

Think safety think Steelmate



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PRI0816R/A

STEELMATE[®]
Automotive

PTSF410 series

Parking assist system



Manual

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User Manual

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Important notice

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. It is strongly recommended to check the position of the sensors before the actual drilling of the holes.
5. Perform a test after installation.

Disclaimer

The parking assist system 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 your vehicle.

About the product

Parking assist system is an ultrasonic distance monitoring system. It electronically detects the area in front of your vehicle while parking, and alerts you with audible tones if the system detects an obstacle. The system will show the accurate distance in meters or feet (upgrade to LED/LCD display).

This product is a 4-sensor front parking assist system for front bumper protection. It electronically detects the area in front of your vehicle while driving/parking, and alert you with audible tones and/or optional visual display, if the system detects an obstacle. If you have one of the optional displays fitted with the digital numbers, the system will accurately show the distance to the obstacle. The various optional displays (LED/LCD) available are suitable for dash or interior mirror mounting.

Each part of this product has passed the most stringent test before releasing to the market. It is reliable at a wide temperature range (-40°C~+80°C /-40°F~+176°F) and becomes very useful when you are parking in poor weather conditions.

With the help of our parking assist system, you can enjoy a convenient and easy parking experience.

Key features

- 4 front sensor system
- Buzzer can be upgraded to LED/LCD displays
- Can also work as a 2-sensor system
- Self-test function
- Anti-false alert technology
- All weather design

Specifications

Operating voltage: 9~16V DC
 Operating current: <250mA
 Detection range: 0.3cm~0.9cm/1.0ft~3.0ft
 Buzzer SPL: 70~90dB

ECU:

Operating temp: -40°C~+80°C/-40°F~+176°F
 Storage temp: -40°C~+85°C/-40°F~+185°F

LCD:

Operating temp: -20°C~+70°C/-4°F~+158°F
 Storage temp: -30°C~+80°C/-22°F~+176°F

LED:

Operating temp: -40°C~+80°C/-40°F~+176°F
 Storage temp: -40°C~+85°C/-40°F~+185°F

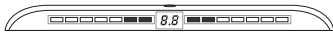
Buzzer:

Operating temp: -40°C~+80°C/-40°F~+176°F
 Storage temp: -40°C~+85°C/-40°F~+185°F

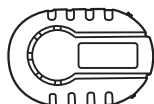
Buzzer & Display (optional)

The alert buzzer can be upgraded to display. These pictures are for reference only, the actual display may vary.

Only some displays have set button or digital indication. Digital indicator and volume adjustable function depend on the display you choose.



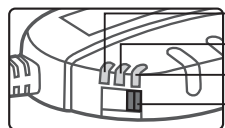
Display (optional)



Buzzer

Volume and frequency adjustment (for Buzzer)

Volume adjusting



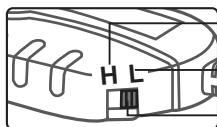
- Low volume
- Medium volume
- High volume
- Volume switch

Frequency adjusting

The buzzer can be changed the frequency of sound so that it will easily to distinguish the warning between front system and rear system.

Recommendation:

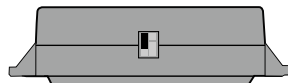
"L" for rear system
"H" for front system



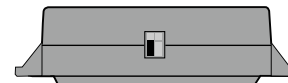
- High frequency sound
- Low frequency sound
- Frequency switch

Activated by pressing footbrake

The system is activated by pressing the footbrake. When you press the footbrake and release it the system will continue to work for some time.

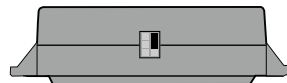


Continue to work for 5 seconds (Default setting)
Recommendation for AT vehicles

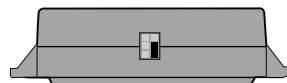


Continue to work for 20 seconds
Recommendation for MT vehicles

Sensor installation height



Sensor installation 55cm < H < 65cm
(Default setting)



Sensor installation 45cm < H < 54cm

2 / 4-sensor automatic recognition

This 4-sensor system can be used as a 2-sensor system.

This has to be done by connecting the 2 central sensors (F&G) or 2 outside sensors (E&H).

Self-test function

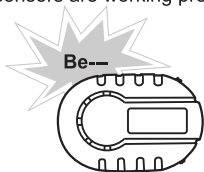
Once ACC on, the system will test all rear sensors automatically.

If all sensors are working properly, the buzzer/display will beep once for indication.

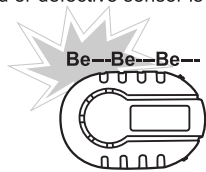
If a damaged or defective sensor is detected, then the system will beep 3 times for alarm.

For buzzer

All sensors are working properly

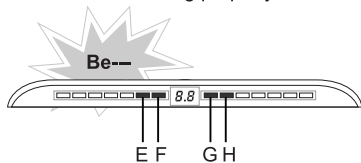


Damaged or defective sensor is detected.

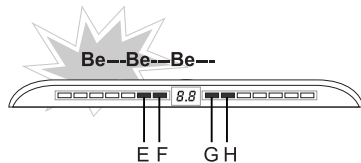


For display

All sensors are working properly



Damaged or defective sensor is detected.

