MEITRACK® Tire Pressure Sensor

User Guide

Applicable Models: MD600\MD833H\T633L

Document Record

Document Title	MEITRACK Tire Pressure Sensor User Guide	Creation Date Last Revision	2017-05-10 2024-05-27
Project	MD600\MD833H\T633L		
Document Type	Accessory User Guide	Total Pages	44
Version	V2.0	Confidentiality	External Document

Copyright and Disclaimer

Document Revision History

Version	Date	Edit
1.0	2017-05-10	Initial Draft
2.0	2024-05-17	1、 Modify applicable device models, replace discontinued tire pressure values, and standardize document formatting 2、 Add specifications and parameters for tire pressure sensors and LCD displays 3、 Revise images and descriptions of the main unit and optional accessories 4、 Add connection methods 5、 Optimize configuration procedures for tire pressure sensors 6、 Revise the method for viewing tire pressure alarm information in platform reports 7、 Optimize the procedure for viewing tire pressure alarm information in the APP 8、 Replace all images and enhance document descriptions 9、 Add power supply voltage specifications for the tire pressure receiver 10、 Add charging time and post-full-charge usage duration for the LCD display 11、 Add recommended installation locations and precautions for signal repeater installation 12、 Remove the sensor transmission protocol section

		13、 Add the function and usage steps of display screen labels 14、 Add FAQ

Usage Precautions

Warning

1. The drowsiness alerts issued by the device do not replace the driver's judgment and control.
2. The drowsiness alerts are based on computer vision and deep learning technologies and cannot guarantee 100% recognition accuracy. For instance, the algorithm's accuracy varies depending on road and weather conditions.
3. The device is designed to enhance user awareness of driving conditions when used properly. Improper use may distract the user, potentially leading to accidents, property damage, or personal injury. Do not attempt to view information stored on the device or modify the device settings while driving. Operate the device only when your vehicle is stationary and parked safely in accordance with local laws. Always remain aware of your surroundings and avoid distractions from the display screen or mobile phone. Focusing on the device may create driving hazards. The user assumes all risks associated with using this device.
4. When installing the device in the vehicle, do not place it where it obstructs the driver's view of the road or interferes with vehicle controls, such as the steering wheel, pedals, or gear lever. Do not place it unsecured on the dashboard. Avoid positioning the device in front of or above any airbags.
5. In regions where it is prohibited or restricted for drivers to play videos on the device, please adhere to the applicable local laws.

Maintenance Precautions

1. Ensure the device remains dry at all times. Do not expose the device or cables to humid environments, and avoid operating the device with wet hands to prevent short circuits, corrosion-related faults, or electric shock hazards.
2. Avoid subjecting the device to strong impacts or vibrations to prevent malfunction.
3. Do not expose the device or power supply to excessively high or low temperatures, as this may result in device malfunction.
4. Do not strike, throw, or puncture the device, and avoid dropping or compressing it.
5. Do not use power supplies or data cables that are not officially approved or provided.
6. Do not disassemble the device or its accessories without authorization; otherwise, the device and accessories will be excluded from warranty coverage.

Table of Contents

1 Product Functions and Specifications

1.1 Product Introduction

Vehicles are susceptible to tire blowouts due to the combined effects of ground temperature and ambient weather conditions. Consequently, drivers who are unaware of the tire status while operating the vehicle are at increased risk of traffic accidents. Early awareness of tire conditions and timely implementation of effective preventive measures in response to abnormal tire pressure can significantly reduce accident occurrence.

The tire pressure sensor is designed for real-time monitoring and abnormal condition alerts of vehicle tire pressure. It is installed on the valve stem of each tire or replaces the original valve stem. Pressure data is wirelessly transmitted from inside the tire to the locator device, and then displayed on the MS03 Platform and App for each tire's pressure status. When tire pressure is too low or a leak is detected, the system automatically issues an alarm.

1.2 Product Functions

- Real-time monitoring of tire temperature and pressure
- Users can set alarm threshold values for tire temperature and pressure
- Rapid air leakage alarm
- Wireless transmission method
- Intelligent sleep mode

1.3 Specifications and Parameters

1.3.1 Tire Pressure Transmitter

(Small vehicle) Built-in FS-6 3718

(Small vehicle) Built-in FS-6 0424

(Large vehicle) External NL

(Large vehicle) External SL

(Large vehicle) Built-in IL

Item	Describe
High frequency	433.92MHz
Frequency stability	±10KHz
Modulation frequency	9.6KHz
Modulation Type	ASK

Operating Voltage	2.0~3.6V
High-Frequency Power	8dBm
Standby Current	<24A
Transmission Current	<10mA
Operating Temperature	-40℃ ~+80℃; External: -40℃ to +80℃, Internal: -40℃ to +100℃
Storage Temperature	-40℃ ~ +85℃; External: -40℃ to +85℃, Internal: -40℃ to +105℃
Battery Life	External Sensor: 1 to 2 Years, Internal Sensor: 3 to 5 Years
Pressure Range	0 to 6 bar (Passenger Vehicle); 0 to 13 bar (Heavy Vehicle)
Dimensions & Weight	(Heavy Vehicle) External NL: 30 × 25 mm, 16 g External SL: 41(L) × 27(W) × 24(H) mm, 32 g Internal IL: (excluding valve stem) 60 × 35 × 20 mm, 88 g (Small car) Internal FS-6 3718: 81(L) × 55(W) × 21(H) mm, 32 g Internal FS-6 0424: 63(L) × 75(W) × 20(H) mm, 45 g

1.3.2 Tire Pressure Repeater RP03

Item	Describe
High frequency	433.92MHz
Frequency stability	≤±20KHz
Modulation frequency	9.6KHz
Modulation Type	ASK
Operating Voltage	12~24V
Transmission Power	/
Reception Sensitivity	Better than -110 dBm @ BER 10^{-3}
ACC ON Current	≤100mA
Operating Temperature	-20℃ ~+80℃
Storage Temperature	-40℃~+85℃
Dimensions & Weight	77*62*15mm，105g
Waterproof Rating	IP67

1.3.3 Tire Pressure Receiver RP02

Item	Describe
Pin	4 PIN
High frequency	433.92MHz
Frequency stability	≤±20KHz
Modulation frequency	9.6KHz
Modulation Type	ASK
Operating Voltage	5V
Reception Sensitivity	Better than -110 dBm @ BER 10^{-3}
Transmission Power	/
ACC ON Current	≤100mA
ACC OFF Current	/
Operating Temperature	-20℃ ~+80℃
Storage Temperature	-40℃~+85℃
Dimensions & Weight	91*39*15mm，105g

1.3.4 LCD display

Item	Describe
High frequency	433.92MHz
Frequency stability	≤±10KHz
Modulation frequency	9.6KHz
Modulation Type	ASK

Operating Voltage	12~28V
High-Frequency Power	≤3dBm
Reception Sensitivity	-100dBm
Standby Current	≤30mA
Transmission Current	≤100mA
Operating Temperature	-20℃ ~+80℃
Storage Temperature	-40℃~+85℃
Dimensions & Weight	115*29*83mm，140g

1.4 Sleep Mode

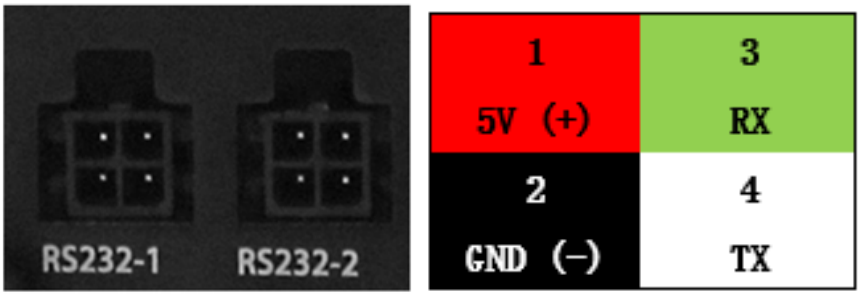
To conserve battery power, the tire pressure sensor updates tire pressure data every 5 minutes during normal operation. Immediate upload occurs only when a tire pressure alarm event is triggered. The tire pressure sensor includes a built-in vibration sensing module. When the vehicle remains stationary for 15 consecutive minutes, the tire pressure sensor will automatically enter sleep mode, during which tire pressure data will no longer be updated.

2 Main Unit and Accessories

 Tire Pressure Receiver (with 4P Interface) (Mandatory)	 Tire Pressure Repeater (Optional)	 Tire Pressure Transmitter with Built-in FS-6 3718 (Small Vehicle) (Optional)
 Tire Pressure Transmitter with Built-in FS-6 0424 (Small Vehicle) (Optional)	 Tire Pressure Transmitter External NL (Large Vehicle) (Optional)	 Tire Pressure Transmitter External SL (Large Vehicle) (Optional)
 Tire Pressure Transmitter with Built-in IL (Large Vehicle) (Optional)	 LCD display (optional)	

3 Connection Method

RS232 Interface Diagram of MD600\MD833H\T633L:

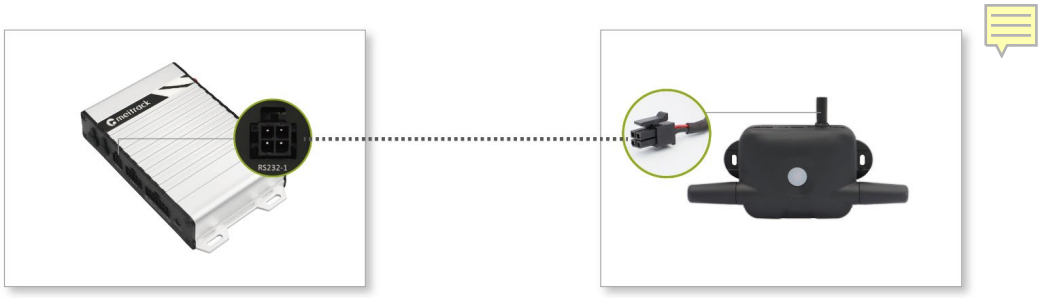


Pin	Color	Function (Tire Pressure Receiver)
1	Red	Power output, output voltage: 5V
2	Black wire	Ground wire
3	Green wire	RX (MD600\MD833H\T633L receives data via this port)
4	White wire	TX (MD600\MD833H\T633L transmits data via this port)

Connection method between MD600\MD833H\T633L and the Tire Pressure Receiver: The receiver's 4-pin connector plugs directly into the device's RS232-1 or RS232-2 port (must be a 4-pin interface).

Note: The device must be connected to an external power supply for the Tire Pressure Receiver to function properly (the indicator light flashes rapidly every few seconds).

The connection diagram is shown below:

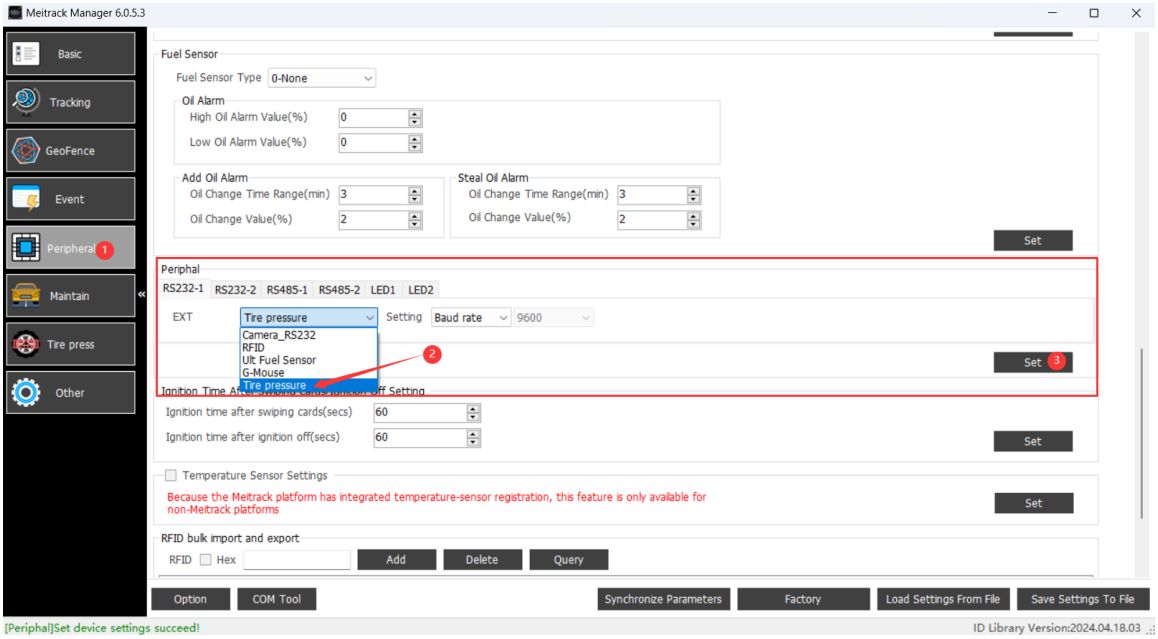


4 Tire Pressure Sensor Configuration

4.1 Using MM to Configure the Tire Pressure Sensor

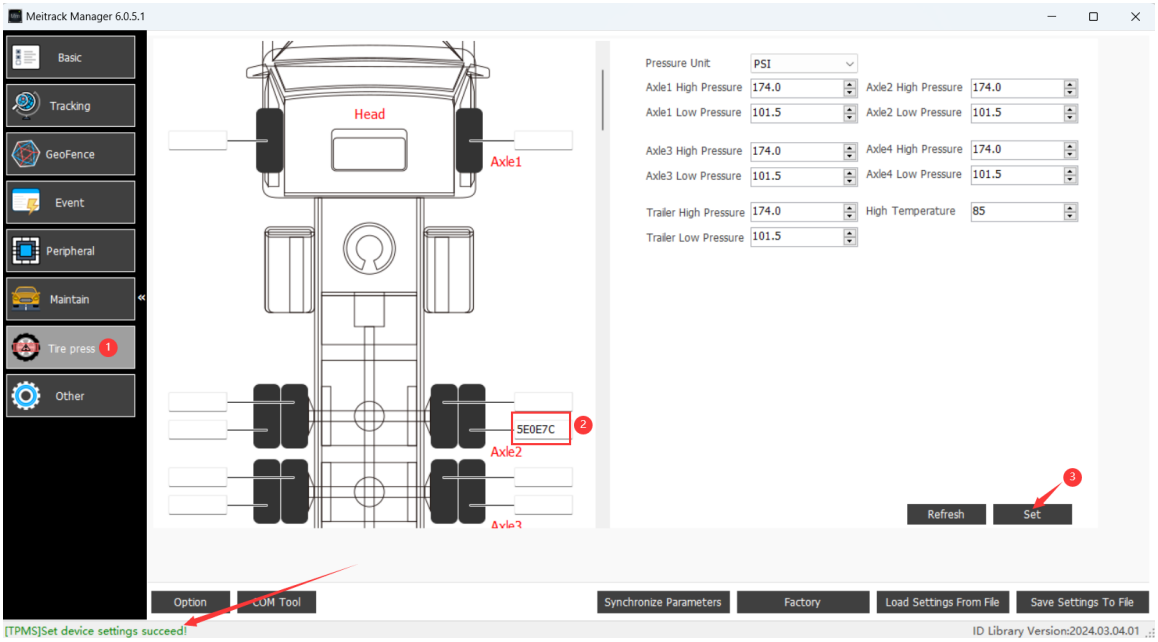
Before configuring the tire pressure sensor, please note the ID printed on the sensor's surface, as shown: the ID number is 5E0E7C.

