

WanFeng

Tire Pressure Monitoring System

User's Manual



ShangHai Well-Lion Electronic Technology Co., Ltd

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- Thanks for buying WFTPMS TL040102.
- WFTPMS TL040102 can be used in cars with tire pressure under 3.5Bar.
- For a safe and correct use of WFTPMS, please read this manual first.
- The ultimately explanation of this manual belongs to Shanghai Well-Lion Electronic Technology Co., Ltd
- Please visit <http://www.well-lion.com>

WFTPMS Packing List

Dear user:

Thanks for your purchasement. Please make sure that your purchasement includes all the following items:

In case of short of any item, please contact your distributor for consultation.

Product Type	WFTPMS TL040102	Product Color	Grey+Black
	Transmitter 4		User Manual 1
	Receiver 1		Quality Certificate 1
	Double-face glue 2		Converter sleeve 1
	Seal washer 4		Installation pin 1
			Screw glue 1

1. Foreword

WFTPMS is a new auto safety system, which is different from usual afterward safety solutions. WFTPMS warns the driver to take precaution to prevent traffic accidents caused by tire abnormal pressure. With WFTPMS you can enjoy a safer, more economical, more reliable and more comfortable drive.

2. Introduction of WFTPMS

Adopting advanced IC technology, with high-capability, easy installation and high-reliability characteristics, WFTPMS is one of the most advanced system for tire pressure monitoring system in the world.

WFTPMS can be used in cars with tire pressure under 3.5Bar.

WFTPMS comprises a transmitter mounted inside the tire and a receiver installed in the car.

The advanced lithium battery is used to ensure that the transmitter can work six years at least. Transmitter transmits the monitored pressure and temperature data to the receiver. Once the data is abnormal, the system warns immediately, and the tire location and the corresponding values are displayed at the same time.

For power supply, the receiver connects to the vehicle battery. The receiver not only can display the present time but also can memorize 38 pieces of history fault information that can be identified by diagnostic tool.

3. Basic Function of WFTPMS

The system can monitor the tire pressure, tire temperature and the battery status all the time and warn in time. The main functions of WFTPMS are as follows:

Clock function: Display the present time and set the time.

Tire monitoring functions:

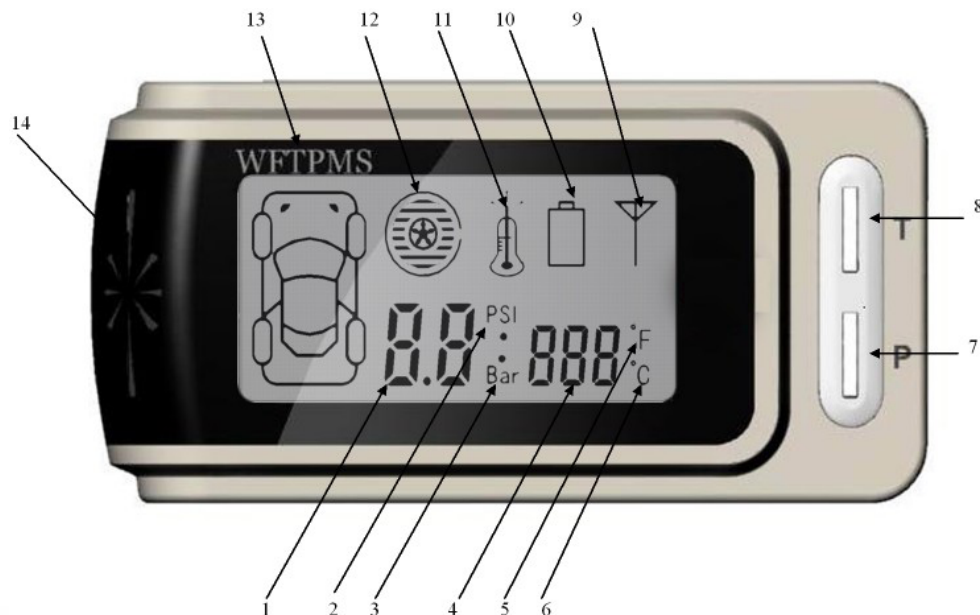
Reading function: Read the present tire pressure and temperature values.

Setting function: Set the tire pressure standard value and temperature warning threshold.

Warning function: Air leak warning, high-pressure warning, low-pressure warning, high-temperature warning, low-battery warning and no-signal warning.

