

STEELMATE
Automotive

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Parking Assist System

Front & Rear Protection



Manual

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User's Manual

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Parking Assist System

User's Manual

Important notice

Parking assist systems help to provide assistance when reversing and parking. Driving skills, such as slowing down, use of mirrors etc. are 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 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 driving or 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 parking your vehicle.

About the product

Parking assist system is an ultrasonic distance monitoring system. It electronically detects the area in front of and at the rear of your vehicle while parking, and alerts you with audible and visual warnings. It assists the driver when parking and in a maneuvering situation.

These series products are front and rear parking assist systems with two independent ECUs and buzzers. The front system is designed for front bumper protection and can work as a 2-sensor system. The rear system is ideal for cars with tow bars or spare wheels. Combined with functions such as automatic radio mute, self-test function, and intelligent detection for spare tire or metal bar (front & rear), these series products can provide you with complete protection.

This product can be upgraded to displays. The various display is perfect for roof lining mounting, which allows you to view the display from the interior mirror. It can also be installed on the dashboard or on top of the rear view mirror according to your preference.

All parts of our products have passed the most stringent testing before they are released into the market. The product is reliable at a wide temperature range (-40°C ~ +80°C/-40°F ~ +185°F) meaning it will still continue to function when you are parking on a raining day, snowing day or at night etc. With the help of our parking assist system, you can enjoy a more relaxed and safer parking experience.

Key features

- 8-sensor system, complete front and rear protection
- 2 control units designed for luxury vehicles
- Automatic radio mute function while reversing
- Intelligent detection, compatible with spare tire or metal bar (front & rear)
- Anti-false alert technology
- Can be used as 6-sensor system
- Can be upgraded to be with displays (optional)
- Detachable sensors with waterproof wire connectors
- Self-test function
- All weather design (-40°C ~ +85°C / -40°F ~ +185°F)

Technical specifications

- Input voltage: 12V DC
- Operating temperature: -40°C ~ +85°C / -40°F ~ +185°F
- Buzzer SPL: 70 ~ 90 dB
- Detection range: Front 0.3m ~ 1m/1ft ~ 3.3ft
Rear 0.3m ~ 1.5m/1ft ~ 4.9ft

Radio mute function

When reverse gear is engaged, the system will automatically mute the car audio.

This function aims to help the driver to reverse safely without distraction.

6 / 8-sensor automatic recognition

This system can be used as a 6 or 8-sensor system. This has to be done by connecting the 2 middle sensors (F & G) or 2 side sensors (E & H) in the front.

Note:

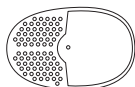
The warning distance for E & H sensor is <0.9m/2.9ft.

The warning distance for F & G sensor is <1.0m/3.3ft.

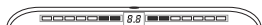
Buzzer & Display (optional)

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

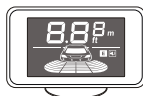
Only some displays have set button or digital indication. Digital indicator and volume adjustable function depend on the display you choose.



Buzzer



LED display (optional)



LCD display (optional)

Self-test function

Front system

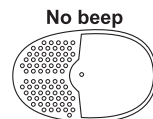
When the ignition is turned on, the system will test the front sensors E, F, G and H automatically.

If a damaged or defective sensor is detected, then the system will:

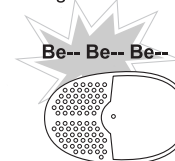
- Beep three times.
- Other sensors will continue to function normally

Once the self-test procedure is completed, the system will detect the obstacle in front of the car for 30 seconds.

1. All sensors are working normally



2. Damaged sensor is detected



The front system will keep working for 5 seconds when the footbrake is released.

Rear system

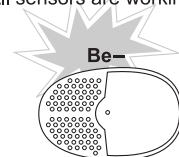
When reverse gear is selected, the system will test the rear sensors A, B, C and D automatically.

If all sensors are working normally, the buzzer will beep once.

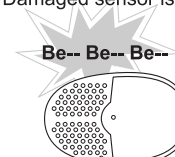
If a damaged or defective sensor is detected, then the system will:

- Beep three times.
- Other sensors will continue to function normally

1. All sensors are working normally



2. Damaged sensor is detected

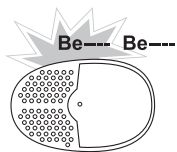


Learning function

Learning function for cars with front metal bar

Turn the ignition on, press the footbrake and connect the green learning wire (located in the main front ECU wiring loom) to a +12V power supply. The system will perform learning procedure.

The buzzer will give 2 audible tones. This indicates that the learning function is successful and the system will ignore the front protrusion. Once programmed, disconnect the green wire and insulate it.



Note: if the vehicle does not have front metal bar or other front protrusion, the above procedure is not needed.

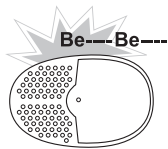
Learning function for cars with rear tow-bar or spare wheel

Ignition on, shift the gear from "N" to "R" and shift back in 1 second and repeat for 10 times. At the 10th time stay at "R" position for 6 seconds to achieve the learning function.

Ignition on, shift the gear from "N" to "R" and shift back in 1 second and repeat for 12 times. At the 12th time stay at "R" position for 8 seconds to clean the learning function.

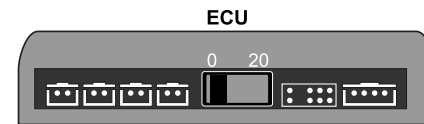
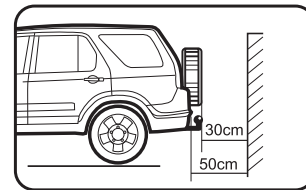
If you forget the shift-times, please stay at "R" position for 4 seconds to clean the memory and next time will be the first time.

