

Think safety think Steelmate

E13

©Steelmate Co., Ltd. All rights reserved.
The right to change the design and specifications reserved.
The trademark, patent and copyright are owned by
Steelmate Co., Ltd.

STEELMATE CO., LTD.

Steelmate Industrial Park, Heping Street, Dongfu Road, Dongfeng Town,
Zhongshan City, Guangdong, P.R. China 528425



PRI0886R/A

STEELMATE®
Automotive

PTS810 V10

Front & Rear Parking Assist System



Manual

10:51

Contents

User Manual

Important notice	02
Disclaimer	02
About the product	02
Key features	03
Specifications	03
LCD display	03
Self-testing function	04
Volume adjustment	05
Voice adjustment	05
Learning function for cars with tow-bar or spare wheel	06
Dual intelligent function	07
How does the system work	09
Attention	13
Sensor maintenance	13

Installation Manual

Brief installation diagram	14
Includes	15
Installation tools	15
Sensor installation	16
Wire connection	23
Functional test	24
Troubleshooting	25

User Manual

Important notice

Parking Assist System (PAS) helps to provide assistance when reversing and parking. Driving skills such as slowing down, use of mirrors etc. is always essential.

1. This system is for vehicles with 9~16V DC only.
2. This system should be installed by a professional auto technician.
3. Route wiring harness away from heat source and electrical components.
4. It is strongly recommended to check the position of the sensors before the actual drilling of the holes.
5. Perform a functional test after installation.

Disclaimer

The PAS is designed as a driver assistance device, and should not be used as a substitute for safe parking practices. The area into which the vehicle is to be reversed must be constantly visually monitored while parking.

The manufacturer and its distributors do not guarantee or assume liability for collisions or damages while reversing the vehicle.

About the product

This PAS comes with 8-sensor and a display that is an ultrasonic detects the area behind the vehicle while reversing and driving forward, and alerts with audible tones & visual warnings, if the system detects an obstacle. It assists the driver when parking and in manoeuvring situation.

PTS800V10 is a front and rear parking assist system with slim black LCD display. All the detachable sensors are waterproof and can be easily changed. Combined with the anti-interference and anti-false alert technology, the system can detect obstacles in any weather conditions and response quickly. The system has intelligent detection, which is ideal for vehicles with tow-bar or spare tire.

Every part of the product has passed the most stringent test before releasing to the market. It is reliable at a wide storage temperature range (-40°C~+85°C/ -40°F~+185°F) and becomes very useful when you are parking at a raining day, snowing day or at night etc. With the help of parking assist system, you can enjoy a comfortable, relaxed and safer parking experience.

Key features

- 1 Slim black display with digital showing
- 1 Complete front & rear car protection with 8-sensor
- 1 Can change to 6-sensor system (2 front + 4rear)
- 1 1 control unit and 1 display for easy installation
- 1 All weather design
- 1 Sensor with waterproof wire connector
- 1 Voice/ beep alert selectable
- 1 Anti-false alert technology
- 1 Intelligent detection for vehicles with tow-bar, spare tire or other protrusion
- 1 Self-test function

Specifications

Operating voltage:	9~16V
Operating current:	<350mA
Operating temperature:	
ECU:	-40°C~+80°C/ -40°F~+176°F
Display:	-20°C~+70°C/ -4°F~158°F
Storage temperature:	-40°C~+85°C/ -40°F~+185°F
Detection range:	0.30m~2.59m/ 1.0ft~8.4ft
Siren SPL:	70~90dB
Detection range:	
Front:	0.30~0.89m/ 0.3~3.2ft 0.30~0.59m/ 0.3~1.9ft (reversing)
Rear:	0.30~2.59m/ 0.3~8.4ft

LCD display

Matrix obstacle position

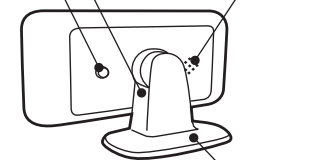
Digital distance



Universal joint

SET button

Speaker



Pedestal

Self-testing function

1. When ACC ON, the system will test 4 front sensor (E,F,G,H) automatically.

1) Normal



2) Damaged or defective sensor is detected



3) Once the self-test procedure is completed, when you press the footbrake, the system will detect in front of the vehicle for 5 seconds.

2. When reverse gear is selected, the system will test (A,B,C,D,E,H) sensors automatically.

1) Normal



2) Damaged or defective sensor is detected



3) Once the self-test procedure is completed, the system will detect rear of the vehicle automatically.

Normal & no obstacle

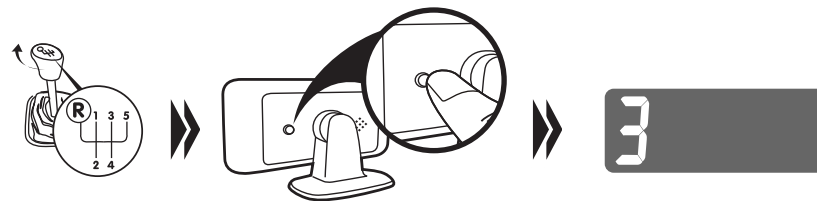


When detected damaged/ defective sensor:

- 1 Beep 3 times for alarm
- 1 Other proper sensors will keep working after the alarm
- 1 No. of sensor damage/ defective (E1~E6) will be show on the display together with the corresponding LCD lights on for showing which sensor(s) is(are) damaged/ defective
- 1 The system will not alarm when sensors (F&G) are damaged/ defective as it will work as 2-sensor system automatically.

