S&T

TIRE PRESSURE MONITORING SYSTEM

USER MANUAL

T P M S 1 2 0 9 W

FCC ID:TTETPMS1209W

Notice

1. Please do read this Manual carefully before using the product.
2. The system can monitor the tire pressure effectively, but does not warrant to avoid any sudden accidents. Users should utilize the system to ensure the tire to be used under a standard pressure and avoid using the poor quality or badly abraded tires .
3. Users are not allowed to open, repair and refit the product by themselves; otherwise the warranty service will be invalid.
4. Users must fill the Warranty Card correctly after buying the product for maintaining their own rights and interests.
5. The final right to interpret the product is reserved by Sate Auto Electronic Co.,Ltd.

www.sate.com.cn

CONTENTS

S&TTPMS1209W01, Full-time Direct TPMS----1
Parts of TPMS1209W01----1
Display ----2
Installation ----2
Master----2
Sensor----3
Security sheath----3
Function and Operation----4
Master's Auto-switch Mode Function----4
High Pressure Alarm ----4
Low Pressure Level 1 Alarm----4
Low Pressure Level 2 Alarm----4
Low Pressure Level 3 Alarm----5
Quick Leakage Alarm----5
Sensor Trouble Alarm ----5
Low Battery Alarm----5
Standard Pressure programming----6
Alert Record Enquiry----6
System Time Enquiry----7
Pressure Unit Switch----7
Specification----8
Warranty Term----9
Valid Warranty Card----9
Warranty Condition, Responsibility and Limitation----9
Important Notes----9

WARRANTY TERMS

Valid Warranty Card

1. The Warranty Card must be filled completely, signed by the user and sealed by the authorized distributors of Sate.
2. The Warranty Card is valid in the country or region where the purchase is occurred.
3. The Warranty service requires user to offer the Warranty Card.

Warranty Condition, Responsibility and Limitation

1. The product warranty period is one year and is subject to the time marked on the invoice.
2. Any damages or faults due to improper use are not involved in the warranty commitment.
3. Users are not allowed to open, repair and refit the products by themselves; otherwise the warranty service will be invalid.
4. The warranty does not include replacement of the enclosure and display panel.
5. The warranty does not cover the product damage due to abrasion or corrosion.

Important Notes

1. The Warranty Card must be filled completely and its number shall be quoted whenever the user requires the service.
3. Please inform Sate in case that the telephone number or address on the Warranty Card are changed.
4. The warranty responsibility is subject to the conditions and limitations specified in the *User Manual*.

SPECIFICATION

Operating Temperature of the Master :-20℃~+50℃

Operating Temperature of the Sensor:-40℃~+85℃

Pressure Scale of the Sensor:0~6.0bar/0~87psi

Accuracy for Pressure Measurement:±1.5psi

Modulation Type:FSK

RF Frequency: 434.1Mhz

Emission Output Power:-10~0 dbm

Receiving Sensitivity: -105dBm

Input Voltage:4.3v (Cigarette lighter adapter)

1.2×3v(rechargeable battery group)

S&T TPMS1209W01, FULL-TIME DIRECT TPMS

TPMS1209W01 is a full-time direct tire pressure monitoring system which includes one Master and four Sensors. The Sensor can be screwed on the tire instead of the cap of the valve to sense the pressure of the tire all the time and transmit the data to the Master through RF. The data will be dealt with by the master and then be shown on the screen. Then the master will issue different alarms according to the standard pressure.

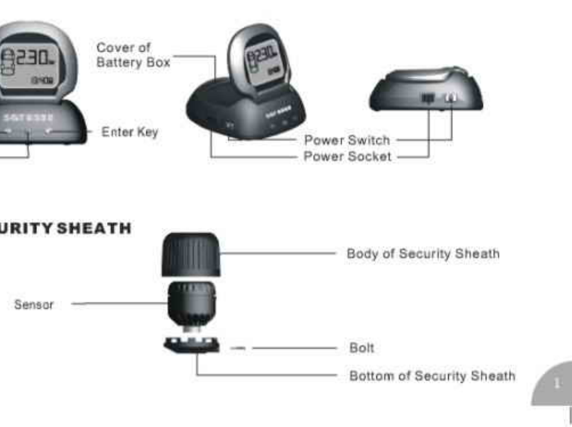
S&T TPMS1209W01 can inform the tire pressure condition of the vehicle to the driver timely so as to avoid tire busting or tire damage and it can also reduce gasoline consumption.

