RightCLICK

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Magnetic Parking Sensors

MRPS01 & MRPS02

Installation & Technical Guides

Please read the manual before use

*Magnetic Parking Sensor (MRPS01/MRPS02) is strictly a driving assistance product and should not be used to substitute safe driving practices.

ATTENTION: The wiring information is being provided free of charge and on an as is basis, without any representation or warranty. It is your responsibility to verify any circuit before interfacing with it. We assumes no responsibility with regards to the accuracy of this information. Proper installation in every case is and remains the responsibility of the installer. We assumes no responsibility resulting from an improper installation, even in reliance upon this information.

Magnetic parking sensor - MRPS01

I. FUNCTIONS

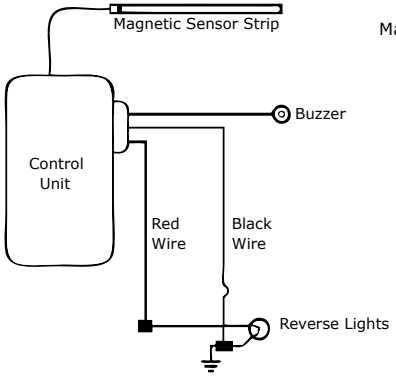
Magnetic parking sensor detects obstacles behind the car according to the reflection principle of Magnetic wave, the system comprises of an electronic box, an antenna sensor and a buzzer.

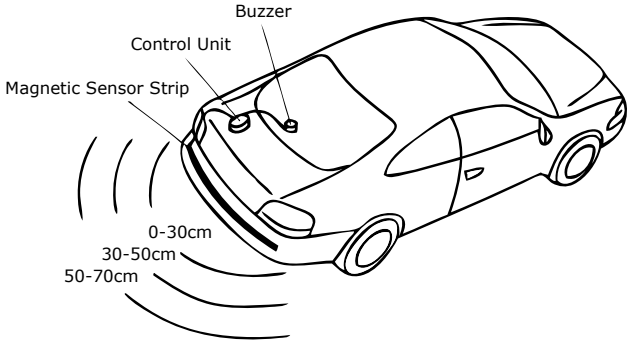
II. FEATRUES:

- Indicate the distance of obstacles behind your car by different frequency beeping.
- The sensor antenna is installed inside the bumper, Fitted without drilling the bumper.
- Gives Full Bumper protection and is Maintenance Free.
- Easy installation, totally built-in mounting, Maintains your cars new and original factory look.
- Detection in all directions without dead angle.
- Detects (people, vehicles, garage doors, walls, pillars, posts, etc).
- Allows you to get close (10cm) to an object. Great for tight spaces.
- Compatible with vehicles that have Tow bar (Towing Hook) fitted.
- On approaching to an obstacle, the electronic unit activates the acoustic signal with types of Beeping.

1. A continuous sound of "BEEP" approximately between 0-0.3m
2. A short interval sound of "BEEP" approximately between 0.3-0.5m
3. A long interval sound of "BEEP" approximately between 0.5-0.7m

III. Mounting Guide





1. **Mounting of the antenna sensor**: The antenna sensor is installed in the inside part of the vehicle's bumper. Make sure to clean the inside surface of the bumper so that the sensor strip will mount properly, (Notes: Only install the antenna sensor on non-metallic bumpers.)

2. **Mounting of the control unit**: Place the control unit in the trunk and secure on the inside panel using the double sided tape.

3. **Mounting of the power cable and the buzzer**: The Red and Black wires are routed towards the reverse lights, (NOTE: It is highly recommended to connect the system to the reverse lights so that it will function while reversing or backing up the vehicle). Mount and place the buzzer in the trunk, or, towards the front of the vehicle to maximize its performance.

Technical characteristics:

- Working voltage: DC12V +/- 2V
- Currency consumption: <50mA·Working temperature: -20~+70°C
- Detection range: Approximately in 0.7m (Will work up to 2.3 feet or 0.7 meters. Working distance varies depending on the conductivity of the bumper surface.)

(**Notes**: The detection range is greater for big conductor, narrower for small nonconductor)

Boosting the Parking Sensor Detection Range

New vehicles are manufactured with a **metal crash protection bar** placed directly behind the rear bumper. This is to make the car structure stronger and protect the passengers in the vehicle.

When installing a magnetic parking sensor to the bumper, the crash protection bar may reduce the detection range. If the adhesive antenna when fitted is within 3 cm of the crash protection bar once the bumper is refitted you have 4 options below to overcome this problem.
Approximately only 5% of all vehicles are affected.

If you have a Tow bar (towing hook) **fitted or spare wheel fixed to rear door** (i.e. 4x4, MPV, SUV) and these protrude from the vehicle body entering the last detection zone, you can increase this zone by following number 2 below.

Gaining Optimum Magnetic Sensor Detection Range Options:

1. Install the antenna slightly higher or lower than the crash protection bar but not lower than the recommended minimum of 40 cm from the ground, with 50 cm being optimum height.

