

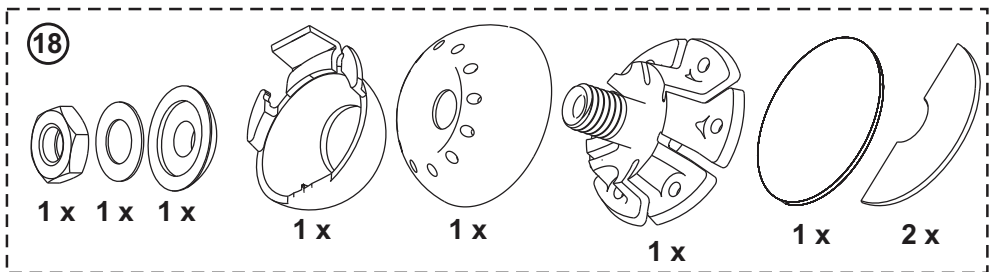
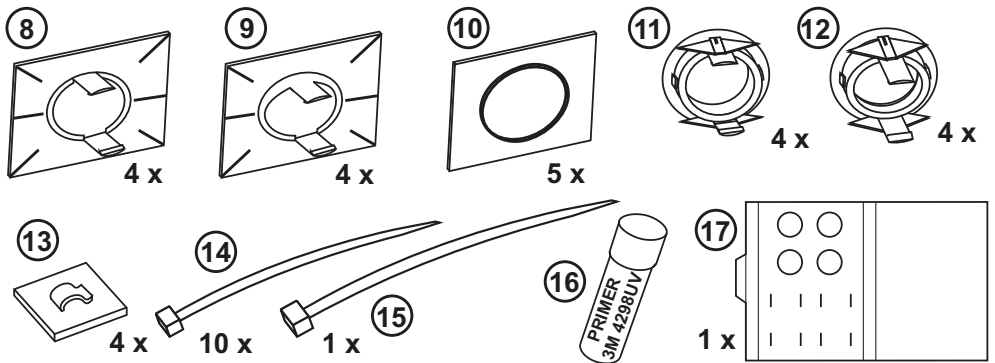
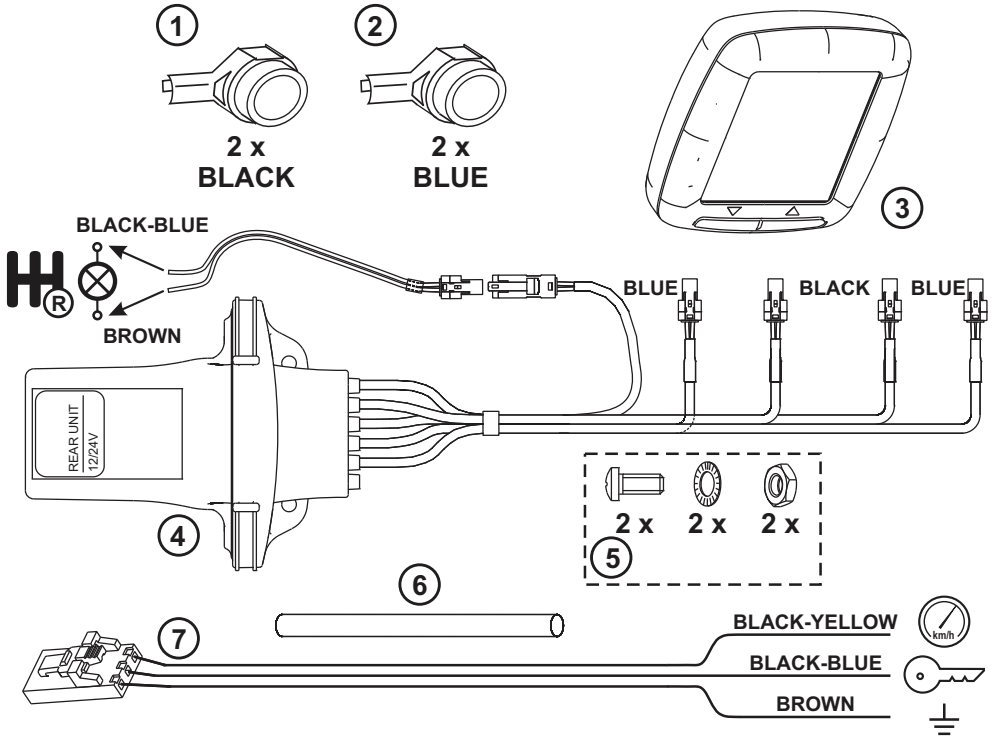