PARTS OF S&T TPMS1209W01

MASTER



SENSOR AND SECURITY SHEATH



DISPLAY



INSTALLATION

MASTER



Put three pieces of rechargeable batteries into the battery box on the back of the Master, fix the master on the platform with a mushroom-shape d interlocking stem. Turn on the Master and the Master starts to work. The screen displays the pressure of the four tires in turn. At this time the pressure unit shown on the screen is--- Bar.
The Master also can be powered by the cigarette lighter through a special plug with a transformer inside.
Notice: Some vehicles` cigarette lighter will power off when the key is pulled out. If the master powered only by the cigarette lighter, it will not receive any information while the vehicle is parking.

FUNCTION AND OPERATION

System Time Enquiry

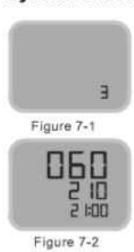


Figure 7-1

Figure 7-2

Press the E key for more than 2 seconds to access the menu interface, the interface number appearing on the lower corner on the right is "1". Shift the interface number to "3" by S key, as shown in figure 7-1.
Press E key to access the system time enquiry interface, year/month/date/hour /minute will appear on the display here. For example: the system time shown on the figure 7-2 is 21:00 on Feb 10th,2006.
Press E key to exit the system time enquiry interface and back to the menu interface. Then press S key to shift the interface number to "E", press E key again will bring the system back to the normal mode.

Pressure Unit Switch

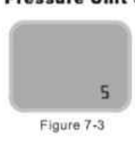


Figure 7-3

The system provides 2 pressure units -- " Bar" and "Psi" . Users can choose the unit as following:
Press the E key for more than 2 seconds to access the menu interface, shift the interface number on the lower right corner from "1" to " 5" by the S key, as shown in figure 7-3.
Press E key to access the Pressure Unit Switch interface. The upper right corner displays "Bar" at first. Press S key to shift the pressure unit to " Psi" as shown in figure 7-4.
Press E key to confirm the pressure unit shown on the display and exit the Pressure Unit Switch interface. Then press S key to shift the interface number to E, press E again will bring the system back to normal mode.

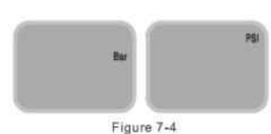


Figure 7-4

FUNCTION AND OPERATION

Standard Pressure Programming

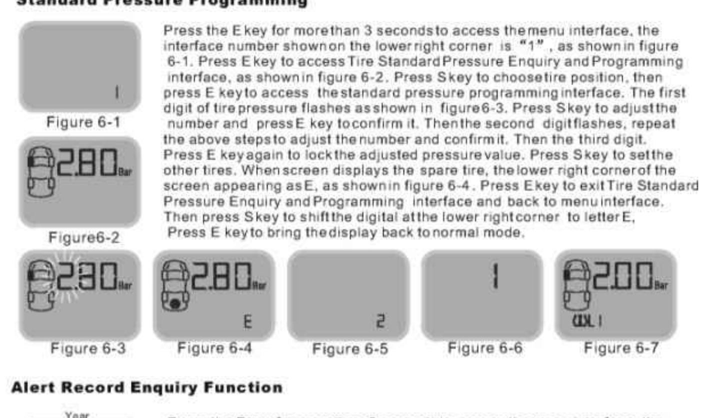


Figure 6-1

Figure6-2

Press the E key for more than 3 seconds to access the menu interface, the interface number shown on the lower right corner is "1", as shown in figure 6-1. Press E key to access Tire Standard Pressure Enquiry and Programming interface, as shown in figure 6-2. Press S key to choose tire position, then press E key to access the standard pressure programming interface. The first digit of tire pressure flashes as shown in figure6-3. Press S key to adjust the number and press E key to confirm it. Then the second digit flashes, repeat the above steps to adjust the number and confirm it. Then the third digit.
Press E key again to lock the adjusted pressure value. Press S key to set the other tires. When screen displays the spare tire, the lower right corner of the screen appearing as E, as shown in figure 6-4. Press E key to exit Tire Standard Pressure Enquiry and Programming interface and back to menu interface. Then press S key to shift the digital at the lower right corner to letter E, Press E key to bring the display back to normal mode.