Volume adjustment

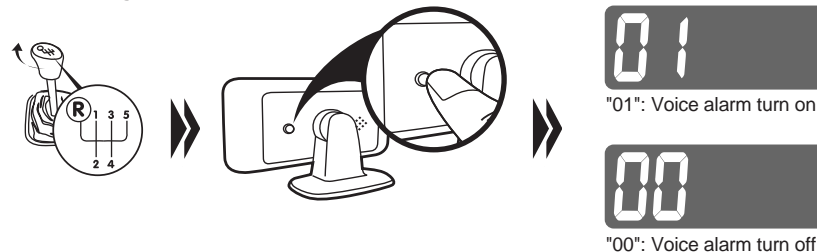
Once ACC ON and reverse gear is selected, press "SET" button to select the volume level, it will saved and exit after 1 second later. ("3" for Max, "2" for Middle, "1" for Min)
Default setting: Max volume



Voice adjustment

Once ACC ON and reverse gear is selected, press "SET" button for 2 seconds with "Bi" sound once enter the voice adjustment mode.. Then press the SET button again to turn ON/ OFF the voice function.

Default setting: Voice alarm turn on



"01": Voice alarm turn on

"00": Voice alarm turn off

Learning function for cars with tow-bar or spare wheel



1. With the ignition "ON", change the gear from "N" to "R" for 10 times (Each gear change must be within 1 second)
2. After 10th times, leave the gear in "R" position.
3. The display will beep and flash once to complete the learning process.
4. When the learning function is activated, the system will ignore the tow bar or spare wheel and only detect other object behind the vehicle.

Clearing the learning function:

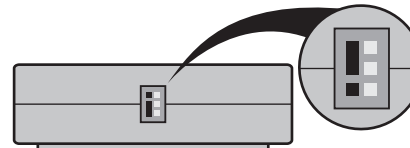
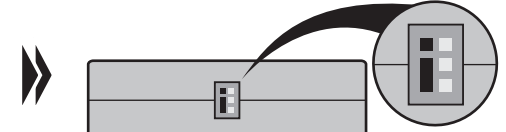
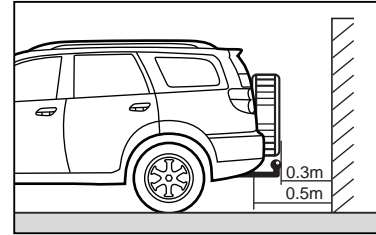
1. With the ignition "ON", change the gear from "N" to "R" for 12 times (Each gear change must be within 1 second)
2. After 12th times, leave the gear in "R" position.
3. The display will beep and flash once will dark in turn to indicate that learning function is cleared successfully and the system is reset.

Note:

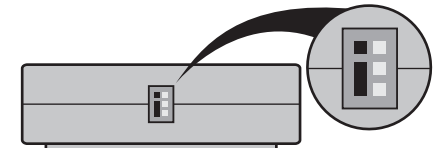
1. If you make a mistake while carrying out the above procedure, leave vehicle in the "R" position for 2 seconds to clear the system memory and then start the procedure again.
2. If the vehicle does not have tow-bar or spare wheel, you do not need to use this function.

Dual intelligent function

When this function is ON, the detected distance will increase 20cm between the sensor and obstacle which is designed for the tow-bar/ Spare wheel.

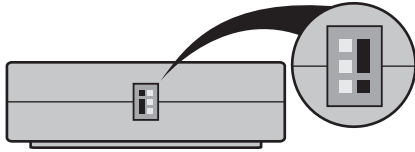


Jumper position: "0" (Default setting)
Normal detected distance

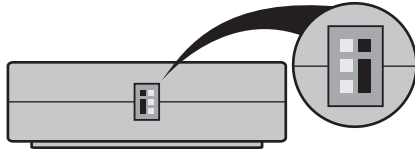


Jumper position: "20"
The detected distance from sensor to obstacle should be increased 20cm.

Sensor sensitivity adjustment



Jumper position: "55-65cm"
Normal sensor sensitivity
Recommended for the sensor which is installed
between 55-65 cm from ground



Jumper position: "45-54cm" (Default setting)
Low sensor sensitivity
Recommended for the sensor which is installed
between 45-54 cm from ground

How does the system work

Driving forward (6 sensors)



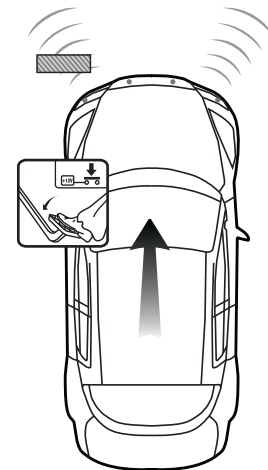
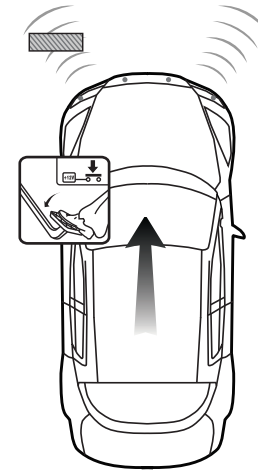
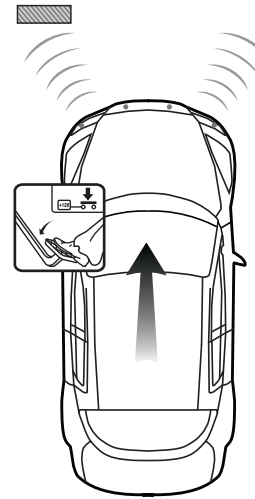
Distance: >0.6m/2.0ft



Distance: 0.4m/1.2ft



Distance: (<0.30m/1.0ft)



Driving forward (8 sensors)