2. The recommended solution is to Install 2 antennas in parallel with a gap of 5-12 cm apart, with the lowest at a minimum height of 40 cm from the ground. Twist the 2 antennas together at the terminal end and run in parallel, installing them on the most protruding part of the bumper.
   Only fit 2 antennas if needed. Using 2 can result in an increase of false alarms due to detection of the ground if fitted too low.

3. Insulate the metal crash protection bar from vehicle body. See **'Insulating Metal Crash Protection Bar'** for details.

4. Cover the entire length of the metal crash protection bar with Black Duct, Duck or Gaffa tape, available from any DIY store. Isn't as effective as 1, 2 or 3 above but may help reduce any interference from the crash bar.

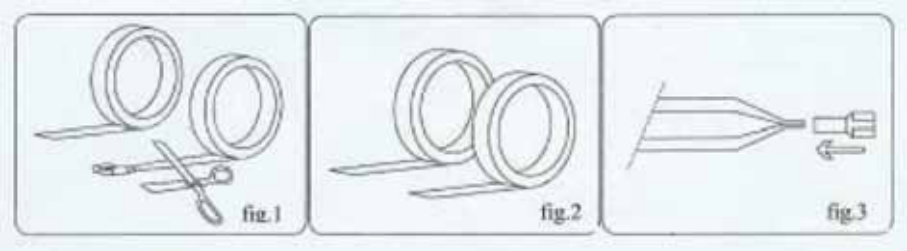
Pre-Install Test: (Rear Sensor Using 2 Antennas)

To ensure optimum detection range; once you have measured and determined your desired heights for the antenna, and before fixing the bumper back on permanently. Position the bumper back on your car using only the clips to hold it, and test with your hand to ensure you are satisfied with the detection range. Move antenna if required.

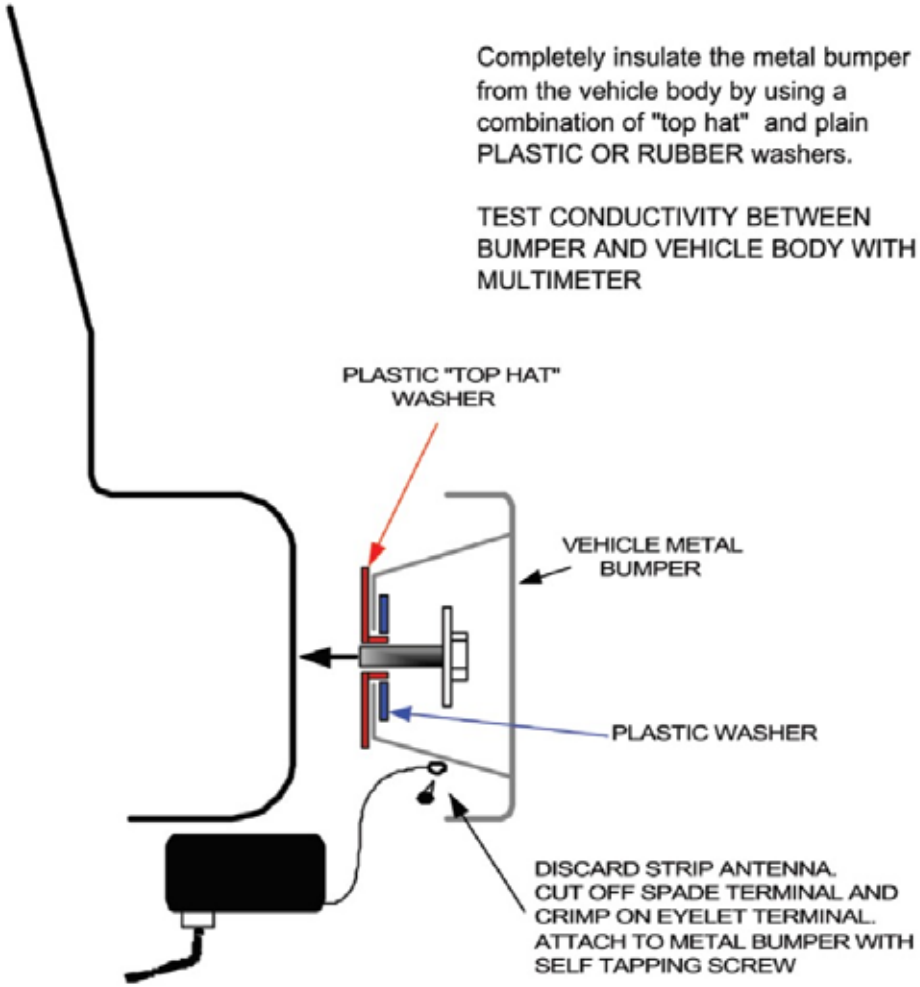
***When doing a Pre-Test only approach the vehicle once and then reset the system by disengaging reverse gear or false alerts from the system can be given during this test.**

Installing 2 Antennas:

1.Remove the female terminal on the antenna (fig. 1)
2.Install the 2 Antennas in parallel (fig. 2)
3.Twist the 2 Antenna ends together and insert them into the male connector (fig. 3)



