STEELMATE
Automotive

PTS400EX

Parking assist system

Manual

Contents

User's Manual

Installation Manual

Parking Assist System

User's Manual

Important notice

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. 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 behind your vehicle while reversing, and alerts you with audible tones and display, if the system detects an obstacle. The system will show the accurate distance in meters or feet depending on your region.

PTS400EX is a 4-sensor rear parking assist system. It will warn you if there is an obstacle behind your vehicle. Combined with functions such as beep alarm (can be upgrade to LED/LCD display), self-test and learning function, PTS400EX is ideal for cars with tow-bar or spare wheels.

The various display(optional) is perfect for roof 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.

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 ~ +85°C/-40°F~+185°F) and becomes very useful when you are parking in poor weather conditions.

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

Key features

- Buzzer can be upgraded to various display with built-in buzzer
- Roof mount/ Interior mirror/ dashboard installation choices (depend on the specialty of various display)
- Can be used as 2-sensor system
- Dual intelligent functions for cars with tow-bar, spare wheels or other protrusion
- Precise detection range
- Self-test function
- Anti-false alert technology

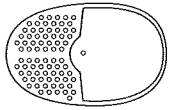
Technical specifications

Input voltage:	12V DC
Working power:	<2.5W
Detection range:	0.1~2.5m/0.3~8.2ft
Alarm range(Buzzer):	0.1~1.5m/0.3~4.9ft
Operating temperature:	-40°C ~ +85°C/ -40°F~+185°F
Buzzer SPL:	70 ~ 90dB

Buzzer & Display (optional)

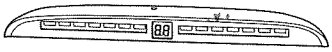
The alert buzzer can be upgraded to display. These pictures are for reference only, the actual display may vary.

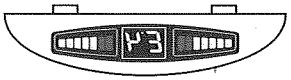
Only some LED displays have set button or digital indication. Digital indicator and volume adjustable function depend on the display you choose.



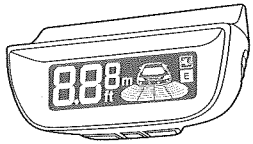
Buzzer

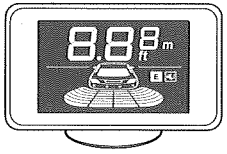
LED display





LCD display





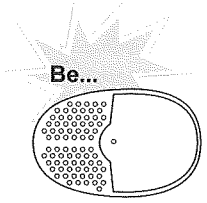
Self-test function

Rear parking system

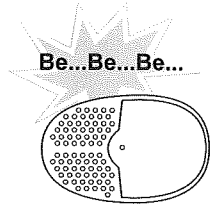
When reverse gear is selected, the system will test the rear sensors A, B, C and D automatically.
If al sensors are working normally, the buzzer will beep once.
If a damaged or defective sensor is detected, then the system will:

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

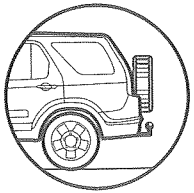
1. All sensors are working normally

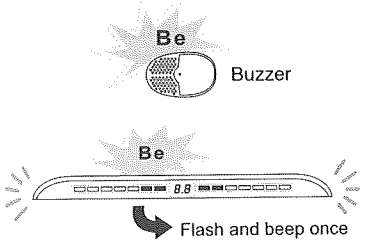


2. Damaged sensor is detected



Learning function for cars with tow-bar or spare wheel



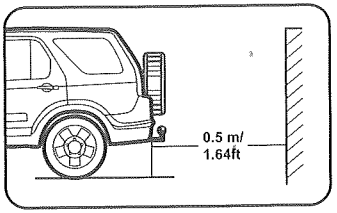


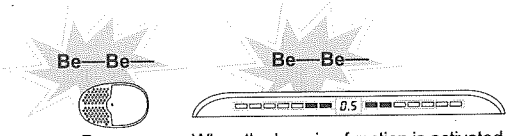
Ignition on, shift the gear from "N" to "R" and shift back in 1 second and repeat for 10 times. At the 10th time stay at "R" position for 6 seconds to achieve the learning function.

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.

Note: If you forget the shift-times, please stay at "R" position for 2 seconds to clean the memory and next time will be the first time.