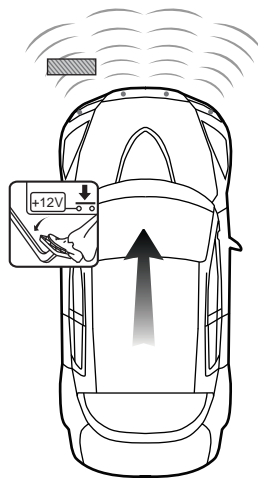
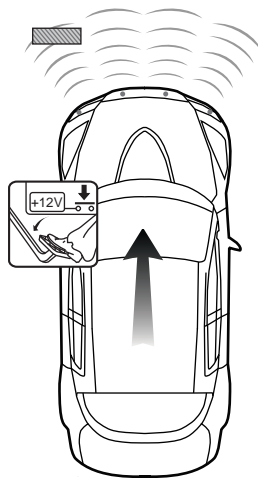
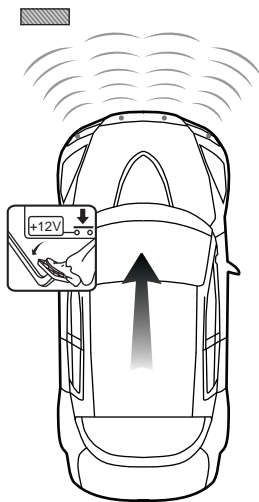
Distance: >1.0m/3.3ft



Distance: 0.4m/1.2ft



Distance: (<0.30m/1.0ft)



Reversing



Distance:<0.3m/1.0ft

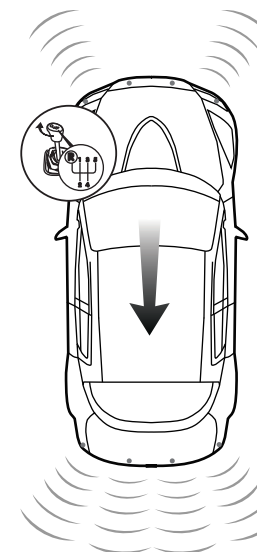
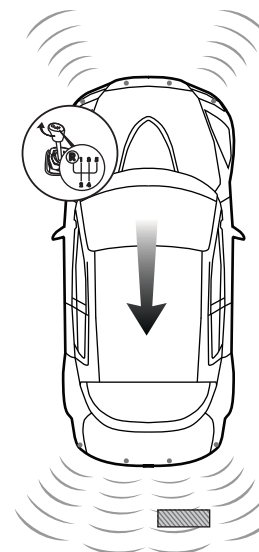
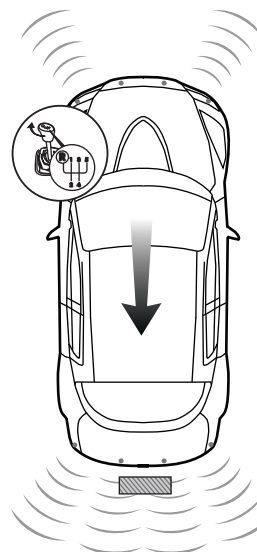


Distance:0.8m/2.6ft

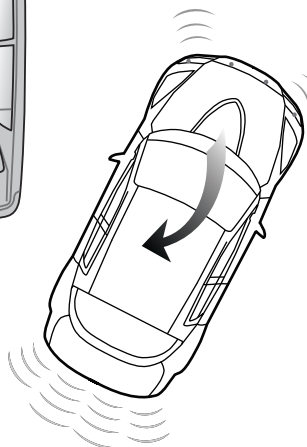
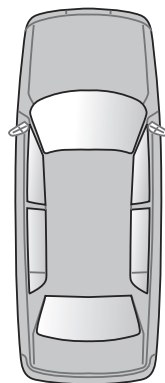
No Beep



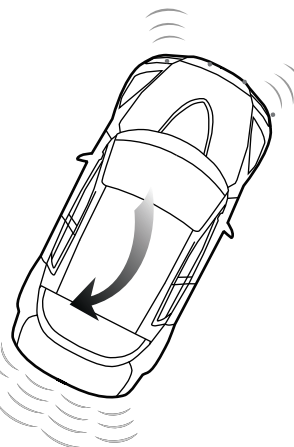
Distance:>1.5m/4.9ft



Zigzag reversing



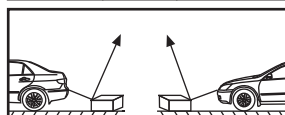
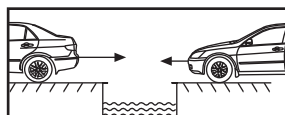
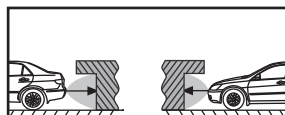
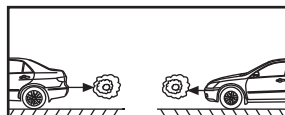
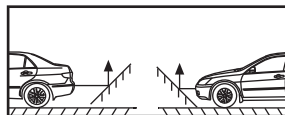
Be--Be--Be--
Distance: 0.4m/1.3ft



Be-----
Distance: <0.3m/1.0ft

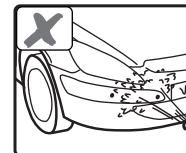
Attention

False detection may occur in the following situations:

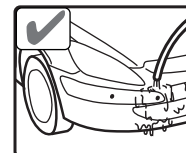
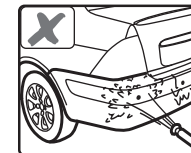


- 1 After installation, please fully test the system before use.
- 1 Heavy rain, dirty or damaged sensors may result in false alarm occasionally.
- 1 Ensure that the self-test procedure is completed and all sensors are functioning before reversing.

