



PARKING ASSIST SYSTEM

PTS 400V

Honesty Innovation Passion



Steelmate Co., Ltd.

<http://www.steel-mate.com>

E-mail: sales@steel-mate.com

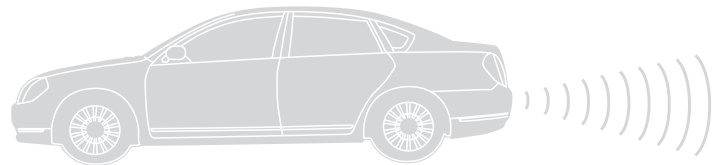
All rights reserved

The trademark, patent and copyright owned by Steelmate Co., Ltd.

The right to change design and specification for improving the product is reserved



PR10112/B



User's Guide

10 reasons to choose Steelmate

1. Stable, reliable and professional
2. User friendly innovative design
3. More than 100 engineers in the company
4. More than 190 design and utility patents in possession
5. Complete range of products for cars and commercial vehicles
6. Nearly 20 years leading experience in the Chinese automotive industry
7. The preferred product and brand in more than 70 countries
8. The first Famous Trademark in the automotive industry recommended by SAIC China
9. ISO 9001 and ISO/TS16949 certified company
10. Products have FCC, CE, E-mark approvals

Warranty

I. The unit is warranted for a limited period of time from the date of purchase. In the unlikely event of a defect arising in this product when used in accordance with the manufacturer's instructions, the parts would be repaired or replaced free of charge.

I It is required to show warranty card when making any warranty claims.

I The model and serial number on the unit must be the same as the information on the warranty card.

II. This warranty is non-transferable and is automatically void if:

I The original purchaser has not completed the warranty card.

I The unit's serial number is defaced, missing or altered.

I The unit has been modified or used in a manner contrary to its intended purpose.

I The unit has been damaged by accident, unreasonable use, neglect, improper installation or service.

III. The warranty does not cover damage to the unit caused by installation or removal of the unit.

Steelmate warranty card

User:	
Tel:	
Vehicle license/reg number:	
Steelmate product model No:	
Series No:	
Date of installation:	
Name of the distributor	Signed by distributor

Attention

Steelmate parking assist systems help to provide assistance when reversing and parking. Driving skills, such as slowing down, use of mirrors etc. is always essential.

1. This unit is for vehicles with 12V DC only.

2. Unit should be installed by a professional auto technician.

3. Route wiring harness away from heat sources and electrical components.

4. Perform test after finishing the installation.

About the product

The parking assist system is an ultrasonic distance monitoring system. It electronically detects the area behind your vehicle while reversing, and alerts you with multiple warning methods. It assists the driver when parking and in manoeuvring situations.

Every part of our products has passed the most stringent test before releasing to the market. It can operate at a wide temperature range (-40°C ~ +85°C) and has good stability in all weather conditions.

Steelmate's parking assist system, will result in an increased level of control while reversing and parking.

Features

- 1 Response time only 0.08 seconds
- 1 Dynamic blue digital display
- 1 New anti-false alert technology
- 1 Reversing-confirm design
- 1 Perfect performance in all weather conditions (-40°C ~ +85°C)
- 1 Does not interfere with the vehicles' electronic system
- 1 Detachable sensor cables with fully insulated and waterproof connectors
- 1 Highly visible flashing Warning light
- 1 Self-testing function
- 1 6 warning modes
- 1 Anti-dazzling design
- 1 Built-in buzzer with adjustable volume and voice ON/OFF button
- 1 Universal joint base on display

Specifications:

Voltage:	9V~16V
Operation current:	300mA
Sensor installation height:	45~60cm
Detection range:	0.1~2.5m
Display range:	0.3~2.5m
Operating temperature:	- 40°C ~ + 85°C
Beep Volume:	70~90 dB

1. Visual display does not power on after installation.
 - 1) Is the power supply wire connected correctly?
 - 2) Is the ignition turned to ACC/ON?
 - 3) Is reverse gear selected?
 - 4) Are all wiring connections correct?
 - 5) Is the display damaged?

2. The display indicates a defective sensor.
 - 1) Check if the sensor surface is clean.
 - 2) Check that the sensor wires are plugged in the ECU properly.
 - 3) Check that the sensor wires are not damaged.

3. The obstacle position is not corresponding to the display indicator.
 - 1) Are the sensors' wires connected to the ECU according to the position (A. B. C. D)?

