

KEETEC®

Parking Sensor



www.keetec.eu



PR10000R/B

BS410 LED
Manual

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User Manual

Important notice

Parking sensor helps to provide assistance when reversing and parking. Driving skills such as slowing down, use of mirrors etc. are always essential.

1. This system is for vehicles with 12V 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 drilling the holes.
5. Perform a functional test after installation.

Disclaimer

Parking sensor 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.

Key features

- 4-rear parking sensor with LED display
- Can be used as 2-sensor system
- Precise detection range
- Self-testing function
- Anti-false alert technology
- Dual intelligent function together with learning function for vehicle with tow-bar, spare wheel or other protrusions
- Available in all weather

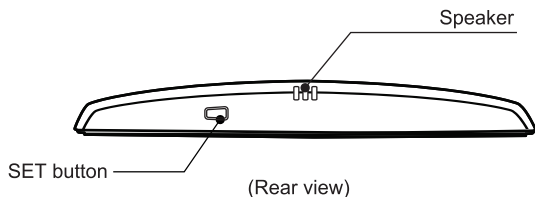
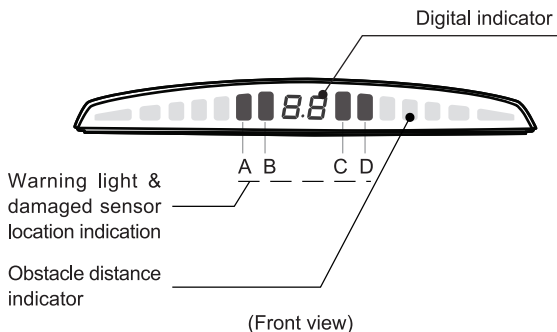
Specifications

Operating voltage: 9~16V DC
Operating current: <250mA
Detection range: 0.1~2.5cm
Display range: 0.3~2.5cm

Operating temperature:

ECU: -40°C~+80°C
Display: -40°C~+80°C
Sensor: -40°C~+80°C

LED display



Self-testing function

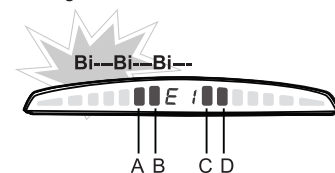
When reverse gear is selected, the system will test all rear sensors automatically.

If all sensors are working properly, the display will beep once for indication. If a damaged or defective sensor is detected, then the display will beep 3 times for alarm.

All sensors are working properly



Damaged or defective sensor is detected



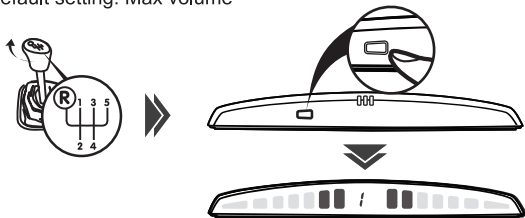
Note:

- Beep 3 times for alarm
- ABCD are represent the corresponding rear sensors, please refer to page 16 for the corresponding location
- Other proper sensors will keep working after the alarm
- The locations of damaged/ defective sensor(s) numbers (E1~E4) will show on display
- The system will not alarm when sensors (A&D) are damaged/ defective as it will work as 2-sensor system automatically

Volume / voice adjustment

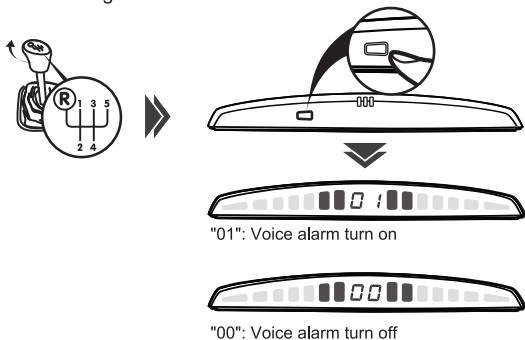
Once ACC ON and reverse gear is selected, Press "SET" button to adjust the volume level, it will save and exit after 2 seconds. ("1" for Min, "2" for Middle, "3" for Max)

