

Receiver Setting

General Description

Once Tai-safety Graphic Type TPMS installed complete, temperatures and pressures of tires will start to be measured and collected to Receiver. Receiver will automatically filter out key parameter, identify abnormal condition, and, if necessary, warning you through voice and flash light. In avoiding confusion when reading message form Panel of Tai-safety TPMS Receiver, a graphic type panel is adopted as interface. With only one key press, you can easily change important parameters of your TPMS, for example, temperature unit system, pressure unit system, etc.

❖ Panel

Tai-safety Graphic Type TPMS utilize a graphic panel to clearly show all parameters and tire situations to user in real time. Figure 2 is the graphic panel which Tai-safety Graphic Type TPMS used.

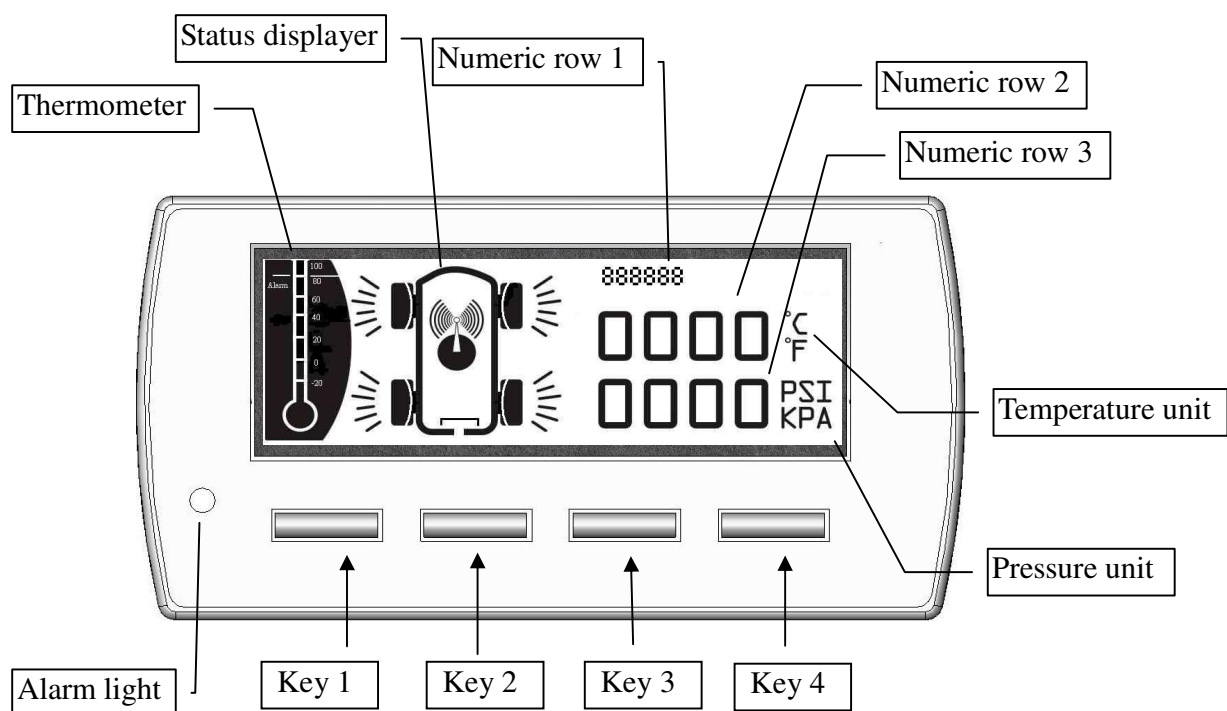


Figure 2 Panel description

Numeric row 1: a 6 digitals numeric display segment, show tire Identification (ID) number usually.

Numeric row 2: a 4 digitals numeric display segment, it was used to show tire temperature under

normal operating mode.

Numeric row 3: a 4 digitals numeric display segment, it was used to show tire pressure under normal operating mode.

Key 1: a bottom switch, single press on **Key 1** under normal operating mode will swap temperature unit system between Fahrenheit (°F) and Celsius (°C).

Key 2: a bottom switch, single press on **Key 2** under normal operating mode will swap pressure unit system between PSI and KPA.

Key 3: a bottom switch, press on **Key 3** under normal operating mode can read all tire temperatures and pressures out one after one.

Key 4: a bottom switch, press Key 4(for at least 0.5 second) can change current operating mode.

