



M202
M202L

www.orange-electronic.com

Motorcycle Tire Pressure Monitoring System



M202 / M202L Owner's Manual

TABLE OF CONTENTS

1. NOTICE	2
2. SPECIFICATIONS	3
3. UPDATED ADJUSTING WARNING LEVELS	4
4. INCLUDED ACCESSORIES	5
5. SYSTEM INSTALLATION	6
MONITOR INSTALLATION	6
SENSOR INSTALLATION	7
SENSOR INSTALLATION NOTICE	8
6. SYSTEM OPERATION	9
7. ADJUSTING OPERATING UNITS	9
8. ADJUSTING WARNING LEVELS	10
9. SYSTEM ALARM	11
10. SENSOR REPLACEMENT	12
11. WARRANTY POLICY	13
12. QUESTIONS	13



To ensure correct operation and service, read the following instructions before operating the Motorcycle TPMS accessory.

NOTICE

The Motorcycle TPMS Kit (M202) complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

- (1) this device may cause harmful interference
- (2) this device must accept any interference received, including interference that may cause undesired operation

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 radio frequencies and may cause interference to radio communications if not installed or used in accordance with instructions.

There is no guarantee that interference will not occur during installation. If the equipment does cause harmful interference to a wireless reception (determined by turning the equipment off and on), try one of the following corrective measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet different from the outlet the receiver is connected

Caution: Any changes or modifications in the construction of the device void the user's authority to operate or receive warranty for the equipment. To comply with the FCC RF exposure compliance requirements, the device and antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

SYSTEM SCOPE OF USE AND WARNINGS

Orange Electronic's M202 is an aftermarket TPMS system intended for use on 2-wheel motorcycles. The system displays tire pressure and temperature information and activates an alert for any pressure or temperature irregularities. It is the responsibility of the driver to react promptly and with discretion to alerts. Abnormal tire pressure should be corrected at the driver's earliest opportunity.

Notice: The display may not receive RF signals from the sensors due to regular wear of sensors, wireless interference or an incorrect installation. If the system does not display tire information for more than 10 minutes, the display will show lines. If this occurs, place any wireless devices (cell phone, etc.) further away from display unit or locate a qualified tire service center to correct the issue. The tire sensor(s) may be damaged or the battery life may be low (usually 3 years).

*System Installation and Usage

Proper use of the TPMS requires that a qualified tire service technician has properly installed the TPMS sensors. The M202 system is intended for use on 2-wheel motorcycles. The maximum inflation pressure is 50psi.

*Reacting to Alerts

Upon noticing an alert, proceed to a safe location to inspect or service tire(s). A low or high pressure alert indicates that the air pressure in one or more tires has surpassed a preset pressure level and a high-temperature alert indicates that the temperature of one or more tires has surpassed the preset temperature threshold.



*Use of Chemicals

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

Updated specs!



Thank you for purchasing the TPChecker® Tire Pressure & Temperature Monitor!
We have updated the unit with two new functionalities:

-  pressure monitoring between 0 - 74 psi
-  adjustment of individual warning levels for front and rear tires

*updated instructions for changing warning levels on back side of sheet

TPMS Sensor Specifications	
Pressure Monitoring Range	0psi to 74psi / 0kPa to 510kPa / 0bar to 5.1bar
Pressure Reading Accuracy	±1psi / ±10kPa / ±0.1bar (at normal pressure)
Temperature Reading Accuracy	±4°C in normal environmental conditions
Storage Temperature	-40°F to 257°F / -40°C to 105°C
Operating Humidity	Maximum 95%
Operating Frequency	314.85 +/- 0.1 MHz
Transmission Power	Max 5dBm
Battery	3 V
Sensor Weight	27.5g ± 1.5g (M202)
Sensor Weight	31.0g ± 1.5g (M202L)
Valve Length	2.5cm (M202) / 3.8cm (M202L)
Direct Replacement for	TR412 or any valve with Rim Hole Size = 11.5mm (.453") (M202)
Direct Replacement for	TR413 or any valve with Rim Hole Size = 11.5mm (.453") (M202L)

Monitor Specifications	
Operating Voltage	9V - 16V
Operating Current	< 150 mA
Operating Temperature	-20°C to 80°C / -4°F to 176°F

UPDATED ADJUSTING WARNING LEVELS

Use the following steps to adjust the preset high/low pressure and high temperature warning levels for the individual front and rear tire.

The unit has been pre-loaded with alert thresholds, the details as below.

