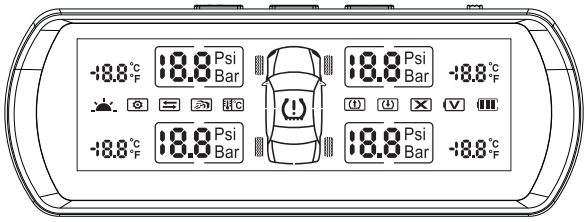


DLS-TP400 USER'S MANUAL

TPMS

CONTENTS

Safety Precautions..... 2
Packing List..... 3
Standard Tools and Accessories..... 4
Display Desktop Base Installation..... 5
Cigarette Lighter Bracket Installation..... 6
Display Power On..... 7
USB Charging Socket..... 8
External Sensor Installation..... 9
External Sensor Exploded View..... 10
A: External Sensor Battery Replacement..... 11
B: External Sensor Battery Replacement..... 12
Leakage Reasons of Nonstandard Tire Valve..... 13
Internal Sensor Installation..... 14
Driving Checking 16
Display Functions.....16
Display Instructions 18
LCD Display Description..... 18
Buttons Instructions..... 19
Voltage Query..... 19
Enter Setting Mode..... 20
Exit Setting Mode..... 21
Pressure Unit Setting..... 22
Temperature Unit Setting..... 23
Code Learning 24
Exchange Tire Position..... 26
High Temperature Alarm Value Setting (Factory Default 65 °C) 28
Front Tire High Pressure Alarm Value Setting (Factory Default 46 Psi) 29
Front Tire Low Pressure Alarm Value Setting (Factory Default 26 Psi) 30
Rear Tire High Pressure Alarm Value Setting (Factory Default 46 Psi)..... 31
Rear Tire Low Pressure Alarm Value Setting (Factory Default 26 Psi) 32
FAQ..... 33

Safety Precautions

Before installing this system, please read below notes carefully:

1. Display should be installed in proper place which will not block driver's view.
2. Make sure the display bracket stick strongly in case of falling off when driving.
3. After installing sensors, please check if the tire is leaking with soapsuds when needed.
4. Take note of blow-out when tire pressure is too high and be careful of fuel consumption and balance when it is too low.
5. This system can detect the tire in real time, but can not prevent any tire accident happening, choosing good quality tire is the same important as using our product to make sure the tire pressure in normal range.
6. Secure the safety when checking the tire pressure and temperature in driving.
7. The tire pressure will become a little higher or lower when temperature is changing when driving, this is normal.

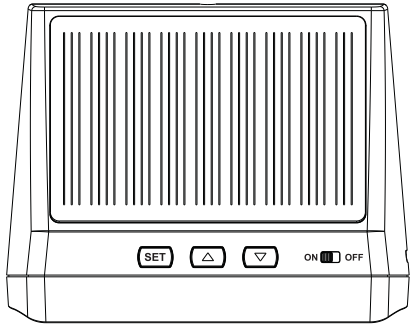
Notes and Statement

- This system is only suitable for vehicle that tire pressure is no more than 51Psi, which with 12V power.
- The tire safety can no tbe only relied on this system, vehicle user should inspect the tire regularly in case of nail sticking or any breaking.
- Please park the vehicle and check as soon as the system is warning.
- This system can not predict the suddenly damage by outside force.
- Please don't operate this system when driving.
- The display can only work normally when power is on.
- The sensor lifetime is related to vehicle driving mileage, and it can be shortened when working under -20℃ temperature.
- The tire temperature will get higher when driving, and the tire pressure will be 1- 4 Psi higher accordingly.
- Please park the vehicle properly, our company do not take responsibility of sensor stolen.

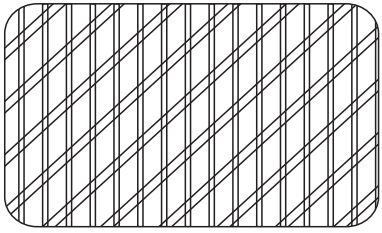
⚠ It is recommend that install display and power on before sensors.

⚠ Display and 4 sensors are already learned with each other before leaving the factory, no need to do code learning again after installation.

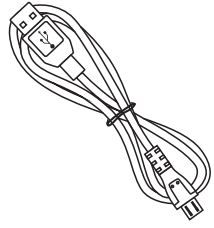
Packing List



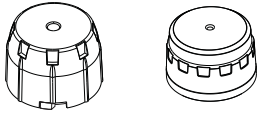
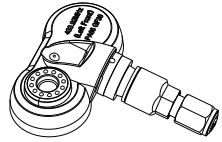
Display



Skid pad



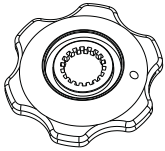
USB charging cable

(External) Sensor X4	(Internal) Sensor X4
 A B	

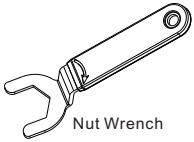
*Sensor X4 (External or Internal depend on user's purchase)

Standard Tools and Accessories

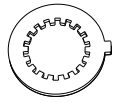
A: (External) Tools and Accessories



Uncap Wrench
(for replacing battery)



Nut Wrench



Anti-dismantle
Locking Plate
2pcs(for backup)

B: (External) Tools and Accessories

Combination Wrench

① for locking the sensor with hexagonal nut

② For fixing the sensor base when unscrew the sensor cover to replace battery

Hexagonal Nut 5pcs (one for backup)

Ring Needle (for replacing the silicon seal ring)

① for pulling out the silicon seal ring

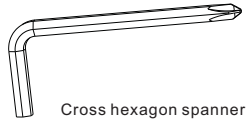
② for setting the silicon seal ring

Silicon Seal Ring 4pcs(for backup)

If the silicon seal ring is damaged, please replace it by the backup ring for avoiding leakage.

