



PICOLINK TECHNOLOGY CO.,LTD.

鉅連通科技股份有限公司

無線胎壓監測器 Tire Pressure Monitoring System

C2-安裝指南 Instruction Manual



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1. Introduction

1-1 Scope of System Application

Tire pressure monitoring system-C2(TPMS C2) is a device installed on the valve and detect tire pressure and temperature in real-time then the detecting value will be transmitted to the receiver with RF wireless. The driver can read the condition of vehicle and reduce the rate of accident happening.

The device needs to be installed by qualified personnel in accordance with installation manual to enjoy related warranty. The system is suitable for sedan tire (under 3.5 ton) and 60psi the maximum detectable pressure (420 Kpa). When the system displays a warning light and warning “beep ” sounds. When the system displays a warning light and beep to warn, The driver should immediately slow down, stop in a safe location and check the tire condition, and find a qualified tire maintenance station to repair.

1-2 Safety Notice

1. The kind of chemicals used in various types of sealants and tire filling might affect the operation of the TPMS sensor and TPMS receiver and can lead to shortened life of sensor valve.
2. Tire pressure monitoring system (TPMS) is auxiliary driving safety equipment, which cannot detect tire condition. The driver must still regularly check tire condition.
3. The system adopts the wireless transmission of signals. In some special circumstances, interference or erroneous methods of operation or installation method errors may cause weaker signal or its inability to receive signal. For example, choose the qualified socket extension
4. The driver has to get into good driving habits and regular maintenance of the vehicle’ s major systems. Then it will have a better performance



on average fuel consumption

5. Annual periodic inspection for the “sensor valve” is proposed, which should be replaced immediately if damaged, in order to avoid air leakage. The driver should immediately slow down, stop in a safe location and check the tire condition, and find a qualified tire maintenance station to repair.

1-3 Why TPMS? Why Picolink?

● Why TPMS?

- ✓ Improve fuel economy up to 2-5%
- ✓ lower the level of tire wear by 20~30%
- ✓ Decrease the probability of flat tire
- ✓ Maintenance cost saving
- ✓ Mandatory equipment for new car-Seat belt, Third brake light and Tire pressure monitoring system



● Why Picolink?

- ✓ Breaking through the limitation of material and distance then create the only TPMS with aluminum alloy frame.
- ✓ Applying chipset made by best chip-maker in German – Infineon and well-known Swiss batteries-Renata
- ✓ Pressure endurance of external valve is up to 100 Psi
- ✓ Easy installation and quick operation





FCC Notices:

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

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.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

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.



2. C2 Tire Pressure Monitoring System Introduction

2-1 Product Specification

● C2-Receiver Specification





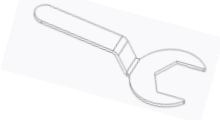
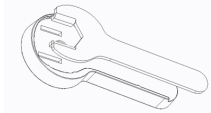

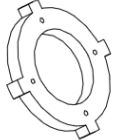
Operating voltage	DC 12V~24V
Storage Temperature	-40°C ~ +85°C
Operating Temperature	-25°C ~ +75°C
Weight	42 g
Dimension	D42.5 *H56.0 mm

● C2-External Sensor Specification

Battery Voltage	DC 3V	Weight	9 g ± 1 g
Operating Frequency	433.92 MHz	Dimension	D21.9*H20.2 mm
Pressure Monitoring Range	0~60 psi± 1 psi	Storage Temperature	-40°C ~ +85°C
Temperature Monitoring Range	-30°C ~ +85°C ± 4°C	Battery Life Time	1~2 years