LOW/HIGH PRESSURE WARNING LEVELS:

Preset Warning Levels:

<i>Rear</i>	High Warning Level: 50psi Low Warning Level: 30psi	<i>Front</i>	High Warning Level: 45psi Low Warning Level: 27psi
-------------	---	--------------	---

To modify the high and low pressure warning levels for the front and rear tires, use the following steps:

1. Press and hold the "Set" button for 1 second to enter warning level modification.
2. The display unit will enter warning level modification for the FRONT tire first.
3. The display will show "Lo" with flashing numbers.
4. Use the "Fun" button to change the front tire's low pressure warning level by +1psi within the ranges of 17-50psi. After reaching desired low warning level, select front low pressure by pressing the "Set" button.
5. The display will show "Hi" with flashing numbers.
6. Use the "Fun" button to change the front tire's high pressure warning level by +1psi within the ranges of 35-70psi. After reaching desired high warning level, select front high pressure warning by pressing the "Set" button.
7. The display unit will enter warning level modification for the REAR tire second.
8. The display will show "Lo" with flashing numbers.
9. Use the "Fun" button to change the rear tire's low pressure warning level by +1psi within the ranges of 17-50psi. After reaching desired low warning level, select rear low pressure by pressing the "Set" button.
10. The display will show "Hi" with flashing numbers.
11. Use the "Fun" button to change the rear tire's high pressure warning level by +1psi within the ranges of 35-70psi. After reaching desired high warning level, select rear high pressure warning by pressing the "Set" button.
12. After selecting the high and low warning levels for the front and rear tires, the display will automatically enter the set-up for high temperature warning level.

HIGH TEMPERATURE WARNING LEVEL:

Preset warning level: 176°F

Preset warning range: 140-248°F

1. The display unit will show 'Hi' and flashing numbers.
2. Press the 'Fun' button to modify flashing numbers to desired high temperature warning level.
3. Press the 'Set' button once desired warning level has been reached to set warning level.
4. System will return to normal display mode, showing tire pressure and temperature.

INCLUDED ACCESSORIES

A	Display Unit	1
B	Sensors	2
C	Velcro for Display (not shown)	1
D	Manual	1
E	Clip	2
F	Ties for power cord (not shown)	3

M202



M202L








SYSTEM INSTALLATION

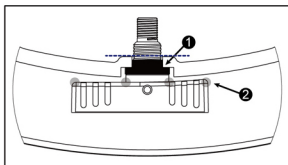
The Orange Electronic Motorcycle TPMS Kit (M202) requires both the display unit and tire sensors to be installed. It is recommended to install the display unit before the two sensors.

DISPLAY UNIT INSTALLATION:

Step	Process
1	<p>Red Wire - positive (power) Black Wire - negative</p> <p>On the motorcycle's fuse box, connect red wire to positive electrical connection and connect black wire to negative connection.</p> <p>Optional: Use clips (Accessory E) and ties (Accessory F) to help connect and fix electrical wires to the fuse box.</p>
2	<p>Attach velcro to the back of the display unit and place monitor at an appropriate position in front of driver.</p>

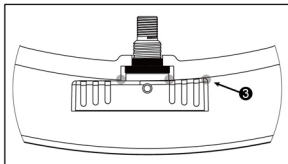
Step	Process	Photo
1	<p>*Only a professional tire dealer or mechanic should install the TPMS sensor.</p>	
2	<p>Remove each tire and release the air pressure.</p> <p>Take off the air valves from the wheel of the tire.</p> <p>(Note: You will change the valve to a TPMS valve)</p>	
3	<p>Match the number on each TPMS sensor with the correct wheel position on the motorcycle before installing. (IMPORTANT)</p> <p style="text-align: center;">F-1 : Front tire R-2 : Rear tire</p>	
4	<p>Take off the valve cap and nut.</p> <p>Set up the new TPMS sensor valve in the wheel.</p> <p>After valve stem is through the rim, load nut.</p> <p>Use a wrench to secure the valve and tighten nut to 40 kgcm (4±0.5 Nm; 35.4 inlb)</p>	
5	<p>Inflate the tires to the manufacturer's recommended inflation level.</p> <p>Balance the tires to manufacturer's specifications:</p> <ul style="list-style-type: none"> Balance tires using a balancing machine. A lead tire weight may need to be added for balancing. Sensor weight = 27.5g +/- 1.5g 	

SENSOR INSTALLATION NOTICE



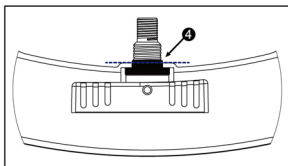
" Safe "

1. The grommet is invisible from the rim.
2. The sensor does not touch the rim.



" Not Safe "

3. The sensor touches the rim.



" Not Safe "

4. The grommet is visible from the rim.

SYSTEM OPERATION

Tire pressure and temperature will automatically be monitored when the TPMS unit is installed. Once accessory power is applied, the system will scan both tire sensor IDs and display tire pressure and temperature in real time within 3 minutes.