Recording function: The record contains warning cause, tire pressure, tire temperature, and the warning time.

4. Introduction of receiver Interface board



- | | |
|--------------------------|-------------------------------------|
| 1. Pressure value | 8. "T" button (Time) |
| 2. Pressure unit PSI | 9. No-signal warning symbol |
| 3. Pressure unit Bar | 10. Low-battery warning symbol |
| 4. Temperature value | 11. High-temperature warning symbol |
| 5. Temperature unit (°C) | 12. Pressure warning symbol |
| 6. Temperature unit (°F) | 13. Product brand |
| 7. "P" button (Pressure) | 14. Buzzer |



High pressure warning □

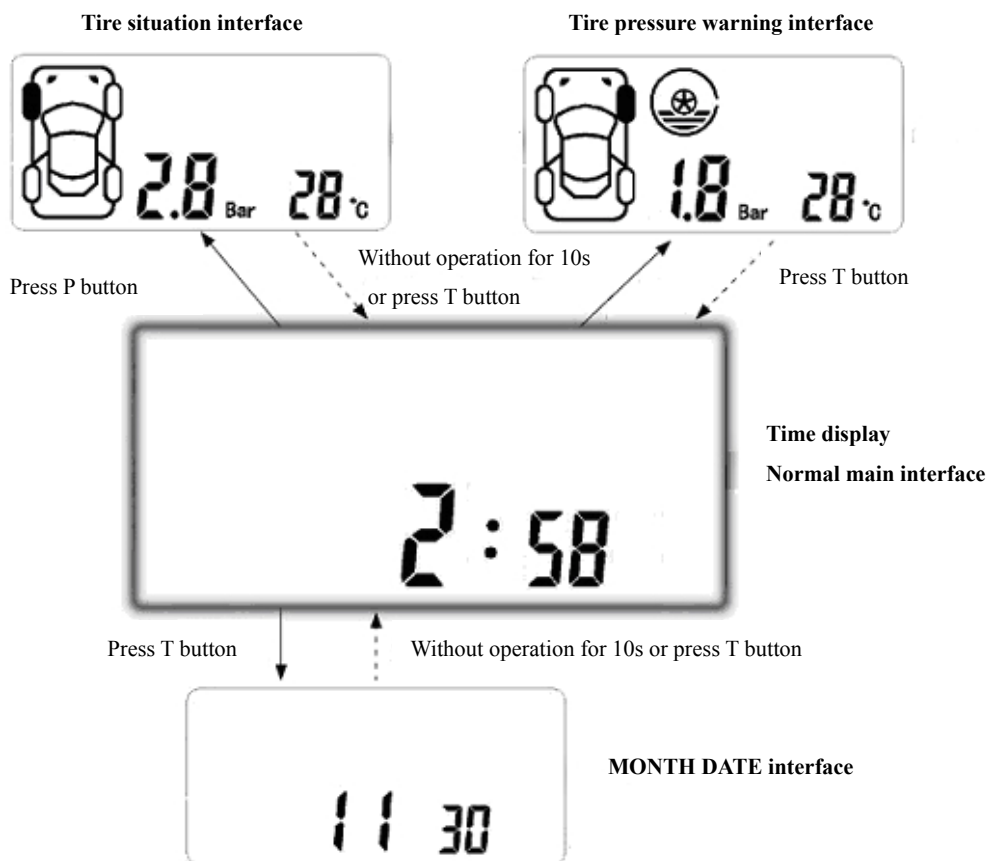


Low-pressure warning □



Leak air warning □

5. Operation Illustration



Once the key switches on the ignition, the system is powered up by 12V voltage, and enters into the normal working mode with the LCD background lighting up for 10 seconds. The system starts checking tire pressure and temperature in the clockwise order: left front tire→ right front tire→

right rear tire→left rear tire. If the tire is in warning status, the buzzer rings, LCD background lights and displays the tire situation at the same time. If in normal status the system turns into clock mode and monitors the tire continually.

In the normal working mode, the system monitors the tire and displays the time continually. If the tire is abnormal during driving, the buzzer rings, LCD background lights and the display shows the tire warning status. (If there are two or more tires warn at the same time, the system will display warning tire separately). It tells that the driver should stop or slow down for quick action. Under the warning mode, press “T” button to terminate the buzzer and the system turns into the clock mode, but the display will still light to remind the warning condition. The buzzer will resound after one hour if the warning is not be terminated.

