

TireGard™

Wireless Tire Pressure Monitoring System Handlebar Mount
BBP# 13-318
User Guide



Table of Contents

Precautions	2
TireGard™ Handlebar Mount Features & Benefits	3
Controls	3
Graphic User Interface and Contents	4
System Map	4
Installation.....	5
The Installation of LCD Monitor/Receiver.....	5
The Installation of Tire Pressure Sensors.....	6
Anti – Theft Ring for Sensor (optional).....	8
Install LCD Monitor/Receiver to the Handlebar Bracket.....	10
Operation Instructions	13
LCD Monitor/Receiver Basic Function	13
Advanced Setting Mode.....	14
Sensor Learning Mode.....	17
Operation Procedures	18
Definition of Warnings	19
Troubleshooting	20
Additional Information	20
Package Content	21
Product Specifications	23
Warranty	23

Precautions

1. Sensors will work with all valve stems – However, rubber 90° valve stems do not last as long as metal and depending on the age and quality of your rubber 90° valve stem you need to make sure they are in good shape. We do recommend the use of metal valve stems for better durability. Please verify clearance when used with a 90 degree valve stem (Softail, etc.) to clear any and all calipers or other components before use. We do not recommend use with tire additives.
2. Make sure the LCD Monitor/Receiver can receive signals from all tire sensors.
3. TireGard™ WTPMS has a unique anti-theft device to prevent sensors from being stolen.
4. Please confirm that all sensors are fitted tightly. If necessary, spread detergent water on the valve stem to check for any air leakage. **DO NOT OVER TIGHTEN SENSORS.**
5. If tire pressure is low or dropping quickly, stop the motorcycle immediately and determine the problem.
6. The LCD Monitor/Receiver will automatically make a connection with the sensors once turned on. Sensors must be in motion to wake up in order to transmit current data. It is normal that tire pressure figures might not be updated immediately due to no change in tire pressure.
7. TireGard™ WTPMS is designed to avoid interfering or being interfered with by other signals.
8. Many environmental factors can cause tire temperature to rise or fall. For example, hot weather or warm tires will result in rising tire pressures.
9. The LCD Monitor/Receiver is **NOT** waterproof. If the LCD Monitor/Receiver accidentally gets wet, do not power on the system until it is completely dried.
10. If you have any questions concerning your TireGard™ unit, please contact your nearest TireGard™ dealer or email info@bigbikeparts.com .

TireGard™ Handlebar Mount Features and Benefits

TireGard™ Wireless Tire Pressure Monitoring System (WTPMS) is a powerful and effective tool for maximizing safety, increasing fuel economy, improving vehicle handling, and reducing operating cost. Through its wireless technology, tire pressure and temperature information is displayed instantly on the easy to read Graphic User Interface (LCD Monitor/Receiver) in real time.

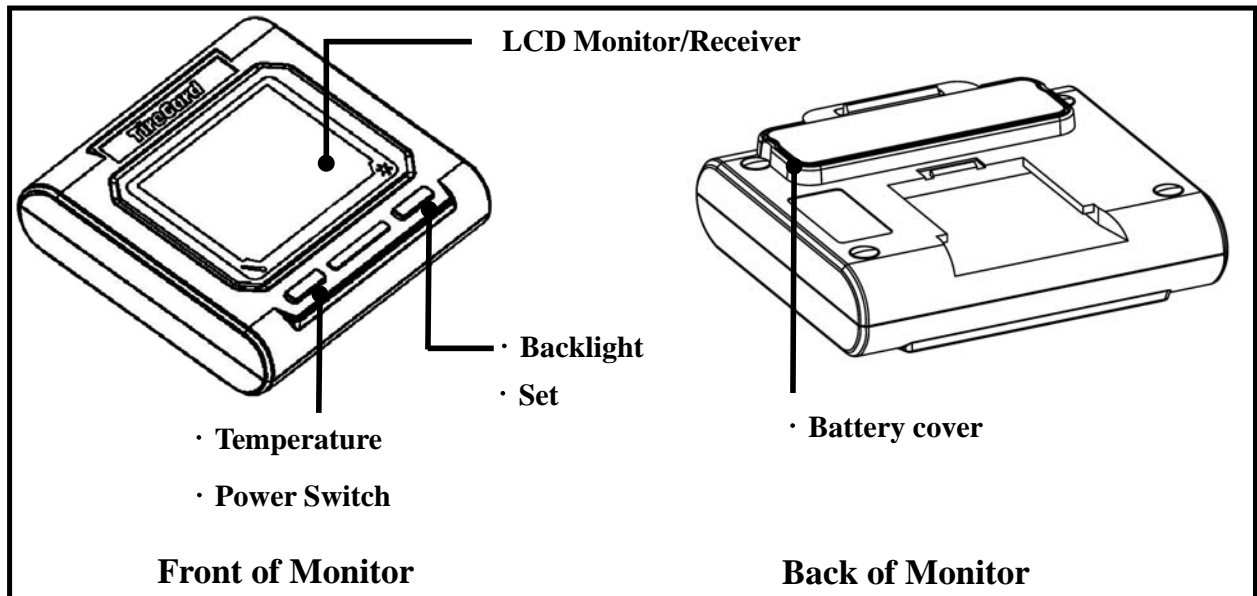
- Do It Yourself installation is quick and easy without any technical knowledge or special equipment for the external sensor models.
- Wireless technology allows the sensor and monitor to connect automatically.
- Real-time highly accurate sensor and monitor with powerful Graphical User Interface.
- Fully adjustable pressure and temperature warning range with flashing warning light; which immediately alerts operator of abnormal tire pressure or temperature.
- Tire pressure and tire temperature data will update every time the sensor on the tire experiences a 1 PSI or greater pressure change.
- Anti-Theft Ring to prevent removal of external sensor.
- Both Sensor and Monitor are battery powered with a low battery indicator on the LCD Monitor/Receiver which will alert rider of battery power status.

TireGard™ WTPMS (Wireless Tire Pressure Monitoring System) - Powerful tool for maximizing uptime and improving safety- The New WTPMS Standard - TireGard™ Tire Pressure/Temperature Monitoring Solution.