As shown in page 11 picture 3 - Replace Sensor Battery.

(**Internal**) **Tools**

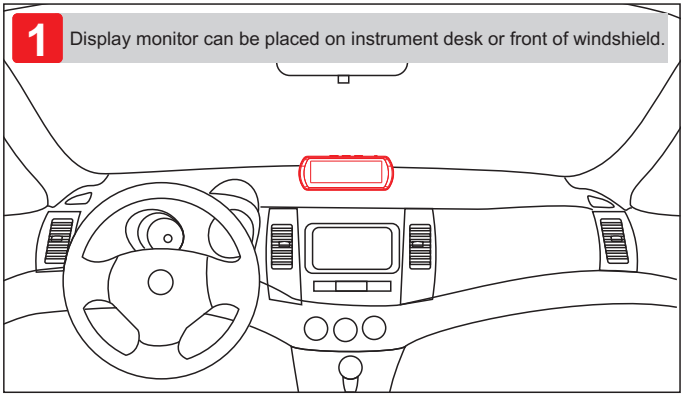


Cross hexagon spanner

* Tools (External or Internal depend on user's purchase)

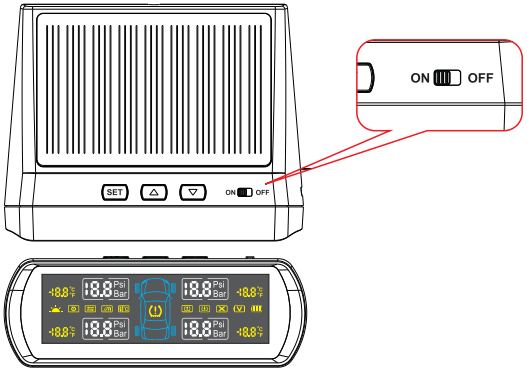
Display installation

1 Display monitor can be placed on instrument desk or front of windshield.

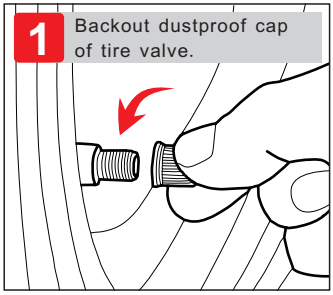


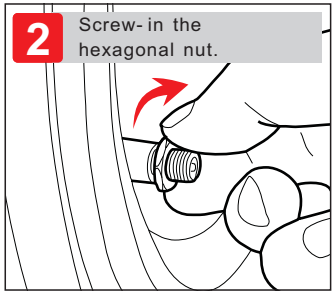
Note: Please put display far away from metal device, as well as DVR or DVD.

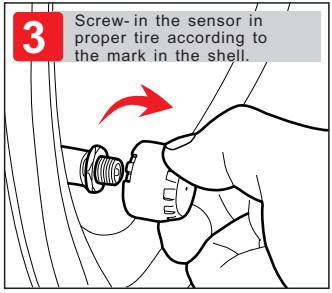
2 Turn switch from OFF to ON in the top of display.

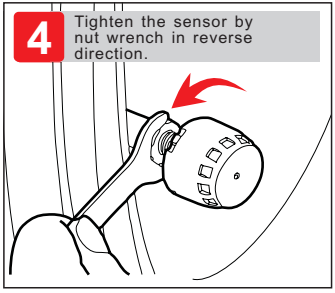


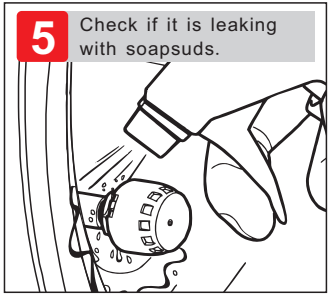
External Sensor Installation





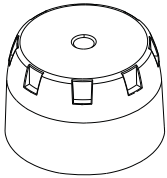






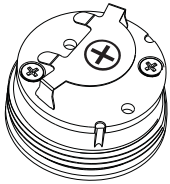
* Display and 4 sensors are already learned with each other before leaving the factory, no need to do code learning again after installation.