Installing Magnetic Sensors on Vehicles with a Metal Bumper



Magnetic Parking Sensor - MRPS02

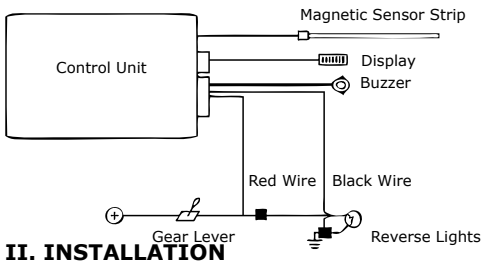
With LED 3 Colors 7 Lights Display

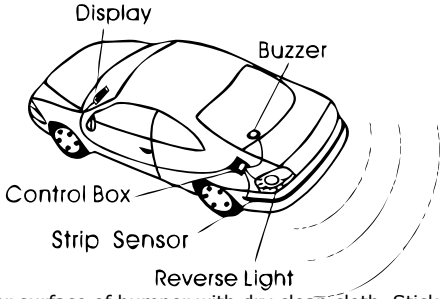
I. FUNCTIONS

Magnetic parking sensor detects obstacles behind the car according to the reflection principle of Magnetic waves, the system comprises of an electronic box, an antenna sensor, LED display, Buzzer and power wires. **Features as follows**:

- Indicate the distance of obstacles behind your car by different frequency beeping.
- The sensor antenna is installed inside the bumper, Fitted without drilling the bumper.
- Gives Full Bumper protection and is Maintenance Free.
- Easy installation, totally built-in mounting, Maintains your cars new and original factory look.
- Detection in all directions without dead angle.
- Detects (people, vehicles, garage doors, walls, pillars, posts, etc).
- Allows you to get close (10cm) to an object. Great for tight spaces.
- Compatible with vehicles that have Tow bar (Towing Hook) fitted.
- On approaching to an obstacle, the electronic unit activates the acoustic signal with types of Beeping.

Detection distance	Alarming sound	LED display	Remarks
Digital display: 0.8m~0.5m	Long interval sounds Be..Be..Be..	Green light turn on in order	Normal reversing (safe range)
Digital display: 0.5m~0.3m	Short interval sounds Be..Be..Be..	Green and yellow light turn on in order	Slow reversing (proper range)
Digital display: 0.3m~0.0m	Continuous sounds Be..	Green, yellow and red light turn on in order	Stop reversing (dangerous range)





II. INSTALLATION

Install strip antenna sensor: Take off bumper, clean inner surface of bumper with dry clean cloth. Stick the white double-sided tape on the inner surface of bumper from one end to the other at a position as high as possible. Then stick the strip sensor on the white double-sided tape. Too low installation may result in detectin of metal parts underground. Kepp strip sensor away from metal part of vehicle. If the strip is too long, you can cut it to suitable length.

Install display: Pass the single cable (approx 5.80 m long) from the rear of the vehicle to the front under the carpet and door rubber/plastic trim. Following the original cars wiring route. The display can be placed (positioned) any where in front of the driver using the self adhesive strip that's already applied to the display.

Install control unit: Place the control unit in the trunk and secure on the inside panel using the self adhesive material included double sided tape. Make sure control unit is fixed tightly, avoid any vibration. The extension cable between ontrol unit and strip sensor should also be fixed very tightly, avoid any possible vibration. The vibration may lead to false alarm.

3. **Install power cables and buzzer**: The Red and Black wires are routed towards the reverse lights, (NOTE: It is highly recommended to connect the system to the reverse lights so that it will function while reversing or backing up the vehicle). Mount and place the buzzer in the trunk, or, towards the front of the vehicle to maximize its performance.

Magnetic Parking Sensor Installation Guide

Magnetic Parking Sensors are a Robust, Reliable, Ultra Discreet, No-Drill, Easy Fit, High Performance product that fit all Cars from Alfa Romeo to VW. The Universal Option is compatible with any Car, Vehicle, Van, 4x4, Motor home, Caravan, Trailer, Horse Box or Vehicle (12V).

Installing the Magnetic Parking Sensor on cars & vehicles with a plastic bumper!
Removal of the bumper on vehicles is not as difficult as it at first may seem and is typically held on with 2-4 screws and a few locators. If you are a keen DIYer and will be installing the parking sensor yourself, (if required) you can ask your dealer parts department for an exploded view (print off) of your rear bumper, this will show you exactly how the bumper is held on to the vehicle and where any screws, locators or rivets can be found. Alternatively a Haynes Manual will detail this information.

Mounting the Control Unit:
Install the parking sensor control unit on the inside of the vehicle next to where the reversing light is situated, behind the trim and attach to the body. Typically the passenger side is more suitable. You then pass the antenna wire from the unit through the hole with the grommet fitted (this hole is now provided by vehicle manufacturers) to connect to the antenna on your bumper. On older vehicles or in cases where it is not possible to find a small hole, this must be drilled and the wire passed through using a grommet. If there is no room inside of your vehicle (highly unlikely) the unit can be mounted behind the bumper.