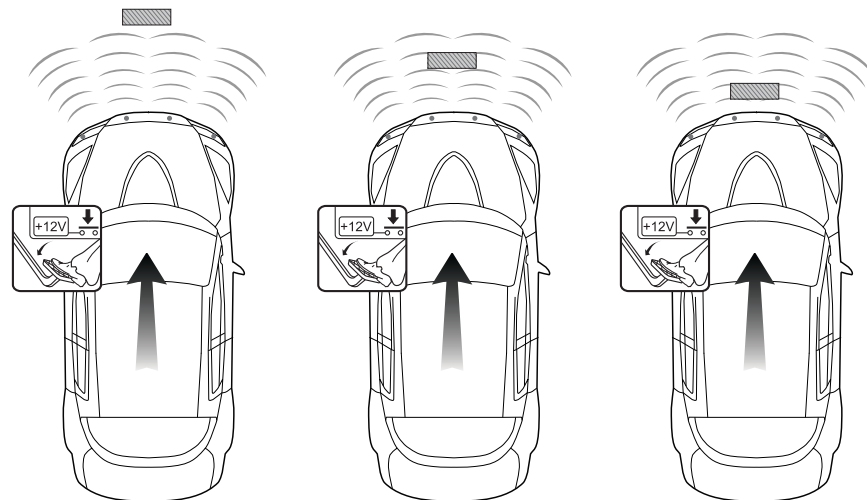


Notes:

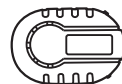
- Beep 3 times for alarm
- Other proper sensors will keep working after the alarm
- No. of sensor damaged/defective (E1~E4) will be shown on the display together with the corresponding LED lights on for showing which sensor(s) is(are) damaged/defective.
- For E2: The system will not alarm when sensors (F&G) are damaged/defective as it will work as 2-sensor system automatically.

How does the system work

Driving forward, press footbrake

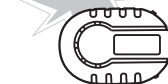


No beep



Distance: >0.9m/3.0ft

Be---Be---



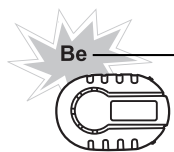
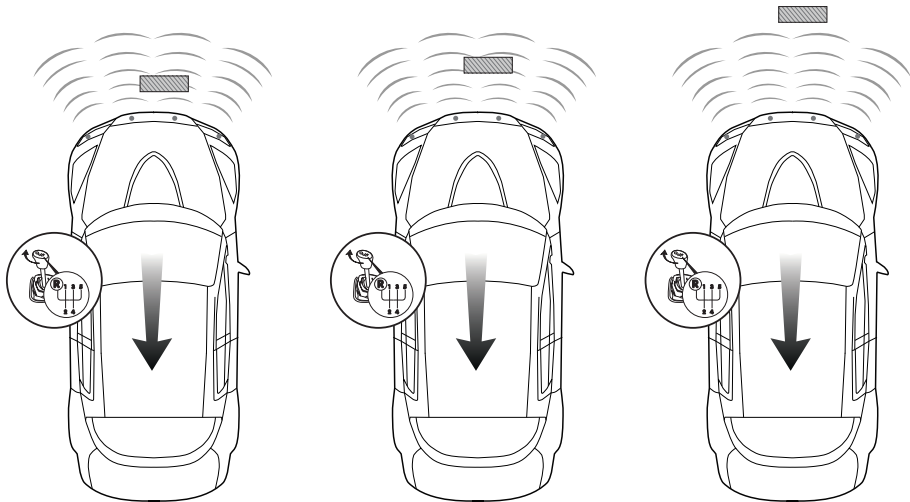
Distance: 0.6m/2.0ft

Be---

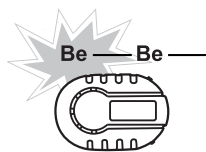


Distance: <0.3m/1ft

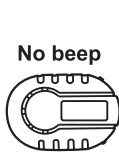
Reversing



Distance: <0.3m/1.0ft



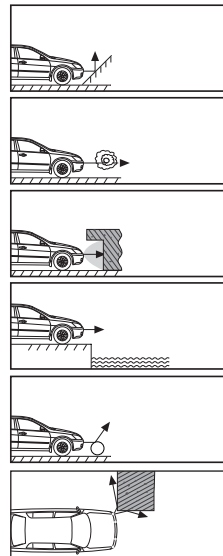
Distance: 0.6m/2.0ft



Distance: >0.9m/3.0ft

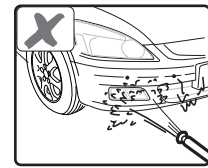
Attention

False detection may occur in the following situations:

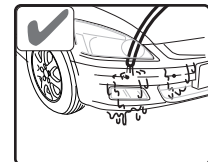


- After installation, please fully test the system before use.
- Heavy rain, dirty or damaged sensors may result in false alarm occasionally.
- Ensure that the self-test procedure is completed and all sensors are functioning before using the system.

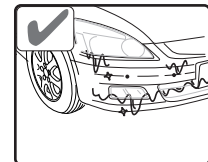
Sensor maintenance



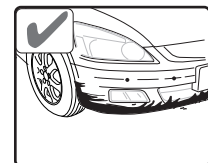
Do not wash the sensor with a pressure washer or scrub them forcibly.



Please wash car with low-pressure water.