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

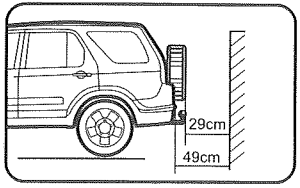


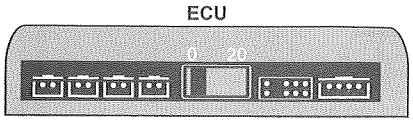


When the learning function is activated, the system will ignore the tow-bar or spare wheel and only detect other objects behind the vehicle.

Note: If the vehicle does not have tow-bar or spare wheel, you do not need to use this function.

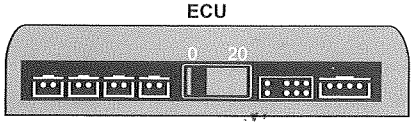
Dual intelligent function for spare whee (optional)



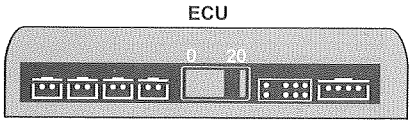


In "0" position: The measured distance is between sensor and obstacle.

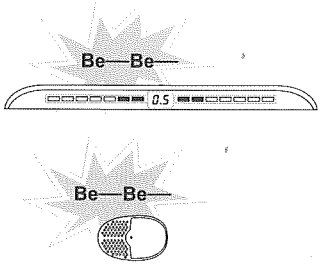
In "20" positon: The measured distance is between spare wheel (20 cm) and obstacle.

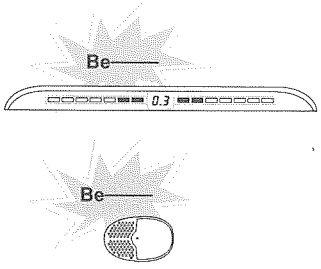


In "0" position



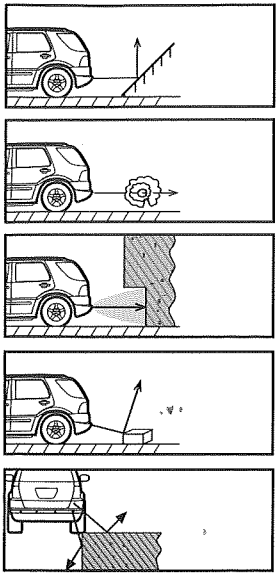
In "20" position





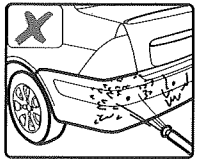
Attention

False detection may occur in the following situations:

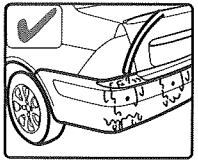


- After installation, please fully test the system before use.
- Heavy rain, dirty or damanged sensors may cause false warning occasionally.
- Ensure that the self-test procedure is completed and all sensors are functioning before using the system.

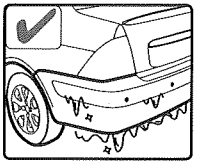
Sensor maintenance



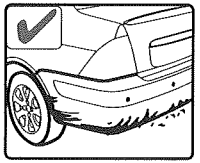
Do not wash the sensor with a pressure washer of scrub them forcibly.



Please wash car with low-pressure water.