Mounting the Speaker:
Mount the parking sensor speaker using the included adhesive mount in the boot onto any plastic trim or shelf or to the rear parcel shelf. The volume is loud enough to provide a good warning even if mounted close to the trim. This connects into the control unit by push fit connection.

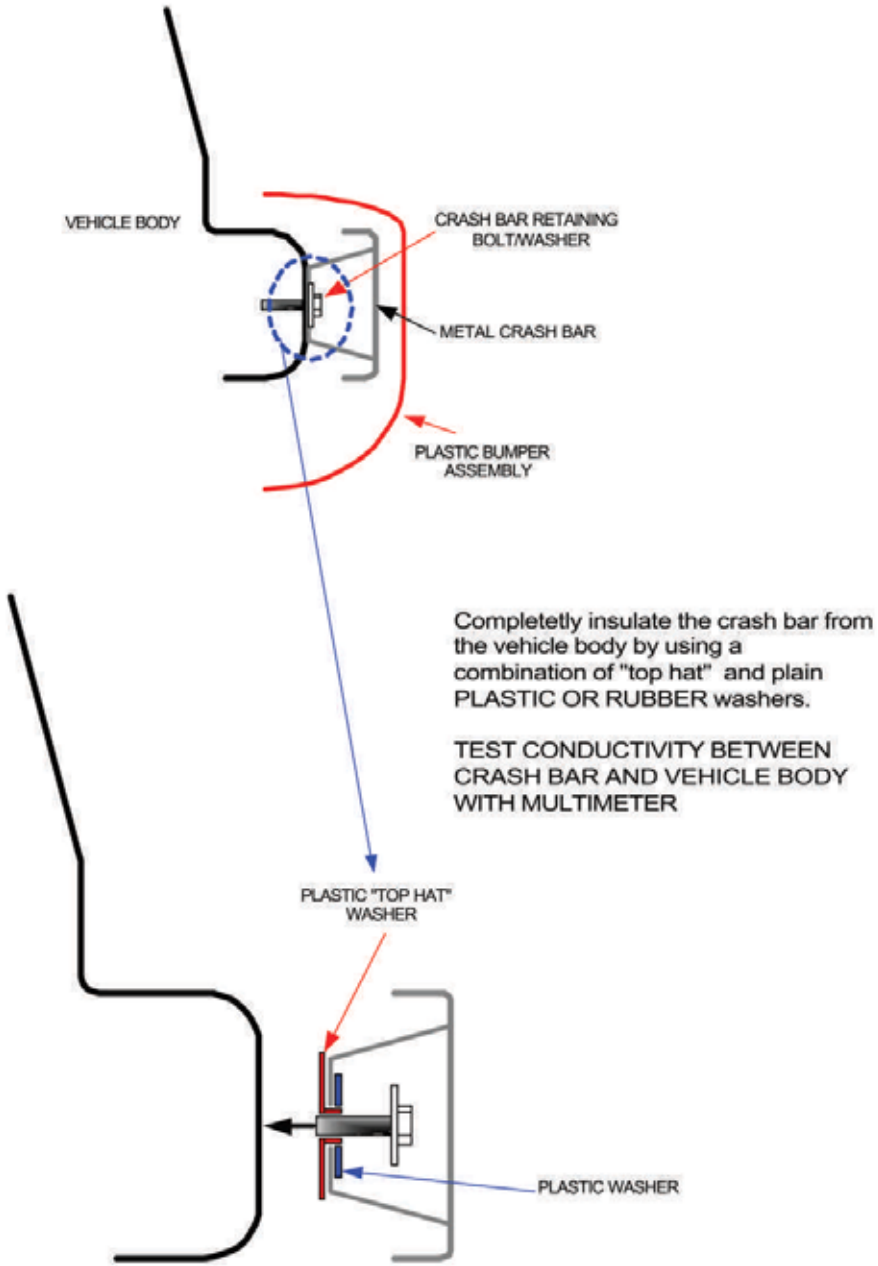
Mounting the Antenna:
Mount the silver parking sensor antenna (adhesive strip) onto the inside of the rear bumper (making sure the bumper surface is clean before attaching) with the connector on the side where you have located the control unit. When the antenna has been attached, covering the whole of the bumper from left to right, the excess length is cut off. Place a piece of tape at either end of the antenna to ensure a secure installation onto the bumper.
It is important that the antenna is installed at the highest part from the ground that corresponds to the furthest distance from the vehicle body as a precaution to prevent any interference from metal parts. Generally the best position of the parking sensor antenna is 40-50cm from ground level, but not essential. Once the bumper is removed, if your vehicle has a metal crash protection bar and you think that the antenna will be within 2 cm's of this metal bar (once the bumper is re-fitted) then you can cover this using Black Duct, duck or Gaffa Tape to prevent any interference. This is available from any DIY store. Please Do Not use silver Duct Tape as this contains metal particles.