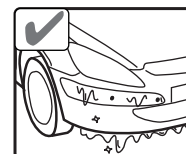
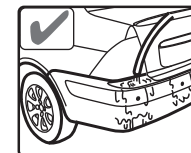
Sensor maintenance



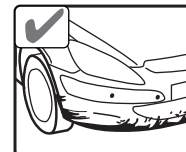
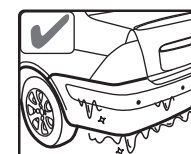
Do not wash the sensor with squirt gun or swab them forcibly.



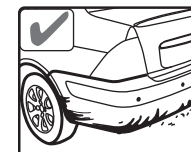
Please wash car with low-pressure water.



Please melt the ice with water when the sensors are covered by ice.

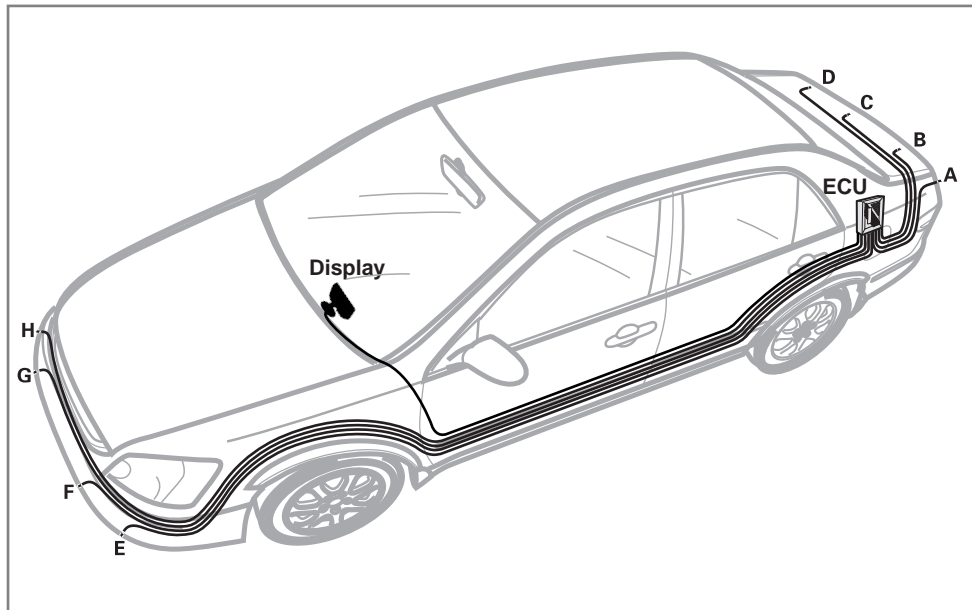


Please clean the sensors with cloth or low-pressure water when the sensors are covered by mud or snow.

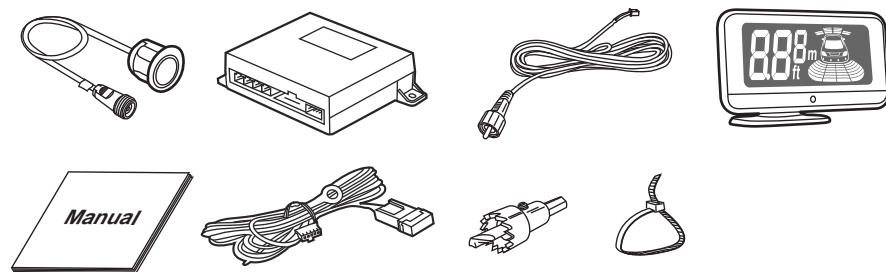


Installation Manual

Brief installation diagram

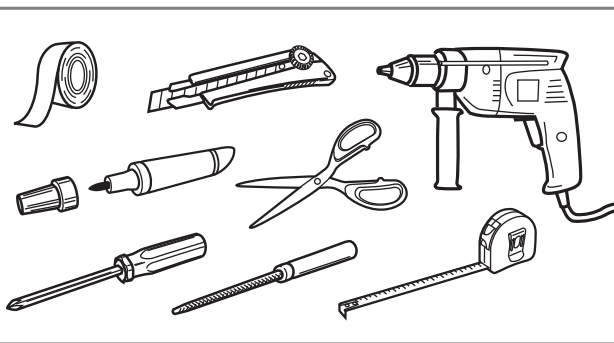


Includes



※ The above graphics are for reference only.