Use the 'Fun' (function) button to cycle between display modes:

Mode 1: Tire pressure

Mode 2: Tire temperature

Mode 3: Cycle between tire pressure and temperature

ADJUSTING OPERATING UNITS

ADJUSTING PRESSURE AND TEMPERATURE UNITS:

1. Press the 'Set' button and release after 3 seconds when screen goes blank.
2. Press the 'Set' button to choose psi, kPa or bar.
3. Once your preferred pressure unit is displayed, press and hold 'Set' button for 3 seconds until the temperature unit is displayed
4. Press the 'Set' button to choose Fahrenheit (F) or Celsius (C)
5. Once your preferred temperature unit is displayed, press and hold 'Set' button to set your preferred warning levels

ADJUSTING WARNING LEVELS

Use the following steps to adjust the preset high/low pressure and high temperature warning levels for the TPMS unit. The unit has been pre-loaded with alert thresholds, use care when modifying figures.

LOW PRESSURE WARNING LEVEL:

Preset warning level: 25psi / 170kPa / 1.7bar

Preset warning range: 17-32psi / 120-220kPa / 1.2-2.2bar

1. Press the 'Set' button for 1 second to enter low pressure set-up.
2. The display unit will show 'Lo' and flashing numbers.
3. Press the 'Fun' button to modify flashing numbers to desired low pressure warning level.
4. Press the 'Set' button once desired warning level has been reached to set warning level and proceed to set low pressure warning level.

HIGH PRESSURE WARNING LEVEL:

Preset warning level: 44psi / 300kPa / 3.0bar

Preset warning range: 38-49psi / 260-340kPa / 2.6-3.4bar

1. Press the 'Set' button for 1 second to enter high pressure set-up.
2. The display unit will show 'Hi' and flashing numbers.
3. Press the 'Fun' button to modify flashing numbers to desired high pressure warning level.
4. Press the 'Set' button once desired warning level has been reached to set warning level and proceed to set high temperature warning level.

HIGH TEMPERATURE WARNING LEVEL:

Preset warning level: 176°F / 80°C

Preset warning range: 140-248°F / 60-120°C

1. Press the 'Set' button for 1 second to enter high temperature set-up.
2. The display unit will show 'Hi' and flashing numbers.
3. Press the 'Fun' button to modify flashing numbers to desired high temperature warning level.
4. Press the 'Set' button once desired warning level has been reached to set warning level.
5. System will return to normal display mode, showing tire pressure and temperature.

SYSTEM ALARM



When the Motorcycle TPMS unit detects abnormal tire pressure, the display unit will show tire pressure in red and continue doing so until the abnormal pressure has been corrected.

When the Motorcycle TPMS unit detects high tire temperature, the display unit will show tire temperature in red and continue doing so until the abnormal temperature has been corrected.

When the Motorcycle TPMS unit detects low battery voltage in the tire sensors, the display unit will show sensor voltage in red and continue doing so until the sensor is replaced.

*It is the responsibility of the driver to act with caution and discretion in response to a warning from the display unit. Tire pressure and temperature issues should be corrected as safely and early as possible.

SENSOR REPLACEMENT

If a sensor's battery runs empty or if tires are rotated, the sensors need to be relearned by the display unit in order to display the correct information.

Step	Process
1	Install a new Orange sensor according to directions (page 6).
2	Press the 'Set' and 'Fun' keys simultaneously for around 5 seconds. The screen will flash white and red text. Once a '1' is shown, release the buttons. This indicates that sensor replacement mode has been entered.
3	Press the 'Fun' key to switch between tire to be replaced. (1 = front, 2 = rear)
4	Deflate the selected tire within the range of 12-26psi / 120-180kPa / 1.2-1.8bar. When the display unit recognizes the deflation, it will display tire pressure in red.
5	Inflate tire back to manufacturer's recommended inflation level.
6	When the display unit recognizes the proper inflation level, it will return to normal display mode and monitor tire pressure and temperature in real-time.

WARRANTY POLICY

WARRANTY: Orange Electronic products are guaranteed from material defects for 365 days after the date of purchase. If the product fails under normal circumstances within the 1st year, Orange Electronic will repair or replace the product. Product will not be replaced or repaired if damaged from misuse or incorrect application. To obtain repair or replacement of the product under warranty, contact Orange Electronic or distributor. Proof of purchase and date of purchase are required to validate the warranty claim.

Orange Electronic is not liable for any direct or consequential loss or property damage arising from the use of the product.

Warning: Only use Orange Electronic replacement parts. Using other brands will not allow the system to work and void the warranty.

QUESTIONS

Any questions pertaining to warranty information or other questions not answered in the preceding pages can be answered by the place of purchase or by Orange Electronic's service phone line or e-mail address:

+1(885)632-8767 (OEC-TPMS)

sales@orange-electronic.com

For updated TPMS information and Orange products visit the Orange Electronic website:

www.orange-electronic.com

Thank you for your purchase and enjoy your new Motorcycle TPMS!