External Sensor Exploded View

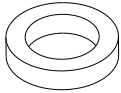


cover

Button Battery CR1632



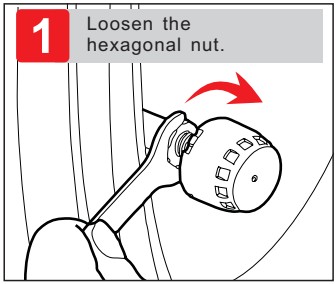
Sensor

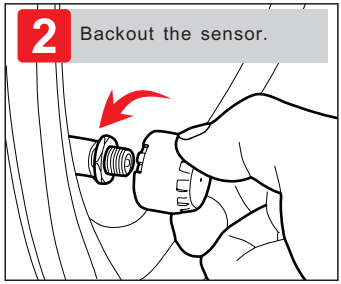


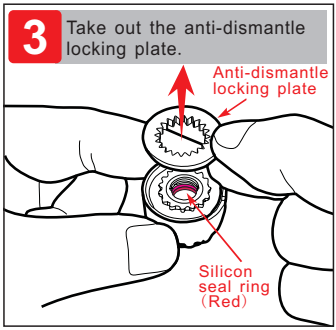
Silicon Seal Ring

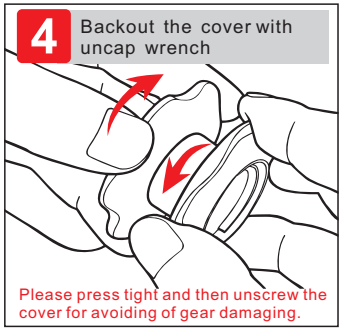
External sensor Technical Parameter	
Sensor Weight: <10g	Operating Current: < 12mA
Pressure Range: 0Psi-51Psi / 0Bar-3.5Bar	Operating Temperature: -40℃ ~ +125℃
Battery Model: CR1632	Pressure Error: ±1Psi / ±0.1Bar
Battery Lifetime: >3 years	Temperature Reading Accuracy: ±2℃
Static Current: < 0.7μA	Operating Humidity: 5～98%

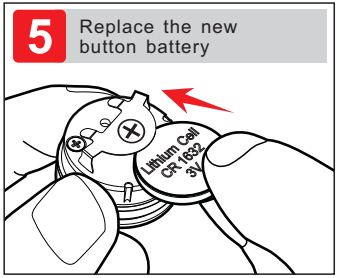
A: External Sensor Battery Replacement

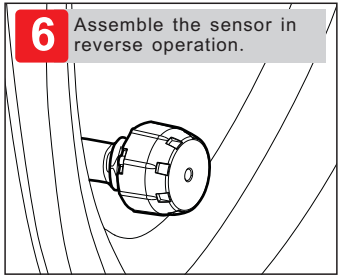






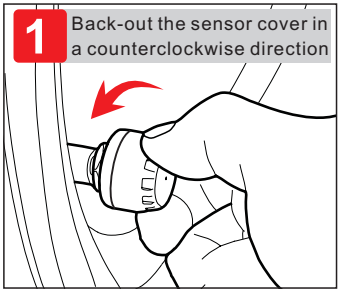


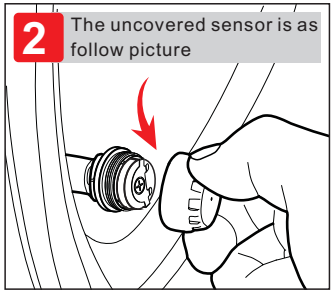


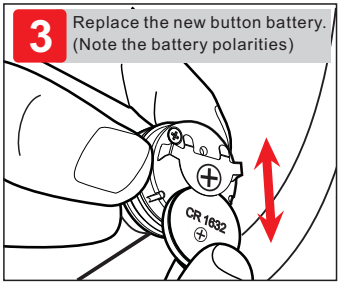


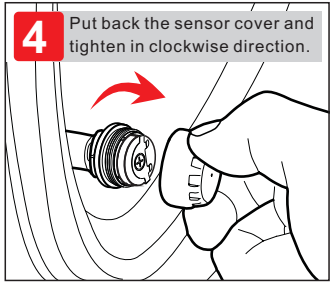
B: External Sensor Battery Replacement

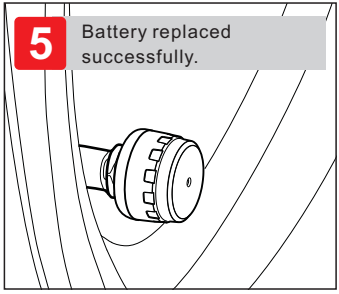
* No need to take out the sensor from tire if it is installed already, just unscrew the sensor cover from the valve to replace battery

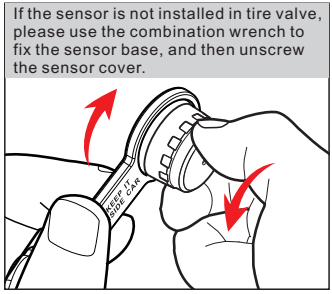








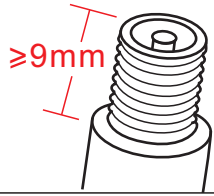




Leakage Reasons of Nonstandard Tire Valve

Standard Valve

- The valve core is even with the edge.
- The valve thread length ⩾ 9mm

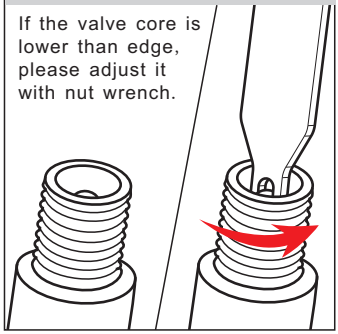


Leakage Reason 1 of Nonstandard Tire Valve

The breach in the valve may cause the leakage, please replace it with a standard valve.

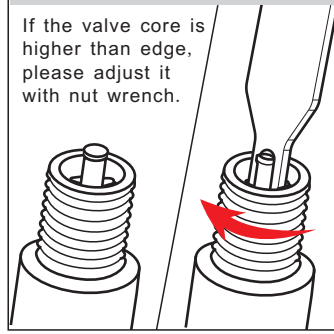
Leakage Reason 2 of Nonstandard Tire Valve

If the valve core is lower than edge, please adjust it with nut wrench.



