1. Kit Contents

A  X1	B  X4	C 	D  X1
E  EXTENSION CABLES X4	F  Power Wire X1	G  X1	H  Paint Mask X1

2. Painting the Sensors

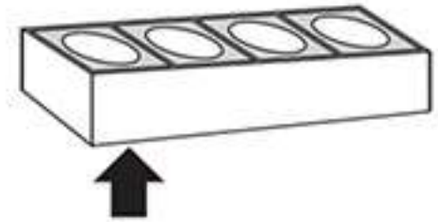
1) Preparation

<u>For BL-412PM</u>

Remove the plastic rings **<u>(silicon rubber is not removable, do not attempt to remove)</u>**

2) Sand the surface of sensors with a fine sandpaper (1000 or 1200 grit) for better paint adhesion. Clean the sensor well to be free from sanding dust.

3) Place the sensors inside the paint mask box (provided).

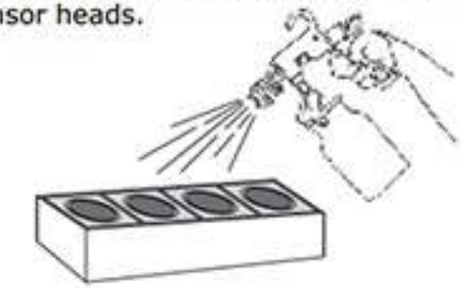


4) Spray and paint

Apply a thin coat of paint. Let it dry then paint again for better paint coating coverage.

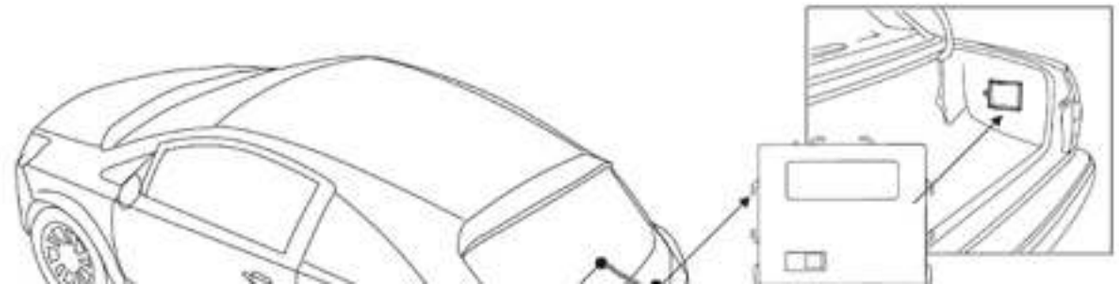
<u>For BL-412PM</u>

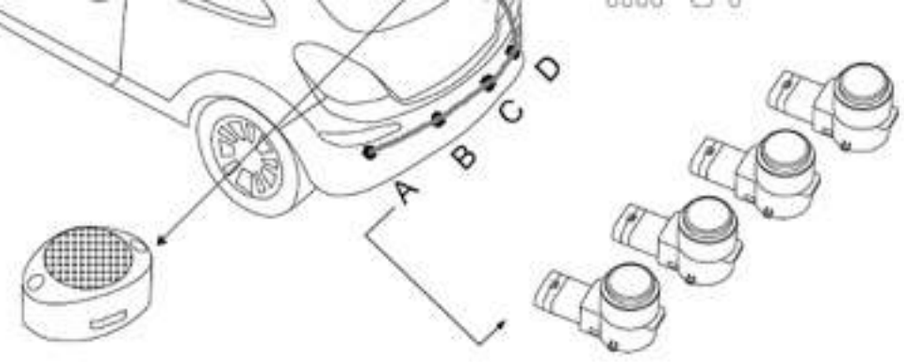
Paint the plastic rings together with the sensor heads.



