



User Manual

TPMS

D18T

Notice

Please read the safety cautions below carefully before installing this product:

Please make sure that this product can be used in your car and you can install it correctly before installation, so that no negative impact could be caused.

1. The monitor shall be mounted in a place where the driver's sight is not blocked or influenced negatively.
2. The monitor shall be fixed firmly to avoid falling during driving.
3. After the sensor installation, please check whether the air in the tire is leaking or not. When necessary, you may spread some soap-suds to the tire valve to check air leaking.
4. The tire pressure value could increase rapidly with quick increase of tire temperature while driving. Please stop driving and park to cool the tires in case of over-high temperatures exceeding the defined threshold to avoid tire blowout.
5. Please stop to check if tire air is leaking or there exist other issues when tire pressure is rising rapidly or decreasing unusually during driving.
6. This product can monitor effectively tire pressures and temperatures in real time. However, it can not guarantee no tire-safety related accidents will happen. This product can not substitute the function of the spare tire, which thus still needs to be prepared and carried after installation and use of the product.
7. This product can monitor the tire pressures and temperatures automatically and issue acoustical and optical alarming when necessary. Therefore the driver does not have to observe the monitor's screen constantly so that he can always pay attention to driving.
8. The product is designed to work with 24V voltage supply, please provide corresponding power supply.

Product Briefing

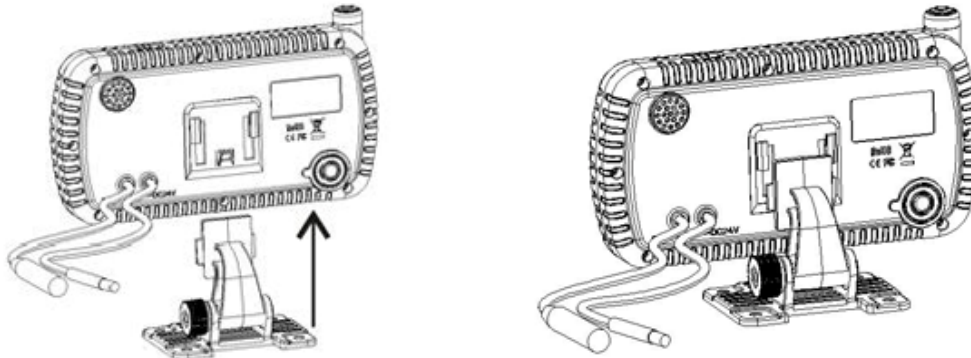
The system is composed of sensors, repeater and receiver. It is used to monitor the pressure and temperature data of the tires. After collecting the pressure and temperature data, the sensors send the data to the repeater by wireless RF, then the repeater send the data to the receiver. The receiver receives and display in the screen. When the pressure or temperature over or under warning value value, the receiver will warn automatically to remind the users pay attention to the tires' situation. The system's operation can promote

vehicle' s comfortability and prevent tire' s flat, reduce oil comsumption, decrease tires' abrading and increase the dynamic performance indirectly.

2. Installation illustration

2.1 Monitor installation

2.1.1 Receiver base installation diagram

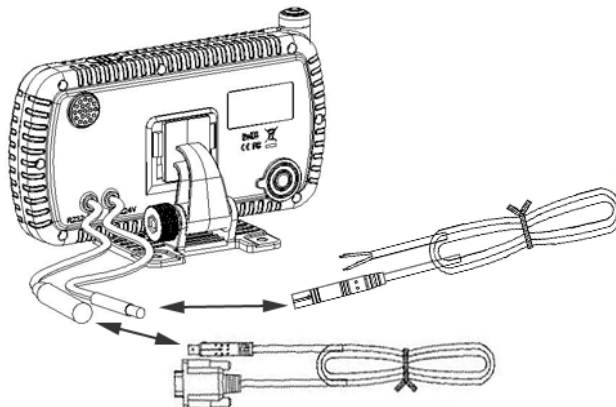


- ① Holder is access from the slot under the back of receiver
- ② Push the holder up to make it fit the receiver and lock completely

2.1.2 Monitor installed in truck

(1) Install monitor

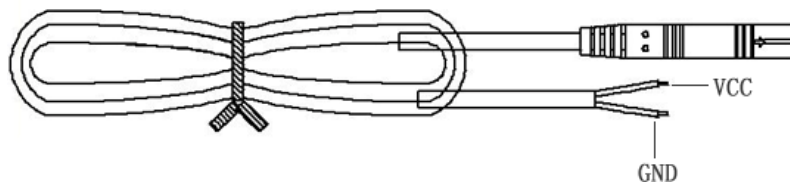
Fix the receiver onto the dashboard or front windshield by screw and double-side tap, and connect the power line and serial port line of receiver with matched power line and serial port line, see the pictures below:



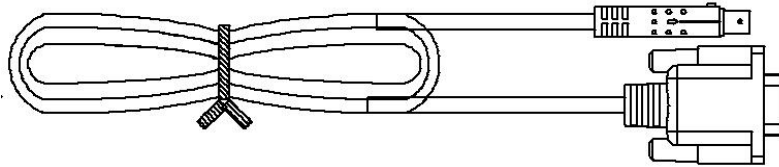
(2) Install power line

Power line and serial port line 1pc each, joint definition as diagram below, connect them with the ending of car line.

Power line:



Serial port line(Optional):



Notice:

- ◆ Monitor should be installed at the suitable position that won't affect driving sight
- ◆ Should make sure the monitor be reinforced to avoid falling when driving
- ◆ When check the pressure and temperature during the driving, pls. pay attention to the driving safety
- ◆ The product can monitor the pressure and temperature automatically and is equipped with sound and light warning, it's no need to pay close attention to prevent from distraction when driving
- ◆ Pls. turn the monitor on to check to make sure it work normally
- ◆ You can connect to GPS module or PC via RS232 port when you need send the data of tire to other equipments

2.2 Bandage sensor's installation





- ① The steel tie around the hub ② Put the sensor on the steel tie ③ Pre tighten steel tie screw



- ④ Installing non-slip rubber pad ⑤ Tighten the steel tie screw ⑥ Installation completed

Notice:

- ◆ The installation position of the sensor should be close to the valve position, which is convenient for the receiver to match with the sensor after installing tire.
- ◆ After the sensor installation must check whether the sensor is loose, we must tighten the steel tie screw.

in the box with a monitor installed in the car;

3.The sensor and tighten the valve stem to the original car, it will go through a process of deflated, because between the sensor produces gas nozzle would contradict the original car and the valve core valve caused the leak, then please continue to tighten as soon as possible sensor until no leak, and the sensor can not be screwing up;

4.When installed 3 - When the 6th tires, tires do not need fixed before installing, otherwise it will cause the sensor 3-6 tires can not be installed; outer edge of the tire when you need to install baffles, May need to install sensors in the front bezel installed;

5.Tighten the sensor, use the bubble liquid junction sensors to check whether the leak with gas nozzle can be covered the entire contact surface of the liquid bubbles to check for leaks;

6.Esulting in air leaks when it comes to sensor installation, replace immediately a new spare sensors, spare tire and replace the sensor records the existence of the position, and if so which car, which tire position;

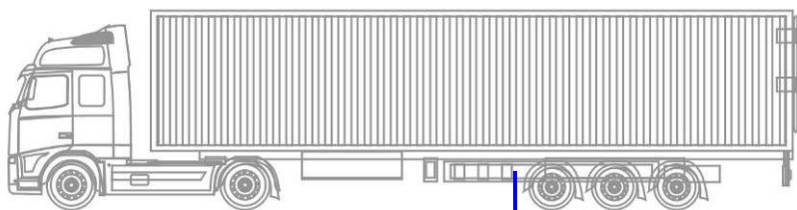
- ① Remove the tires from truck and deflated to tire
- ② Remove the tires from wheel;
- ③ Fix the sensor to wheel according the picture④&⑤;
- ④ Fix the sensor via screw like picture⑥;
- ⑤ Install tires, and give the tire to the standard air pressure like picture⑦) ;
- ⑥ Check the tire, we can re-fix the sensor if the tire is leakage;

2.5 Intelligent repeater installation

2.5.1 Select installation position

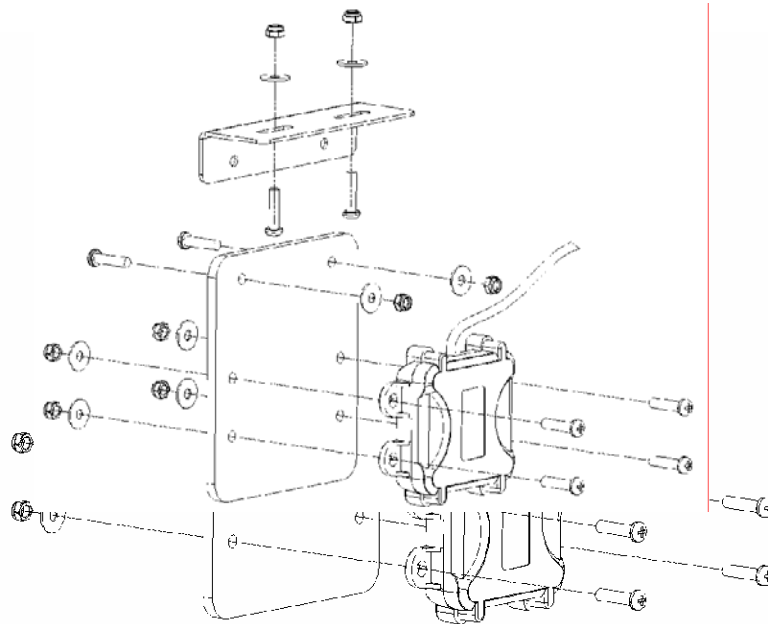
- The installation position of intelligent repeater should be in the position of the relatively empty. It can' t be lower than the cross beam of car chassis nearest to ground, but must close to the trailer tire(as picture below)
- If there is no suitable trailer in the middle of the installation position can also choose to against the side of the trailer.
- In order to ensure the intelligent repeater good communication effect, please don't put intelligent repeater directly on the metal.