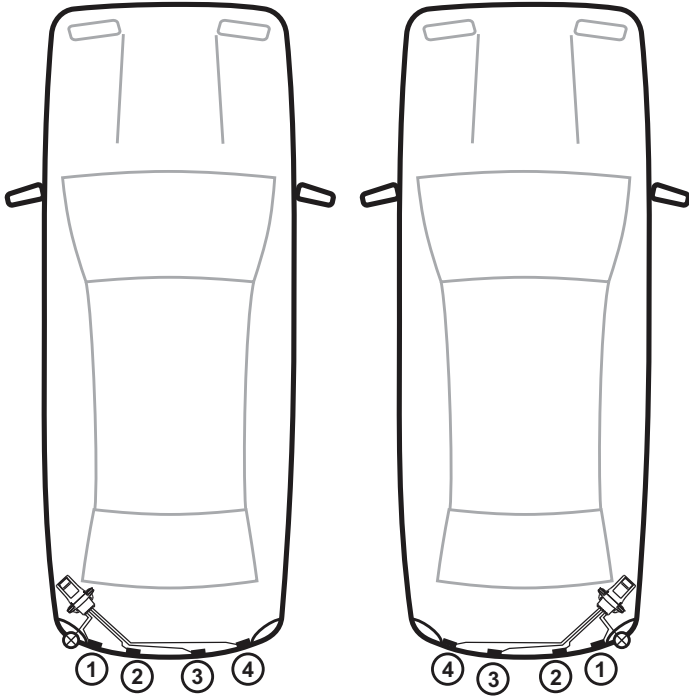
# **KIT Parking Sensor 814W**

## **INSTALLATION AND USE MANUAL**

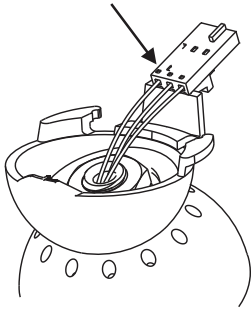
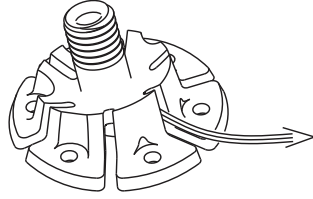
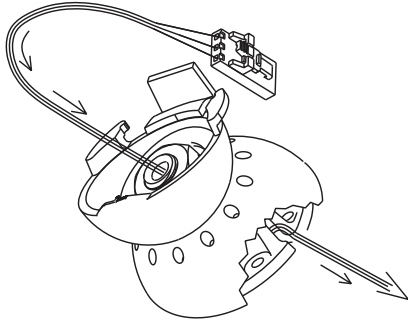




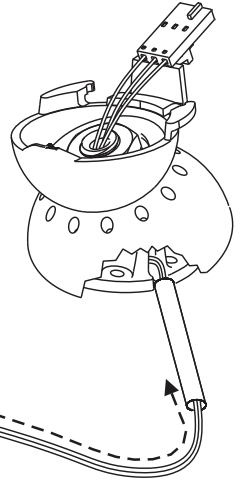




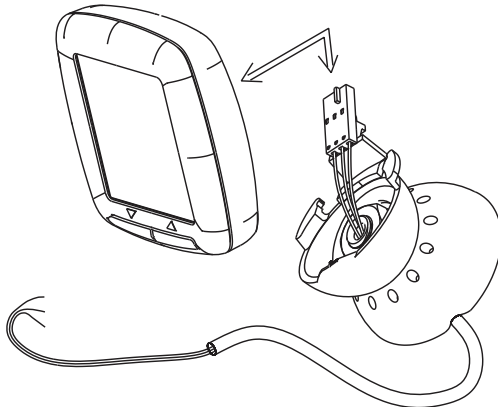
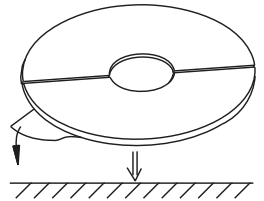
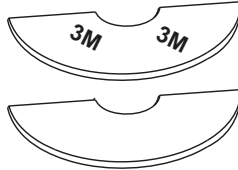
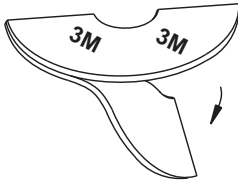
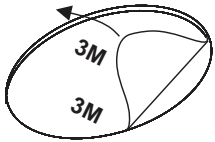
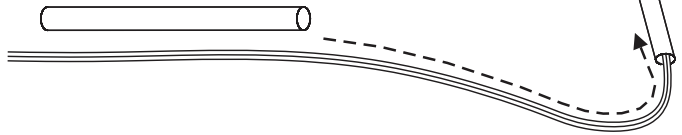
Sensor 1: rear with shortest cable.  
Sensor 4: rear with longest cable.