The buzzer will beep twice, this indicates that the learning function is successful and the system will not warn for tow-bar or spare wheel.



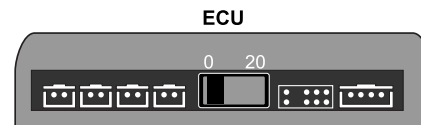
Note: If the vehicle does not have rear tow-bar/spare wheel, the above procedure is not needed.

Dual intelligent function for spare wheel (rear ECU)

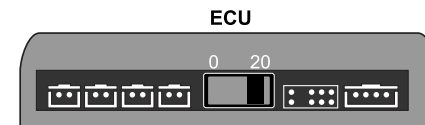


In "0" position: The measured distance is between sensor and obstacle.

In "20" position: The measured distance is between spare wheel (20 cm) and obstacle.



In "0" position



In "20" position

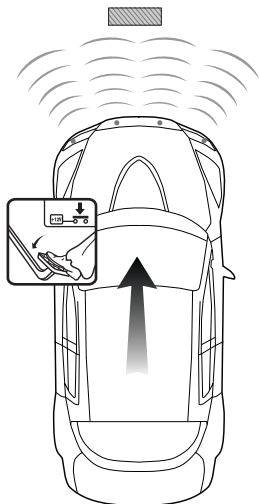


How does the system work

Driving forward

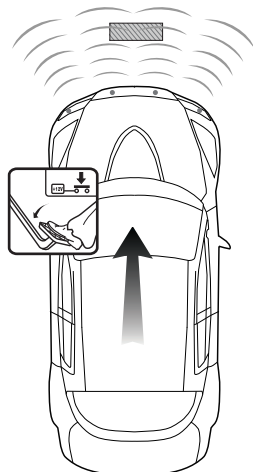
No beep

Distance: 1m/3.3ft



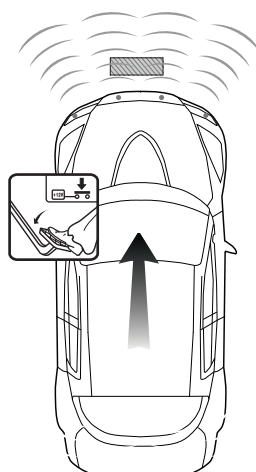
Be --- Be ---

Distance: 0.6m/2ft



Be -----

Distance: <0.3m/1ft

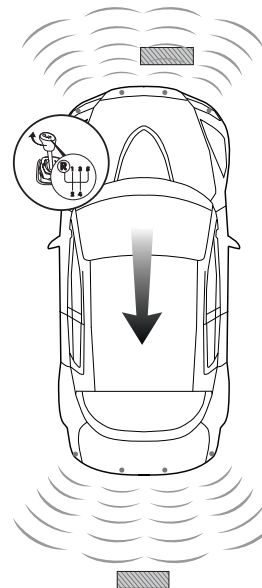


The front system will keep working for 5 seconds after the footbrake is released.

Reversing

Be -----

Distance: <0.3m/1ft

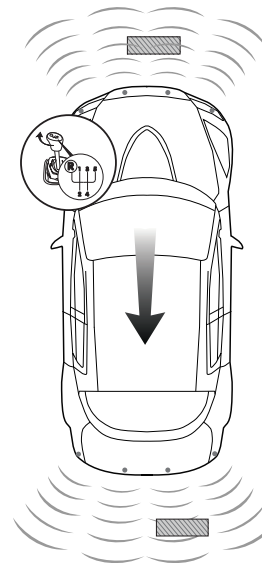


No beep

Distance: >1.5m/4.9ft

Be--Be--Be--

Distance: 0.5m/1.6ft

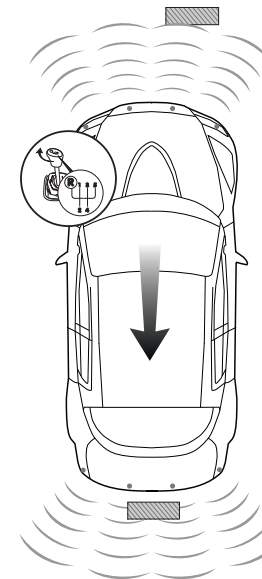


Be--Be--Be--Be--

Distance: 0.8m/2.6ft

No beep

Distance: 1m/3.3ft



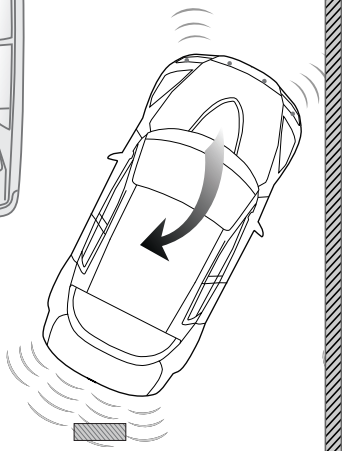
Be -----

Distance: < 0.3m/1ft

Zigzag reversing

Be--Be--Be--

Distance: 0.4m/1.3ft



Be--Be--Be--

Distance: 0.6m/2ft

Be --- Be ---

Distance: 0.6m/2ft

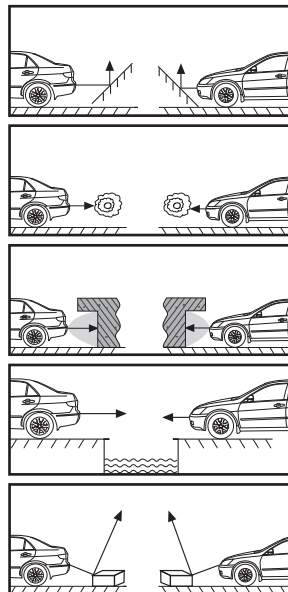


Be -----

Distance: 0.3m/1ft

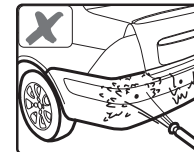
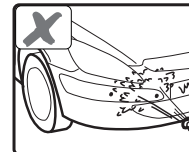
Attention

False detection may occur in the following situations:

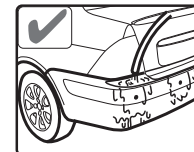
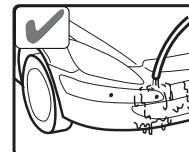


- After installation, please fully test the system before use.
- Heavy rain, dirty or damaged sensors may result in false alarm occasionally.
- Ensure that the self-test procedure is completed and all sensors are functioning before reversing.

