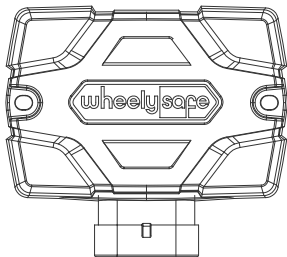


# Tyre & Wheel Safety Alert System

## TB-1 / TEH-1 User Manual



# Tyre & Wheel Safety Alert System

## 1. Product Introduction

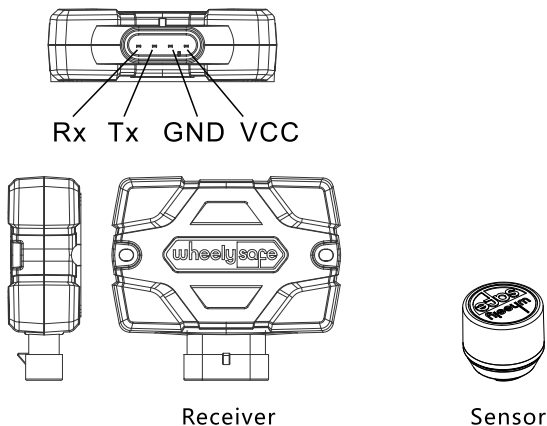
The Tyre & Wheel Safety Alert System consists of receiver and sensor. Sensor is installed in vehicle wheel rim to detect and collect tire pressure and temperature, transmit to receiver through 433MHz frequency. Receiver receives data from sensor and forwards to dash board (or other terminal) via serial port. The system functions significantly in the applications of vehicle fleet, where typically a tractor is mobilized with various trailers. The receiver codes with sensor during vehicle trip, and stores sensor ID to its memory. Even after trailers are detached from tractor, the sensor ID is still available in memory for future attachment. The receiver is external-powered by 4PIN connector, with a build in 20mAh rechargeable Ni-MH battery.

## 2. Characteristics

- \* Extended communication distance, strong and stable transmission
- \* Monitor and notify users of vehicle tire condition
- \* Code with 68 sensors at maximum
- \* Early high/low air pressure alarm
- \* Strong signal, high reliability
- \* High temp. alarm
- \* Low battery alarm
- \* Tire blow out alarm

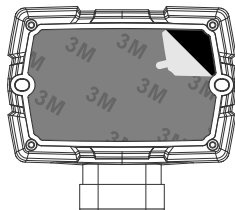
# Tyre & Wheel Safety Alert System

## 3. Product Image



## 4. Install Receiver

Peel off the protection film from backside, adhere receiver at an ideal location for good view and connection, improve tape adhesive strength by pressing on receiver for 1min.



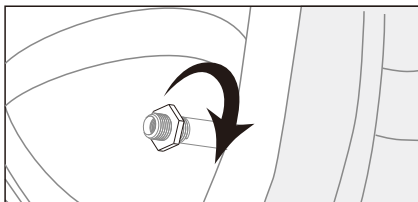
# Tyre & Wheel Safety Alert System

## 5. Specifications

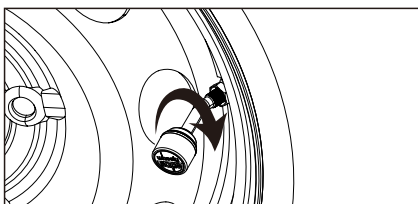
General Specifications	
Spec. Item	Receiver
HF Frequency	433.92MHz
Frequency stability	$\leq \pm 20\text{KHz}$
Modulation freq.	9.6KHz
Modulation type	ASK
Operation voltage	12~24V
Receiving sensitivity	Higher than -110dBm
Transmission current	<18mA
Operation temperature	-20°C ~ 80°C
Storage temperature	-40°C ~ 85°C
Weight	74g
Dimensions	88×78×28mm

# Tyre & Wheel Safety Alert System

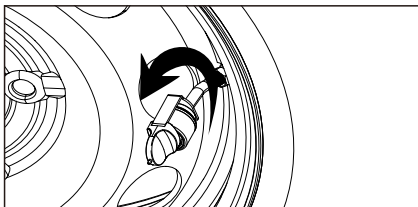
## 6. Install Sensor



**1** Rotate the nut onto vehicle tire valve.



**2** Mount sensor on valve clockwise, screw down to bottom and tight.



**3** By enclosed spanner rotate the nut anti-clockwise until it's pressing against sensor.

# Tyre & Wheel Safety Alert System

## 7. Specifications

Product	Sensor
HF Frequency	433.92 MHz
Frequency Stability	$\pm 20\text{KHz}$
Modulation Frequency	9.6KHz
Modulation Type	ASK
Operation Voltage	2.5-3.0V
High Frequency Power	$\leq 8\text{dBm}$
Pressure Accuracy	$\pm 1.5 \text{ PSI (0.1 Bar)}$
Temperature Accuracy	$\pm 3^{\circ}\text{C}$
Operating Current	$< 14.5\text{mA}$
Standby Current	$< 3\mu\text{A}$
Operating Temperature	$-40^{\circ}\text{C}-120^{\circ}\text{C}$
Storage Temperature	$-40^{\circ}\text{C}-125^{\circ}\text{C}$
Weight	$18\pm 3\text{g}$
Dimensions	(H) 16mm x (Dia.) 20mm

# Tyre & Wheel Safety Alert System

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Any changes or modifications not expressly approved by the party responsible for compliance 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.

#### FCC Warning

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.

#### Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.