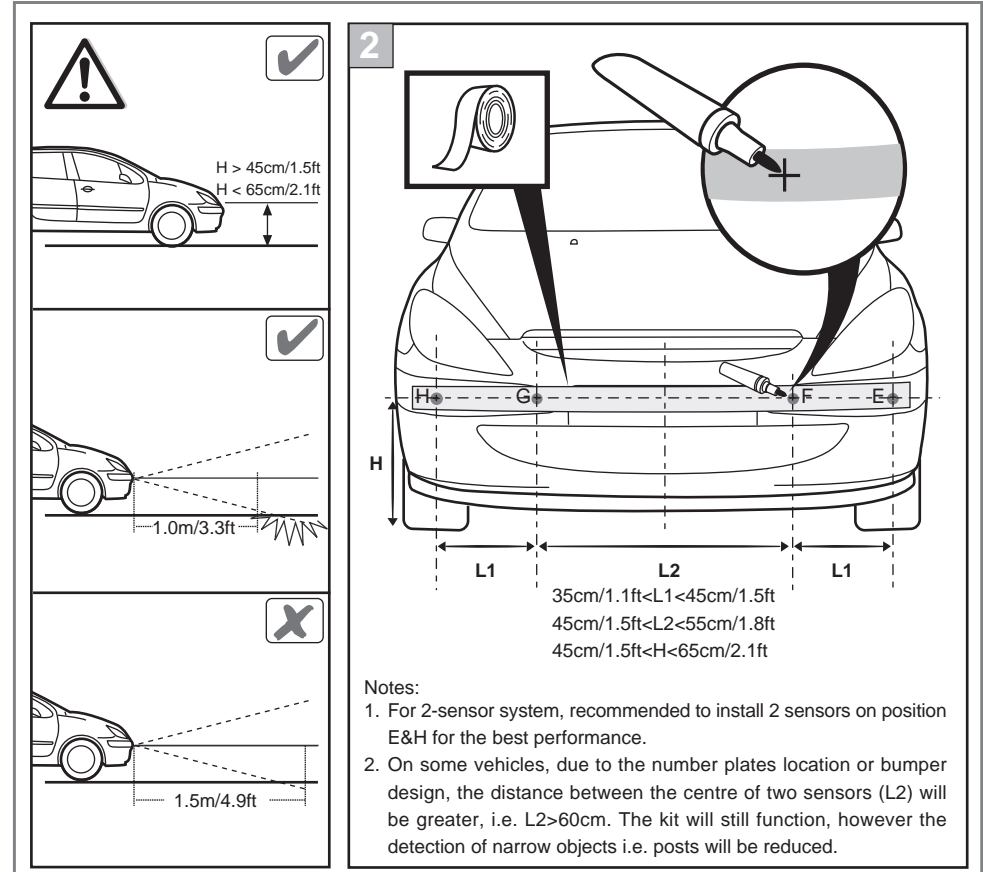
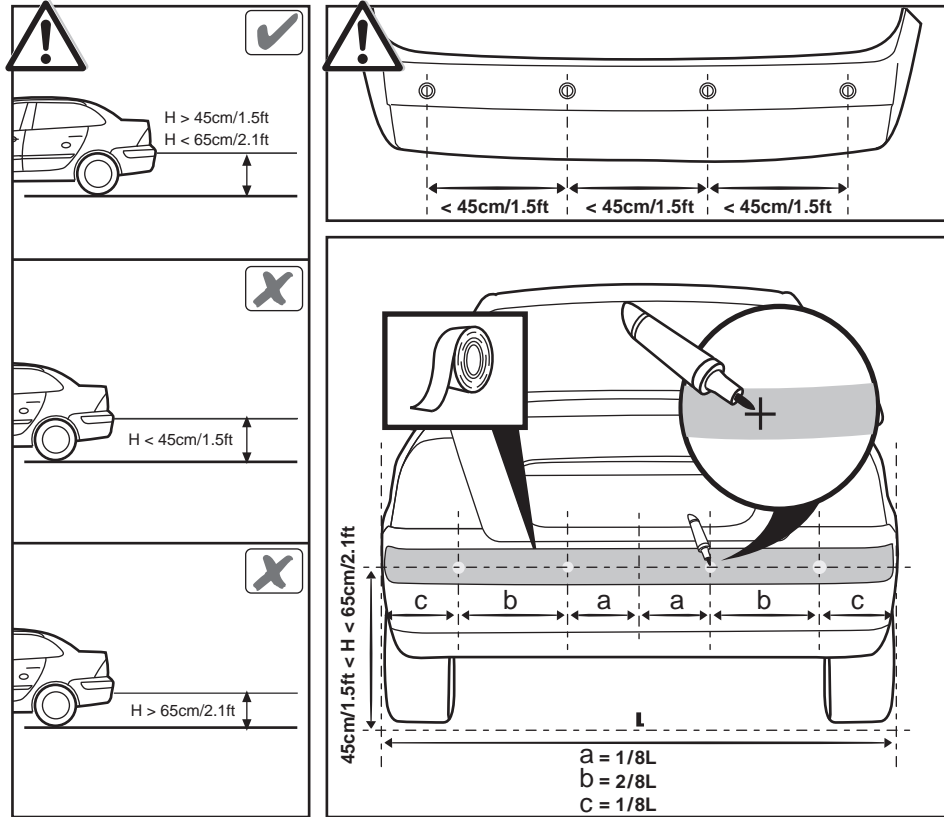
Installation tools



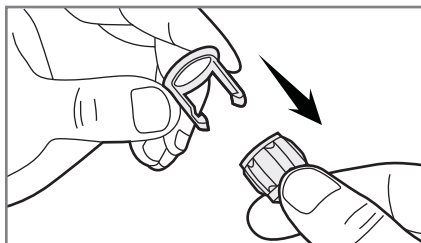
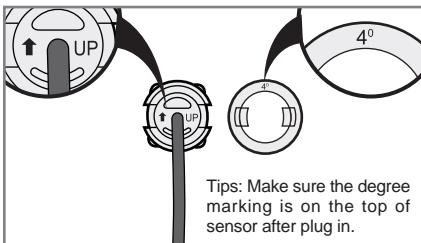
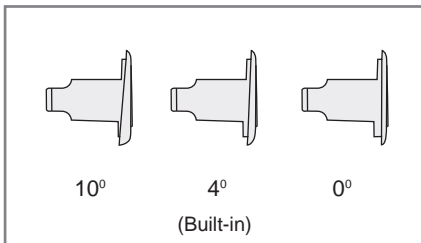
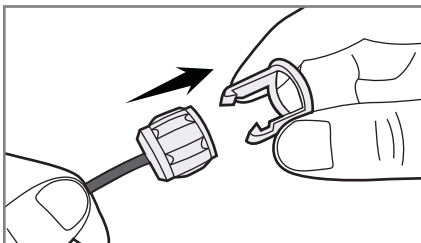
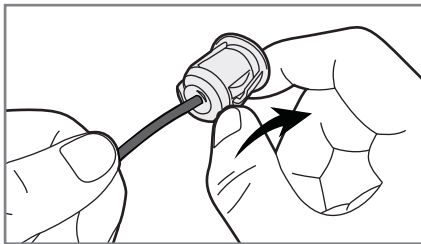
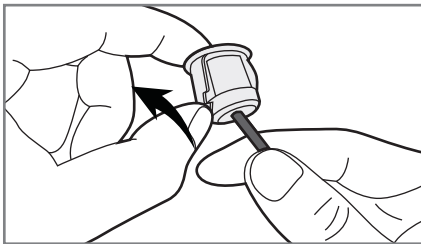
60' ~ 80'

