

# Original BMW Accessories. Installation Instructions.



## Park Distance Control (PDC) Rear Retrofit BMW 3 Series Sedan (E90)

**Installation instructions only valid for U.S. cars.**

**Retrofit kit No.** 66 21 0 395 009 Park Distance Control (PDC) Rear Retrofit

### Installation time

The installation time is 1.0 hours, but this may vary depending on the condition of the car and the equipment in it.

### Important information

These installation instructions are primarily designed for use within the BMW dealership organization and by authorized BMW service companies.

In any event the target group for these installation instructions is specialist personnel trained on BMW cars with the appropriate specialist knowledge.

All work must be completed using the latest BMW repair manuals, circuit diagrams, servicing manuals and work instructions in a rational order using the prescribed tools (special tools) and observing current health and safety regulations.

**To avoid unnecessary extra work and/or costs, if any installation or function problems occur, after a brief troubleshooting session (approx. 0.5 hours), contact the following:**

- 1. Either your national subsidiary or your regional office**
- 2. The Support team via the Aftersales Assistance Portal (ASAP) using the optional technical parts support application.**

**Specify the chassis number and the part number of the installed retrofit kit and give a precise description of the problem.**

Do not archive the hard copy of these installation instructions since daily updates are made by ASAP.

Pictograms



Denotes instructions that draw your attention to dangers.



Denotes instructions that draw your attention to special features.



Denotes the end of the instruction or other text.

Subject to technical modifications.

**Print out section 9 of these installation instructions and give it to the customer.**

**Installation information**

Ensure that the cables/lines are not kinked or damaged as you install them in the car. The costs incurred as a result of this will not be reimbursed by BMW AG.

Additional cables/lines that you install must be secured with cable ties.

If the specified PIN chambers are occupied, bridges, double crimps or twin-lead terminals must be used.

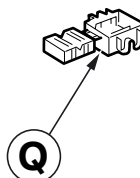
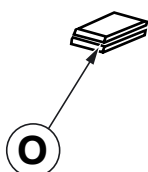
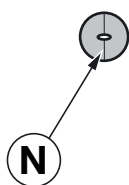
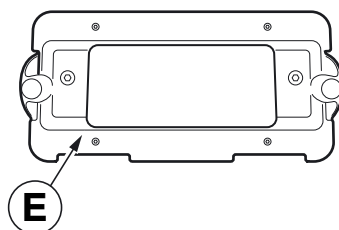
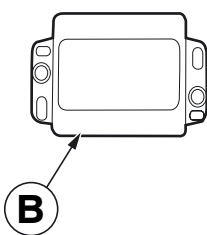
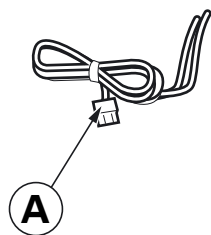
**Special tools required**

None

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## 1. Parts list



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### Legend


- A** Wiring harness
- B** Control unit
- C** Signal generator
- D** Signal generator cable
- E** License plate holder

- N** 2-piece rubber grommet
- O** Velcro strip (2x)
- Q** Miniature connector (4x)
- S** Cable tie 200 x 3.6 mm (20x)

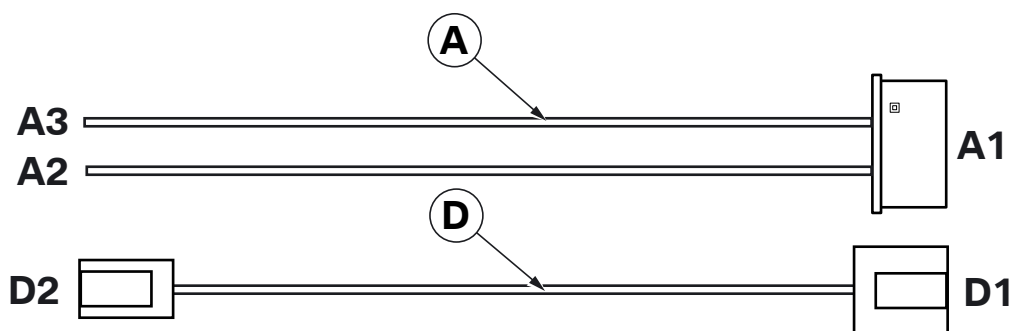


The other parts in the universal retrofit kit are not required ◀

## 2. Preparations

	TIS No.
Conduct a brief test	---
Disconnect the negative pole of the battery	12 00 ...
<b>The following components must be removed first of all</b>	
 Observe the safety instructions for working on cars with airbag systems. ◀	---
Trunk floor trim	51 47 101
Right trunk wheel arch trim	51 47 161
Trim for the tailgate	51 49 000
Roof pillar trim, rear right (C pillar)	51 43 251
Trim for additional brake light	---