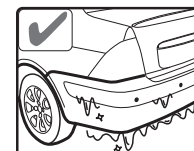
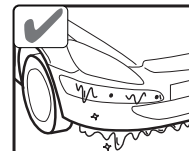
Sensor maintenance



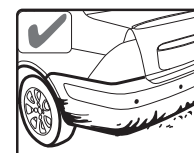
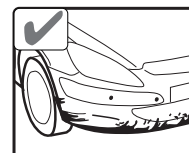
Do not wash the sensor with squirt gun or swab them forcibly.



Please wash car with low-pressure water.



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

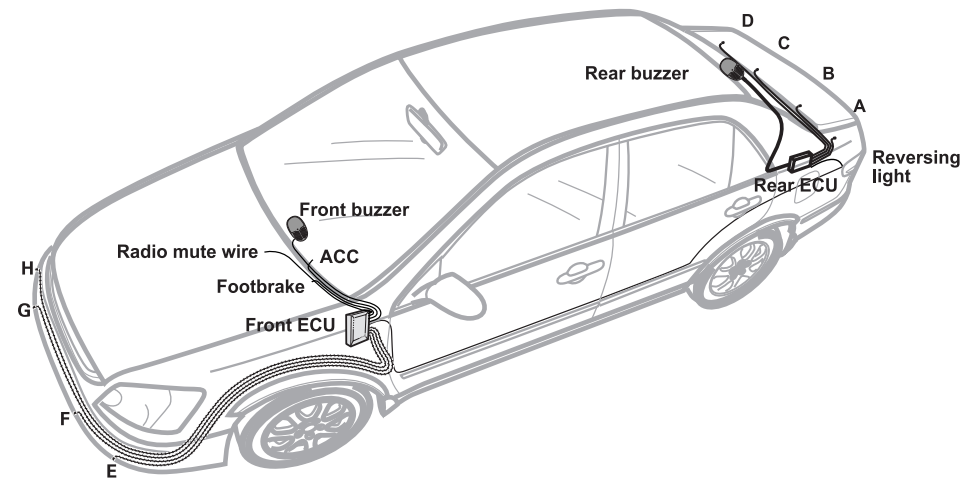


Please clean the sensors with cloth or low-pressure water when the sensors are covered by mud or snow.

