

**Bluetooth Low Energy
Tire Pressure Monitoring System
User Manual
Model: Merlin-G (Aegis)**

SYSGRATION®

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1. Product Introduction

A bicycle tire pressure monitor that provides real-time monitoring of tire pressure and temperature for enhanced safety while riding. Connect via Bluetooth and use the dedicated app on your smartphone to access tire pressure information enabling you to monitor tire pressure and performance data all in one device. Compact appearance and easy to install, also suitable for various bicycle types.

2. Notice

Product Warning

2.1.1 Do not operate the APP while riding. The company is exempt from all responsibilities that result from rider's carelessness and improper operation.

2.1.2 The system adopts the wireless transmission of signals. In some special environments, frequency interference, faulty operation or faulty installation may result in weaker signals or inability to receive signals.

2.1.3 If the TPMS sensor is low on battery(if abnormal conditions exist continuously, the battery may make the TPMS sensors continuously emit signals to warn the rider, so the battery life will be shorter than expected), please go as soon as possible to a Authorized Giant Dealer to confirm whether the TPMS sensor needs to be replaced. You will take all the risks and responsibilities if you do not change the sensor when the low battery sensor warning is displayed.

2.1.4 Temporary resealing of product injected through the valve hole may adversely affect the operation of the sensor. The company is exempt from all responsibilities. Furthermore, do not place the TPMS sensor in contact with any chemicals. They might damage the sensor and prevent it from functioning properly.

Federal Communication 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.

FCC Caution:

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.

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 0.5 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 0.5 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

Industry Canada Statement

This device complies with Industry Canada licence-exempt RSS standard.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC Radiation Exposure Statement:

This equipment complies with RSS-102 radiation exposure limit set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0.5cm between the radiator and your body.

Cet équipement est conforme aux CNR-102 d'Industrie Canada. Cet équipement doit être installé et utilisé avec une distance minimale de 0.5 centimètres entre le radiateur et votre corps. Cet émetteur ne doit pas être co-localisées ou opérant en conjonction avec autre antenne ou émetteur. Les antennes utilisées pour cet émetteur doivent être installés et fournir une distance de séparation d'au moins 0.5 centimètre de toute personne et doit pas être co-située ni fonctionner en conjonction avec une autre antenne ou émetteur.

3. BLE TPMS Specification

BLE Sensor Specification	
Operating Voltage	3V
Monitored Pressure Range	0 to 125psi (0 to 861 kPa)
Operating Frequency	2.4GHz
Transmission Power	4 dBm MAX
Battery Life	600 Hours (under normal operating condition)
Battery Capacity	140 mAh (CR1632)

4. BLE TPMS Package

Part Name	Quantity
BLE TPMS Sensor	2 pcs
CR 1632 Battery	2 pcs
Adapter	2 pcs
Sleeve	2 pcs
User Manual	1 pcs

5. BLE TPMS Sensor Installation

5.1 BLE TPMS Sensor Accessories



1.Battery(CR1632) 2.BLE TPMS Sensor 3.Sleeve 4.Adapter

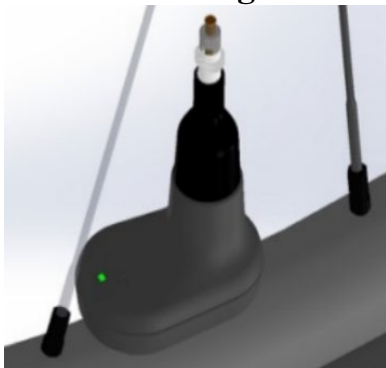
5.2 BLE TPMS Battery Replacement



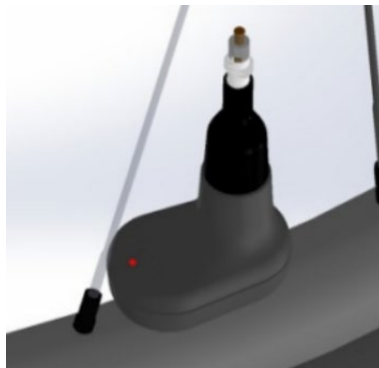
Rotate the battery cover counterclockwise and remove the cover and battery. Do not use any tools to remove or install the battery cover.