(1) On the Peripherals settings page, set the RS232 function to Tire Pressure.



(2) On the 'Tire press' page, enter the tire pressure ID number into the corresponding tire location, then click 'Set' to complete the configuration. To unbind, clear the sensor's corresponding ID number and then click 'Set'.

Note: If the tire pressure configuration is successful, the green message '[TPMS]Set device setting succeed!' will appear at the bottom left corner; If the tire pressure configuration fails, the red message '[TPMS]Set device parameter settings failed!' will appear. This indicates that the tire pressure ID was not entered in the correct tire location.

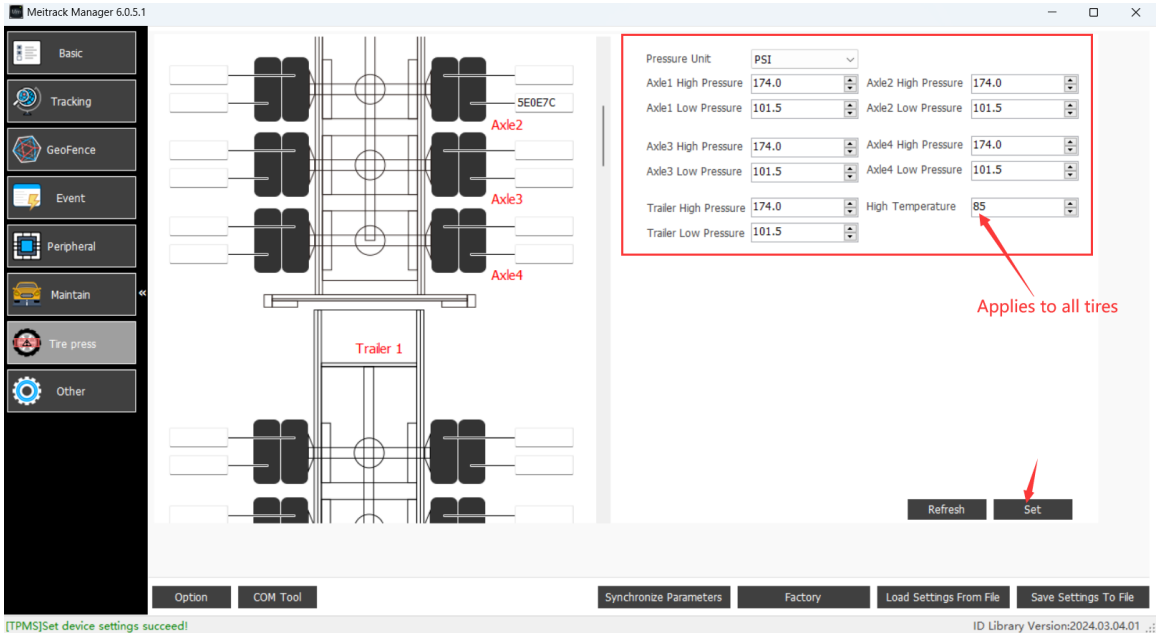


(3) Since the vehicle front is particularly important, alarm values can be set individually for the four axles' tires at the vehicle front. These alarm value settings are located at the upper right corner of the interface. Tire pressure values can be displayed in two selectable units: 'PSI' and 'bar'.

Under normal conditions, tire pressure for large trucks ranges from 7 to 12 bar (101.5 to 174.0 PSI), whereas

for passenger cars it ranges from 2.2 to 2.5 bar (31.9 to 36.25 PSI). Tire pressure values differ slightly depending on the vehicle type and should be configured based on the vehicle's actual specifications. In high-temperature conditions and during extended driving periods, tire temperature can exceed 80°C, resulting in a corresponding increase in tire pressure. Therefore, when setting tire pressure, select the most appropriate tire pressure and temperature alarm values according to the vehicle's actual driving conditions.

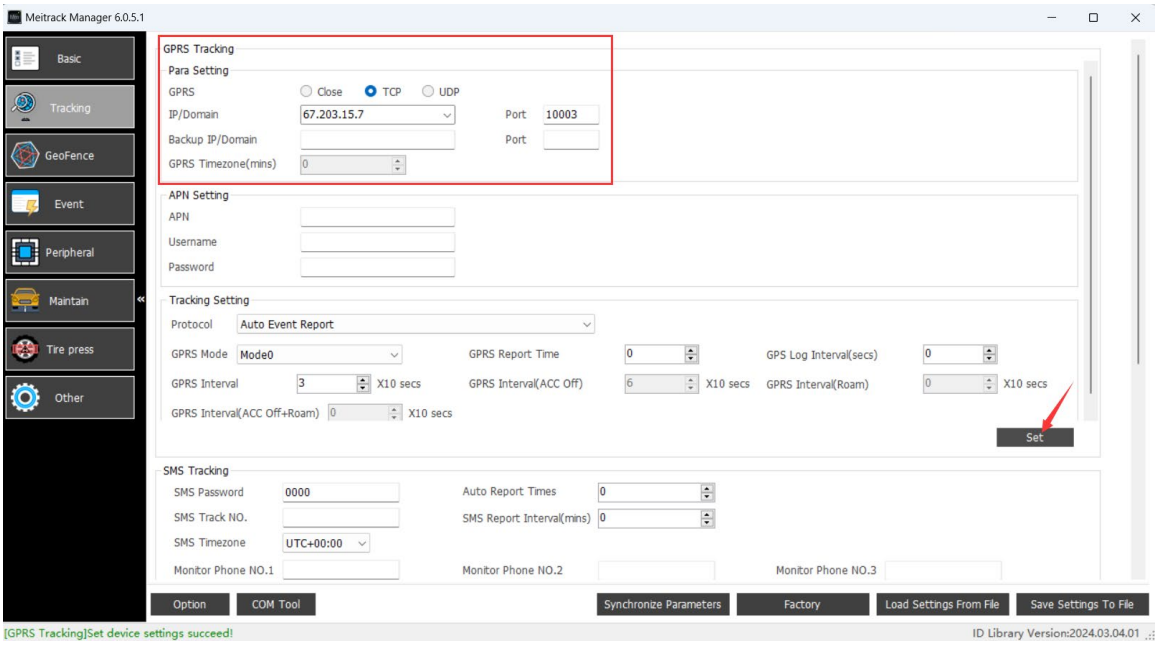
As illustrated below, using a large vehicle as an installation example: bind the tire pressure sensor with ID 5E0E7C to the second tire at the vehicle front, and set the high pressure alarm for the first, second, third, and fourth axles, as well as the trailer, to 12 Bar (174.0 PSI), the low pressure alarm to 7 Bar (101.5 PSI), and the high temperature alarm threshold for all tires to 85℃.



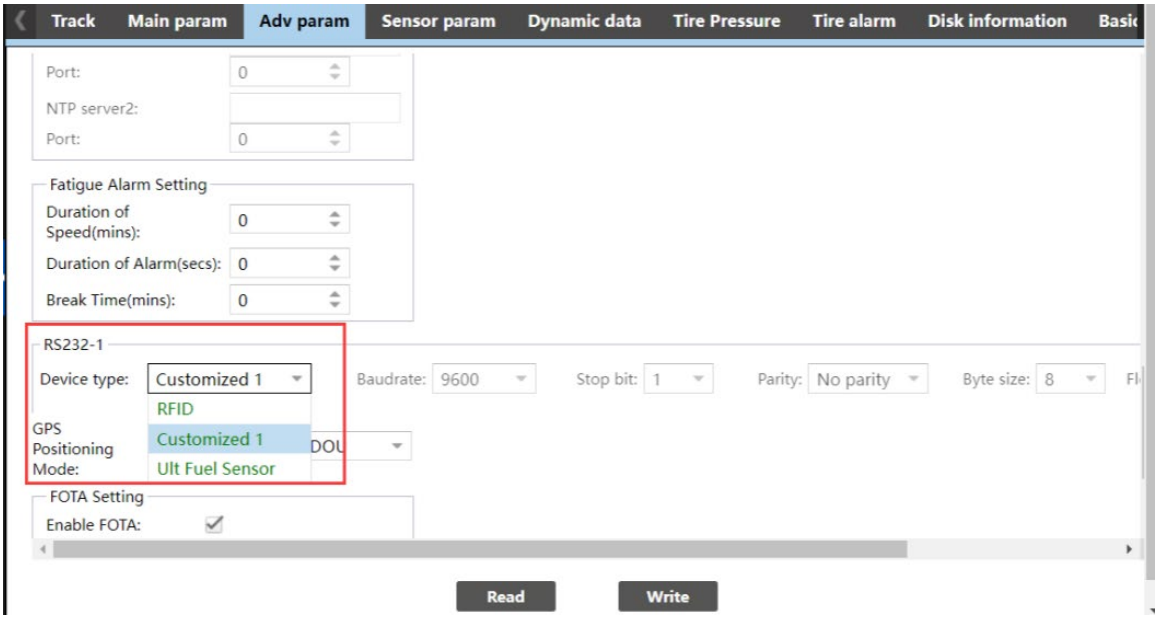
Note: Prior to configuration, ensure the tire pressure receiver is properly installed; otherwise, configuring the tire pressure sensor values will not be possible.

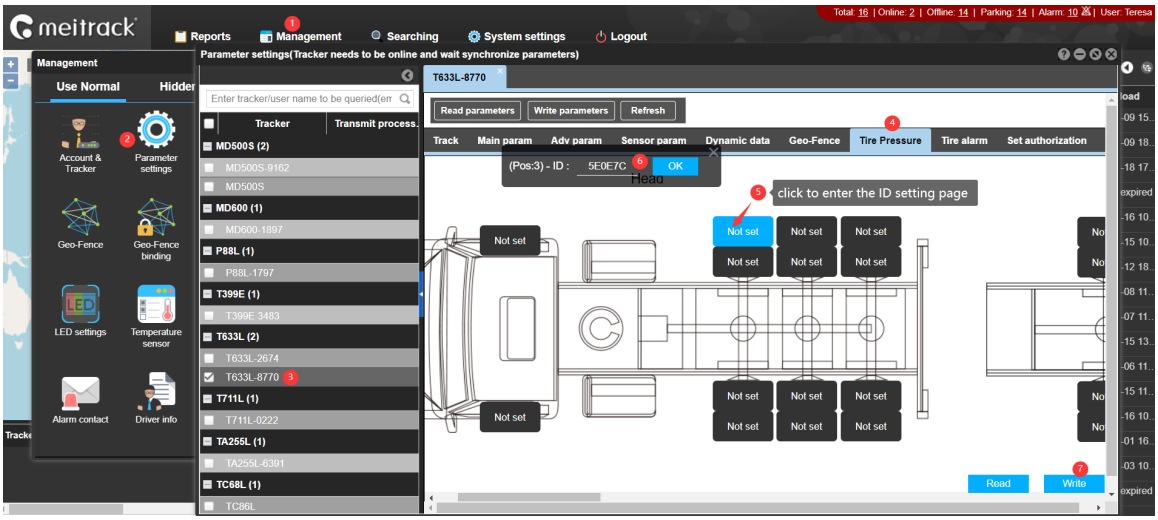
4.2 Use the MS03 platform to configure the tire pressure sensor.

(1) Configure the server IP and port corresponding to the platform within Meitrack Manager. (The port for Tracker devices is 10003, and for MDVR devices, it is 50005.)