The installation position
of repeater

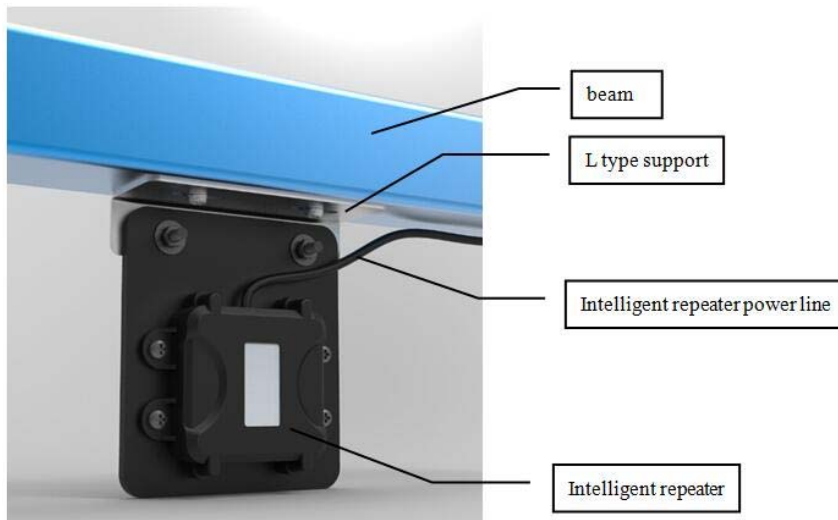


2.5.2 Installation method

As diagram



Effect picture after installation (perpendicular to car chassis cross beam)










Notice:

- ◆ There are 2 power line of intelligent repeater. Red power line connects positive pole of truck normal open power, black power line is ground connection. Pls. fasten the power lines by ribbon to prevent from wearing and short circuit.
- ◆ Ensure the input voltage and pressure range of intelligent repeater match, connect the power line according to the sign of negative and positive position.

- 8



3.3 Monitor icon definition

Icon	Description
	Tire symbol
	Receiver battery electric quantity display
	Tire pressure abnormal symbol
	Tire leakage symbol
	Sensor' s signal symbol
	Tire temperature abnormal warning symbol
	Sensor low voltage warning symbol
LEARNING	Under learning status
REPEATER OFF	Turn off repeater
REPEATER ON	Turn on repeater
SET TIRE NUM	Setup tire numbers
HIGH PRESSURE	High pressure warning
LOW PRESSURE	Low pressure warning
SENSOR FAIL	Sensor fault
FAST LEAKAGE	Fast leakage warning
HIGH TEMP	High temperature warning
LOW VOLTAGE	Low voltage warning

Pressure unit: Bar or Psi, optional

Temperature unit: °C or °F, optional

4.System display



4.1 Tire mode

Imitation truck modeling, left side is truck head, right side is truck body. Every tire using small rectangle to express, maximum can setup 46 tires(front 2 tires, back 44 tires)

4.2 Receiver working status

After turning on, the receiver is under working status, the display screen display the pressure and temperature of tires and the battery and voltage of sensors every 6 seconds circularly.





4.3 Data up and down checking

When under working status, press  to check above tire' s data and press  to check below tire' s data.

5. System setting method

We have already setting ok, so you needn't set it,unless you want to change the volume

5.1 System setting mode

When it is under normal working status, long press  key for 3 seconds, enter fist setting, the screen will display "P1". Shortly press  key 1 second each time, number plus 1, it will switch from P1 to P7 circularly. Long press  key for 3 seconds or no p any key for 10 minutes, it will exit to normal working status.

5.2 P1-P7 definition explanation

- P1: sign vehicle type and tire number
- P2: sensor pairing, ID learning
- P3: Unit setting
- P4: Tire pressure warning threshold value setting
- P5: Tire temperature warning threshold value setting
- P6: Trailer pairing setting

P7: Sensor position exchange

5.3 Factory default setting data

Item	Setting data
Pressure unit	Psi
High pressure warning data	174Psi
Low pressure warning data	87Psi
Temperature unit	°C
High temperature warning data	90 °C

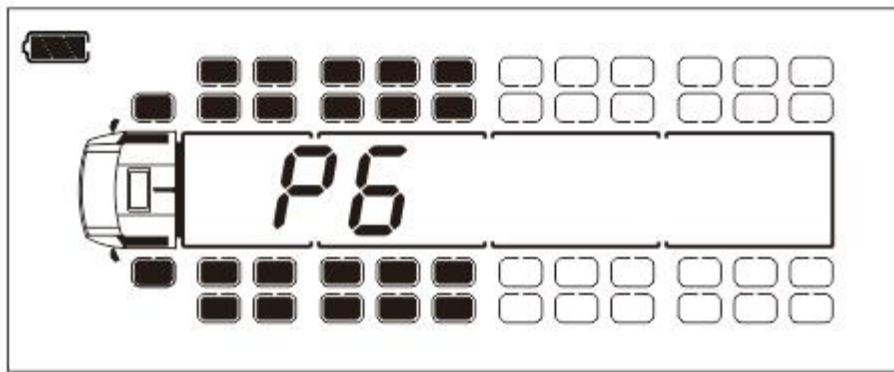
6. Intelligent trailer's application

6.1 Illustration

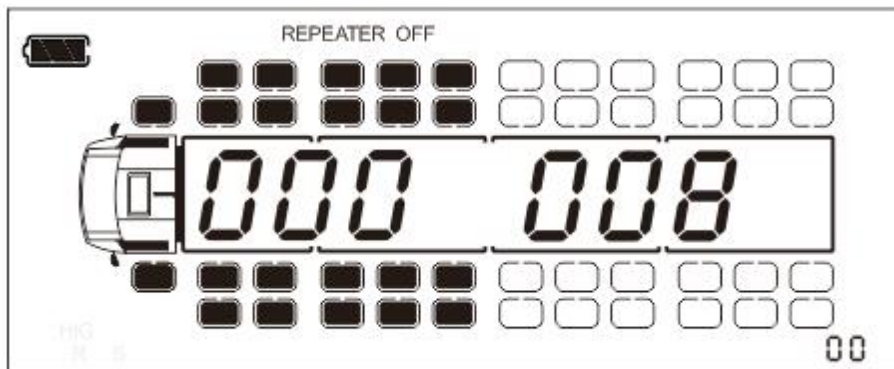
- ◆ In fleet, one head often needs to link many trailer. Intelligent repeater can send the data of newly linked trailer to the receiver, no need to pair the sensors one by one.
- ◆ Intelligent repeater can keep trailer sensor' s ID, trailer ID and tire pressure and temperature warning threshold value. After trailer exchange, the tire data of the discharged trailer still kept in the intelligent repeater. Next time when link again, it can be distinguish automatically, easy use.
- ◆ When first time using this function, you need to pair all sensors and keep the sensors ID in the intelligent repeater. Setting method as below(take setting 22 tires for example):

6.2 Setting method

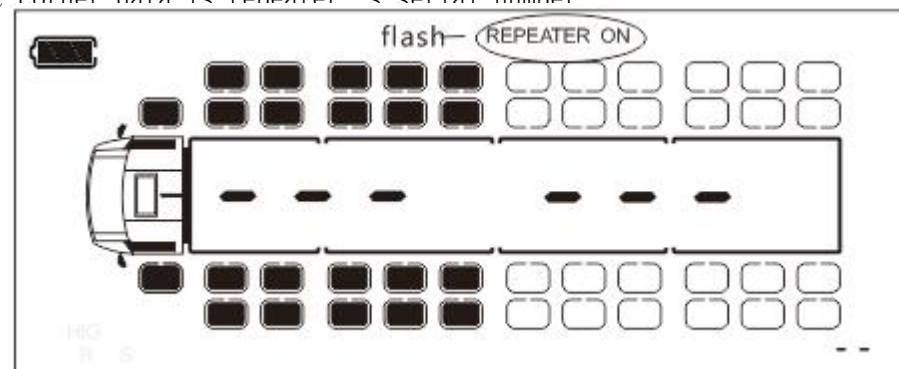
- (1) Trailer pairing setup



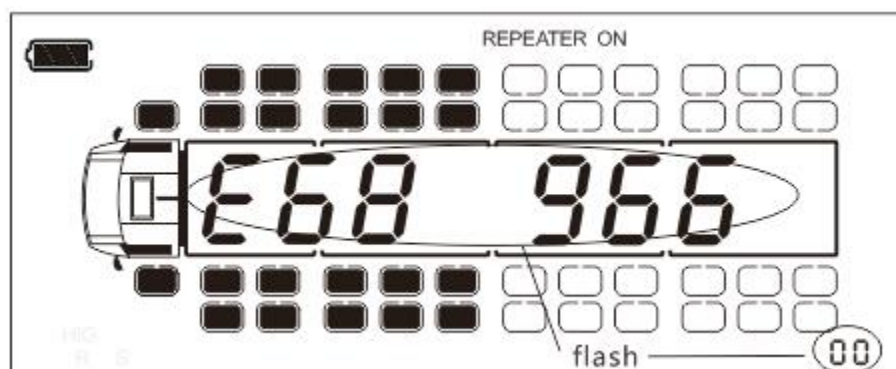
① Screen display “P6”, shortly press **OK** key for 1 second.



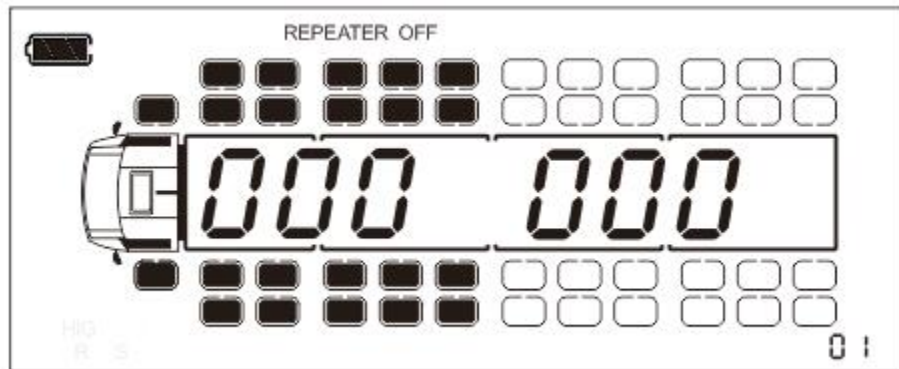
② Entering trailer pairing setting, the screen display original ID, bottom right corner data is repeater's serial number



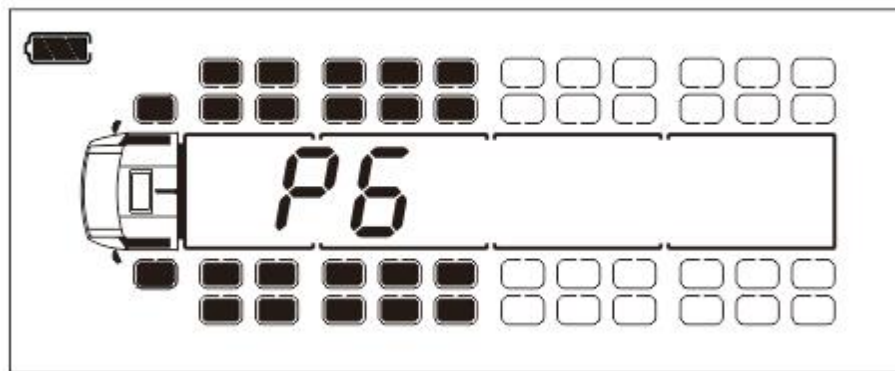
③ Shortly press **OK** key for 1 second, the screen displays “- - -”, “REPEATER ON” blinks, it shows it's waiting for receiving the repeater's ID.



