

Troubleshooting

1. No beep at power up or no LED light flashing
 - 1). Is the power wire connected correctly?
 - 2). Verify the ground connection
 - 3). Is the ignition turned to ACC/ON?
 - 4). Is reverse gear selected?
 - 5). Is the display damaged?
 2. When reverse gear is selected, the blue digital display 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
 3. The obstacle position is not corresponding to the display indicator
Are the sensors' wires connected to the correct jacks of the ECU?
 4. 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
- If the problem persists, please follow these steps:
- 1). Replace the ECU and re-check the system
 - 2). Test the sensor with certified ECU by using a flat wooden board
 - 3). Plug the certified sensors into the ECU and re-check
 - 4). Email your questions and we will reply you ASAP

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.
 - 1 It is required to show warranty card when making any warranty claims.
 - 1 The model and bar code 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:
 - 1 The original purchaser has not completed the warranty card.
 - 1 The unit's bar code is defaced, missing or altered.
 - 1 The unit has been modified or used in a manner contrary to its intended purpose.
 - 1 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 reg No.:	
Product model No.:	
Bar code:	
Date of installation:	
Name of the distributor	Signed by distributor



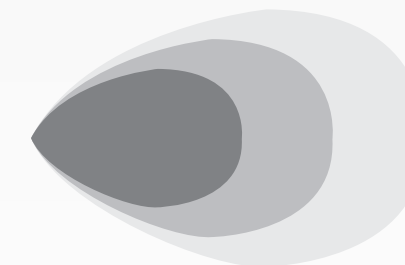
Manufactured by:
Steelmate Co., Ltd
<http://www.steel-mate.com>
E-mail: service@steel-mate.com

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



Manual

PARKING ASSISTANT SYSTEM



PTS400M
PTS400M(I)
PTS400N
PTS400N(I)
PTS400I

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 solutions from one single source
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. Good quality, on-time delivery and complete aftersales service

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 advised to check the position of the sensors before the definitive drilling of the holes.
5. Perform test after finishing the installation.

About the product

Parking assist system is an ultrasonic distance monitoring system. It electronically scans the areas behind your vehicle during the reversing process and acoustically warns you of any obstacles in your path by both an audible tone and colorful LED.

Every component of this product has passed strict testing prior to shipment. The system gives accurate and reliable performance in all weather conditions (very hot or very cold, rain or snow).

When shift the gear to reverse, the system will start self-test the sensors. When all the sensors are functioning properly, it will beep once. If there is any problem with the sensors, the system will beep three times and the damaged sensors' locations and the total number (except for PTS400I) will be shown on the display.

When an object is detected, the digital distance (except for display I), an audible beeps and the left or right side of the LED will turn on. The audible beeps will change tones when the distance is becoming shorter and shorter, until a continuous beep is heard, "-P" is displayed on the display (except for display I) and the colour LED turns on.

For system with self-learning function (PTS400M (I), PTS400N (I)), the system will remember the spare tyre or towbar behind the vehicle without false alarming. For detail information regarding the self-learning function, please refer to page 3.

※ This manual is applicable to PTS400M (with digital front M display), PTS400N, PTS400I (with digital display installed at the back of the windshield and viewed from the rearview mirror), and PTS400M(I), PTS400N(I) (with the learning function).

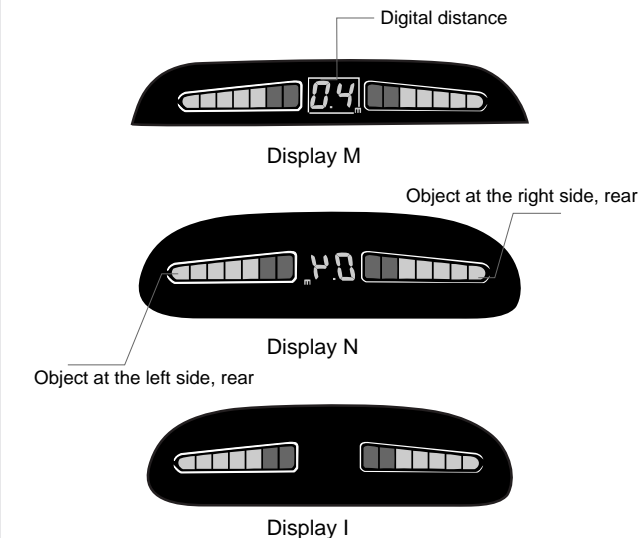
Features

1. Detection range: 0.1 ~ 1.5m, display range: 0.3~1.5m
2. Self-testing function activated by reverse gear
3. Learning function (optional)
4. Digital LED display
5. Anti-false alert technology
6. Accurate performance in all weather conditions
7. Easy installation
8. Suitable for all vehicles

Technical parameters:

- a) Voltage: 12V±3V
- b) ECU working current: 35mA±5mA
- c) Display working current: < 300mA
- d) Buzzer: 70 ~ 90dB
- e) Frequency: 40KHz
- f) Temperature: -40°C ~ +85°C

The LED display

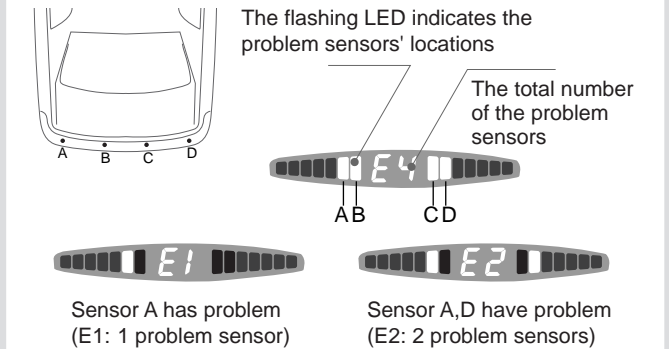


Self-testing function

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

If all the sensors are normal, the system will beep once and the LED display will flash once.

If there is any problem with the sensors, the system will beep three times to indicate that one or more sensors have problem.



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

Learning function (optional)

This is a very useful function for vehicles with spare tyre, towbar or bike holder, etc.

If the vehicle has a spare tyre at the back, the ordinary parking assist system may detect the tyre and result in continuous false alarm.

With Steelmate's parking assist system that has the learning function, the problem can be resolved easily, as the system will "remember" the tyre as part of the vehicle.

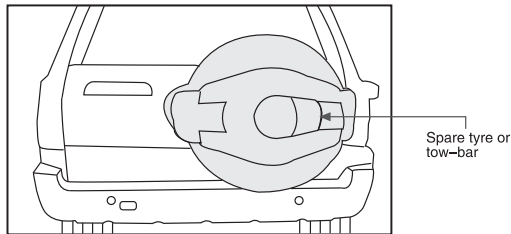
How to activate the learning function:

Drive the car to a place where there is no object within 2.5m behind. When ACC ON, shift the gear from "P" to "R" position back and forth continuously for 5 times and in 10 seconds, then,

Learning function (optional)

the LED light on the display will flash three times. The flashing LED will confirm that the learning function is activated and the system will remember the tyre's location automatically.

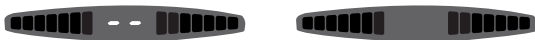
When the locations of the back tyre, the trolley height & size etc have been changed and to "remember" the new locations, please repeat the above action again.



How does the system work

The system will test all the sensors automatically when the reverse gear is engaged. Then, it starts to scan and detect the area behind the car.

The object distance is: >1.5m:



The object distance is: 1.5 ~ 0.3m:

The digital distance and the yellow/red LED will indicate the obstacle's location and distance behind the car.

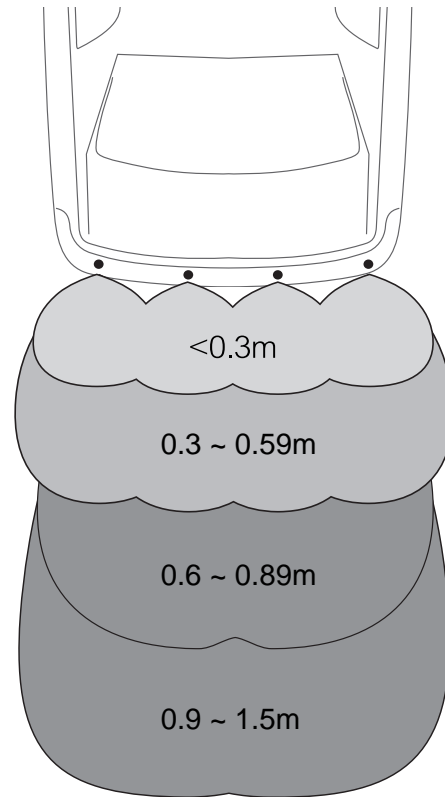


The object distance is: <0.3m:

When the object is less than 0.3m behind the car, the buzzer will beep continuously. -P" will be shown on the display.