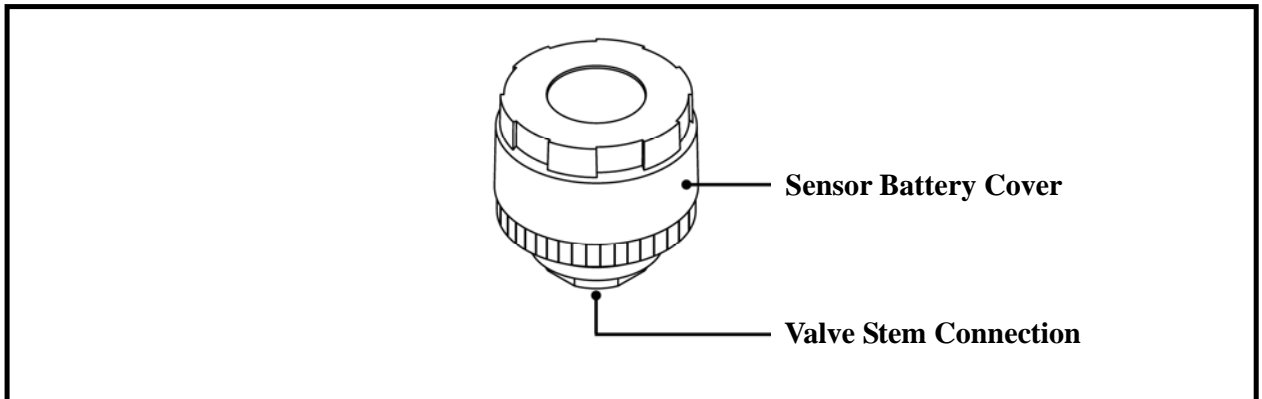
TireGard™ is a leading WTPMS solution for the motorcycle industry. By continuing to develop new and better WTPMS designs and manufacturing technologies, TireGard™ has helped motorcycle riders to improve safety issues and reduce operational costs. The major milestone of TireGard™ WTPMS is the introduction of lightweight valve stem cap sensor design. The extremely lightweight, compact sensor has been specifically designed to simplify and reduce the installation time. Now there is no need to sacrifice tire maintenance efforts to gain safety. Through wireless technology, tire pressure and temperature information is displayed on the friendly Graphic User Interface (LCD Monitor/Receiver).