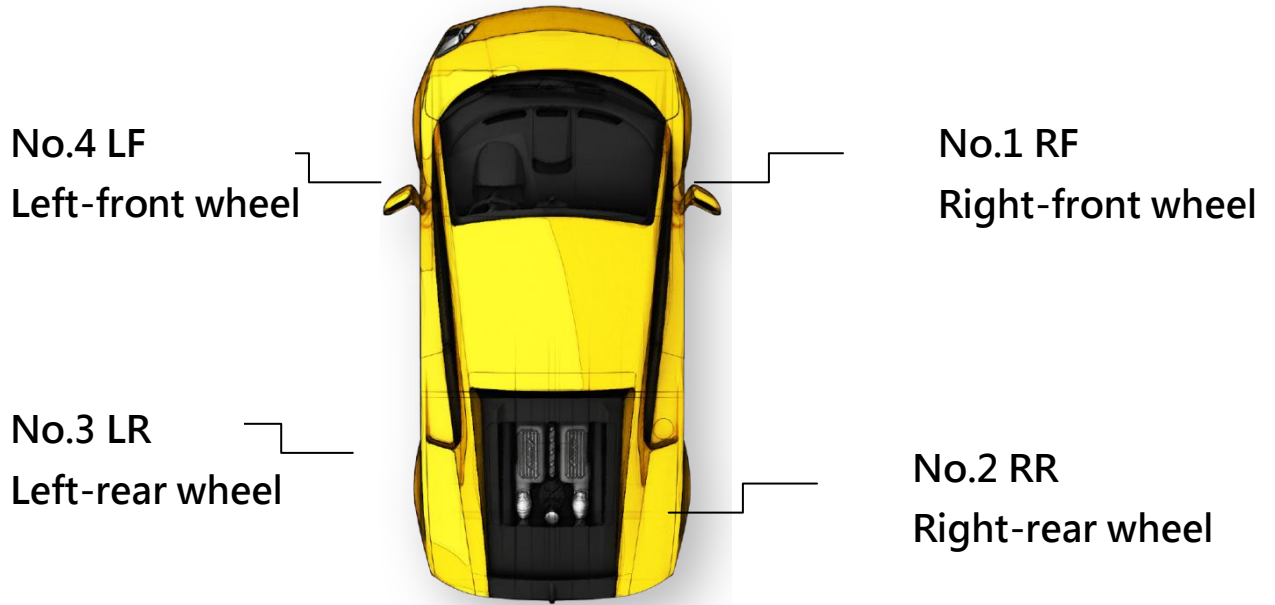
2-2 Accessories

Receiver		1	Sensor		4
CR1632 Battery (installed in sensor)		1	Nut		4
Curved Spanner		1	Spanner		1
Instruction Manual		1	Washer		4

3. Installation Procedure

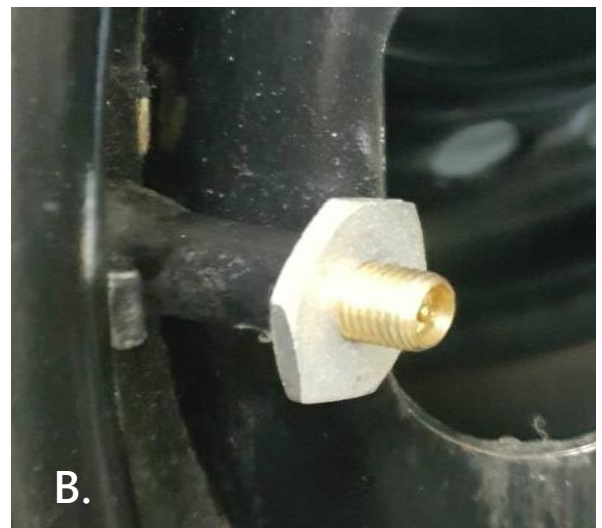
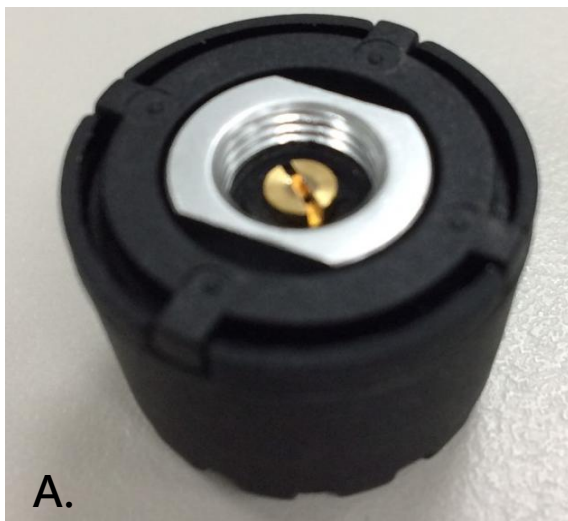
3-1 Sensor Installation

