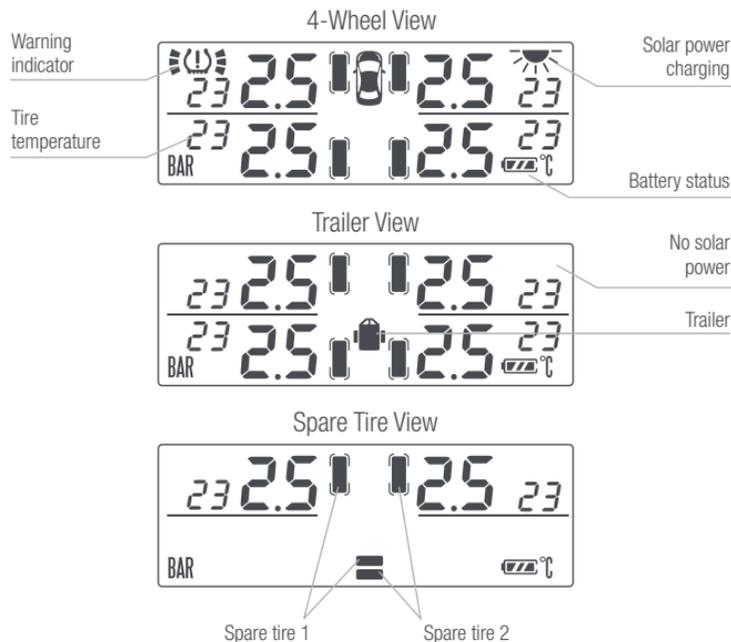| External sensor	Internal sensor
Theftproof nut ×4 Spanner ×1	

2 | Display

If trailer sensors are detected, the display switches between 4-wheel view and trailer view every 5 seconds. Spare tire pressure can be checked by pressing ➤ twice.

Quick check: press ➤ to switch from 4-wheel view → trailer view → spare tire view.

4-Wheel View

Warning indicator
Tire temperature
Solar power charging
Battery status

Trailer View

No solar power
Trailer

Spare Tire View

Spare tire 1   Spare tire 2

TPMS Warning Signals

When the unit detects abnormal tire conditions or low sensor battery, it will emit audio beeps and visual warning. Press any button to temporarily silence the alarm.
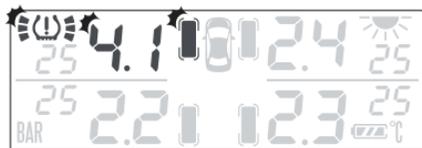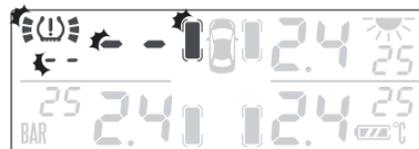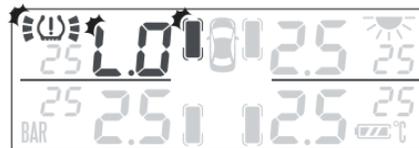

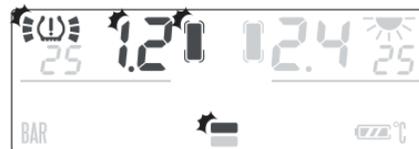High pressure alarm

Low pressure alarm

High temperature alarm

Sensor failure signal

Low sensor battery

Spare tire alarm* (e.g. low pressure)
Spare tire alarm will alert for high/low pressure.
Spare tire alarm will beep 15 times and fall silent.

Charging the Display

Charge the display via solar power or 5V USB micro USB. Charging via solar power will cause the solar charging indicator to light up.

⚠WARNING: For first-time use, please charge the display via micro USB about 3 hours.

Display ON/OFF

To turn on the display: hold ⏻ button for 3 seconds.
To turn off the disoplay: hold ⏻ button for 3 seconds.

Automatic sleep: After 4 minutes without detecting vehicle vibration, the display will sleep automatically and lower power consumption.

