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## STEELMATE TP-S12I

# STEELMATE TP-S12I Valve Type Tire Pressure Monitoring System

User Manual

## 1. INTRODUCTION

This manual provides instructions for the STEELMATE TP-S12I Valve Type Tire Pressure Monitoring System (TPMS). This system is designed to monitor your vehicle's tire pressure and temperature in real-time, enhancing driving safety for both the driver and passengers. The system features internal sensors for high accuracy and a solar-powered display unit with audible and visual alarms for abnormal tire conditions.



Figure 1: STEELMATE TP-S121 Display Unit

## 2. PACKAGE CONTENTS

Please check the package contents upon opening to ensure all items are present:

- Display Unit (1)
- Valve Sensors (4)
- Adhesive Tape Set (1)
- Instruction Manual (Japanese)



Figure 2: Package Contents

### 3. PRODUCT FEATURES

- **Internal Valve Sensors:** Provides higher accuracy and security compared to external sensors.
- **Real-time Monitoring:** Continuously displays tire pressure and temperature for all four tires.
- **Audible and Visual Alarms:** Notifies the driver of abnormal tire conditions (e.g., rapid air leakage, high/low pressure, high temperature) with sound and flashing display.
- **IP67 Waterproof and Dustproof:** Sensors are designed to withstand harsh environmental conditions.
- **Solar Powered Display:** The display unit charges via solar energy, simplifying installation and reducing cable clutter.
- **Power-Saving Sensors:** Designed for long battery life, typically exceeding 5 years under normal use.
- **Three-Color LED Display:** Clear and easy-to-read display with different colors for various statuses.

**タイヤ空気圧モニターシステムのメリット**

		
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空気圧 高い X 空気圧 低い X 空気圧 正常 ✓		
摩擦減少 寿命延長	最適なバランスを保つ	義務つけ予定国

Figure 3: Benefits of a Tire Pressure Monitoring System

## 4. SETUP

### 4.1 Sensor Installation

The valve sensors are internal and require professional installation. It is strongly recommended to have the sensors installed by a qualified specialist or car service center to ensure proper mounting and tire balancing.

### 4.2 Display Unit Placement

The display unit is solar-powered, making its placement straightforward. Position the display unit on your vehicle's dashboard where it can receive direct sunlight for charging and where the display is clearly visible to the driver without obstructing the view of the road. Use the provided adhesive tape to secure the unit.

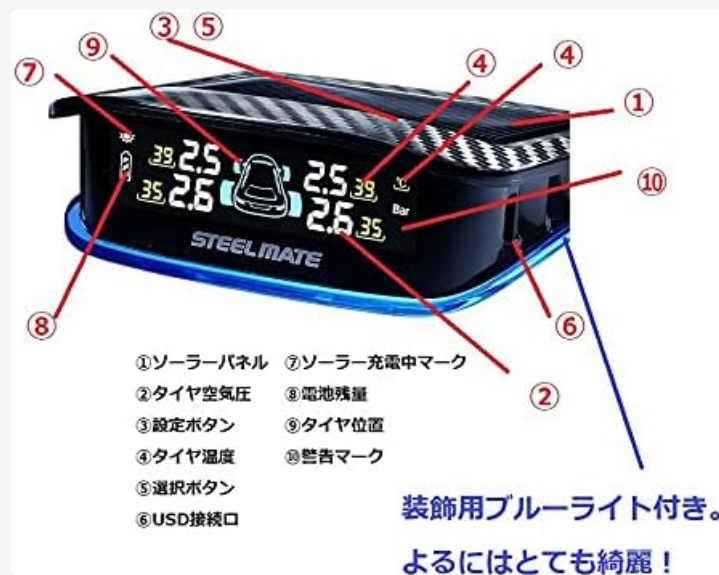


Figure 4: Recommended Display Unit Placement

## 5. OPERATING INSTRUCTIONS

### 5.1 Power On/Off

The display unit automatically powers on when it detects vibration (e.g., when the vehicle starts moving) and powers off after a period of inactivity to conserve battery. It also charges automatically via its solar panel when exposed to sunlight.

### 5.2 Display Overview

The display shows real-time pressure and temperature for each tire. It also indicates battery status and solar charging activity.



**当商品特徴：**

1. 液晶受信機はソーラー充電のため、設置超簡単です。
2. センサー部に高性能電池内蔵あり、5年間以上は電池交換不要です。
3. タイヤの温度、空気圧同時監視、異常時にアラームで知らせます。
4. 有名メーカーSTEELMATE社製で、品質保証1年間付き。

Figure 5: Display Unit Features

1. **Solar Panel:** Charges the internal battery.
2. **Tire Pressure:** Displays current tire pressure (e.g., in Bar or PSI).
3. **Setting Button:** Used to enter settings mode and confirm selections.
4. **Tire Temperature:** Displays current tire temperature (e.g., in °C).
5. **Selection Button:** Used to navigate through settings options.
6. **USB Port:** For alternative charging or firmware updates.
7. **Solar Charging Indicator:** Lights up when the unit is charging via solar power.
8. **Battery Level:** Indicates the display unit's internal battery charge.
9. **Tire Position:** Graphic representation of the vehicle and tire positions.
10. **Warning Mark:** Appears when an alarm condition is met.

### 5.3 Alarm Functions

The system will trigger an alarm (audible beep and flashing display) if any tire's pressure or temperature falls outside the preset safe range. The default alarm pressure range is 1.7 Bar (low pressure) to 3.3 Bar (high pressure). The display will highlight the affected tire and show the warning mark.

# 家族の安全を守る



## 三色カラースクリーン 一目瞭然



Figure 6: Three-Color Display Screen

## 6. MAINTENANCE

### 6.1 Display Unit Care

Keep the solar panel on the display unit clean and free from dust or obstructions to ensure efficient charging. Wipe the display screen with a soft, dry cloth. Avoid using abrasive cleaners or solvents.

### 6.2 Sensor Battery

The internal sensors are designed for a long battery life, typically exceeding 5 years. Battery replacement for internal sensors should be performed by a professional.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Display not turning on	Low battery; No vibration detected	Place in direct sunlight for charging; Start driving to activate.
No tire data displayed	Sensor not transmitting; Sensor battery low; Interference	Drive for a few minutes; Check sensor battery (professional service); Relocate display unit.
Inaccurate readings	Incorrect sensor installation; Sensor malfunction	Consult a professional for sensor re-installation/calibration; Replace faulty sensor.
Alarm frequently triggers	Tire pressure/temperature genuinely outside range; Alarm thresholds set too narrow	Check and adjust tire pressure/temperature; Adjust alarm thresholds in settings (refer to detailed manual).



Figure 7: Dangers of Abnormal Tire Pressure

## 8. SPECIFICATIONS

Component	Specification
Display Unit Operating Voltage	2.6 - 3.6 V
Display Unit Operating Temperature	-20°C to 70°C
Sensor Operating Voltage	2.0 - 3.6 V
Sensor Operating Temperature	-30°C to 105°C
Alarm Pressure Range	1.7 Bar (Low) > Pressure > 3.3 Bar (High)
Material	Alloy Steel
Product Weight	Approximately 250 g

## 9. WARRANTY AND SUPPORT

### 9.1 Warranty Information

This STEELMATE TP-S12I product comes with a **one-year warranty** from the date of purchase. This warranty covers manufacturing defects and malfunctions under normal use. Please retain your proof of purchase for warranty claims.

### 9.2 Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact your retailer or the STEELMATE customer service department. Refer to the contact information provided with your purchase documentation.