Sensor installation

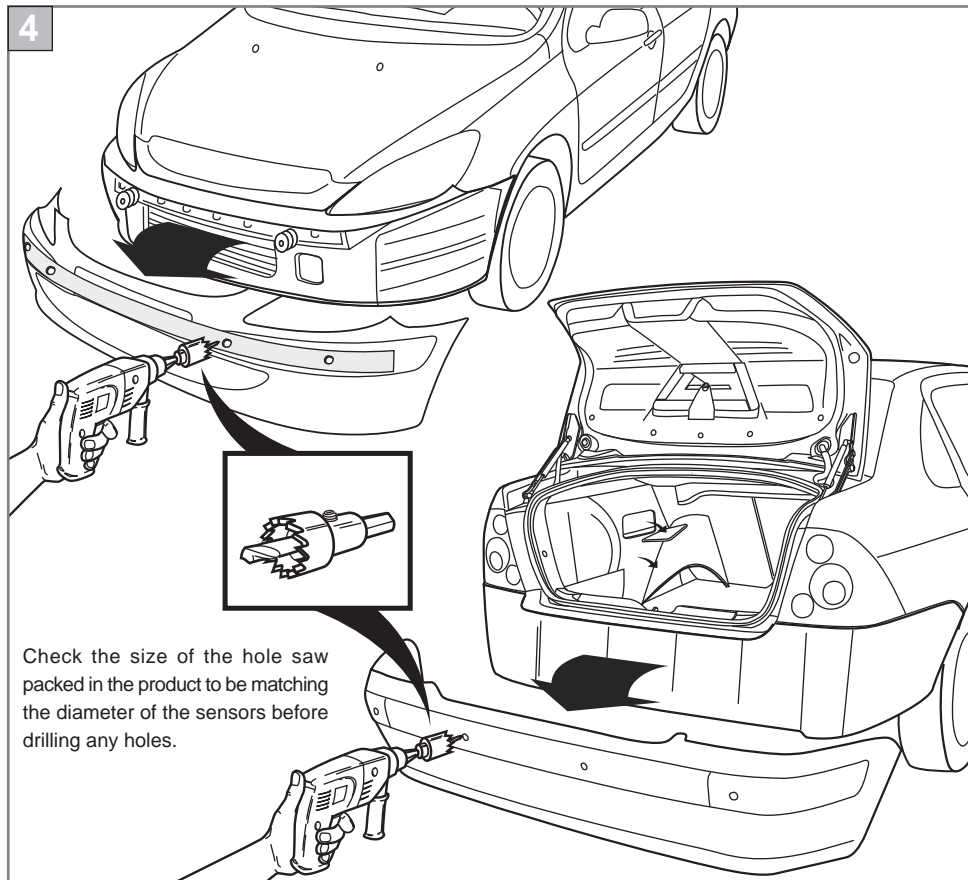
1 The sensor head angle can be changed to compensate for angled bumpers. Please see the instructions overleaf.