- No.4 = Left-front wheel (LF) No.1 = Right-front wheel (RF)
- No.3 = Left-rear wheel (LR) No.2 = Right-rear wheel (RR)



A. Put the washer into the fillister (Fig. A).

B. Remove the cap from the valve stem on the tire and screw the nut into valve (Fig. B)



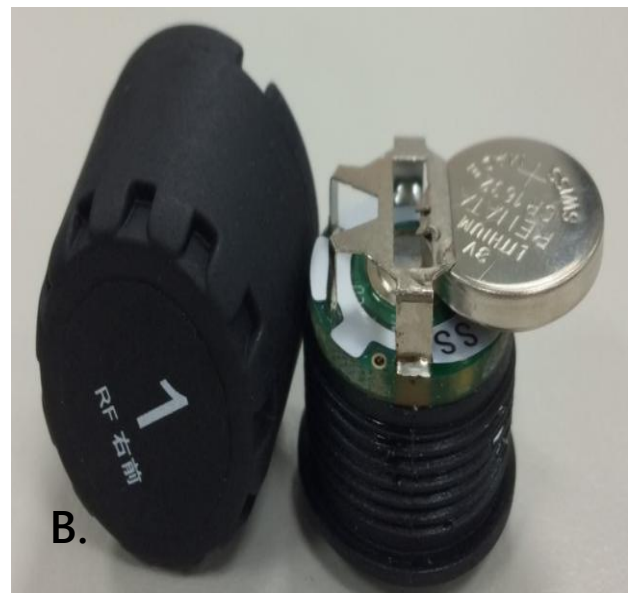
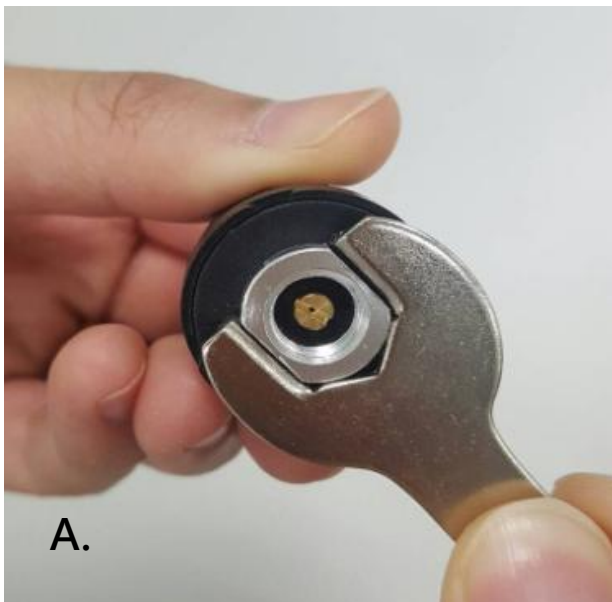
- C. Screw the sensor 1 on the valve of right-front tire tightly
- D. Use double spanner to screw the nut tightly (Fig. C).
- E. Make sure the sensor and the nut is fixed which you can't loosen them by hand.



- F. Install sensor 2, 3 and 4 in sequence by repeating step A. ~ E.