In normal working mode, press “T” button to display the time and date, press “P” button to display pressure and temperature situation in the clockwise order: left front tire→ right front tire→ right rear tire→left rear tire. Without operation in 10 seconds the system will go back to the clock mode automatically.

When the car powers off, the receiver background lights shut down. The system will still monitor the tire situation continuously. When the warning occurs, the system will record automatically and save the data. The system will warn when the system is power up.

6. Setting Illumination

The system factory default settings are as follows:

Pressure unit: Bar

Tire standard pressure: 2.4 Bar

High-temperature warning threshold: 75℃

Temperature unit: ℃

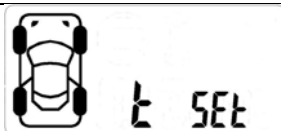
High-pressure warning threshold: more than standard value 25%

Low-pressure warning threshold: less than standard value 20%

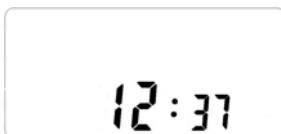
Aimed at different auto, setting can be done by professional or by yourself as the follows:

Pressing the “T” button, then switching the key to the position of ACC or switching on the ignition, you can make the system turn into setting mode. These setting includes: **System Time Setting, Pressure Standard Value Setting, Unit Selection Setting, Tire Interchange Setting, Tire ID Self-Learning Setting, Tire ID Reader Setting** (professional tools, need to purchase extrally) and **Exit Setting**. Without operation for 30s, the system will exit the setting mode automatically and return to the normal working mode.

1) System Time Setting



System Time Setting interface: enter the setting mode, the first setting is time, (Fig-left), press P button to go to the time setting mode, press T button to select other setting.



“HOUR” setting: the “hour” figure flickers, press T button one time to increase the value by one. By keeping pressing the T button the figure will increase sequentially. The value range is from 0 to 23. Press P button to go into the “MINUTE” setting.

With the same method, by pressing T button each time, you can set MINUTE, MONTH, DATE and YEAR Setting SEPARATELY. After the YEAR setting the system will return to the time setting interface and save the data automatically.

2) Pressure Standard Value Setting



Pressure Standard Value Setting interface: enter the setting mode, press T button to select the picture as the left, press P button to go into the setting mode.



Front-tire standard pressure value setting: Press T button one time, the value increase 0.1. By keeping pressing T button the value will increase sequentially. The value range is from 1.0 to 2.8. Press P button to go into the rear-tire pressure setting. (If the unit is PSI, the value range is from 15---41 PSI.)

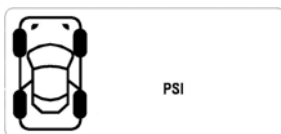


Rear-tire standard pressure value setting: Press T button one time, the value increase 0.1. By keeping pressing T button the value will increase sequentially. The value is from 1.0 to 2.8. Press P button to exit the rear-tire standard pressure value setting and return to the pressure standard value setting interface and save the data. (If the unit is PSI, the value range is from 15---41 PSI.)

3) Unit Selection Setting



Unit Selection Setting interface: enter the setting mode, press T button to select picture as the left, then press P button to go into the pressure and temperature unit selection setting.



Choose the pressure unit: Press T button to choose pressure unit (PSI or BAR), press P button to confirm and then go into the temperature selection interface.



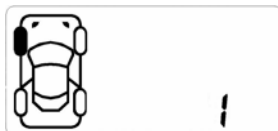
Choose the temperature unit: press T button to choose the

temperature unit ($^{\circ}\text{C}$ or $^{\circ}\text{F}$), press P button to confirm and save the unit information at the same time and return to the unit selection setting interface.

4) Tire Interchange Setting



Tire Interchange Setting Interface: Enter the setting mode, press T button to select the picture as the left, then press P button to go into the tire interchange setting.



The first tire selection: Press T button to select the first tire, then press P button to confirm and go into the second tire selection setting.



The second tire selection: the first chosen tire turns black, press T button to select the second tire, then press P button to confirm the selection. When the selection succeeds (the two tires are not the same), the system will save the data after 5s flashing and return to the tire interchange setting interface. If the two chosen tires are the same, the setting fails and the system returns to the setting interface instead.

5) Tire ID Self-learning Setting



If one of the transmitters breakdowns or for other reasons, users need to replace the transmitter, the system need to learn the new ID code. Enter the setting mode, press T button to select the picture as the left, then press P button to go into the Tire ID Self-learning Setting.