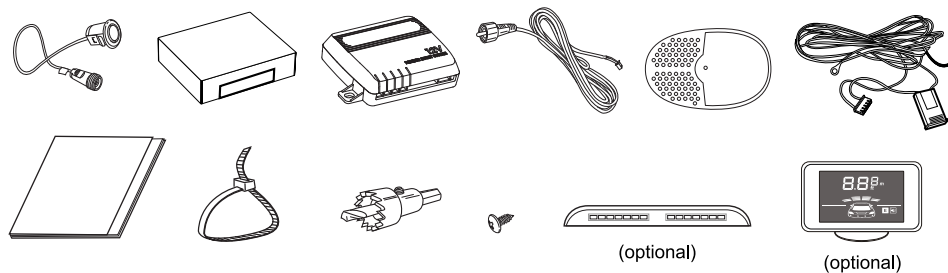
Parking Assist System

Installation Manual

Brief installation diagram

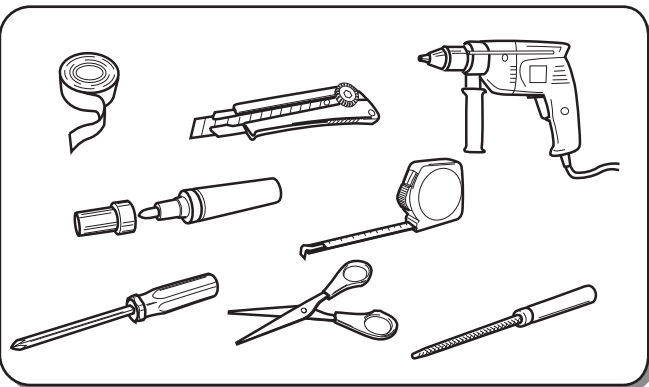


Packing list



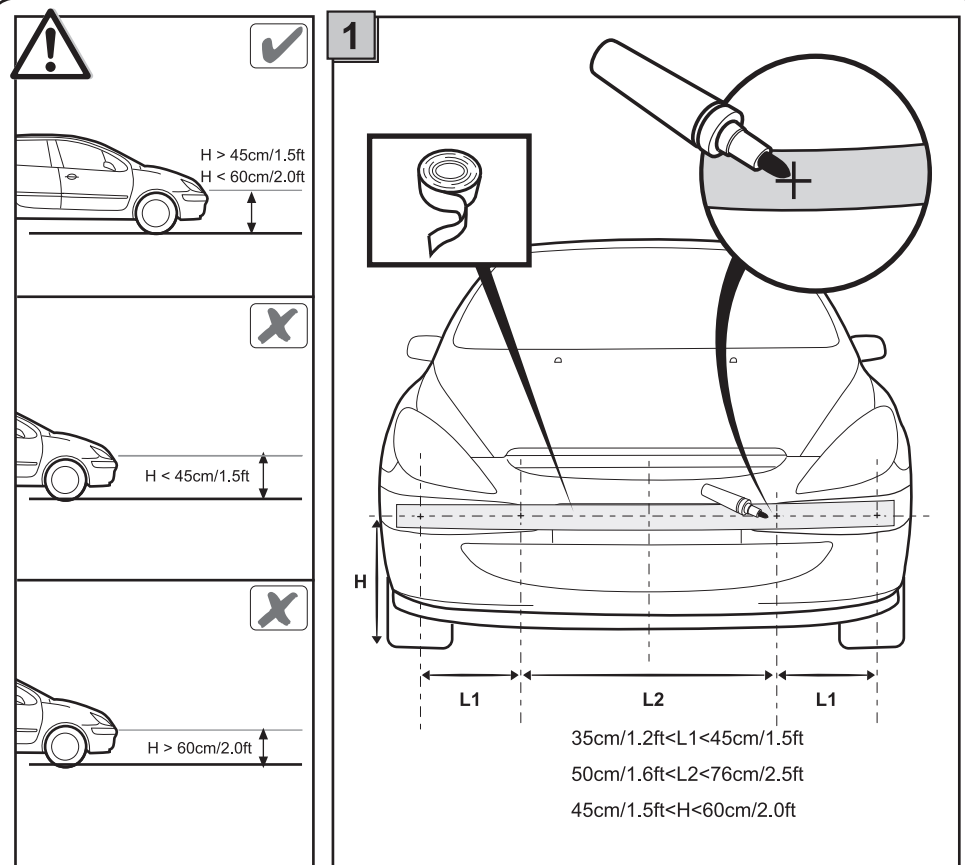