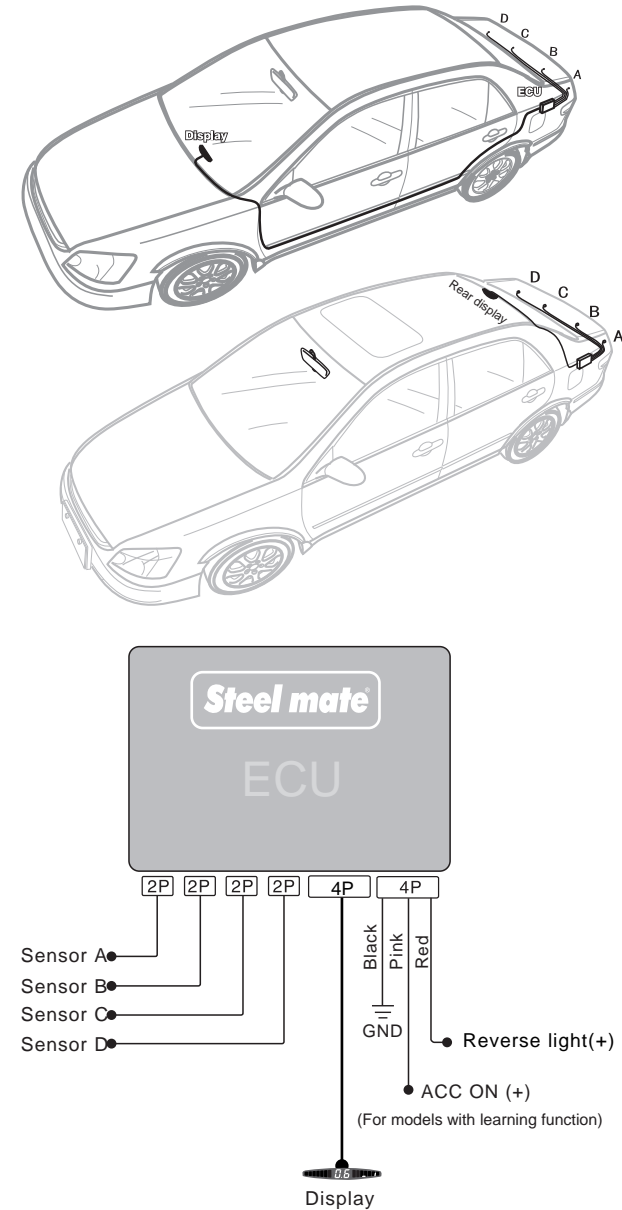


Warning modes & indications



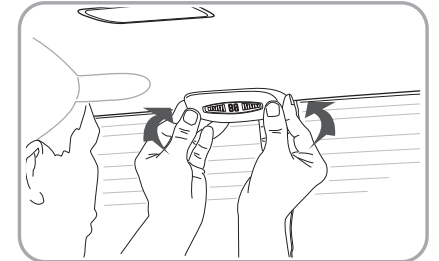
Distance range	Warning sound	Color	Remark
1.49-0.9m	Be.....Be.....	Orange	Slow
0.89-0.6m	Be..Be..Be..Be..		
0.59-0.3m	Be-Be-	Red	Stop
<0.3m	Be-		

Installation diagram

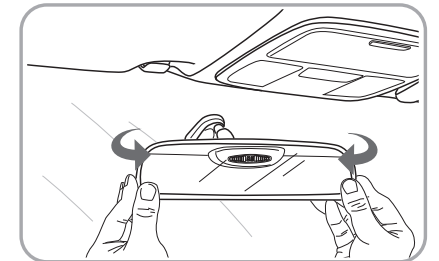


Display installation

1) Rear display installation

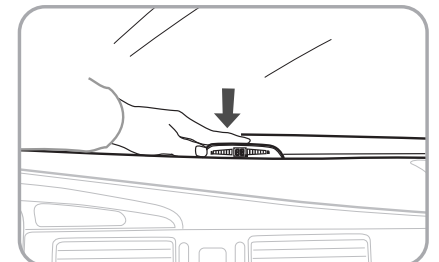


Mount the display on the roof of the vehicle with screws. Fix wires at a hidden place.



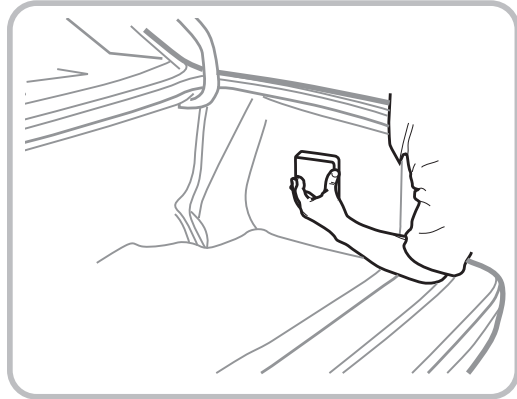
Adjust the rear view mirror and make sure that the driver can see the rear situation and the rear display at the same time.