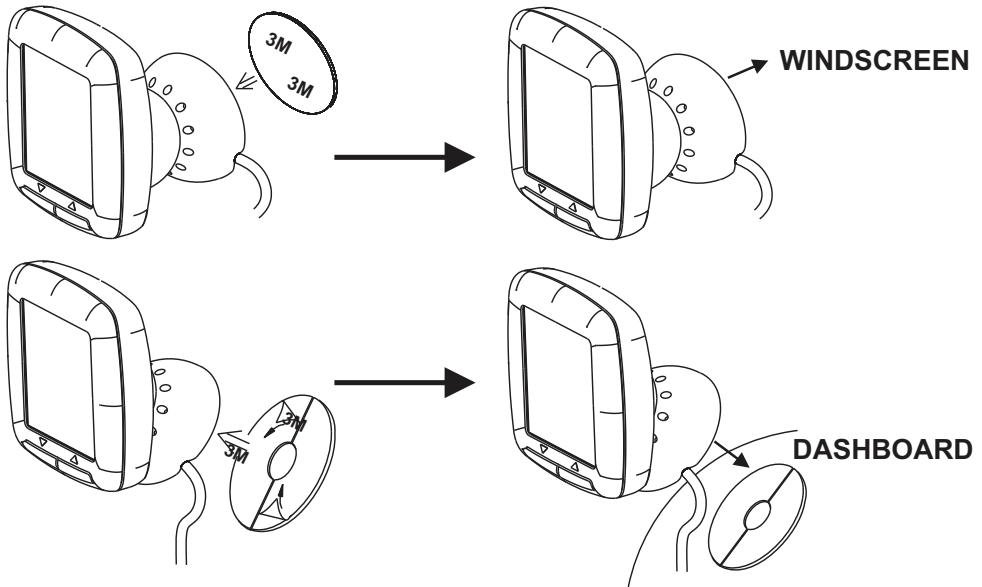


**CORRECT POSITION**

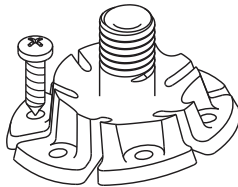


8





### ALTERNATIVE MOUNTING



### TECHNICAL SPECIFICATIONS

Supply voltage	From 9 to 30 Vdc
Current consumption when system working	100mA max.
Service temperature range	From -20°C to +70°C
Ultrasound frequency	40Khz
Control units and display communication frequency	434Mhz
Software version reference (reported on control unit and display)	SW07

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**USER MANUAL**

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**1.0 - PRELIMINARY ADVICE**

Dear customer,

Before installing, identify your kit and refer to it for the correct instructions.

The Caution and Warning signs in this manual provide important notices for installing and using this product.

Be sure to follow them in order to ensure a safe and reliable use:

**For the user.**

This sign highlights useful information or indications regarding the use of the parking system.

**For the installer.**

This sign indicates various operating modes according to connections and programming of the system or it simply provides useful indications for the installation.

# USER MANUAL

## 2.0 - SYSTEM OPERATION



Remember to always look behind the vehicle while parking.  
Small obstacles or objects with low reflectance might not be detected.



The parking system is designed only as a parking aid, it should not be considered to replace care and attentiveness while manoeuvring.



If the sensors are deactivated with the right-hand display button, they will remain deactivated until the next press or until reverse gear is re-engaged.

## 2.1 - DETECTION ZONES



Detection zones are indicated as "R" and detection zones closest to the obstacle are indicated as "RC" and displayed as "STOP".

The STOP zone is the minimum distance detected between an obstacle and the sensor and in this case the warning tone is solid.

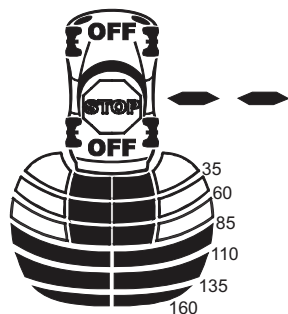
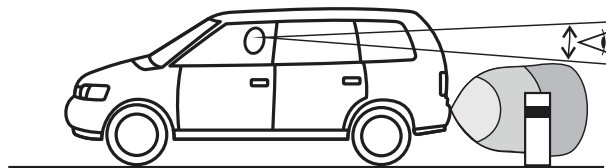


The detection range and the volume of the buzzer can be adjusted (see setting of parameters) according to the needs of the user and the vehicle on which the system is installed.

The stage-by-stage sound alert will vary according to the detection zone.