Remove the old CR1632 battery, Install a new CR1632 battery into the sensor with the + (plus) sign facing the cover. Then put the cover back on and rotate it clockwise to secure.

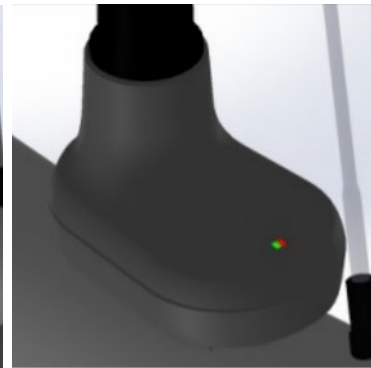
5.3 BLE TPMS Light



Green flashing
Battery Normal



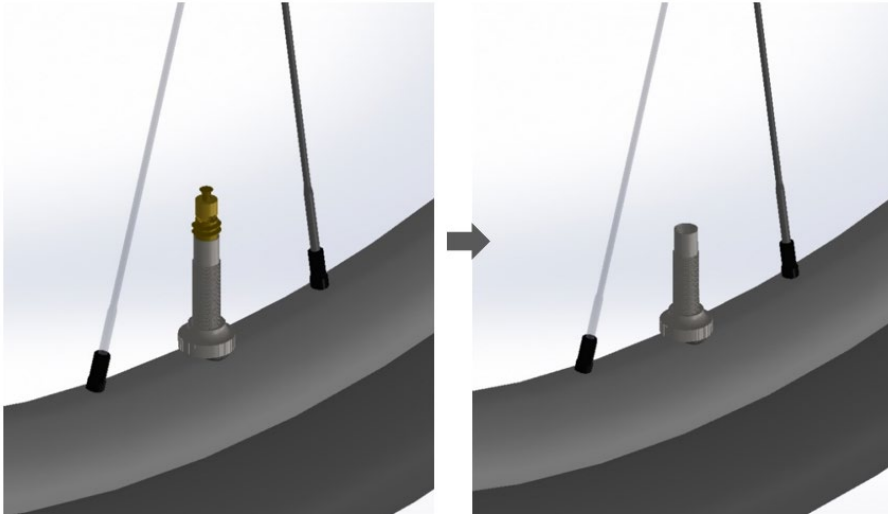
Red flashing
Low Battery Warning



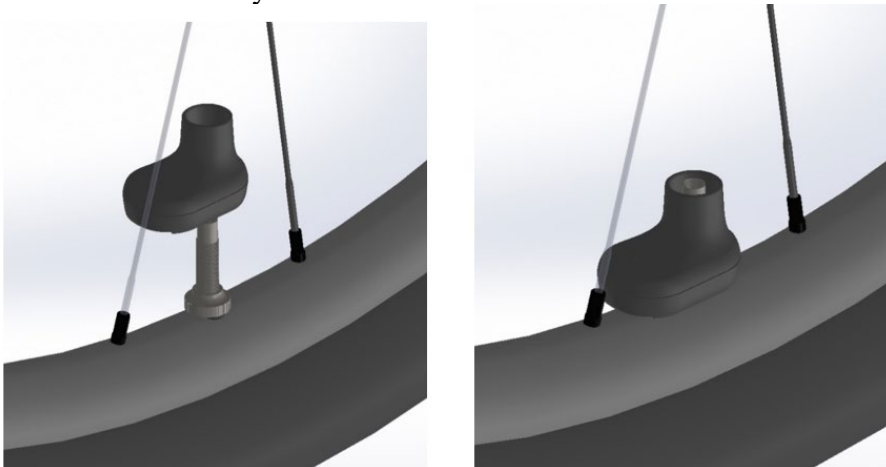
Green & Red flashing
Update firmware/bootloader