3-2 Battery Replacement

- A. Use spanner to loosen the nut and remove the sensor cap (Fig. A).
- B. Install CR1632 battery into sensor 1. (Fig. B)





C. Screw the sensor cap back by hand

D. Use spanner to fix and to screw the nut tightly till the fillister comes out and the washer can fit in well (Fig. C)



E. Refer to 3-1sensor installation then install the sensor back.

3-3 Receiver Installation

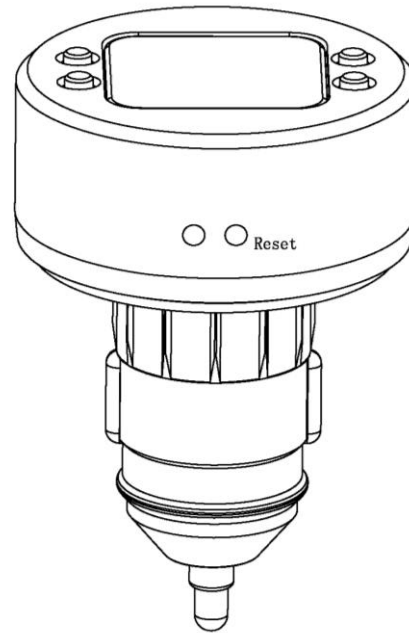
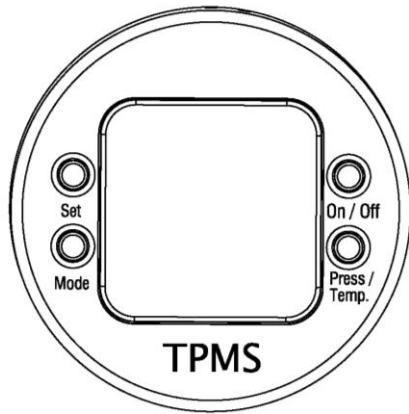
A. Plug the receiver into the cigarette lighter.

B. Do the settings after the receiver lights up.



4. Operation Illustration

4-1 Button Function



Button	Function
ON / OFF	Turn on/off display ; Turn off alarming sound
Press/ Temp	Value switch (pressure/temperature)
Set	Function settings
Mode	Mode switch
Reset	Return to default settings

4-2 Indicator Illustration



1 RF 2 RR	Right-front tire Right-rear tire	8.8.8	Value
3 LR 4 LF	Left-front tire Left-rear tire	1 RF	Normal tire pressure
5 ST	Spare tire	1 RF	Abnormal tire pressure
(!)	TPMS warning icon	E1	No signal detected
°C °F	Temperature unit	E2	Sensor battery is low
bar psi	Pressure unit		

4-3 Starting Screen

- The starting screen is presented as Fig.1.
- The device will detect tires when the vehicle is moving and reaching a certain speed then the screen will present the pressure value.



Fig.1

4-4 Mode Switch

- The tire pressure value will be presented firstly every time the device is turned on. Press 【Press / Temp】 to switch into temperature mode.



4-5 Unit Switch

- Pressure unit: psi, bar
- Temperature unit: °C, °F
- In pressure mode, hold down 【Mode】 for 3 seconds to switch pressure unit. (psi -> bar)
- In temperature mode, hold down 【Mode】 for 3 seconds to switch temperature unit. (°C -> °F)

5. System Settings

5-1 Default Value Adjustment

- Hold down 【Set】 for 3 seconds to enter into front-tire pressure settings.
- Default stander tire pressure value: 35 Psi (35 Psi =2.4 Bar)
- Default warning tire temperature value: 80 °C (80 °C=176°F) °
- Please refer to the recommended pressure value which can be found in your vehicle handbook or printed either in the sill of the driver door or on the inside of the fuel tank flap before you do the setting as follows.