4. When reverse gear is selected, the indicator indicates 0.5 m or 0.6m.
 - 1) There are obstacles within 0.6 m.
 - 2) Are sensors mounted too low or detecting the ground?
 - 3) Check whether the sensor is installed up-side-down.
 - 4) Unplug 1 sensor at a time to check for response.

5. Audible voice and warning tones too low.

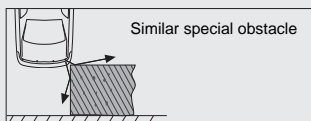
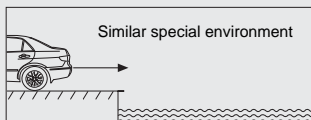
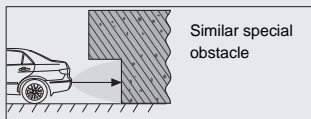
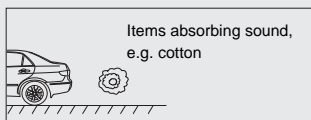
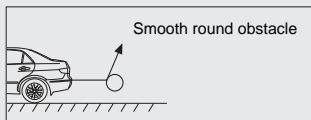
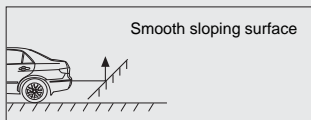
Press the volume button to achieve the required level.

6. No audible voice warnings.

Check whether the voice warning is switched on at the display or the version of this product is without voice warning.

Notice

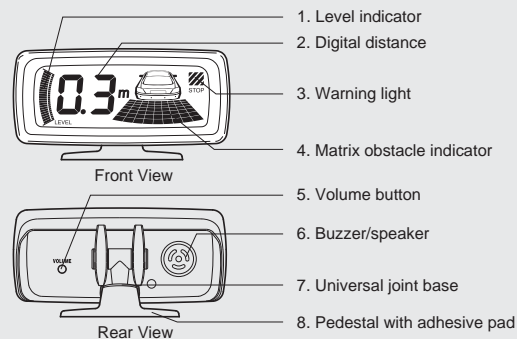
False detection may occur in the following situations:



- 1 After installation, fully test the system before use.
- 1 Heavy rain, dirt or a damaged sensor can cause incorrect detection.
- 1 Ensure that the self-testing function is complete and indicates no faults before reversing.

The product is a driver assistance device. No warranty as to the operating efficiency of the system or prevention of accidents is guaranteed.

Display



1. Digital distance

Obstacle distance detection range: 0.1~2.5m.

Obstacle distance display range: 0.3~2.5m.

The digital number on the display will be refreshed every 0.1m.

2. Level indicator

The level of the indicator will be changed step by step according to the distance of the obstacle.

3. Warning light

When the object distance is less than 0.3m, "STOP" will appear and the red Warning light will flash on the screen to warn the driver to stop the vehicle.

4. Matrix obstacle indicator

Matrix indication will be varied according to the obstacle's size and shape.

5. Volume button

The volume has 3 levels (Low/Medium/High), press volume button to change it.

The voice warning can be switched ON/OFF by pressing and holding the volume button (for the models with voice function).

6. Buzzer/Speaker

Voice and audible warning is optional.

7. Universal joint base

The display can be adjusted in any direction. Removed from the pedestal, the display can be inserted in the A/C vent with the clip enclosed.

8. Pedestal with adhesive pad

The display can be installed on the dashboard or windshield firmly with the adhesive pad on the pedestal.

Turn the voice warning ON/OFF

(For the models with voice warning function)

Voice OFF:

In voice ON mode, press and hold the volume button for 2 seconds, it will beep once and the screen will show 01, 02 or 03 on the screen indicating the voice warning is OFF.



Voice ON:

In voice OFF mode, press and hold the volume button for 2 seconds, it will beep once and the screen will show 11 or 12 or 13 on the screen indicating the voice warning is ON.



Volume adjustment

Low level:

Press the volume button once, it will beep once and the volume will be set to LOW level.



Medium level:

Press the volume button again, it will beep twice and the volume will be set to MEDIUM level.



High level:

Press the volume button a third time, it will beep three times and the volume will be set to HIGH level.



【 Notice 】:

The above modes can be swapped, when the distance of the obstacle is <math><0.3\text{m}</math>, the volume will turn to high level automatically, when the obstacle is out of the range, the system will return to the former status. The factory setting is HIGH level and the voice warning function is ON.