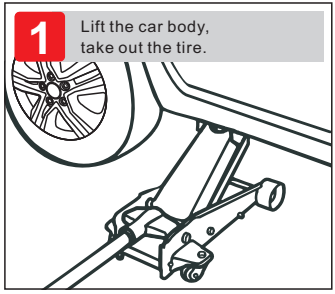
Leakage Reason 3 of Nonstandard Tire Valve

If the valve core is higher than edge, please adjust it with nut wrench.

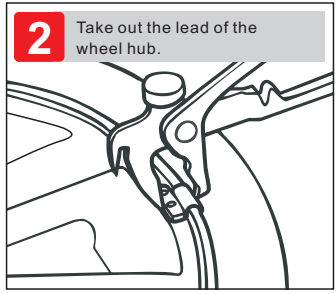


Internal Sensor Installation

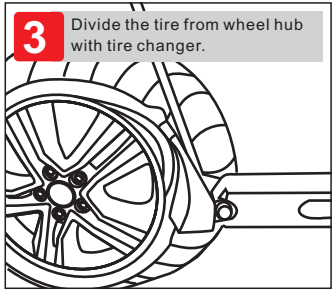
1 Lift the car body, take out the tire.



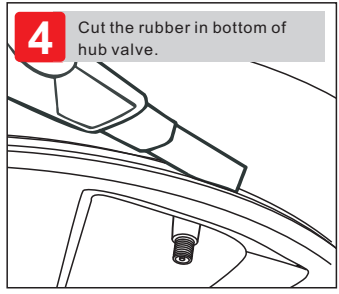
2 Take out the lead of the wheel hub.



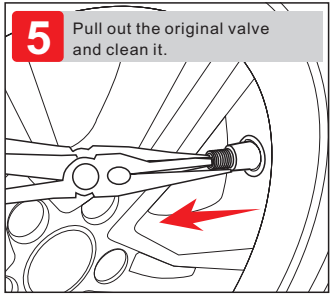
3 Divide the tire from wheel hub with tire changer.



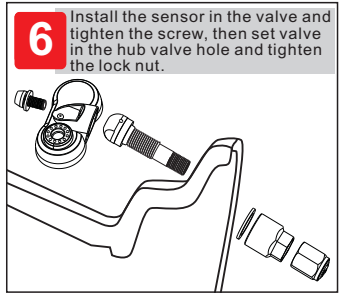
4 Cut the rubber in bottom of hub valve.



5 Pull out the original valve and clean it.

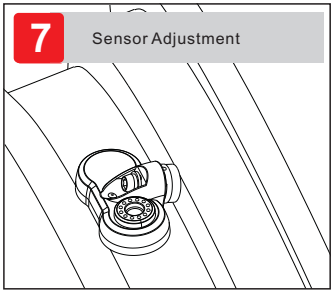


6 Install the sensor in the valve and tighten the screw, then set valve in the hub valve hole and tighten the lock nut.

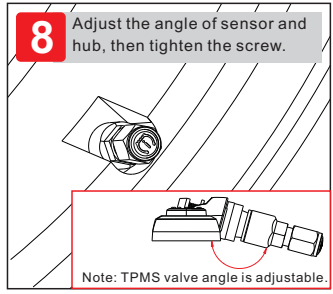


Internal Sensor Installation

7 Sensor Adjustment

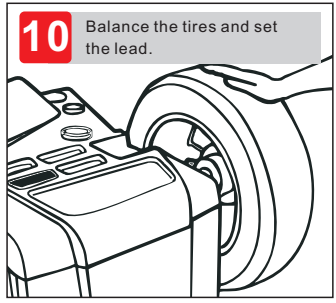


8 Adjust the angle of sensor and hub, then tighten the screw.



9 Install the tire and hub, and then pump up.

10 Balance the tires and set the lead.



Internal Sensor Technical Parameter

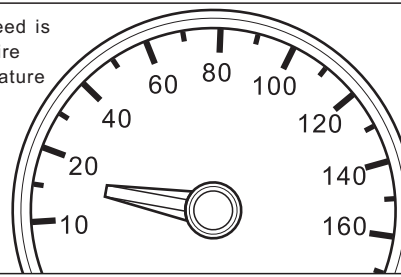
Operating Temperature: -40℃ ~ +125℃
Operating Humidity: 5 ~ 98%
Sensor Weight: 43g (24g excluding the valve)
Sensor Size: 60.5*30*20mm
Battery Lifetime: > 6 years
Pressure Range: 0 ~ 51Psi (0 ~ 3.5Bar)
Temperature Range: -40℃ ~ +90℃
Working Frequency: FSK 433.92MHz

* Display and 4 sensors are already learned with each other before leaving the factory, no need to do code learning again after installation.

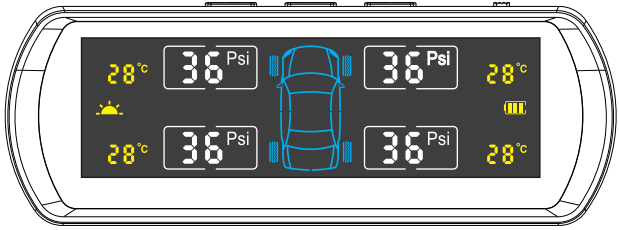
Driving Checking

1 When the driving speed is up to 15km/h, the tire pressure and temperature data will be updated automatically.

>15km/h



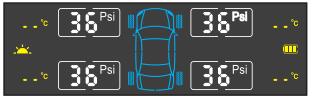
2 If all the 4 tire pressure and temperature data is shown, it means the system installed and working successfully.