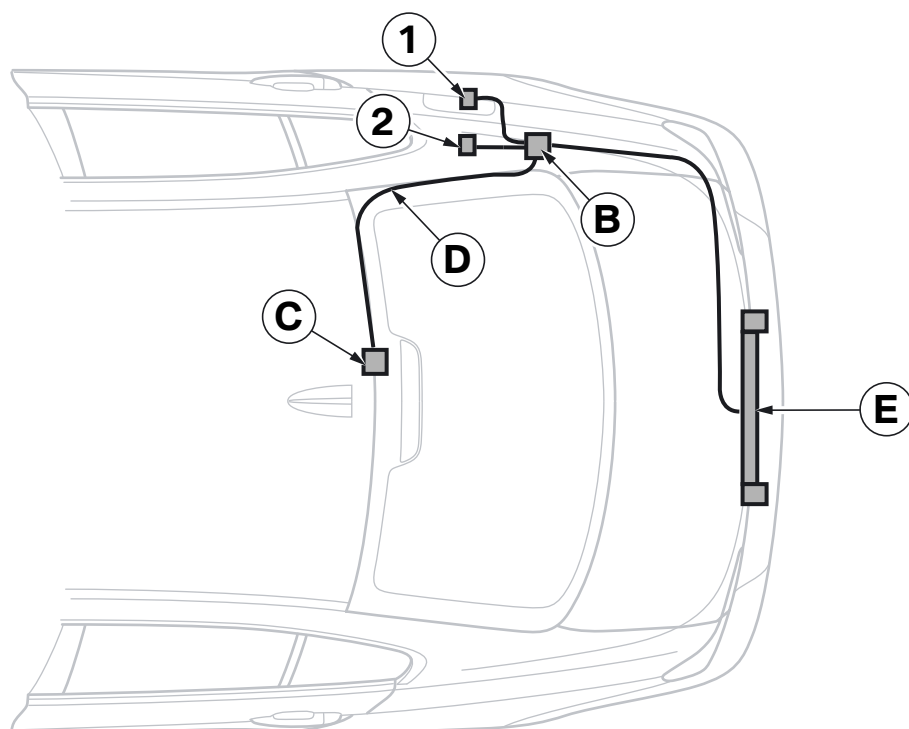
### 3. Connection diagram



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Branch /Item	Designation	Signal	Cable color / Cross-section	Connection location in the car	Abbreviation / Slot
A	Wiring harness	---	---	---	---
A1	Black 4-pin socket casing	---	---	On control unit <b>B</b>	---
A2	Cable open	Terminal 31	SW 0.35 mm <sup>2</sup>	Using miniature connector <b>Q</b> to joint connector terminal 31 on the right-hand side of the trunk	X498
A3	Cable open	RFS terminal	RT 0.35 mm <sup>2</sup>	Using miniature connector <b>Q</b> to the black/blue cable on the standard wiring harness on the right-hand side of the trunk	---
D	Signal generator cable	---	---	---	---
D1	Black 4-pin socket casing	---	---	On control unit <b>B</b>	---
D2	Black 2-pin socket casing	---	---	On signal generator <b>C</b>	---

## 4. Installation and cabling diagram

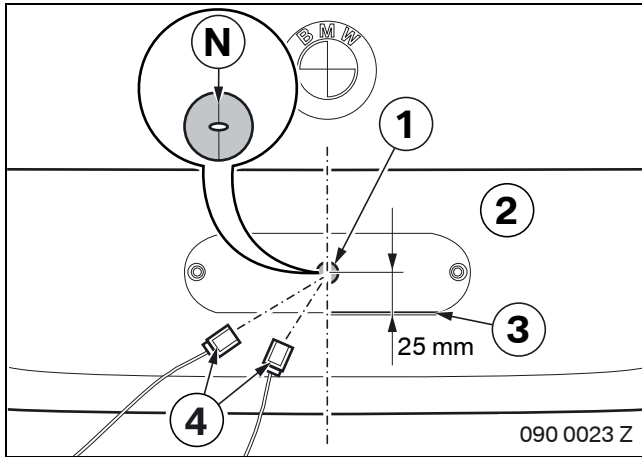


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### Legend

- B** Control unit
  - C** Signal generator
  - D** Signal generator cable
  - E** License plate holder
- 
- 1** RFS terminal tap on the standard wiring harness
  - 2** Terminal 31 tap on joint connector **X498**