For the overall functionality of the parking system, check the programming of the sensors.



ZONE	DISTANCE
RC	35 cm
R1	60 cm
R2	85 cm
R3	110 cm
R4	135 cm
R5	160 cm

**CENTRAL SENSORS:** black zones.  
**LATERAL SENSORS:** black contoured zones.

**CLOSEST DETECTION ZONE:** the STOP sign and the two symbols next to the vehicle diagram turn on. The distance indication turns off.



## **2.2 - REAR SENSORS**

The sensors are activated when reverse gear is engaged; an audible signal warning and the downward arrow icon that lights up on the display will indicate the sensors are active.

Obstacles are signaled by different audible tones and the lighting up of the relative detection zones and distance on the display.

The faster the beeping, the closer the obstacle; a continuous tone indicates the obstacle is extremely close to the bumper.

To deactivate the sensors (when reverse gear is engaged), simply press the push-button on the right hand side of the display; the "OFF" sign will light up on the bottom part of the displayed vehicle and the downward arrow will turn off to indicate the sensors are deactivated.

To reactivate them, simply press the same button or disengage reverse gear and re-engage it.

## **3.0 - TROUBLESHOOTING GUIDE**

### **3.1 - SLOW POWER SUPPLY SIGNAL**

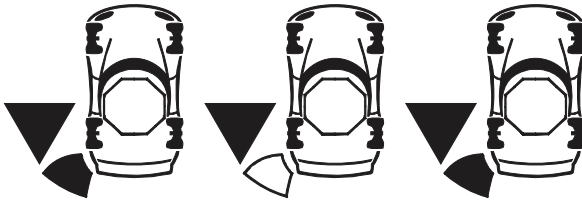
If, when the reverse gear is engaged, the battery level is too low to guarantee the accuracy of the system, the system activation signal will almost immediately sound (lower sound than usual) but the sensors will not work.

When nominal tension is restored, the sensors will start working normally.

### **3.2 - FAULTY SENSORS**

If, when ignition is turned on or reverse gear is engaged, one of the sensors turns out to be inoperative or not connected, the vehicle icon will light up on the display together with the arrow and the inoperative sensor (or sensors).

The icon of the inoperative sensor will flash as long as reverse is engaged; the other sensors will operate normally.



Sensor 1  
inoperative;  
sensor icon  
flashes.

### **3.3 - OTHERS**

<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
Ice on sensors	Clean the sensors
Sensors mounted too low	Use the angle brackets (9 or 12) to tilt axle of sensors upwards
Back part of sensors in contact with frame	Create a separation between the sensors and the vehicle (at least 2mm)
Sensors detect external spare wheel	Modify the setting of parameter 11



In areas with high RF disturbances, the antenna icon will light up on the display and a ticking sound will be heard.

The display will turn off after a few seconds and will light up again after the disturbances cease.

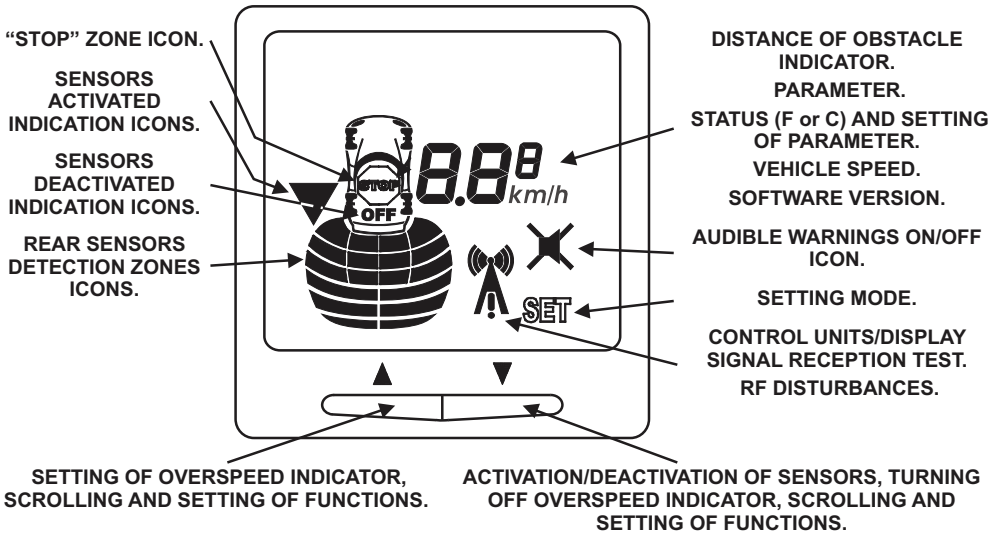


If necessary, adjust the sensors sensitivity level (see chap. 11.0, setting of parameter - parameter 17).