Figure 6-3 Figure 6-4 Figure 6-5 Figure 6-6 Figure 6-7

Alert Record Enquiry Function

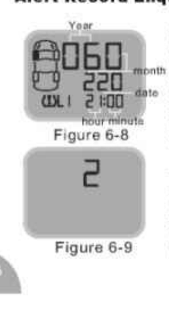


Figure 6-8

Figure 6-9

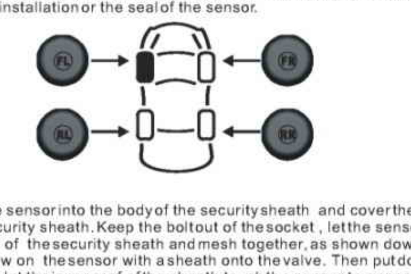
Press the E key for more than 2 seconds to access the menu interface, the interface number on the lower righter corner is "1", shift the interface number to "2" by S key, as shown in figure 6-5.
Press E key to enter the Alert Record Enquiry interface. The figure "1" on the screen means this is the latest alert record , as shown in figure 6-6 . Press E key, the display will show the mode of alarm as shown in figure 6-7. Press S key, the time when the alarm issued will appear on the screen, which includes year/month/date /hour / minute. For example: the time shown in figure 6-5is 21:00, Feb 10th ,2006,and the system issued a low pressure alarm for the front left tire. The pressure value is 2.0 Bar. Press S key to shift to the next alarm record, as shown in figure 6-9. Press E , the screen will display the next record. After all records are checked, the letter E will appear on the lower right corner of the screen. Press E key to exit Alert Record Enquiry and back to the menu interface. Then press S key to shift the interface number on the lower right corner to E, Press E key to bring the system back to the normal mode.

INSTALLATION

Sensor



Inflate the tire to the standard pressure, screw the sensor onto the valve according to the position label, sensor can sense the pressure of the tire and transmit the data to the Master.
Notice: The current tire pressure will be programmed to be the standard pressure by sensor once it screwed onto the valve. So it must be ensured that the current pressure is the standard pressure. The standard pressure can be obtained from the vehicle User Manual, the cover of the gasoline tank or the inner side of the door for driver.
After sensor installation, please wait 100 seconds before you move the vehicle.
Note : Please check each sensor with soap solution to confirm it`s firmly screwed onto the valve and there is no air leakage caused by the installation or the seal of the sensor.



Security Sheath



Put the sensor into the body of the security sheath and cover the bottom of the security sheath. Keep the bolt out of the socket , let the sensor fit the bottom of the security sheath and mesh together, as shown down in picture 2,.screw on the sensor with a sheath onto the valve. Then put down the sheath let the inner roof of the sheath touch the sensor to separate the meshing bottom, screw on the bolt tightly by a special tool, as shown down in picture 3. Then anyone cannot screw off the sensor together with the sheath without a special tool. The function of the bolt is to prevent the sensor bottom to mesh the sheath bottom, this can let the sheath in a loose running while the sensor remains on the valve, thus the sensor can not be stolen or be screwed off by a sudden force while running.
Note: The tires need to be re-balanced after installing the sensors and the sheathes.

SPECIFIC INFORMATION OF THE SECURITY SHEATH

This product provides a security for each sensor. A security sheath includes a body ,a bottom, a bolt and a special tool for the bolt, as shown down in figure 1. It can prevent the sensor being removed from the valve easily without the special tool.



Figure 1

Before inflating the tire, user should loose the screw on the sheath by the special tool and then screw off the sensor together with the security sheath.

Note : The sheathes will not influence the work of the sensors, you can choose using the sheathes or not while you installing the system.