Electrical Connections:
1) Black wire MUST be connected to the ground (body / chassis) of the vehicle.
2) Red wire is connected to the 12V supply wire of the reversing light. Live only when reverse gear is selected.
3) Connect the antenna connection wire from the unit to the antenna

Bumper Removal:
99% of car & vehicle bumpers are made of plastic. When installing the Magnetic car parking sensor, depending on your vehicle, the bumper may have to be removed, but on some cars you can get away with just loosening the bumper by releasing the locator screws. If you choose to pay for installation most auto electricians, mechanics and body shop technicians will remove the bumper literally in minutes.
Removal of the bumper is not as difficult as it at first may seem and is typically held on with 2-4 screws and some locators. In a few cases rivets are used that need to be drilled out and simply replaced from your dealer parts department (at a minimal cost) when re-fitting.
If you are a keen DIYer and will be installing the parking sensor yourself, (if required) you can ask your dealer parts department for an exploded view (print off) of your rear bumper, this will show you exactly how the bumper is held on to the vehicle and where any screws, locators or rivets can be found. Alternatively a Haynes Manual will detail this information..

Insulating Metal Crash Protection Bar

Insulation Of Metal Crash Protection Bar From Vehicle Body To Prevent Interference And Loss Of Detection Range



Typical Bumper Removal Overview:

Installation of the Rear Magnetic Parking Sensor and removal of the bumper is not as difficult as it at first may appear. Bumpers on cars are now purely cosmetic and no matter how big or small are pretty simple to remove for a DIY or expert fitter.

Preparation:
If you are not 100% confident in removing your bumper and want a hand, nip to your dealer, call at the parts department and get a print off of the bumper assembly. Explain you're removing your bumper and want to see if there are any screws, rivets or clips you'll need to replace.
Alternatively grab a Haynes manual or search online as someone may have posted your bumper removal instructions.

Bumper Removal:
Start under each wheel arch. Remove any screws, torx screws or clips to get access to the screws/bolts behind the wheel arch mudguard. The mudguard typically will not need removing in full, you just need access. Grab a torch and look for the screws and/or bolts holding the edge of the bumper and remove these. On some cars the main bumper bolts are also under here but some are accessed from within the boot behind the boot lining.

Next remove the 2 to 4 screws underneath the bumper.

Now working inside of the boot you'll need to carefully ease off the rubber boot seal and plastic trims and any side trim/panels typically on the passenger side to gain access to the light cluster wiring and to find a location to mount the control unit.
To remove the plastic trim remove any clips, screws or bolts and force off with as much care as possible.

Remove the main bolts or any remaining screws/bolts and ease the bumper off. Bumpers at this point are typically held on with clips to hold them in position once the screws/bolts are removed and this makes it ideal when refitting the bumper to hold it in place while testing.

> **Tip**: When installing the metallic antenna, don't let the twin antenna wire (from Control Unit to antenna) touch the car body. Run it through the hole using a rubber a grommet. This twin wire can be extended but keep as short as possible and tape any excess to the bumper or pull the excess back into the car once the bumper is re-fitted.

Finding an Installer:
Grab your Yellow Pages or Thomson Local or look on their websites and go to the following categories. Give them a quick call and ask for a quote. A mobile installer may suit your schedule better where they will come to your home or workplace to install your kit.

Start with the car electrics and auto electrics or auto electrician categories but all of these below are fully capable of installing this product.

- Car Electrics or Auto Electricians
- Car Body Shops
- Car Mechanics
- Car Audio or Car Stereo
- Car Security Installers

MOUNTING INSTRUCTIONS

1. WHAT IS THE MRPS SENSOR & HOW DOES IT WORK ?

Is able to detect all objects within a set proximity of your vehicle. A unique design ensures No Holes need to be drilled in your bumper making the MRPS totally invisible when fitted!
Once activated by selecting reverse gear the MRPS generates a shielded area around the rear bumper allowing you to park and reverse in total safety with complete confidence.
When an obstacle enters the zone of protection, a series of acoustic signals are given to alert the driver as to its proximity.

a) Upon selecting reverse gear a diagnostic check of the entire system is completed. If the Magnetic Parking Sensor is installed correctly, the buzzer will make a sound or beep if there is an obstacle with in 0.7 meters or 2.3 feet from the bumper.
b) During the approach to an obstacle the ECU unit activates the acoustic alert starting from a distance between bumper and obstacle (measured in the central zone of the bumper) of around 60-70 cm, with 3 types of signal.

ALERT SEQUENCE

1) An increase in sequence of "BEEP" informs the driver that an obstacle is approaching (alert signal).

2) A continuous sound when the obstacle is in proximity of the bumper at a variable distance between (15 to 30 cm) according to the type of obstacle. These values correspond to the central zone of the bumper while on the side edges of the bumper the distance is slightly less.

3) A continuous sound at a different lower frequency when an obstacle is very close to the bumper (10-15 cm) in order to alert you of possible contact..