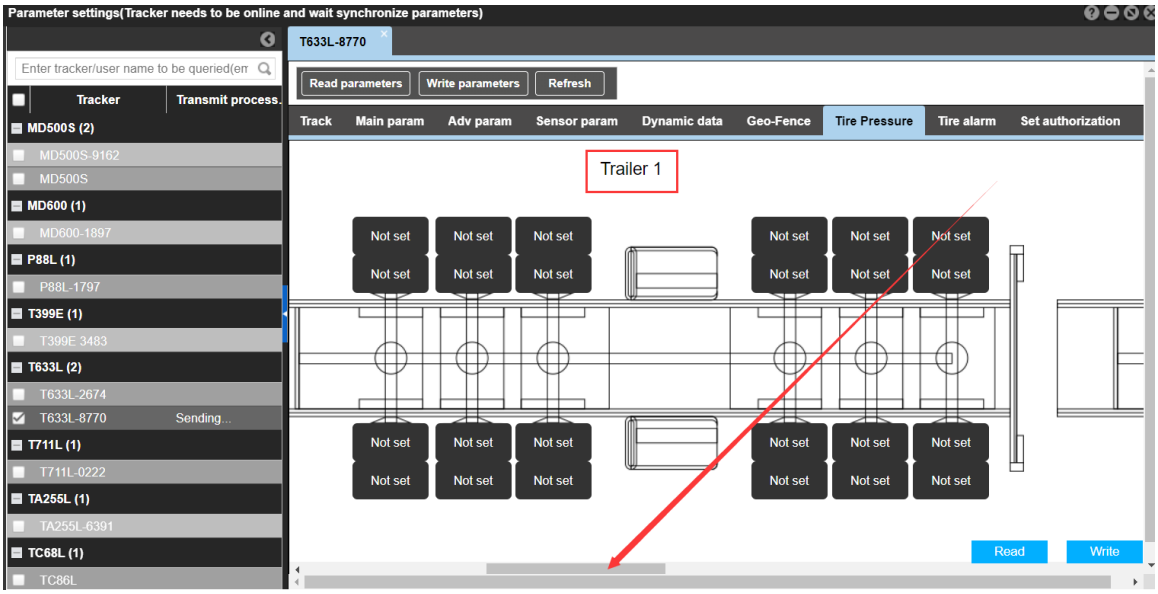


(2) Configuration can commence once the platform indicates the device is online. The settings interface and procedure on the MS03 platform are identical to those in Meitrack Manager. The detailed settings interface is illustrated below:

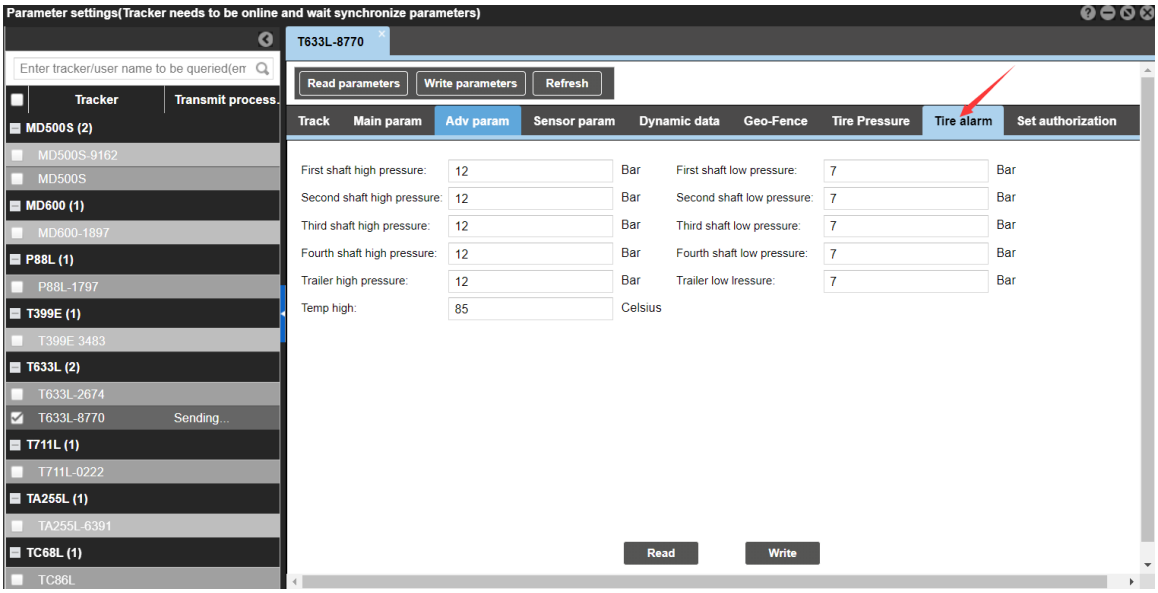




As shown above, the tire pressure sensor with ID 5E0E7C is bound to the second tire at the vehicle front. After binding the vehicle front tires, dragging the navigation bar allows entry to the tire binding interface for Card Slot 1; further dragging grants access to the tire binding interfaces for Card Slots 2, 3, and 4. The configuration method for the card slots is the same as for the vehicle front.

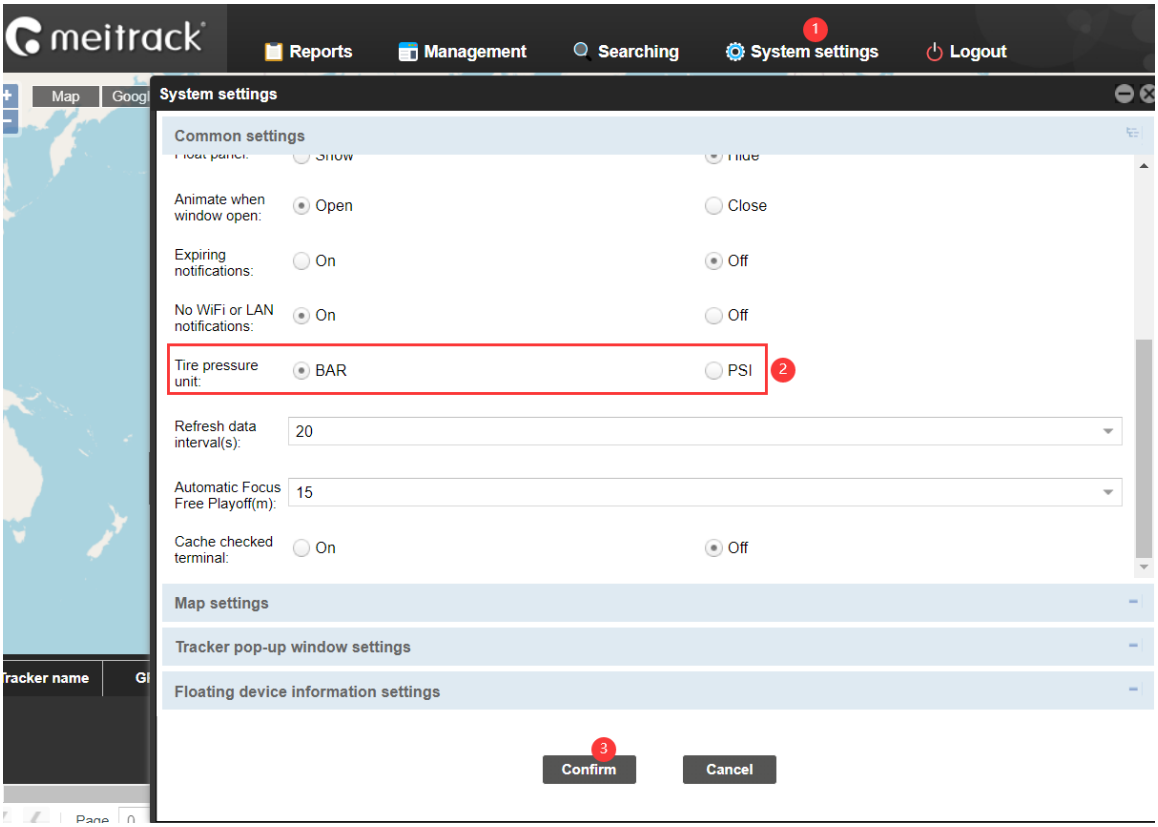


(3) After binding the tire ID, it is necessary to set the alarm value. Click “Tire alarm” to access the alarm value setting interface, as shown below:



Note:

(1) The tire pressure unit on the "Tire alarm" page cannot be changed. To switch to PSI, please go to "System settings".



(2) Configuring the tire pressure sensor on the MS03 platform is identical to using Meitrack Manager. The difference is that Meitrack Manager requires a USB data cable connection, while the MS03 platform allows remote configuration as long as the device remains online.

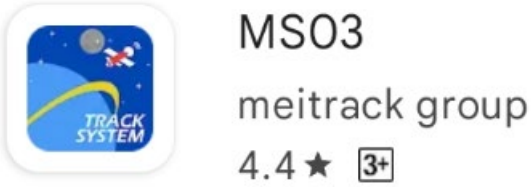
4.3 Configuring the tire pressure sensor using the APP

(1) Download the MS03 mobile APP by scanning the QR code below. (Note: Log in with your MS03 platform

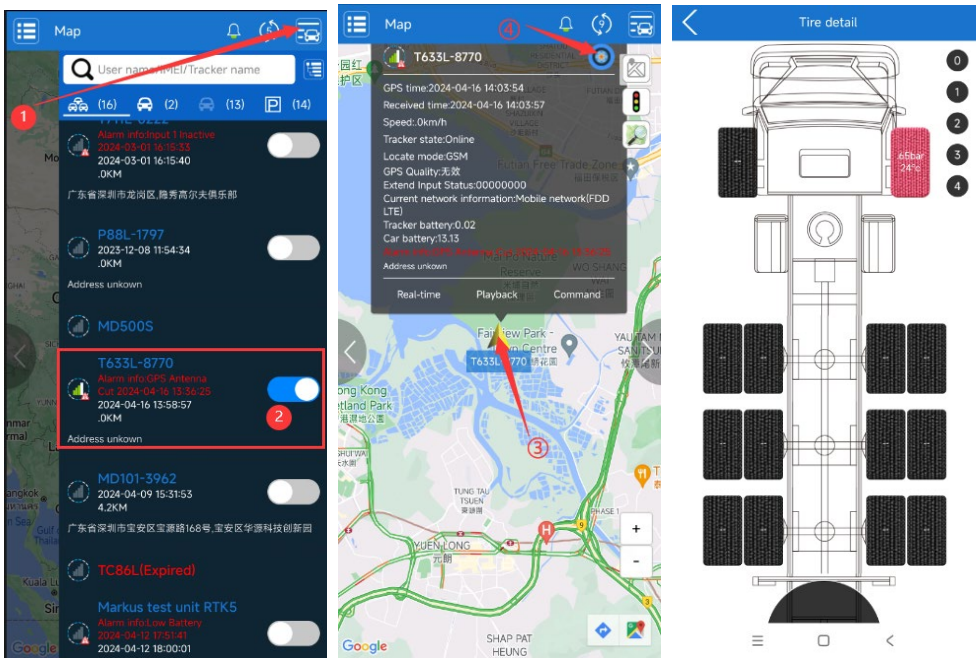
account and password)

Android MS03 QR Code

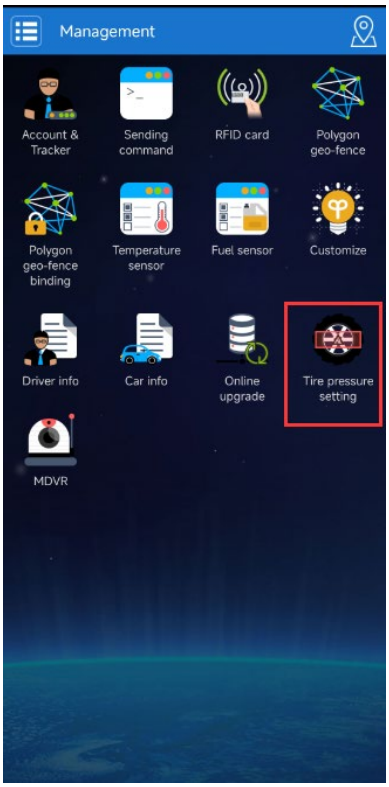
iOS MS03 QR Code

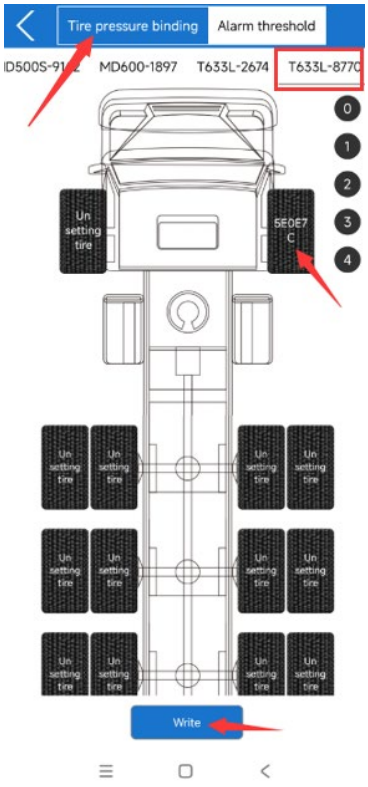


(2) Access the Tire Pressure Sensor configuration page by clicking the icon in the top right corner of the APP homepage. Select the device to be displayed on the map. Tap the Tracker icon to view device information; the top right corner provides access to the tire pressure display page.



(3) Bind the Tire Pressure Sensor ID. Enter the sensor ID corresponding to the tire location to bind the tire pressure sensor to the tire. To switch to another cartridge, simply tap the numeric navigation button on the right side of the screen. For example, tapping button “4” will switch to cartridge 4.





(4) Configure the tire pressure alarm threshold.