Controls

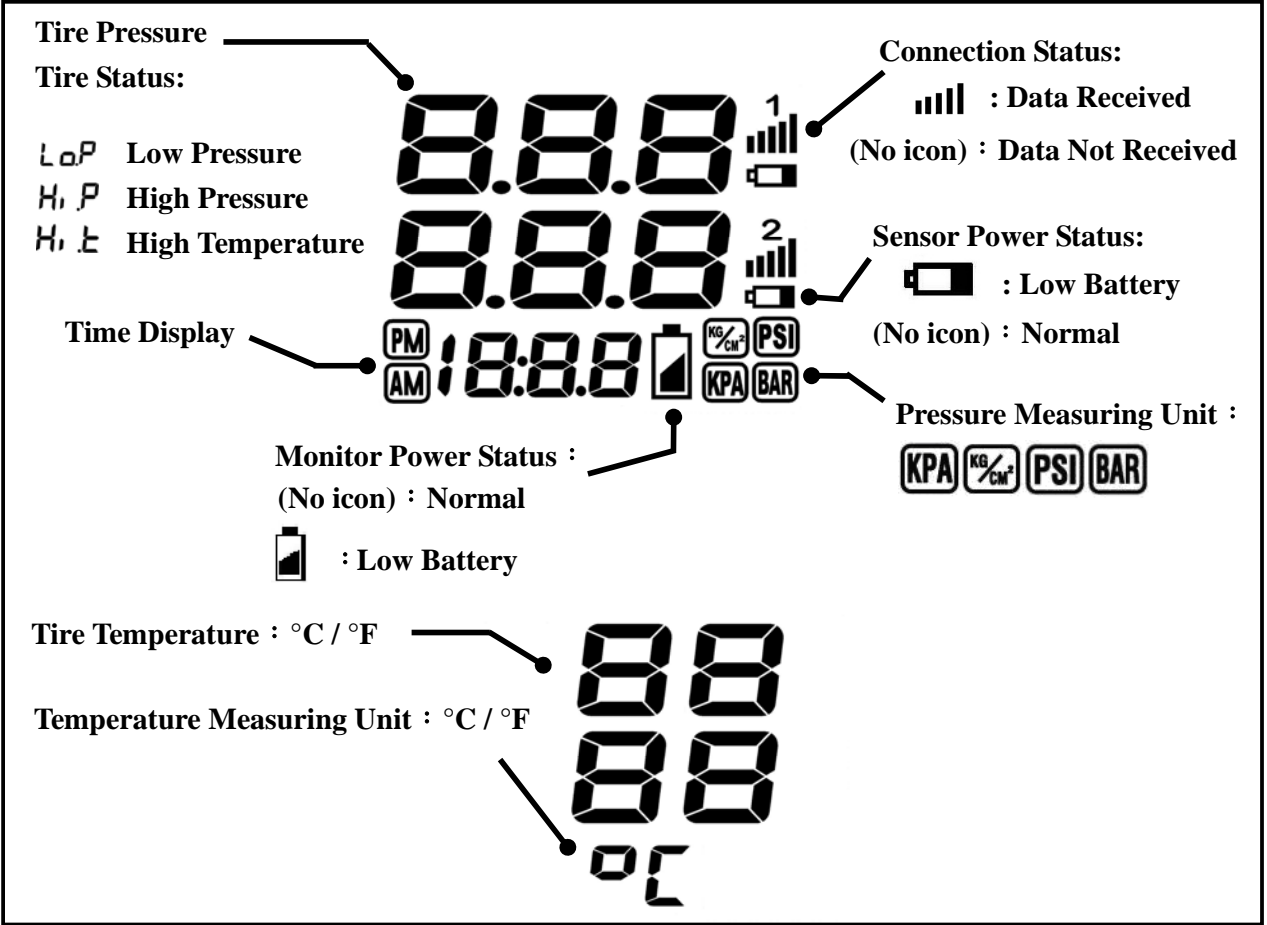
LCD Monitor/Receiver Description



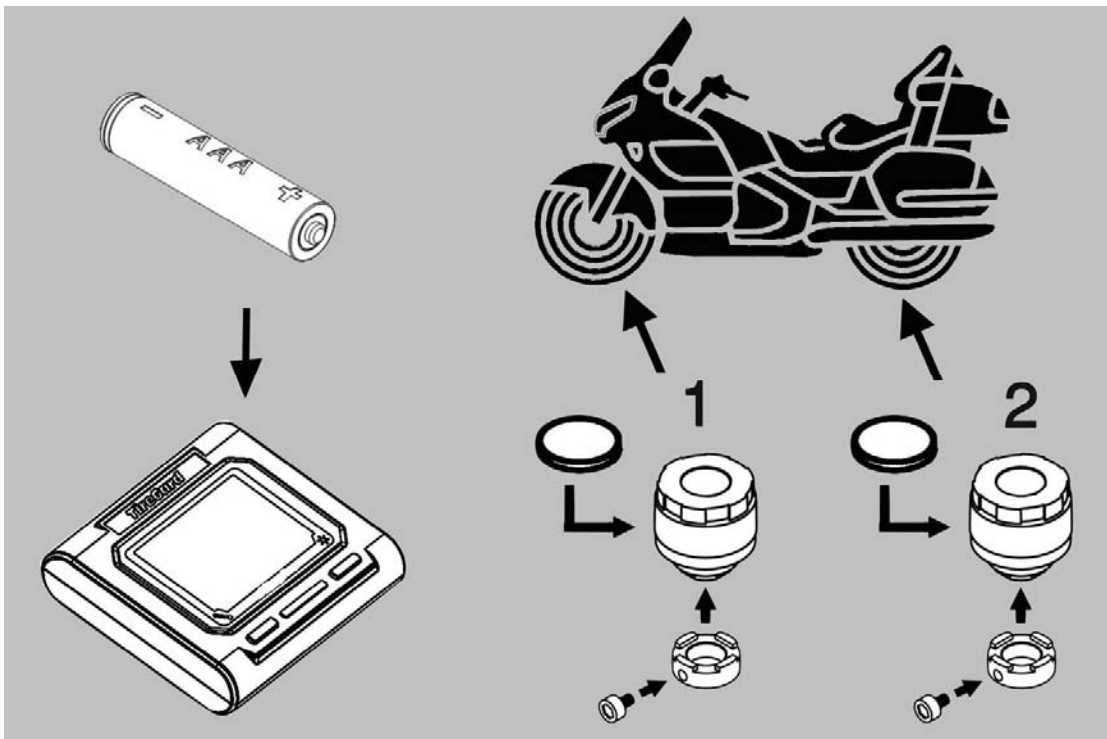
Sensor Description



Graphic User Interface and Contents



System Map

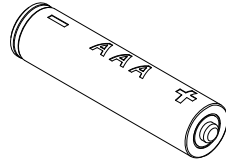


Installation

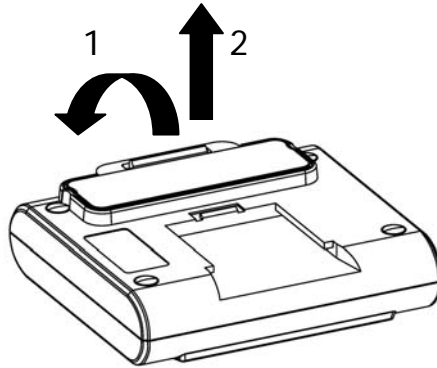
1. The Installation of LCD Monitor/Receiver

Insert battery :

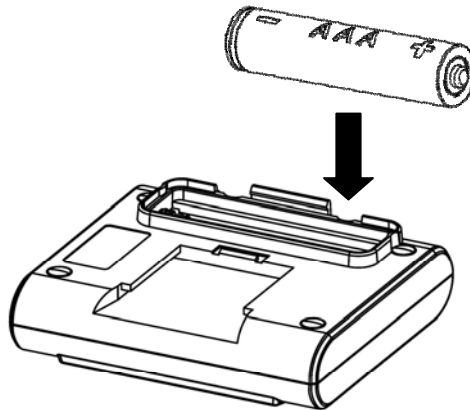
- A. Prepare one AAA-type battery.



- B. Place fingertips near convex bottom edge and open the battery cover.



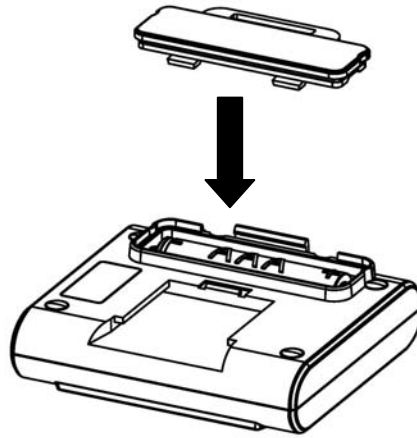
- C. Install the battery, please follow battery compartment direction icon.



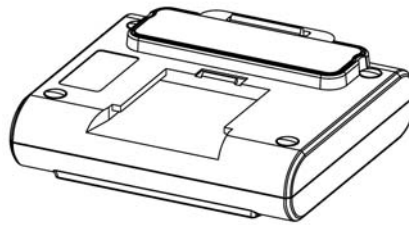
- D. After the battery is inserted, the LCD Monitor/Receiver will automatically power on and the display will show graphics as shown below.



E. Please be careful with the battery cover hook to avoid damage.



F. Carefully align the battery cover, making sure the hook is in the slot to avoid water leakage around the battery compartment and press cover down securely.



Caution :

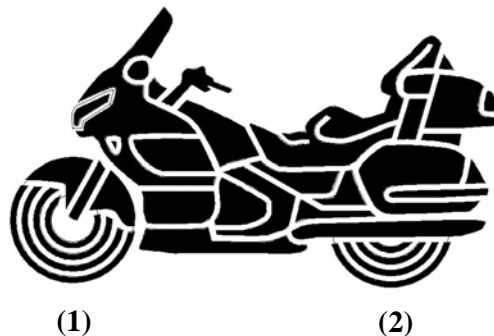
Before installation, make sure the water resistant battery gasket is in place. Do not use any sharp object to touch the gasket hook to avoid damage.

2. The Installation of the External Sensors

Each sensor is designed specifically for the tire location as denoted by its number; you have to make sure the sensors are installed in their specified positions. When inserting the batteries into the sensors, do not mix up the Front (1) and Rear (2) sensor caps. Each sensor is marked on its cap and within its body indicating its position on the motorcycle.

Sensor Map

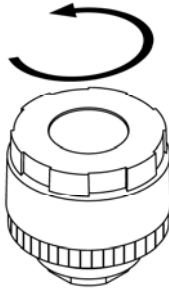
Number 1 means Front Tire & Number 2 means Rear Tire



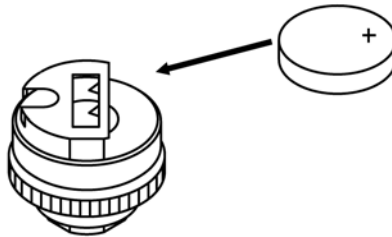
Insert Batteries in External Sensors:

Battery Installation for Tire Pressure Sensor

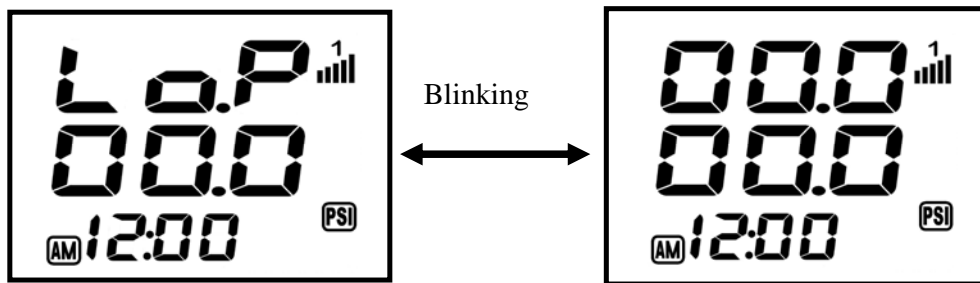
- A. Remove sensor cap by rotating counter-clockwise.



- B. When inserting the lithium battery make sure the battery polarity is correct.

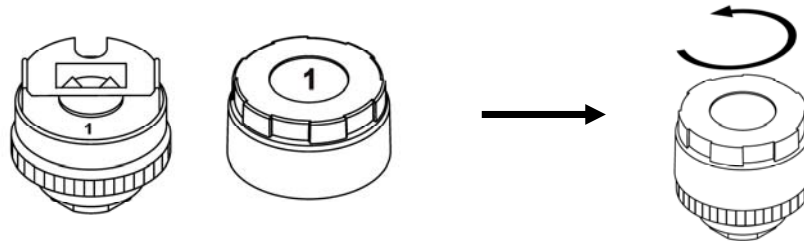


Immediately the LCD Monitor/Receiver will receive signals from the corresponding sensors and report the pressure value on the screen. At first, you will find the value shows “00.0”. It is because sensors have not been mounted yet.



