



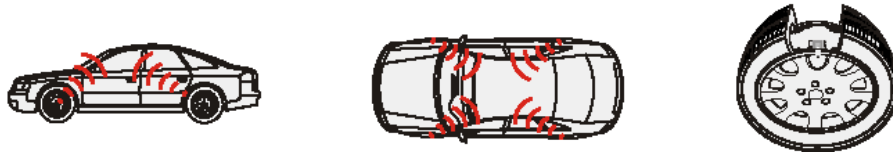
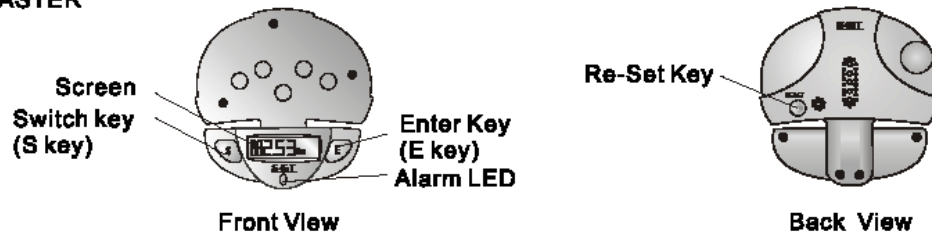
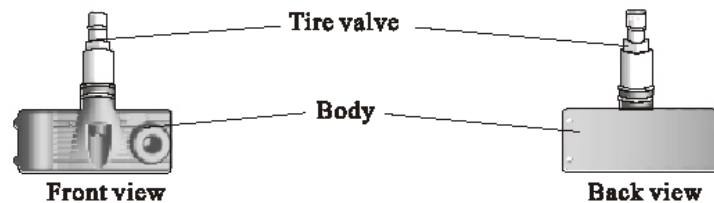
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S&T TPMS

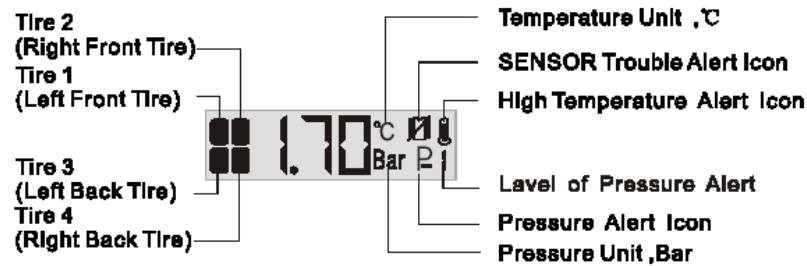
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S&T TPMS, Full-Time Directly Tire Pressure Monitoring System

S&T TPMS includes **MASTER** and **SENSORs**. The **SENSOR** Integrated with the tire valve, located inside each tire to collect pressure and temperature data of the tire all the time. The **SENSORs** transmit the data to the **MASTER**, The **MASTER** receives and processes the data, shows the information on the screen, and sounds the alarm if any innormal condition occurred, which is based on the setting pressure.

**Parts of S&T TPMS****MASTER****SENSOR**

Display of S&T TPMS



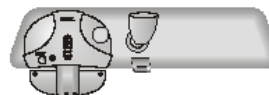
Installation and Initialization of S&T TPMS

Fixing the MASTER

Fixing: Clean the back of the interior rearview mirror, affix the MASTER to the right back of the mirror with the special adhesive tape, let the display part of the MASTER near the lower edge of the mirror.



Front View



Back View



Side View

Power Supply: Route the power wire of the MASTER to the inside trim board from the above of the mirror to the power distribution box along the edge of the trim. Connect the anode of the MASTER power wire to the anode of the power board on the car and earth the cathode.

△Caution: Be sure to secure the connectors.

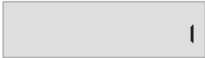
Display: The MASTER begins to work after connected to the power supply, the screen shows the position of the tires in turn. All the pressure value shown on the screen is 0.00 Bar and the temperature value is 00°C before the SENSORS initialized.

Initialization of the SENSORS

△Notice: The SENSORS must be initialized to set the standard pressure and ID of the system before installation.

Function: The MASTER sends the ID to the SENSORS, defines the SENSORS position, and sets the standard pressure in accordance with the vehicle type and the tire position.

Operation Steps:

1.  Take one SENSOR, insert the shunt connector to connect the right two contacts in the hole to start the initialization.
2.  Press the E key for more than 2 seconds to access the initialization interface ,as shown on the left.
3.  Press the E key to access the initialization interface for the tire 1, as shown on the left.
Press the S key to select the tire 2, 3, and 4 in turn to access the initialization interface 2,3,4 to initialize the other tires,select the interface E and press the E key to exit and return to the normal status.
4.  E.g., set the standard pressure of the tire 1 to 2.50 Bar: Choose '1' in the step 3 and press the E key to access the setting Interface, as shown on the left.
At this time, the unit's order '0' is flashing, press the S key to adjust it to be '2'.
Press the E key to shift the flashing digit to the decile, and press the S key to adjust it to be '5'.
Press the E key to shift the flashing digit to the percentile , no need to adjust because it is just '0'.
Press the E key to shift the flashing digit to 'E', press the E key, the initialization program of SENSOR 1 starts to work.