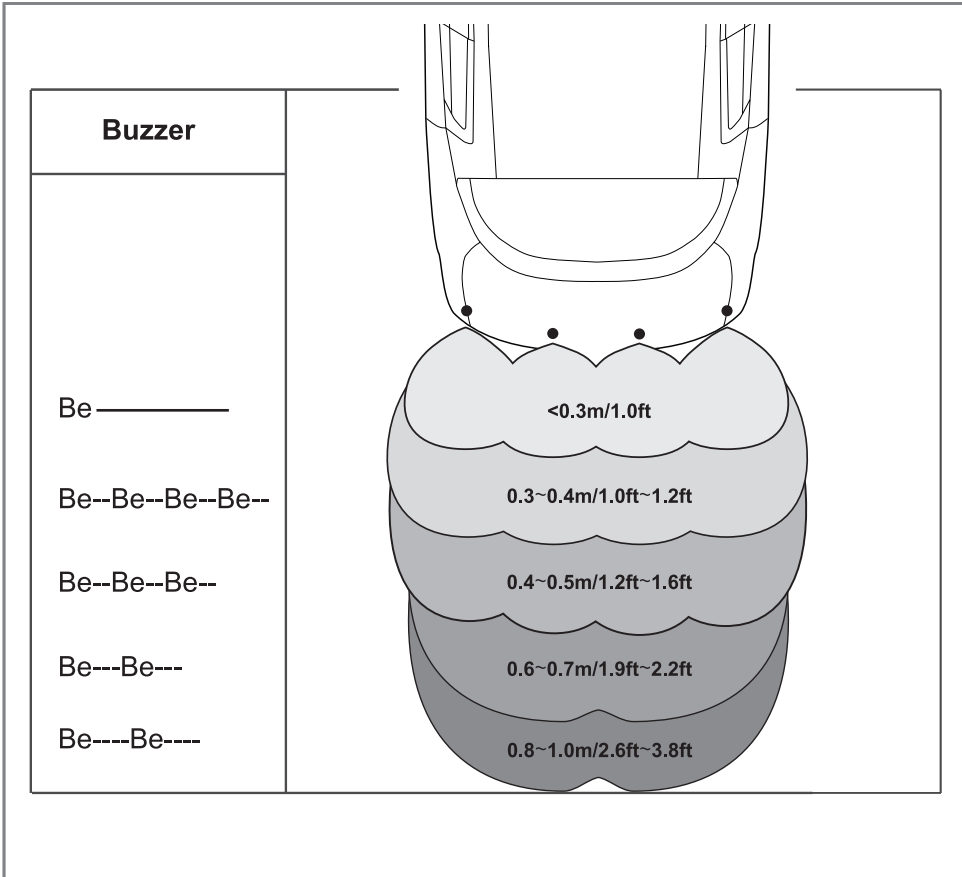


Please melt the ice with warm water when the sensors are covered by ice.



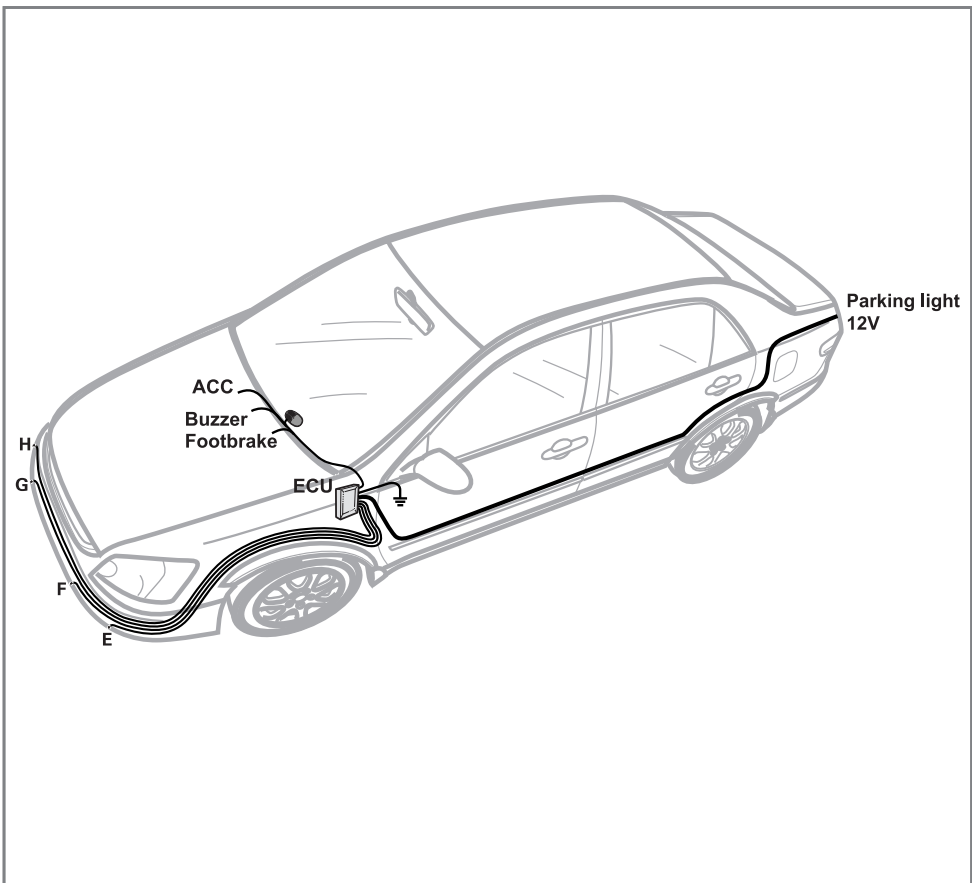
Please clean the sensors with cloth or low-pressure water when the sensors are covered by dirt or snow.

Different scenarios for system with buzzer

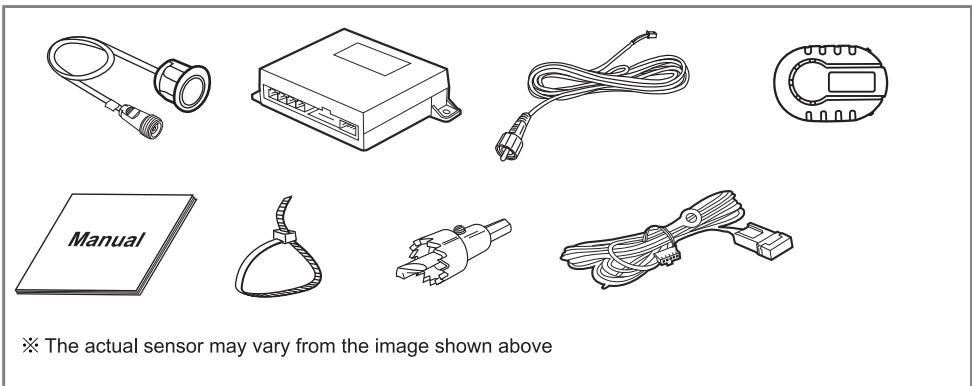


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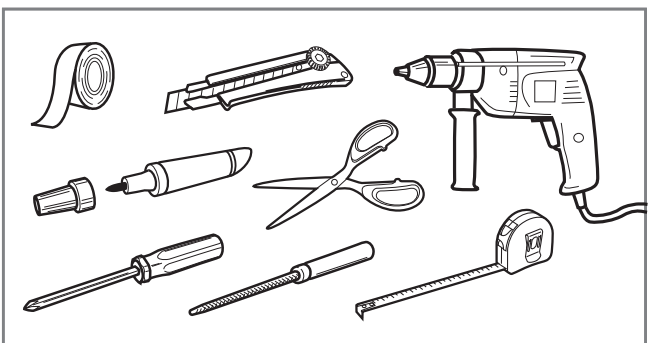
Brief installation diagram



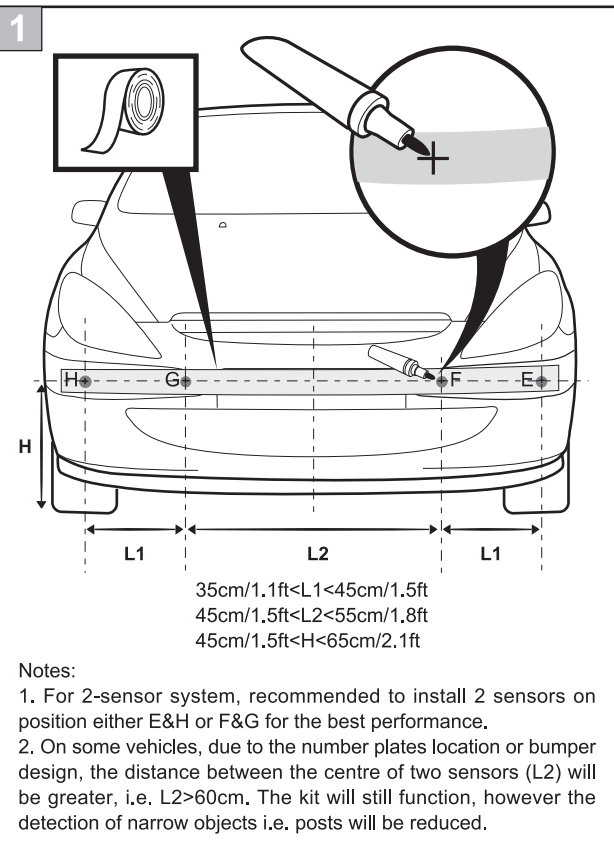
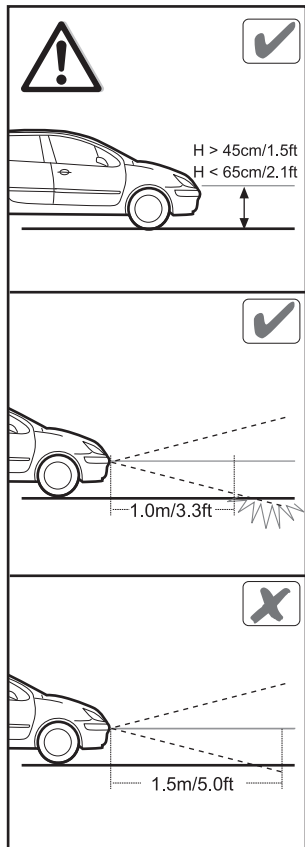
Packing list



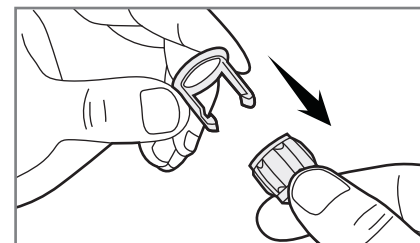
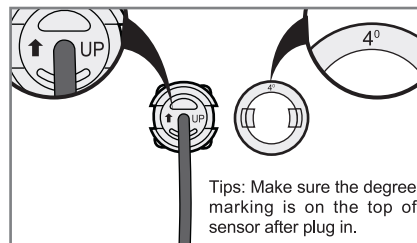
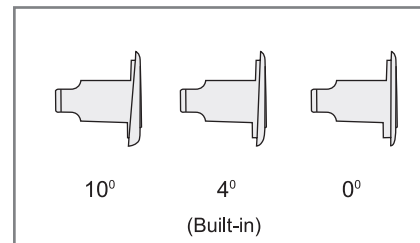
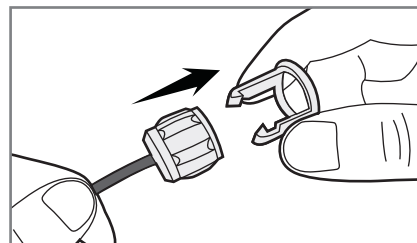
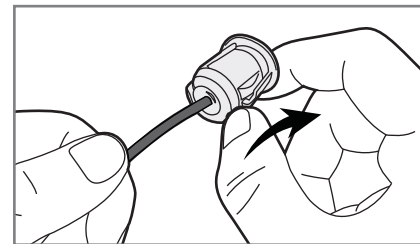
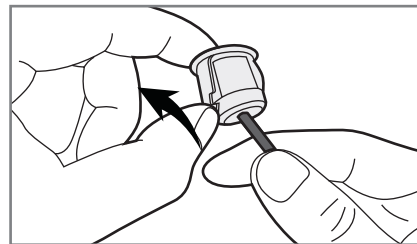
Installation tools



Sensor installation

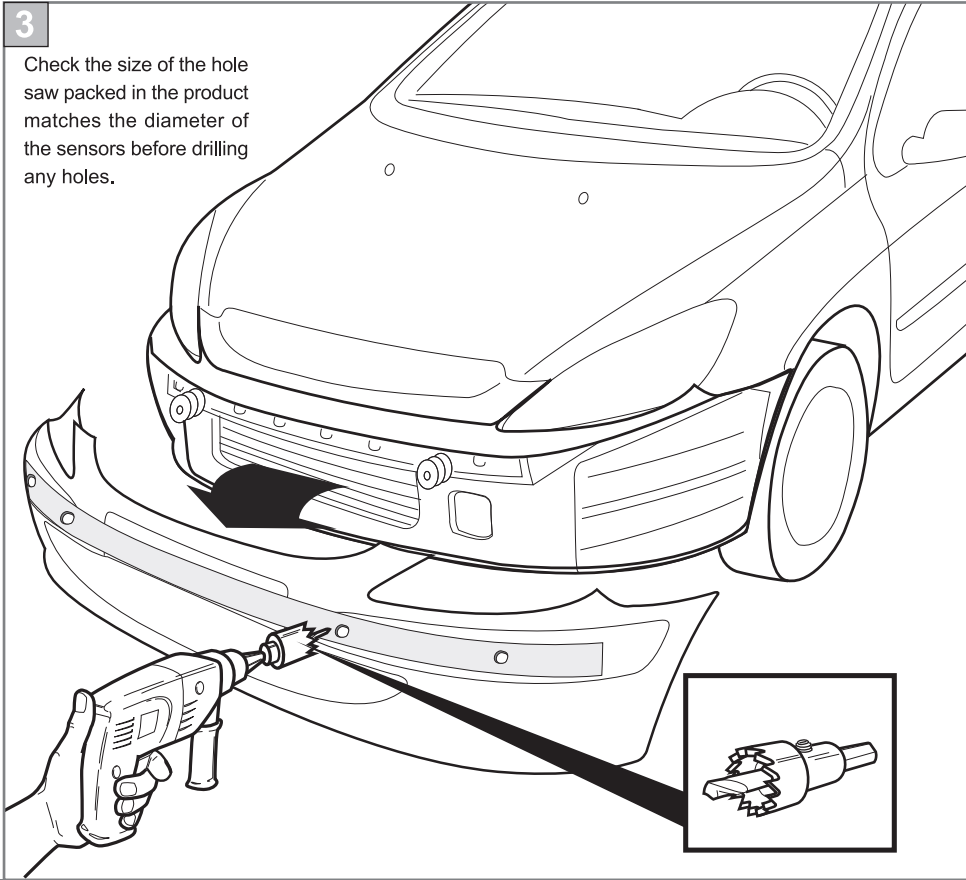


2 Change of sensor cover



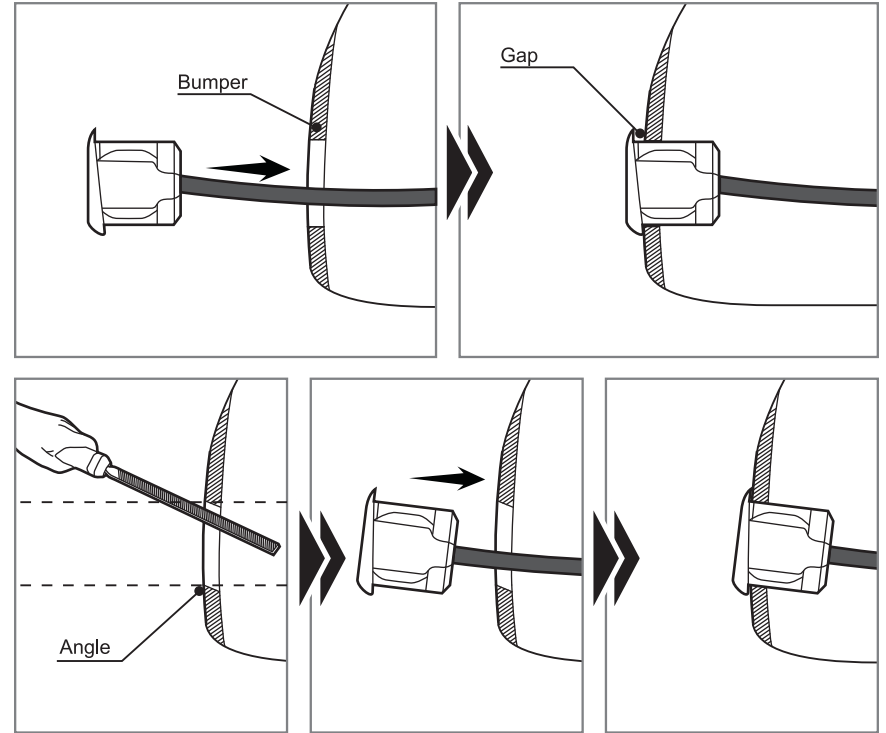
3

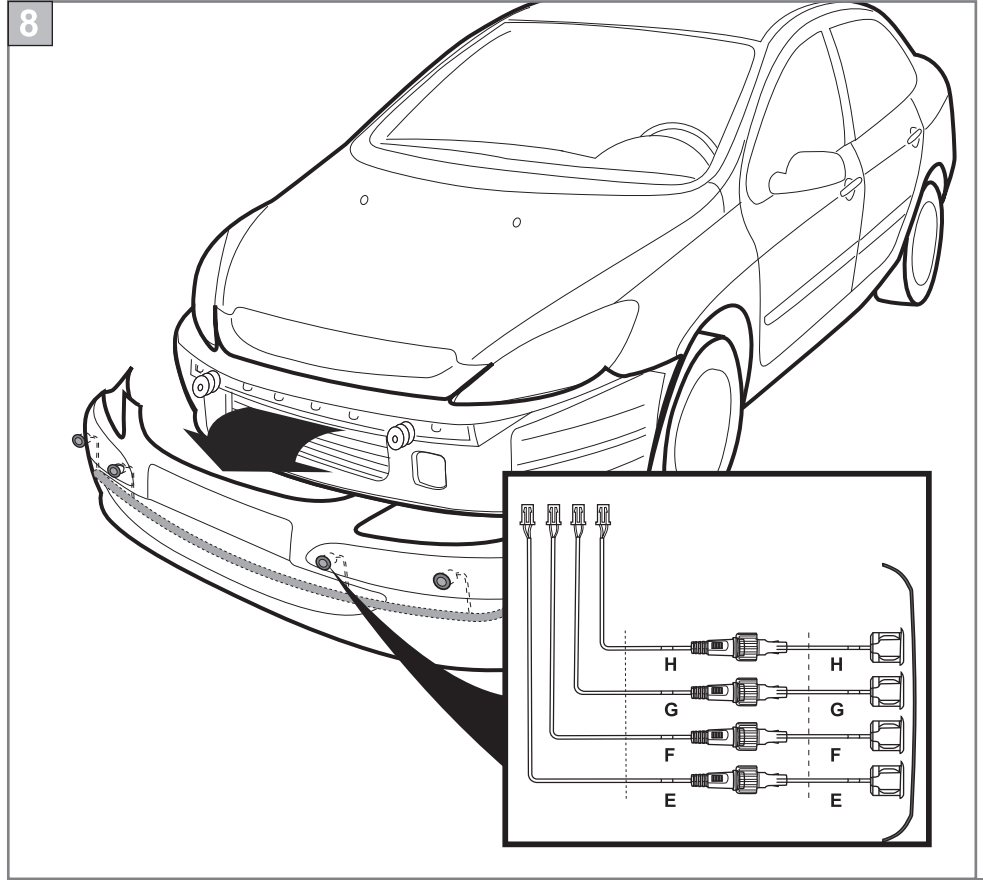
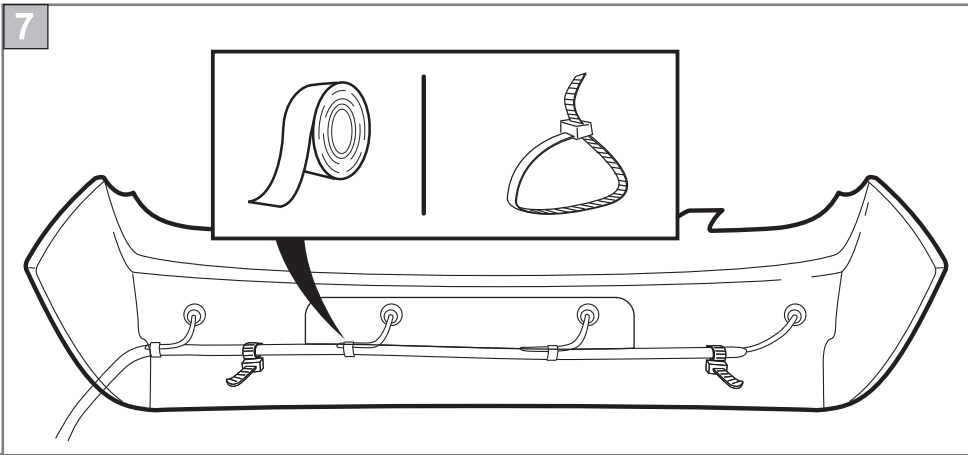
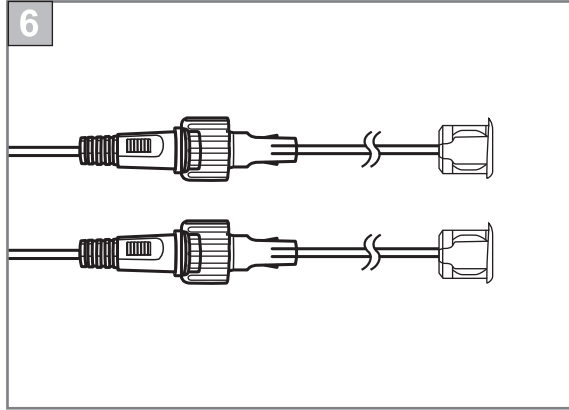
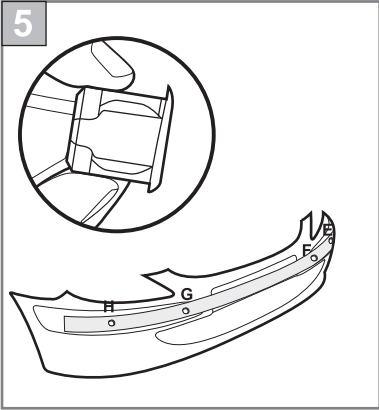
Check the size of the hole saw packed in the product matches the diameter of the sensors before drilling any holes.



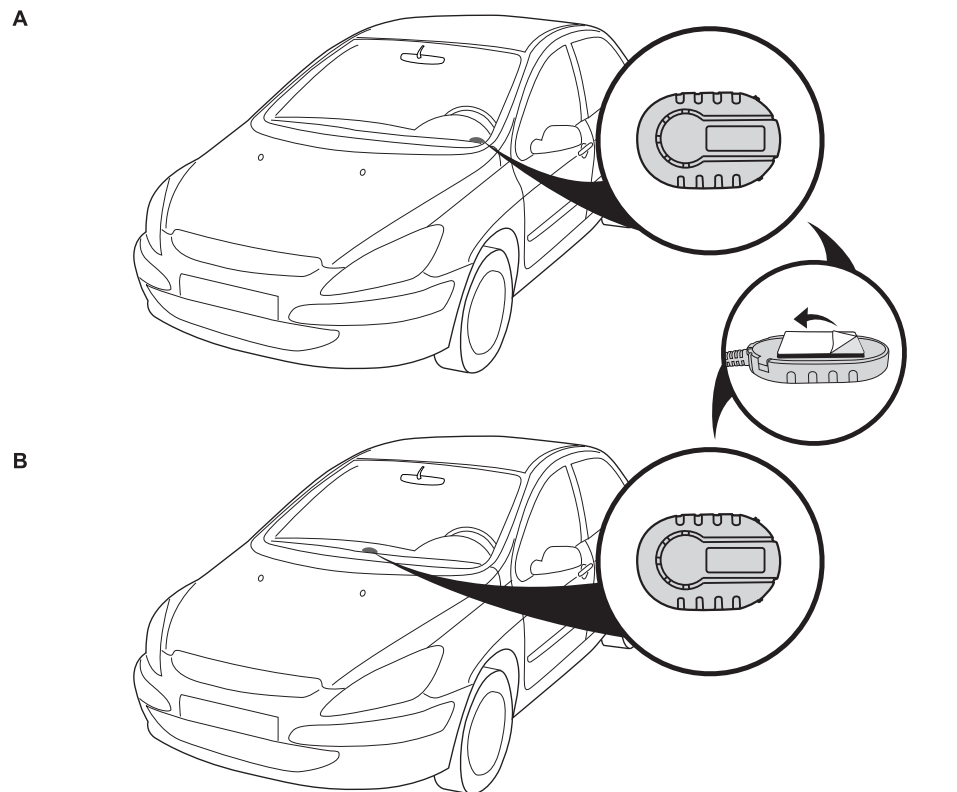
4

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



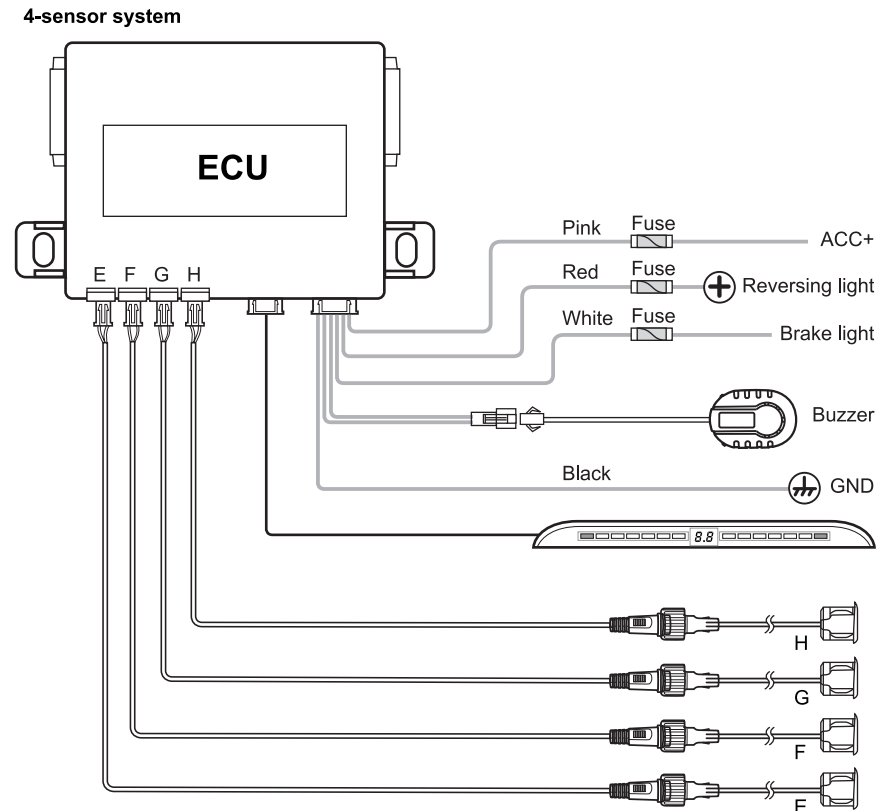


Buzzer installation



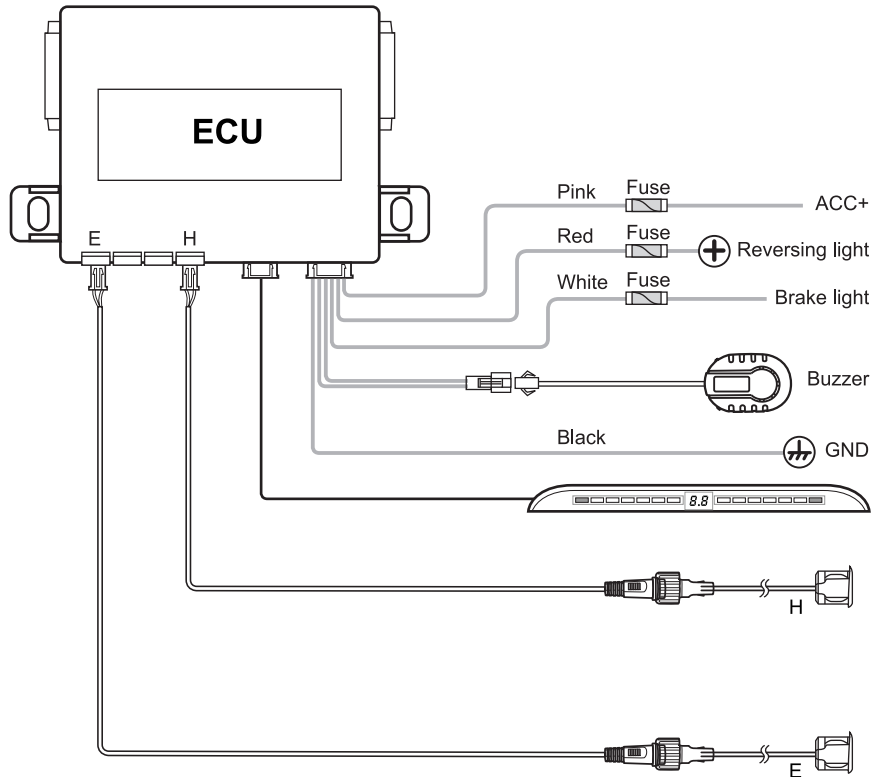
The above locations are the recommended installation of buzzer.