Display Functions

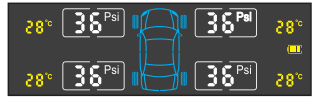
Parking Display

Car ignition ON, display shows all 4 tire pressure values, and temperature as follow:



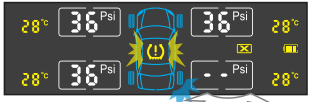
Driving Display

When the driving speed is up to 15km/h, the tire pressure and temperature data will be updated automatically.



Sensor Disabled

Bi-

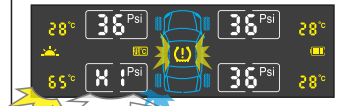


High Temperature Warning

Bi-Bi-

The tire temperature is higher than 65℃.

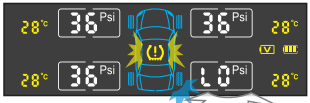
Temperature display range: -40℃ ~ +90℃



Sensor Battery Run Out of Power

Bi--Bi--

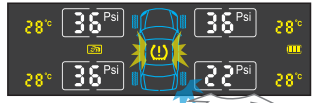
External sensor battery lifetime is over 3 years.
Internal sensor battery lifetime is over 6 years.



Leakage Warning

Bi-Bi-Bi-Bi-Bi-

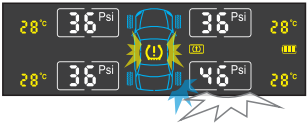
It means the tire may be stick by nail or aged.

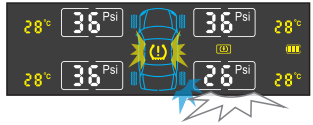


Abnormal Pressure Warning

Above 46 Psi: Bi-Bi-Bi-Bi-
Below 26 Psi: Bi-Bi-Bi-

The pressure is out of normal range 26-46Psi（Factory Default Pressure Range）

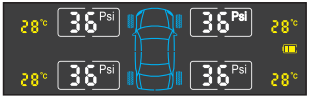




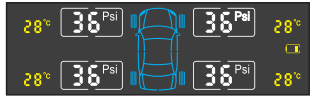
Display Battery Charging

Display Battery Power Indication

The icon shows battery is full, and shows battery is low, please charge it by sunshine or using the car charger. When the battery is full, display can work about 1 month.



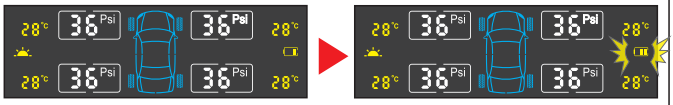
Battery Full



Battery Low

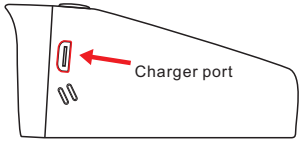
Solar Charging

When the display is charged by sunshine, icon shows on, which means the battery is charging, and the battery icon keep flashing from to .

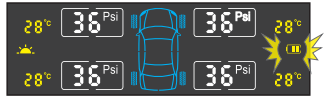


Car Charger Charging

When the weather is cloudy or rainy, the display can be charged by car charger, there is a charger port in side of the display.

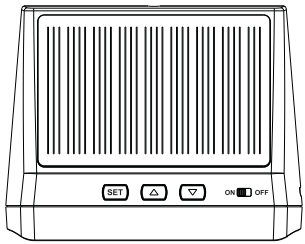


Input Voltage: 5V



the battery icon keep flashing from to when the display is charging

Display Instructions



Display Technical Parameters

Input Voltage: 12 ± 3V
Operating Current: <40mA
Operating Temperature: -40°C ~ +85°C
Operating Humidity: 5 ~ 98%

SET SET and confirm button

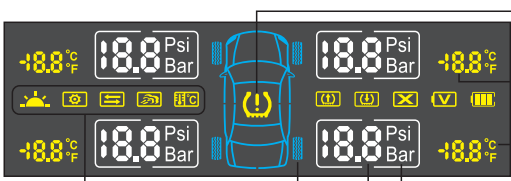
▲ UP button - Forward

▼ DOWN button–Back

ON/OFF Power switch

* Press SET button and hold on 2 seconds to enter setting mode or confirm and exit.

LCD display description



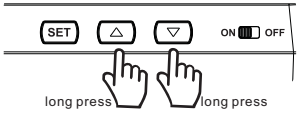
Warning
Tire temperature value
Temperature Unit
Pressure Unit
Tire pressure value
Tire position

Display icons description

	Solar charging icon (show on when the display is charged by sunshine)		High Pressure Warning (show icon when tire pressure is higher than the set value)
	Code learning of sensor and display		Low Pressure Warning (show icon when tire pressure is lower than the set value)
	Exchange the tire position in display when tires exchanged, no need to exchange sensors.		Sensor Disabled (show icon when any of the sensors is disabled)
	Leakage Warning (show icon when tire is leaking)		Low Power Warning (show icon when the sensor battery is run out of power)
	High Temperature Warning (show icon when tire temperature is out of the set range)		Battery icon (show display battery power)

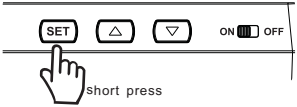
Buttons Instructions

Under non setting mode, short press UP/DOWN button is invalid.



Press UP + DOWN buttons together and hold on until it beep twice, system return to factory default setting.