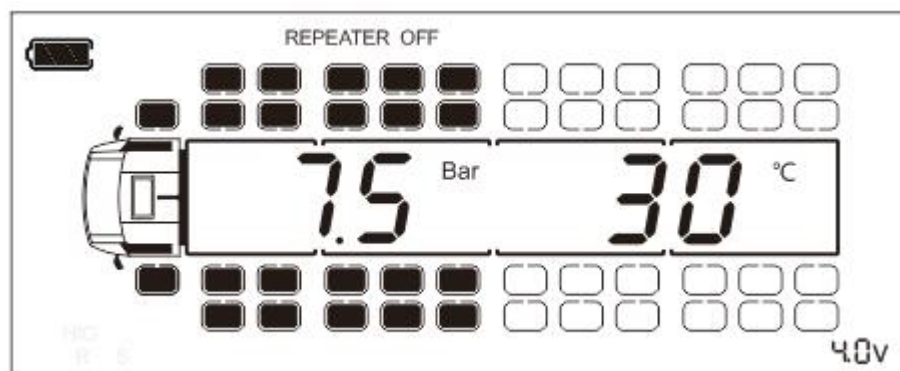
④Power the repeater on, receiver receives new repeater' s ID, the screen displays ID data and sounds "tick", the data blinks 3 times.



⑤Skip to next repeater automatically. If need to pair many repeaters, can repeat the opeartion process as ③-④, max. 10 repeaters.





⑥Long press **(OK)** key for 3 seconds to keep ID and exit to system setting mode.

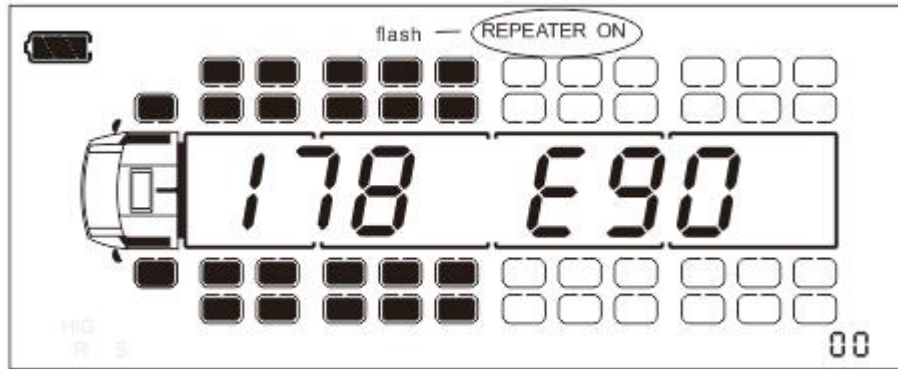


⑦Long press **(MODE)** key for 3 seconds to exit to normal working status.

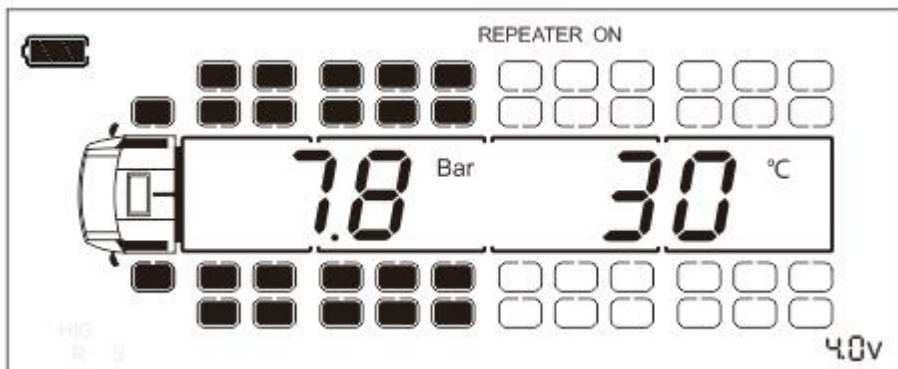
(2) Display and repeater connection

In order to display and a new repeater communication is normal, when for the first time use, need to operate this function, handshake connection mode is as follows:

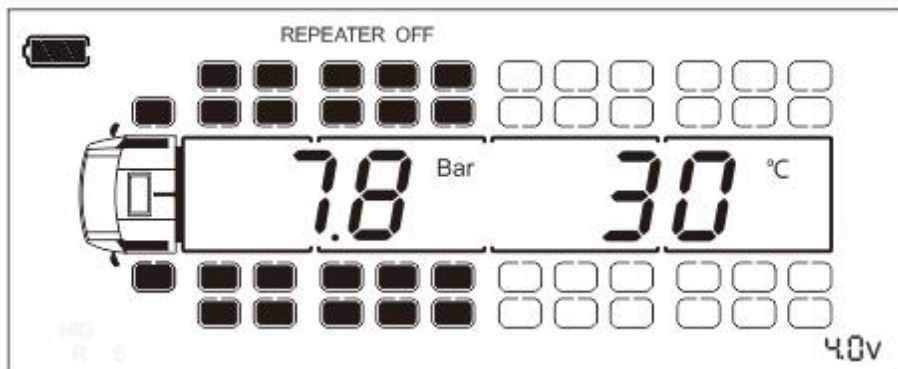
Intelligent repeater and receiver power on simultaneously, intelligent repeater sends ID data signal, the receiver receives and screen will display require link order as “REPEATER ON” blinks (as below diagram①) . Press  key on the receiver, assemble the intelligent repeater(as below diagram②) .If press  key, means won' t assemble intelligent repeater (as below diagram③) .



① receiver is sending the order of requiring link repeater




② Assemble repeater, screen display

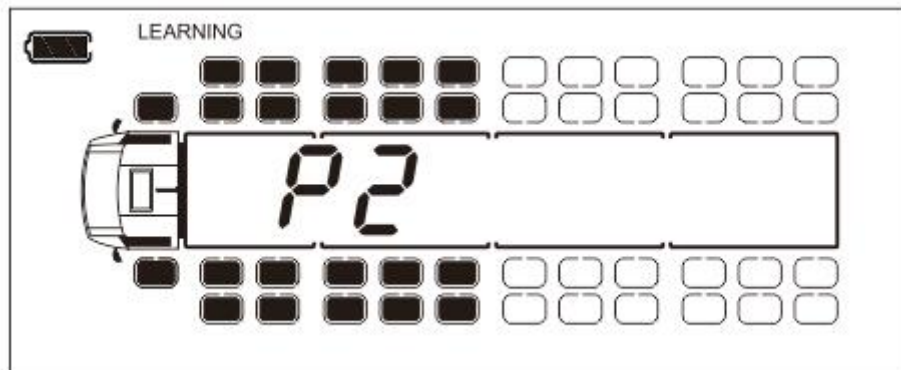


③ No mount repeater, screen display

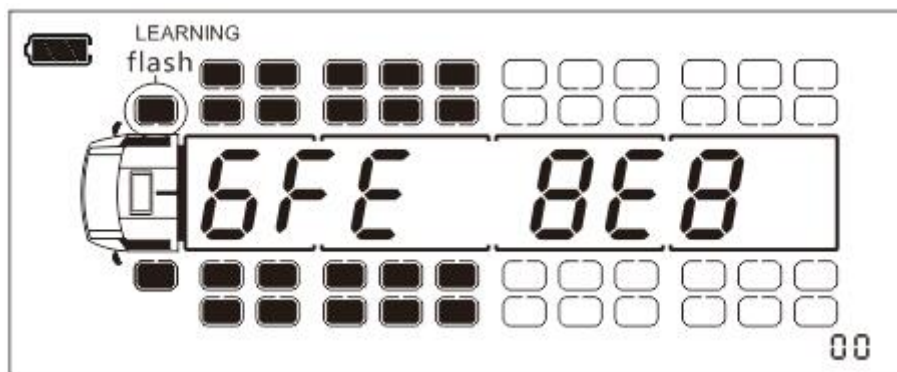
● **Notice:**

If have mounted the intelligent repeater, even if intelligent repeater power on after power off, the receiver will mount the intelligent repeater automatically again, no need to press  key. But if receiver power on after power off, the screen will display requiring link order as “REPEATER ON” blinks (as diagram①) .

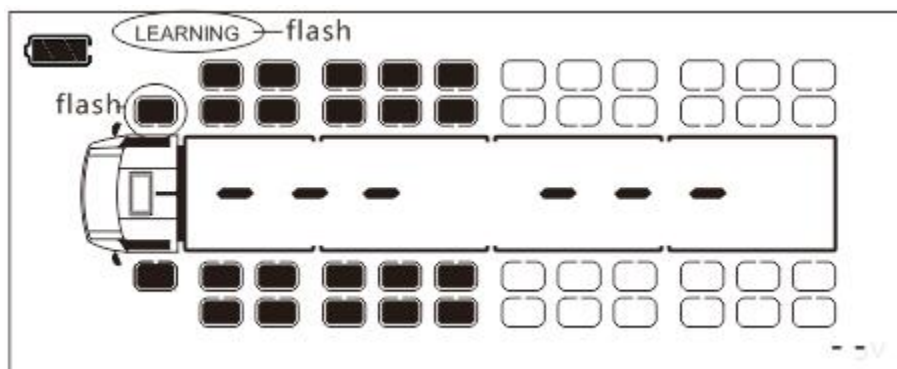
(3) Sensor pairing, ID learning



① screen display as “P2”, shortly press **(OK)** key 1 second.



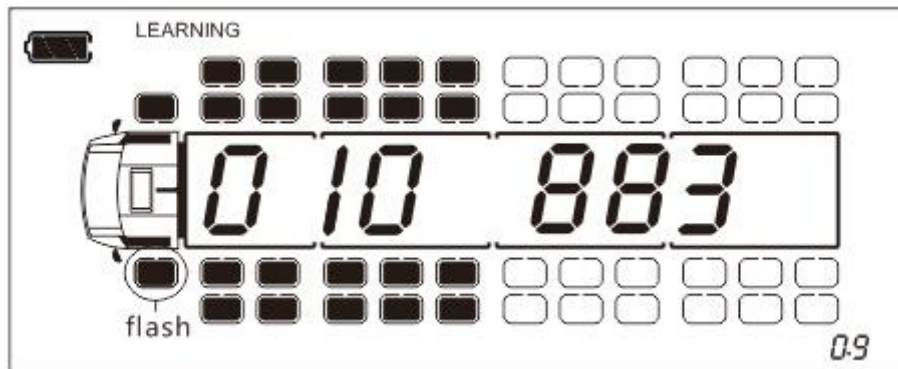
② Entering sensors' pairing setting function (first tire blinks, screen display the paired ID data), press **(^)** or **(v)** key, locate the pairing tire position and press **(OK)** after confirmation.