## 4.0 - DISPLAY



The following icons will be displayed according to operations.



On every button press, the sensors will be activated/deactivated.  
The downward arrow icon will be displayed when the sensors are activated.

## 5.0 - SETTING OF OVERSPEED AUDIBLE ALERT



This procedure can only be done if the relative cable of the display wiring is connected to the odometric signal of the vehicle; check with your installer.

- Turn the ignition “ON”.
- Enter in the programming mode (see chapters 10.0 and 11.0), select parameter 14, select value 2 and set it by keeping one of the two display buttons pressed for about 3 sec.; by activating this function the display and the speed value will light up every time speed exceeds 10 km/h.
- Turn ignition key “OFF” then “ON” and increase speed.
- Look at the speed displayed; when the required threshold is reached to set the overspeed audible alert, press the right-hand display button.
- A series of audible signals will now sound every time the vehicle exceeds the registered speed.
- To deactivate this function press the left-hand display button when speed exceeds 15km/h; an audible signal will indicate deactivation.
- To reactivate this function and set another threshold, press the right-hand side button (even if the speed is higher than the one actually set, the system will register this last value).

# INSTALLER MANUAL

## 6.0 - INSTALLATION OF SENSORS

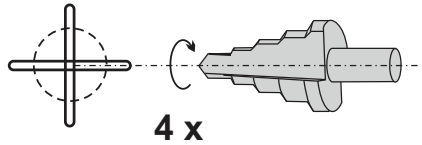


To install the sensors on a metal bumper, you must use appropriate adapters (not supplied).

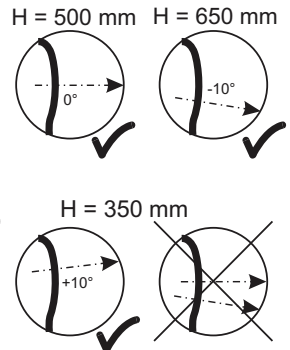
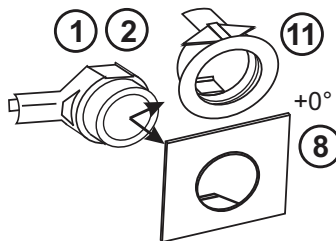
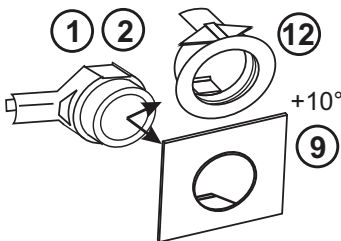
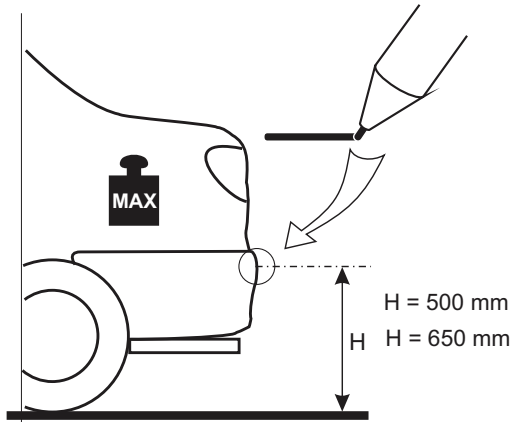
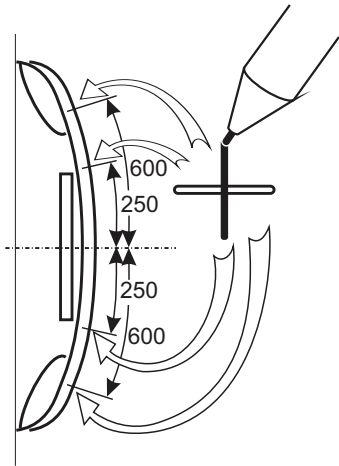
Choose the suitable type of plastic bracket and mark the center of the holes to drill. For brackets "8" drill holes with a 18mm diameter, for brackets "9" drill holes with a 22mm and for brackets "11" and "12" drill holes with a 24mm diameter.

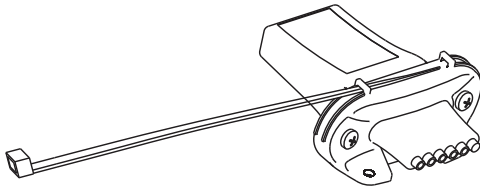
Sensors and plastic brackets can be painted to match the color of your bumpers.

- ① ② + ⑧ → Ø 18
- ① ② + ⑨ → Ø 22
- ① ② + ⑪ ⑫ → Ø 24

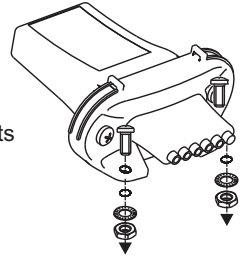


Before drilling, inspect behind the bumper to check for any possible obstruction such as iron struts and, in any case, be careful to avoid damaging parts behind the bumper.





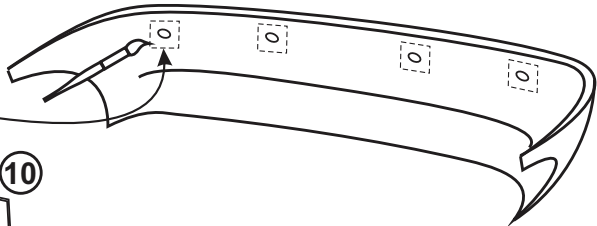
Use the supplied tie (15) or bolts (5) to secure the control units to the front bumper.



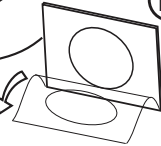
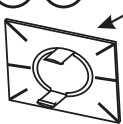
Clean thoroughly the plastic brackets (8 or 9) and around the holes, apply "PRIMER" (16), let dry for at least one minute and then proceed as follows.



16



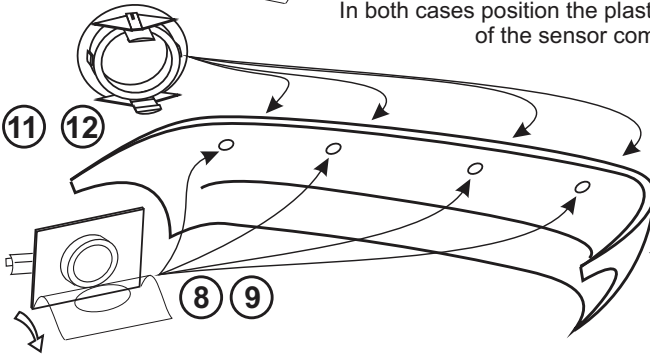
8 9



10

Remove the protective film from the adhesive (10) and apply it to the bracket (8 or 9) or snap the bracket (11 or 12) in the hole from the outer part of the bumper.

In both cases position the plastic brackets so that the connector of the sensor comes out horizontally.

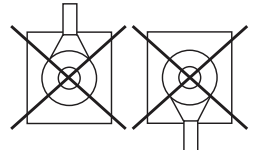


11 12

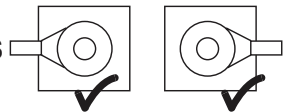


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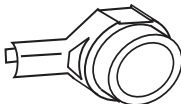
NO



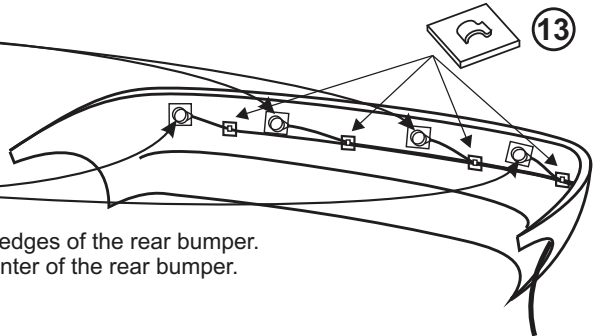
YES



1 BLACK

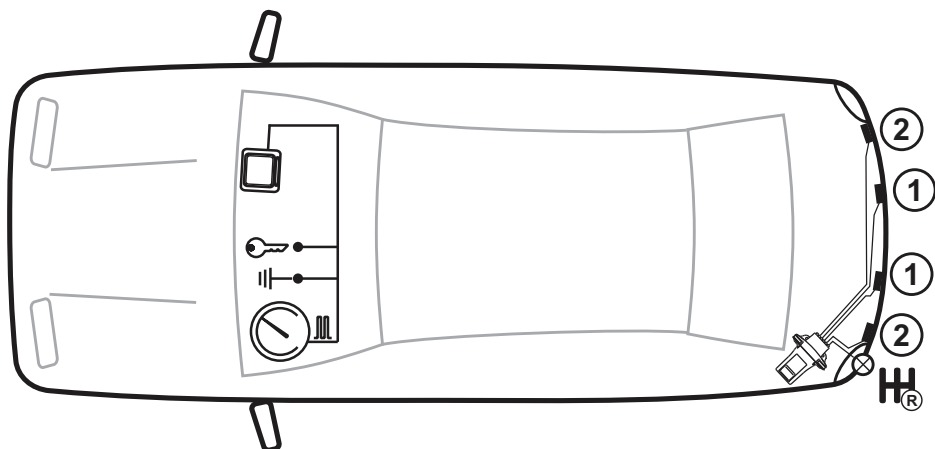


2 BLUE



Install the BLUE sensors on the outer edges of the rear bumper.  
Install the BLACK sensors on the center of the rear bumper.