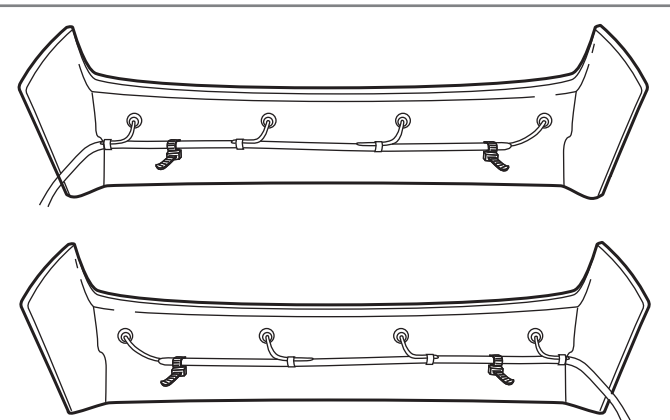
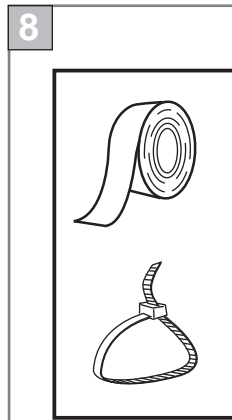
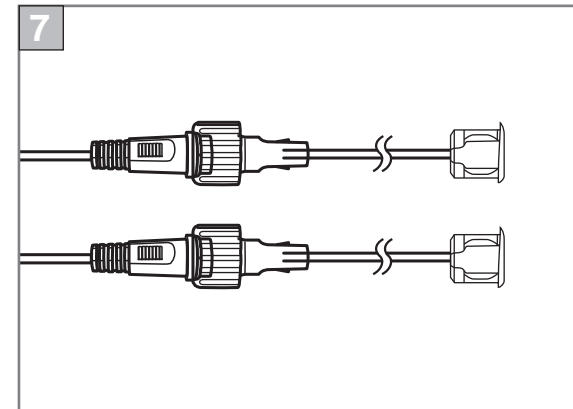
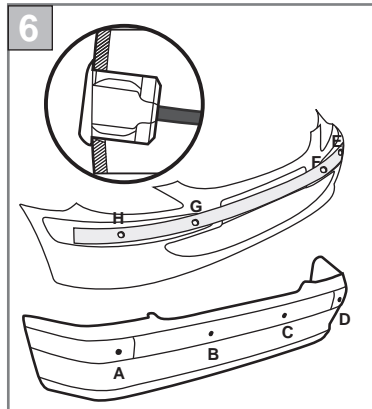
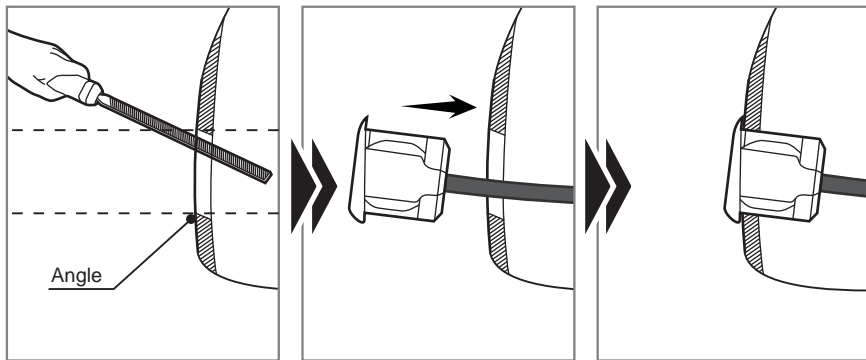
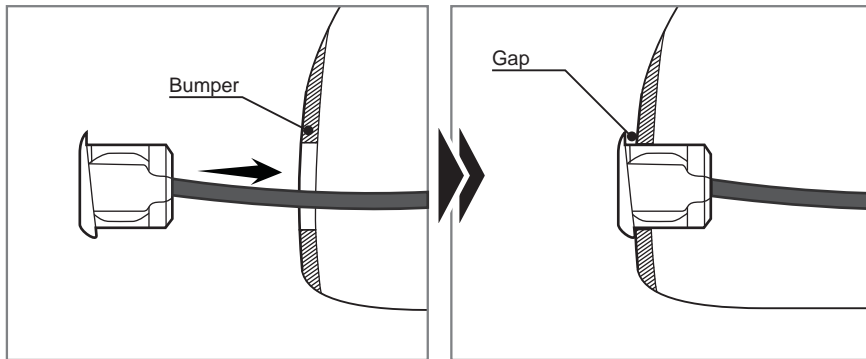
3 Change of sensor cover.