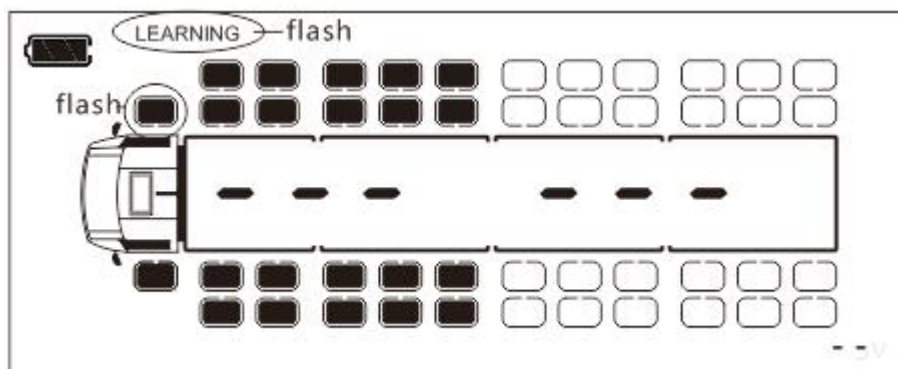
③ Screen skip as “- - -” “LEARNING” start to blink, shows it is waiting for receiving sensor' s ID.




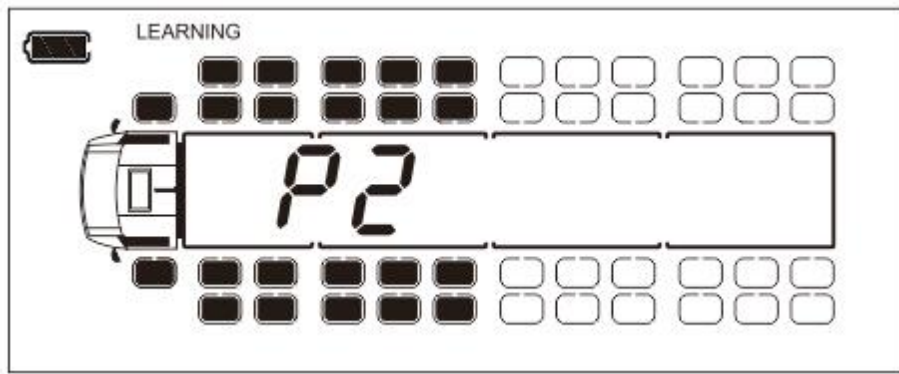
④ Handheld tool (or tire inflation/deflation, remove sensor or tighten sensor when you use external sensor) activates the sensors.



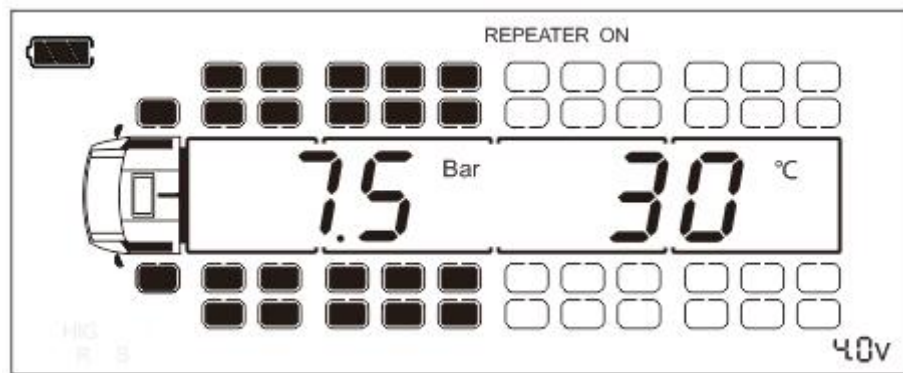
⑤ Receive new sensor's ID, the screen display full ID data and sounds "tick". ID data blinks 3 times and skip to next tire automatically.



⑥ If cancel pairing operation, when the screen display as "--- --- ---", shortly press  for 1 second.



⑦ After finishing the setting, long press **OK** key for 3 seconds to save and exit back to system setting mode.

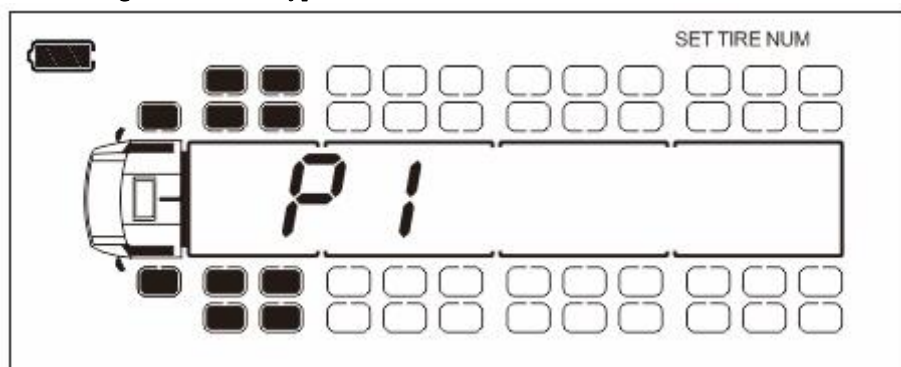


⑧ Long press **MODE** key for 3 seconds and exit to normal working status.

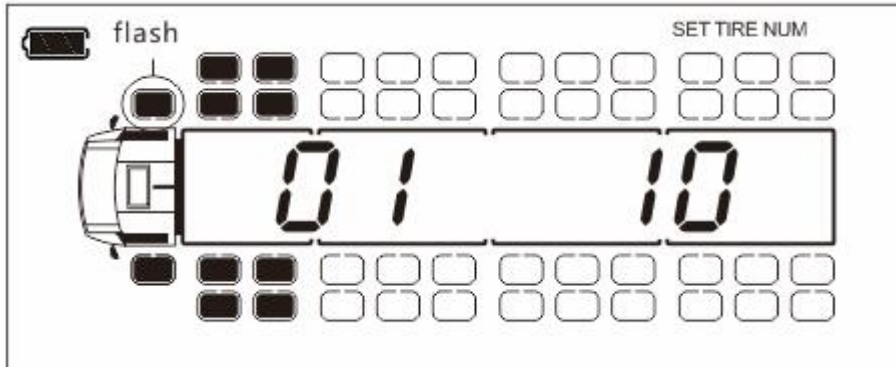
6.3 Other mode setting method

- Notice:
 - ◆ Explain in detail the setting method of P1、P3、P4、P5 and P7 in order as following.
 - ◆ Take setting 22 tires for example:

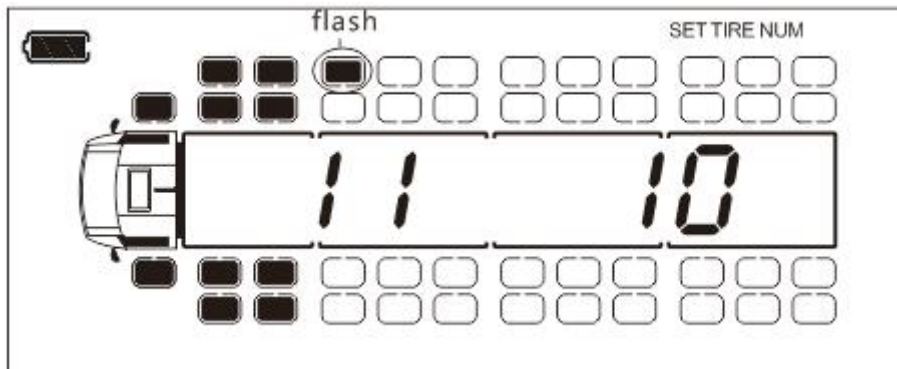
6.3.1 P1 sign vehicle type and tire number



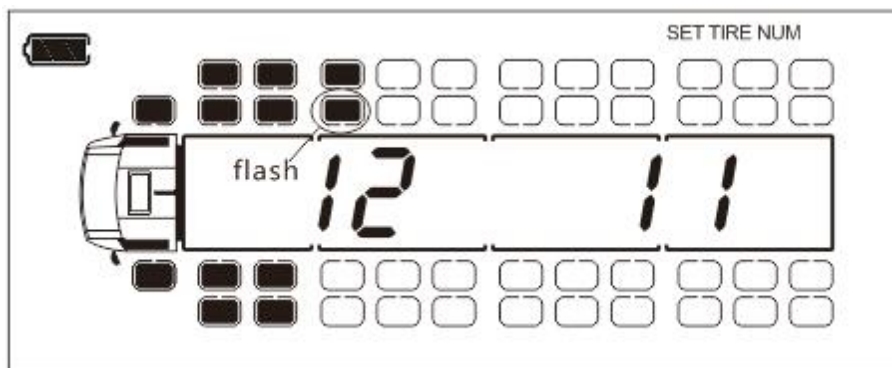
- ① Display “P1”, press **(OK)** 1s .



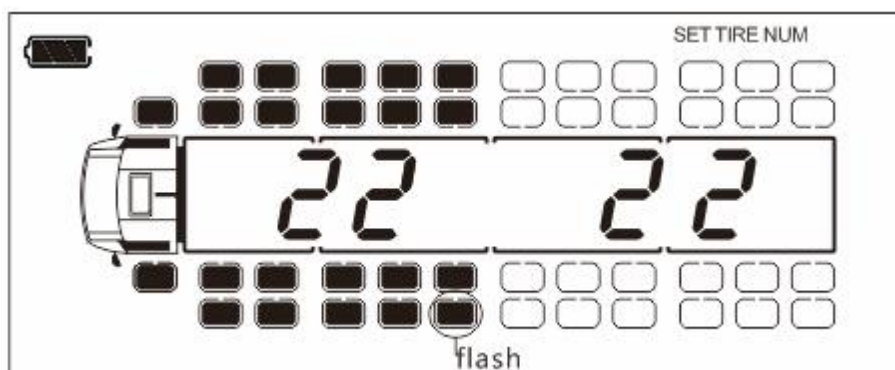
- ② Enter sign tire setting function(left side data shows the selecting tire position, right side data shows the signed tires quantity) , press **(^)** or **(v)** key, locate the tire position.




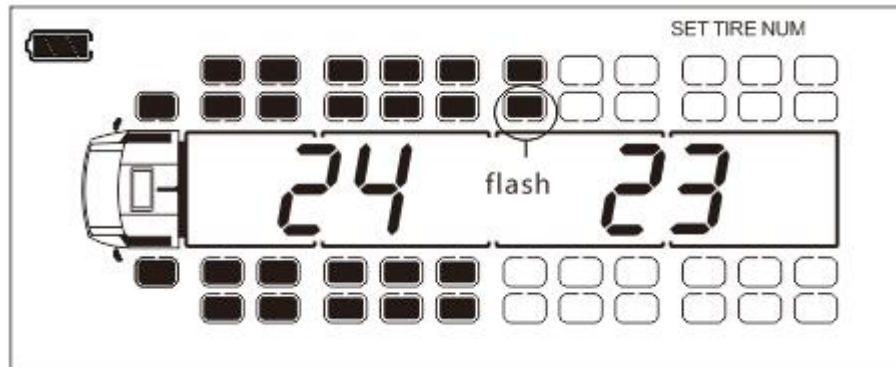
- ③ When left side data is “11”, shortly press **(OK)** key for 1 second.