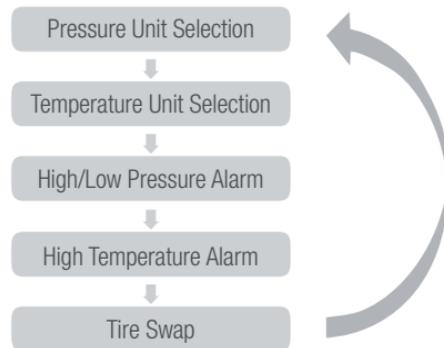Automatic wake-up: The display will wake up automatically when it detects vibration.

3 | TPMS Settings

Settings Mode

1) Hold ⚙ button for 3 seconds to enter Settings Mode.
2) Then short press ⚙ button to rotate through the functions.
3) To exit Settings Mode, hold ⚙ button for 3 seconds.
NOTE: All changes to the settings are autosaved.

Functions Rotation

Pressure Unit Selection
↓
Temperature Unit Selection
↓
High/Low Pressure Alarm
↓
High Temperature Alarm
↓
Tire Swap

Pressure Unit Selection

1. Enter Settings Mode.
2. Press ➕ to choose between BAR or PSI.
3. Move onto other settings by short pressing ⚙ , or exit Settings Mode.

Temperature Unit Selection

1. Enter Settings Mode and rotate to Temperature Unit Selection.

2. Press ➕ to choose between ˚C or ˚F.

3. Move onto other settings by short pressing ⚙ , or exit Settings Mode.

High and Low Pressure Alarm

Users are able to customise 4 sets of pressure alarms, including:
Front wheels set, rear wheels set, trailer front wheels set, and trailer rear wheels set.

1. Enter Settings Mode and rotate to High Pressure Alarm settings [HI] for the first set.

2. Press ➕ or ➖ to choose the desired high pressure alarm threshold.

3. Move onto Low Pressure Alarm settings [LO] for the first set of wheels by short pressing ⚙ .

4. Press ➕ or ➖ to choose the desired low pressure alarm threshold.

5. Move onto [HI] settings for the second set by short pressing ⚙ , or exit Settings Mode.

6. Choose the the desired high pressure alarm threshold using ➕ or ➖.

7. Move onto [LO] settings for the second set by short pressing ⚙ .

8. Press ➕ or ➖ to choose the desired low pressure alarm threshold.

9. Move onto HI/LO settings for the third and fourth set by short pressing ⚙ , and using ➕ or ➖ to choose the desired alarm threshold.

Note：There are no separate high/low pressure settings for spare tires.
Spare tire 1 follows the alarm settings of the front wheels set.
Spare tire 2 follows the alarm settings of the trailer front wheels set.
Spare tire alarm will beep 15 times and fall silent, press any button to silence the display.

Factory Setting:
HI: 3.0 BAR / 43 PSI
LO: 2.0 BAR / 29 PSI

High Temperature Alarm

1. Enter Settings Mode and rotate to High Temperature Alarm Setting.

2. Press ➕ or ➖ to choose the desired high temperature alarm threshold.

3. Move onto other settings by short pressing ⚙ , or exit Settings Mode.
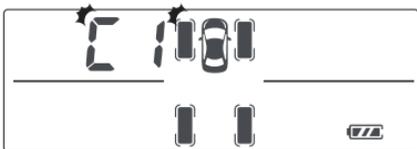
Factory Setting:
80˚C/176˚F

Tire Swap Function

The below example performs tire swap on the front right wheel and the rear right wheel of the vehicle. ENSURE that these instructions are followed carefully:
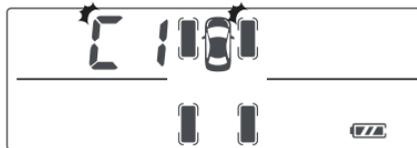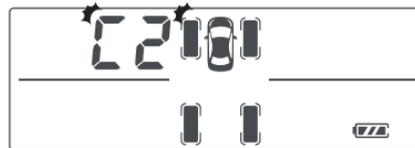
1) Original Tire Pressure.
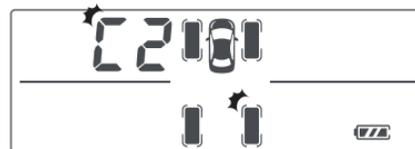

2) Enter Settings Mode, rotate to Tire Swap.