Note: After removing the battery, you will need to let the system reset. Allow it to sit for 10 seconds before inserting the battery again.

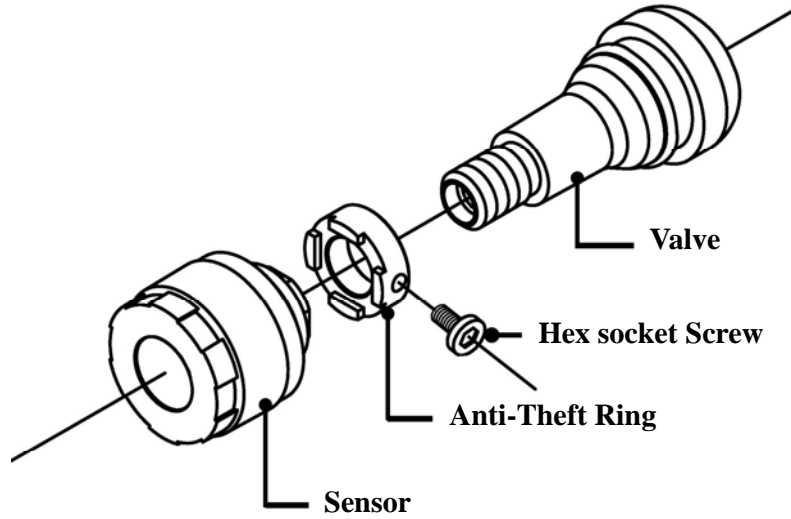
- C. Install sensor cap by rotating clockwise. (Tighten completely by hand. Do not use a tool.) Please ensure the sensors are in the correct (1 or 2) position. Do not mix up sensor caps. Both sensor cap and sensor body have reference marks indicating position.



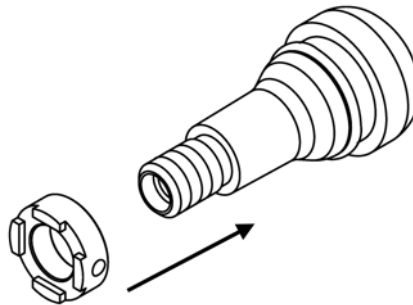
Please verify clearance when used with a 90 degree valve stem (Softail, etc.) to clear any and all calipers or other components before use. We do not recommend use with tire additives.

Anti –Theft Ring for External Sensor: (Installation is optional)

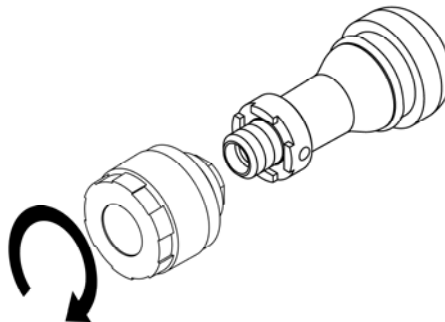
Anti –Theft Ring is designed to prevent the possibility of sensors being easily stolen.



- A. Place Anti-Theft Ring onto the valve stem.
(Before installing the sensor, please make sure the valve stem is properly cleaned.)



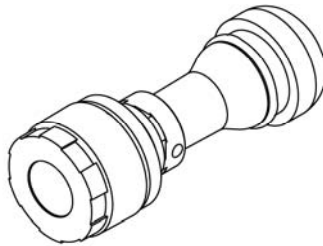
- B. Install sensors onto valve stem. Do not over tighten the sensor as it may become damaged.



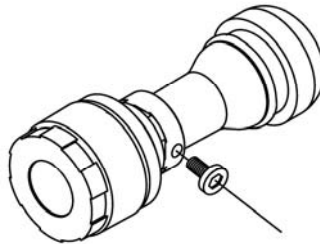
C. Now, the display will show you the latest tire pressure.



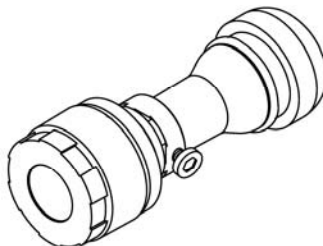
D. Adjust the Anti-Theft Ring position to seat it with the sensor firmly in place.



E. Insert the hex socket screw into the Anti-Theft Ring.
(Do not exert excessive pressure as damage to the valve may occur.)



F. When all of the tire pressure sensors are installed, check for air leaks using detergent water.
(Spread detergent water on the valve stem and watch for bubbles.) If the tire pressure sensors
and tire valves are properly fitted, no air will be leaking from the system.



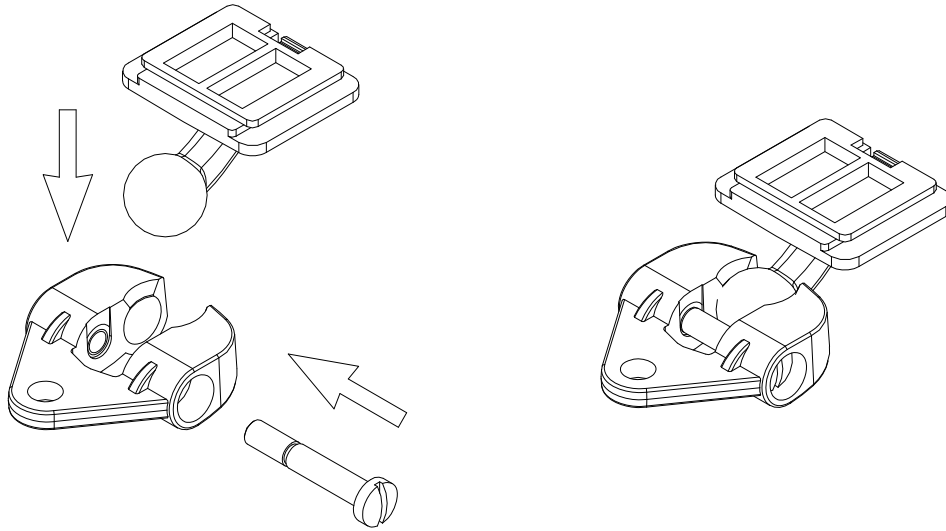
Installation of LCD Monitor/Receiver to the Handlebar Mounting Bracket

There are two options for installing the handle bar mounting bracket.

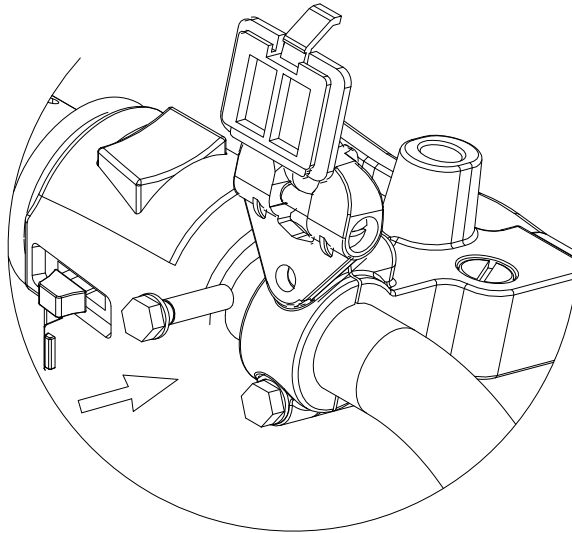
Option A : This option can be directly installed to the bracket on the Brake/Clutch Face Clamp.