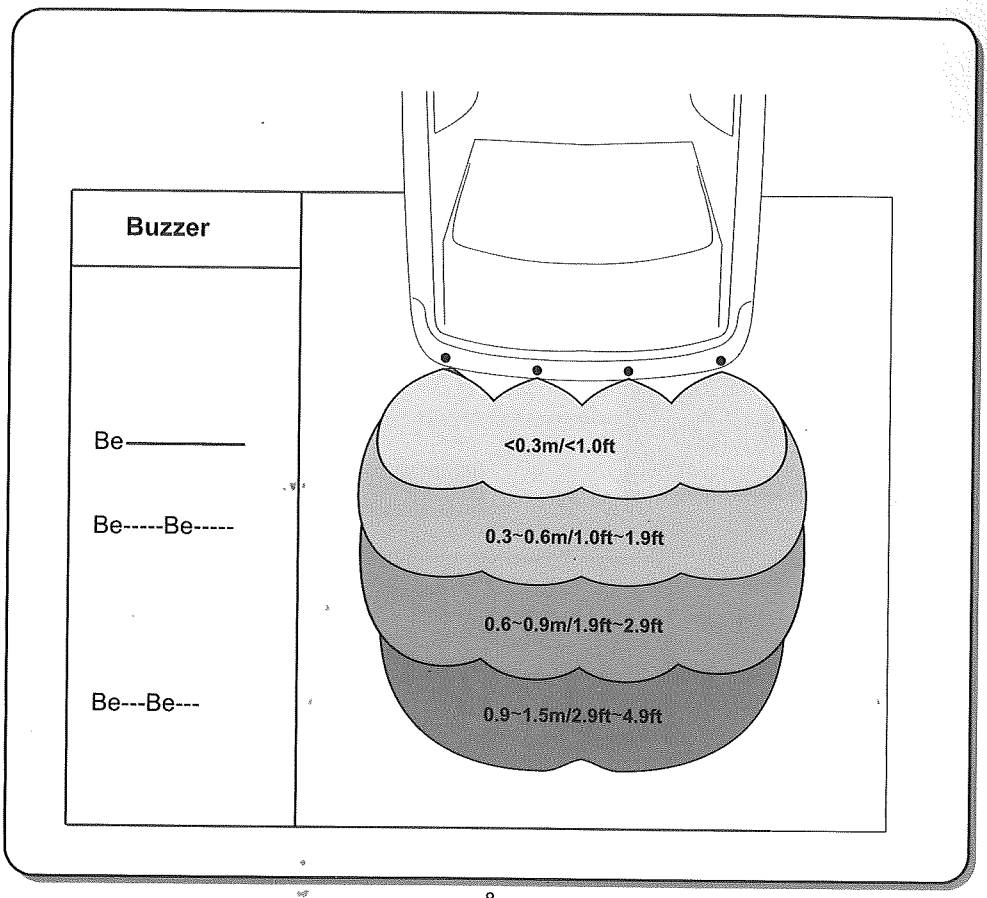


Please melt the ice with water when the sensors are covered by ice.