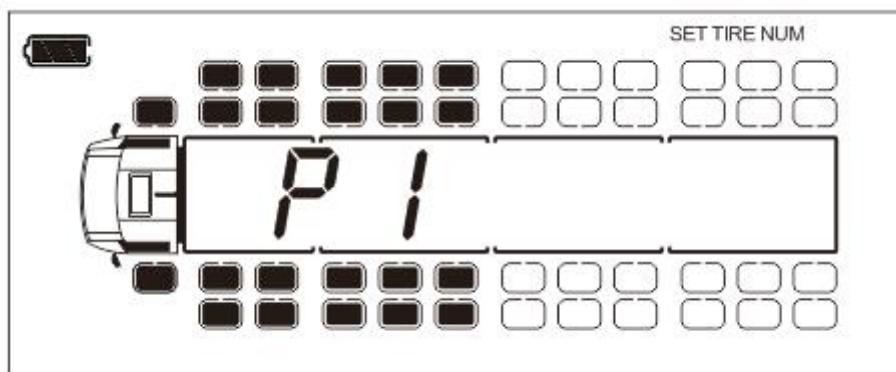
- ④ Finish sign and skip to next tire blink automatically.



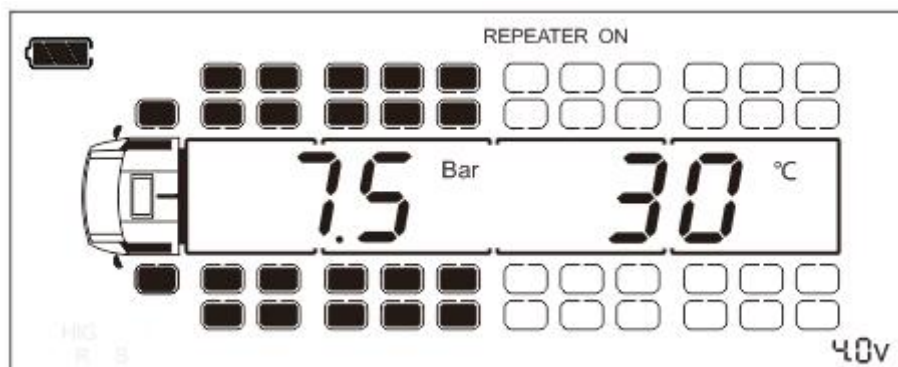
- ⑤ Always shortly press  key for 1 second, until sign 22pcs of tire, shows the sign finished.



- ⑥ If sign more tire, shortly press (as diagram above), shortly press  for 1 second to cancel.

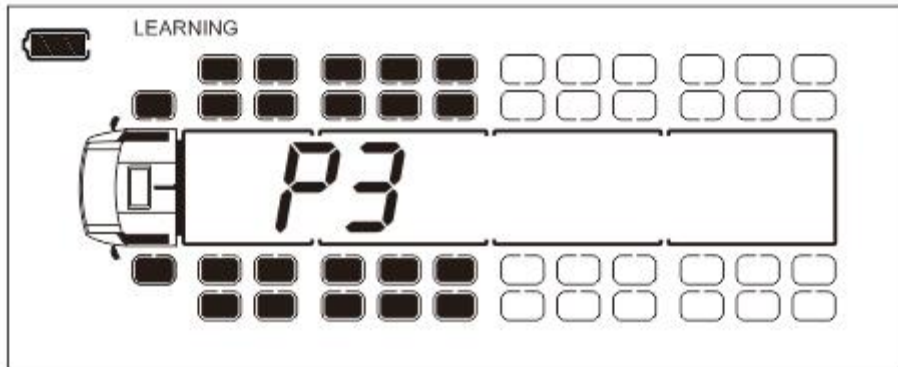


- ⑦ After finishing the sign, long press  key for 3 seconds to save and exit back to system setting mode.

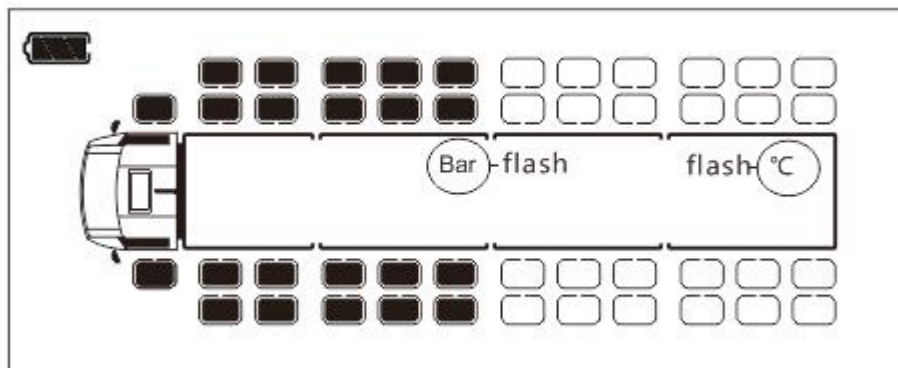


- ⑧ Long press  key for 3 seconds to exit back to normal working status.

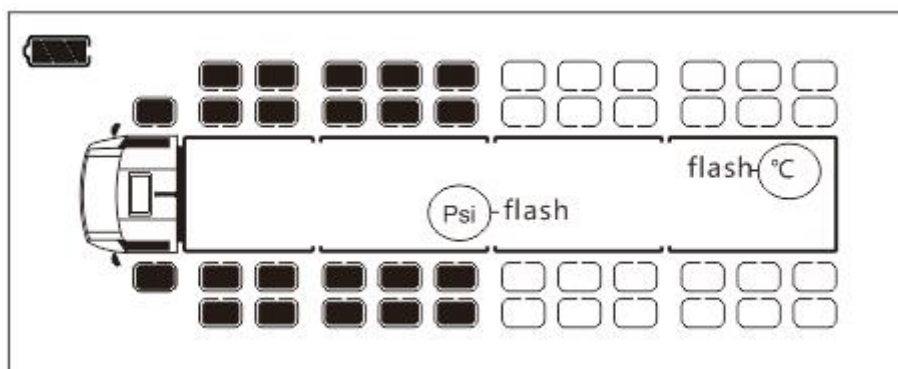
7 P3 Unit setting



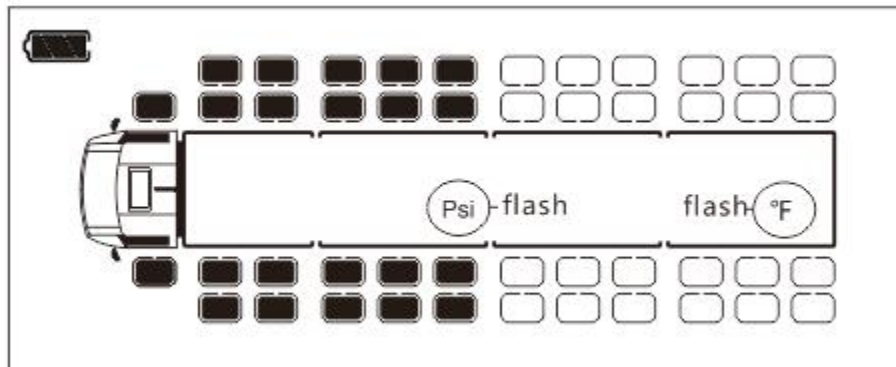
- ① Screen displays “P3”, shortly press **OK** key for 1 second.



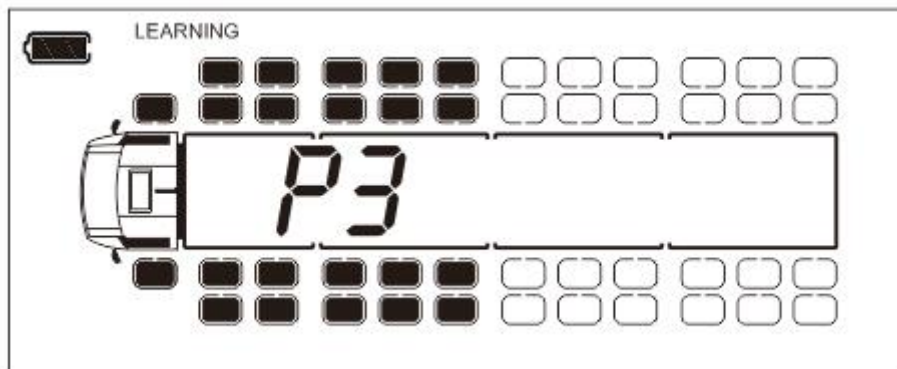
- ② Entering unit setting function(left side display air pressure unit, right side displays temperature unit).



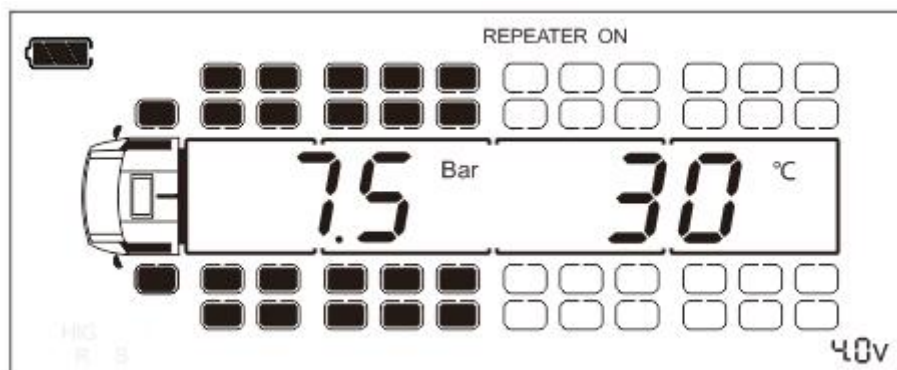
- ③ Press **^** key to select air pressure unit



- ④ Press  key to select temperature unit.

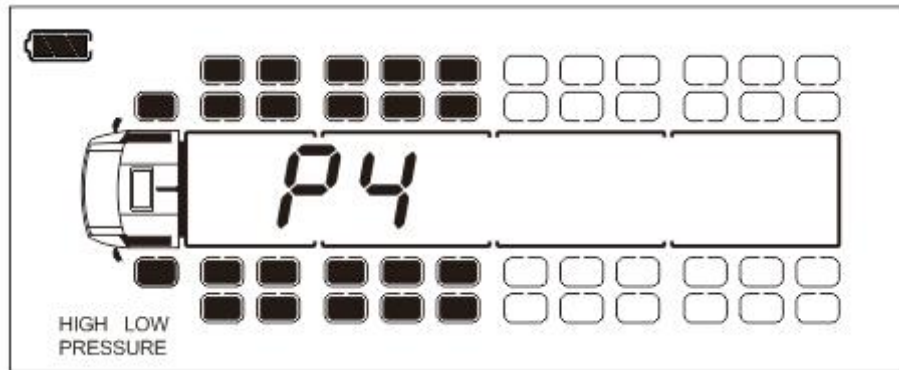


- ⑤ After finishing the setting, long press  key for 3 seconds to save and exit back to system setting mode.