3. System Overview

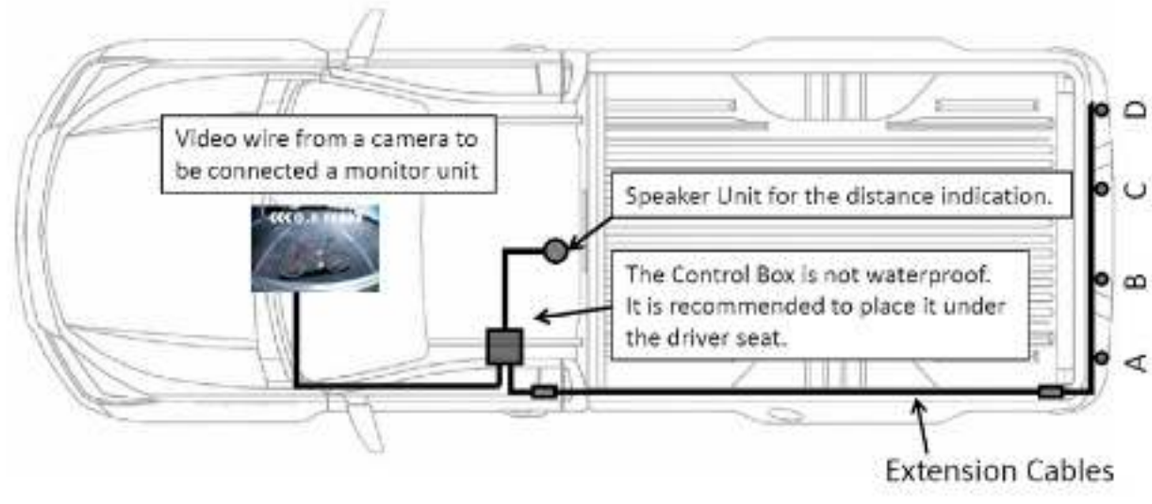
For a Passenger Car





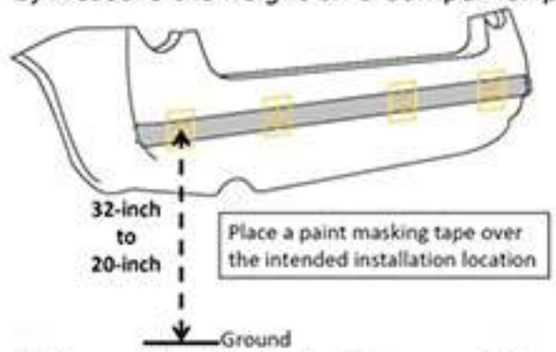
Place the speaker and control box inside a vehicle. <u>Avoid from water damages.</u> The speaker unit is used for hearing distances from the sensors to objects. Closer to objects, you will hear with shorter pitch sound.

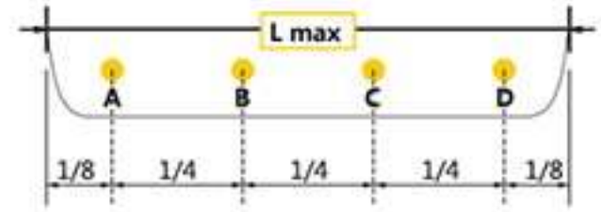
For a Truck



4. Installation

1) The proper placement of the sensors is important both for appearance and for the proper operation of the unit. Sensors should be mounted at 90° angles to the ground. It is important to avoid obstructions caused by bumper shape.
2) Measure the height on a bumper for proper installation locations.



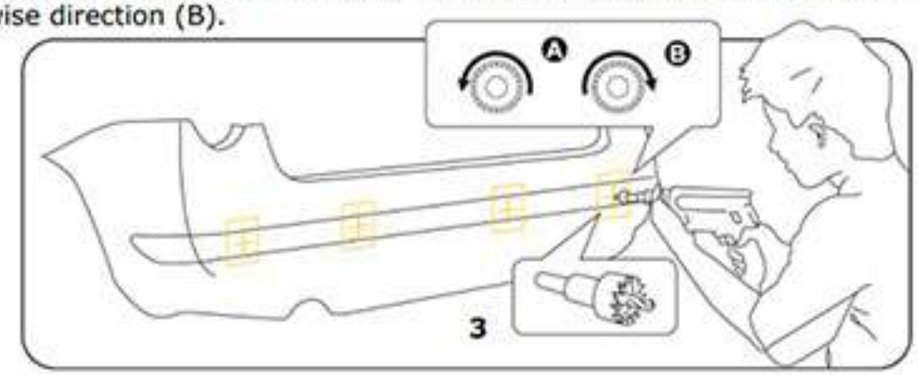


3) Generally, it is the best to mount the sensors as high as possible in the bumper. Use paint masking tape and mark the location as above diagram for the proper spacing of the sensors.

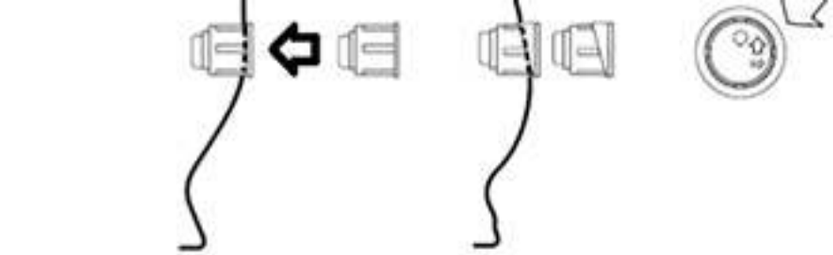
Important!

MUST CHECK BEHIND THE BUMPER FOR ANY METAL BRACKETS OR INTERNAL BRACES BEFORE DRILLING

4) Also be sure that the bumper surface and the sensors will fit at 90° to the ground. Make sure the hole surface is clean and start cutting the bumper surface in counter clockwise direction (A) first to prevent from paint to chip, then drill the hole in clockwise direction (B).



BL-412PM sensors <u>MUST be installed from outside of the bumper</u>. Please check the direction dot (WHITE) and make sure of the correct orientation.



Vertical installation position to the ground

5) It is important not to drill the hole larger than the measurement indicated. **MUST use the hole saw provided.**

6) Route the sensor wires through the bumper to a suitable location in the vehicle trunk or rear hatch. Connect the main control unit RED wire to a positive charge wire of the vehicle back-up light. Connect the main control unit BLACK wire to a stable ground.

7) After routing and attaching the cables, use an offal (small block of wood, etc) to press the sensors into place. **NEVER push the sensor heads (center portion) to push into the bumper.**

Important!

- **Do not use the negative charge wire of the vehicle back-up light for ground. Some vehicles have a "check bulb" feature that makes that wire not a true ground.**
- **The system may not detect a small and round pole (such as a fire hydrant or light pole, etc).**
- **When the vehicle approaches a rising slope, the slope may not be detected, as most of the signal will be reflected up and not back at the vehicle.**

5. Detecting Range

Normal Detecting Range

The sensors' detection range is as following. They can detect up to 8-feet.