Select the self-learned tire: press T button to select the self-learned tire as the following sequence: left front—right front—right rear—left rear. Press P button to confirm.



After the transmitter launches the signal, the system begins to learn the new ID code. During that time press T button to abandon the self-learning process and to return to the ID Self-learning setting interface.



When the self-learning succeeds, the system will display the self-learned tire pressure and temperature values, save the data and exit self-learning setting after 5 seconds flashing. The system will return to the Tire ID self-learning setting interface.

6) Tire ID Reader Setting



Tire ID Reader Device is a special tool to operate the system. We

advise you not to operate by yourself rather than professional support. Please refer to Tire ID Reader User Manual.

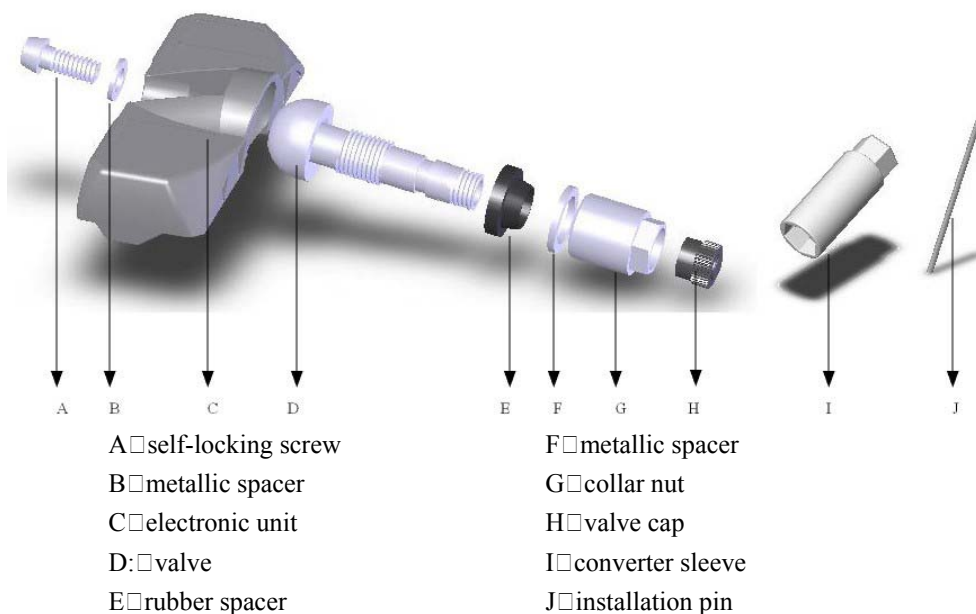
7) Exit Setting



To exit the setting, press T button to choose the picture as the left. Press P button to exit the system setting and go back to the time display interface.

7 Installation Illumination

Transmitter Installation



- 1) Take out of the product from the package, and the transmitter is a whole unit. It's needed to unscrew the valve cap (H) and the collar nut (G), take off the metallic spacer (F), and loose the self-locking screw (A).
- 2) Put the electronic unit (C) and valve (D) through the valve hole of the rim. Then put the metallic spacer (F) on the valve, tighten the collar nut (G). (Fig-1)
- 3) Put the installation pin (J) into the radial boring of the valve and tighten collar nut with the converter sleeve (I) (4 ± 0.5 Nm torque.) (Fig-2)
- 4) Press the electronic unit lightly into the deep well of the rim in order to let the electronic unit lie flat in the drop center. Apply the thread glue on self-locking screw (A) then tighten it the with 4 ± 0.5 Nm torque.(Fig-3)
- 5) Now the electronic unit had tightly leaned against the valve. (Fig-4)

- 6) Tighten the valve cap and complete the installation. (Fig-5)
- 7) Install tire onto the wheel. Attention must be paid to ensure that the tire bead does not press against the wheel electronic unit!



Receiver Installation

- 1) The receiver can be installed at a convenient location on the dashboard, and there are two ways to fasten the receiver:
 - a) Install a plinth on the back of the receiver (as picture 1, circumvolve the plinth clockwise), and push on the slot of the air-conditioner. (as picture 2)
 - b) Adhere the double-face glue on the back of the receiver, and then adhere to a convenient place of dashboard.
- 2) Power cable connection:
 - a) Red cable--- connect to the power of the car (12V or 24V).
 - b) White cable--- connect to the power of the key switch..
 - c) Black cable--- connect to the earth.



8 Technical Specifications

Receiver:

- 1) Working frequency: 433.92MHz
- 2) Sensibility: <-100dBm
- 3) Power supply: 9--12V

- 4) Working temperature range: -20°C — $+85^{\circ}\text{C}$
- 5) Unit outline size: $85\text{mm}\times 44\text{mm}\times 16\text{mm}$
- 6) Working electric current: 20mA

Transmitter:

- 1) Transmitting frequency: 433.92MHz
- 2) Transmitting power: $>0\text{dBm}$
- 3) Monitored pressure range: 100kPa — 350kPa 0Bar 3.5Bar
- 4) Pressure accuracy: 10kPa 0.1Bar
- 5) Monitored temperature range: -40°C — $+125^{\circ}\text{C}$
- 6) Temperature accuracy: $\pm 2^{\circ}\text{C}$
- 7) Power-supply: 3.6V lithium battery
- 8) Battery life: over 6 years
- 9) Working temperature range: -40°C — $+125^{\circ}\text{C}$
- 10) Weight: $\leq 49\text{g}$, with electronic unit $\leq 33\text{g}$
- 11) Unit outline size: $66\text{mm}\times 30\text{mm}\times 20\text{mm}$

9 Warranty Clause

Guarantee: In the period of warranty, Well-Lion, its dealer and the service center can repair this product to correct the flaw of the material, design or workmanship in the reasonable time on business. The product can be changed if Well-Lion thinks necessary.

Warranty Date

Guarantee period is 12 months counted from the day of procurement.

How to get the warranty service

User must supply

1. Product part of influence
2. Buying Certification which could read name and date clearly.
3. Warranty card.

Exception to guarantee:

1. Normal abrasion
2. Change or Modify the product without any authorization
3. Damage caused by wrong operations
4. Repair without authority
5. Other damage not because of design, technical, manufacturing and quantity problem of the system;
6. Under the extreme temperature and environment or influenced by corrosion and oxidation.
7. The wore part such as battery.

Important Statement

1. The data of tire pressure and temperatures displayed by WFTPMS are just for warning, so the data itself cannot prevent the car from occurring accident.
2. WFTPMS is a safety system that monitors the conditions of tire pressure and temperature.

When the condition is abnormal, WFTPMS warns the driver to take precautions so as to prevent traffic accident. But it doesn't mean usual checking of the tire is no longer necessary. Drivers should follow the Car User's Manual to take usual check of the tire condition. If the accident is caused by the abrasion, crack, break of the tire or perforation into the tire, WFTPMS is not responsible for it.

3. This system complies with part 15 of FCC Rules. Operation must be subject to the following two conditions: (1) This system does not cause harmful interference, and (2) this system must operate normally in any interference received, including interference that may cause undesired operation.
4. This system has been tested to comply with the limits for a Class B Digital Device, specified in the Article 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
5. This system complies with all European Electromagnetic Compatibility Regulations (95/54/EC and EN 300 220-1).
6. This system complies with National Regulations for auto electronic products, and meets the EMC requirements and the requirements made by Radio-Communication Administration for low-power consumption transmitters and receivers.

Caution: The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the users authority to operate this equipment.

Notes: 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.

Legal obligation

The warranty clause must be explained under the law. If the law allows, for the product itself, Well-Lion has the only responsibilities to exchange goods, supply the same goods, maintenance the goods or pay the cost for the same quantity of the product, for the service itself, Well-Lion has the only responsibility to supply the service or pay the cost for the same service.

Attention:

1. Operation is not suggested during driving.
2. On being warned, the driver should immediately slow down and stop the vehicle to have the

vehicle checked and repaired. Only when tire pressure and temperature return to normal condition, the vehicle can be allowed to drive on.

- The warranty information, the function of product and the norm can be modified without notifying.

Warranty Card (For Well-Lion)

User Information	User Name		Telephone	
	Address			
	E-mail		Zip Code	
Product Information	Product Name		Product Model	
	Product Colour		Product Number	
Dealer Information	Dealer Name		Telephone	
	Dealer Address			
	Sell Date		Invoice Date	
	Dealer Signature		Zip Code	

Warranty Card (For Customer)

Product Information	Product Name		Product Model	
	Product Colour		Product Number	
Dealer Information	Dealer Name		Telephone	
	Dealer Address			
	Sell Date		Invoice Number	
	Dealer Signature		Zip Code	
Installation Record	Installation Company		Installation Address	
	Installation Date		Installation Staff	