Default setting: Max volume



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

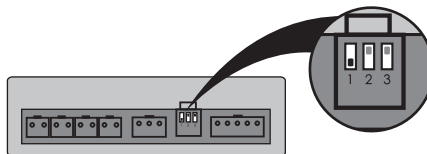
Default setting: Voice alarm turn off



"01": Voice alarm turn on

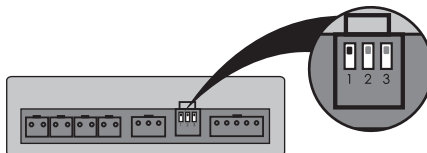
"00": Voice alarm turn off

Sensor sensitivity adjustment (Switch 1 on ECU)



Switch 1 in the "ON" position

- Normal sensor sensitivity
- Recommended for the sensor which installed higher than 50cm from ground



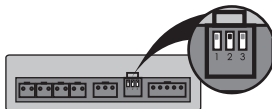
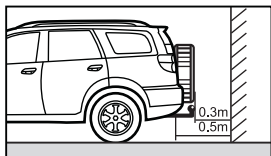
Switch 1 in the "OFF" position

- Low sensor sensitivity
- Recommended for the sensor which installed between 45~50cm from ground

Tips: The default setting for the switch 1 is in "ON" position.

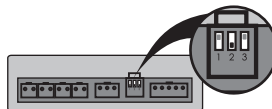
Dual intelligent function (Switch 2 on ECU)

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



Switch 2 in the "OFF" position

- Normal detected distance



Switch 2 in the "ON" position

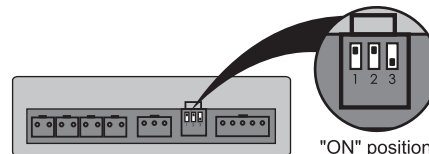
- The detected distance from sensor to obstacle should be increased 20cm

Tips: The default setting for the switch 2 is in "OFF" position.

Learning function for cars with tow-bar or spare wheels

The system may have a false alarm due to vehicle with tow-bar / spare wheel / other stuff nearby rear sensors when it is located without obstacle and reserve "R" gear selected. When learning function is ON, the system will ignore the tow-bar / spare wheel / other stuff nearby rear sensors in detection.

Method 1: By turning switch 3 on ECU



"ON" position

Switch 3 in the "ON" position

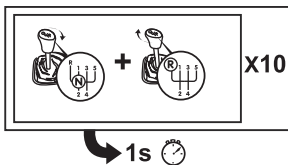
1. With the system power off, turn the switch 3 to the "ON" position.
2. Turn the ignition/ ACC on and select "R" gear, the display will "Bi" once.
3. After 3 seconds the display will "Bi" once again to indicate the learning process has been completed.
4. Select Neutral "N" gear and turn switch 3 back to the "OFF" position to complete the learning function.

Clear/ Reset the learning function:

1. With the system power off, turn the switch 3 to the "ON" position.
2. Turn the ignition/ ACC on and select "R" gear.
3. Leave the vehicle in "R" gear for 10 seconds, the display will turn on and "Bi" once to indicate the learning function has been cleared.
4. Select "N" gear and turn switch 3 back to the "OFF" to complete the clearing of the learning function.

Tips: The default setting for the switch 3 is in "OFF" position.

Method 2: By selecting gear position

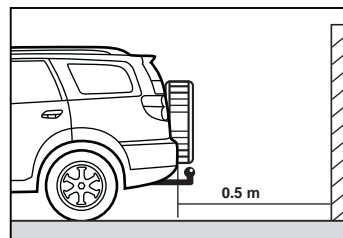


1. With the ignition ON, change the gear from "N" to "R" for 10 times (each gear change must be within 1 second).
2. After the 10th times, leave the gear in "R" position and the display will turn off.
3. The display will "Bi" once and turn on after 6 seconds. The display will "Bi" once and turn on again after 3 seconds to indicate the learning function has been completed.