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

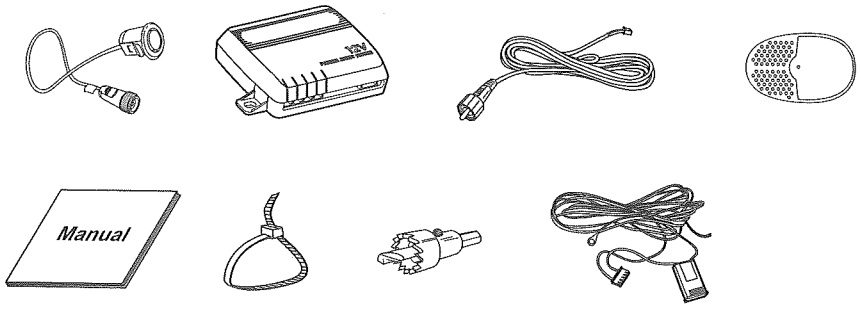
How does the system work



Parking Assist System

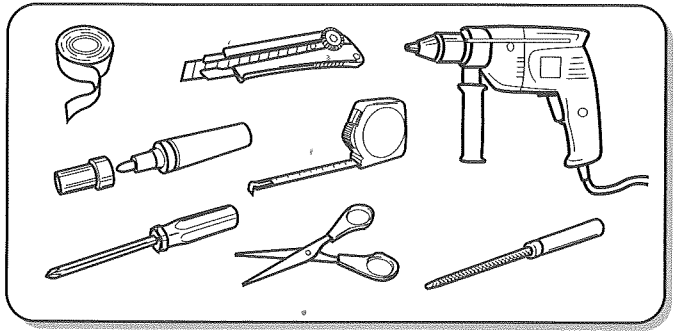
Installation Manual

Packing list



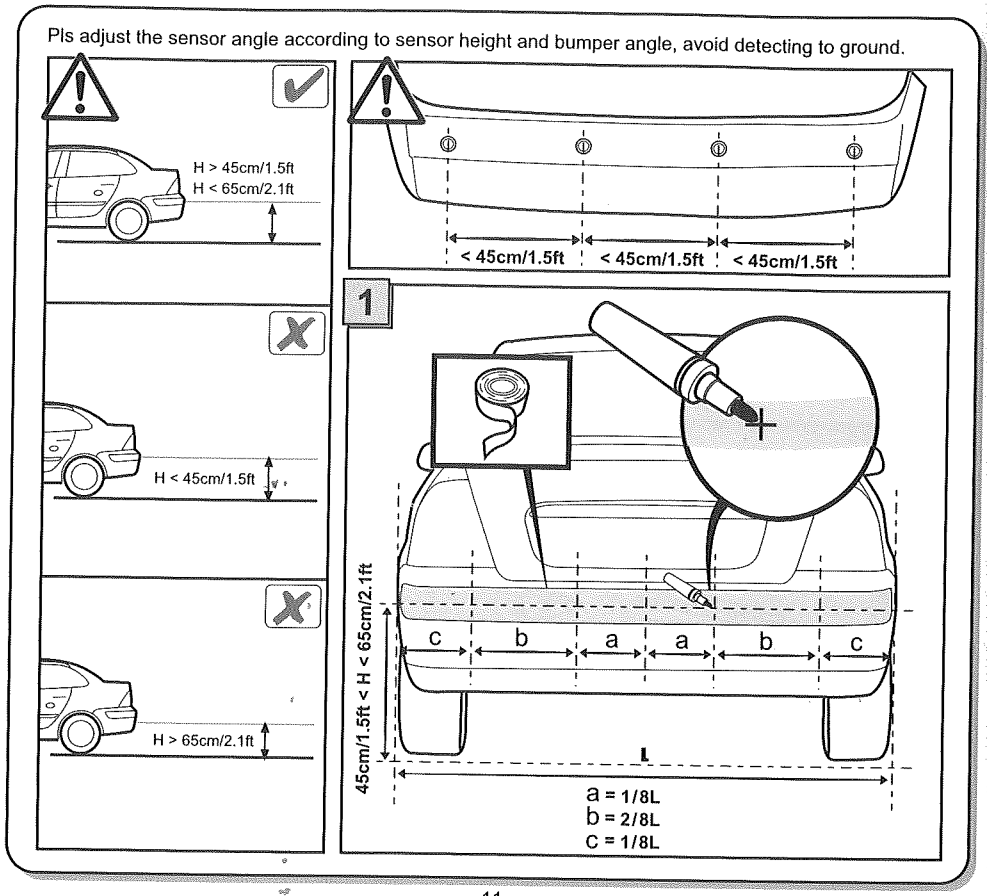
※ The actual sensor may vary from the image shown above