Step 1. Place the ball shaped fastener into the Y shaped clamp until you hear a click sound.

Step 2. Install the adjustable holder screw and adjust with a regular screwdriver to screw secure.



Option A Figure:

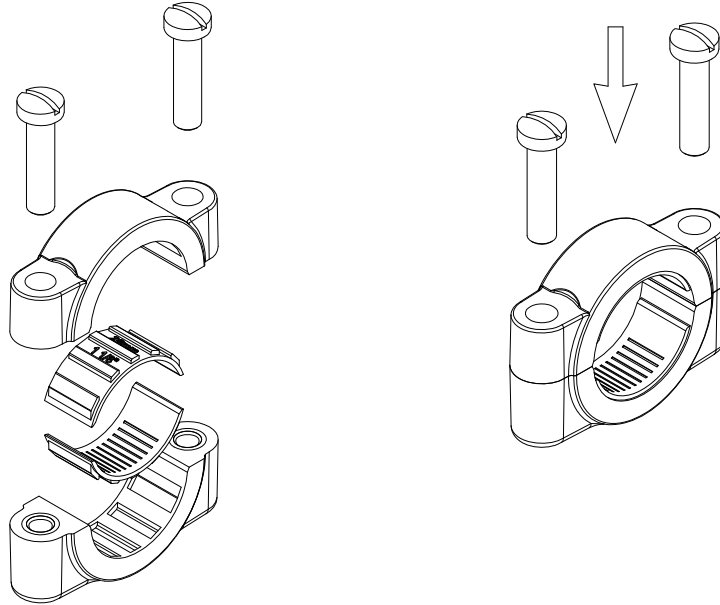


Remove the original screw from Brake/Clutch Face Clamp and align bracket, then install the screw back in place. Insure screw is securely tightened, but do not over tighten as you may crack mounting bracket.

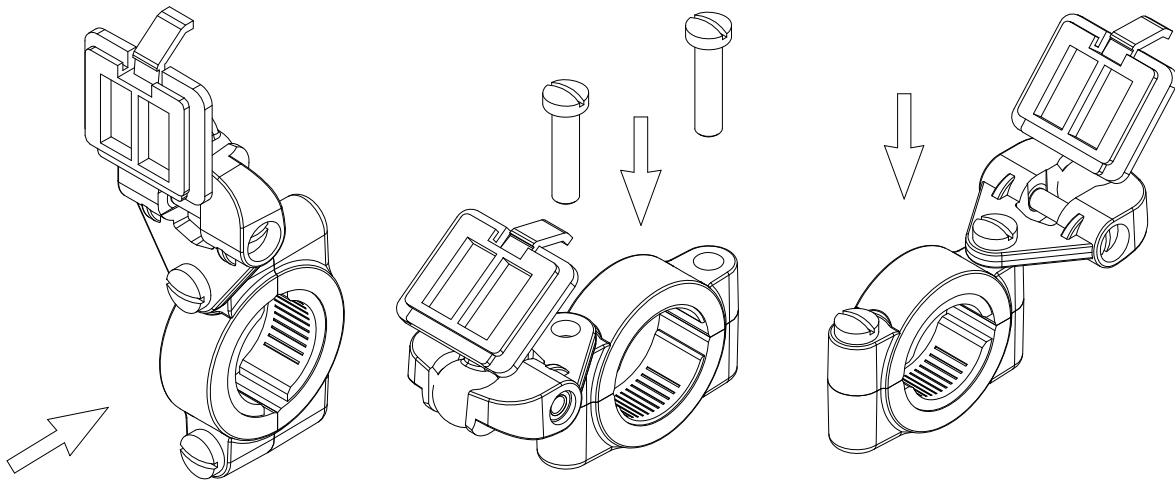
Option B : This option can be directly installed on a variety of handle bar diameters.

Step 1. Make sure the Anti-Slip Rubber Mounting Pads match the handle bar diameter.

Step 2. Install the bracket to the handle bar and tighten the screw securely.



Option B Figure :



Upright to the handle
Parallel to the handle bar
(rear)

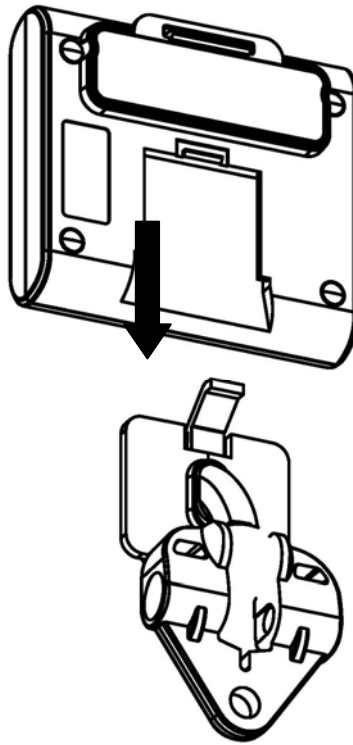
Parallel to the handle bar
(front)

Parallel to the handle bar
(rear)

The Anti-Slip Rubber Mounting Pads fit three sizes:

1. Handle bar diameter 1-1/8" (28mm)
2. Handle bar diameter 1" (25mm)
3. Handle bar diameter 7/8" (22mm)

Install LCD Monitor/Receiver on the bracket



Make sure the LCD Receiver/Monitor is properly secured to the holder.

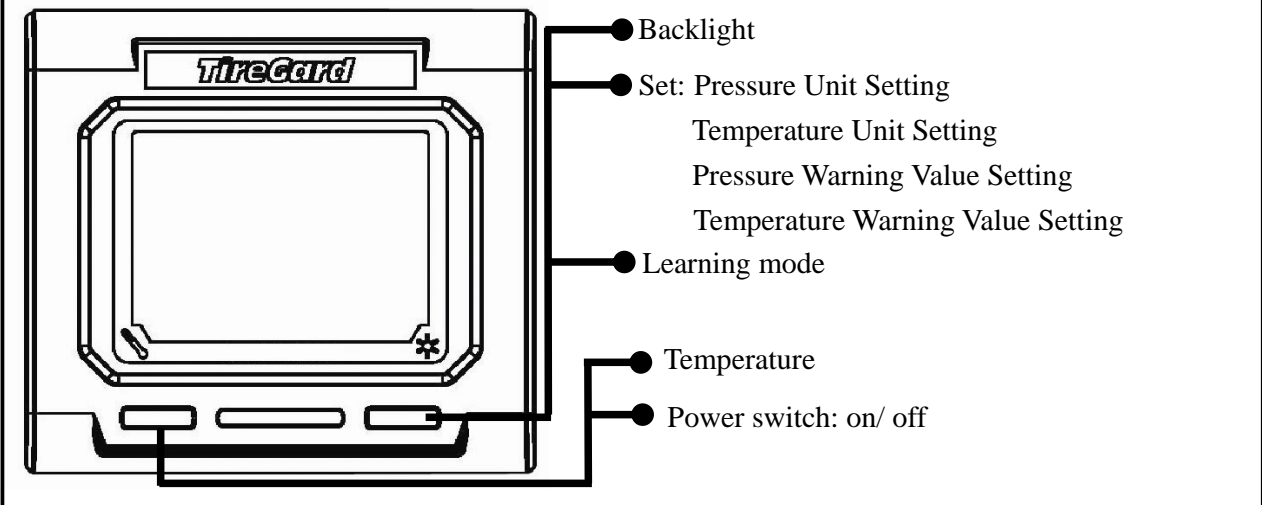
Caution :

1. Not recommended to use other screws for replacement of original screw to prevent damage.
2. Do not over tighten the holder screw to avoid damage on the Y shape bracket.
3. Strongly suggest using the silicon cover for extra protection.
4. If the silicon cover is wet, let air dry before use.