Under setting mode



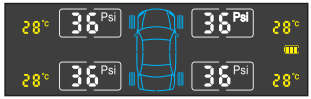
Press SET button to enter the current setting item or confirm and exit. (exclude the exchanging mode)

Press UP button shortly: set forward

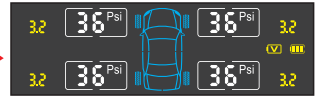
Press DOWN button shortly: set back

Voltage Query

In the main interface, press SET button shortly to check the battery voltage, the icon " V " show up as follow picture, and it will return to the main interface after 20 seconds automatically.



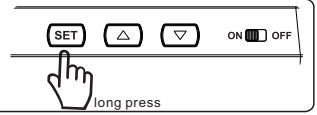
Main Interface



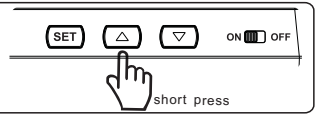
Voltage Query

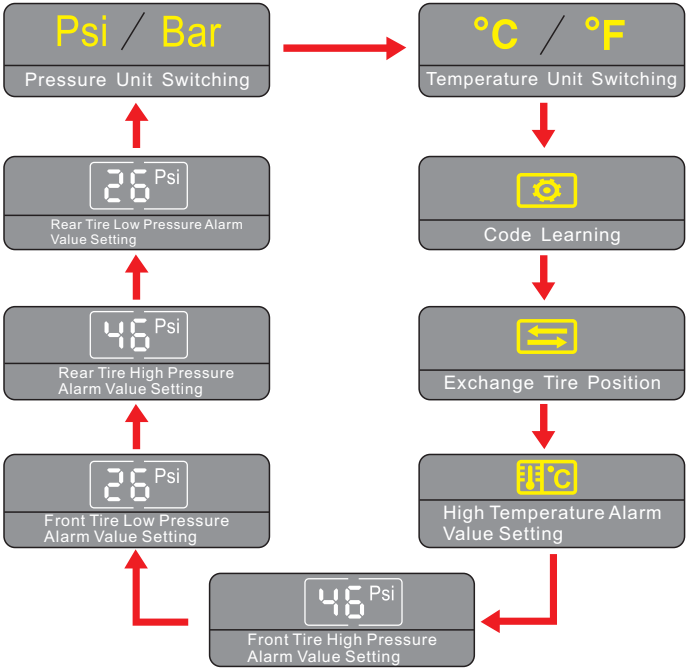
Enter Setting Mode

1 Under non setting mode, press SET button and hold on until it beep once to enter setting mode



2 and switch by pressing UP/DOWN buttons circularly as follow:

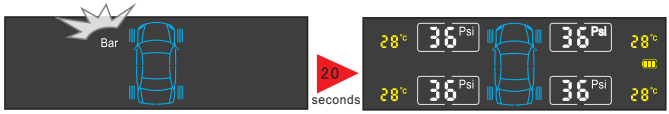




Exit Setting Mode

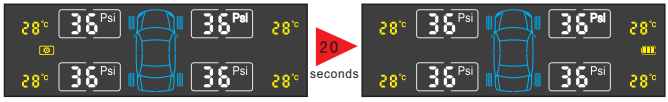
1 Under any mode, press SET button and hold on until it beep once, the setting will be confirmed and exit.

2 Under any mode, if there is no operation within 20 seconds the system will confirm and exit the current mode automatically (not including code learning and exchange tire position mode).



3 Under code learning mode:

- If there is no operation and code learning signal within 3 minutes, the system will confirm and exit automatically.

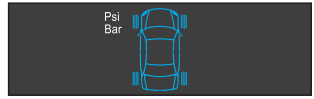


- If there is no operation and code learning signal after 20 seconds when the forth sensor is learned, the system will confirm and exit automatically.

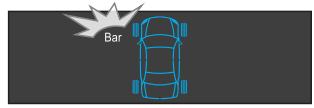
Pressure Unit Setting

1. Choose pressure unit setting mode, the display shows pressure unit Psi and Bar.

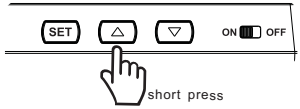
* The factory default pressure unit is Psi.

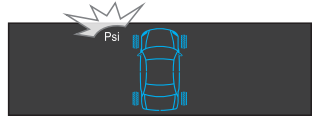


2. Press SET button shortly until it beep once and then release to enter pressure unit setting, the current unit will flash.

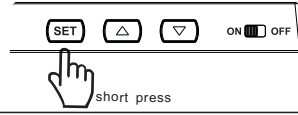


3. Press UP/DOWN button to switch the pressure unit.



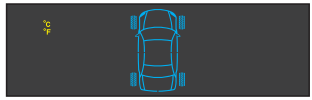


4. Press SET button shortly until it beep once and then release to confirm the setting and exit the current mode.

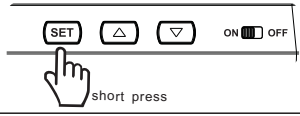


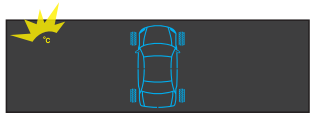
Temperature Unit Setting

1. Choose temperature unit setting mode, the display shows temperature unit °C and °F .

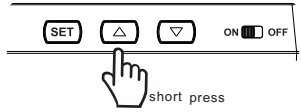


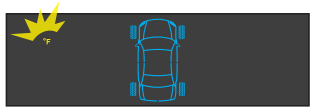
2. Press SET button shortly until it beep once and then release to enter temperature unit setting, the current unit will flash.