Installation tools

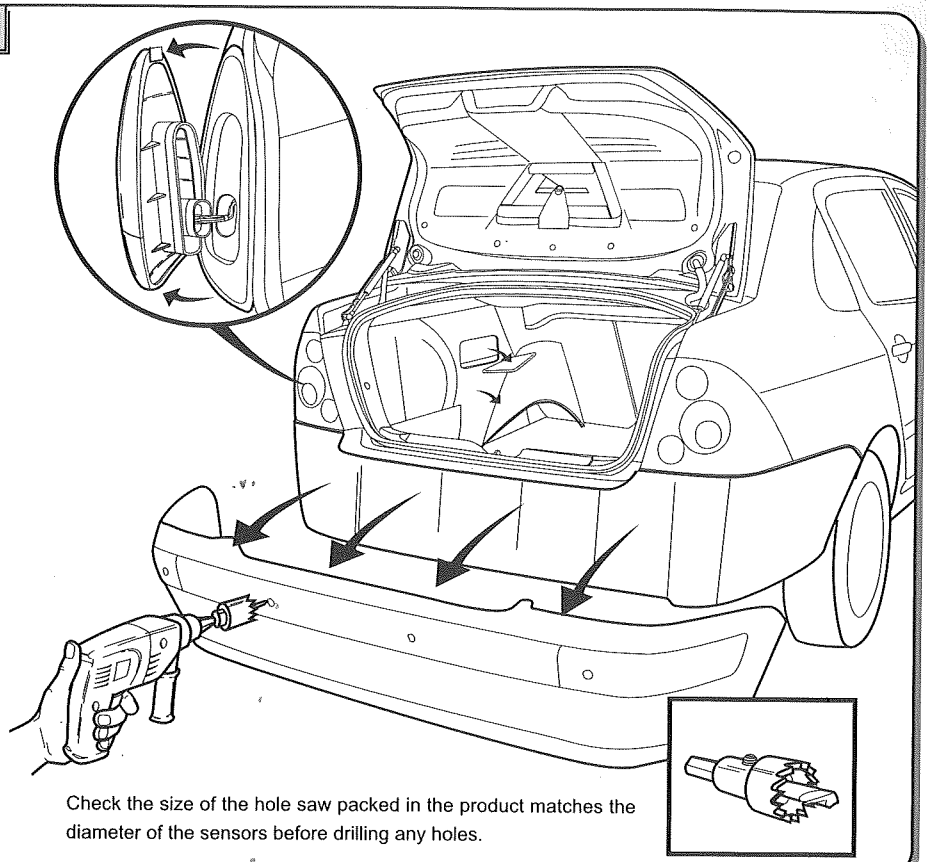


30' ~ 60'