Clear/ Reset the learning function:

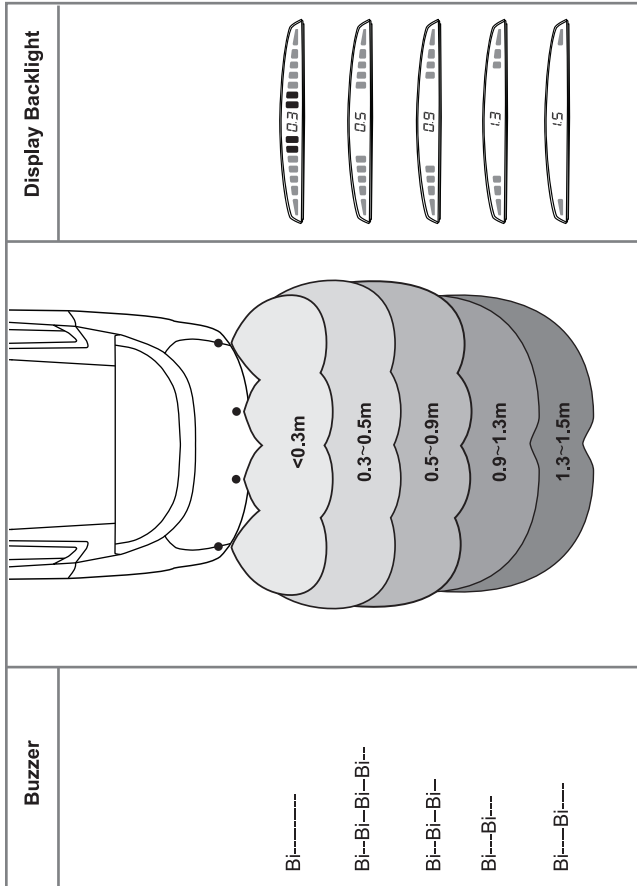
1. With the ignition ON, change the gear from "N" to "R" for 12 times (each gear change must be within 1 second), and the buzzer will not chirp.
2. Leave the gear in "R" position and the display will turn off.
3. After 6 seconds the display will turn on and "Bi" once to indicate the learning function is cleared successfully and the system is reset.

Tips: If miscarrying the above learning procedures, leave vehicle in "R" position for 2 seconds to clear the system memory and start the above learning procedure again.



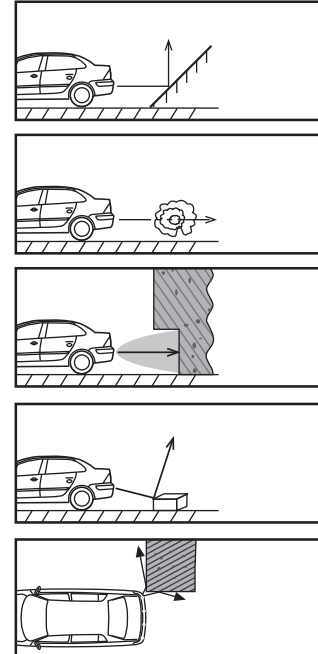
Functional test after learning function is set

Different scenarios for system



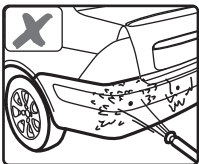
Attention

False detection may occur in the following situations:

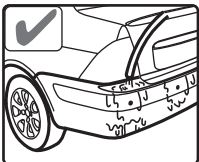


- After installation, please perform a functional test before use
- Heavy raining, dirty/ damaged sensors may cause false alarm occasionally
- Ensure the self-test is completed and all sensors are function properly before using the system

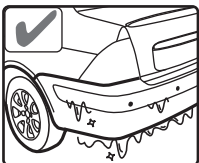
Sensor maintenance



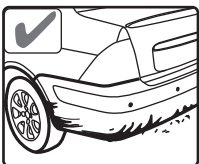
Do not wash the sensor with a pressure washer or scrub them forcibly.



Please wash car with low-pressure spray.



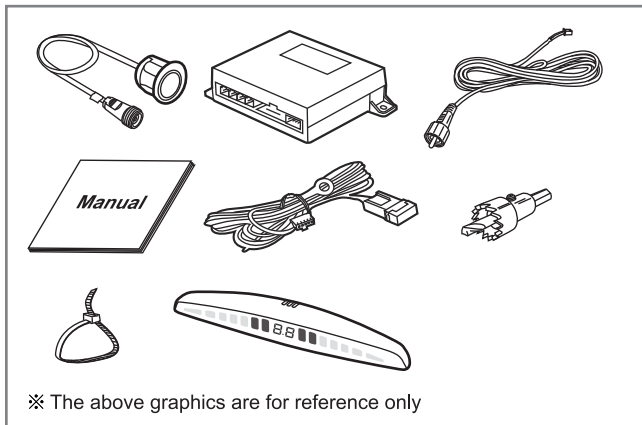
Please melt the snow with water when the sensors are covered.



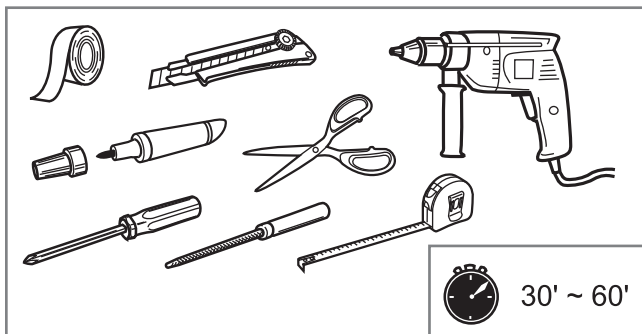
Please clean the sensors with cloth or low-pressure spray when the sensors are covered by dirt or snow.

Installation Manual

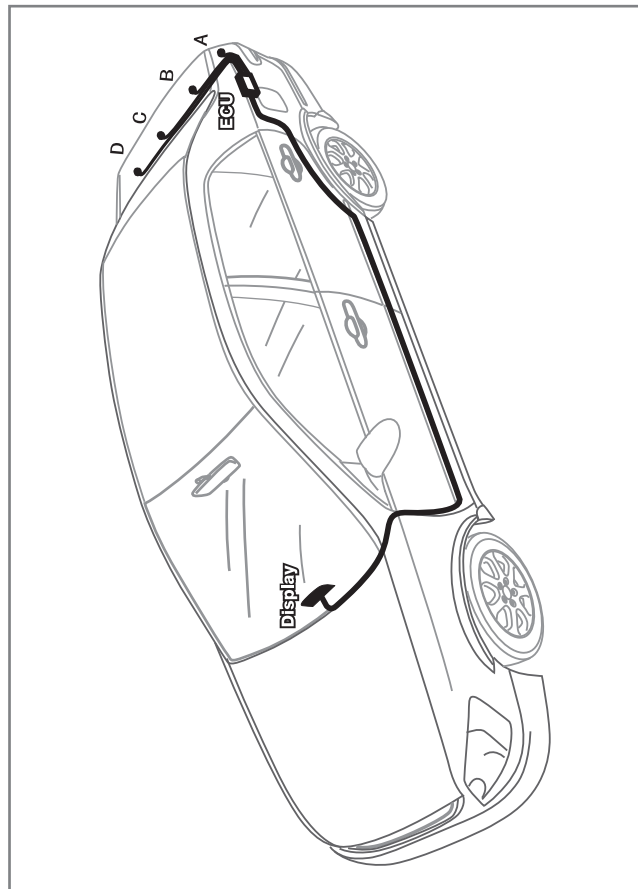
Includes



Installation tools



Sensor installation



1

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

$H > 45\text{cm}$
 $H < 65\text{cm}$

$H < 45\text{cm}$

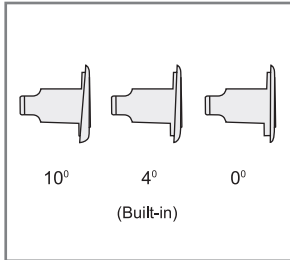
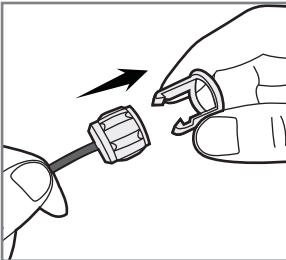
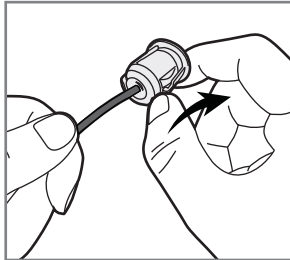
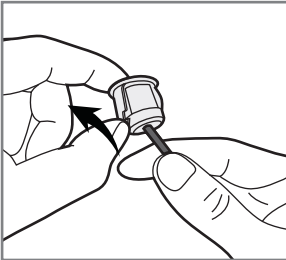
$H > 65\text{cm}$

$< 45\text{cm}$ $< 45\text{cm}$ $< 45\text{cm}$

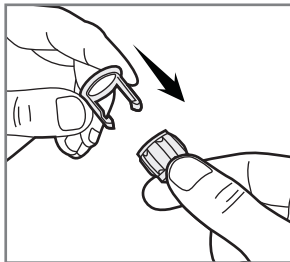
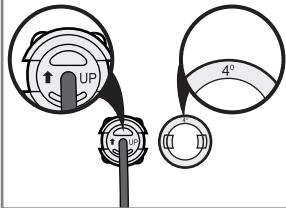
$45\text{cm} < H < 65\text{cm}$

$a = 1/8L$
 $b = 2/8L$
 $c = 1/8L$

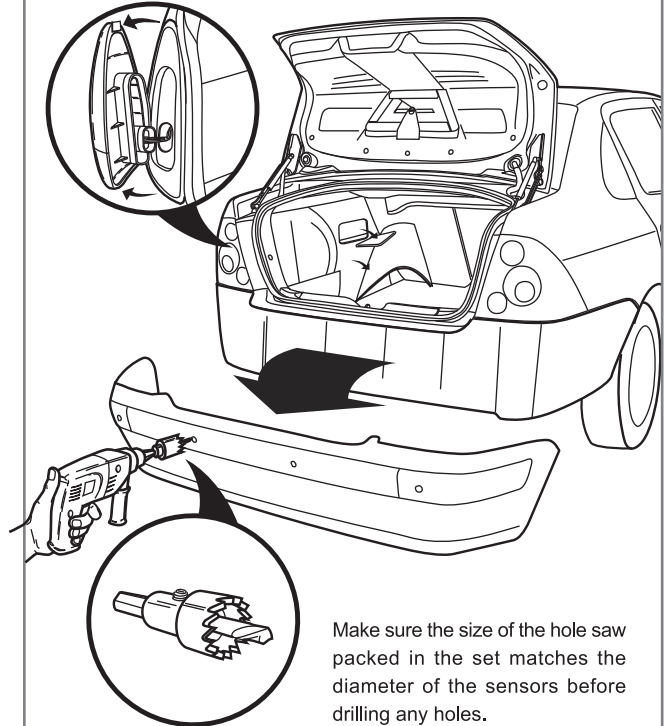
2 Change of sensor cover



Tips: Make sure the degree marking is on the top of sensor after plug in.

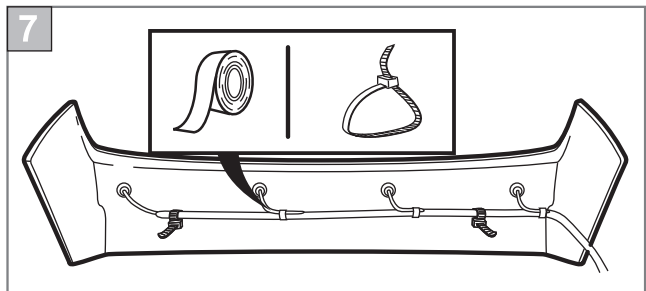
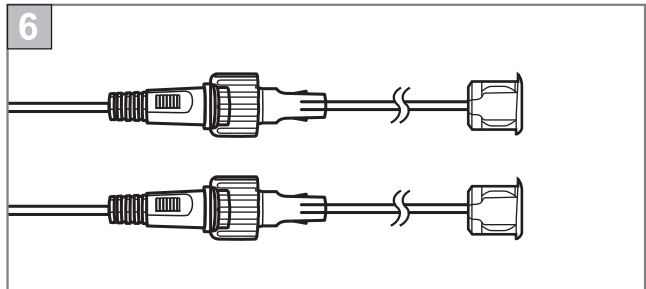
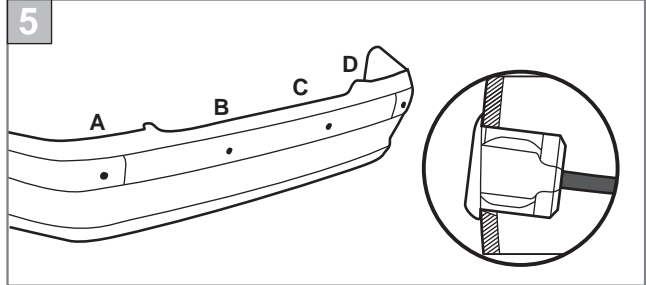
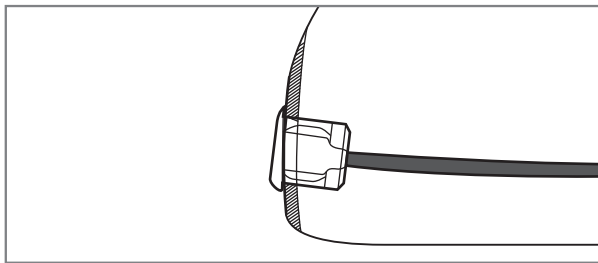
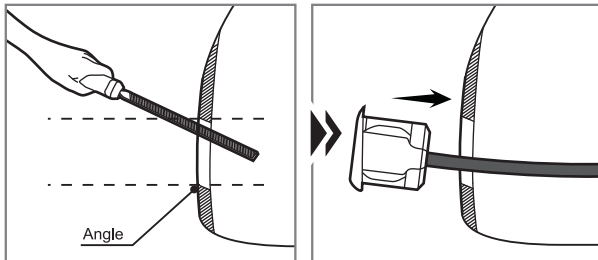
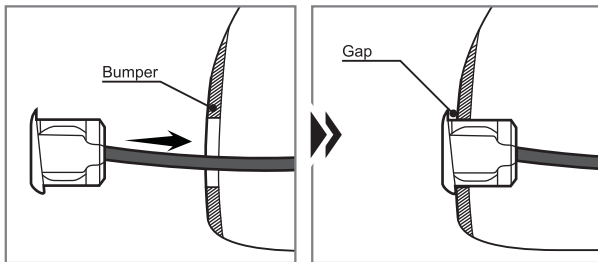


3

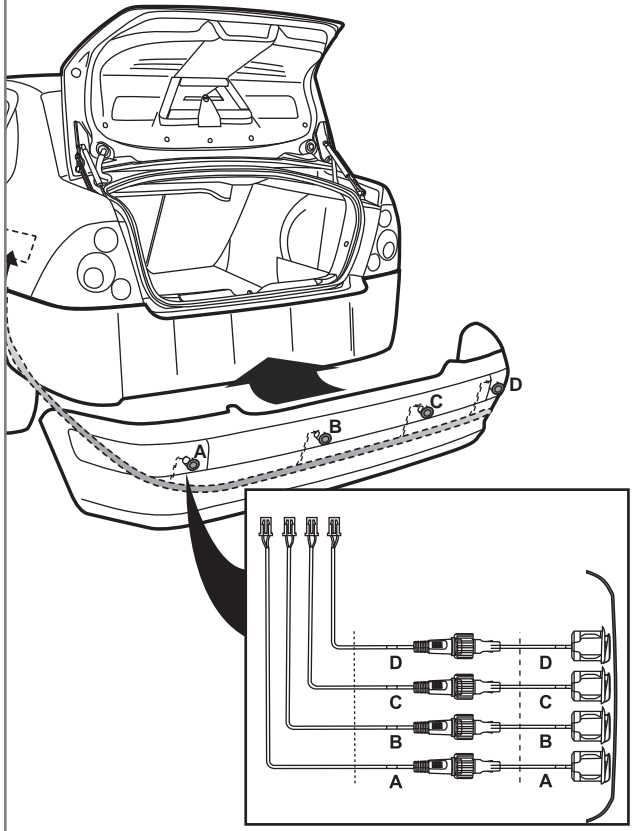


Make sure the size of the hole saw packed in the set matches the diameter of the sensors before drilling any holes.