- ※ The actual sensor may vary from the image shown above
- ※ The alert buzzer can be upgraded to display, the display pictures are only for reference.

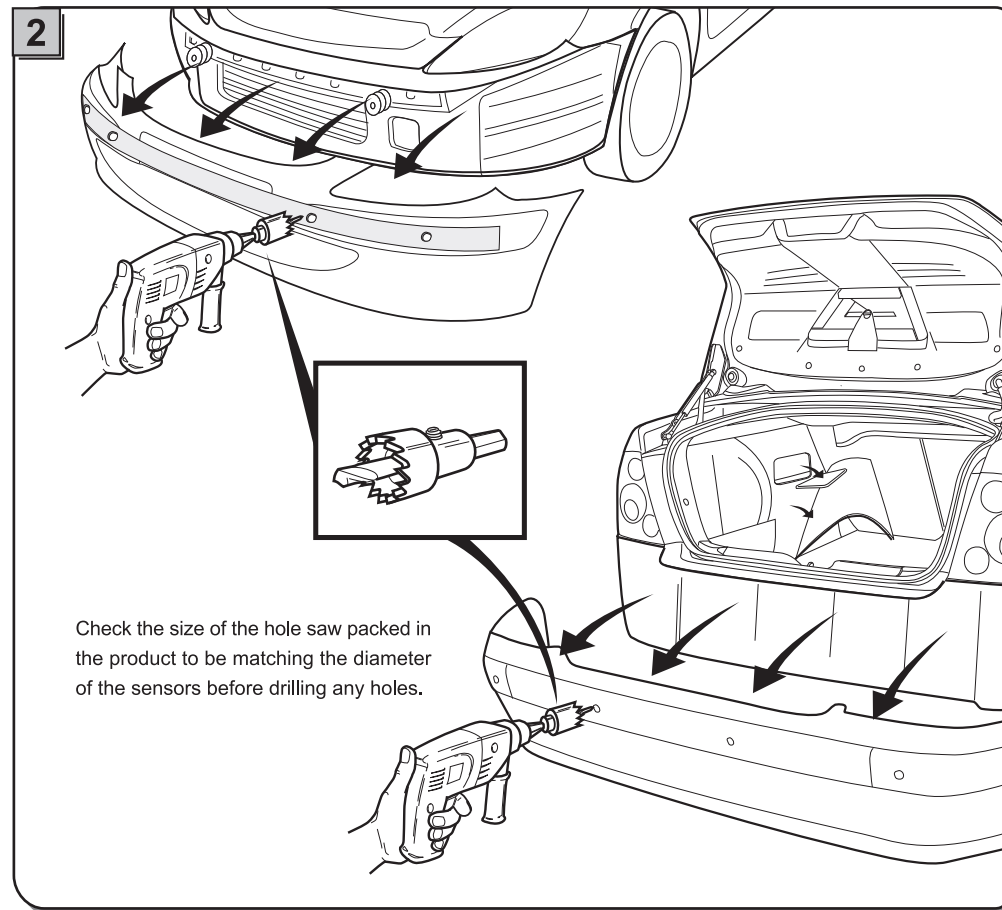
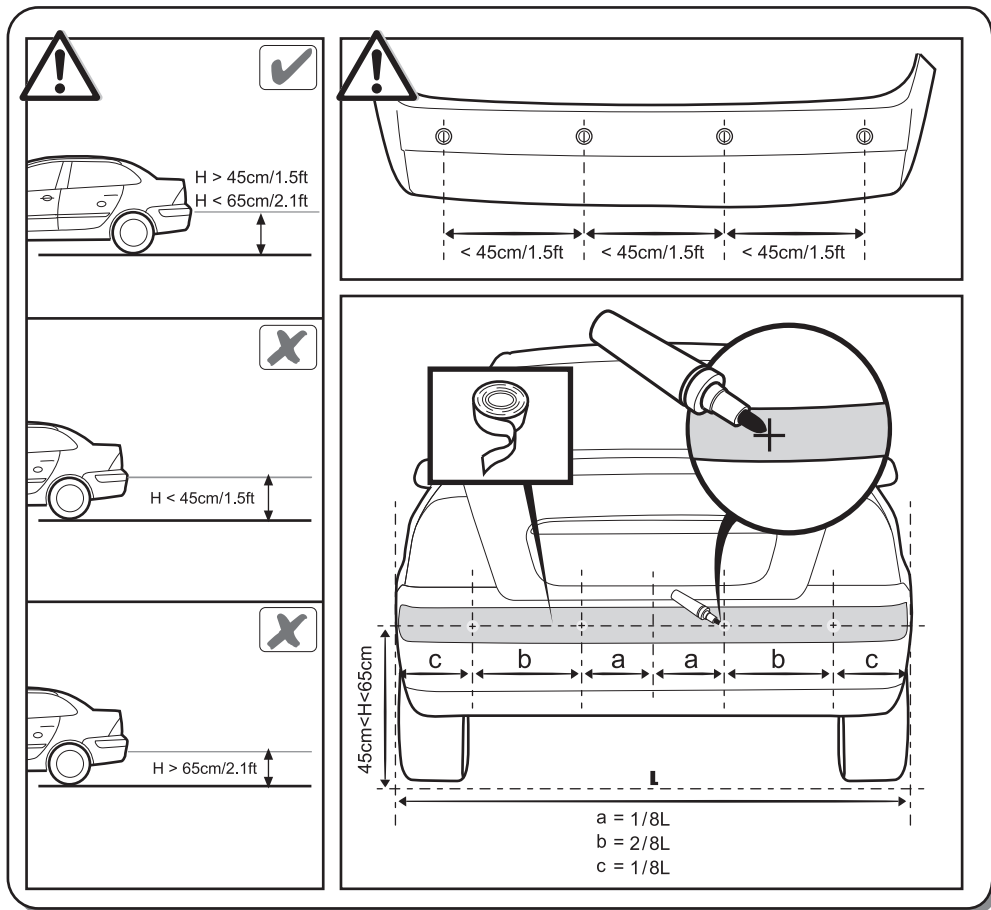
Installation tools