2. TECHNICAL SPECIFICATION

- Operation voltage DC12V +/-2V
- Current consumption: < 50mA
- Working Temperature: -20 ~ +70 °C
- Detection range: Average distance of sensor activation: 70cm

(Notes: The detection range is greater for big conductor, narrower for small nonconductor)

3. MOUNTING THE ELECTRONIC CONTROL UNIT (ECU)

a) Ensure you have access to route the black aerial wire from the boot / trunk to the antenna, which will be located on the inside of the bumper. Look for any grommets or holes provided by the car manufacturer for the routing of this wire. If no hole is present, simply drill a small hole and use a grommet to protect the wire casing.

b) Secure the electronic control unit using the adhesive material included (using pressure to ensure a secure fit), inside of the boot / trunk of the vehicle, close to the reverse light cluster but leaving a gap of at least 2 cm to ensure no interference with the existing electrical components.

4. ANTENNA MOUNTING NOTES

The adhesive aluminium antenna sensor must be installed on the inner side of the bumper and it is of high importance that the antenna is installed on highest part from the ground and on the greatest protrusion of the bumper from the car body. 40cm to 60cm from the ground with 50cm being optimum.
The ECU must be mounted inside of the boot / trunk of the vehicle and the antenna sensor on the inside surface of the bumper following the procedure of the points 3a and 3b.

Note: The system is only able to work optimally when the antenna sensor is run the full length of the bumper leaving a gap of at least 3 cm from the metal structure of the vehicle especially the metal crash protection bar found behind the bumper. But it can run over a metal structure for a short length of 2/3 cm.

MOUNTING THE ANTENNA

Pre-test:
Once you have measured and determined your desired heights for the antenna, and before fixing the bumper back on permanently. Position the bumper back on your car using only the clips to hold it, and test with your hand to ensure you are satisfied with the detection range. Move antennas if required.

*When doing a Pre-Test only approach the vehicle once and then reset the system by disengaging reverse gear or false alerts from the system can be given during this test.

a) Remove the bumper and carefully clean the inner side surface using alcohol or other solvent (but NOT anti-adhesive detergent), where the antenna will be positioned.

b) Place the antenna connector so that it will be situated at the side of the bumper where the ECU is positioned. Also ensure that once the bumper is re-fitted there is a route for the wire into the vehicle.
Run the antenna over the full length of the bumper onto the sides leaving a gap of 20cm from the wheels. Use strong pressure to secure the antenna appropriately and cut off any excess. If you accidentally break the antenna, simply rejoin by overlapping.

c) For maxium adhesion and optimum protection apply a piece of black adhesive material at either end of the antenna. Its recommended (but not essential) to cover the antenna with a black anti-rust protection paint that is applied to the underneath of a car chassis to protect from the elements or use a similar plastic protection primer...

The MRPS detect any movement around the sensor. It is immune to the temperature, sounds and wind variations that cause false detections

5. ELECTRICAL CONNECTIONS

5.1 Connecting the Electronic Control Unit (ECU).

a) The antenna connector Attached to the ECU: route this wire out of the vehicle using an original rubber grommet on the car body or through the hole you have made for ease of access.
***DO NOT** run the antenna wire through the Air Valve if present near your bumper.

b) Insert the connector that houses the power, earth and speaker connector.

c) Provisionally replace the bumper on the car.

d) Black Antenna Wire from the ECU: connect the male connector to the female connector on the antenna positioned on the bumper.

IMPORTANT Note: This antenna wire (Black wire attached to the ECU) must be fastened securely to the antenna using the included connector or solder if required. Fix the wire securely when routing from ECU to antenna, using as much mastic as you need to avoid any movement or oscillation. This will prevent false alarms.

5.2 Electrical Connections

a) Red Wire (12V when reverse is engaged): Connect to reverse light wire.

b) Black wire: Connect to Earth picked up from the body of the vehicle. Typically a small bolt can be found close to the light cluster at rear of vehicle, attach earth wire here or to earth wire.

6. MOUNTING THE SPEAKER

Mount the speaker in an appropriate position so it can easily be heard, under the side trim in the boot / trunk. This wire can be extended if required and run to your desired location.

Operations

SAFE OPERATING TIPS

- Do not detach, disassemble or modify it. This may cause incorrect operation. It is water resistant but not waterproof.
- Do not submerge sensor and its components in water, which can cause internal damage to the parking sensor.
- If the temperature changes rapidly, such as when hot water is poured on the vehicle in cold weather, the system may not operate normally. The sensor can withstand the effects of rain, snow, and inclement weather.
- If dirt, rain or snow attaches to the sensor, the sensor may not function properly. If water droplets, snow or mud adhere to the sensor and its components, rinse with water and wipe with a dry cloth.
- Do not use alcohol, benzene or thinner to clean the sensor and its components. This will damage the unit.
- To clean the sensor and its components, wipe with a clean a cloth dampened with mild cleaner diluted with water and then wipe with a dry cloth.
- Will work up to 2.3 feet or 0.7 meters. Working distance varies depending on the conductivity of the bumper surface.
- The system is only designed for backup/reserving purposes. We are not responsible for damages on the system or the vehicle if used for other purposes.
- ALWAYS engage Parking/Emergency/Hand Brakes of the vehicle when testing or trouble shooting the system.
- The system is designed to ADD safety and protection. The device was NOT designed to replace other safe driving habits. Double checking and looking around before backing up is STILL the safest way.