3. Press UP/DOWN button to switch the temperature unit.

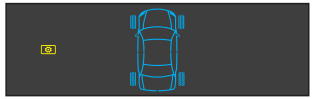




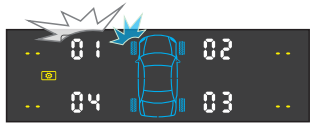
4. Press SET button shortly until it beep once and then release to confirm the setting and exit the current mode.

Code Learning

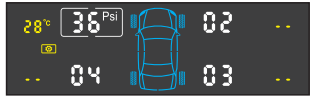
1. Choose code learning mode, the display shows icon



2. Press SET button shortly until it beep once and then release, the display shows “01-02-03-04” and 01 icon starts to flash, it means the system enter the code learning mode.

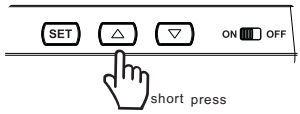


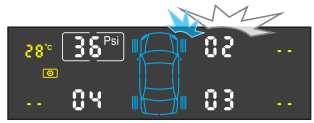
3. Install the sensor and the display will show current tire pressure and temperature.



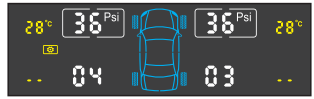
Code Learning

4. Press UP/DOWN button to choose the tire position, the current values and icons will flash.





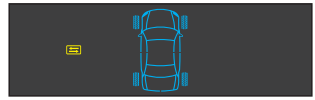
5. Install the current position sensor and the display will show the tire pressure and temperature.



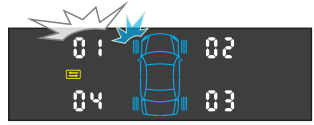
6. If there is more than one sensor need to be learned, repeat step 4 and 5.

Exchange Tire Position

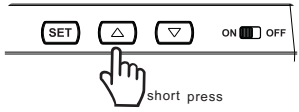
1. Choose exchange tire position mode, the display shows icon

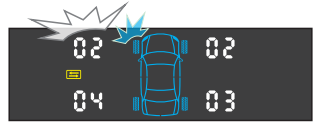


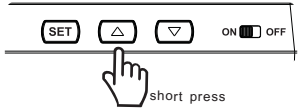
2. Press SET button shortly until it beep once and then release, the display shows all tire position information (01 – front left, 02- front right, 03-rear right, 04-rear left), and the current tire number flash.

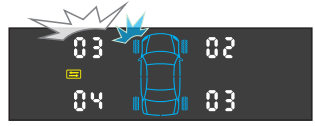


3. Press UP/DOWN button to choose the exchanged tire position, and the current tire number flash.



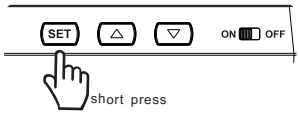


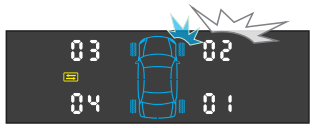




Exchange Tire Position

4. Press SET button shortly until it beep once and then release to next position.

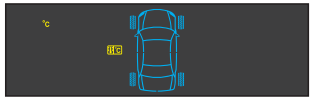




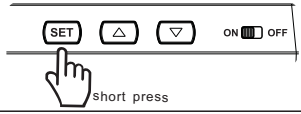
5. Press SET button and hold on until it beep once to confirm and exit the setting mode.

High Temperature Alarm Value Setting (Factory Default 65℃)

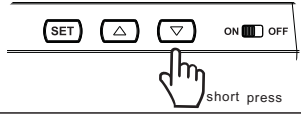
1. Choose high temperature alarm value setting, the display shows icon

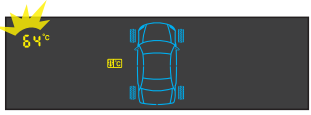


2. Press SET button shortly until it beep once and then release to enter high temperature alarm value setting, the current value flash.



3. Press UP/DOWN button to adjust the value, by each press the value increase / decrease 1℃ and will be circular between 60℃and 90℃.

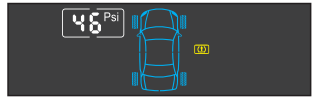




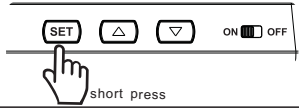
4. Press SET button shortly until it beep once and then release to confirm the setting and exit the current mode.

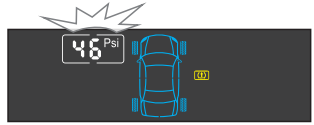
Front Tire High Pressure Alarm Value Setting (Factory Default 46Psi)

1. Choose high pressure alarm value setting, the display shows icon and the current value on top-left.

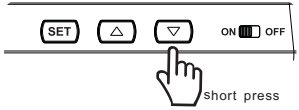


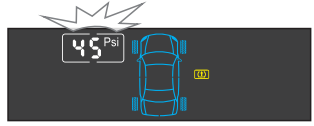
2. Press SET button shortly until it beep once and then release to enter high pressure alarm value setting, the current value flash.





3. Press UP/DOWN button to adjust the value, by each press the value increase / decrease 1Psi and will be circular between 36Psi and 51Psi.