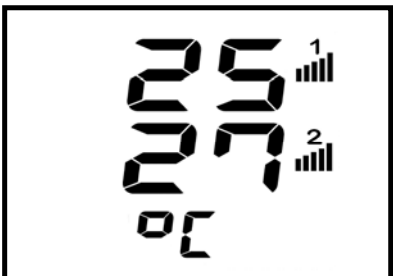
Operation Instructions

LCD Monitor/Receiver Basic Function

Function Buttons



Basic Function

	<p>Power Switch</p>
<ul style="list-style-type: none"> ● Press once Power on LCD Receiver/Monitor ● Press for about three seconds Power off LCD Receiver/Monitor 	
	<p>Display Tire Temperature Figures</p>
<p>Push the button, the LCD Receiver/Monitor will display tire temperature instead of tire pressure for about three seconds.</p>	
<div style="text-align: center;">  <p>Display Tire Temperature</p> </div>	



Backlight: on/ off

The LCD Receiver/Monitor is also equipped with a backlight, so you are able to check your tire pressure and temperature at any time, day or night. The backlight will turn off after three seconds.



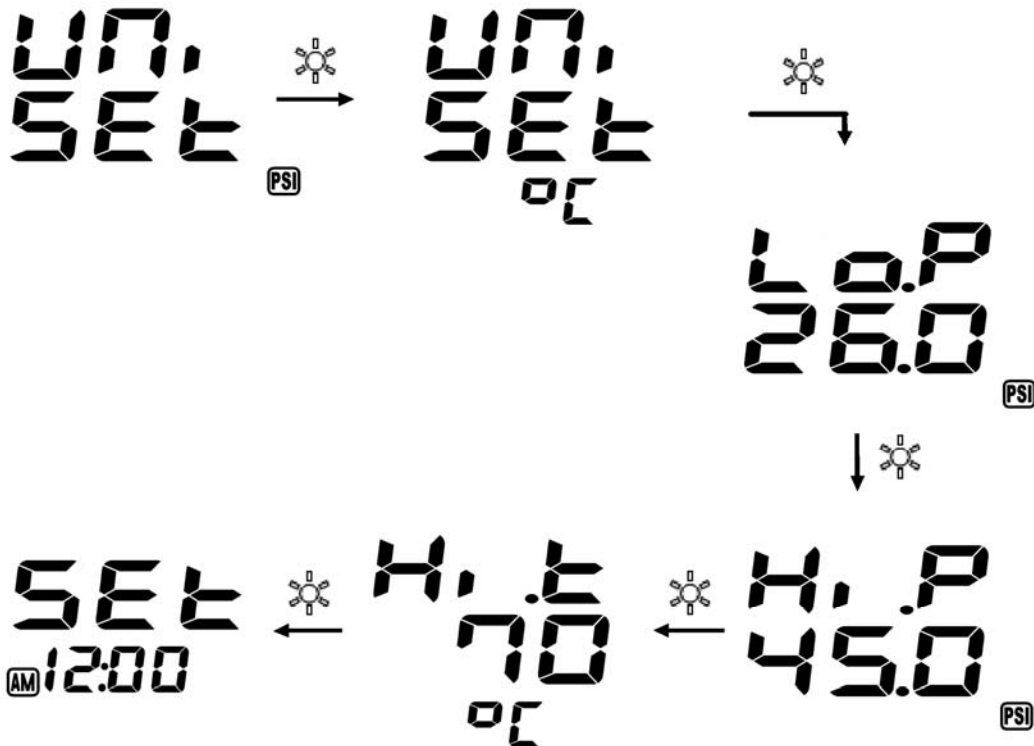
Advanced Setting Mode



Three
Seconds

- Pressure Unit Setting
- Temperature Unit Setting
- Pressure Warning Value Setting
- Temperature Warning Value

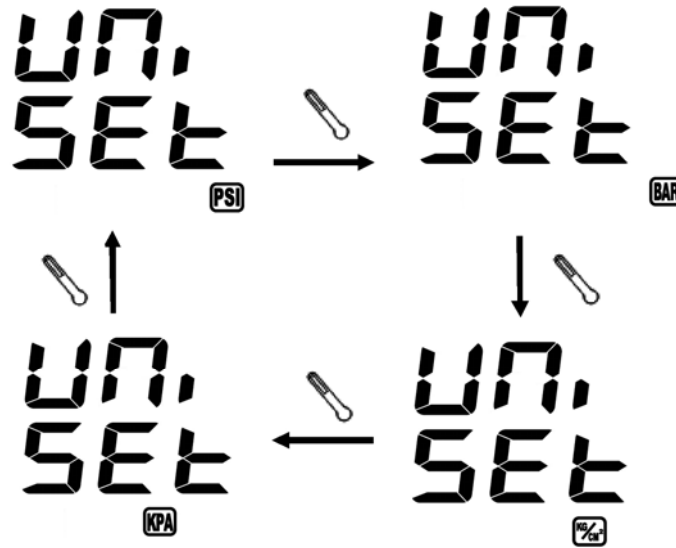
Press the “Temperature button” for over three seconds to enter advanced setting mode. Make selection by pressing the “Backlight button” and adjust your warning values.



A. Set the Pressure Measuring Unit :

There are four types of pressure measuring units: PSI, KPA, BAR and kg/cm^2

User can adjust values up or down by pressing the “Temperature button”.

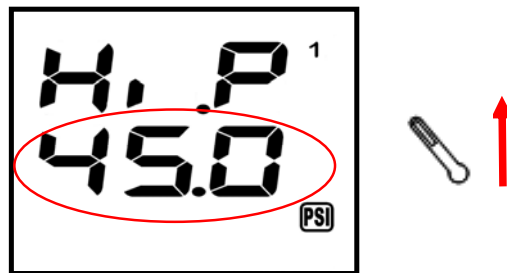


B. Set the Temperature Measuring Unit: °C and °F

User can adjust values up or down by pressing the “Temperature button”.