SAFETY AROUND AND BEHIND OTHER VEHICLES

Using a parking sensor is not enough to completely overcome a vehicle’s blind spot. Many preventable injuries and deaths occur in driveways or parking lots when drivers do not see children, pets, or others near their vehicles. Here are a few safety tips that will help you to avoid a backover accident.

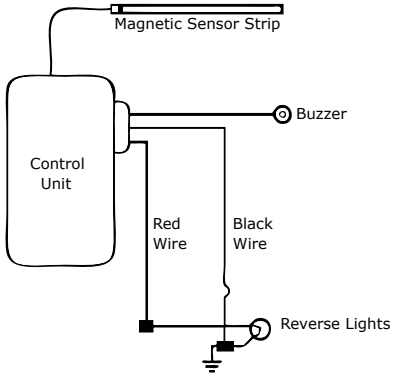
- Walk completely around your vehicle before getting in. Check for kids, toys, and pets before entering the vehicle and starting the engine.
- Know where children are. Have children stand in a place where they are in full view.
- Be aware of young children. Young children are small and hard to see.
- Parents, caregivers and all adults need to be vigilant in supervising children, especially when children are in the yard, driveway or parking lot playing near parked cars.
- Roll down your window so you will be able to hear what is happening outside your vehicle.
- Owners of SUVs, trucks, and vans need to take extra care to avoid hitting or running over a child.
- Teach children to move away from a vehicle whenever it is started.

CHECKPOINT:

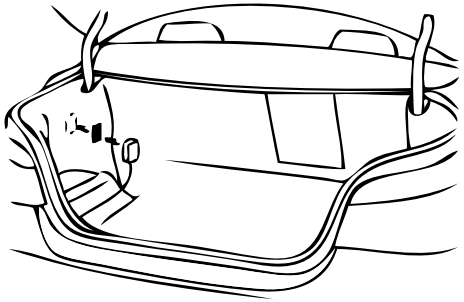
At this point, you can check if wires are properly connected

- Reconnecting the battery.
- Turn the ignition to the "Accessories" position.
- Engage the Emergency or Hand Brake.
- Put the vehicle in reverse.

If the Magnetic Parking Sensor is installed correctly, the buzzer will make a sound or beep if there is an obstacle with in 0.7 meters or 2.3 feet from the bumper.



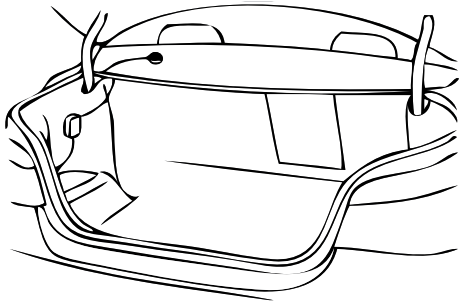
9) Place the control unit in the trunk and secure on the inside panel using the double sided tape.



10) Mount and place the buzzer towards the front of the vehicle to maximize its performance

NOTE:

- o Do not cover the buzzer or mount it where the sound can be obstructed
- o Make sure the to select the location of the buzzer where it can be heard inside the vehicle.



7. FINAL SET-UP & TEST PROCEDURE

Switch on the ignition and select reverse gear. Do Not start the engine.

a) Upon selecting reverse gear a diagnostic check of the entire system is completed. If the Magnetic Parking Sensor is installed correctly, the buzzer will make a sound or beep if there is an obstacle with in 0.7 meters or 2.3 feet from the bumper.

ATTENTION: If the speaker doesn't give this or any other signal check all connections especially check that the chosen earth (black wire) is secure.

b) Starting from about 1 meter away from the centre of the bumper, walk slowly to simulate the reverse motion of the car. Only approach the vehicle once and then reset the system by disengaging reverse gear or False alerts from the system can be given during this test.

At a distance of around 60/70 cm the first acoustic signal will emit a (Beep... Beep...). The frequency and repetition will increase as the distance from the object decreases and will eventually become a continuous sound at around 20-30 cm. A second continuous sound (third signal indicating imminent contact) **will emit only a few centimetres from the bumper**.

Note: The Parking Sensor MRPS – Rear alerts you to obstacles that are approaching with more frequent beeps. The alert is only given by moving towards and approaching obstacles and not fixed or stationary obstacles.

ALERTS & WARNINGS

1) As soon as the system is activated the surrounding area of the bumper (antenna sensor) is monitored.

2) It is very important during the set-up and testing, not to switch on the system while you are very close to the electronic control unit and antenna sensor as this could result in false information on the working dynamics of the system.

3) Due to the operating principle of the Parking Sensor MRPS and depending on the mounting position of the antenna sensor, the unit can at times give alert signals in error as the vehicle reverses. This is due to detection of the road surface and is completely normal.