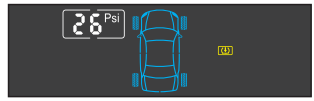




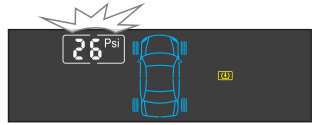
4. Press SET button shortly until it beep once and then release to confirm the setting and exit the current mode.

Front Tire Low Pressure Alarm Value Setting (Factory Default 26Psi)

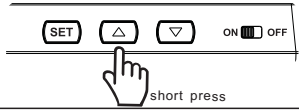
1. Choose low pressure alarm value setting, the display shows icon and the current value on top-left.

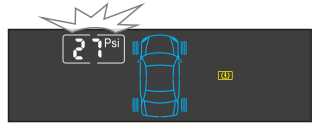


2. Press SET button shortly until it beep once and then release to enter low pressure alarm value setting, the current value flash.

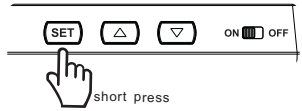


3. Press UP/DOWN button to adjust the value, by each press the value increase / decrease 1Psi and will be circular between 11 Psi and 35 Psi.



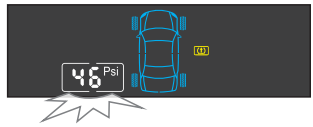


4. Press SET button shortly until it beep once and then release to confirm the setting and exit the current mode.

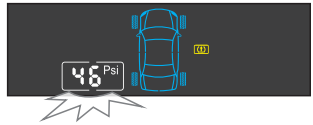


Rear Tire High Pressure Alarm Value Setting (Factory Default 46Psi)

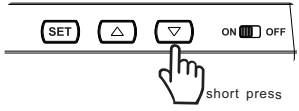
1. Choose high pressure alarm value setting, the display shows icon and the current value on lower-left.

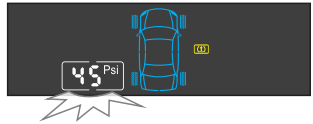


2. Press SET button shortly until it beep once and then release to enter high pressure alarm value setting, the current value flash.



3. Press UP/DOWN button to adjust the value, by each press the value increase / decrease 1Psi and will be circular between 36Psi and 51Psi.

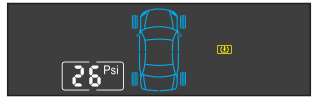




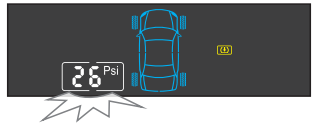
4. Press SET button shortly until it beep once and then release to confirm the setting and exit the current mode.

Rear Tire Low Pressure Alarm Value Setting (Factory Default 26Psi)

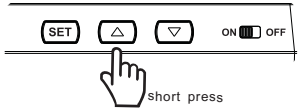
1. Choose low pressure alarm value setting, the display shows icon and the current value on lower-left.

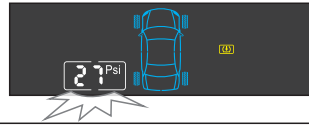


2. Press SET button shortly until it beep once and then release to enter low pressure alarm value setting, the current value flash.

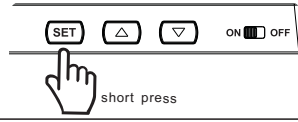


3. Press UP/DOWN button to adjust the value, by each press the value increase / decrease 1Psi and will be circular between 11Psi and 35Psi.





4. Press SET button shortly until it beep once and then release to confirm the setting and exit the current mode.



FAQ

Sensor Interface Leakage
It is usually caused by nonstandard tire valve, please replace it with a standard one in tire store.

Sensor Missing
Please buy sensor from our company and reset it.

Battery Out of Power
Please replace a new button battery CR1632

Tire Position Exchange
After exchanging the tires position, please set the tire position by display exchanging tire position mode.

Display not Working
1 . Check if DC interface is connected
2 . If there is no 12V power in cigarette lighter holder, please check related fuse.
3 . Check if it is poor connection between the cigarette lighter top and the lighter holder.
4 . If the problem still exists after above checking, please contact the local distributor.

Display Tire Data Shown Discontinuously
1 . Check if there is DVR, e-dog or parking sensor nearby, please move them to 20cm far away from the display.
2 . Check if there is connected wires nearby, or if the display set on the car audio speaker, please move the display away from them.

Sensor Transmission not Good
1 . Check if the sensor is installed in tire and near the display, because the sensor and display wireless transmission distance is limited.
2 . Check if the (external) sensor battery CR1632 is installed.
3 . Check if the (external) sensor battery polarity is correct.
4 . Check if the (external) sensor battery is run out of power, please replace new one if it is.
5 . Please reinstall the (external) sensor battery. After taking out the battery, wait for more than 10 seconds to reinstall it back, this will make sure the sensor is reset.
6 . Check if there is some sensor from another system mixed in this one. Each sensor has a unique ID code, and the display can only recognize the sensor from this system.
7 . If the problem still exists after above checking, please contact the local distributor.

Display Tire Pressure Show "0" and Warning
1 . Check if the sensor is installed properly.
2 . If it is external sensor, please tighten the sensor to the tire valve. Because the sensor can not detect the tire pressure if it is not contacted with valve core.

Display Show Nothing after Restart
The sensor can only detect and show new tire pressure and temperature value when the pressure is changed by over 1Psi, so just drive and speed up the car.