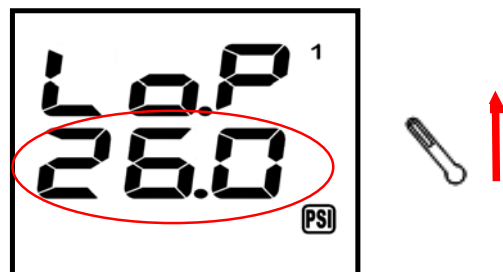
C. Setting the Front Wheel Upper Pressure Warning Value :

To set the front wheel upper pressure warning value, adjust the setting with flash icon. Press the “Temperature button” for adjustment. The default value is 45 PSI.



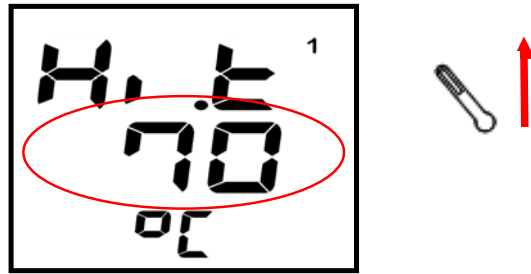
D. Setting the Front Wheel Lower Pressure Warning Value:

To set the front wheel lower pressure warning value, adjust the setting with flash icon. Press the “Temperature button” and backlight button for adjustment .The default value is 26 PSI.



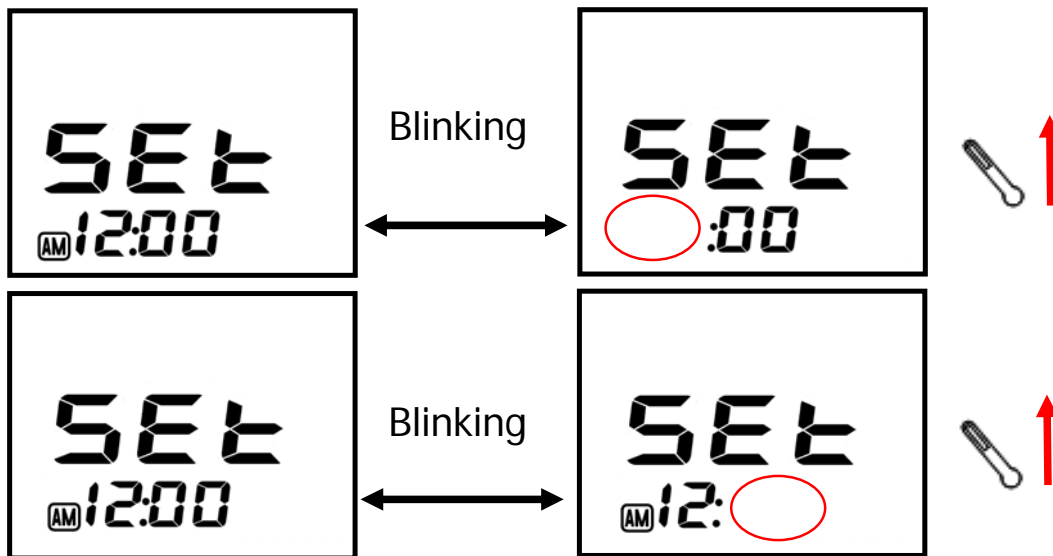
E. Setting the Front Wheel Temperature Upper Warning Value

To set the front wheel temperature upper warning value, adjust the setting with flash icon. Press the “Temperature button” for adjustment. The default value is 70°C.



F. Setting the Rear Wheel Pressure and Temperature Warning Value repeat previous steps (steps C –E).

G. To set the monitor time value, adjust setting with flash icon. Press “Temperature button” for adjustment.



Note : When the battery is inserted, time value will reset, so you will need to adjust the time again. This mode will return to the main screen as long as there is no operation for more than 25 seconds.



Sensor Learning Mode

**Five
Seconds**

In the unlikelyhood the sensor is broken or missing, the sensor learning mode provides a low cost alternative to replace damaged or lost sensors. These ‘learnable sensors’ are available separately. The LCD Monitor/Receiver can reload new sensors and the system will integrate this sensor information into its system and will overwrite the replaced sensors information. Pressing the “Temperature button” and the SET button at the same time for three seconds will activate the systems ‘learning mode,’ and the TireGard™ unit will start to recognize the new sensor(s).

LEA
LEA
LEA

Enter learning mode, insert battery into ‘learnable sensor’ immediately the LCD Monitor/Receiver will beep once and finish learning process.

0E8 
LEA
LEA

The ‘learning mode’ will continue for about 30 seconds and then go back to the main screen.

Operation Procedures

1. Initialization

Switch on LCD Monitor/Receiver to boot up (monitor must be on for sensors to communicate readings). LCD Monitor/Receiver will communicate with sensors and show the last tire pressure values before the system was turned off.

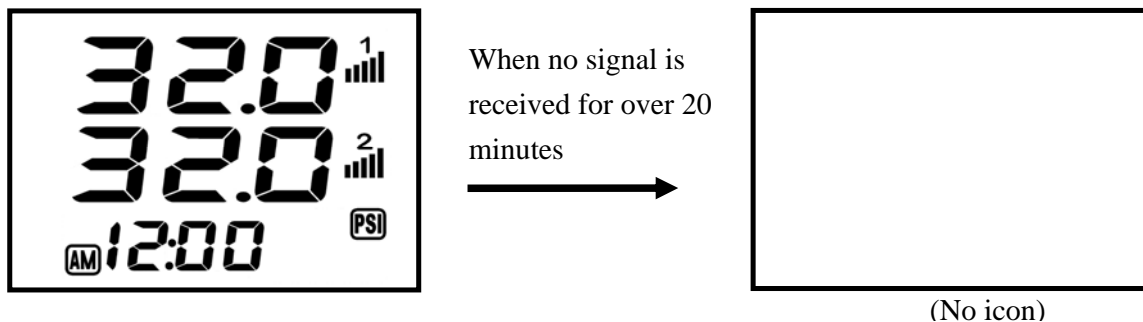
2. Main Screen

After Switching on LCD Monitor/Receiver to boot up, the unit will enter main screen mode. Most of the time your system will stay in this mode and respond with the latest figures for both tire pressure and temperature. In this mode, you will find the antenna icon will be flashing and the time showing.



3. Automatic Power Off

For power saving purpose, the unit is designed to automatically enter a sleep mode if no signal is received from the sensors for more than 20 minutes. In this mode, the LCD Monitor/Receiver will turn off to save battery power.



Restart the monitor from sleep mode by pressing any button, or operation can trigger the restart function, for example wheel movement, etc. At the same time monitor will display all tire data.

4. Abnormal Status Alerts

The LCD Monitor/Receiver will flash a red warning light for 10 seconds and repeat 5 times when:

- A. Tire pressure is below low warning value.
- B. Tire pressure is higher than upper warning value.
- C. Tire temperature higher than upper warning value.

The LCD Monitor/Receiver will show low battery icon when:

- D. LCD Monitor/Receiver runs out of power.
- E. Tire pressure sensor runs out of power.