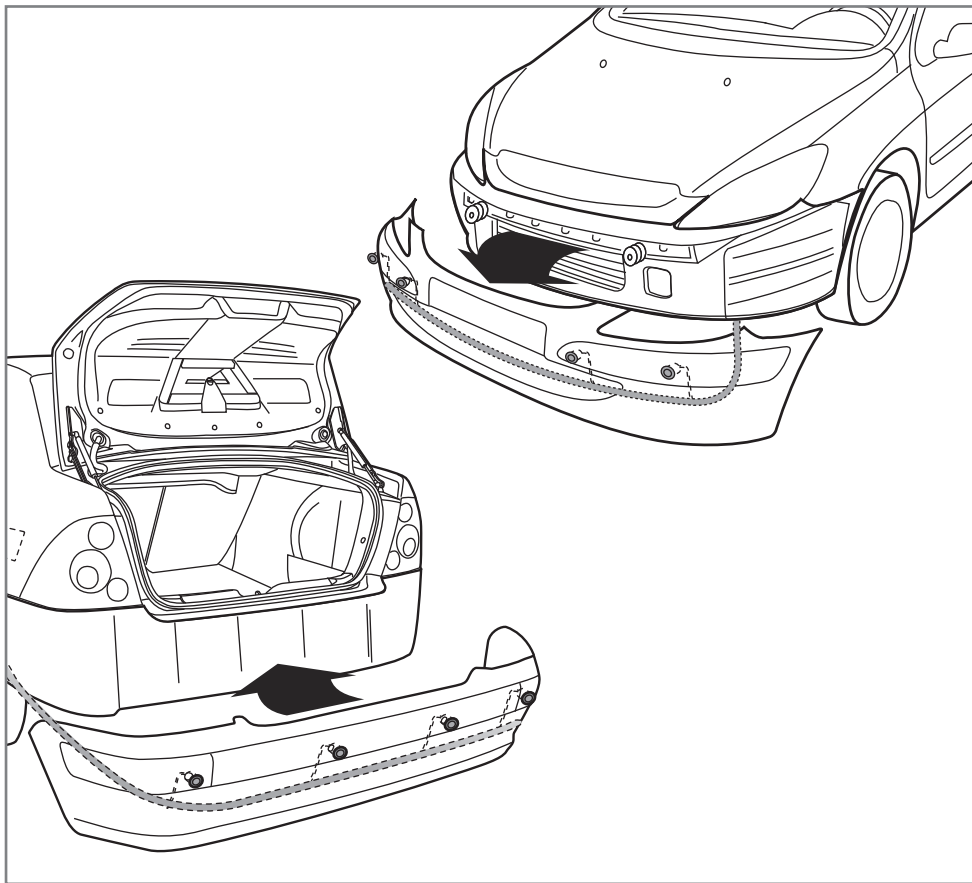


4

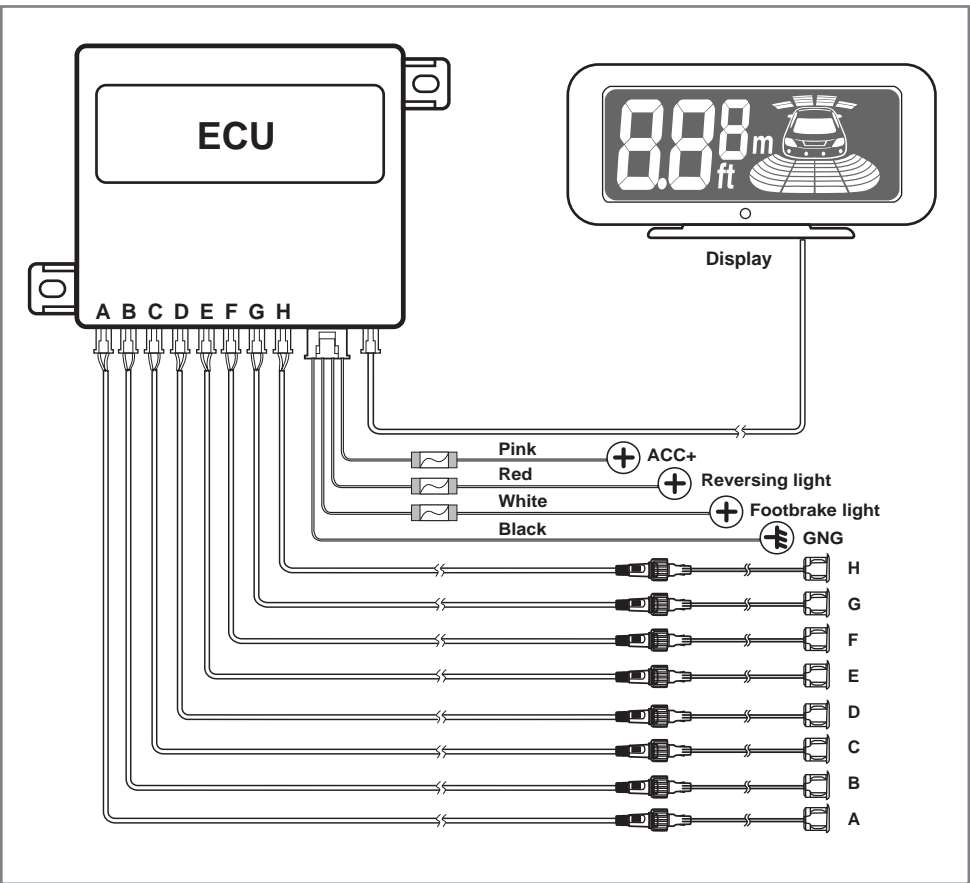


5 Hint: If a gap found between bumper and 10° sensor cover after installation, please adjust the angle of the hole shown as below.



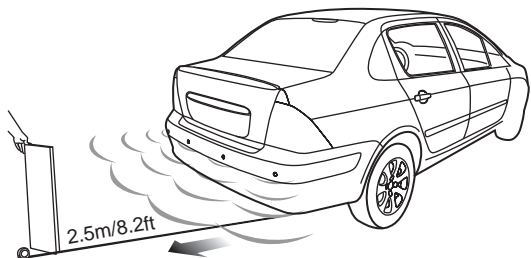


Wire connection

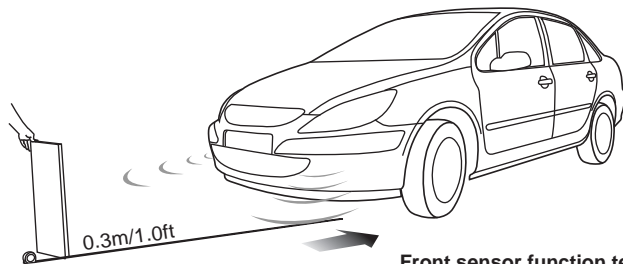
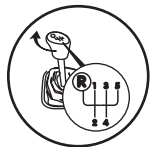
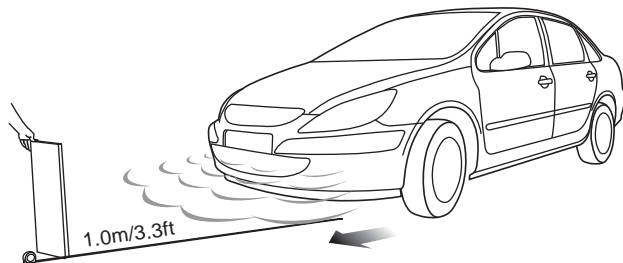


Functional test

Functional testing is possible by holding a wooden board (0.3 x 1.0m/1x3.3ft) standing at the front or rear of the car, and drive the car forward and backward to test each function respectively as shown in this manual.



Rear sensor function test



Front sensor function test

Troubleshooting

1. After installation, the buzzer/display doesn't work.

- 1 Make sure the wires connected properly.
- 1 Make sure the vehicle is ACC ON.
- 1 Make sure the reverse gear is selected (the reversing light should be lighted on).

2. Damaged sensor detected

- 1 Make sure ALL sensors plugged into the ECU correctly and tightly.
- 1 Make sure no snow or dirt covered on the sensor.
- 1 Please check the sensor is damaged or not.

3. False alarm

- 1 Make sure ALL sensors plugged into the ECU in the correct position tightly.
- 1 Please check if any of sensors detected the ground.
- 1 Please check if the rubber ring of the sensor came out (if sensor comes with rubber ring).

4. Display alarm sound is too low or too high

- 1 Press the SET or volume button to adjust the volume to a suitable level.

5. If the problem persists, please follow below.

- 1 For consumer: Please contact the nearby dealer or customer service center.
- 1 For installer/dealers:
 - a. Test the sensors with a certified ECU by performing a functional test.
 - b. Replace another ECU and retest the sensors.

- 1 Plug the certified sensors into the ECU and performing a functional test again.
- 1 Please email us at sales@steel-mate.com about the problems with details.