Temperature unit: show the temperature unit system currently adopted.

Pressure unit: show the pressure unit system currently adopted.

Thermometer: show tire temperature in graphic.

Alarm light: flash if any tire problem occurs.

Status displayer: display communication condition with all tires graphically. Figure 3 shows detail symbols of Status Displayer and their names in this manual.

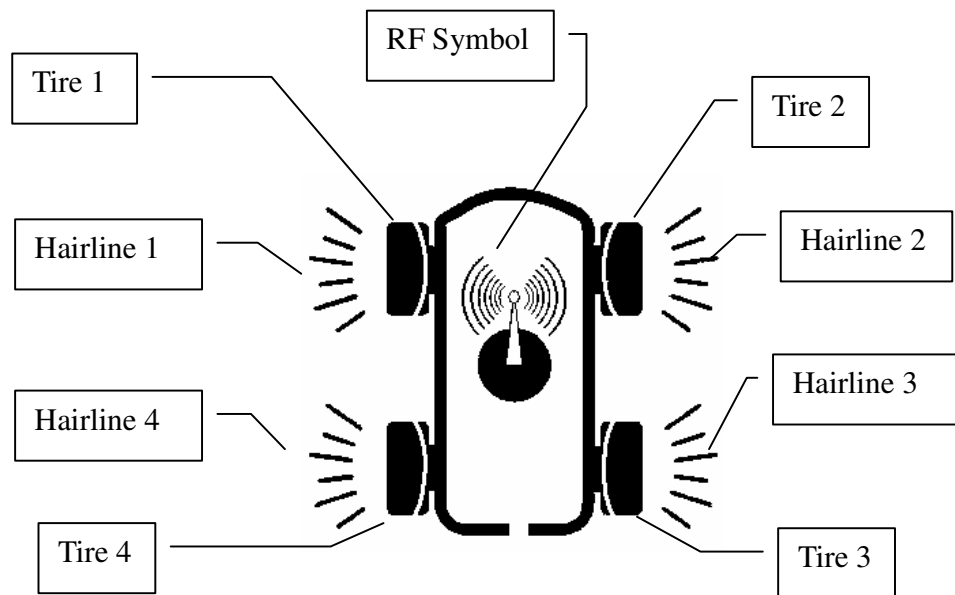


Figure 3 Detail description of Status displayer

❖ Modes

Tai-safety Graphic Type TPMS has a very flexible and easy-to-use interface for both daily normal operation and parameter setting operation. In order to integrate friendly operation interface and powerful parameter adjusting function, Tai-safety Graphic Type TPMS contains four major operation modes:

➤ Normal operating

- Temperature threshold setup
- Pressure threshold setup
- Tire ID search and position setup

Normal Operating

After proper installed Tai-safety Graphic Type TPMS on your car, it will automatically monitoring all tires conditions for your car. A wireless network works between tires and Tai-safety Graphic Type TPMS Receiver. Due to operating environment variations (tire condition variations, road condition variations, energy saving requirements, communication stability requirements, etc.), communications between tires and Tai-safety Graphic Type TPMS Receiver is random but stable. Receiver has guard all tires' conditions all the time, display parameters on panel and warning you if necessary. Normal operating mode was the major operating mode when we use Tai-safety Graphic Type TPMS, it also the default operating mode after power on. Under this operating mode, Tai-safety Graphic Type TPMS will automatically monitoring temperatures and pressures of all your tires, compare these parameters with thresholds stored in database inside Tai-safety Graphic Type TPMS Receiver, determine whether to warning you or not according to thresholds which you defined and saved inside database of Tai-safety Graphic Type TPMS.

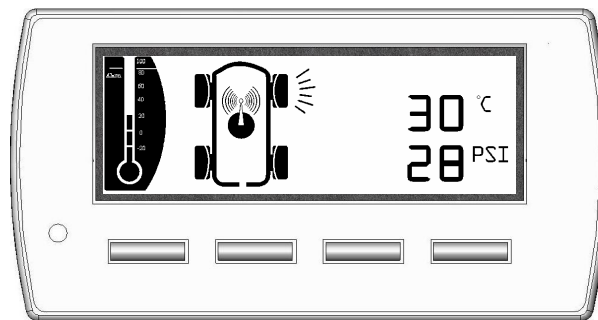


Figure 4 Panel displaying under normal operating mode

Messages on panel: when a new message form tire has just been read, **RF Symbol** will turn on for one second, and the **Hairline** which respect to the message sending tire will flash for 5 seconds. Temperature, pressure, and **Thermometer**, will all show on panel, too.

Figure 4 shows panel displaying under normal operating mode, it means that tire 2 is right now 30 °C, 28 PSI.

Change temperature unit system: any time, a press on **Key 1** under normal operating mode will swap temperature unit system between Fahrenheit (°F) and Celsius (°C).

Change pressure unit system: any time, single press on **Key 2** under normal operating mode will swap pressure unit system between PSI and KPA.

Figure 5 shows the panel display when temperature unit changed into Fahrenheit (°F) and pressure unit system becoming KPA, it means that tire 4 is right now 80 °F, 180 KPA.

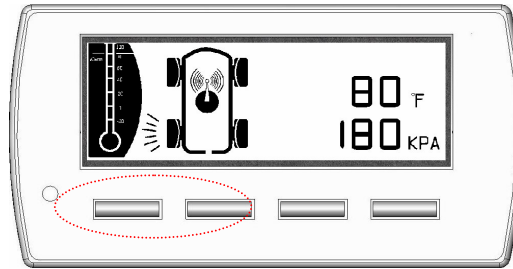


Figure 5 Panel display when temperature unit changed into Fahrenheit (°F) and pressure unit system becoming KPA.

Select different tire information to read: you can check all recorded tire parameters by press Key 3. Each single press on Key 3 can call one tire parameters out, including temperature, pressure, and identification code, as shown on figure 6. Continually press on Key 3 can read tire parameters one by one.

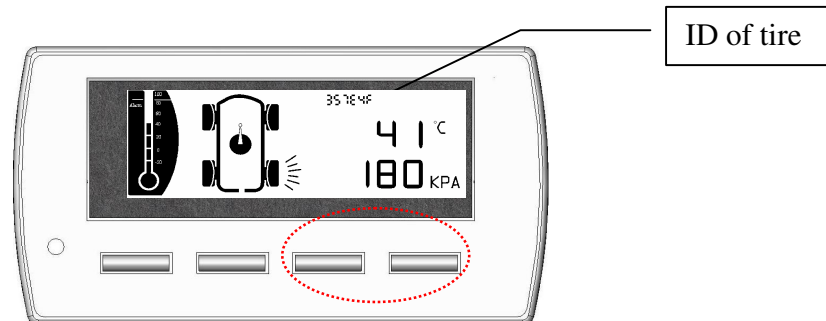


Figure 6 Panel display when read out parameters of tire 3

Temperature Thresholds Setup:

Users can setup both High Temperature Threshold (HTT) and Low Temperature Threshold (LTT) for all four wheels in a single setting or for each wheel by setting individually.

Switch into Temperature Thresholds Setup Mode (TTSM):

It is easy to switch into TTSM by single press on Key 4 for at least 0.5 second. After switch into TTSM successful, panel will display as figure 7: first and third numeric rows blank, second numeric row and all four wheels will start flashing (color gray represents the flash action).

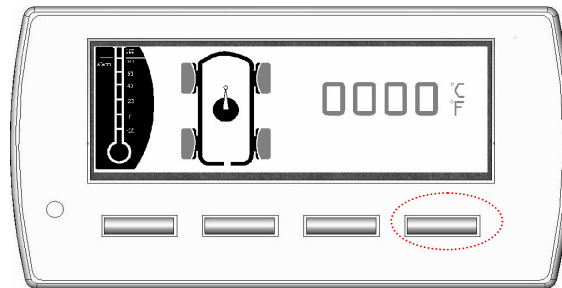


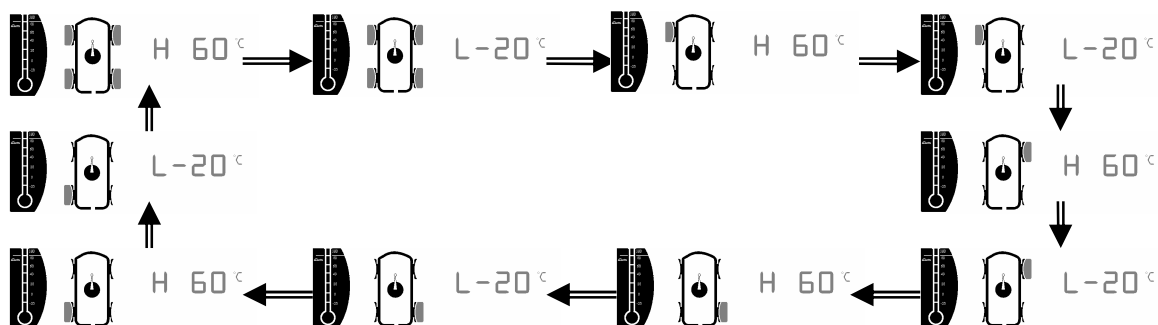
Figure 7 Panel display under TTSM

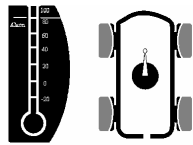
Choose One Threshold Temperature to Set:

There are ten Threshold Temperatures can be set, they are:

- High Temperature Threshold of All Tires (HTAT),
- Low Temperature Threshold of All Tires (LTAT),
- High Temperature Threshold of First Tire (HTT1),
- Low Temperature Threshold of First Tire (LTT1),
- High Temperature Threshold of Second Tire (HTT2),
- Low Temperature Threshold of Second Tire (LTT2),
- High Temperature Threshold of Third Tire (HTT3),
- Low Temperature Threshold of Third Tire (LTT3),
- High Temperature Threshold of Fourth Tire (HTT4),
- Low Temperature Threshold of Fourth Tire (LTT4)

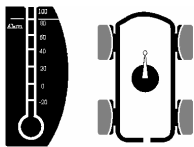
By pressing Key 3 under TTSM, we can select threshold temperature to set one after another. The order of the threshold temperature which we choose to set is: HTAT, LTAT, HTT1, LTT1, HTT2, LTT2, HTT3, LTT3, HTT4, LTT4, and turn back to HTAT, etc., figure 8 shows some setting examples. Each time Key 3 is pressed, you can select Temperature Threshold to set as follows:





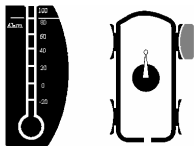
H 60 °C

: Panel display on setting High Temperature Threshold of All Tires (HTAT)



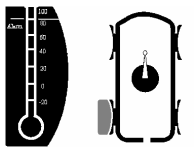
L -20 °C

: Panel display on setting Low Temperature Threshold of All Tires (LTAT)



H 60 °C

: Panel display on setting High Temperature Threshold of Second Tire (HTT2)



L - 18 °C

: Panel display on setting Low Temperature Threshold of Fourth Tire (LTT4)

Figure 8 Setting examples

After setting threshold temperature had been determined, one can easily, simply press on Key 1 to increase setting value or press on Key 2 to decrease, as shown on Figure 9.

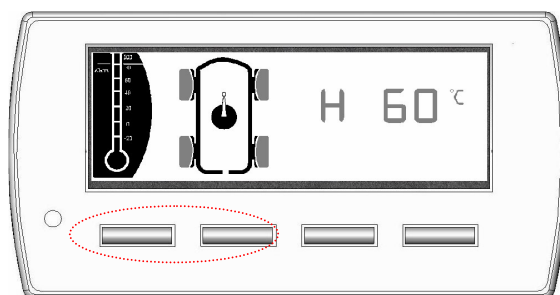


Figure 9 Press on Key 1 to increase setting value and press on Key 2 to decrease

Pressure Thresholds Setup:

Users can setup both High Pressure Threshold (HPT) and Low Pressure Threshold (LPT) for all four wheels in a single setting or for each wheel by setting individually.

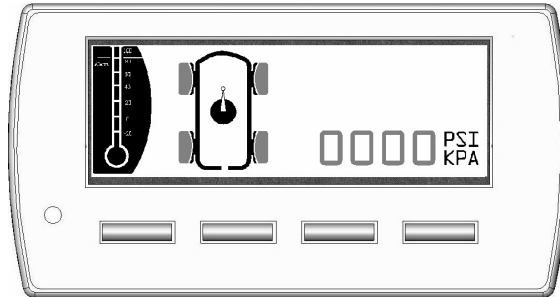


Figure 10 Panel display under PTSM

Switch into Pressure Thresholds Setup Mode (PTSM):

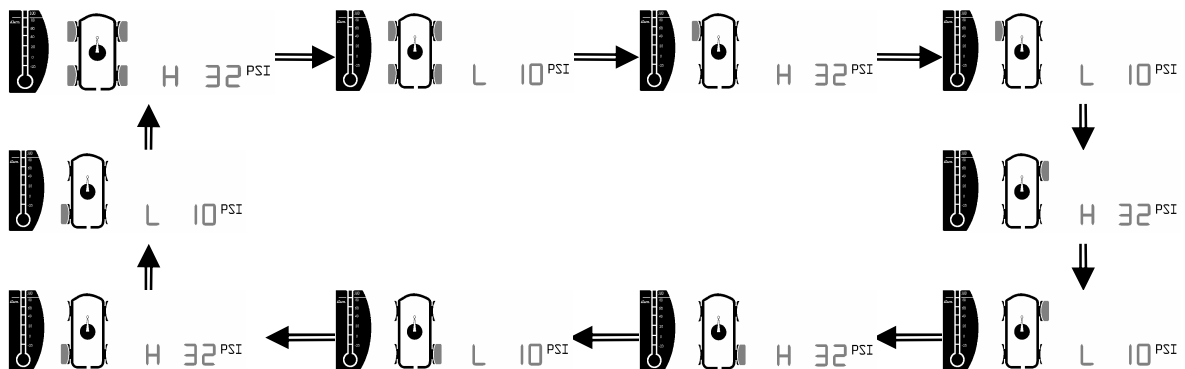
It is easy to switch into PTSM by single press on Key 4 at least 0.5 second under TTSM. After switch into PTSM successful, panel will display as figure 10: first and second numeric rows blank, third numeric row and all four wheels will start flashing.

Choose One Threshold Pressure to Set:

There are ten Threshold Pressures can be set, they are:

- High Pressure Threshold of All Tires (HPAT),
- Low Pressure Threshold of All Tires (LPAT),
- High Pressure Threshold of First Tire (HPT1),
- Low Pressure Threshold of First Tire (LPT1),
- High Pressure Threshold of Second Tire (HPT2),
- Low Pressure Threshold of Second Tire (LPT2),
- High Pressure Threshold of Third Tire (HPT3),
- Low Pressure Threshold of Third Tire (LPT3),
- High Pressure Threshold of Fourth Tire (HPT4),
- Low Pressure Threshold of Fourth Tire (LPT4)

Each time Key 3 is pressed, you can select Pressure Threshold to set as follows:



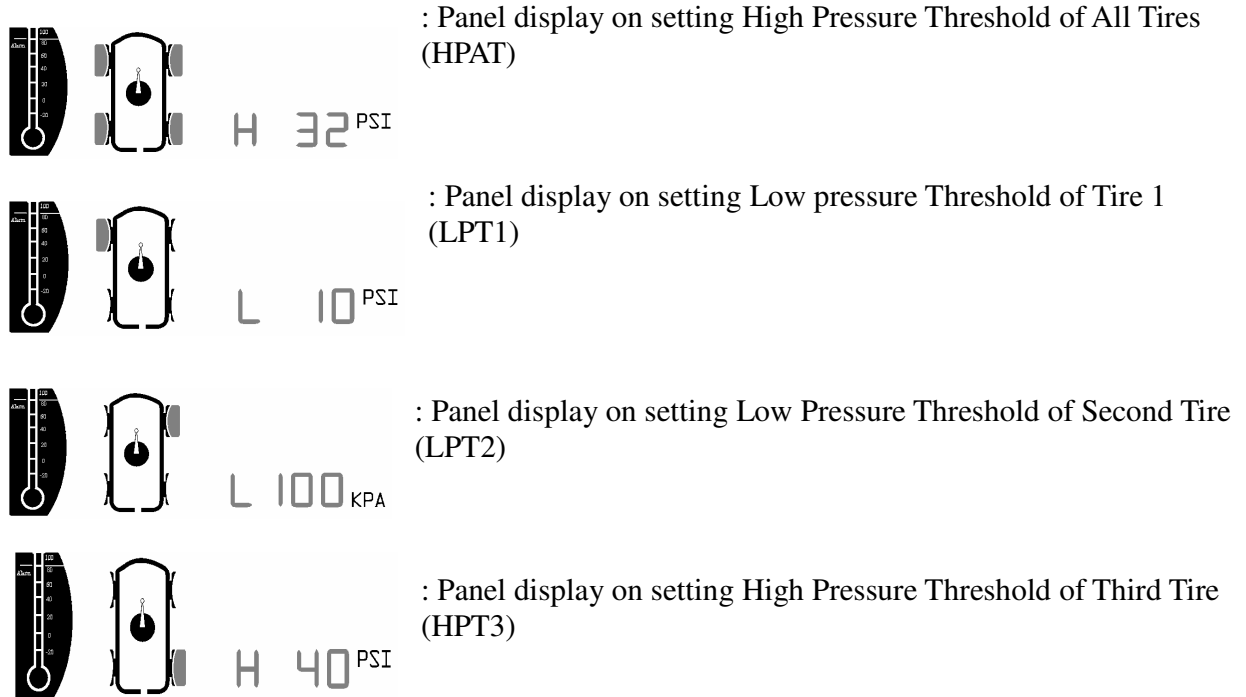


Figure 11 Setting examples

By pressing Key 3 under TTSM, we can select threshold pressure to set one after another. The order of the threshold pressure which we choose to set is: HPAT, LPAT, HPT1, LPT1, HPT2, LPT2, HPT3, LPT3, HPT4, LPT4, and turn back to HPAT, etc., figure 11 presents some setting examples.

After setting threshold pressure had been determined, one can easily, simply press on Key 1 to increase setting value or press on Key 2 to decrease, as shown on Figure 12.

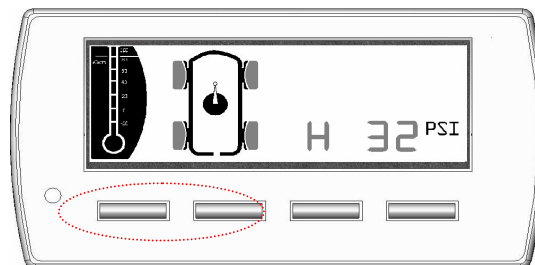


Figure 12 Press on Key 1 to increase setting value and press on Key 2 to decrease

Tire ID Search and Position Setup:

After new installation of Tai-safety TPMS or tire position change due to maintenance requirement, it maybe required to reassign tire ID and position. It can be accomplished in ***Tire ID Search and Position Setup*** mode.

Switch into Tire ID Search and Position Setup Mode:

To avoid over write Tire IDs, which were correctly stored in Tai-safety TPMS already, by mistake, switch into ***Tire ID Search and Position Setup*** mode require more complex operation. Single press on Key 4 under ***Pressure Thresholds Setup*** mode will leave ***Pressure Thresholds Setup*** mode immediately, and panel display will change as shown figure 13, but operating mode would not switch into ***Tire ID Search and Position Setup*** mode at this moment. It requires additional press on Key 3 to certainly switch into ***Tire ID Search and Position Setup*** mode. On the other hand, if you continually press one more time on Key 4, operating mode would switch into ***Normal Operating*** mode, and nothing will be changed.

After switch into ***Tire ID Search and Position Setup*** mode successful, panel displays as shown on figure 14, Tai-safety TPMS Receiver begin to search new tire IDs. There is an ID bank, which contains 6 spaces for storing new ID, implemented in Tai-safety TPMS Receiver. Any new signal received, Tai-safety TPMS Receiver will filter ID out and compare with IDs stored in ID bank, if no any equal, this just received ID will be saved into ID bank as a new ID. Numeric row 2 will now shows value of stored IDs (refer to figure 15).

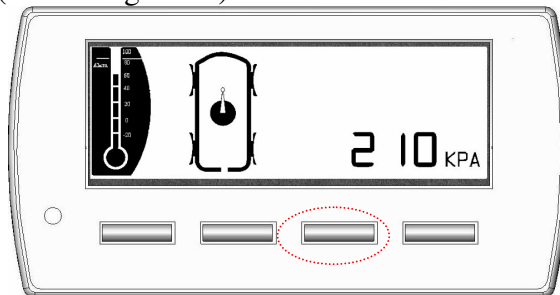


Figure 13 Panel display after leave Pressure Thresholds Setup mode

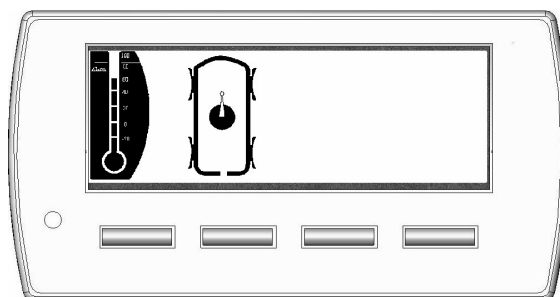


Figure 14 Panel display after into Tire ID Search and Position Setup mode

Pick One ID form ID Bank and Assign to the Correct Position:

You can assign any ID, which was stored in ID bank, to any tire, through the following simple procedure: first, you should make sure that all tires' IDs and right every tire's installation position, press on Key 1 to pick one ID from ID bank, second, according to the practical installation of tire and ID, press on Key 2 to select a tire (position) which respect to the ID you had just picked, then, single press on Key 3 to assign the selected ID to correct tire (position). For help you to exactly handle this assignment procedure, Numeric Row 1 will show the ID number which you had just picked, and Numeric Row 3 presents the order of this ID in ID bank. Figure 14 shows panel display when 3 IDs are read and stored in ID bank, the second ID, F2EF85, is now be picked to wait for assignment.

After assigned appropriate ID into tire, Hairline on this tire will turn on to notify you. Figure 16 shows that Tire 1 and Tire 3 were assigned appropriate IDs, Tire 4 and third ID are now selected to prepare assignment.

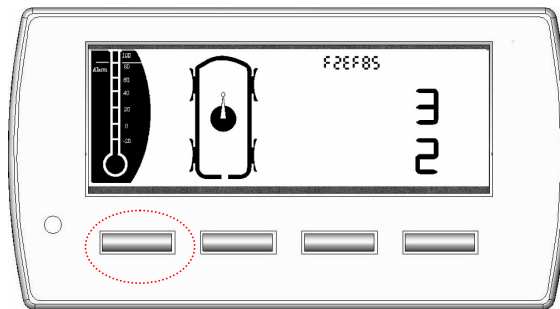


Figure 15 Panel display when three IDs stored and the second ID was picked up

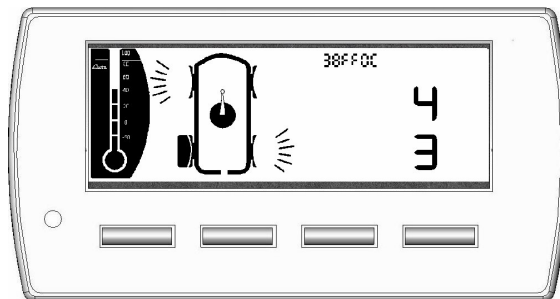


Figure 16 Tire 1 and Tire 3 were assigned appropriate IDs, Tire 4 and third ID are now selected to prepare assignment

Reacting to Alerts

When any abnormal temperature or pressure was detected, Tai-Safety TPMS receiver will warning driver through buzzer and flash light. Tai-Safety strongly recommends you when any alert has been recognized by you please reduce vehicle speed to a safety speed immediately and proceed to a safe stop location where the tire can be inspected and /or serviced.

This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.



Use of Chemical

Temporary resealing or re-inflation products containing internal sealants or propellants in any tire assembly may adversely affect the operation of the sensor/transmitter.

The Specifications of Tai-Safety TPMS

1. SENSOR AND TRANSMITTER SPECIFICATIONS

| Specification | | remarks |
|------------------------------|--|----------------|
| Operating temperature | -40 °C to 120 °C | |
| Operating humidity | 100% | |
| Operating frequency: | 315MHz | |
| Pressure monitoring range | 0~73 psi for passenger car and motorcycle, 0~108 psi for truck | |
| Pressure reading accuracy | ± 1.5 psi at normal pressure range | |
| Temperature reading accuracy | ± 2 °C | |
| Battery voltage | 3.6 V | |
| Sensor weight | With valve: 38 gm | |
| Battery life | More than 5 years | |

2. RECEIVER SPECIFICATINS

| Specification | | remarks |
|-----------------------------|----------------|----------------|
| Operating voltage | 9~30 V DC | |
| Operating current | 150 mA | |
| Operating temperature range | -20 °C to 80°C | |

Frequently asked question

Why did not receive any tire information? The alarm sounds but tire pressure and temperature is OK. What happened?

ANS: The system is wireless RF product; therefore, it may not receive meaningful signals due to the poor environment, incorrect operating or incorrect installation. Although we use protected 315 MHZ communication, the external radio signal still has probability of interfere our system. Please disconnect power and turn on power again to solve this issue.

Contact to us

Email: Taiwan: TAI Electrical Products Inc.

<http://www.ttpms.com.tw/>

Email: tpms@cqs-tech.com