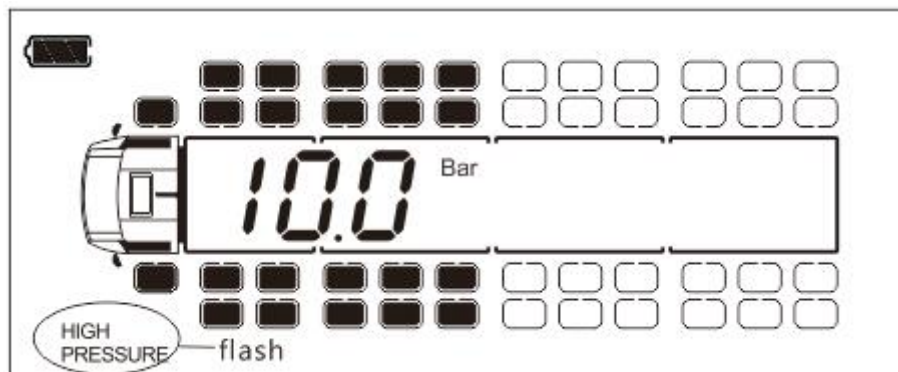


- ⑥ Long press  key for 3 seconds to exit to normal working status.

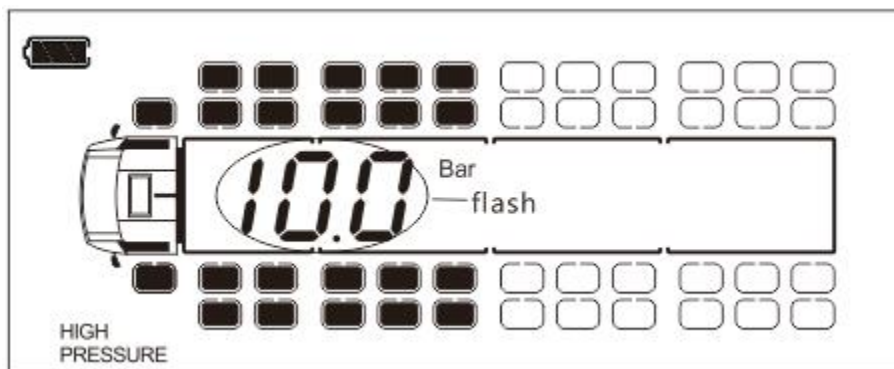
8 P4 Tire pressure warning threshold value setting



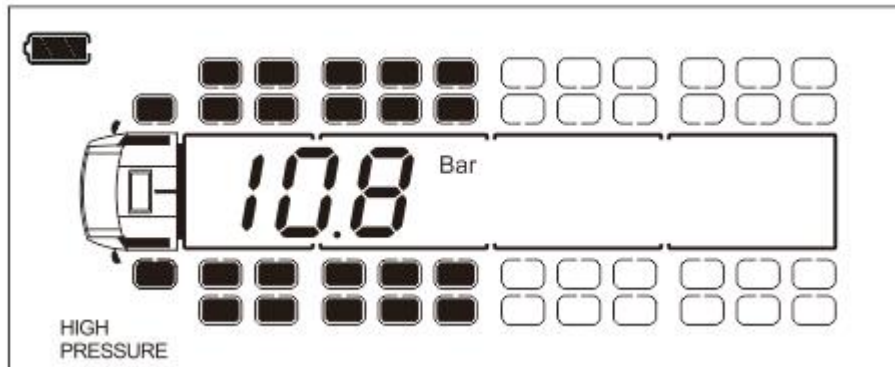
① Screen displays “P4”, shortly press **OK** key for 1 second.






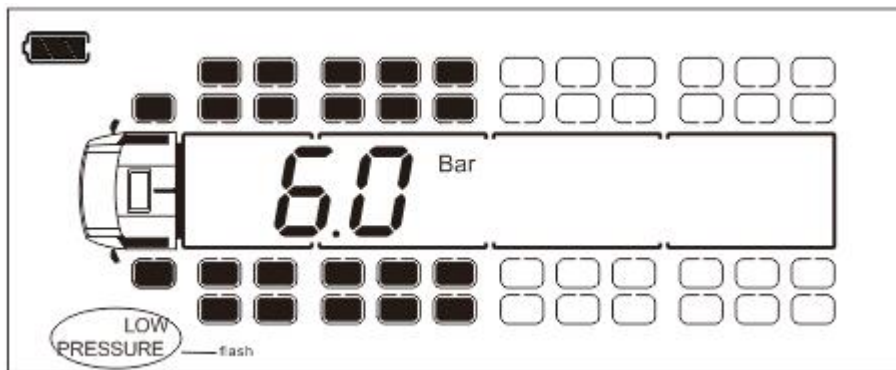
② Enter tire pressure warning threshold value setting function (screen display high pressure warning threshold value, “HIGH PRESSURE” blink).




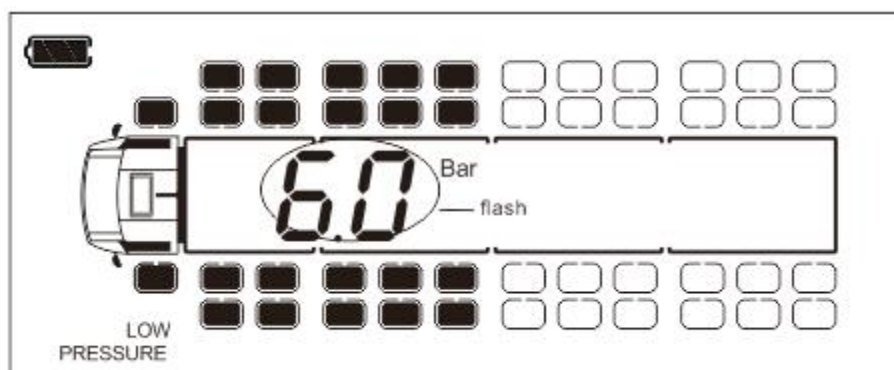
③ Shortly press **OK** key for 1 second, high pressure warning data starts to blink on the screen.




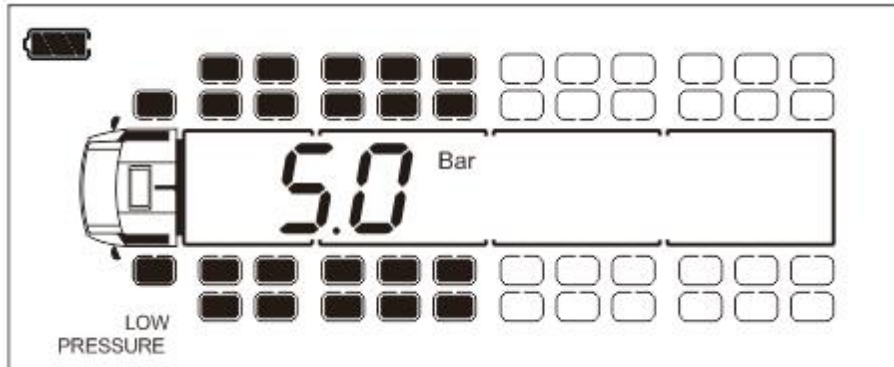
- ④ Press  or  key to adjust the data, the range is 7Bar-14Bar. After confirmation, press  key for 1 second to save the data.






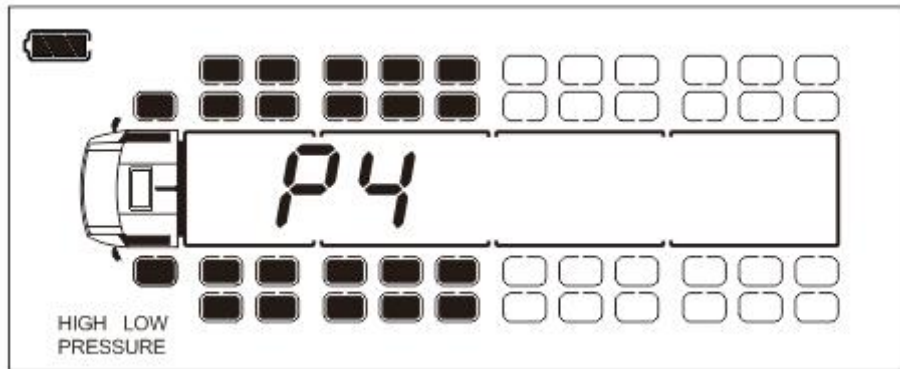
- ⑤ Press  setting Low pressure alarm limit value, “LOW PRESSURE” flashing




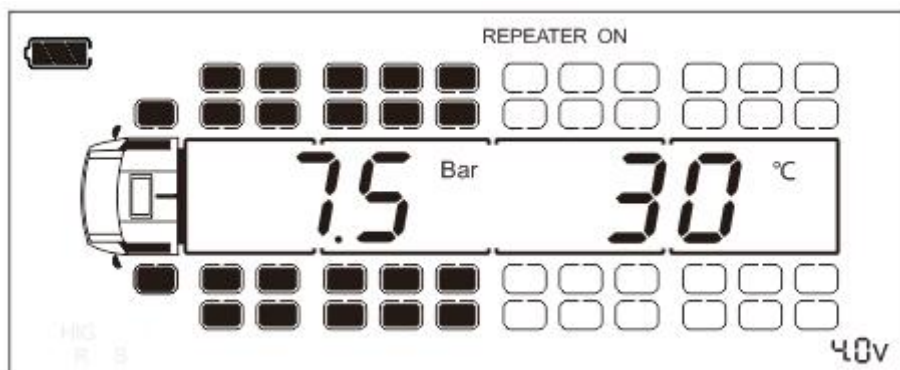
- ⑥ Shortly press  key for 1 second, the low pressure warning data starts to blink on the screen.



- ⑦ Press  or  key to adjust data, the range is 5Bar-6.9Bar. After confirmation, shortly press  key for 1 second to save data.