## 7.0 - CONNECTIONS



Check the wireless communication and the length of the cables before proceeding with the final positioning of the accessories.

- Install the control unit (4) in the rear bumper away from heat sources.
- Connect the sensors (1 e 2) and route the power supply cable inside the vehicle luggage compartment.
- Connect the BLACK-BLUE wire of the control unit (4) to the positive of the reverse light.
- Connect the BROWN wire of the control unit (4) to the metal frame of the vehicle (ground).
- Fix the display (3) inside the vehicle cabin, in a dry place, away from eventual water infiltrations and heat sources where it can easily be seen during the parking and reversing manoeuvres.
- Connect the BLACK-BLUE wire of the display (3) to the positive under key of the vehicle.
- Connect the BROWN wire of the display (3) to the metal frame of the vehicle (ground).
- (Optional) connect the BLACK-YELLOW wire of the display (3) to the odometer signal of the vehicle (see chap. 10.0 and 11.0 for programming and setting instructions. This connection must be done if the customer wants to set the overspeed audible alert, see chapter 5.0).
- Insert the 3-way connector in the display.

## 8.0 - PAIRING OF CONTROL UNIT WITH DISPLAY



When pairing, make sure reverse gear is disengaged and no similar control units are activated in the surroundings.

- Supply the display (turn vehicle ignition key to "ON").
- Press and keep pressed for about two seconds the two push-buttons on the display.
- The letters "LE" will light up on the display.



If the display shows "E1" it means that there are other activated control units in the surroundings; move the vehicle or turn off the other control units.

- Supply the rear control unit (engage reverse gear) and wait until the downward arrow icon lights up; this will indicate the rear control unit has been paired.
- The pairing procedure is completed; parameters can eventually be modified according to individual needs.

## 9.0 - LEARNING OF ODOMETER PULSES (optional)



This procedure is useful when you do not know the odometer pulses of the vehicle and the display cable must be connected to the odometer.

This procedure must be used if the customer wants the overspeed alert feature

- Turn the ignition "ON" and engage the reverse gear.
- Enter in the programming mode (see chap. 10.0), select parameter 14, select value 3 and set it by pressing one of the two push-buttons on the display for about 3 seconds).
- Turn ignition key "OFF".
- Turn the ignition "ON"; the speed displayed will be 50 km/h.
- Increase the vehicle speed until the vehicle reaches the speed indicated on the display, then press the left-hand push-button; if both speeds are identical, press the right-hand push-button.
- The display will turn off until the vehicle reaches 15 km/h.
- The system has now automatically registered the odometer pulses per meter.
- Viceversa, if the reading is incorrect or the odometer signal is lost, the display will show "E3", which means the operation was not successful. Turn the vehicle "OFF" and "ON" again and repeat the entire procedure.

## 10.0 - PROGRAMMING



Only expert users should modify these settings to avoid malfunctions of the parking system.

- Supply the display (turn “ON” the vehicle ignition key) and engage reverse gear.
- Press and keep pressed for more than two seconds one of the two push-buttons on the display; the previous programming mode will be displayed.

**0 1<sup>F</sup>** F: Factory, standard adjustment, “Factory parameters”.

**0 1<sup>C</sup>** C: Custom, user-chosen adjustment, “Custom Parameters”.

Press the left left-button to go to the next parameter.

**02<sup>F</sup>**

Press the right push-button to go to the previous parameter.

**17<sup>F</sup>**

When the parameter you want to modify is displayed, press one of the push-buttons and keep it pressed until the display starts to blink; at this point you can modify the parameter.

**80<sup>F</sup>**

Press the left push-button to increase the value of the parameter (the letter “C” will be displayed when parameter has been modified).

**90<sup>C</sup>**

Press the right push-button to decrease the value of the parameter (the letter “C” will be displayed when parameter has been modified).

**70<sup>C</sup>**

Press one of the two push-buttons on the control unit and keep it pressed for at least two seconds to register the value.

The display will stop blinking and the selected parameter will be displayed.

**0 1<sup>C</sup>**

Disengage reverse gear and cut supply to the display (turn “OFF” the vehicle) to exit the programming mode.