5.4 Installation Steps

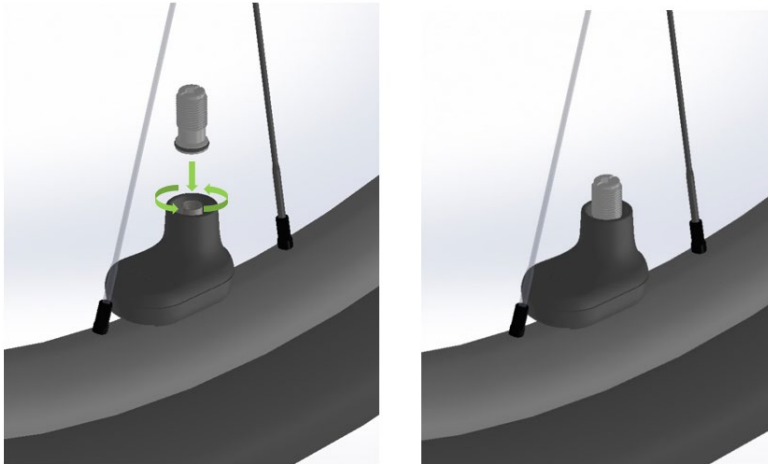
- (1) Remove the valve core from the Presta valve.



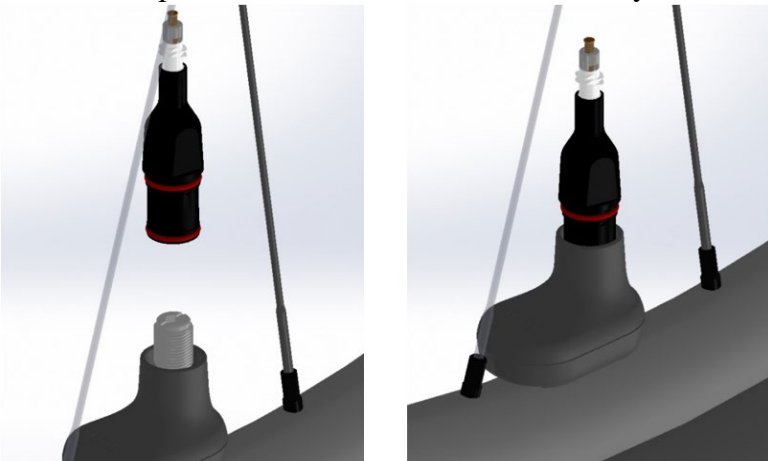
- (2) Insert the TPMS body onto the Valve.



- (3) Use M3 Allen Key to tighten the sleeve until it is finger-tight.
(Please hold the shorter end of Allen key and DO NOT overtighten)



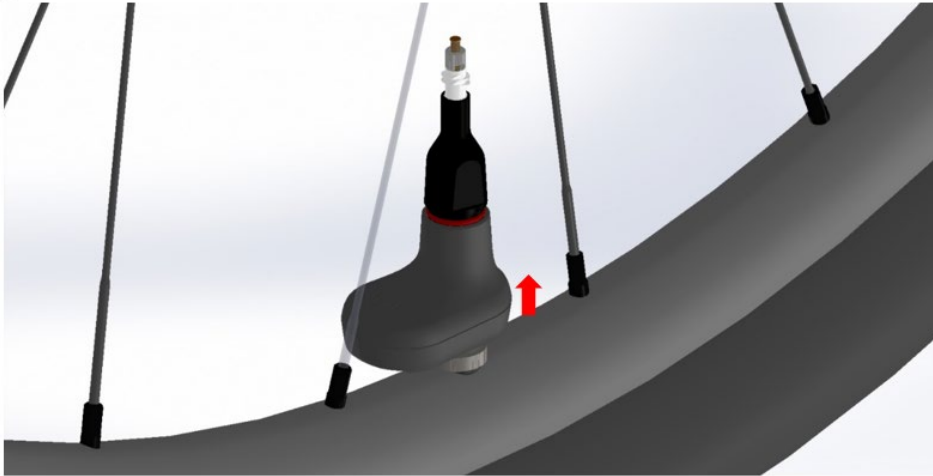
- (4) Apply grease* to fully lubricate the entire O-rings on the adaptor and its inner side, then insert the adaptor onto the sleeve until it stocked by sleeve.