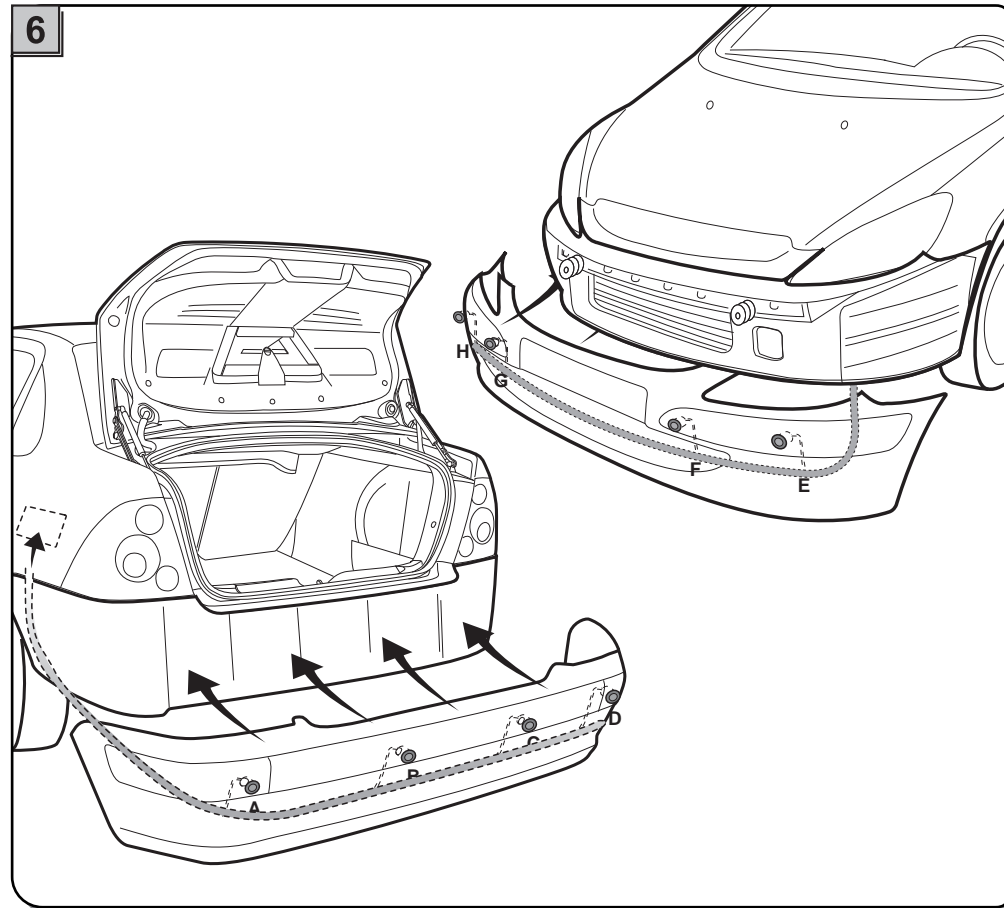
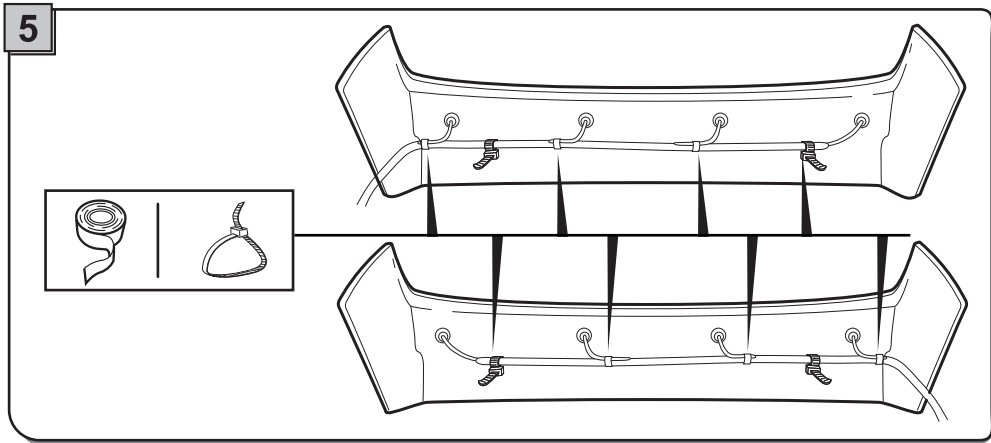
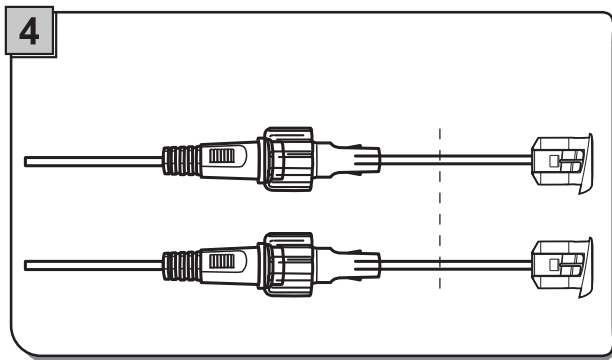
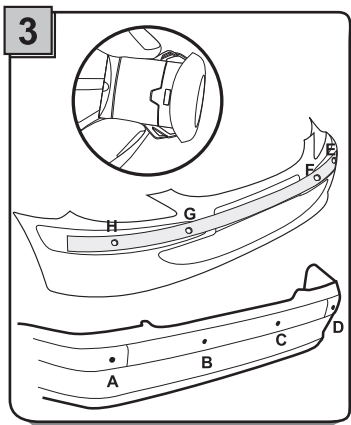