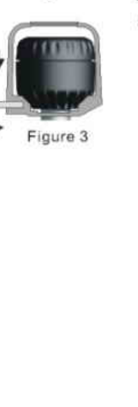


Figure 2

这两幅图应该在上一页显示，因为在安装说明中提到了着两幅图。

Figure 3

WORKING ENVIORNMENT OF THE BATTERY CHARGER

Operating temperature:-10
Operating humidity:
Storage temperature:
Storage humidity:
Vibration resistance:
Impact resistance:

FUNCTION AND OPERATION

Auto-Switch Mode of Master

To save the battery power, the Master can switch to the sleepy mode automatically if the vehicle parks more than 10 minutes.
Under this mode, no information displays on the screen if the pressure is under a standard condition. If the tire pressure is 25% lower than standard pressure, the master can receive the warning alarm within 7 minutes and issue the alert. The Master can switch to the normal mode automatically when the vehicle starts or any key is pressed. In normal mode the Master can receive the updated data from Sensors in time and issue the warning alarm immediately.

High Pressure Alarm



Function: The system will issue a High-Pressure Alert when the air pressure is 25% higher than the standard.
Alert Mode: The alarm lamp, High Pressure Warning Icon and the audible alarm turn on together.
Treatment: Press the S key to stop the audible alarm. The alarm lamp remains on and the display reverts to the normal mode. The red alarm lamp goes off only when the tire pressure reaches normal.

Low Pressure Level 1 Alarm

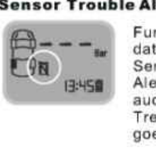
Function: The system will issue a Low Pressure Level 1 Alert when the air pressure is 12.5% lower than the standard.
Alert Mode: The alarm lamp, Low Pressure Warning Icon and the audible alarm turn on together.
Treatment: Press the S key to stop the audible alarm. The alarm lamp remains on and the display reverts to the normal mode. The red alarm lamp goes off only when the tire pressure reaches normal.

Low Pressure Level 2 Alarm

Function: The system will issue a Low Pressure Level 2 Alert when the air pressure is 25% lower than the standard.
Alert Mode: The alarm lamp, Low Pressure Warning Icon and the audible alarm turn on together.
Treatment: Press the S key to stop the audible alarm. The alarm lamp remains on and the display reverts to the normal mode. The red alarm lamp goes off only when the tire pressure reaches normal.

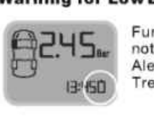
FUNCTION AND OPERATION

Low Pressure Level 3 Alarm



Function: The system will issue a Low Pressure Level 3 Alert when the air pressure is 50% lower than the standard.
Alert Mode: The alarm lamp, Low Pressure Warning Icon and the audible alarm turn on together.
Treatment: Press the S key to stop the audible alarm. The alarm lamp remains on and the display reverts to the normal mode. The red alarm lamp goes off only When the tire pressure reaches normal.

Quick leakage Alarm



Function: The system will issue a Quick Leakage Alert when the pressure difference exceeds 0.20Bar within 12 seconds.
Alert Mode: The alarm lamp and the audible alarm turn on, the leaking tire indicator flashes continuously.
Treatment: Press the S key to stop the audible alarm and resume the rotational displaying. Slow down the car immediately and stop at a safe place to inspect the tire. Only when the leaking tire is repaired and fixed again, the alarm lamp turns off automatically.

Sensor Trouble Alarm

Function: When one Sensor fails to work, or the Master can`t receive the data because of the RF interference for a long time, the system will issue a Sensor Trouble Alarm.
Alert Mode: The red alarm lamp, the Sensor Trouble Alarm Icon and the audible alarm turn on together.
Treatment: Press the S key to stop the audible alarm. The red alarm lamp goes off only When the tire pressure reaches normal.

Warning for Low Battery Power

Function: The system will issue a warning alarm when the battery power is not enough to afford the Master to work.
Alert Mode: The red alarm lamp.
Treatment: Change the batteries or connect to the cigarette lighter adapter.

FCC Caution

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.

FCC Notes:

The manufacturer is not responsible for and radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.