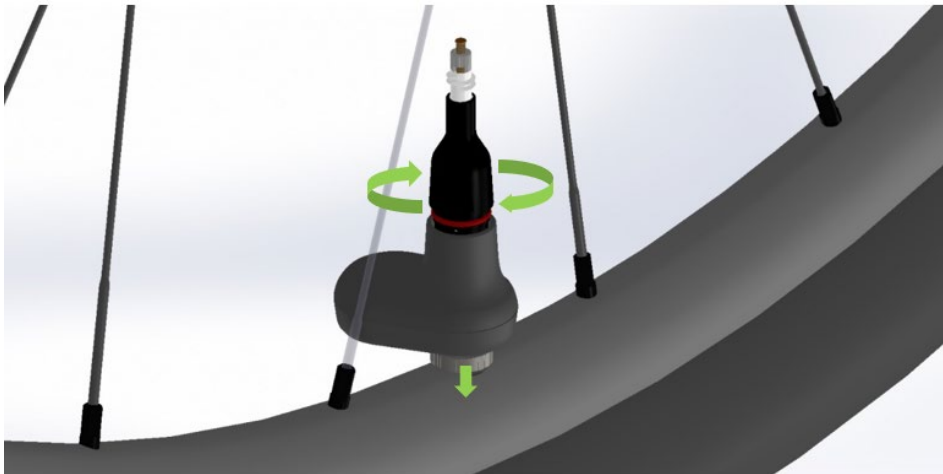
Note:

- Please use neutral grease to lubricate the O-ring. Do not use alcohol or acidic/alkaline solutions for cleaning.

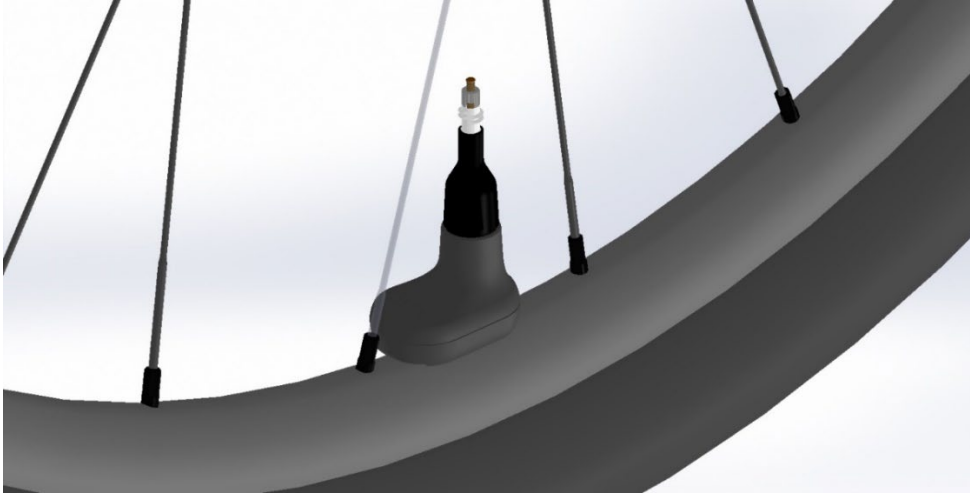
- (5) Pulling up the TPMS body to make it pre-assembled with the adaptor.



- (6) Tighten the TPMS and the adaptor simultaneously via tightening “The Adaptor”.



- (7) When the TPMS is about to contact the bottom surface, adjust the direction of the TPMS and hold it in place with one hand, then use the other hand to continue tightening the adaptor until it is finger-tight. * (Make sure the upper O-ring is fully sunk into the TPMS and no gap between TPMS & adaptor)



- (8) Check both the TPMS and adaptor can no longer rotate or wobble easily, the assembly is then complete.

6. Self-Test Procedures

6.1 Check Device Battery Power

The TPMS is powered by a CR1632 coin battery. If the TPMS fails to transmit data or displays a low voltage warning, the battery may be running low. It is recommended to check or replace the battery first.

6.2 Check Device Connection Status

Use the mobile app to check if TPMS is properly connected. Disconnect and reconnect the device to ensure a stable Bluetooth signal. Restarting the phone's Bluetooth or the device itself might restore the connection.

6.3 Inspect for Physical Damage

- (1) If there is a pressure discrepancy, use a manual tire pressure gauge to measure the pressure of each tire and compare it with the readings from the TPMS.
- (2) If there is a suspected air leakage, remove the TPMS and check the sealing parts, such as O-rings or gaskets. If there is obvious wear, replace them and reinstall the sensor on the wheel rim. (Please make sure following the proper installation procedure.)
- (3) Examine the TPMS itself for visible physical damage, such as cracks or breakage. If any of these are found, the sensor inside TPMS may be damaged.