60' ~ 80'

Sensor installation



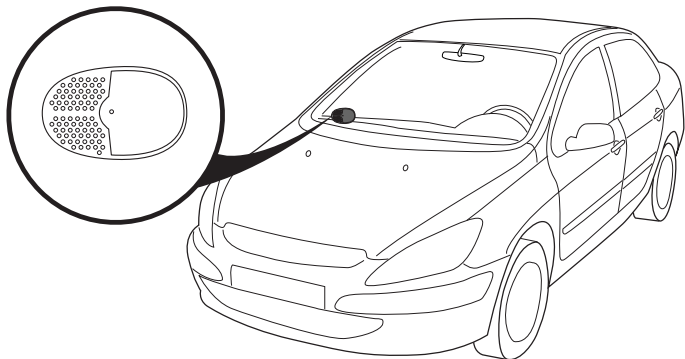




Buzzer installation

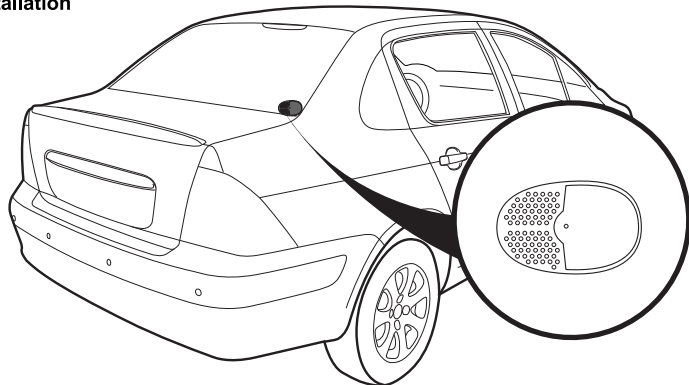
Front buzzer installation

A



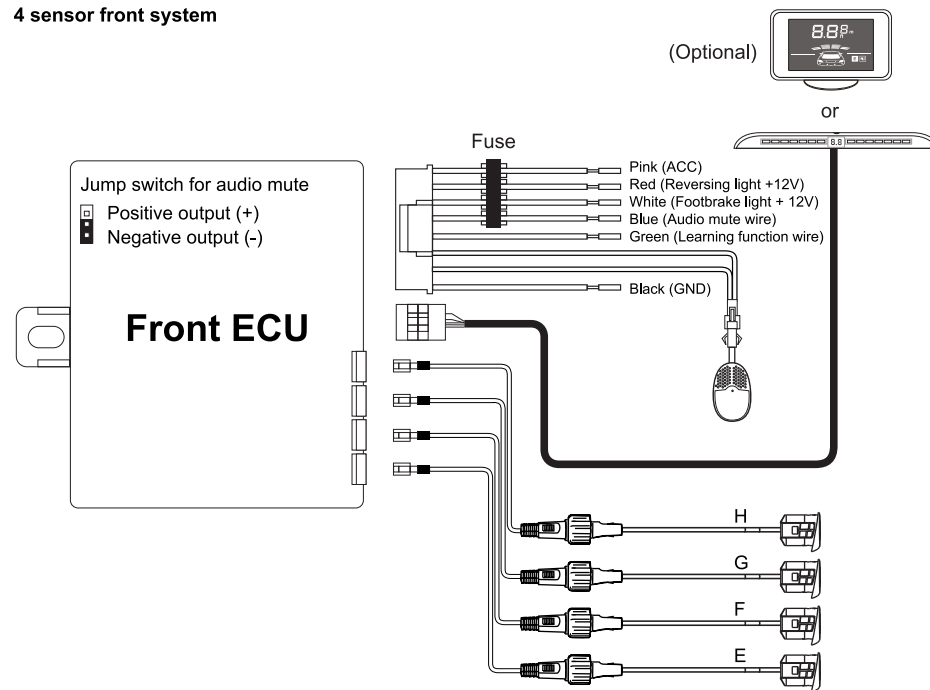
Rear buzzer installation

B



Wire diagram

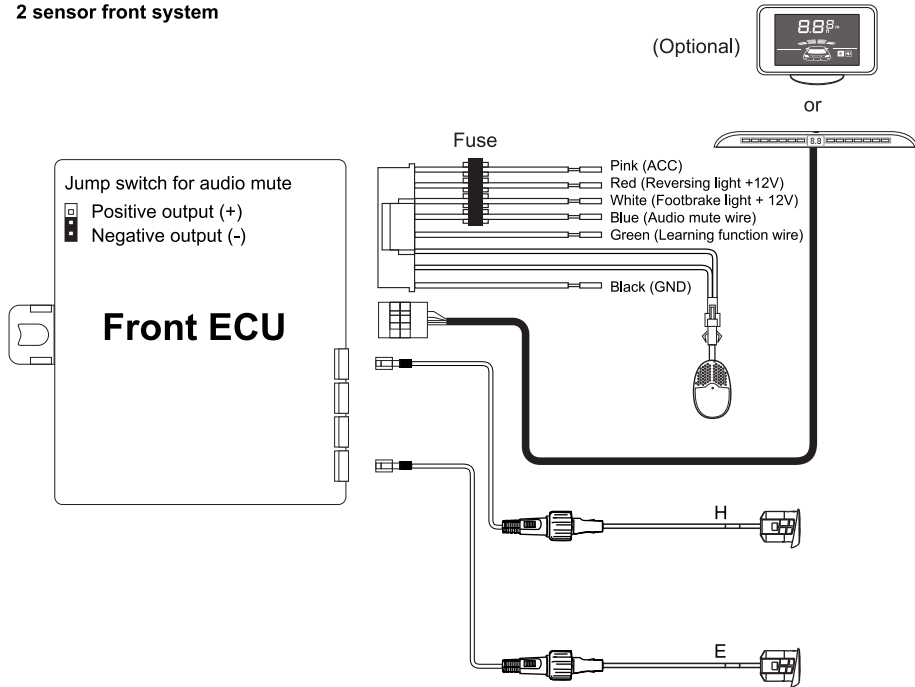
4 sensor front system



Note:

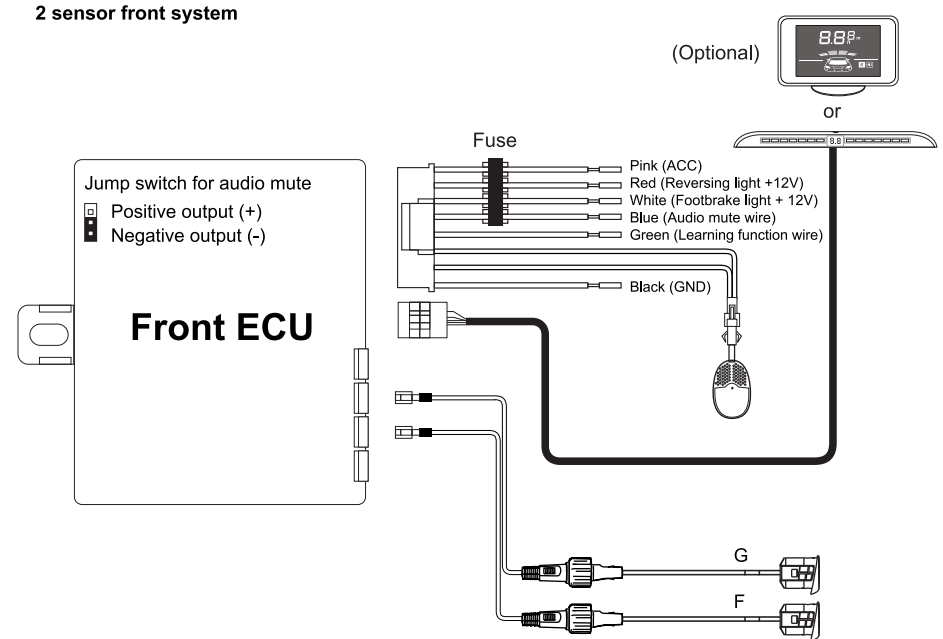
4 sensors display range: 0.3m/1ft ~ 0.9m/3.0ft.