A. Front tire pressure stander value

- The default stander value is 35 psi displayed with the green light.(Fig.1)
- Press 【Set】 to keep the default value or press 【Mode】 to adjust pressure value.
- The pressure adjustable value range is 27~50 Psi. Each press of 【Mode】 will increase the value by 1 Psi .The value will return to 27 Psi when value rise to 50 Psi.
 - ※ The pressure adjustable value range in Bar is 1.9~3.5 Bar.
 - Each press of 【Mode】 will increase the value by 1 Bar.
- After finish the front-tire setting, press 【Set】 to enter into rear tire settings.



Fig.1

B. Rear tire pressure stander value

- The default tire pressure is 35 psi displayed with the green light.(Fig.2)
- Press 【Set】 to keep the default value or press 【Mode】 to adjust pressure value.



Fig.2

C. Spare tire pressure stander value

- The default tire pressure is 35 psi displayed with the green light.(Fig.3)
- Press **【Set】** to keep the default value or press **【Mode】** to adjust pressure value.



Fig.3

- After finish the spare-tire settings, press **【Set】** to enter into tire temperature warning value settings.

D. Tire temperature warning value

- The default warning value is 80°C displayed with the green light.(Fig.4)
- Press **【Set】** to keep the default value or press **【Mode】** to adjust temperature value.



Fig.4

- The temperature adjustable value range is 60~99°C. Each press of **【Mode】** will increase the value by1°C. The value will return to 60°C when value rise to 99°C.

※ The temperature adjustable value range in °F is 140~210 °F.
Each press of **【Mode】** will increase the value by 1°F.

- After finish the temperature setting, press **【Set】** to enter into the home screen.

5-2 Rotation Settings (External)

Method 1

- Remove four sensors from valve firstly then let technician do tire rotation. After tire rotation is done, install the sensors in sequence which can refer to 5-2 sensor installation.

Method 2

- Do tire rotation without removing any sensors. After tire rotation is done, hold down 【Set】 and 【Mode】 in the same time for over 3 seconds then the system will enter into tire rotation settings mode. Press 【Mode】 again can exit the mode.
- The receiver display “1” means the system enter into the setting of NO.1 RF (right-front tire) and so on.
- The setting have to follow the sequence- NO.1 RF(right-front tire)→ NO.2 RR(right-rear tire)→ NO.3 LR(left-rear tire) →NO.4 LF(left-front tire). When you start doing setting, you can exit the mode only after the above setting had finished in sequence.

A. NO.1 RF (right-front tire) settings

- Doing the settings when the receiver display “1” and the tire icon flashes the green light(Fig.1).
- Remove the battery from the sensor of right-front tire then install the battery back instantly. Hearing the beeping sound means the setting is done.
- If the right – front tire no needs to set , press【Set】to skip settings and enter into NO.2 RR (right-rear tire) settings (Fig.2).



Fig.1



Fig.2



B. NO.2 RR (right-rear tire), NO.3LR(left-rear tire) and NO.4 LF(left-front tire) and NO.5 spare tire settings

- Repeat step A. to complete the next 4 tires setting. (Fig3~5)
- When all tires settings are done, the system will go back to tire pressure mode and display all tires value.



Fig.3











Fig.4



Fig.5

6. Warning Light Illustration

Problem	Warning Light & Cause
<p>Abnormal tire pressure</p> 	<p>Alarm : Tire indicator and TPMS warning icon  flashes the red light then the receiver beeps to warn.</p> <p>Cause : Actual pressure > Stander pressure*1.3 Actual pressure < Stander pressure *0.7</p> <p>Example : If stander pressure is 35Psi, the system will alarm when actual pressure >46Psi or <25 Psi.</p>
<p>Excessive high tire temperature</p> 	<p>Alarm : Tire indicator and TPMS warning icon  flashes the red light then the receiver beeps to warn.</p> <p>Cause : Actual temperature > Temperature warning value</p> <p>Example : 83°C > 80°C (Default value)</p>
<p>Fast leak</p> 	<p>Alarm : Tire indicator and TPMS warning icon  flashes the red light then the receiver beeps to warn.</p> <p>Cause : Tire pressure drops rapidly. (Tire drops over 3 Psi in 4 seconds.)</p>