6.4 Check Firmware and Software Versions

Use the mobile app to see if there are firmware updates available for the TPMS. If updates are available, upgrading the firmware might fix performance problems.

7. Warranty Policy

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AGAINST SYSGRATION.LTD. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE, COUNTRY, OR PROVINCE. THIS WARRANTY DOES NOT AFFECT YOUR STATUTORY RIGHTS. TO THE EXTENT THIS WARRANTY IS INCONSISTENT WITH THE LOCAL LAW, THIS WARRANTY SHALL BE DEEMED MODIFIED TO BE CONSISTENT WITH SUCH LAW. FOR A FULL UNDERSTANDING OF YOUR RIGHTS, CONSULT THE LAWS OF YOUR COUNTRY, PROVINCE, OR STATE.

7.1 EXTENT OF LIMITED WARRANTY

Except as otherwise set forth herein, SYSGRATION.LTD warrants its bicycle components to be free from defects in materials or workmanship for a period of two (2) years after original purchase of the product.

7.2 GENERAL PROVISIONS

This warranty only applies to the original owner and is not transferable. Claims under this warranty must be made through the retailer where the bicycle or the SYSGRATION.LTD product was purchased or a SYSGRATION.LTD authorized service location. Original proof of purchase is required.

All SYSGRATION.LTD warranty claims will be evaluated by a SYSGRATION.LTD authorized service location whereupon acceptance of the claim the product will be repaired, replaced, or refunded at SYSGRATION.LTD's discretion. To the extent allowed by local law claims under this warranty must be made during the warranty period and within one (1) year following the date on which any such claim arises.

7.3 NO OTHER WARRANTIES

EXCEPT AS DESCRIBED HEREIN, AND TO THE EXTENT ALLOWED BY LOCAL LAW, SYSGRATION.LTD MAKES NO OTHER WARRANTIES, GUARANTIES, OR REPRESENTATIONS OF ANY TYPE (EXPRESS OR IMPLIED), AND ALL WARRANTIES (INCLUDING ANY IMPLIED WARRANTIES OF REASONABLE CARE, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE) ARE HEREBY DISCLAIMED.

7.4 LIMITATIONS OF LIABILITY

EXCEPT AS DESCRIBED HEREIN, AND TO THE EXTENT PERMITTED BY LAW, IN NO EVENT SHALL SYSGRATION.LTD OR ITS THIRD PARTY SUPPLIERS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. SOME STATES (COUNTRIES AND PROVINCES) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

7.5 LIMITATIONS OF WARRANTY

This warranty does not apply to products that have been incorrectly installed, adjusted, and/or maintained according to the respective SYSGRATION.LTD user manual.

This warranty does not apply to damage to the product caused by a crash, impact, abuse of the product, non-compliance with manufacturer's specifications of intended usage, or any other circumstances in which the product has been subjected to forces or loads beyond its design. This warranty does not apply when the product has been modified, including but not limited to, any attempt to open or repair any electronic and electronic related components.

This warranty does not apply when the serial number or production code has been deliberately altered, defaced, or removed.

SYSGRATION.LTD components are designed for use only on bicycles that are pedal powered or pedal assisted (e-Bike/Pedelec). Notwithstanding anything else set forth herein, the battery pack and charger warranty does not include damage from power surges, use of improper charger, improper maintenance, or such other misuse.

This warranty shall not cover damages caused by the use of parts of different manufacturers or parts that are not compatible or suitable for use with SYSGRATION.LTD components. This warranty shall not cover damages resulting from commercial (rental) use.

7.6 WEAR AND TEAR

This warranty does not apply to normal wear and tear. Wear and tear parts are subject to damage as a result of normal use, failure to service according to SYSGRATION.LTD recommendations, and/or riding or installation in conditions or applications other than recommended.

Wear and tear parts include:

- Air sealing O-rings
- Batteries
- Corrosion
- Dust seals
- Waterproof seals
- Rubber moving parts
- Stripped threads/bolts (aluminum, titanium, magnesium or steel)

Disclaimer:

This product is only to be used as a precautionary warning and provides users with a convenient secondary safety equipment. Please follow the standard installation procedures or ask a qualified authorized dealer to install the product. If the inner tube has been damaged or if a traffic accident occurs due to improper riding behavior, the company will not be responsible for any civil or criminal liabilities.