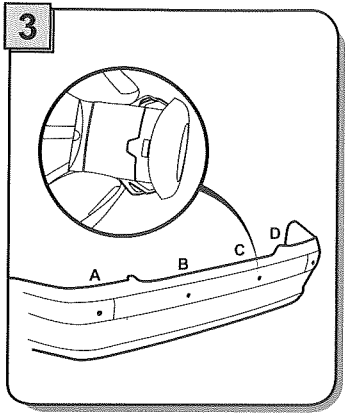
Sensor installation

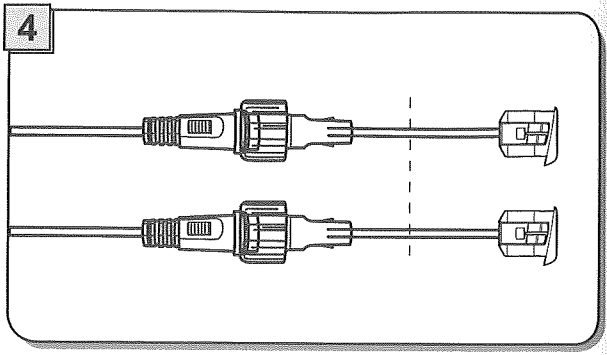


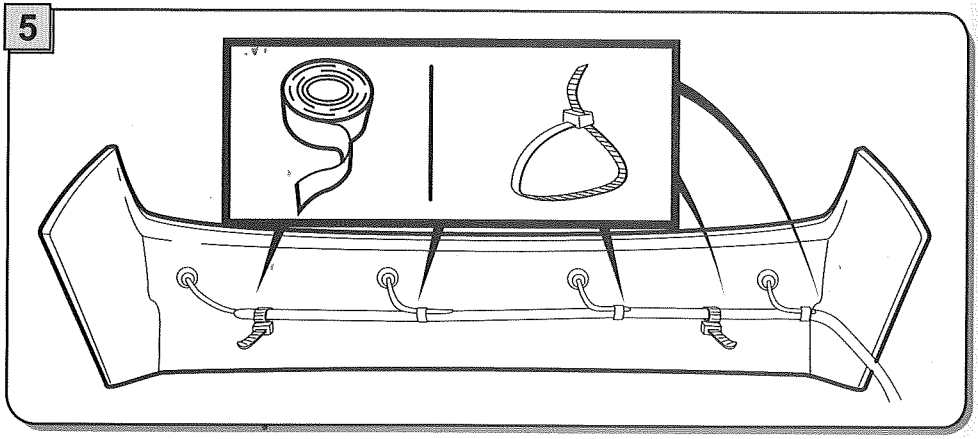
2

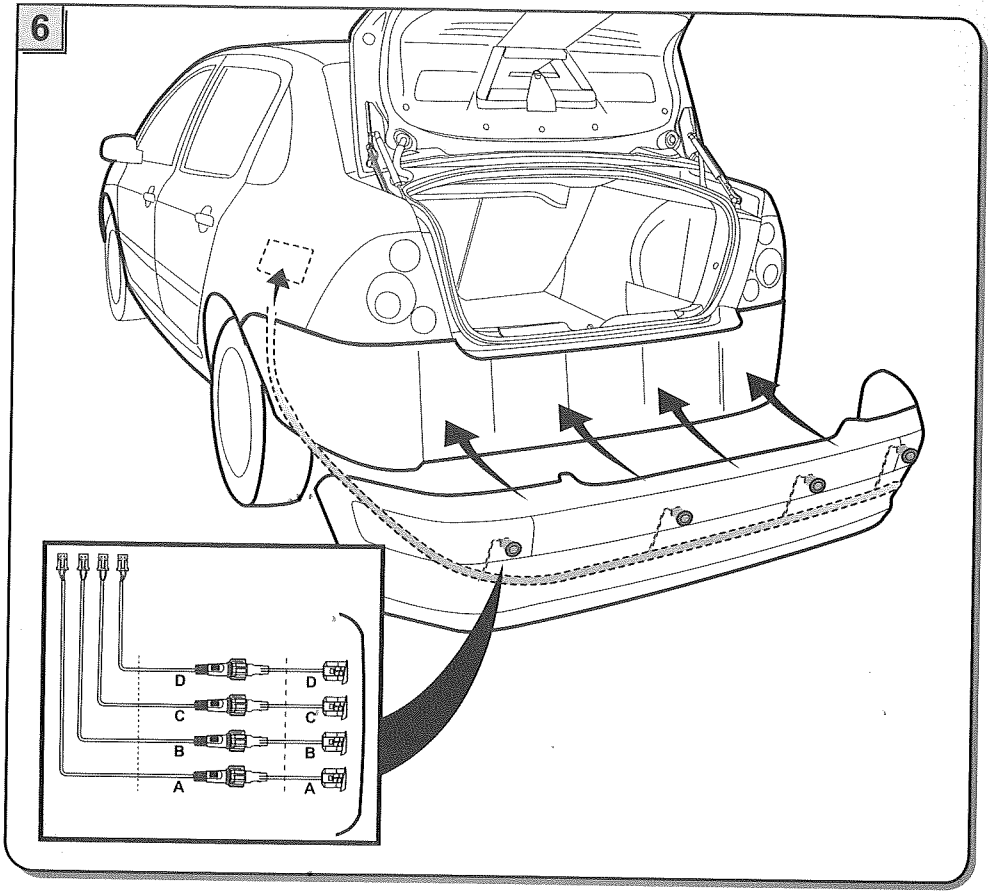


Check the size of the hole saw packed in the product matches the diameter of the sensors before drilling any holes.