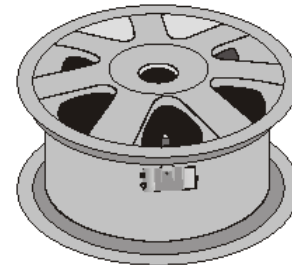
5.  The screen shows 'S' when the initialization is success. Remove the shunt connector ,the beep buzzes, and the display shows Low-Pressure Level 3 Alert.
Affix the position label ① to the initialized SENSOR.
6.  Once the initialization fails, the screen shows '---' as shown on the left. In this case, you need re-Initialize the SENSOR from step 1.
7. Set the other SENSORS following the step 1-6 and affix the position labels ②, ③ and ④ to them correspondingly.

△Notice: If the initialization fails more than 3 times ,please contact Sate Auto Electronic Co.,Ltd .

Installing the SENSORS

- 1.Dismount the tires, affix the tire position labels such as 'Left Front'to them correspondingly, deflate the tires and remove the rubber tubes .
- 2.Clean the rim and the inner wall of the rubber tubes.
- 3.Detach the tire valve.
- 4.Install the Initialized SENSOR with the label at the valve position of the corresponding tire, and secure it .
5. Mount the rubber tubes .
6. Inflate the tires to the setting pressure ,and adjust the wheels' balance .
7. Fix the tires to the vehicle according to the lables.

- △Caution:** 1.Must obey the operation procedures while instatlling the SENSORS.
- 2.The tires installed SENSORS must be adjusted on the Wheel Balancer.



Full-Time Monitoring

Function: The S&T TPMS can work all the time, either parking or running.

High Pressure Alert

Display: 

Function: The High Pressure Alert is initiated when the air pressure within a tire exceeds the setting pressure by 25%.

Alert Mode: The alarm light, High Pressure Warning Icon and the audible alarm turn on together.

Treatment: Press the S key to acknowledge and stop the audible alarm. The alarm light remains on and the display reverts to a normal mode. When the tire pressure reaches the standard pressure, the alarm light turns off automatically.

Low Pressure Level 1 Alert

Display: 

Function: The Low Pressure Level 1 Alert is initiated when the air pressure within a tire drops below the standard pressure by 12.5%.

Alert mode: The alarm light, Low Pressure Level 1 Alert Icon and the audible alarm turn on together.

Treatment: Press the S key to acknowledge and stop the audible alarm. The alarm light remains on and the display reverts to a normal mode. When the tire pressure reaches the standard pressure, the alarm light turns off automatically.

Low Pressure Level 2 Alert P2

Display: 

Function: The Low Pressure Level 2 Alert is initiated when the air pressure within a tire drops below the setting pressure by 25%.

Alert Mode: The alarm light, Low Pressure Level 2 Alert Icon and the audible alarm turn on together.

Treatment: Press the S key to acknowledge and stop the audible alarm. The alarm light remains on and the display reverts to a normal mode. When the tire pressure reaches the standard pressure the alarm light turns off automatically.

Low Pressure Level 3 Alert P3

Display: 

Function: The Low Pressure Level 3 Alert is initiated when the air pressure within a tire drops below the standard pressure by 50%.

Alert Mode: The alarm light, Low Pressure Level 3 Alert Icon and the audible alarm turn on together.

Treatment: Press the S key to acknowledge and stop the audible alarm. The alarm light remains on and the display reverts to a normal mode. When the tire pressure reaches the standard pressure the alarm light turns off automatically.

High Temperature Alert

Display: 

Function: The High Temperature Alert is initiated when the air temperature within a tire exceeds 75°C.

Alert Mode: The alarm light, High Temperature Alert Icon and the audible alarm turn on together.

Treatment: Press the S key to acknowledge and stop the audible alarm.

The alarm light remains on and the display reverts to a normal mode. When the tire temperature cools below 75°C the alarm light turns off automatically.

Quick Leaking Alert

Display: 

Function: The Quick Leaking Alert is initiated when the pressure data collected by the SENSOR drops 0.20 Bar within 12 seconds.

Alert Mode: The alarm light and the audible alarm turn on, the indicator of the leaking tire flashes continuously.

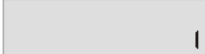
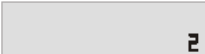
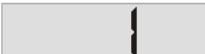
Treatment: Press the S key to acknowledge and stop the audible alarm.

Meanwhile slow down the car and stop at a safe place for inspection and replacement. When the leaking tire is repaired and fixed again, the alarm lamp turns off automatically.

Alert Record Enquiry

Function: The S&T TPMS can record the latest 10 alarms, includes the tire position, alarming type, pressure and temperature at alarm, and alarming time.

Operation Steps:

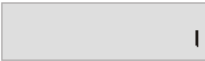
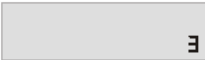
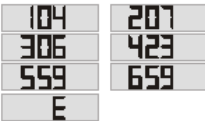
1.  Press the E key for more than 2 seconds to access the Operation Interface 1, as shown on the left.
2.  Press the S key to access the Operation Interface 2.
3.  Press the E key to access the Alert Record Enquiry interface. '0' shown in the middle of the screen indicates that it is the latest alert record.
4.  Press the E key to check the pressure on the record. The screen shows the High Pressure Alert for the tire 1, the pressure of tire 1 while the alarm happened is 2.70Bar.
5.  Press the S key to check the temperature of the tire on the record. In this case it is 56°C.
6.  Press the S key to access six interfaces numbered 1-6, each of which indicates 'year, month, date, hour, minute, second' of the record, as shown on the left. In this case, the alert occurred at 23:59:59 July 6, 2004.
7.  Press the E key to return to the record number interface as shown in the figure.
8.  Press the S key to access the interface 1, it is the second alert record.
9.  Follow the operation steps to check 10 alert records sequentially. The system will return to the normal status automatically if no action is performed within 3 seconds, or press the E key when 'E' is displayed on the interface.

△Caution: The system interface returns to the normal interface automatically if no action is performed during the operation within 3 seconds.

System Time Enquiry

Function : The clock built in the system has been set . The system clock provides time evidence for the alert record. The user can Inquire the current date and time through the function menu.

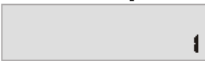
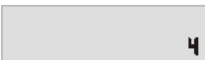
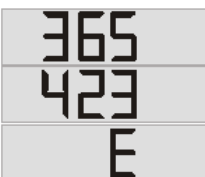
Operation Steps of the Engining:

1.  Press the E key for more than 2 seconds to access the Interface as shown on the left .
2.  Press the S key twice to switch the interface number to 3.
3.  Press the E key to access the Time Enquiry Interface, as shown on the left , '1' is the Year window number, '04' represents the year 2004.
4.  Press the S key,the screen displays six interfaces sequentially, indicates 'year, month, date, hour, minute, second' respectively. In this case, as shown in the figure,the time is 23:59:59 July 6,2004.
Press the S key to access the exit Interface 'E',then press the E key to exit and return to the normal status.

System ID Enquiry

Function : Each S&T TPMS has a unique system ID in order to avoid the confusion with other TPMS when sending and receiving information .

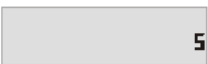
Operation Steps :

1.  Press the E key for more than 2 seconds to access the Interface as shown on the left .
2.  Press the S key three times to access the System ID Enquiry Interface.
3.  Press the E key to check the first three digits of the System ID, and press the S key to check the last three digits of the System ID. In this case, the System ID is '365423' .
Press the S key to access the Exit Interface, then press the E key to exit and return to the normal status.

Standard Pressure Enquiry

Function : The Initialized standard pressure in the system for each tire can be enquired .

Operation Steps:

1.  Press the E key for more than 2 seconds to access the interface as shown in the figure.
2.  Press the S key to access the interface 5.
3.  Press the E key to access the Standard Pressure Enquiry interface for the left front tire (tire 1).
4.  Press the E key again to display the standard pressure of the tire 1. In this case, as shown in the figure, the standard pressure is 2.10Bar.
5.  Press the S key to access the Standard Pressure Enquiry Interface 2 for the right front tire(tire2), other steps are the same as the above .
6.  After enquiry, press the S key to access the Exit Interface 'E', press the E key to exit .

Rotating Tires Without Replacing SENSORS

Function : When rotating the tires, no need to detach the S&T TPMS SENSORS from the tires, just to re-set the SENSOR position and standard pressure.

Operation Steps:

1. Rotate the two tires and bleed one of them firstly.
2. Staying more than 15 seconds after bleeding the tire, and then Initializing the SENSOR.
3. The other operation steps are same as the step 2-5 of 'Initialization of the SENSORS'.
4. After the first setting is finished, set the other one in the same way.

△Caution: When doing the rotation setting, the SENSOR must be Initialized one by one. Do not bleed and Initialize two tires simultaneously.

Function and Operation of S&T TPMS

S&T

Especial Setting For Standard Pressure

Function : The S&T TPMS can be setting different standard pressure according to vehicle type, tire type and tire position. Therefore the standard and data which initiate the alarming are more reasonable.

Sensor Trouble Alert

Display:



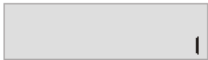
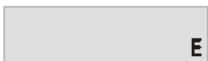
Function : When one of the SENSORS fails to work ,the SENSOR Trouble Alert will be initiated.

Alert Mode : The alert light ,SENSOR Trouble Alert Icon and the audible alarm turn on together .

Treatment: Press the S key to acknowledge and halt the audible alarm . The alarm light remains on and the display reverts to a normal mode.

△Caution: Please contact Sate Auto Electronic Co., Ltd ASAP In this case .

Exit Menu

1.  Press the S key to switch the interface to 'E' .
2.  Press the E key to exit and return to the normal status.

Feature of S&T TPMS

S&T

Operating Temperature	-40℃ ~+125℃	Modulation Mode	FSK
Pressure Range of the SENSOR	0~3.50 Bar	Frequency	433.95MHz
Accuracy for Pressure	1% FS	RF OutPower	75dB μ V/m(3m)
Accuracy for Temperature	$\pm 1^{\circ}$ ℃	Duration of Alarming	12 S
Effective Distance of Transmission	35 m (free space)		

1. The screen shows clobbers or nothing:

Press the Re-Set Key on the back of the MASTER, the system will re-start automatically .If the system still fail to work,please contact Sate Auto Electronic Co.,Ltd.

2. The red alert lamp lights without beep alarming:

Once alert happens , The audible alarm can last for 100 seconds. If the user does not press the S Key to stop it, it will stop automatically after 100 seconds.

3. The pressure alerts frequently:

The user can check if the standard pressure is suitable or not . If the standard pressure is too high or too low , re-set the standard pressure in the same way as the tire rotation setting.

4. How about the life of the SENSOR?

Generally S&T TPMS can work more than 7 years.

5. Why dose the system already have the alert records when the TPMS installed the system?

During the installation, the MASTER starts to record all alerts of the SENSOR after the initialization . As the tire is being inflated and the pressure collected by the SENSOR is increasing, the Low Pressure Level 3 alert, Low Pressure Level 2 and Low Pressure Level 1 alert are initiated sequentially and thus recorded by the MASTER.

6. The temperture data of the front and back tire collected by the SENSORs is different, why is it?

It is normal. The tire temperature is affected by the distance between the tire and the engine the friction between the tire and the ground,and soon.

Valid Warranty Card

1. The Warranty Card must be filled completely, signed by the user and sealed by the authorized distributor of Sate.
2. The Warranty Card is valid in the country or region where the purchase occurs.
3. The Warranty service requires presentation of both the Warranty Card and the original formal invoice.

Warranty Condition, Responsibility and Limitation

1. The product warranty period is one year and subject to the time marked on the invoice .
2. Any damages or faults due to improper use or application of wrong voltage are not involved in the warranty.
3. Users are not allowed to open, repair and refit the product by themselves, otherwise the warranty service is invalid.
4. Injecting chemicals such as leak-proof glue into the tire will damage the SENSORS, and, affect the system operation. Do not use such articles while the TPMS installed
5. The warranty does not include replacement of the enclosure and display panel.
6. The warranty does not cover the product damage due to abrasion or corrosion .

Notes

1. The Warranty Card must be filled completely and its number quoted when requiring the servicing.
2. The presentation of the original purchase invoice is a must for the free servicing.
3. Please inform Sate when the telephone number or address recorded on the Warranty Card changed.
4. The responsibility for the warranty is subject to the conditions and limitation specified in the *User Manual*.

Caution:

Changes or modifications to this unit not expressly approved by the party responsible for compliance will void the user's authority to operate the equipment. Any change to the equipment will void FCC grant.

NOTE:

This equipment has been tested and found to comply with the limits for a 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 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.

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice

1. Please do read this manual carefully before using the product.
2. The product is not applicable to those tires with inner tubes.
3. The system can monitor the pressure tires effectively, but does not warrant avoidance of any sudden accidents. Users should utilize the system to ensure normal tire pressure and avoid using bad quality tires.
4. Improper installation of the product can affect its operating state or damage it.
Therefore the product must be bought at the authorized dealer of Sate and installed by the specially trained staff as required by the manual.
5. Injecting chemicals such as leak-proof glue into the tire will damage the SENSORS and affect the system operation. Do not use such articles with the product, otherwise we won't provide quality assurance.
6. Users are not allowed to open, repair and refit the product by themselves.
7. Users must fill the Warranty Card correctly after buying the product for convenience of maintaining their own lawful rights and interests.
8. The final right to interpret the product is reserved by Ningbo Sate Auto Electronic Co., Ltd.

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