5 Install the Tire Pressure Sensor

5.1 Install the Receiver

Ensure that the T333 is powered by an external power supply and that the distance between the receiver and the tire does not exceed 10 meters. If the distance exceeds 10 meters, an external repeater must be used to extend the range.

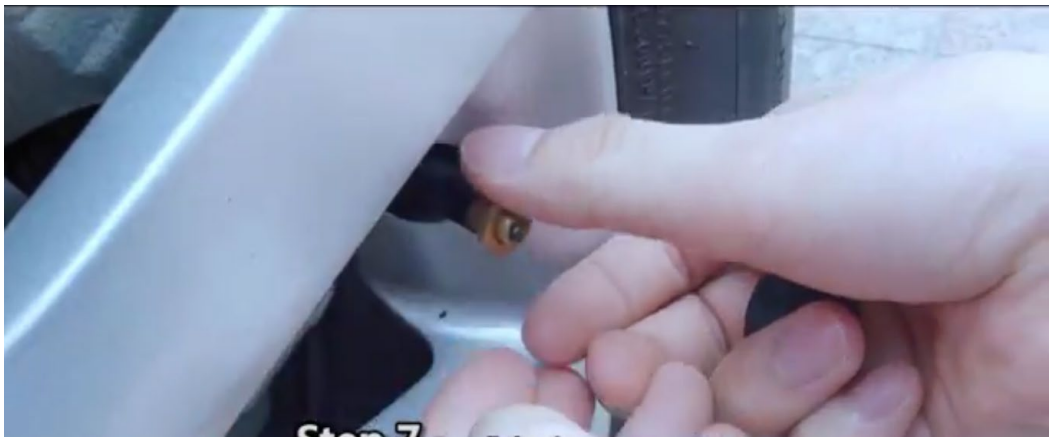
5.2 Install the External Tire Pressure Sensor

The complete installation video for the external tire pressure sensor can be viewed at the following link: https://youtu.be/1jYJGVT0ezw

The installation steps are as follows:

(1) Remove the cap from the wheel valve:

(2) Install the anti-theft nut:



(3) Manually install the external tire pressure sensor:

(4) Use a fixture to tighten the anti-theft nut counterclockwise to prevent theft of the tire pressure sensor.

(5) After installation, drive the vehicle to verify the tire's anti-detachment performance.

5.3 Installation of Built-in Tire Pressure Sensor

Due to the complexity of the built-in tire pressure sensor installation, it must be performed at a 4S dealership or a specialized installation center.

The installation procedure is as follows:

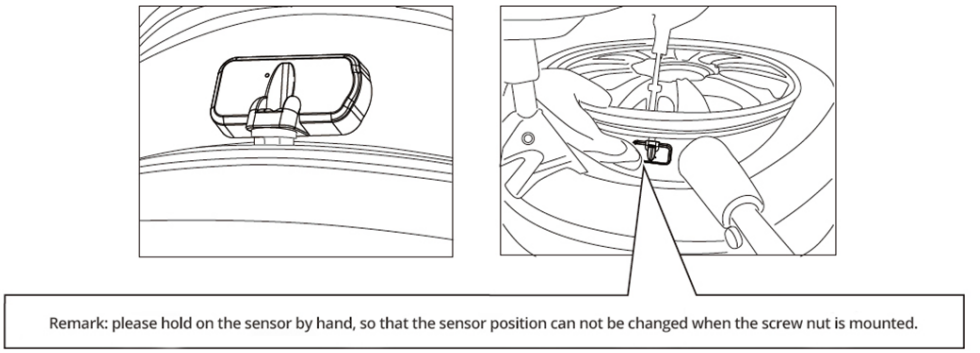
(1) Use professional tools to dismount the tire:

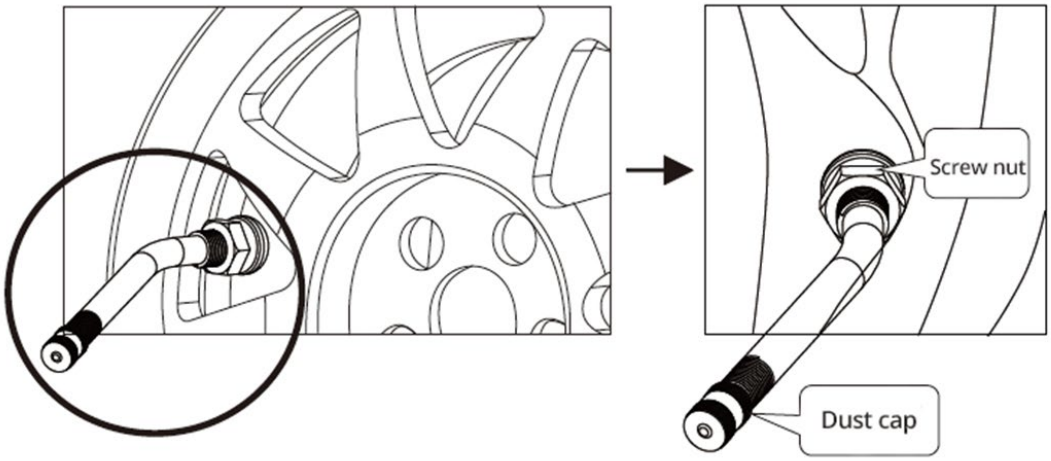
(2) Deflate the tire and place it on the tire changer:

(3) After prying open the tire, use a knife to remove the original valve stem:

(4) Install the sensor wing and valve stem assembly, then securely tighten:

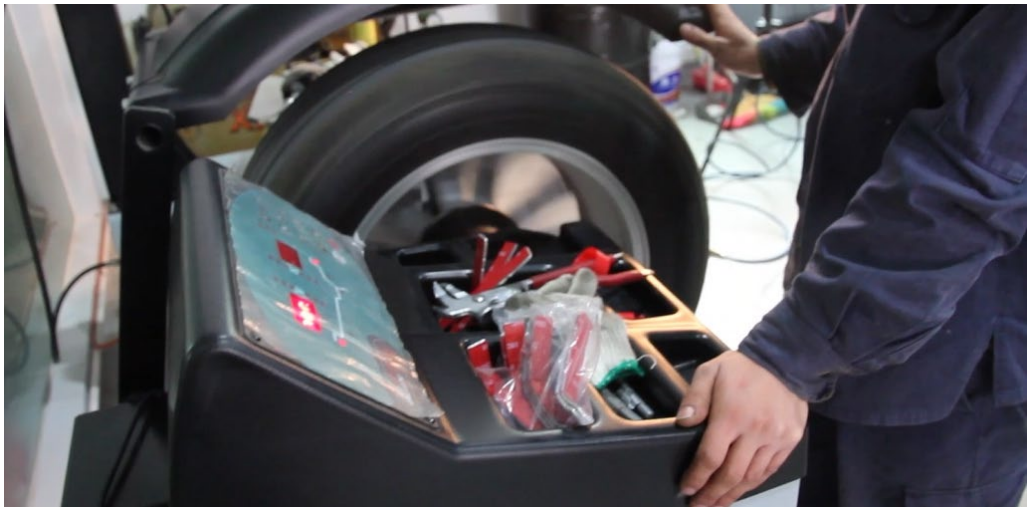
The structural installation schematic is as follows: the wing head faces inward, the valve stem faces outward, and the nut is fastened simultaneously:





(5) After completing the installation, re-inflate the tire to the specified pressure, then conduct dynamic balance testing.

Verify the anti-detachment performance of the tire pressure sensor and ensure the tire can be properly mounted on the vehicle.



5.4 Install the signal relay.

When a truck has multiple cabins, the tire pressure sensor signals may be too distant for the tire pressure receiver at the vehicle front to receive data from the sensors. To enhance signal strength, place the signal relay in the middle cabin of the truck and connect it to a 12V external power supply. This will boost the transmission signal of the tire pressure sensors. Typically, if the transmission distance exceeds 10 meters, installing a repeater is necessary.

An example of the recommended installation location for the signal relay is shown in the figure:

Installation Precautions:

(1) Proximity to the signal source and target device: The signal repeater should be installed as close as possible to both the signal source and the target device to minimize signal transmission distance and reduce signal loss. This ensures optimal signal stability and quality. If the truck body length exceeds 12 meters and the tire pressure sensor on the rear wheels fails to receive data, consider adjusting the position of the tire pressure receiver or installing an additional tire pressure repeater to extend the signal range.

(2) Avoid interference sources: Do not install the device near equipment or power supplies that may cause interference, such as electrical devices with strong electromagnetic emissions or high-voltage power lines.

(3) Ease of maintenance and repair: The installation location should allow maintenance personnel convenient access for inspection and servicing. Avoid installing the repeater in locations that are difficult to reach or operate.

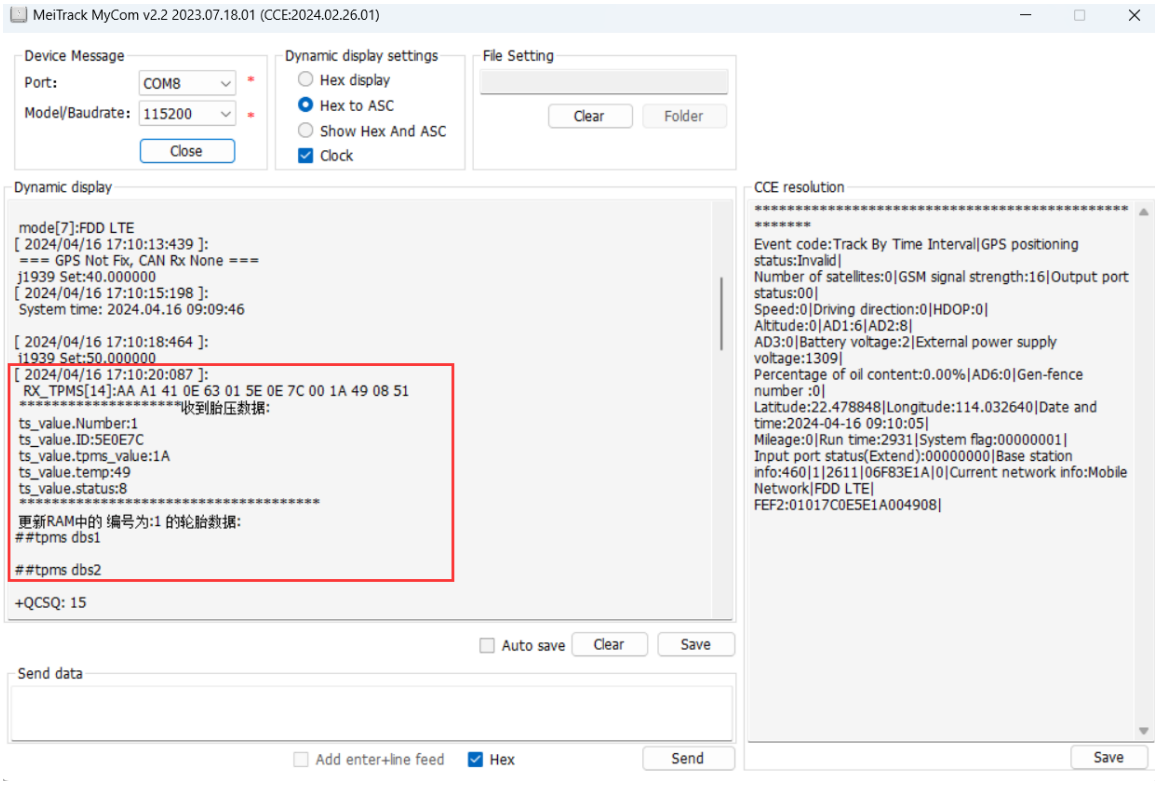
(4) Adequate ventilation: The repeater must be installed in a well-ventilated area to prevent overheating. Excessive heat may lead to reduced device performance or damage.

(5) Protection from moisture and dust: Do not install the repeater in environments prone to dampness or dust accumulation, as this may cause moisture ingress or blockage of ventilation openings, impairing normal operation.

6 View Tire Pressure Alarm Information

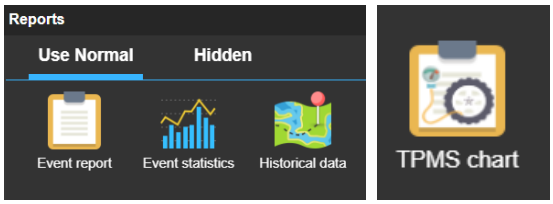
6.1 Use MM to view

Open the COM Tool; if tire pressure data appears in a format similar to the example below, it confirms that the tire pressure connection is successful.