Press the two push-buttons on the display and keep them pressed for more than two seconds to reset all the factory settings (F).

## 11.0 - SETTING OF PARAMETERS

Nr.	PARAMETER	RANGE	SETTING
01	Volume of buzzer	0, 1, 2 (Ref.1)	2
02	Detection range of front central sensors	From 50 to 95 cm	---
03	Detection range of rear central sensors	Not used	160
04	Detection range of sides sensors	From 50 to 95 cm	60
05	STOP zone of front sensors	From 35 to 50 cm	---
06	STOP zone of rear sensors	Not used	35
07	Audible warning for front obstacles	0, 1 (Ref.2)	---
08	Mounting of front control unit	0, 1 (Ref.3)	---
09	Mounting of rear control unit	Not used	0
10	Display colour	1, 2, 3, 4, 5 (Ref.4)	3
11	Suppression of spare wheel indication	Not used	0
12	Number of speed signal pulses	From 1.0 to 25.0	3.0
13	Delay of front sensors deactivation	0 or from 10 to 60 sec. (Ref.5)	---
14	Service display (testing)	0, 1, 2, 3, 4 (Ref.6)	0
15	Connection of odometer wire	0,1 (Ref.7)	0
16	Front sensors sensitivity to detect obstacles	Not used	---
17	Rear sensors sensitivity to detect obstacles	1, 2, 3 (Ref.8)	0

**Ref.1:** 0 deactivated, 1 low, 2 high.

**Ref.2:** the display having only 2 numbers, the range will be indicated as 20 and 80 instead of 120 and 180.

**Ref.3:** 0 standard detection (sensors position 1-2-3-4), 1 inverted detection (sensor position 4-3-2-1).

**Ref.4:** 1 red, 2 green, 3 blue, 4 amber, 5 white.



If a protruding part behind the vehicle (tow hitch, external spare wheel, etc.) creates false obstacle indications, gradually increase the value of parameter 11 until the right setting is reached.

**Ref.5:** increase the value (from 0 to 3) until the system no longer detects the external spare wheel or the tow hitch.

**Ref.6:** 0 not activated, 1 wireless communication test, 2 speed indication and activation of "overspeed audible alert", 3 self-learning of speed pulses, 4 display of software version (small number on display).

**Ref.7:** 0 connection of display cable, 1 not used.

**Ref.8:** 1 low, 2 standard, 3 high.



## 12.0 - TESTING

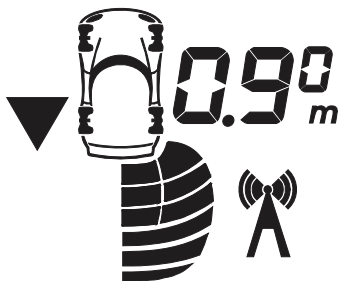
- Turn the ignition key "ON" and engage the reverse gear.
- Press and keep pressed one of the two push-buttons on the the display (3) until the system enters the programming mode; select parameter 14.
- Press and keep pressed one of the two push-buttons on the display (3) until the system enters in the parameter settings.
- Select 1 and set it by pressing one of the two push-buttons on the display for about 3 seconds.
- Disengage reverse gear and turn ignition "OFF".
- Turn ignition "ON"; the display will show the antenna icon (without the reception symbols).



- Supply one the control unit (engage reverse gear); the display will show the icons of the vehicle, the arrow indicating the activated control unit (rear) and the antenna with the reception symbol.



- If necessary test the sensors; depending on the detection zone, the display will show the relative icons of the zones and the distance from the obstacle.



- Once testing is completed, modify setting of parameter 14, disengage reverse and turn ignition key "OFF".

### **13.0 - WARRANTY CONDITIONS**

This product is guaranteed to be free from defects in workmanship for a period of 24 months from the date of installation reported on this warranty, in compliance with the 1999/44/CE Warranty Directive (L. D. N° 24 of the 02/02/2002).

Please fill-in entirely the guarantee certificate included in this booklet and **DO NOT REMOVE** the guarantee label from the device.

The warranty will become void if labels are missing or torn, if the installation certificate is not fully compiled or if the enclosed sale document is missing.

The warranty is valid exclusively at authorized Gemini Technologies centers.

The manufacturer declines any responsibility for eventual malfunctions of the parking sensors or any damage to the vehicle electrical system due to improper installation, use or tampering.

The parking system is strictly a parking assist device, it should not be considered to be a safety device for any purpose.

### **14.0 - WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) DIRECTIVE**

The present device does not fall within the scope of Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) as specified in art. 2.1 of L.D. no. 151 of 25/07/2005.





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