3) Press ➕ button once to select the first wheel (e.g. front right wheel) for Tire Swap. C1 and the selected wheel will flash.
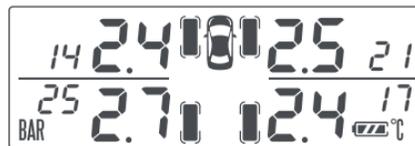

4) Press ⚙ once.

5) Press ➕ button twice to select the second wheel (e.g. front right wheel) for Tire Swap. C2 and the selected wheel will flash.
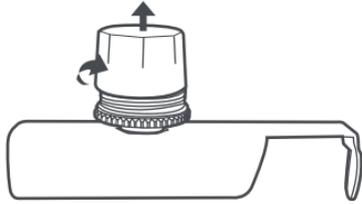

6) Press ➕ once. Tire Swap is done. BAR or PSI will start flashing on the screen. Users must exit Settings Mode before performing another Tire Swap.
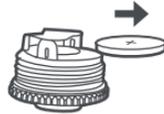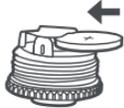
Battery replacement is not available for internal sensors. When the external sensor battery is low, please replace the CR1632 button cell battery by following the instructions below:
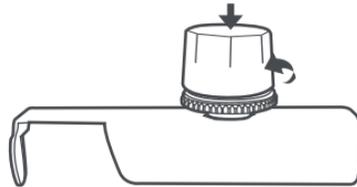
i. Unscrew the sensor cover

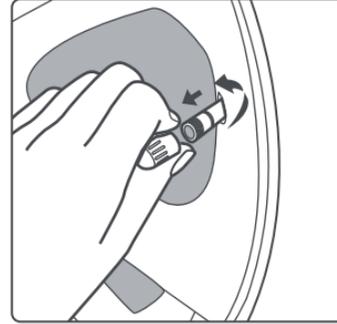ii. Remove the old battery (the + side faces upwards)
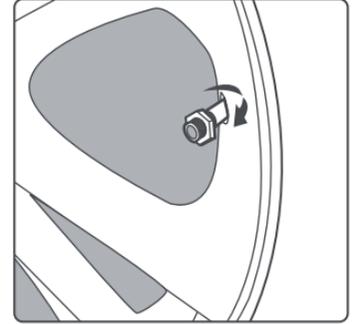
iii. Replace with new CR1632 battery

iv. Screw on the sensor cover

1. Sensor Installation - EXTERNAL SENSOR
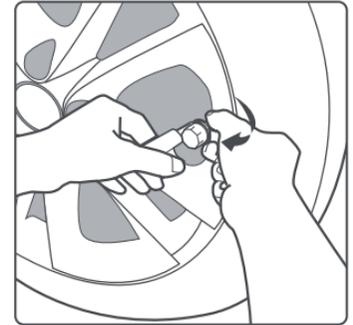
i. Unscrew the valve cap

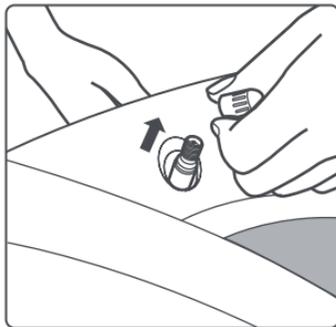ii. Thread the theftproof nut through
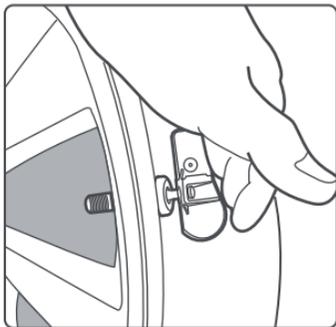
iii. Screw on the sensor