2) Front display installation

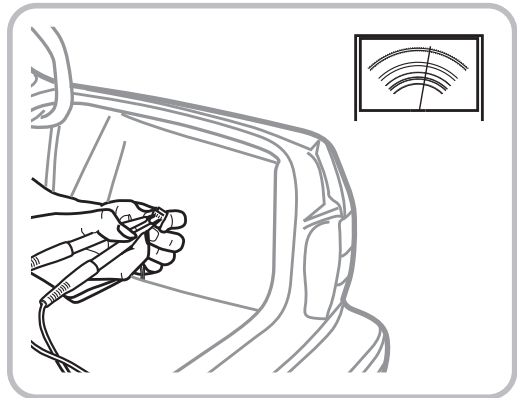


Mount the display on the dashboard or the mirror firmly for the driver easy to see.

ECU installation

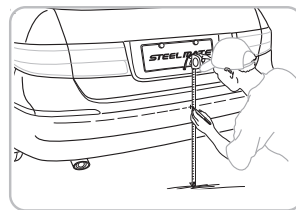
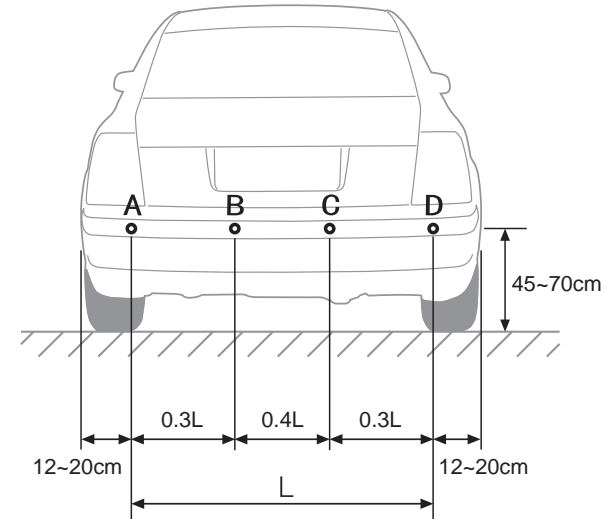


Select a safe/dry area to install the ECU module. Use the self adhesive patch with velcro to mount the ECU inside of the vehicle. Be sure that the sensor leads will reach the installation location.

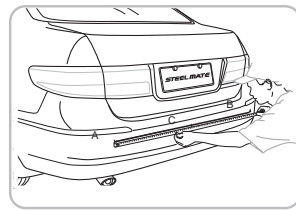


The power wire connect to the car's reverse light wire.

Sensor installation

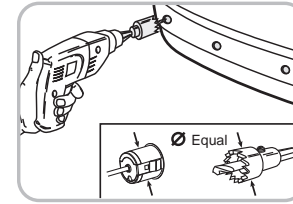


1. The positions of the holes should be vertical and even.

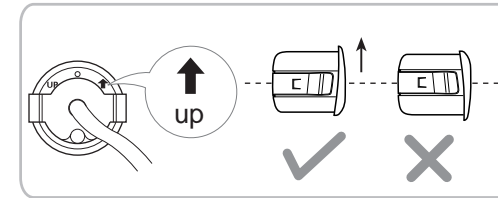


2. Measure & position the sensors' locations.

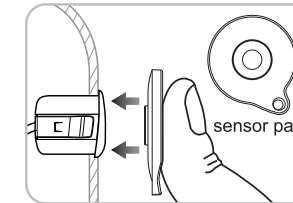
Sensor installation



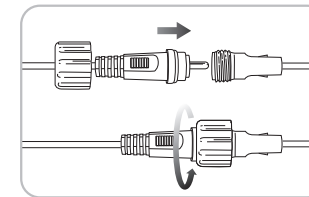
3. Verify that the size of the hole saw is compatible with the diameter of the sensors.



4. Install the sensor vertically, the "up" sign must be on upside.



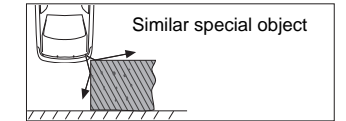
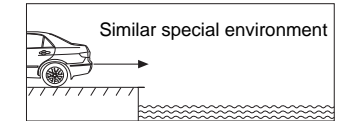
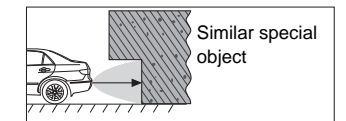
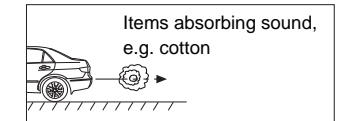
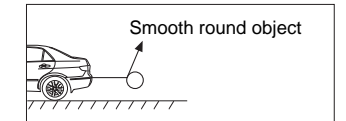
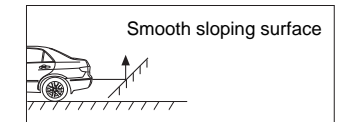
5. Push the sensor into the hole firmly with sensor pad supplied with the product.



6. Insert the plug into the socket and wind the turncap tightly.

Attention

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 malfunction 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.