Definition of Warnings

Item	Status	Purpose	Pattern
1.	Tire pressure is below lower warning range.	The warning of low tire pressure.	LCD will appear LoP icon blinks and the LED light flashes 10 times until condition back to normal setting range.
2.	When tire pressure is below lower warning range, each 1 PSI down, warnings will be given as well.	The warning of tire pressure getting lower.	LCD will appear LoP icon blinks and the LED light flashes 10 times until condition back to normal setting range.
3.	Tire pressure is higher than upper warning range.	The warning of high tire pressure.	LCD will appear HiP icon blinks and the LED light flashes 10 times until condition back to normal setting range.
4.	When tire pressure is higher than upper warning range, each 1 PSI up, warnings will be given as well.	The warning of tire pressure getting high.	LCD will appear HiP icon blinks and the LED light flashes 10 times until condition back to normal setting range.
5.	Tire temperature is higher than upper warning value.	The warning of high tire temperature.	LCD will appear HiT icon blinks and the LED light flashes 10 times until condition back to normal setting range.
6	When tire temperature is higher than upper warning range, each 1 PSI up, warnings will be given as well.	The warning of tire temperature getting high.	LCD will appear HiT icon blinks and the LED light flashes 10 times until condition back to normal setting range.
7	Learnable sensor is integrated.	Finish learning mode.	Back light flash warning alert once.

Troubleshooting

The following checklist will help you remedy problems you may encounter with your unit. Before going through the checklist below, check the connection and operating procedures.

1. Indications disappear from/do not appear in the display.
 - A. Make sure power switch is on.
 - B. Make sure monitor has AAA battery properly installed, observing correct polarity.
 - C. Use fresh batteries if necessary.
2. No connection between sensors and monitor and you find all tire pressure values are gone (indicated by 3 dashes '---').
 - A. Make sure sensor has CR1632 battery properly installed observing correct polarity.
 - B. Use new batteries if necessary.
 - C. If these solutions do not help improve the situation, consult your nearest TireGard™ dealer.
3. Monitor display is getting dark.
 - A. When monitor temperature is over 80°C, it is natural that LCD panel will be getting dark. When temperature is back to normal, LCD screen will be normal again.
 - B. When temperature is below -20°C, the response time of monitor could be slower.
4. 'Learning mode' can only accept 'learnable sensor' not standard sensor.

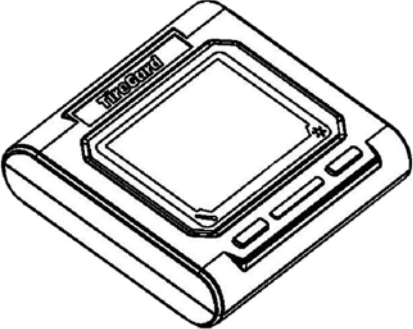
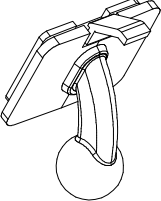
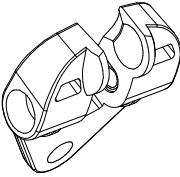
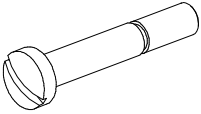
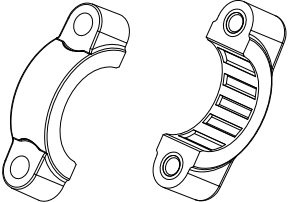
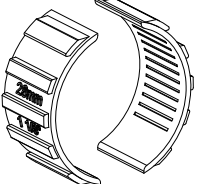
Additional Information

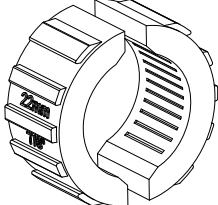
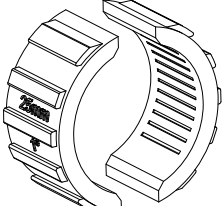
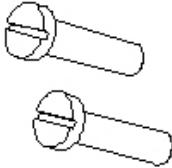
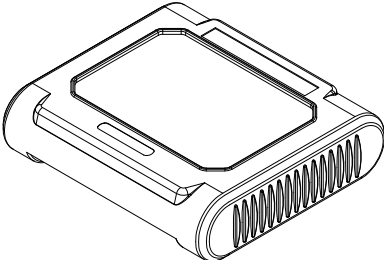
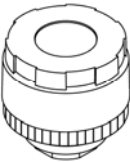

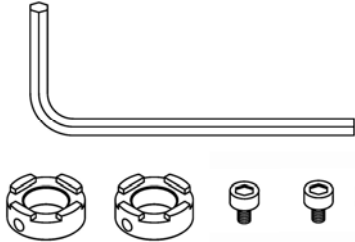
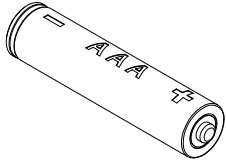
Under normal conditions, sensor batteries will last approximately 1~2 years. LCD Monitor/Receiver battery will last approximately 6 months. (The service life may be shorter depending on the conditions of use.) When the battery becomes weak, the power low indicator will appear on the screen. Replace the battery with a new CR1632 lithium battery for sensor or with AAA 1.5V battery for LCD Monitor/Receiver.

Notes on battery

- Wipe the battery with dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metal tweezers, otherwise a short-circuit may occur.
- Battery may explode if mistreated.
- Do not recharge, disassemble, or dispose of in a fire.

Package Content

Item	Photo	Number
13-318 - LCD Monitor/Receiver		1 piece
Ball Shape Turing Fastener		1 piece
Y Shape Clamp		1 piece
Adjustable Screw for Clamp		1 piece
Handlebar Bracket		1 pair
1-1/8" Handlebar Anti-Slip Rubber Pad		1 pair

7/8" Handlebar Anti-Slip Rubber Pad			1 pair	
1" Handlebar Anti-Slip Rubber Pad			1 pair	
Screw for Handlebar Bracket			2 pieces	
Silicon Cover			1 piece	
Tire Pressure Sensor			2 pieces	
CR1632 battery			2 pieces	
Anti-Theft Ring			Allen Wrench	1 piece
			Anti-Theft Ring	2 pieces
			Hex Socket Screw	2 pieces
AAA 1.5V battery			1 piece	
User Guide			1 piece	

Product Specifications

Tire Pressure Sensor Specifications	
Frequency	433.92MHz
Tire pressure range	0 ~ 60PSI
Accuracy	Tire pressure ± 1 PSI / tire temperature $\pm 2^{\circ}\text{C}$
Operating voltage	3V DC
Operating temperature	-40°C ~ 125°C
Battery life	1~2 years (depends on working hours per day)
Dimensions	Diameter 20.5mm X height 20mm
Weight	10 ± 1 g

LCD Monitor/Receiver Specifications	
Frequency	433.92MHz
Operating voltage	1.5V DC
Battery life	6 months (depends on working hours per day)
Operating temperature	-20°C ~ 80°C
Dimensions	Length 68mm X width 62mm X height 16mm
Weight	58g

Warranty

Big Bike Parts® warrants its TireGard™ merchandise shall be free from defective material and workmanship under normal use and service for a period of one year from date of purchase. This warranty does not apply to any merchandise that has been modified or becomes defective as a result of improper use or mistreatment of the merchandise. This warranty is in lieu of any other expressed or implied warranty on the part of Big Bike Parts® or anyone else. Big Bike Parts® shall not be liable for any consequential or incidental damage arising out of the breach of any warranties of its merchandise.