iv. Tighten the nut using the spanner

Sensor Installation – INTERNAL SENSOR
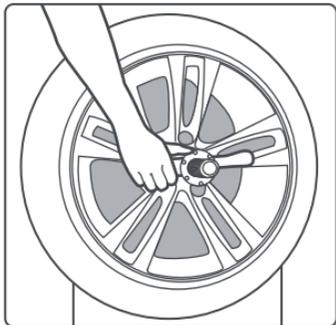

i. Remove the original tire valve

ii. Install the internal sensor

iii. Inflate the tire

iv. Perform a dynamic wheel balance

2. Display Installation
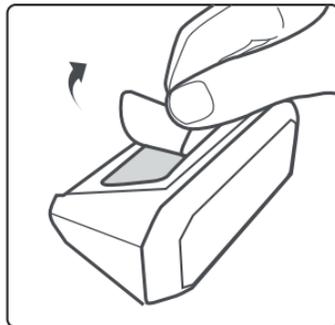
i. Mount the display on the dashboard by double-sided sticker.
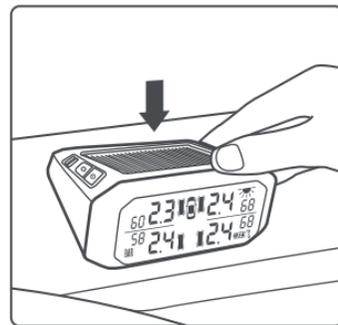
ii. Place the display on the dashboard in the right place.

⚠ Safety Notice

- For first-time use, please charge the display for 3 hours.
- DO NOT mount the display on top of the airbag compartment.
- Some products such as DVRs may cause interference. The display should be mounted away from such products.

3. Functional Test After Installation

Users must perform the functional test after installation.
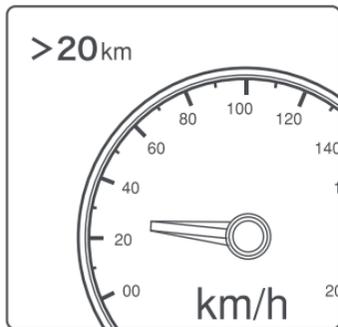
i. Please drive the vehicle over 20km/h (12.4mph) for a few minutes.
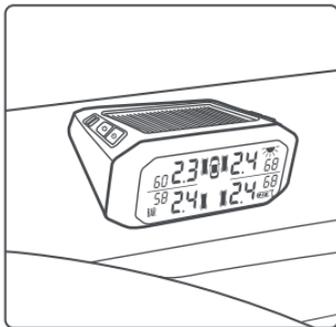
ii. The display should update real-time data automatically. When all tire data is displayed, and the unit shows no abnormal tire condition, the installation is a success.

⚠ *WARNING: NO NEED to perform sensor pairing for a new unit!*

Sensor pairing is used to pair a new sensor or a missing sensor to the display. All units come with sensors already paired to the display in the factory.
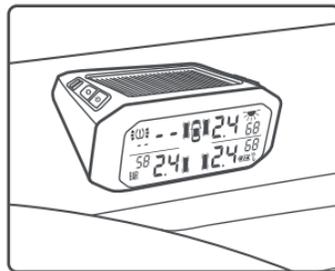
i. Press ⚙ button 5 times to enter Sensor Pairing Mode.
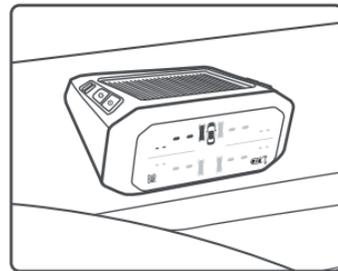
ii. Press ➕ or ➖ button to select the desired tire position.
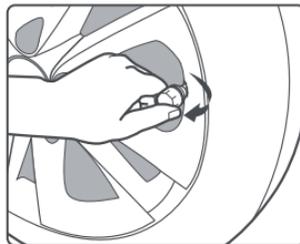
iii. External sensors: screw on the new sensor to the corresponding tire until data shows up on the display with a 'beep' sound.
Internal sensors: With sensors installed, inflate or deflate the corresponding tire until data shows up on the display with a 'beep'.
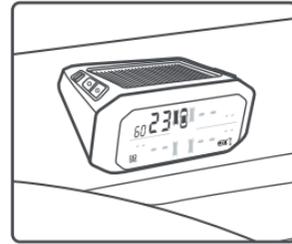
iv. Short press ⚙ button once to save the data.

v. Press ➕ or ➖ to select the next tire position, and repeat steps iii)~iv) to pair the other sensors.

vi. If you have finished pairing selected sensors, hold ⚙ button for 3 seconds to exit Sensor Programming Mode.

7 Product Specifications

Display

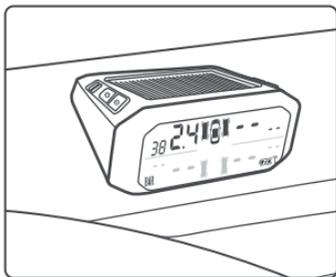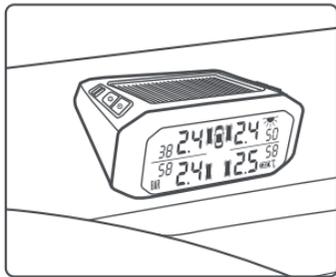| Operating frequency	Operating temperature
433.92MHz ±50KHz	-20~+70℃ / -4~158°F

Factory Default Settings

Default High pressure alarm	3.0 bar/ 43 PSI
Default Low pressure alarm	2.0 bar/ 29 PSI
Default High temperature value	80℃/ 176°F

User selectable range for alarms

High Pressure	Low Pressure	High temperature
0.8 bar~14bar / 12~99PSI	0.5bar~9.9bar /7~65 PSI	70~90℃ / 158~194°F

Sensor

	Internal sensor specifications	External sensor specifications
Weight	14g±1g	8g±1g
Operating frequency	433.92MHz±50KHz	433.92MHz±50KHz
Operating temperature	-40~+100℃ / -40~+212°F	-20~+60℃/-4~+140°F
Pressure monitoring range	0~7 Bar/ 0~99 PSI	0~6 Bar/ 0~87 PSI
Pressure accuracy	±0.1 Bar/±1.5PSI	±0.1 Bar/±1.5PSI
Battery life	6 years	2 years

Q   The display is missing data, what should I do?

A   1. Ensure that all the sensors are present, and the display is fully charged and turned on;

2. Ensure there are no electronic interference around;

3. Drive the vehicle over 20km/h for 5 minutes;

4. Ensure that the sensor battery is working and then repeat step 3.
[Note: The display has low sensor battery warning to alert the user. If it is a new unit, skip to step 4.]

5. If data is still missing, commence sensor pairing.

Q   During a wheel rotation, how can I make sure the sensors are in the right position?

A   There are two methods:

1. External sensors can be taken off and screwed onto the correct position; or

2. Users can utilize the Tire Swap function to exchange two tire positions each time, until all tires are swapped to the correct position.

Q   Do I need to perform a dynamic wheel balancing?

A   After installing internal sensors, dynamic wheel balancing is a must.

Dynamic balancing is not required for external sensors.

Q   How to silence the display alarm?

A   You can press any button to temporarily silence the display, or turn off the display.

Q   After installation, why does air leakage occur?

A   Tire valves may not be of universal standard. Check with your installer.

Q   What to do if I want to upgrade to ten tires?

A   Please purchase extra sensors from authorised stores and follow the sensor pairing instructions in this manual to pair the extra sensors to your display. It is easy.

Q   What happens if I lost a sensor?

A   Please purchase a new sensor from a distributor.

Q   What happens if I separate my trailer and my 4-wheel vehicle? Will the display alarm and report sensor failure?

A   If the display fails to receive all of the pre-paired tyre signals from the trailer at the same time, it will pause the status of trailer data. The display will not alarm and report for sensor failure.

Q   Where do I find help?

A   The first point of contact should be your direct seller. For more help, visit our website www.coastrv.com.au.