2 sensor front system



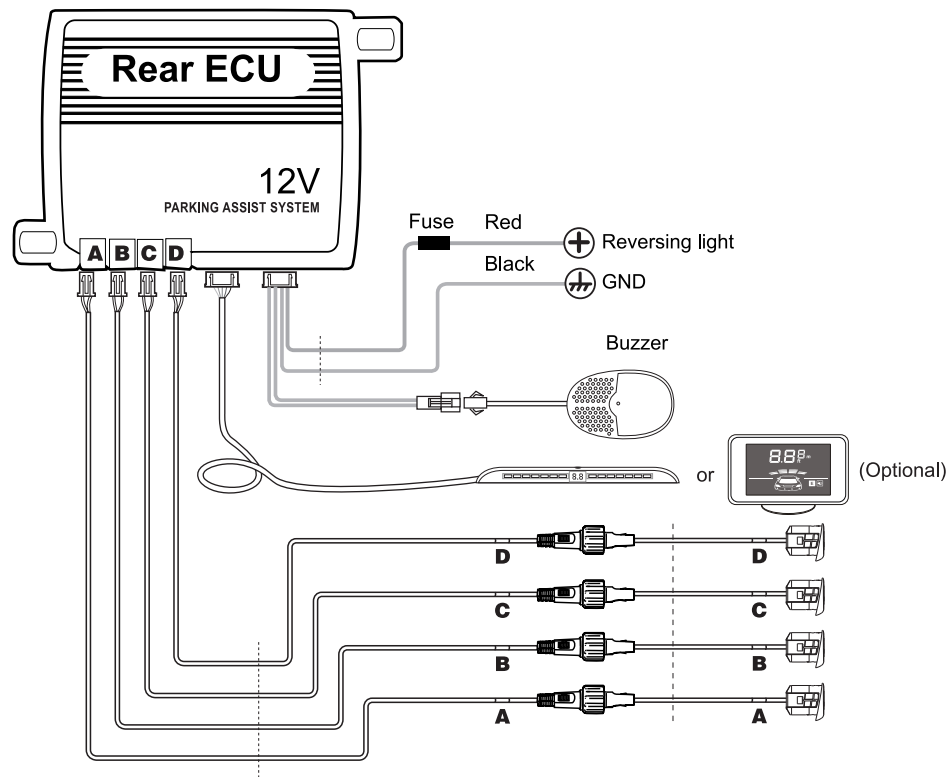
Note:
E & H sensor display range: 0.3m/1ft ~ 0.8m/2.6ft.

2 sensor front system



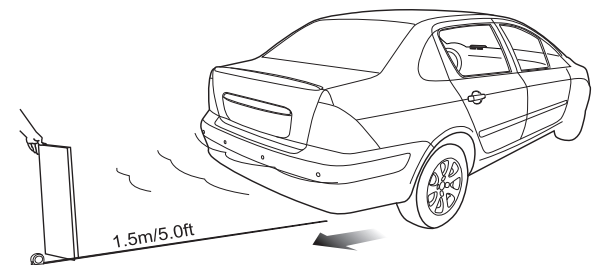
Note:
G & F sensor display range: 0.3m/1ft ~ 0.9m/3.0ft.

4 sensor rear system

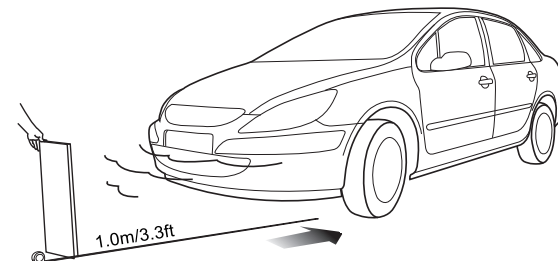
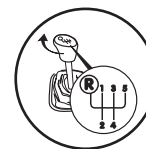
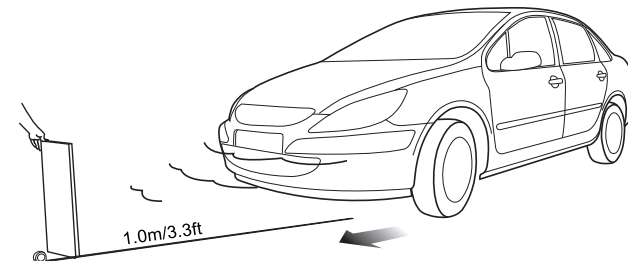
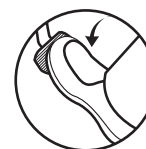


Function test after installation

Function test is possible by holding a wooden board (30 x100cm/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

After installation, the buzzer doesn't work

- a) Are all wires connected properly?
- b) Is the vehicle's ignition ON?

Damaged sensor detected

- a) Are all sensors plugged into the ECU correctly and tightly?
- b) Is the sensor wire broken?
- c) Is the sensor covered by mud or snow?
- d) Is the sensor damaged?

False warning

- a) Are all sensors plugged into the ECU in the correct position tightly?
- b) Does any sensor detect the ground?
- c) Does rubber ring in the sensor come out (14D sensor)?

If the problem persists, please follow these steps

- a) For consumer contact your dealer or nearby service centre.
- b) For installer or dealer
 - 1) Test the sensors with certified ECU by using a flat wooden board.
 - 2) Replace the ECU and recheck the system.
 - 3) Plug the certified sensors into the ECU and recheck.
 - 4) Email your question to us and we will reply ASAP.

Warranty terms

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.

- a) It is required to show warranty card when making any warranty claims.
- b) The model and the unit's serial number must be the same as the information on the warranty card.

This warranty is non-transferable and is automatically void if

- a) The original purchaser has not completed the warranty card.
- b) The unit's serial number is defaced, missing or altered.
- c) The unit has been modified or used in a manner contrary to its intended purpose.
- d) The unit has been damaged by accident, unreasonable use, neglect, improper installation or service.

The warranty does not cover

- a) Damage caused by incorrect or poor installation problems which may be caused by anomalies in the vehicle's electrical system or originating from the environment in which the system is operated.

- b) Damage to the system caused by accident or improper use in any manner whatsoever not the fault, including but not limited to damage by water or as a result of excess voltage applied to the system or if misused or repaired or altered in any way other than by its authorized agent.
- c) False information in the panel of the dash board that is caused by car with CAN bus system.

Warranty card

Dear user:

Thank you for choosing this product.
Please fill the form below and retain it.

User's information:

User:
Tel:
Vehicle license No.:
Product model No.:
Serial No.:
Date of installation:
Name of the retailer:
Signed by distributor:

