BRANDMOTION
seamless vehicle personalization

INSTALLATION INSTRUCTIONS

Ultrasonic Rear Park Aid Kit
(Kit # 9002-3000)

Please read thoroughly before starting installation and check that kit contents are complete.

Items Included in the Kit:

4 – Ultrasonic Sensors with ABCD markings
Electronic Control Module (ECU)
LED Display with Sounder
21mm hole saw
24 mm hole saw
4 rubber isolators
4 6º angle adapters
4 12º angle adapter
4 sensor wiring harnesses labeled ABCD
Wiring Harnesses
These Instructions

Tools & Supplies Needed:

Plastic Trim Removal Tool
Various Socket Drives
Center Punch
Power Drill
Measuring Tape
Wire Ties
Soldering Iron & Solder (Recommended)
Tape or Heat Shrink Electrical Tubing
Velcro (if required)

The Brandmotion Rear Park Aid (RPA) is designed to be a convenience aid to assist in backing your vehicle towards other vehicles and obstacles. It is not a safety system. Normal visual vigilance while backing is still recommended.

Safety Precautions:

- Work in well ventilated area that is clear of obstructions.
- Secure vehicle with tire chucks in both front and rear of tires.
- Turn vehicle accessories OFF and ensure ignition key is in OFF position.
- Wear safety goggles and snug fitting clothes.
- Use tools only for their intended purpose and which are in good repair.
- Only perform this task if confidence, skill, and physical ability permit.

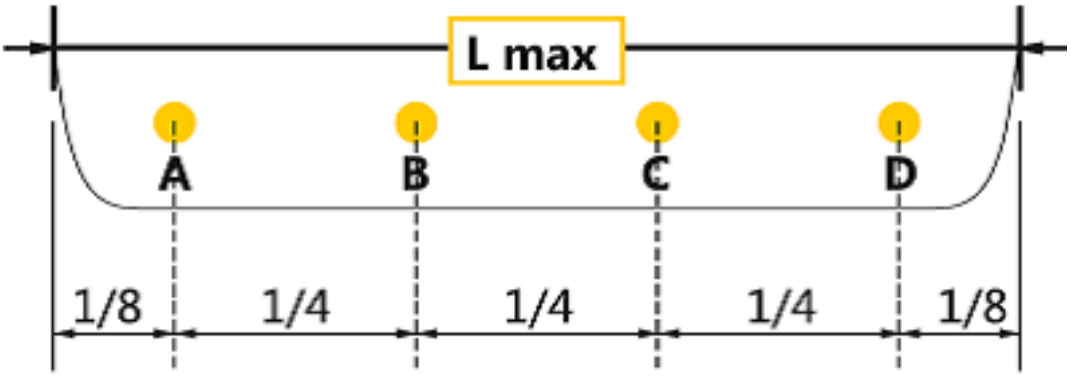
NOTE: We strive to provide accurate and up-to-date installation instructions.

1. Sensor installation

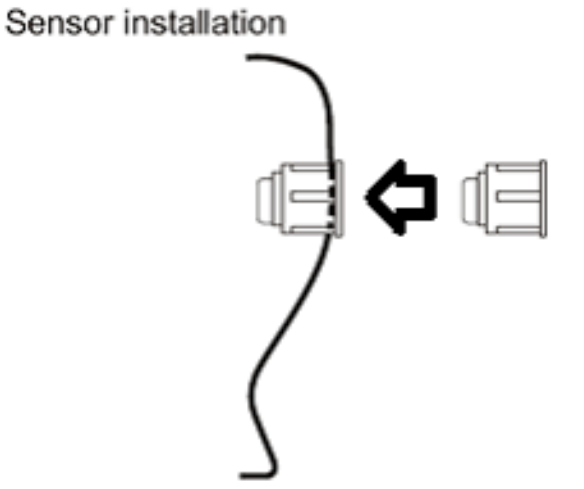
a. Remove bumper fascia from vehicle. **NOTE: Before you drill any holes into the fascia you must check to see if the sensor locations will have any interference with the sensor installation (such as metal beam, braces, bracketry).** You may have to move the sensor slightly left or right to avoid the interference. If it is just interference from foam material, you may have to carve out space for the sensor. Insure that there is enough clearance around the sensor to allow for movement**.**

b. Locate where to drill holes for sensors

i. Space 4 sensor positions equidistant apart horizontally apart from both sides of bumper.



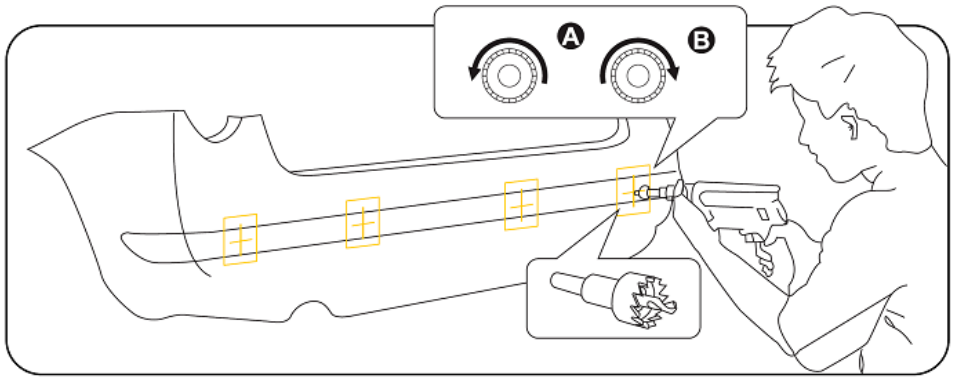
ii. The sensors must be positioned on an area of the bumper that has a flat vertical surface. The front surface of the sensor should be perpendicular to the road surface. If the surface of the bumper causes the sensor to be greater than 3° from 0°, then you should use one of the 6º or 12º adaptor rings supplied to make the correction.



Vertical installation position to the ground

iii. **Back of sensor should be marked "UP" If not, then the 2 holes should be parallel to the bumper.**

c. **Prepare the bumper (fascia) for the hole drilling. A 21mm hole bit is supplied. Mark sensor locations from step 1b. After drilling holes clean any excess material.**

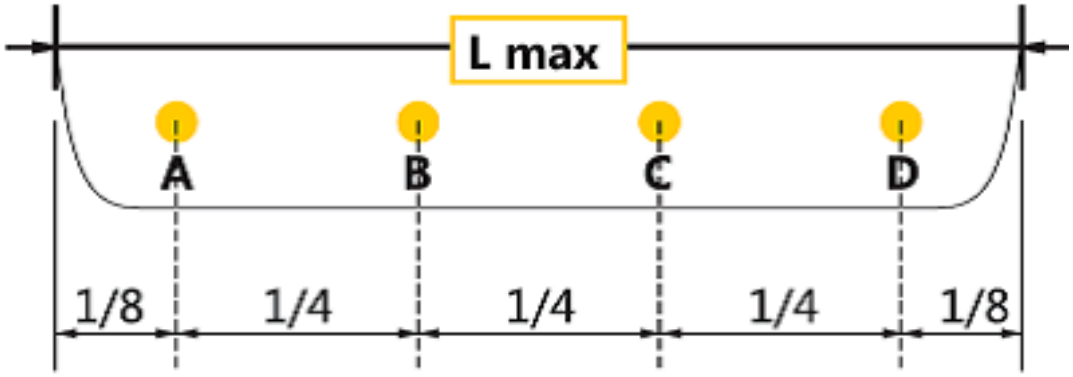


d. **Insert sensors into the drilled holes. They should press firmly into place.**
e. **Reinstall the bumper (fascia) onto the vehicle. Route the sensor wires to the ECU. Be careful in routing the sensor wiring so they do not get pinched and to prevent them from chaffing.**

2. Sensor installation into metal truck bumper

a. Measure the bumper for sensor layout (Start with 1 sensor on each side of the licenses plate.

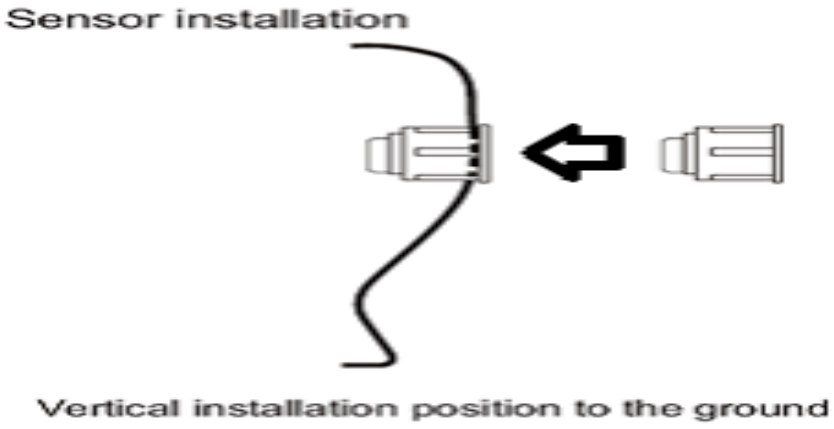
i. **Space 4 sensor positions equidistant apart horizontally apart from both sides of bumper.**



ii. **The sensors must be positioned on an area of the bumper that has a flat vertical surface. The front surface of the sensor should be perpendicular to the road surface. If the surface of the bumper causes the sensor to be greater than 3° from 0°, then you should use one of the adaptor rings supplied to make the correction.**

iii. **If the sensor is mounted into a metal bumper use the rubber isolator, by drilling a 24mm hole in the bumper (using the bit provided), then insert the isolator over the sensor then insert both into the bumper together.**

iv. **A longer Truck Harness is available from Brandmotion *part #9002-3001***



3. ECU Reverse Signal, power & ground

a. **Locate 12v reverse wire at the tail lamp or BCM (Body Control Module) ignition using multi-meter of test light**
b. **Splice red wire to the vehicles 12V reverse wire.** (Recommended: Solder all connections)
c. **Splice black wire to good vehicle ground.**
d. **Install connector to ECU.**

4. ECU installation

a. **Locate the ECU in a dry location; this may be in the trunk or any area surrounding the back seat or rear deck. Mount the ECU firmly with the adhesive tape, Velcro or other fastening method; the ECU connectors facing downward.**
b. **Plug in LED display connector**

5. LED *Display mounting (Note: this display also contains the speaker)

a. **Mount the LED display onto desired viewing surface. This may be:**
    i. **The rear deck surface**
    ii. **Rear upper window roof area**
    iii. **Front console (not recommended)**
    ***If viewed through a mirror the displays will be reversed. The may be reversed via the switch located on the display. Note you may also have to reverse the order of the 4 sensor wires. Instead of "A B C D" they would be "D C B A."**
b. **Use the supplied sticky tape or other fastening method.**

6. Connect all connectors to the ECU.

General Comments:

1. **Drive slowly backwards to test. Measure detections to obstacles or vehicles with a tape measure. Note the actual measuring range is very deceiving to the driver. In general you are further away than you think!**

2. **Use a large size test obstacle, such as a large diameter pole. (Greater than 6 inches in diameter), or a wall (perpendicular).**

3. **Certain objects will be harder to detect, depending on its size, angular shape (geometry), and material.**

4. **If many false alarms are heard then it may be due to:**
   a. **Sensors are pointed downwards at the ground. They should be at zero degrees or pointed slightly upwards a couple degrees.**
   b. **Certain road surfaces, gravel, large bumps in road.**
   c. **Driveways slanted up or down, curbs, bushes.**
   d. **Sensors covered with snow, ice, dirt, mud, paint, grease, heavy rain.**
   e. **Metal bumpers may require an isolator ring for each sensor.**
   f. **Loose sensor.**
   g. **Interference from other noise source, RPA system, ultrasonic range devices.**