Wiring diagram



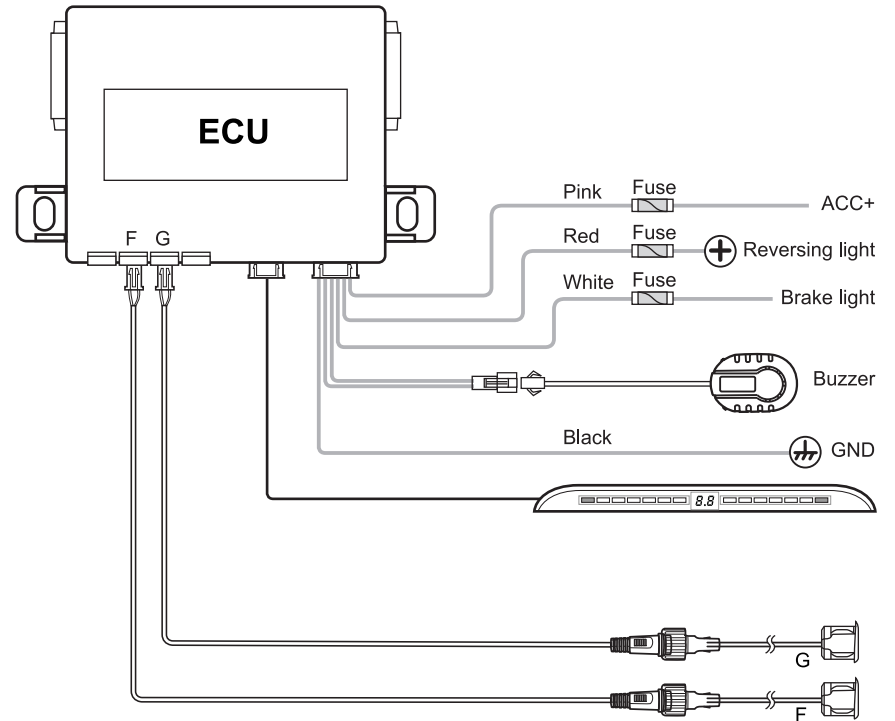
Note: 4 sensors display range: 0.3m ~ 0.9m/1.0ft ~ 3.0ft

2-sensor system



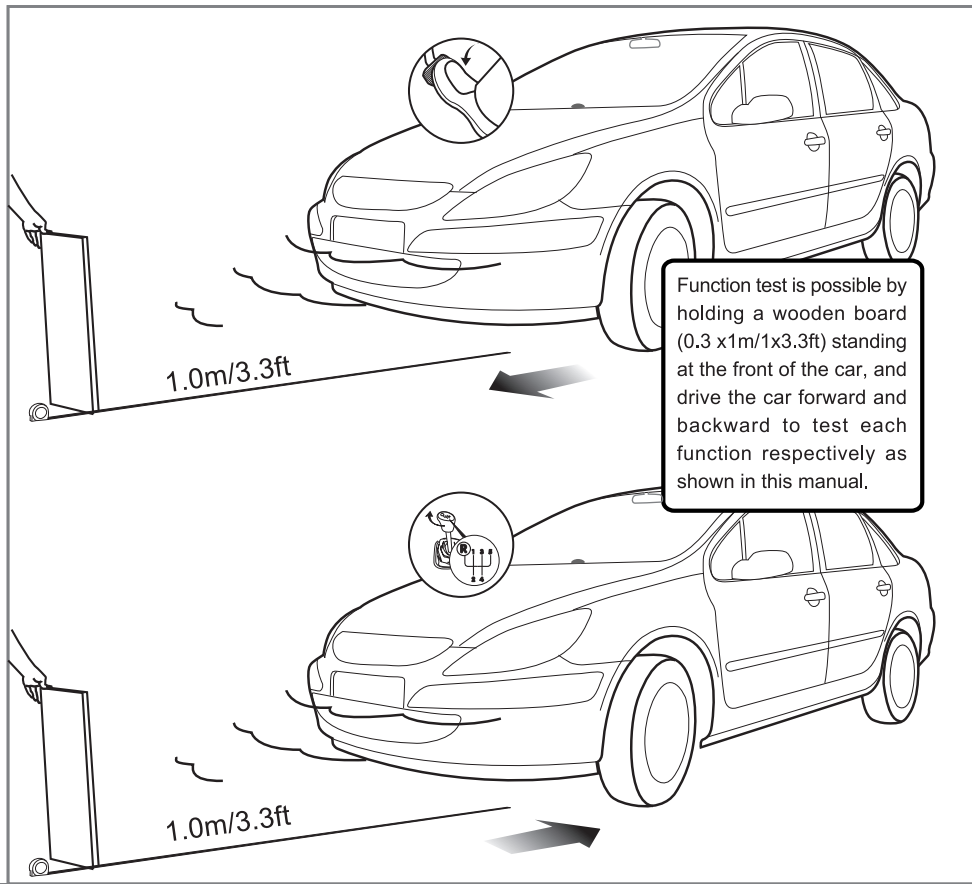
Note: E&H sensors display range: 0.3m ~ 0.7m/1.0ft ~ 2.3ft

2-sensor system



Note: G&F sensors display range: 0.3m ~ 0.9m/1.0ft ~ 3.0ft

Function test



Troubleshooting

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

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

2. Damaged sensor detected

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

3. False alarm

- Make sure ALL sensors plugged into the ECU in the correct position tightly.
- Please check if any of sensors detected the ground.
- 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

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

5. If the problem persists, please follow below.

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

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