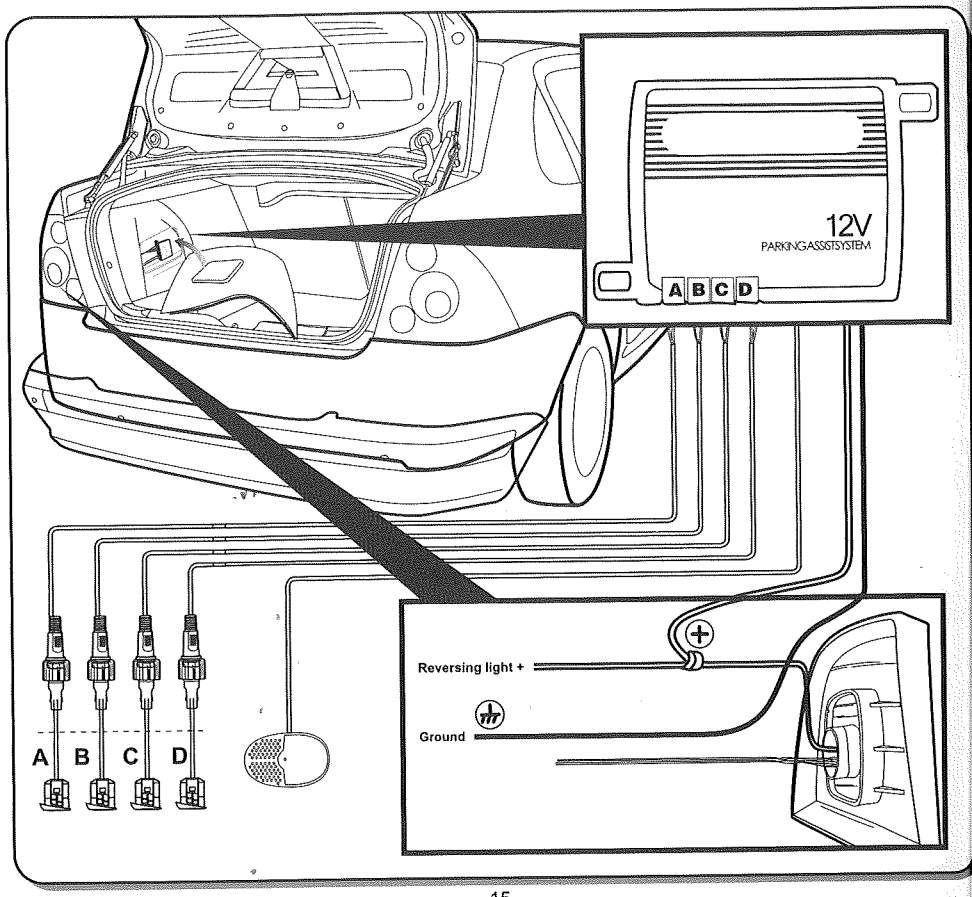

3
A
B
C
D


4

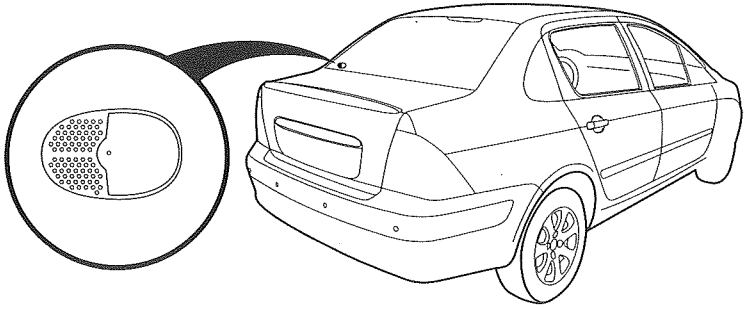

5

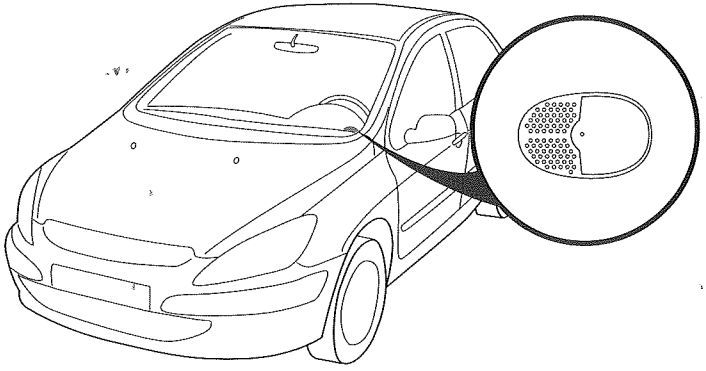

6
D
D
C
C
B
B
A
A

ECU installation



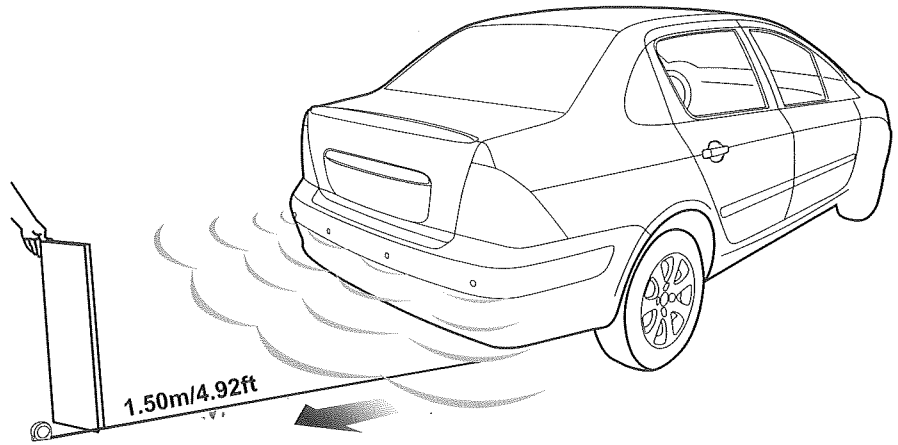
Buzzer installation





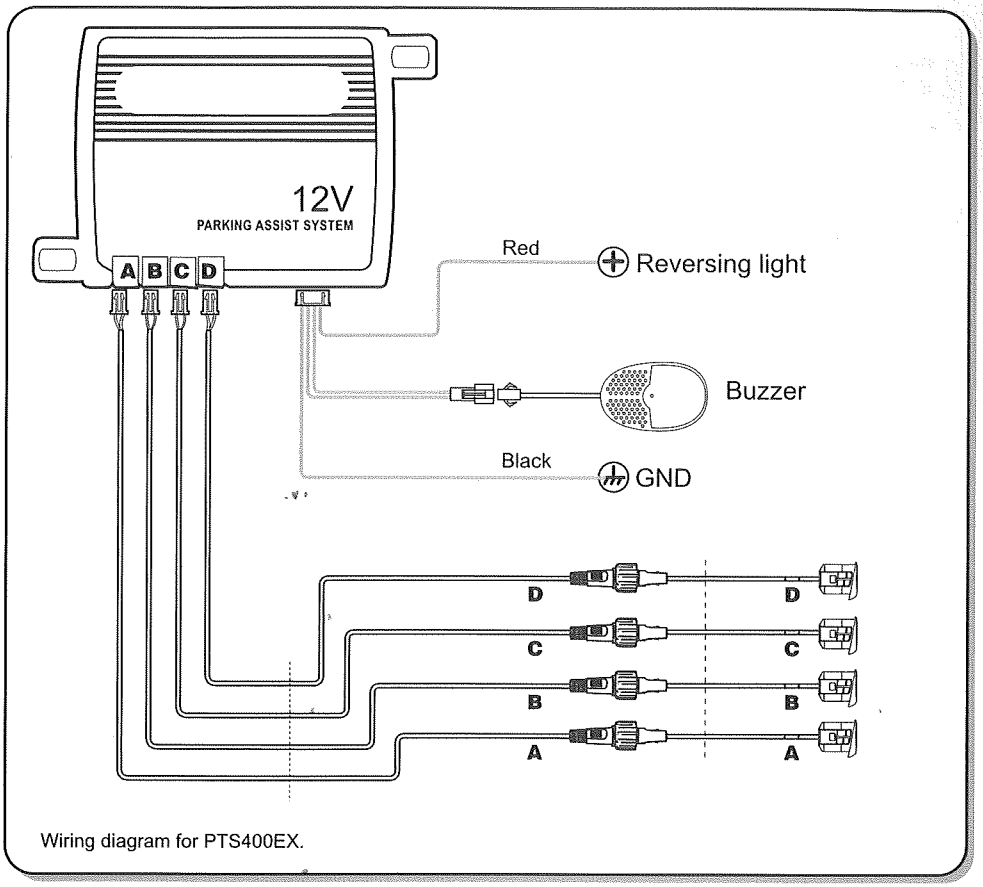
The above are the recommended buzzer installation locations.

Function test after installation



Function test is performed by holding a wooden board (0.3m x 1m/0.98ft x 3.28ft) standing at the back of the car, and reverse the car slowly to test each function respectively as shown in this manual.

Wiring diagram



Wiring diagram for PTS400EX.

Troubleshooting

After installation, the buzzer or display doesn't work

a) Are all wires connected properly?
b) Is the vehicle's ignition ON?
c) Is the reversing gear engaged (the reversing light should be turned on)?

Damaged sensor detected

a) Are all sensors plugged into the ECU correctly and tightly?
b) Is the sensor faulty?
c) Is the sensor covered by dirt 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)?

Warning sound is too low or too high (display)

a) Press the Set button to adjust the volume to a suitable level.

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.

Think safety think Steelmate

STEELMATE CO., LTD.
www.steel-mate.com

PRI0597/B