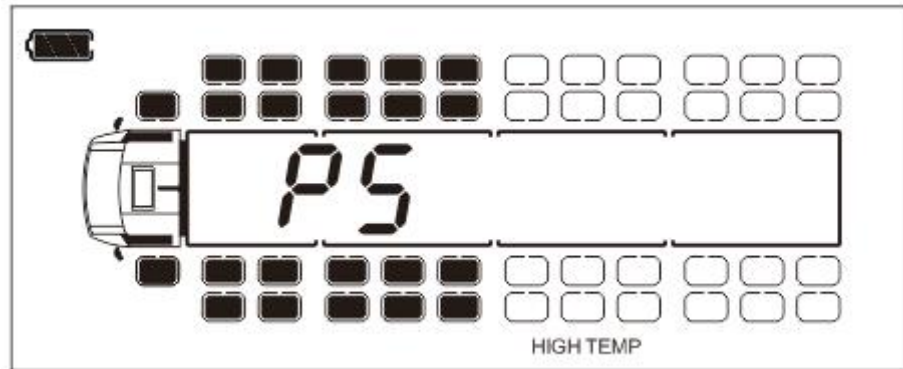


- ⑧ After finishing the setting, long press  key for 3 seconds to save and exit back to the system setting mode.

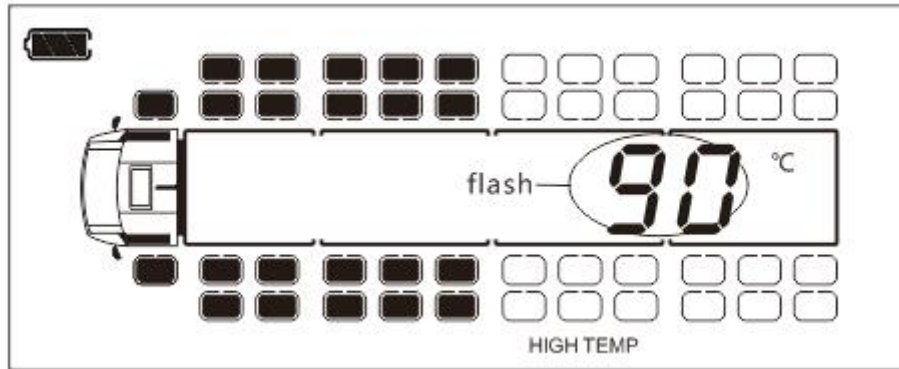


- ⑨ Long press  key for 3 seconds exit to normal working status.

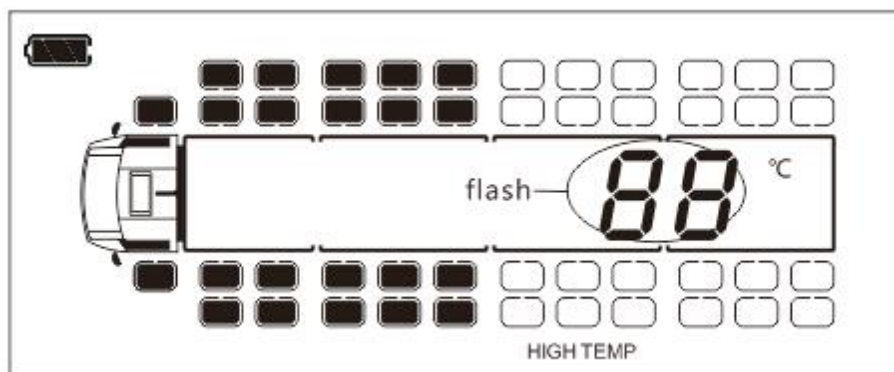
9 P5 Tire temperature warning threshold value setting





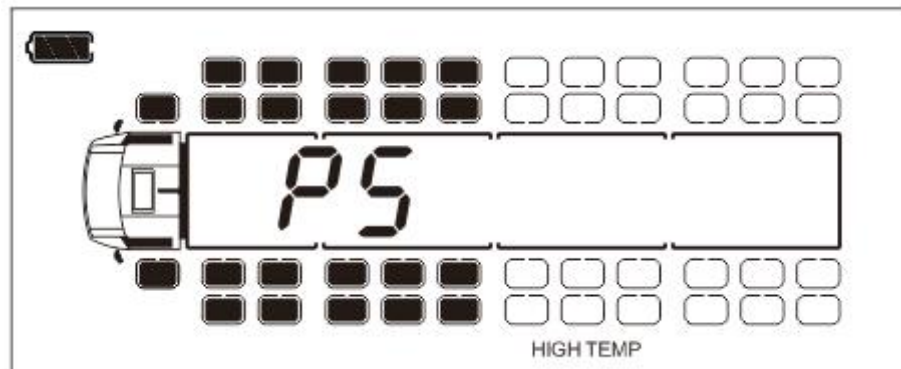
① Screen displays “P5”, shortly press  key for 1 second.



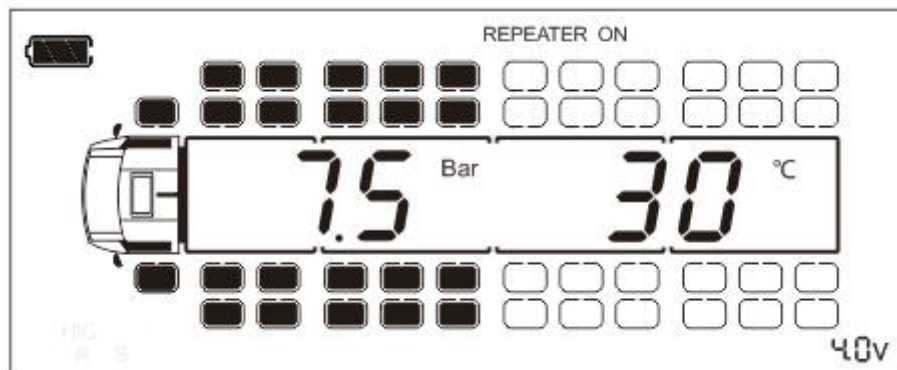
② Enter high temperature warning data setting function, temperature data blinks.



③ Press  or  key, adjust high temperature warning data, the range is 50°C-120°C.

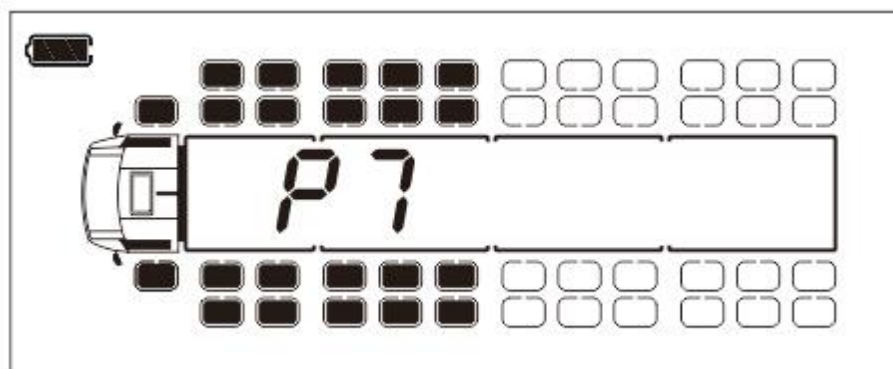


- ④ After finishing the setting, long press **OK** key for 3 seconds to save and exit back to system setting mode.

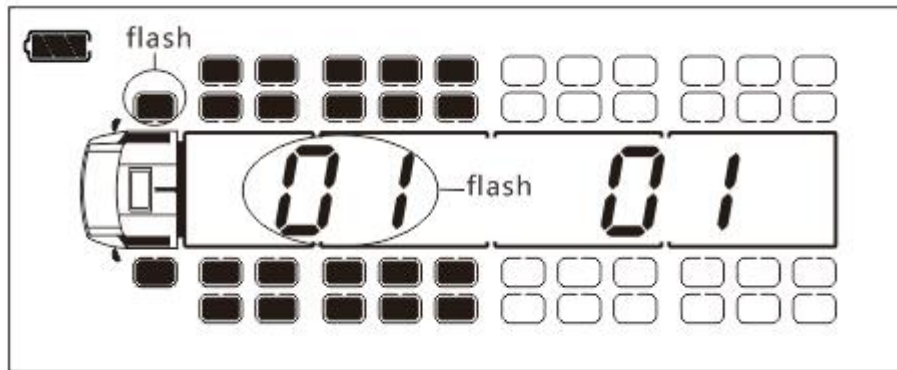


- ⑤ Long press **MODE** key for 3 seconds to exit to normal working status.

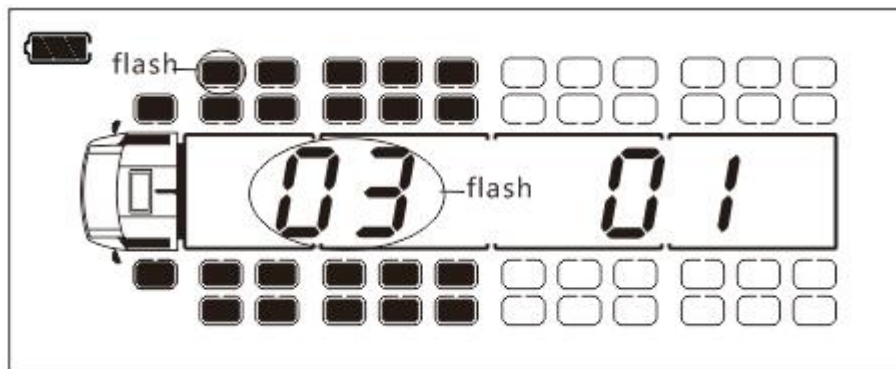
10 P7 Sensor position exchange





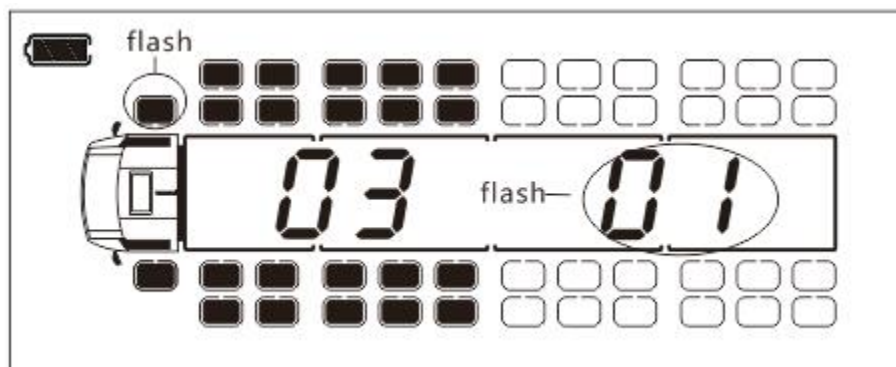
- ① Screen display “P7”, shortly press **OK** key for 1 second.




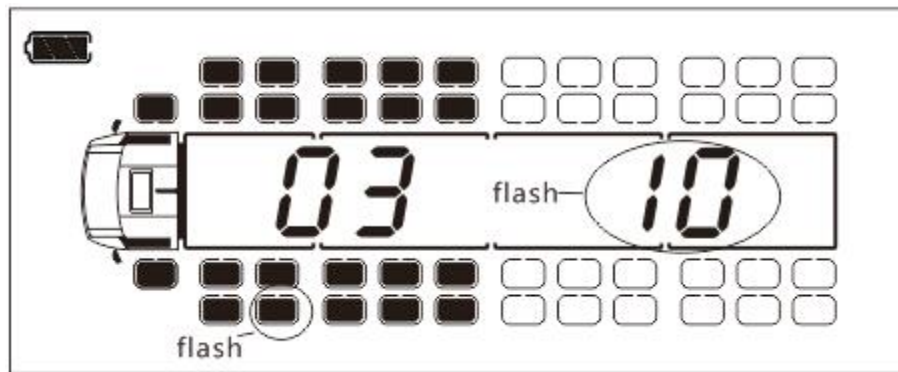
② Enter the sensors exchange function, the screen displays the positions of





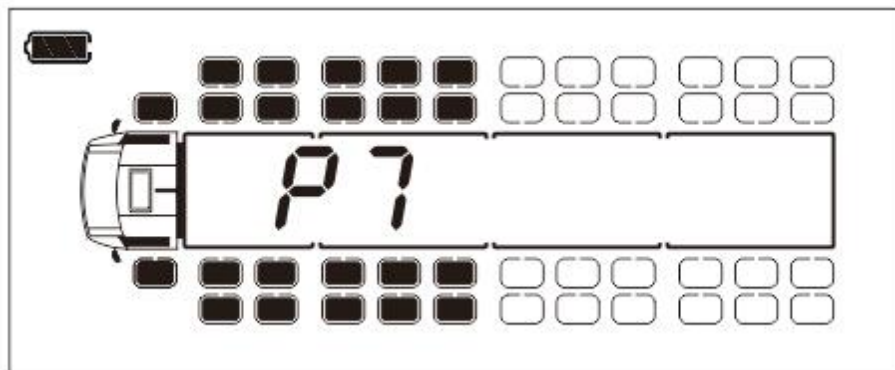
③ Press  or  key, select the first tire which needs to exchange.




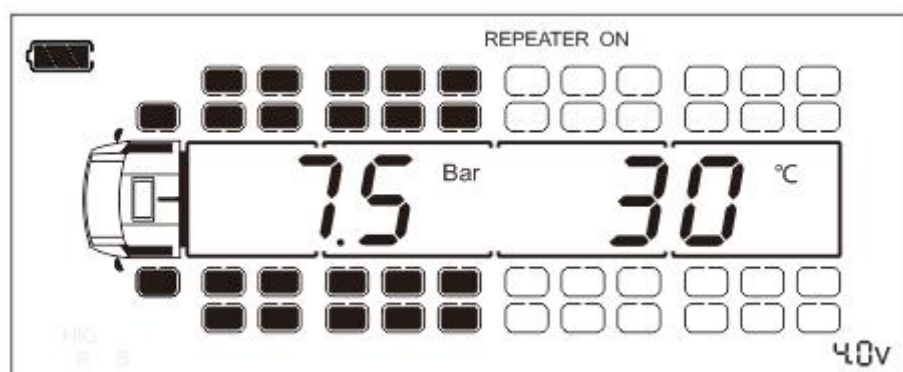
④ After confirmation, shortly press  key for 1 second, skip to right data automatically, data blinks.



⑤ Press  or  key to select second tire which needs to exchange




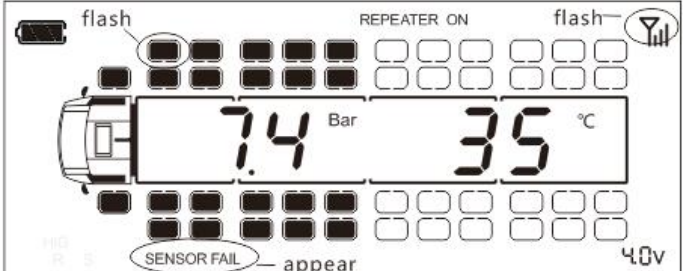
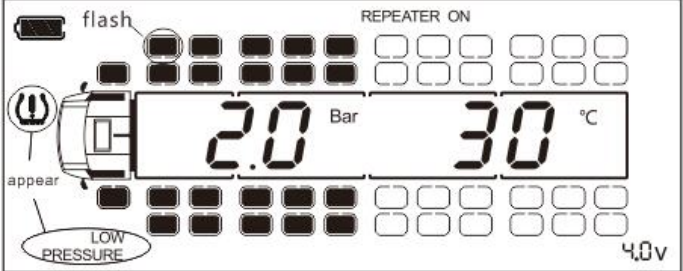
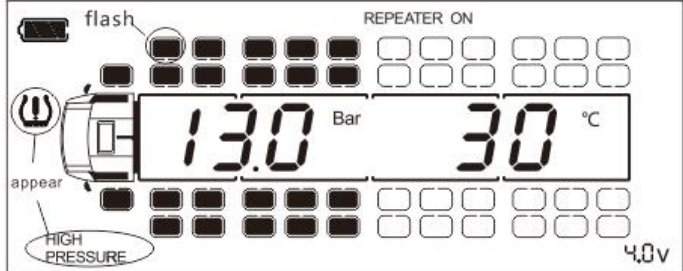
⑥ Long press  key for 3 seconds to exchange, save and exit back to system setting mode.

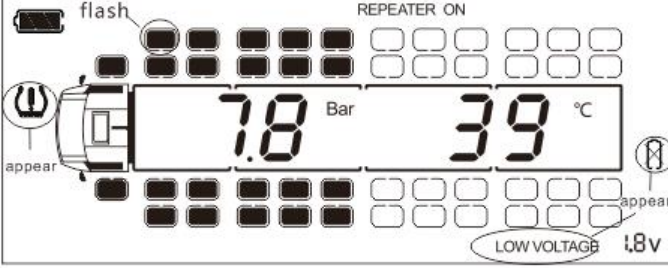
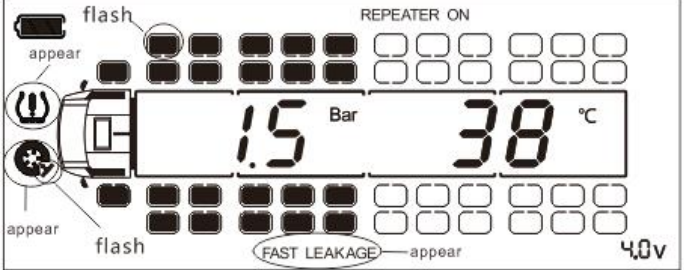
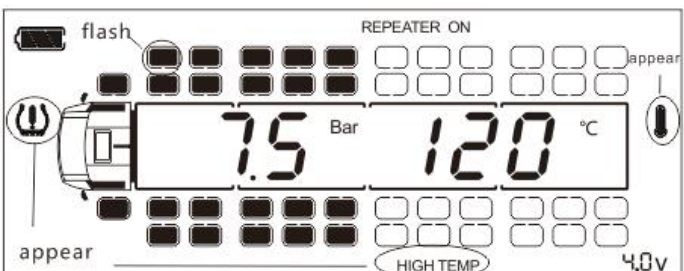


⑦ Long press  key for 3 seconds to exit to normal working status.

11 Warning status

High pressure/low pressure/high temperature/fast leakage/sensor's battery voltage warning Receiver displays each tire's temperature and pressure every 6 seconds, when the pressure or temperature out of the setting safe range, the screen will display the related tire and the data will blink, related fault diagram (HIGH PRESSURE, LOW PRESSURE, SENSOR FAIL, FAST LEAKAGE, HIGH TEMP, LOW VOLTAGE and so on) will display, warning sound will remind and LED red indicate light will blink. Press  key can turn off warning sound, but LED red indicate light still blink until all tires' trouble shooting.

No.	Diagram	Illustration
1		<p>Sensor no signal</p> <p>Correspondent tire icon blinks, meanwhile, shows sensor's icon and SENSOR FAIL ;</p> <p>Icon shows the third sensor no signal.</p>
2		<p>Low pressure warning</p> <p>Correspondent tire icon blinks, meanwhile, shows LOW PRESSURE and tire pressure abnormal warning icon ;</p> <p>Icon shows the third tire low pressure warning.</p>
3		<p>High pressure warning</p> <p>Correspondent tire icon blinks, meanwhile, shows HIGH PRESSURE and tire pressure abnormal warning icon ;</p> <p>Icon shows the third tire high pressure warning.</p>

4		<p>Sensor low voltage warning</p> <p>Correspondent tire icon blinks, meanwhile, shows LOW VOLTAGE and sensor low voltage warning icon ;</p> <p>(Battery voltage warning value is 2.3V)</p> <p>Icon shows the third sensor low voltage warning.</p>
5		<p>Air leakage warning</p> <p>Correspondent tire icon and the small iron nail icon of tire abnormal icon blinks, meanwhile, shows FAST LEAKAGE and tire abnormal indicating icon ;</p> <p>Icon shows the third tire air leakage warning.</p>
6		<p>High temperature warning</p> <p>Correspondent tire icon blinks, meanwhile, shows HIGH TEMP and temperature abnormal warning icon ;</p> <p>Icon shows the third tire high temperature warning.</p>

12 Product technical parameter

12.1 Monitor

No.	Item	Technical parameter
1	Input voltage	DC24 V
2	Battery voltage	3.0~4.2 V
3	Charging time	5 H
4	HF emit working frequency	433.92 MHz
5	RF power	< 5 dB
6	HF receive frequency	433.92 MHz
7	HF receive sensitivity	>-90dbm

12.2 . External sensor

The only External sensor's that is approved to work with this TPMS is FCC ID: ZPNVS62U009.

No.	Item	Technical parameter
1	Battery model No.	CR2032
2	RF frequency	433.92 MHz ± 38 KHz
3	Pressure measurement range	0-1300kpa (0~188PSI)
4	Temperature measurement range	-40℃~125℃
5	Working temperature range	-30℃~85℃
6	Storage temperature range	-30℃~85℃ (Suggest storage in normal temperature)

13 Simple trouble removal

If encountering a problem during assembling or usage, pls. try to use below methods to solve. If the problem is still there, pls. contact our after-sale service center.

Problem phenomenon	Reason analysis	Solution
The tire pressure after installation is not the same as real measurement	When first time assembling, power on to start receiver. The displayed data is the testing data when it left factory	Driving for certain distance, it will update tire pressure and temperature value automatically.
Certain tire doesn't display number information	① Sensor and receiver don't pair well	① Pair again
	② Sensor out of power or is broken	③ Change sensor
	④ Maybe because of serious electromagnetic interference nearby	② Driving away for certain distance and power on to start again
Tire pressure/temperature warning frequently	Check whether the setting warning threshold value is too high or too low.	According to the tire parameter or the range given by user manual, setup warning threshold value again.
Tire temperature differ rather largely	The surrounding air temperature of sensor is on the high side	Pls. check whether tire is abnormal to cause hub heat seriously and cool the hub in time.

FCC Statement

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

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 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.