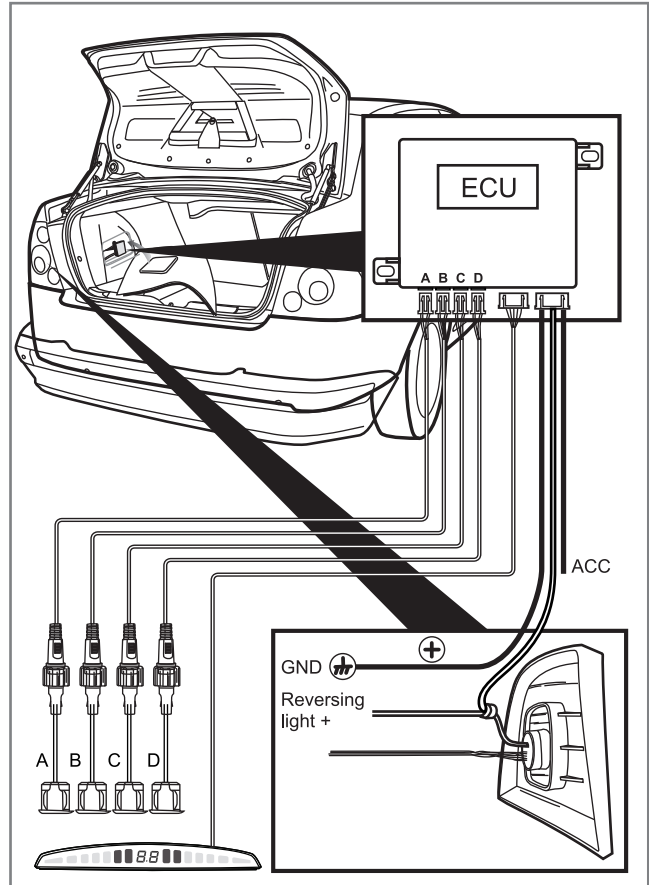
4 Hint: If a gap found between bumper and 10° sensor cover after installation, please adjust the angle of the hole shown as below.



