

TPMS
Tire Pressure Monitoring System

User's Manual

Thank you for buying our automobile tire pressure monitoring system

- This product can be used for light vehicle with tire pressure under 3.5Bar;
- For a safe and correct use of it, please read this manual first.

Packing List

Please make sure that your product includes all the following items:
In case of short of any items, please contact your distributor for consultation.

Sensors	4	User Manual	1
Receiver	1	Wrench	1
Double-sidetape	1	Anti-theft Nozzle	4
Charger	1		

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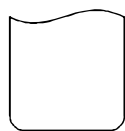
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FOREWORD

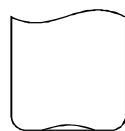
According to statistics , about 70% of all traffic accidents are caused by tire blowout , while the figure would be higher to 80% .The statistics of SAE shows that there are over 260000 accidents caused by tire fault , and about 75% tire fault is caused by low pressure or leak . NHTSA in US develop a project which require all vehicles with gross weight less than 4500 Kg should be installed TPMS product .

It is because long time driving under abnormal tire pressure or temperature that rubbing abrasion of tire become rapid to cause tire blowout . The aim of TPMS is to notice the driver to keep tires in correct condition when driving. Just as the figures showed below , figure B and C result in stress centralization that is makes the tire shoulder be abraded rapidly if under low pressure condition while the centre part be abraded rapidly if under high pressure.

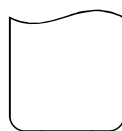
Three different inflation condition of tire



A. normal



B. low pressure



C. high pressure

INTRODUCTION

Our TPMS product uses reliable integrated circuit, according diffusible silicon sensing principle and RF communication principle, which makes the product perform well, easy to install and work stably. This type product is one of the most advanced TPMS products in the world.

- This product belongs to Pressure-Sensor Based TPMS . The sensor is mounted as valve cap to measure the pressure and temperature . The tire is monitored all the time, and our product can send alarm information to driver to tell the emergency of improper pressure or temperature when it is under abnormal condition.
- The driver can keep the tire in good condition after having this product , thus the tire life can be extended.
- The driver can avoid increasing the braking distance and making the auto sideslip on wet road with this product.
- Gas saving is another important benefit to customers if using this product.

This product makes you drive safely . If there's any abnormal, it can send the message immediately including the value of the pressure and temperature , which makes you drive reliably.

OPERATION

This product can monitor the pressure and the temperature of each tire. It will warn the driver if any tire is abnormal.

A) Set function: to set the standard value of pressure, unit of pressure and temperature, high temperature threshold ; exchange sensors' position; set up sensors.

B) warning function: Low pressure warning, high pressure warning, leakage warning, high temperature warning, low power of sensor warning, no signal warning.

1. Key introduction

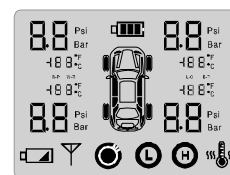
Enter Key : confirm the settings.
Up Key : set and increase.
Down Key : set and decrease.
Switch : to turn on /off the receiver.
DC 5V : to be connected to the accompanied charger .



OPERATION

2. Power on

When the receiver is turned on , the system starts self-checking . The LCD , LED and back light are on . The screen enters into initiate state as picture 1. The self-checking will be finished in three seconds.



Picture 1



Picture 2

3. The Power Saving Mode:

Power Saving Mode: system will be in power saving mode automatically when the receiver hasn't detected any vibration in 30 minutes.

Status of Power Saving mode: The receiver doesn't do anything except detecting vibration (no display in screen ; back light off ; the receiver doesn't receive any data sent from sensors) when it is in Power Saving mode.

Resuming to normal operation mode : in case of any vibration detected by the receiver ,the receiver will return to the normal operation mode .

OPERATION

4.Display interface

Receiver battery : to show current energy of the receiver battery. When the icon is flashing , it means low power for the receiver and the receiver must be charged by the charger in time. charging temperature: 0℃-45℃

Value of tire pressure: to show the real-time tire pressure.

Value of tire temperature: to show the real-time tire temperature.

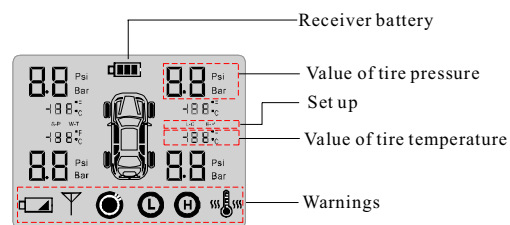
setup:

S-P : to set the standard tire pressure.

W-T : to set the tire high temperature threshold.

L-C : to set up sensors.

E-P : to exchange sensors positions in case of tire rotation.



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OPERATION

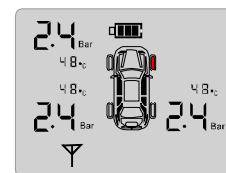
5.Warnings

A) Low power of sensor warning: the buzzer turns on for 6 beeps and red LED is on ; The icon of the warning tire and the icon of low power are flashing; the buzzer will stop buzzing if any key is pressed. The warning message of each tire will be displayed in turn if more than one tire is under abnormal condition.



Picture 3

B) No signal warning: the buzzer turns on for 2 beeps and red LED is on; no pressure and temperature of the tire is displayed, the icon of the warning tire and the icon of “no signal” are flashing; the buzzer will stop buzzing if any key is pressed. The warning message of each tire will be displayed in turn if more than one tire is under abnormal condition.

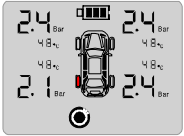


Picture 4

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OPERATION

C) Leakage warning: the buzzer turns on for 6 beeps and red LED is on; the icon of the warning tire and the icon of leaking are flashing; the buzzer will stop if any key is pressed. The warning message of each tire will be displayed in turn if more than one tire is under abnormal condition.



Picture 5

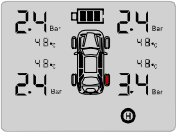
D) Low pressure warning: the buzzer turns on for 6 beeps and red LED is on; the value of pressure, the icon of the warning tire and the icon of low pressure alarming are flashing; the buzzer will stop buzzing if any key is pressed. The warning message of each tire will be displayed in turn if more than one tire is under abnormal condition. When this warning occurs, it will not disappear until the pressure is 0.2 Bar higher than its threshold (F.e., the standard pressure is 2.4Bar, then the low pressure warning threshold is 1.8Bar. If there is low pressure warning, it will disappear when the pressure is higher than 2.0Bar).



Picture 6

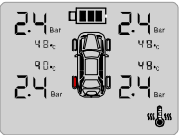
OPERATION

E) High pressure warning: the buzzer turns on for 6 beeps and red LED is on; the value of pressure, the icon of the warning tire and the icon of high pressure are flashing; the buzzer will stop buzzing if any key is down. The warning message of each tire will be displayed in turn if more than one tire is under abnormal condition. When this warning occurs, it will not disappear until the pressure is 0.2 Bar less than its threshold (F.e., the standard pressure is 2.4Bar, then the high pressure warning threshold is 3.36Bar. If there is high pressure warning, it will disappear when the pressure is less than 3.16Bar).



Picture 7

F) High temperature warning: the buzzer turns on for 6 beeps and red LED is on; the value of temperature, the icon of the warning tire and the icon of high temperature alarming are flashing; the buzzer will stop buzzing if any key is pressed. The warning message of each tire will be displayed in turn if more than one tire is under abnormal condition. When this warning occurs, it will not disappear until the temperature is 5°C less than its threshold (F.e., the high temperature warning threshold is 80°C. If there is high temperature warning, it will disappear when the temperature is less than 75°C).



Picture 8

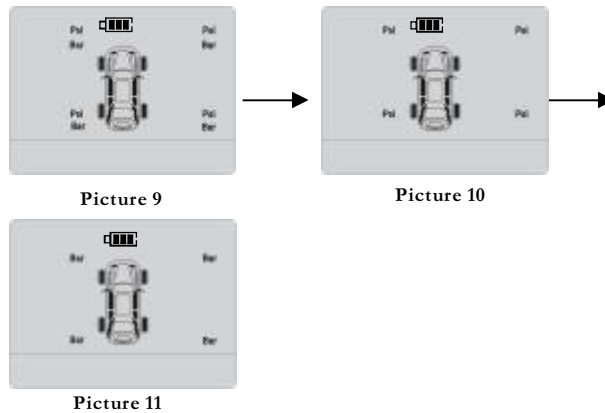
OPERATION

6. System setup

Notes: Users can reset the system's alarm threshold according to one's requirements. If there is no operation in 15 seconds during setting system will automatically exit time setting(except "I.-C" operation).

A) Pressure unit setting

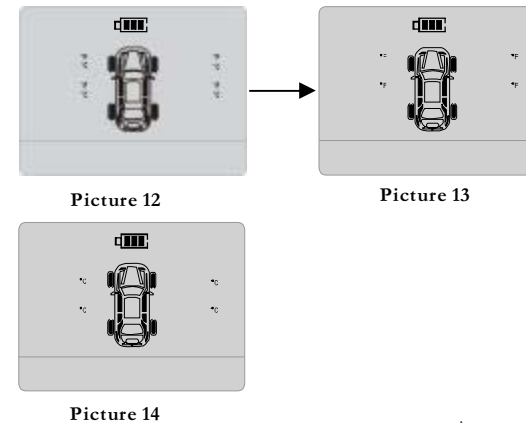
The pre-set pressure unit is "Bar". Press DOWN key for 3 seconds. Press Enter key to enter the pressure unit setting menu. Press UP key to change between "Bar" and "PSI", press Enter key to accept your selection.



OPERATION

Temperature unit setting

The pre-set temperature unit is "C". Press DOWN key for 3 seconds then press up key, when the temperature units is displayed, press Enter key to enter the temperature unit setting menu. Press UP key to change between "C" and "F". Press Enter key to confirm your selection.



B) Standard pressure setting

The pre-set standard pressure is 2.4Bar. Keep on press DOWN key for 3 seconds, If "S-P" is displayed by pressing UP key, press Enter key with front tires icons and previous set value (like 2.4Bar) displayed, press UP key to make the figure increase while DOWN key decrease, press Enter key to accept the value with rear tires icons displayed instead of front tires. To set the rear tires value as same as front tires.

OPERATION

Note: Standard tire pressure is the cold tire pressure recommended by the tire manufacturer.



Picture 15



Picture 16



Picture 17

C) High temperature threshold setting: Pre-ser threshold is “80 °C”. Press DOWN key for 3 seconds then press UP key, when W-T is displayed press Enter key. Press UP key and DOWN key to adjust the value. Press Enter key to confirm the setting.

OPERATION



Picture 18



Picture 19

D) set up sensors

Press the DOWN key for 3 seconds, press the UP key to make “L-C” displayed, then press Enter key to select right front tire and “F0” displayed. Select the tire to be set up by UP key and make the new sensor send out RF signal, sensor’s ID (like “26 E2”) will be displayed after the receiver received the information, then press Enter key to accept it with “---” displayed(system will ignore the ID if Down key is pressed). After that, press UP key till F0~F3 displayed and press Enter key to finish setting up.

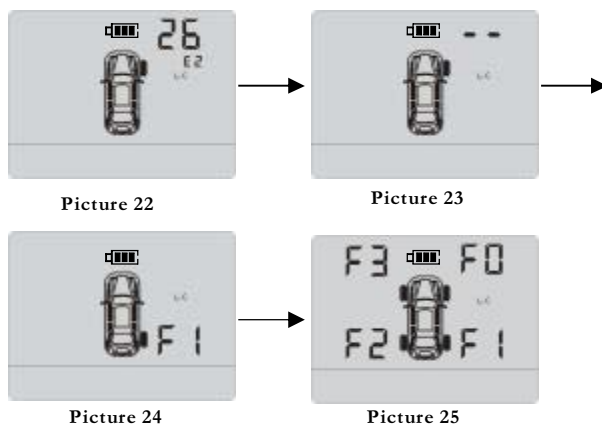


Picture 20



Picture 21

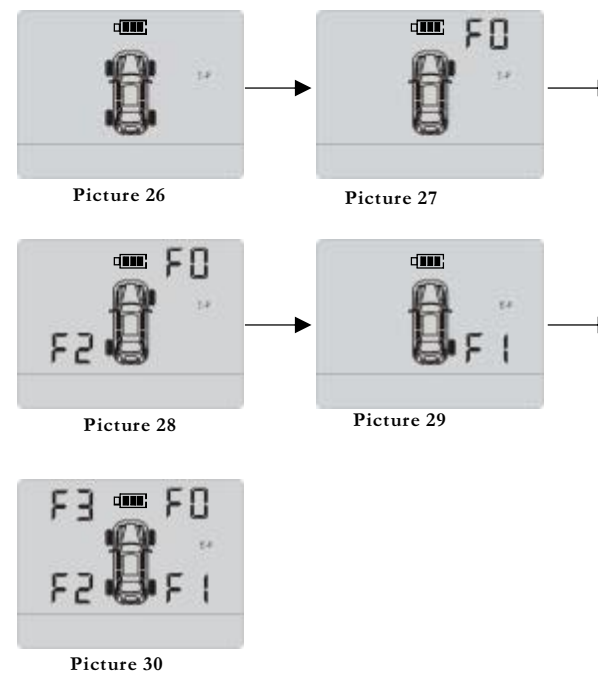
OPERATION



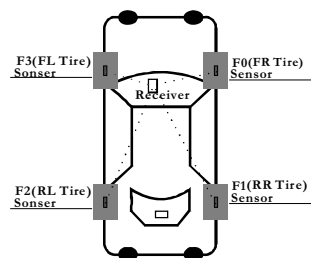
E) Exchange tires position

Press DOWN key for 3 seconds, If “E-P” is displayed by pressing UP key, press Enter key with right front tire icon and “F0” displayed, press UP key to select the tire (for example “F0”) which will be exchanged the position, then press DOWN key to select the second tire (for example “F2”) which will exchange its position with the first one and press Enter key to conduct the exchange. If there is other position exchange, do as the above . When F0-F3 is displayed with pressing UP key, press Enter key to exit the function.

OPERATION



INSTALLATION



1. Change the battery:

Remove the top cover of the sensor. Pick out the used battery and put the new into the sensor with attention that the top of the sensor is battery +. The fix the sensor's top cover .

2. Sensor Installation



INSTALLATION

1. Remove the tire valve cap, make sure that the top of the valve is smooth and without breach, with the valve pin not deep down into the valve;
2. Put the anti-theft nozzle on to the valve;
3. Mount the position matched sensor on to the valve;
4. Make the anti-theft nozzle to fit the sensor and tighten the anti-theft nozzle with the anti-theft wrench.

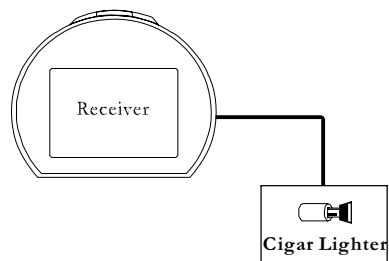
Do as the above to the other sensors.



INSTALLATION

3. Receiver Installation

The receiver should be attached to the maneuvering desk using double-side tape , where the driver can see it easily and clearly.



INSTALLATION

1. Warning Table

SN	Warning type	Value threshold
01	High pressure warning	Tire pressure is 40% higher than the standard.
02	Leakage warning	Tire pressure depression is over 0.1 bar in 20 seconds.
03	Low pressure warning	Tire pressure is 25% lower than the standard.
04	High temperature warning	Tire temperature is over the threshold.
05	Low power of transmitter warning	The power of a transmitter is less than 2.4V.
06	No signal warning	No signal received by a transmitter within 10minutes after "on"

2 . Unit Conversion

Pressure unit conversion:

1kg/cm2= 0.98Bar= 14.2PSI = 98.0665kpa

1 Air pressure equals 1.03327 kg/cm2

Temperature unit conversion: C=5/9 (F-32) F=9/5C+32

Note: C means Celsius; F means Fahrenheit

3. Technical Specifications

A) Reciver:

Power supply: DC 3.7V

Operating temperature: -40°C ~ +85°C (LCD : -20°C ~ +70°C)

Idle currency: <0.3mA

frequency: 433.92MHZ

B) Sensor:

Power supply: DC2.1-3.6V

frequency: 433.92MHZ

Operating temperature: -40°C ~ +125°C

SERVICE AND WARRANTY

Working temperature: -40°C ~ +125°C
Pressure detecting range: 0-3.5Bar
Pressure detecting accuracy: $\pm 0.1\text{Bar}$ (at 25°C)
Temperature detecting range: - 40°C ~ +125°C
Temperature detecting accuracy : $\pm 2^\circ\text{C}$ (at 25°C)

SERVICE AND WARRANTY

Warranty Clause

Guarantee: In the period of warranty, our dealer and the service center can repair this product to correct the flaw of the material, design or workmanship in the reasonable time on business. The product can be changed if we think necessary.

Warranty Date

Guarantee period is 12 months counted from the purchase day.

How to get the warranty service

User must show

1. Product (part of influence) ;
2. Invoice that name and date could be read clearly;
3. Warranty card.

Exception to Warranty:

1. Normal abrasion ;

SERVICE AND WARRANTY

2. Change or Modify the product without any authorization ;
3. Damage caused by wrong operations;
4. Repair without authority;
5. Other damage not because of design, technical, manufacturing and quality problem of the system.;
6. Under the extreme temperature and environment or influenced by corrosion and oxidation.
7. The non-renewable parts such as battery.

Important Statement

1. The data of tire pressure and temperatures displayed by our TPMS are just for warning, so the data itself cannot prevent the car from occurring accident.
2. Our TPMS is a safety system that monitors the conditions of tire pressure and temperature. When the condition is abnormal, our TPMS warns the driver to take precautions so as to prevent traffic accident. But it doesn't mean usual checking of the tire is no longer necessary. Drivers should follow the Car User Manual to take usual check of the tire condition. If the accident is caused by the abrasion, crack, break of the tire or perforation into the tire, our TPMS is not responsible for it.
3. This system complies with part 15 of FCC Rules. Operation must be subject to the following two conditions: (1) This system does not cause harmful interference, and (2) this system can operate normally in any interference received, including interference that

SERVICE AND WARRANTY

may cause undesired operation.

4. This system has been tested to comply with the limits for a Class B Digital Device, specified in the Article 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
5. This system complies with all European Electromagnetic Compatibility Regulations (95/54/EC and EN 300 220-1).
6. This system complies with National Regulations for auto electronic products, and meets the EMC requirements and the requirements made by Radio-Communication Administration for low-power consumption transmitters and receivers.

Legal obligation

The warranty clause must be explained under the law. If the law allows, for the product itself, we have the only responsibilities to exchange goods, supply the same goods, maintain the goods or pay the cost for the same quantity of the product, for the service itself, we have the only responsibility to supply the service or pay the cost for the same service.

Attention:

1. Operation is not suggested during driving.
2. Once being warned, the driver should immediately slow down and stop the vehicle to have the vehicle checked and repaired. Only when tire pressure and temperature return to normal

SERVICE AND WARRANTY

condition, the vehicle can be allowed to drive on.

3. The warranty information and product features may be modified without notice.

Warning:

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference,
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does

SERVICE AND WARRANTY

cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

SERVICE AND WARRANTY

WARRANTY CARD

User Information	User Name		Telephone	
	Address			
	E-mail		Zip Code	
Product Information	Product Name		Product Model	
	Product Color		Product Number	
Dealer Information	Dealer Name		Telephone	
	Dealer Address			
	Sell Date		Invoice Date	
	Dealer Signature		Zip Code	

Warranty Card

WARRANTY CARD

Product Information	Product Name		Product Model	
	Product Colour		Product Number	
Dealer Information	Dealer Name		Telephone	
	Dealer Address			
	Sell Date		Invoice Number	
	Dealer Signature		Zip Code	
Installation Record	Installation Company		Installation Address	
	Installation Date		Installation Staff	

Warranty Card (ForCustomer)