4) Operation in Heavy Rain conditions: *When heavy rain is present the MRPS parking sensor system automatically reduces its sensitivity in order to eliminate false alarms that can be given by the movement of water on the bumper. False signals in heavy rain conditions are highly affected by specific designs of vehicles and their bumpers. Some bumper designs have a higher chance of false alarms in heavy rain conditions.

False signals are given as a result of water flowing between the car body and the bumper. This have been reduced as much as possible with good results within the MRPS software for optimum usage.

However once the software does recognise that water is present during a reversing manoeuvre the first and second zones are eliminated to prevent continuous false signals and the next alert zones are utilised until the system is reset and water eliminated. This is intelligent in itself and *surpasses ultrasonic's* in such scenarios ensuring a safe and secure parking and reversing manoeuvre.

Thank you:

Thank you for purchasing the Magnetic Parking Sensor. This parking sensor was designed to give additional convenience when driving or operating your vehicle. The Magnetic Parking Sensor determines the distance of the obstacle while doing a reverse or parking maneuver. All parts needed to install and operate the system are included in this package.

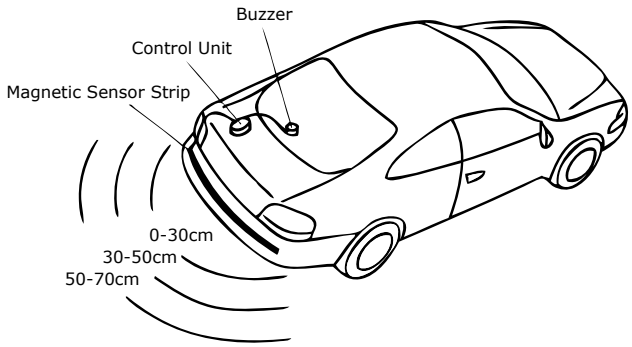
Package Content:

- Buzzer (MRPS01)
- Buzzer & Display (MRPS02)
- Magnetic Sensor Strip
- Control Unit

Installation Instructions:

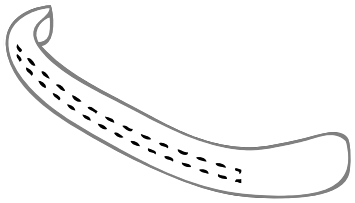
NOTE:

- Only install this unit on non-metallic bumpers.
- These installation instructions do not apply to all types of vehicles. They are meant only as a general guide due to the large number of vehicle makes and models. For vehicle specific questions, contact your vehicle's manufacturer.
- Install the Magnetic Parking Sensor in the inside part of the vehicle's bumper to achieve maximum viewing angle.
- Install the Magnetic Parking Sensor on rear bumper of the vehicle for maximum performance.
- The Magnetic Parking Sensor is installed without drilling a hole through the bumper route the wire by using a pre-existing hole on the vehicle to route the wires to the reverse taillights.



1. Locate reverse lights and select a route for the power wire that will connect to the power source
2. Clean the inside surface of the bumper so that the sensor strip will mount properly

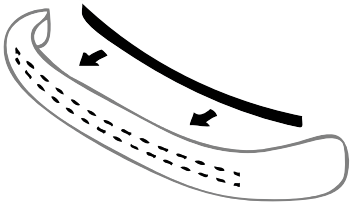
NOTE: Some vehicles might require you to remove the bumper to be able to access the inside part and to install the sensor.



3. Place the end of the magnetic strip with the connector near the area where the power wire will come through

4) Remove the tape backing off and unroll the magnetic sensor strip along side the inside of the bumper.

NOTE: Cut the magnetic sensor strip to fit the length of the bumper



5) Press the sensor strip firmly against the inside of the bumper

NOTE:

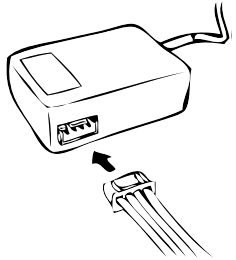
o Do not wrap the magnetic sensor strip around the sides of the bumper

o Make sure the sensor is facing the front face of the bumper and attached to the bumper directly

6) Connect the magnetic sensor strip to the control unit

NOTE: No need to drill a whole to route the wire from the control unit to the magnetic sensor strip. Use existing holes in the trunk area to route the wire

7) Connect the power cable and buzzer to the control unit



8) Route the RED and BLACK wires towards the reverse lights you selected for power

NOTE: It is highly recommended to connect the system to the reverse lights so that it will function while reversing or backing up the vehicle.

CAUTION: Before connecting the power wires, use a Volt Meter or a Multi-Meter to determine positive and the negative wires on the vehicle's reverse light wires. Vehicle wiring may vary. Refer to the vehicle Owner's Manual for more information.

a. Determine positive and negative wires. Most vehicles will have two color wires, BLACK for negative and RED for positive.

b. Disconnect vehicle battery before proceeding to the next step as a precaution

c. Connect the RED power wire to reverse light's positive wire.

d. Connect BLACK wire to reverse light's negative or ground wire.

e. Secure wires with cable ties or electrical tape.