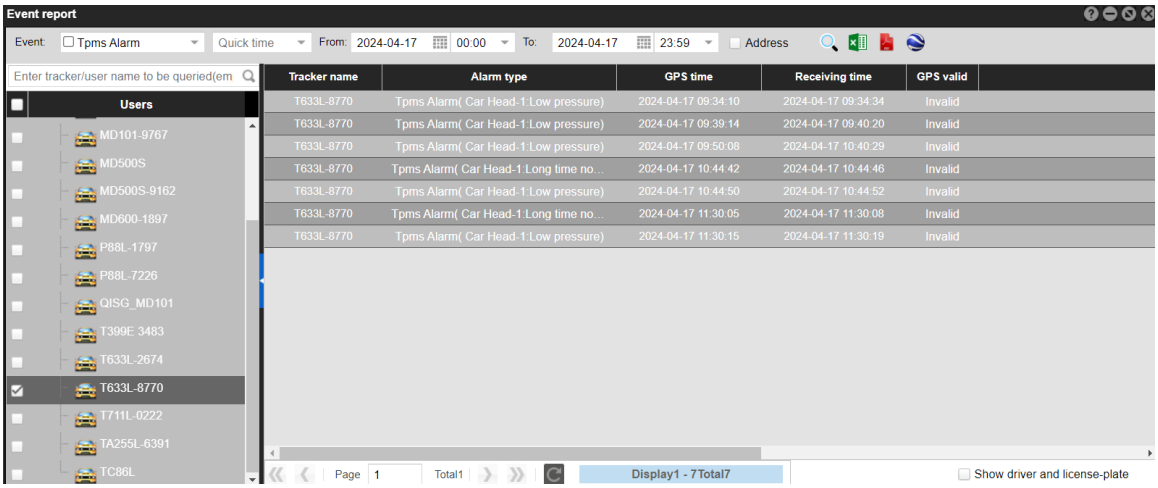


6.2 Use the MS03 platform to view

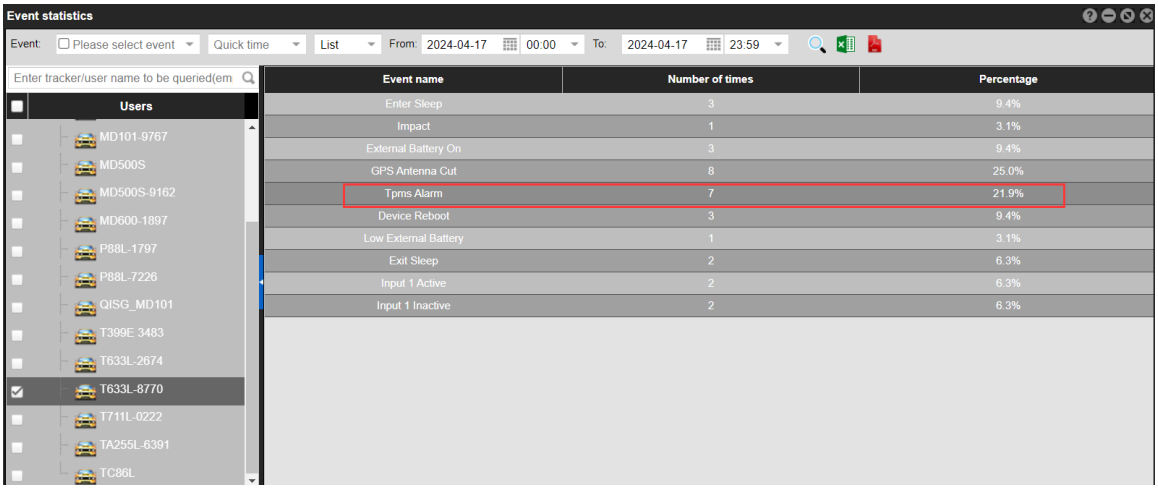
Tire pressure alarm data can be viewed in the 'Event Report,' 'Event Statistics,' 'Historical Data,' and 'Tire Pressure Report' sections. (Note: Only the 'Tire Pressure Report' is displayed as a line chart; the other three reports present data solely in list format.)



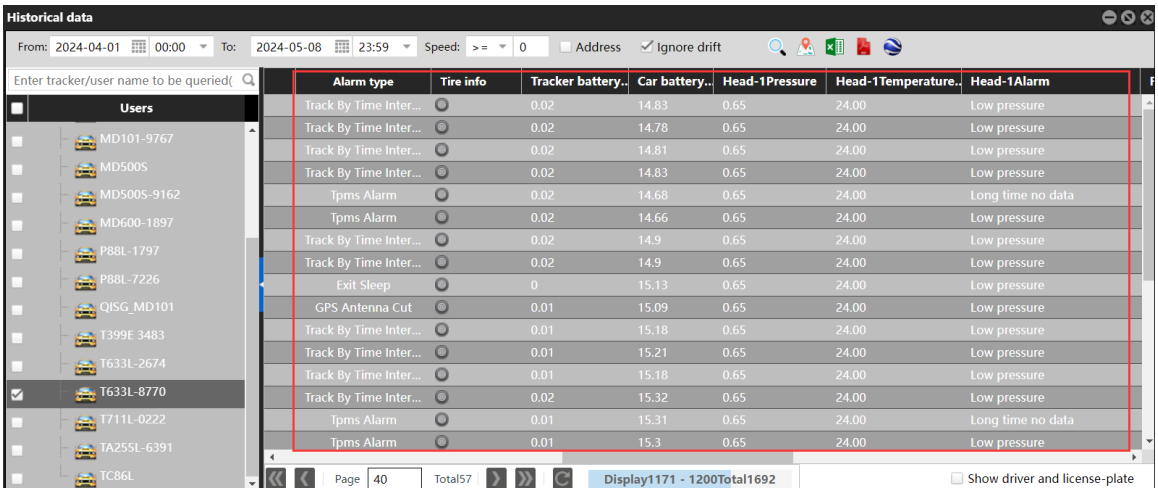
(1) Event Report



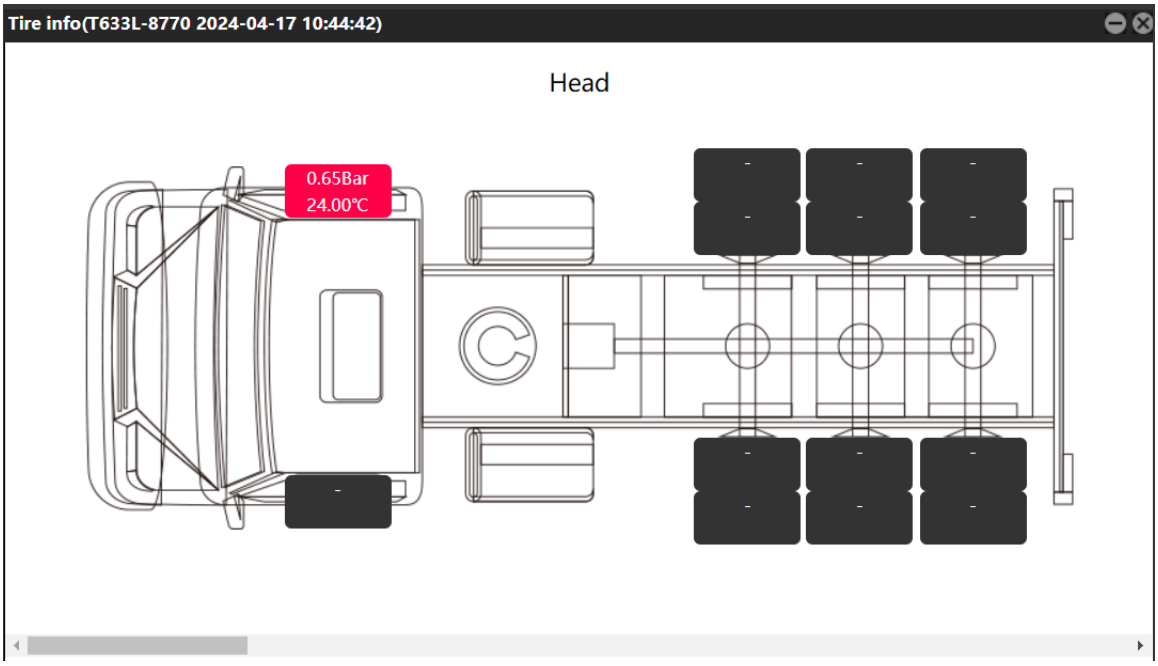
(2) Event Statistics



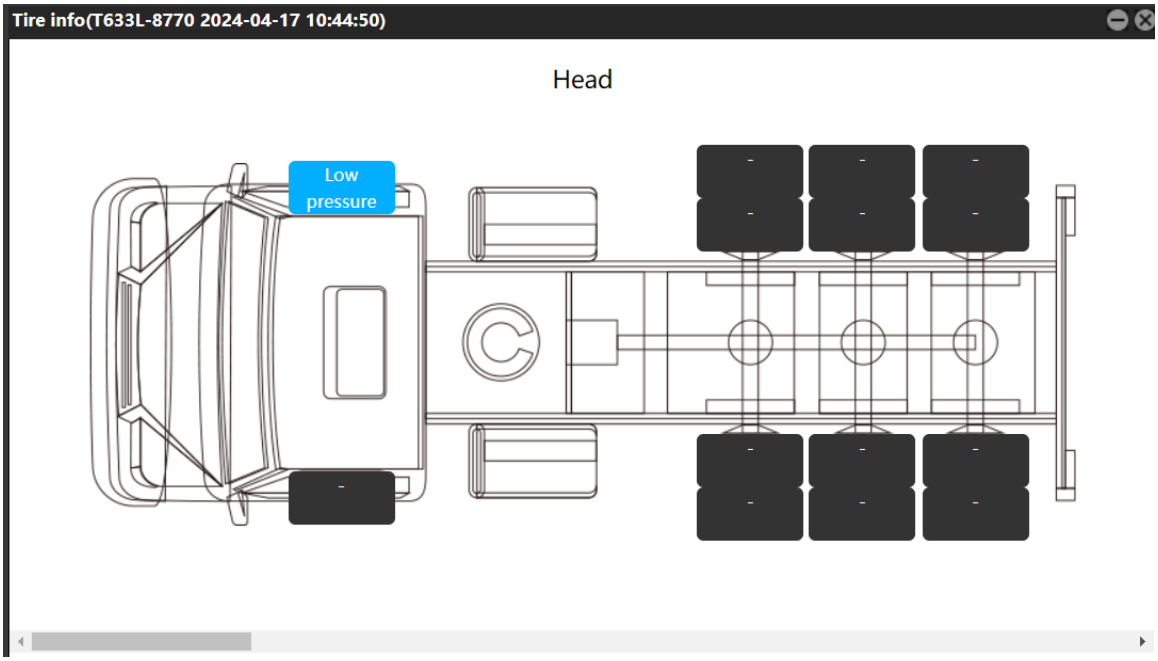
(3) Historical Data

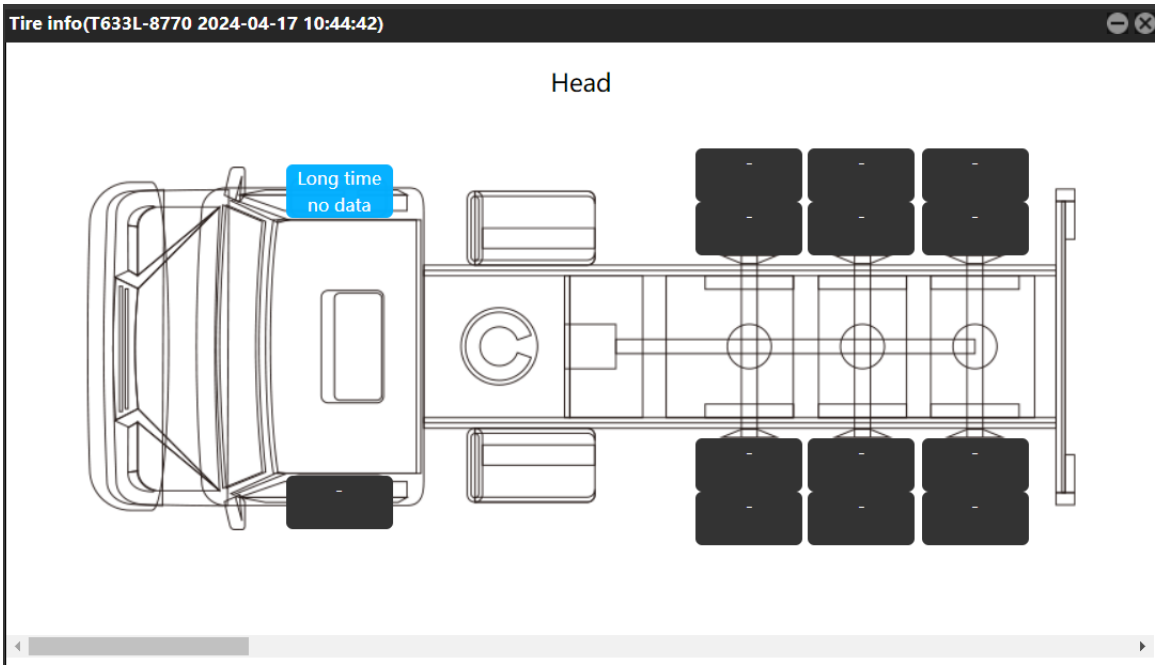


Click the icon in the tire pressure information column  to enter the graphical interface. In this interface, red indicates an alarm, while black indicates normal status.

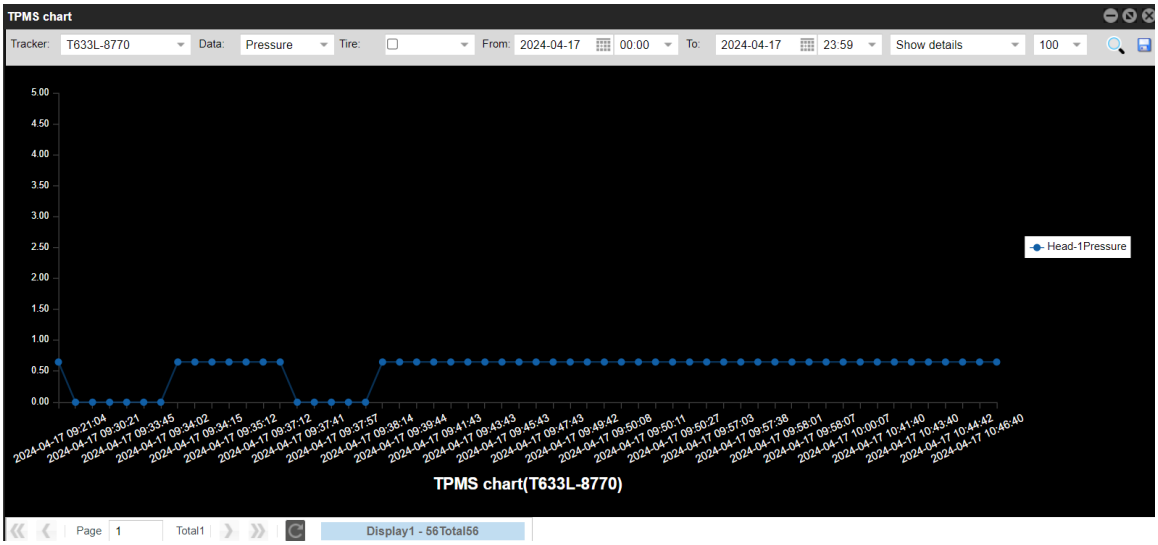


Hover the mouse over the corresponding tire location to display the specific alarm type, such as 'Low Tire Pressure' or 'No data received for an extended period.'





(4) Tire Pressure Report



Note: In addition to the basic tire high pressure, low pressure, and high temperature alarms, there are three additional alarm types based on the rate of tire pressure change:

① When the rate of tire pressure decrease is ≥ 0.2 bar/s, the platform will display a “Rapid Air Leak” alarm event;

② When the rate of tire pressure decrease is between 0.05 bar/s and 0.2 bar/s, the platform will display a “Slow Air Leak” alarm event;

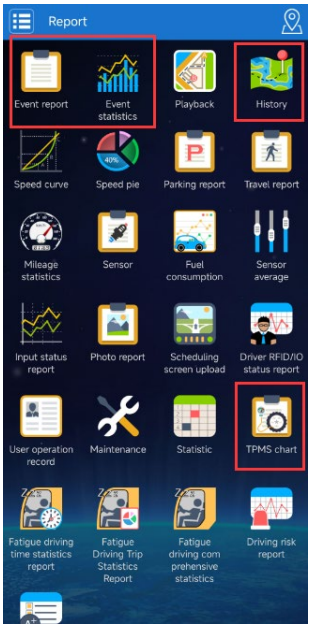
③ When the rate of tire pressure increase is ≥ 0.2 bar/s, the platform will display an “Inflation” alarm event;

Furthermore, when the tire pressure sensor’s battery level is critically low, the platform will display a “Low Battery” alarm for the sensor, indicating that the battery should be replaced.

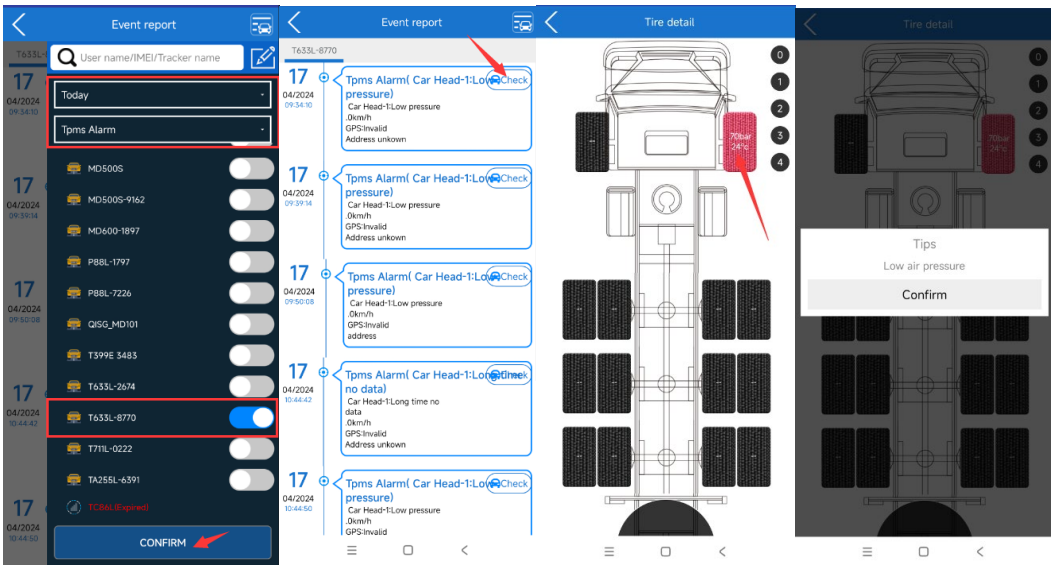
6.3 View via the APP

As with the MS03 platform, the APP provides 'Event Report,' 'Event Statistics,' 'Historical Data,' and 'Tire Pressure Report' sections to view tire pressure alarm information. However, the presentation format differs from

that of the platform.

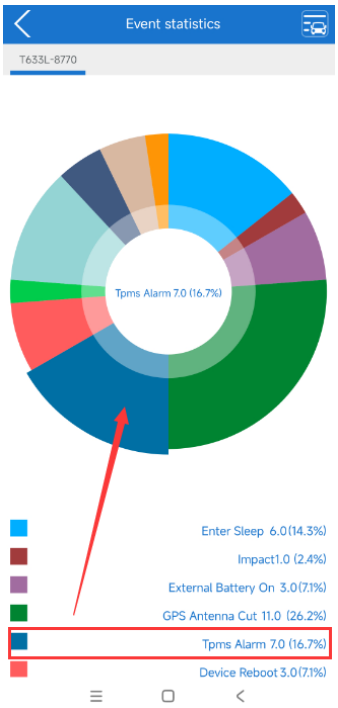


(1) Event Report



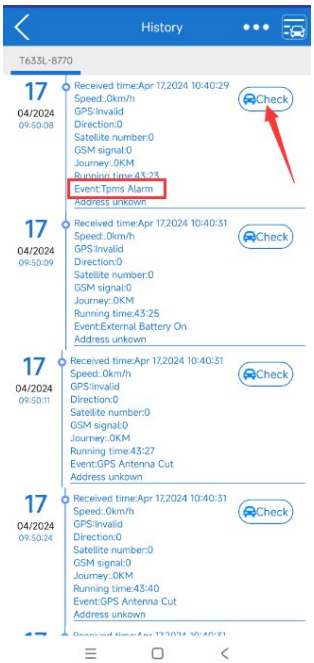
Note: Clicking 'Check' will open the tire pressure information page, where red indicates an alarm and black indicates normal status. Clicking on the color will display the specific alarm type.

(2) Event Statistics

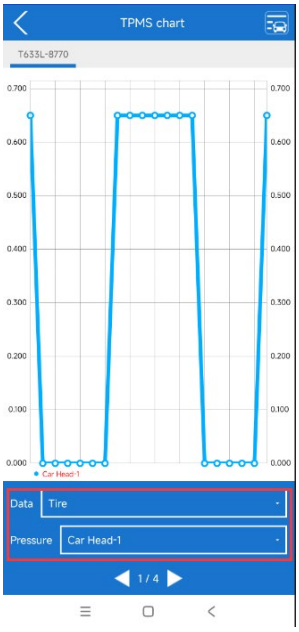


Note: Click the upper right corner to select the desired date and alarm event type; the graph will update accordingly.

(3) Historical Data



(4) Tire Pressure Report



7 Viewing tire pressure sensor data and alarm information using the dedicated display

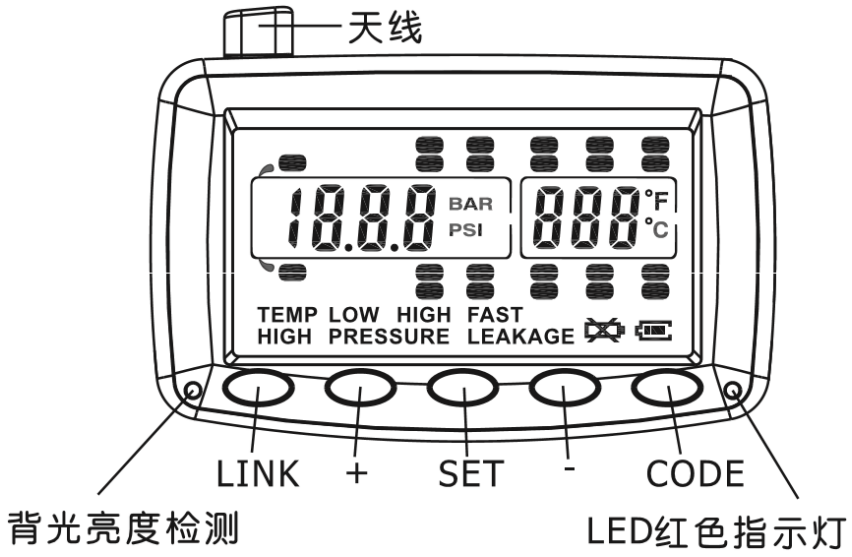
Besides the WEB platform and APP, the dedicated display can also directly receive tire pressure sensor data after completing the pairing code configuration.

7.1 Display Screen Overview

(1) The display screen contains a built-in battery and can be charged via an external power supply.

(2) If the display screen remains stationary without vibration for 10 minutes, it will automatically enter sleep mode to conserve power. It will wake and resume data reception upon detecting vibration.

(3) Structural Diagram:



(4) Function Buttons:

Item	Name	Function Description
1	Power Switch	Located on the left side of the display screen, used to power the device on or off.
2	LINK	Used to clear the configured Tire Pressure Sensor ID.
3	SET	"Confirm" Button
4	CODE	Used for pairing code configuration.
5	+ or - Buttons	Used to select the Tire Pressure Sensor ID.

(5) Display Charging:

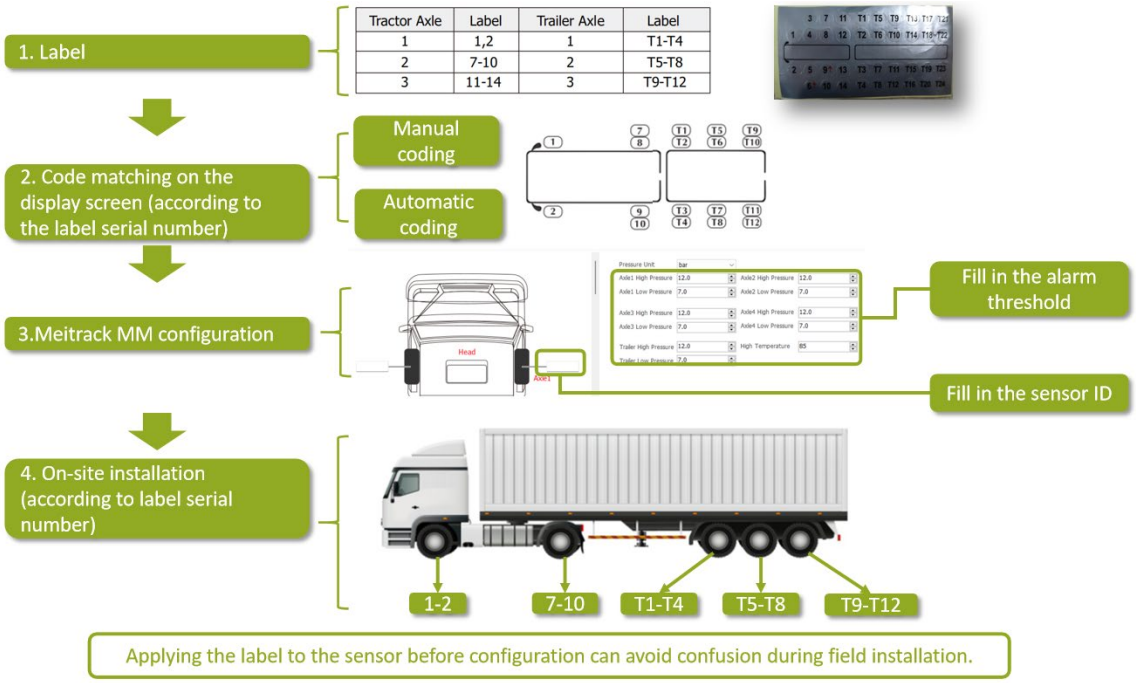
The display is equipped with a built-in rechargeable lithium battery. After a full charge, it can operate for approximately 40 hours. The battery level is indicated by four display levels. When the display shows  When charging, please use the original charger. It takes approximately 2.5 hours to fully charge. For extended parking periods, please disconnect the charger from the vehicle power supply.

Note: Please charge the display screen in an environment between 0℃ and 45℃.

7.2 Display Screen Configuration

To verify which tire pressure sensors' data are shown on the display screen, pairing code configuration must be performed.

7.2.1 Configuration Procedure



Note:

It is recommended to label the tire pressure sensors and complete the pairing code configuration indoors before installing the sensors on the tires. The reasons are as follows:

(1) Tire Location Identification: Labeling allows identification of the tire location where each tire pressure sensor is installed. This is crucial to ensure that each sensor is properly installed at its corresponding tire location, allowing the subsequent pairing and monitoring processes to accurately identify and display the tire pressure information for each tire.

(2) Minimize confusion: When multiple tire pressure sensors on the vehicle require pairing, labels help prevent confusion and ensure each sensor is correctly matched to its respective tire location.

(3) Facilitate maintenance: Labels can record essential information such as installation date, sensor model, and manufacturer details, aiding future maintenance and servicing. This is especially important when sensors need to be replaced or adjusted, enabling rapid and precise identification of each sensor.

(4) Safety: By means of the label, the vehicle owner or maintenance personnel can readily access the tire pressure sensor information for each tire, thereby ensuring safe driving and proper vehicle maintenance.

Therefore, affixing the label prior to completing the pairing process is a simple yet effective measure that enhances the accuracy and reliability of pairing, while also supporting future vehicle maintenance and management.

7.2.2 Automatic Pairing Code Configuration

In standby mode, press and hold the display CODE key for approximately 3 seconds. Release upon hearing a

"Bi" sound. The system will enter pairing mode, and the tires requiring pairing will flash. Use the + or - keys to select the tire location to be paired. Position the bottom of the display close to the sensor to be paired, then press the CODE key to activate the sensor for pairing. The LCD will display "lDLF" (the letters LF along with the corresponding tire icon), and the red LED indicator will remain illuminated. Once the display receives the sensor's ID code, the 6-digit ID code will appear on the LCD, the red LED indicator will turn off, and the buzzer will emit a long "Bi" sound, indicating successful pairing and automatic saving of the ID code. If no ID code is received within 6 seconds, two "Bi, Bi" sounds will be emitted, the red LED indicator will remain off, and "id Err" will be displayed on the LCD, indicating pairing failure. At this time, please rotate the sensor or the display, or bring the bottom of the display closer to the sensor to be paired, then press the CODE key again to complete the pairing. Press the + key to select the next tire to be paired and pair it using the same method. If a duplicate code is detected during pairing, the previous identical ID code will be automatically deleted. After all ID codes are successfully paired, do not press any key for approximately 3 minutes to exit the setting mode, or press and hold the CODE key for 3 seconds until you hear a 'Bi' sound, then release to return to normal working condition.

When the corresponding wheel is selected, the appearance of the ID number indicates successful pairing. If 'ID ERR' appears, it indicates pairing failure and requires re-operation.

Note: Please ensure that other sensors maintain a distance of more than 1 meter from the sensor being paired to avoid mistakenly pairing with other sensors' ID codes. If a previously paired tire ID code is mistakenly paired again during the process, the previous identical ID code will be automatically cleared, retaining the newly paired tire ID code.

7.2.3 Manual Pairing

In standby mode, press and hold the Display CODE key for approximately 6 seconds. When the first 'Bi' sound is heard, continue holding the button; release it upon hearing the second 'Bi' sound. The system will then enter manual code setting mode. The current tire ID code will be shown on the display screen. Use the ± or - keys to select the tire to be configured. Press the SET key to confirm the selected tire. Next, press the CODE key to switch between digits of the six-digit ID code. Use the + or - keys to adjust the value of the selected digit. After setting the tire ID code, press the SET key to save it. Press the + key to select the next tire to configure and repeat the process. Once all ID codes have been entered, either refrain from pressing any key for approximately 3 minutes to exit the setting mode automatically, or press and hold the CODE key for 3 seconds until a 'Bi' sound is heard, then release to return to normal working condition.

7.2.4 Remove ID Code

Deletion in ID Code Search Mode: (Single ID Code Deletion):

In standby mode, briefly press the Display CODE key. When a 'Bi' sound is heard, the system enters the ID code

search mode interface. Use the + or - key to select the tire location to delete. Press and hold the SET key for 3 seconds. The display will emit two 'Bi' sounds, indicating the tire ID code has been deleted (the deletion is saved automatically). If no key is pressed for approximately 3 minutes, the system will automatically exit the setting mode, or briefly press and release the CODE key after hearing a 'Bi' sound to return to normal working condition.

~Deletion in Pairing Code Mode: (Single ID Code Deletion):

In standby mode, press and hold the Display CODE key for about 3 seconds. When a 'Bi' sound is heard, release the key. The system enters the pairing code mode interface. Use the + or - key to select the tire location to delete. Press and hold the SET key for 3 seconds. The display will emit two 'Bi' sounds, indicating the tire ID code has been deleted (the deletion is saved automatically). If no key is pressed for approximately 3 minutes, the system will automatically exit the setting mode, or press and hold the CODE key for 3 seconds and release after hearing a 'Bi' sound to return to normal working condition.

~One-Key Remove All:

In standby mode, briefly press the Display CODE key. When a “Bi” sound is heard, the system enters the ID code search mode interface. Press and hold the LINK key for 3 seconds until a “Bi” sound is heard, then release. The display will show “DEL ALL,” indicating that all tire IDs will be deleted. Briefly press the SET key to delete all tire ID codes; simultaneously, the display will emit a continuous “Bi..” sound for 3 seconds and then return to normal working condition. Briefly pressing the CODE key will cancel the deletion and exit the ID code search mode, or if no key is pressed for approximately 3 minutes, the system will automatically exit to normal working condition.

7.2.5 Restore Factory Settings

While in shutdown, press and hold the Display SET key to power on. When a “Bi” sound is heard, release the key. The display will restore the factory alarm parameter settings, while the original tire ID code information remains unchanged.

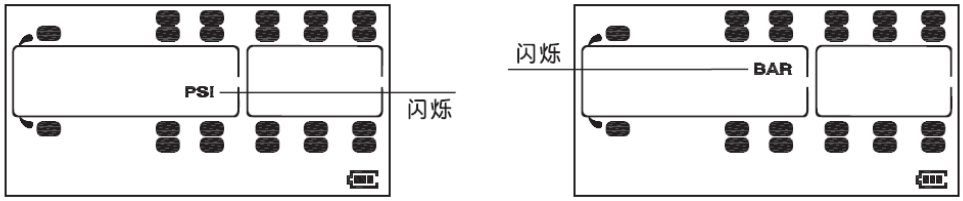
After restoring factory settings, the relevant parameters are as follows:

Pressure Unit:	PSI
High Pressure Alarm Value:	175PSI(12.1 BAR)
Low Pressure Alarm Value:	100PSI(6.9 BAR)
Temperature Unit:	°C
High Temperature Alarm Value:	70°C(158°F)

7.2.6 Configure high temperature, high pressure, and low pressure alarm values.

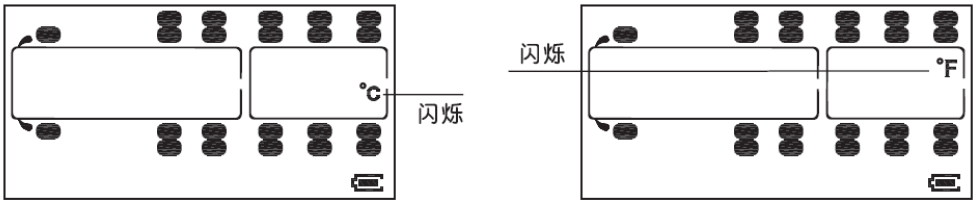
After powering on, press and hold the SET key. Release it upon hearing a “Bi” sound to configure the high temperature, low temperature, high pressure, and low pressure alarms for each cabin.

Pressure Unit:



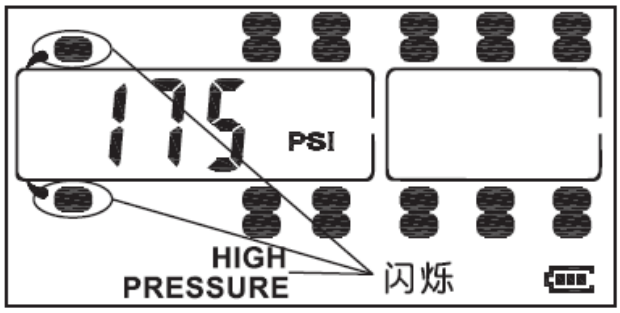
Press the + or - key to select the desired pressure unit.

Temperature Unit:

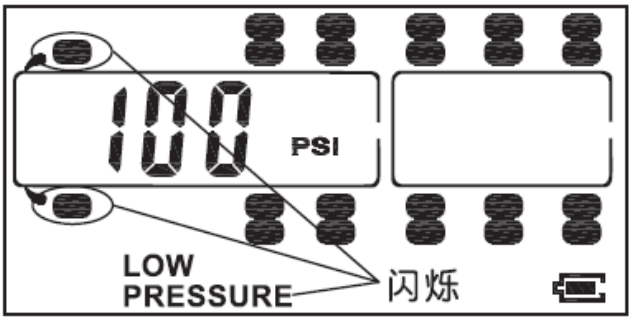


Press the + or - key to select the desired temperature unit.

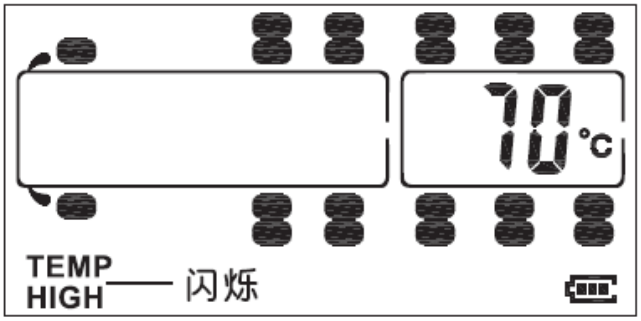
High Pressure Alarm:



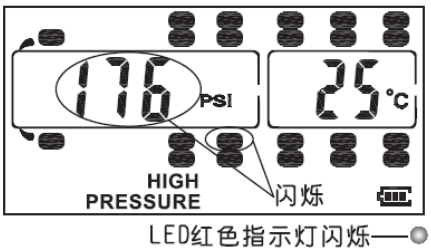
Low Pressure Alarm:

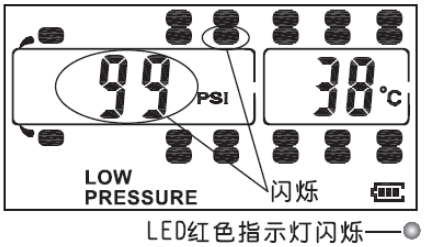


High Temperature Alarm Value:

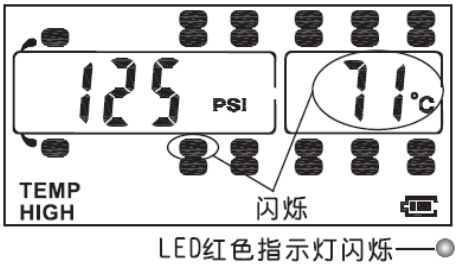


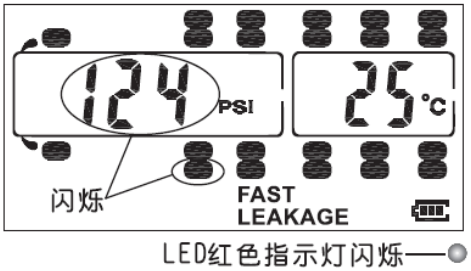
7.2.7 View related alarms.



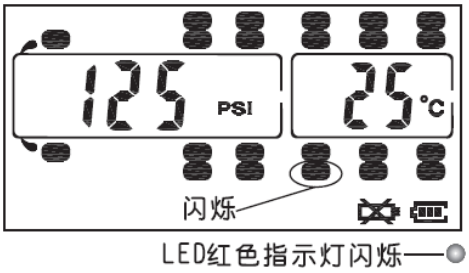


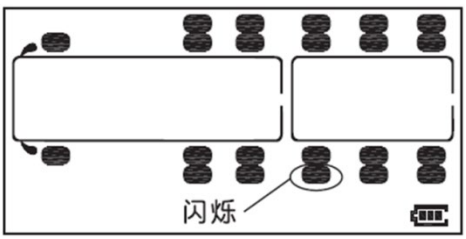
High Pressure Alarm: The red LED and the corresponding tire will flash. Low Pressure Alarm: LED red light and corresponding tire flashing





High Temperature Alarm: LED red light and corresponding tire flashing Rapid Air Leak Alarm: LED red light and corresponding tire flashing





Sensor Low Battery Alarm: LED red light and corresponding tire flashing Data Reception Failure Alarm: corresponding tire flashing

8 Common Tire Pressure Commands

8.1 Retrieve All Alarm Parameters of Tire Pressure Sensor – DA0

GPRS Configuration Method	DA0
GPRS Configuration Response	DA0, <First Axle High Pressure Threshold><First Axle Low Pressure Threshold><Second Axle High Pressure Threshold><Second Axle Low Pressure Threshold><Third Axle High Pressure Threshold><Third Axle Low Pressure Threshold><Fourth Axle High Pressure Threshold><Fourth Axle Low Pressure Threshold><Trailer High Voltage Threshold><Trailer Low Voltage Threshold><High Temperature Threshold>
Note	First Axle High Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar First Axle Low Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Second Axle High Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Second Axle Low Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Third Axle High Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Third Axle Low Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Fourth Axle High Pressure Threshold: Hexadecimal unsigned format, 1 byte; actual value = transmission value ÷ 10; unit: Bar Fourth Axle Low Pressure Threshold: Hexadecimal unsigned format, 1 byte; actual value = transmission value ÷ 10; unit: Bar Trailer High Pressure Threshold: Hexadecimal unsigned format, 1 byte; actual value = transmission value ÷ 10; unit: Bar Trailer Low Pressure Threshold: Hexadecimal unsigned format, 1 byte; actual value = transmission value ÷ 10; unit: Bar High Temperature Threshold: Hexadecimal unsigned format, 1 byte; actual value = transmission value minus 50; unit: °C
Example	
GPRS Transmission Content	@@Q25,863835020877432,DA0*72\r\n
GPRS Configuration Response	$$Q90,863835020877432,DA0,02080010000000000004576*46\r\n

8.2 Retrieve All Bound Tire Pressure Data – DA1

GPRS Uplink	DA1

GPRS Downlink	DA1, <Location1><ID1><Tire Pressure1><Temperature1><Status1>……<LocationN><IDN><Tire PressureN><TemperatureN><StatusN>
Note	Location: denotes the tire location, represented by 1 unsigned byte in hexadecimal format; Bits 7 to 5 indicate the card number: 000(B): Vehicle Front, 001(B): Trailer 1, 010(B): Trailer 2, 011(B): Trailer 3, 100(B): Trailer 4. Bits 4 to 0 indicate the tire index on a specific card; for example, 00001(B) represents the first tire. ID: Tire Pressure Sensor ID, 4 bytes in unsigned hexadecimal format. Tire Pressure: 2 bytes unsigned hexadecimal format; actual value = (transmission value × 0.025) Bar Temperature: 1 byte unsigned hexadecimal format; actual value = (transmission value − 50) °C Status: 1 byte unsigned hexadecimal format BIT7: Transmitter Battery Voltage Status; 0 indicates normal battery voltage, 1 indicates low battery voltage BIT6: Set to 1 if no data is received from the transmitter for an extended period (15 minutes) BIT5: Reserved BIT4: 1 indicates high tire pressure BIT3: 1 indicates low tire pressure BIT2: 1 indicates high temperature; 0 indicates normal temperature BIT1~BIT0: 00 = normal; 01 = rapid air leak; 10 = slow air leak; 11 = inflation Note: A maximum of 64 tire data entries are supported; that is, the maximum value of N is 64.
Example	
GPRS Transmission Content	@@Q25,863835020877432,DA1*82\r\n
GPRS Configuration Response	$$Q90,863835020877432,DA1,020800100000000000000711010000000000000061001000000000000501010000000000000040001000000000000031100000000000000010185A000000BC*46\r\n

8.3 Retrieve data for a specific tire – DA2

GPRS Uplink	DA2, Location
GPRS Downlink	DA2, <Location><ID><Tire Pressure><Temperature><Status>
Note	Location: denotes the tire location, represented by 1 unsigned byte in hexadecimal format; Bits 7 to 5 indicate the card number: 000(B): Vehicle Front, 001(B): Trailer 1, 010(B): Trailer 2, 011(B): Trailer 3, 100(B): Trailer 4. Bits 4 to 0 indicate the tire index on a specific card; for example, 00001(B) represents

	the first tire. ID: Tire Pressure Sensor ID, 4 bytes in unsigned hexadecimal format. Tire Pressure: 2 bytes unsigned hexadecimal format; actual value = (transmission value × 0.025) Bar Temperature: 1 byte unsigned hexadecimal format; actual value = (transmission value − 50) °C Status: 1 byte unsigned hexadecimal format BIT7: Transmitter Battery Voltage Status; 0 indicates normal battery voltage, 1 indicates low battery voltage BIT6: Set to 1 if no data is received from the transmitter for an extended period (15 minutes) BIT5: Reserved BIT4: 1 indicates high tire pressure BIT3: 1 indicates low tire pressure BIT2: 1 indicates high temperature; 0 indicates normal temperature BIT1~BIT0: 00 = normal; 01 = rapid air leak; 10 = slow air leak; 11 = inflation
Example	
GPRS Transmission Content	@@g27,863835020877432,DA2,01*C8\r\n
GPRS Configuration Response	$$g35,863835020877432,DA2,010185R000000K@*F2\r\n

8.4 Remove tire – DA3

GPRS Uplink	DA3, <Location1> … <LocationN>
GPRS Downlink	DA3, <Location1> … <LocationN>, OK
Note	Location: denotes the tire location, represented by 1 unsigned byte in hexadecimal format; Bits 7 to 5 indicate the card number: 000(B): Vehicle Front, 001(B): Trailer 1, 010(B): Trailer 2, 011(B): Trailer 3, 100(B): Trailer 4. Bits 4 to 0 indicate the tire index on a specific card; for example, 00001(B) represents the first tire. Note: 1. The maximum value of N is 64. 2. The response returns the tire locations that were successfully removed.
Example	
GPRS Transmission Content	@@i27,863835020877432,DA3,0A*22\r\n
GPRS Configuration Response	$$i34,863835020877432,DA3,0A,OK*56\r\n

8.5 Retrieve multiple tire data – DA4

GPRS Uplink	DA4, <Location1><ID1> … <LocationN><IDN>
GPRS Downlink	DA4, <Location1><ID1> … <LocationN><IDN>, OK
Note	Location: denotes the tire location, represented by 1 unsigned byte in hexadecimal format; Bits 7 to 5 indicate the card number: 000(B): Vehicle Front, 001(B): Trailer 1, 010(B): Trailer 2, 011(B): Trailer 3, 100(B): Trailer 4. Bits 4 to 0 indicate the tire index on a specific card; for example, 00001(B) represents the first tire. ID: Tire Pressure Sensor ID, 4 bytes in unsigned hexadecimal format. Note: A maximum of 64 tire data entries are supported; that is, the maximum value of N is 64. The response returns the tire locations and IDs that were successfully bound.
Example	
GPRS Transmission Content	@@\31,863835020877432,DA4,9800100100*62\r\n
GPRS Configuration Response	$$\59,863835020877432,DA4,0210000000!0100000080010010 0C11000000980010010 0010185R00,OK*A4\r\n

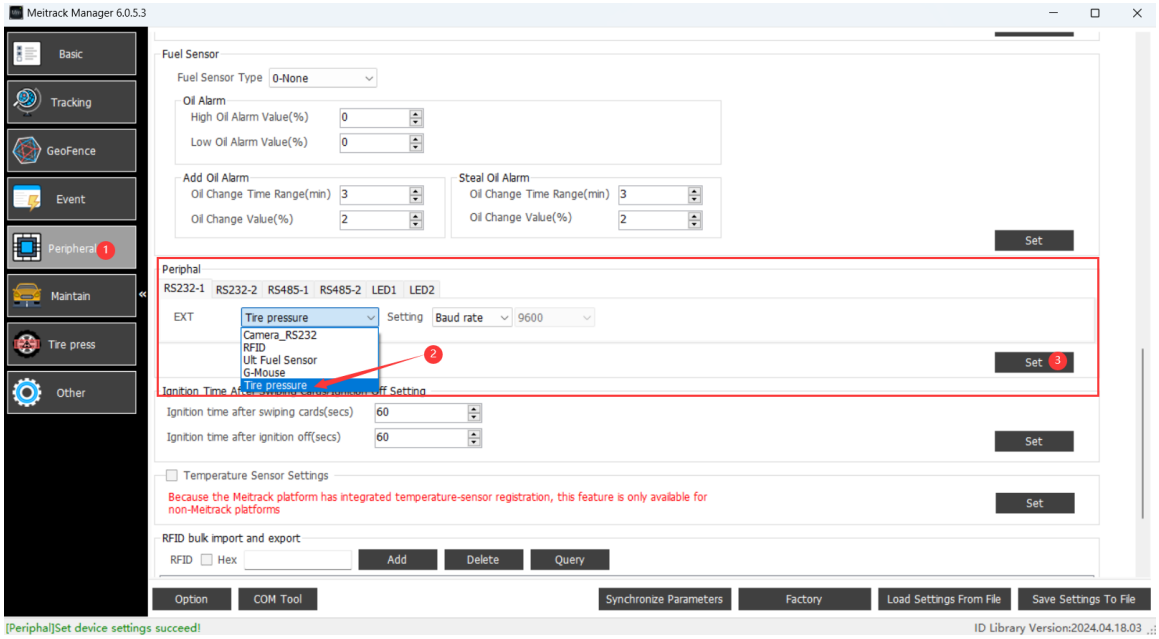
8.6 Set Alarm Value – DA5

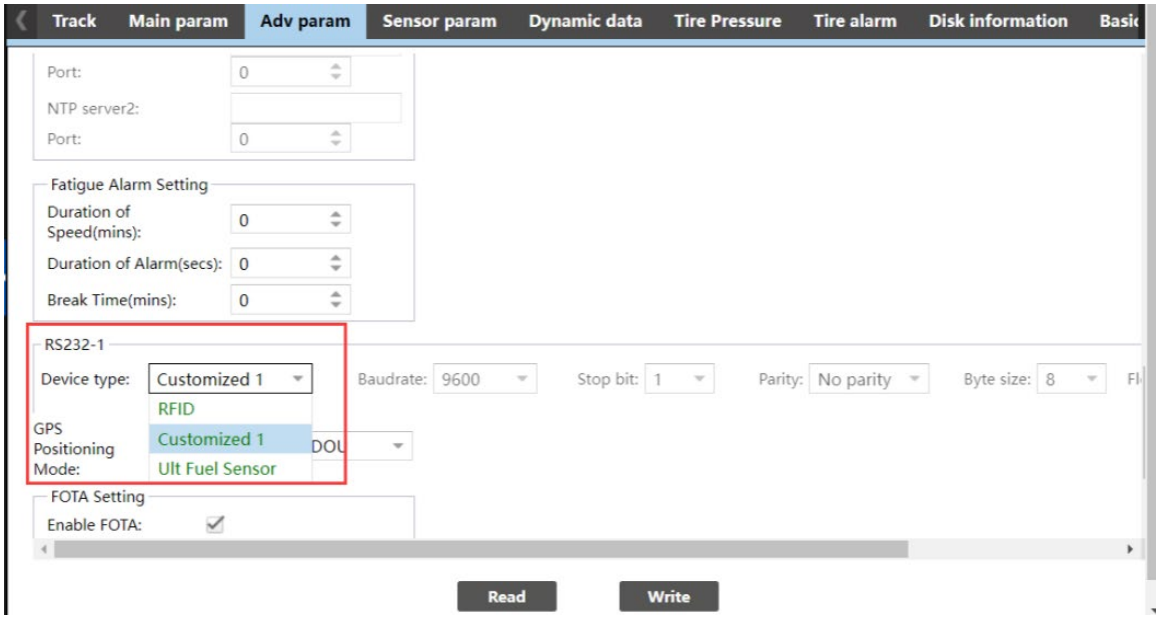
GPRS Uplink	DA5, <First Axle High Pressure Threshold><First Axle Low Pressure Threshold><Second Axle High Pressure Threshold><Second Axle Low Pressure Threshold><Third Axle High Pressure Threshold><Third Axle Low Pressure Threshold><Fourth Axle High Pressure Threshold><Fourth Axle Low Pressure Threshold><Trailer High Voltage Threshold><Trailer Low Voltage Threshold><High Temperature Threshold>
GPRS Downlink	DA5，OK
Note	First Axle High Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar First Axle Low Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Second Axle High Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Second Axle Low Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Third Axle High Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Third Axle Low Pressure Threshold: Hexadecimal unsigned format, 1 Byte; Actual value = Transmission value ÷ 10; Unit: Bar Fourth Axle High Pressure Threshold: Hexadecimal unsigned format, 1 byte; actual value = transmission value ÷ 10; unit: Bar Fourth Axle Low Pressure Threshold: Hexadecimal unsigned format, 1 byte; actual value = transmission value ÷ 10; unit: Bar Trailer High Pressure Threshold: Hexadecimal unsigned format, 1 byte; actual value =

	transmission value ÷ 10; unit: Bar Trailer Low Pressure Threshold: Hexadecimal unsigned format, 1 byte; actual value = transmission value ÷ 10; unit: Bar High Temperature Threshold: Hexadecimal unsigned format, 1 byte; actual value = transmission value minus 50; unit: °C
Example	
GPRS Transmission Content	@@I37,863835020877432,DA5,FF0000FFFFFF00000F19d*58\r\n
GPRS Configuration Response	$$I31,863835020877432,DA5,OK*BC\r\n

9 FAQ

1. **Tire pressure setting failed in MM. How to verify?**
   （1） Verify whether the device's RS232 interface is connected to the tire pressure receiver.
   （2） Verify whether the tire pressure sensor is securely tightened onto the tire.
   （3） Verify whether the tire pressure sensor ID is correctly assigned to the corresponding tire location.
2. **Tire pressure setting was successful, but tire pressure data cannot be detected. How can this be verified?**
   （1） Verify that the Tire Pressure Sensor ID is correct.
   （2） Reconnect the tire pressure receiver.
   （3） Check whether there is a tire pressure alarm on the platform or if the tire pressure report values have changed.
   （4） If the network quality is poor, tire pressure data upload may be delayed. Please try again when the network is stable.
   （5） If the above attempts fail, capture the LOG and provide it to technical support for analysis.
3. **Why does the T633L fail to configure successfully using the same tire pressure setting procedure?**
   Some devices have tire pressure as a special customized function and do not require additional configuration. However, for some devices (such as the T633L), tire pressure is a standard function that requires setting the RS232 function to tire pressure on the peripherals settings page, or selecting 'Customized 1' for the RS232 function in the platform parameter settings.





4. **Why does the ts_value display as 0 in MM's COM Tool?**

   The tire pressure is too low and the tire requires inflation.

5. **Is it possible to measure tire pressure indoors?**

   Yes, it is. You need to prepare the tire pressure receiver, tire pressure sensor, and tire. It is recommended that the device be connected to an antenna for improved signal reception.

6. **Can the pressure unit be switched between BAR and PSI on the MS03 platform?**

   Yes. The unit can be changed under 'System settings → Common settings.'

7. **The truck is too long (approximately 12 meters), and the tire pressure sensor installed on the rear wheels cannot receive data?**

   （1） Adjust the position of the tire pressure receiver.

   （2） Install a tire pressure repeater to extend the signal range.

8. **How do I turn the display screen's night light function on or off?**

When the display detects low ambient brightness, the backlight will automatically turn on; when sufficient brightness is detected, the backlight will automatically turn off. While the backlight is on, press and hold the + key for 3 seconds to forcibly turn off the backlight. Press any key again to turn the backlight back on.

If you have any further questions, please send an email to info@meitrack.com. We are committed to providing you with excellent service.