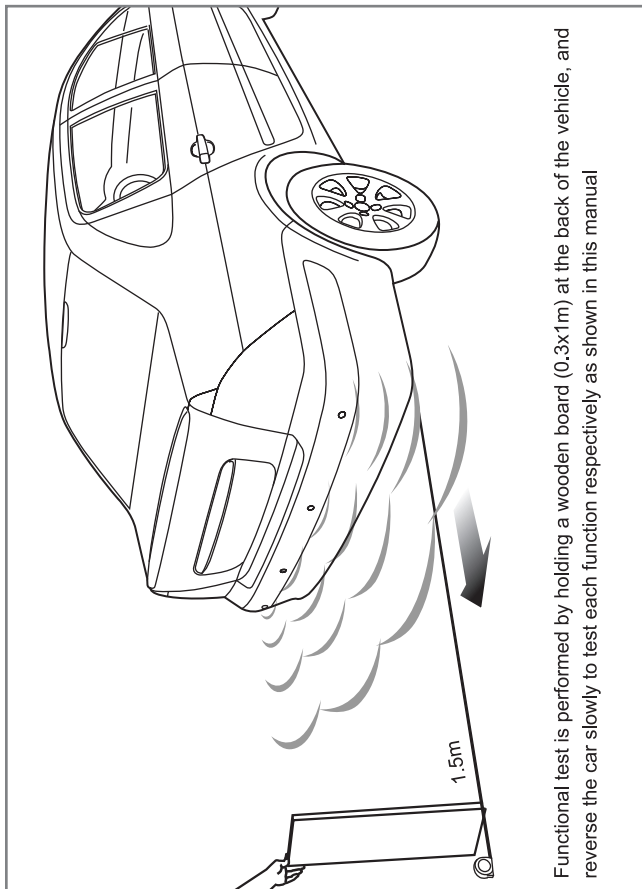
8



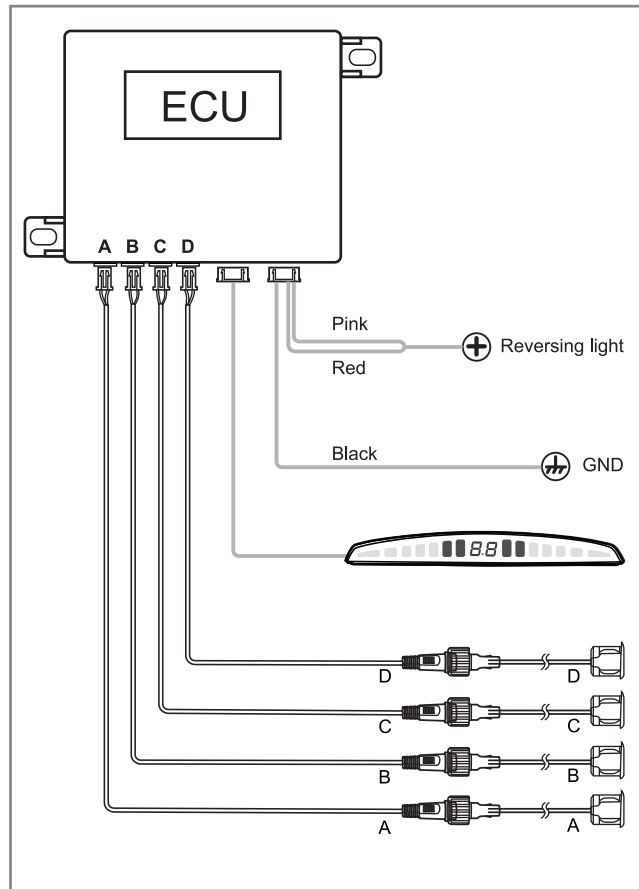
ECU installation



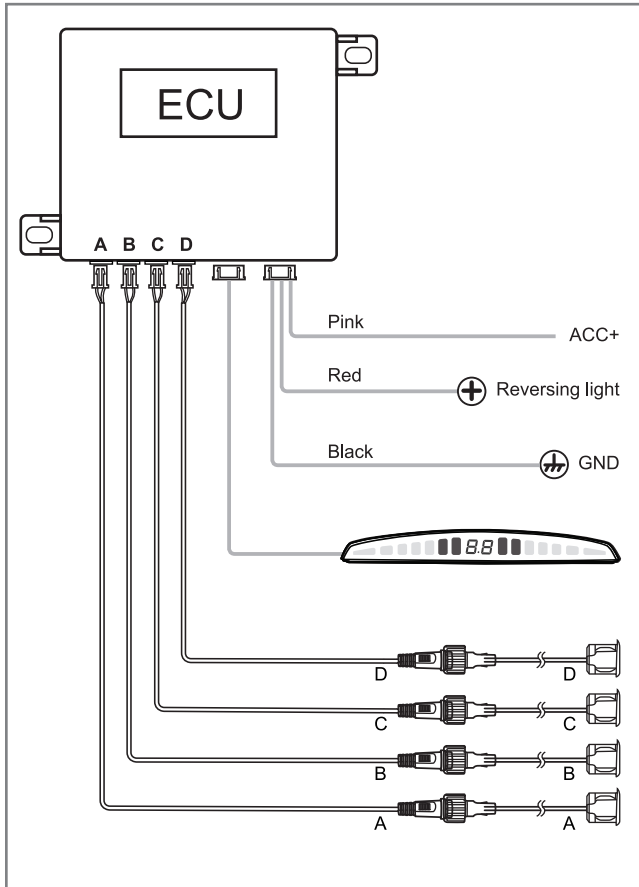
Functional test after installation



Wiring diagram 1



Wiring diagram 2



Troubleshooting

1. After installation, the 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 lit 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 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

- Turn 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 perform a functional test again