Warning modes and indications

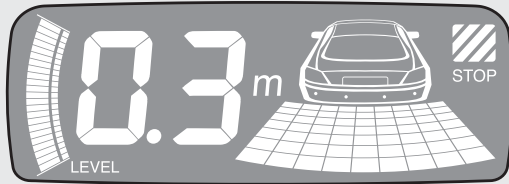
	Distance on display	Matrix indication	23-stage reminding
	-P	Row 7	Stage 22~23
	$2.5^m \sim 0.3^m$ Display will show the accurate digital distance and refresh every 0.1m.	Row 6	Stage 21~22
		Row 5	Stage 20
		Row 4	Stage 18~19
		Row 3	Stage 16~17
		Row 2	Stage 14~15
		Row 1	Stage 1~13
		Row 1 flash	NO

Buzzer	Voice
Be —	Stop 0.3m
Be — Be —	0.4m 0.5m 0.6m 0.8m
Be-Be-Be-Be-	1.0m 1.2m 1.5m
Be--Be--	2.0m
No Beep	Attention (2.5m)

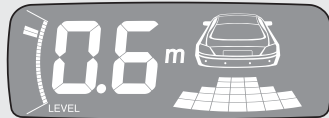
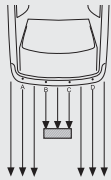
【 Notice 】:

When voice reports the distance, the buzzer will not beep

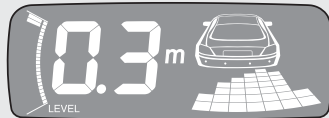
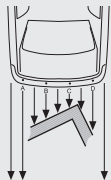
Blue display



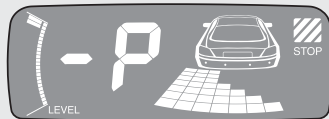
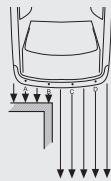
Example 1



Example 2



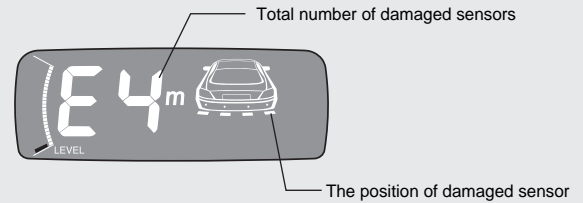
Example 3



Self-testing function

The system will test all the sensors automatically when reverse gear is selected.

- If all the sensors are functioning, the system will beep once and the display backlight will flash once.
- If there is any problem with the sensors, the system will beep three times to indicate that one or more sensors are damaged. The damaged sensors' position and the total number will be shown on the display.



Example:



One sensor is damaged, it is sensor A



Two sensors are damaged, they are sensor A and D

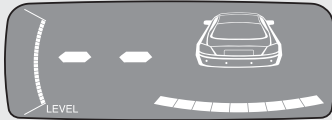
[Notice] :

When damaged sensor is detected, please check the sensor's surface and connections before replacing it.

How does the system work

When reverse gear is selected, the system will beep once to confirm that it is active. After self-testing, the system will detect the object behind the car automatically. The system will warn the driver in up to 6 different modes (digital distance, Matrix indication, level indication, audible alert/voice warning, and warning light flashing).

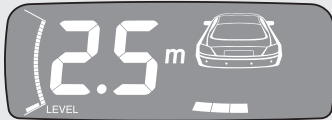
- When the object distance is----greater than 2.5 meters, Row 1 will flash.



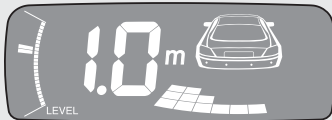
Object: >2.5 meters

- When the object distance is----0.3~2.5 meters:

The display will show the distance by a digital number reading and show the object's position in the Matrix and the level indicator.

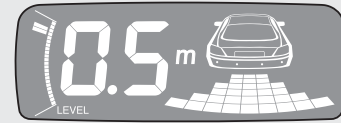


Object : 2.5 meters

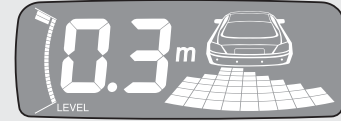


Object: 1.0 meter, at the left side of the car rear

How does the system work

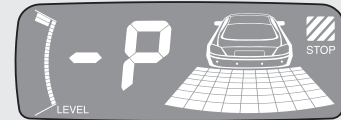


Object: 0.5 meters, at the middle of the car rear



Object: 0.3 meters at the left side of the car rear

- When the object distance is----less than 0.3 meters:



Object: < 0.3 meters

"-P" will be displayed and "STOP" with the red Warning light flash on the display. The volume will go to HIGH level automatically and the voice warning will say "Stop".