Problem	Warning Light &Cause
<p>The sensor battery is low</p> 	<p>Alarm : Tire indicator flashes red light and the indicator of sensor in low battery E2 flashes the green light then the receiver beeps to warn.</p> <p>Cause : The sensor battery is getting low.</p> <p>Example : 2RR sensor battery is getting low. If there are more than one sensor battery getting low ,the indicator would flash by turn.</p>
<p>No signal detected</p> 	<p>Alarm : Tire indicator flashes the red light and the indicator of no signal detected E1 lights up.</p> <p>Cause : The receiver detect no signal from 4 sensors for over 5 minutes.</p>



7. Troubleshooting

1. Why does the display show “E1”?

The surrounding electromagnetic wave jams the transmission and connection of receiver then leads the receiver unable to work. Pull the receiver out and re-plug it into cigarette lighter and if still can't work after 10minutes, please contact with maintenance department.

2. Why does the display show “E2”?

It means the sensor's battery is getting low.

3. How to know the stander tire pressure for my car?

You'll find the manufacturer's optimum or recommended tire pressure for your car on a sticker in the door jam, or in your owner's manual. Some models even place the stickers on the trunk lid, in the console or on the fuel door.

4. Is that normal that tire pressure value is different when I measure it by traditional tire pressure gauge and TPMS separately?

That's normal. The traditional tire pressure gauge needs to be adjusted frequently to keep measurement correct. As for TPMS, it's electronic detection making measurement precise and keeping the tolerance to stay in ± 1 psi.

5. How to reset the setting after the battery of sensor is changed?

Please refer to chapter 5-2 “Rotation Settings” .

6. Is the sensor unable to work if batteries are dead?

Yes. The driver can confirm which battery is getting low from the receiver. For external sensor user, you can just buy CR1632 battery to replace and refer to chapter 5-2 “Rotation Settings” to set up.

7. Dose the sensor need to be removed as doing tire rotation?

No, it doesn't. Please refer to chapter 5-2 “Rotation Settings” .



8. Can I adjust pressure and temperature value on my own?

The product has default settings, but it allow the driver to adjust depends on the trait of tire.

9. When dose TPMS start to monitor?

TMPS will detect tire as engine is starting and car is moving.

8. Appendix

8-1 Warranty

Thank you for buying this product. From the date of purchase on we provide 1 year free warranty for the product, protecting the client' s interests and Picolink product quality assurance. During the warranty period, under normal conditions of use, in the event of the emergence of the problem of a poor product, the company is willing to provide the bad product with repair service or have it replaced ,enabling you to get the guarantee and demonstrating the company' s responsible attitude toward products. In the following cases, although the product is still within the warranty period, there will be no free warranty.

1. The damage caused by irresistible natural factors such as natural disasters changed, pests, and lighting...etc.
2. The damage caused by human factors like improper use, self-disassemble and not complies with the term of use.
3. The failure or functional failure caused by other products(equipment)other than machines
4. The damage caused by using other accessories which not produced by Picolink.
5. Necessary consumables replacement.



8-2 Disclaimer of Liability

The product is only to be used as per the precautionary warnings and provides users with convenient secondary safety equipment. Please follow the standard procedure or get to a qualified supplier or specialized tire repair center to install. If the vehicle's tires have been damaged or traffic accidents occur resulting from the user's improper driving behavior, the Company will not assume civil or criminal liability.

9. Technical Support

In the event of any questions about warranty, you may contact with your local dealer or Picolink directly.

Other relevant latest information of Picolink product is available at our company website. <http://www.picolink.com.tw>

Warranty

PRODUCT TYPE	C2	LOT NO.	
PURCHASE DATE	(Y) /	(M) /	(D)
DEALER STAMP			