## 5. To install the license plate holder



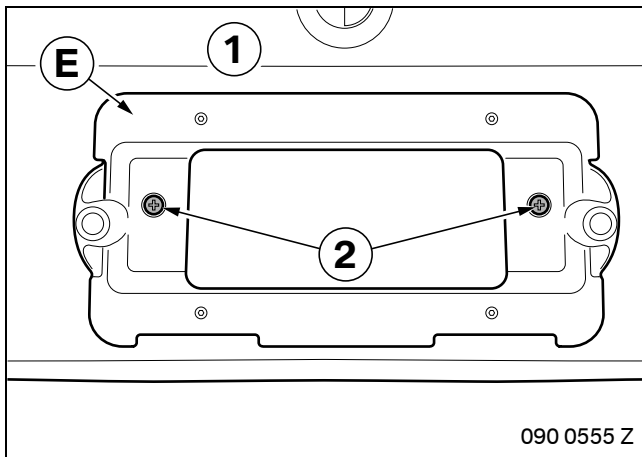
Mark the hole (1) on the tailgate (2) as follows:

- In the middle
- Approx. 25 mm from the bottom edge (3)

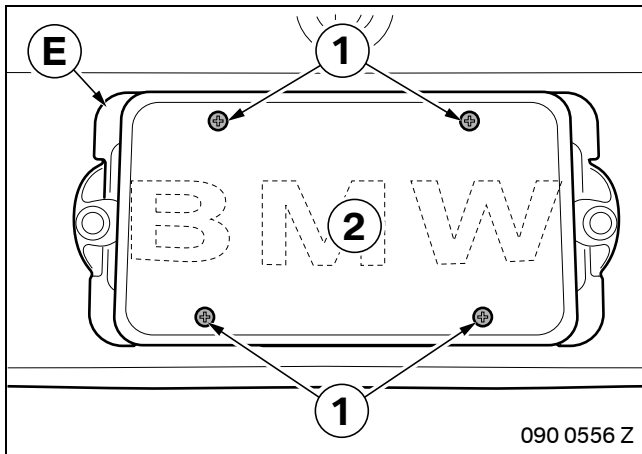
Drill through the tailgate (2) at the marked position (1) using a 12 mm step drill bit.

Complete the anti-corrosion treatment process.

Route the sensor cable (4) through rubber grommet **N** and insert rubber grommet **N** in the tailgate (2).



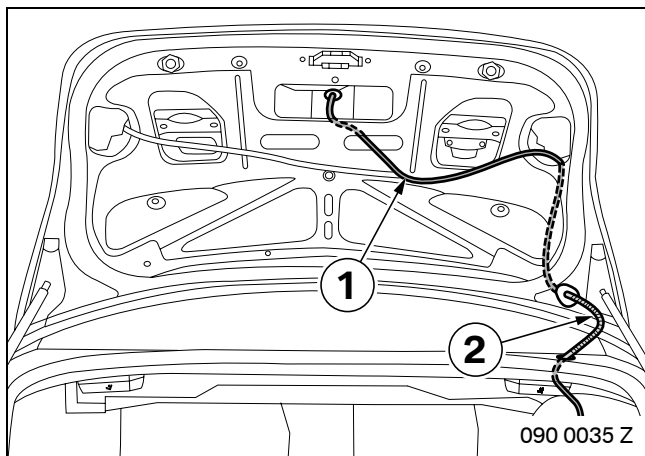
Secure license plate holder **E** to the tailgate (1) using the license plate screws (2).



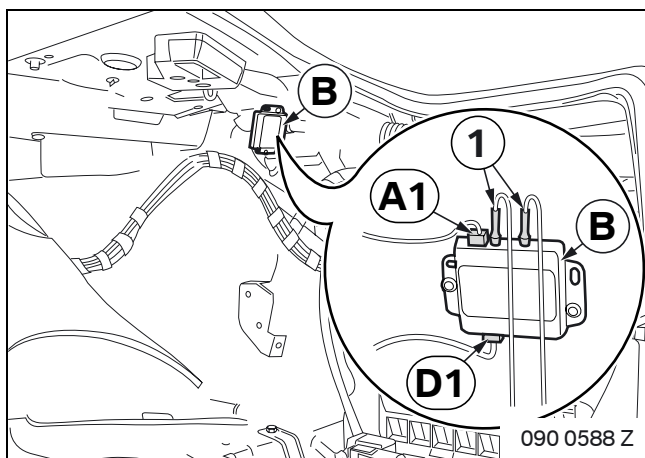
Secure the license plate (2) to the license plate holder **E** using the license plate screws (1).



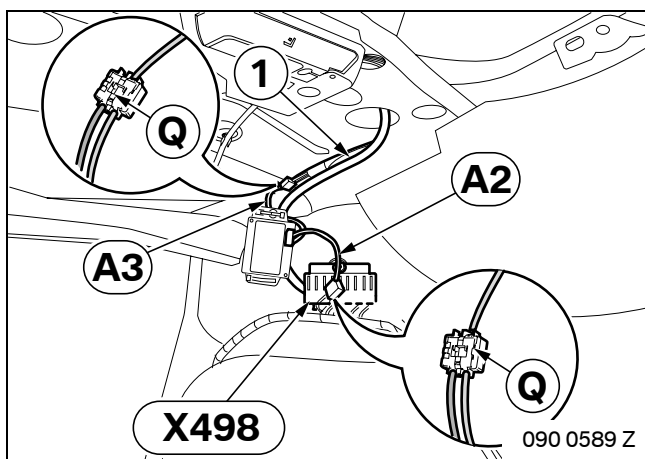
## 6. To install and connect the wiring harness



Route the sensor cable (1) along the standard wiring harness through the grommet (2) into the right-hand side of the trunk.



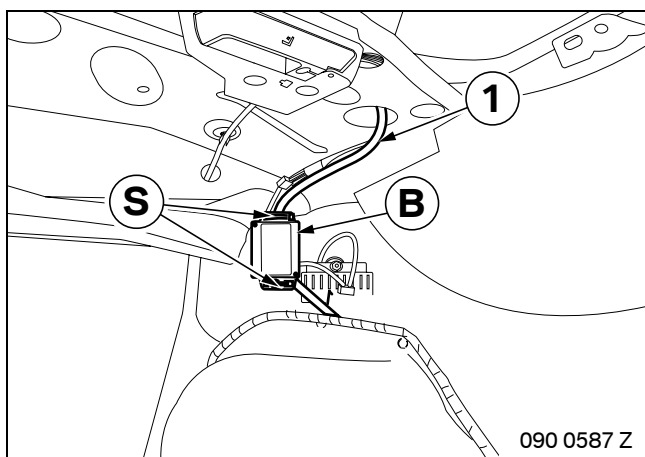
Connect the sensor cable (1), branch **A1** (black 4-pin) and branch **D1** (black 2-pin) to the control unit **B**.



Connect branch **A3**, red cable, to the wiring harness (1) leading to the tailgate as follows:

- Find the black/blue cable
- Check that the terminal RFS reversing signal is active
- Connect branch **A3** using a miniature connector **Q**

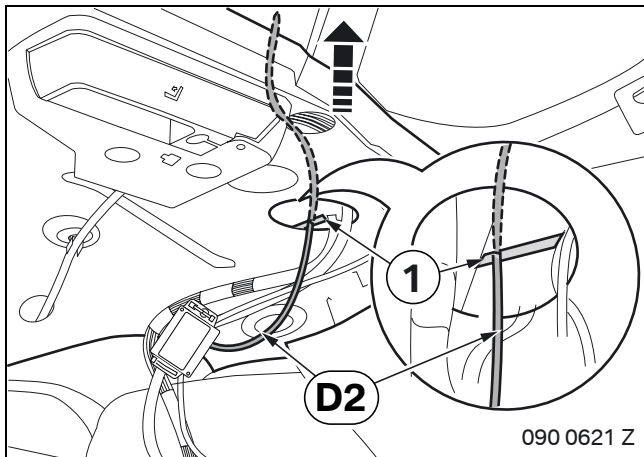
Route branch **A2**, black cable, to joint connector **X498**, brown cable, and connect it with a miniature connector **Q**.



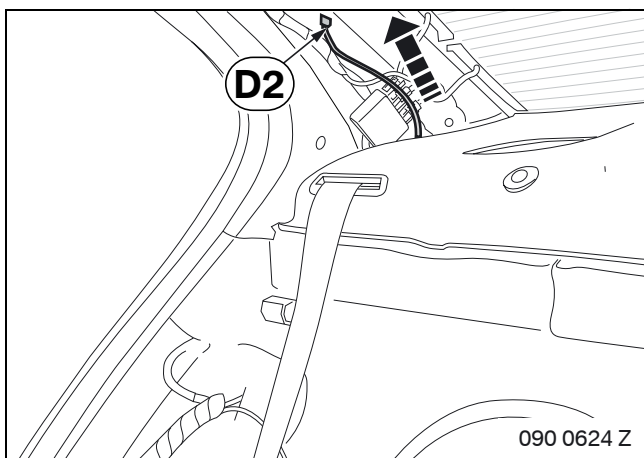
Do not attach control unit **B** to main cable B+, red cable. Otherwise there may be malfunctions due to magnetic fields. ◀


Secure control unit **B** to the standard wiring harness (1) on the right-hand side of the trunk using cable ties **S**.

## 6. To install and connect the wiring harness

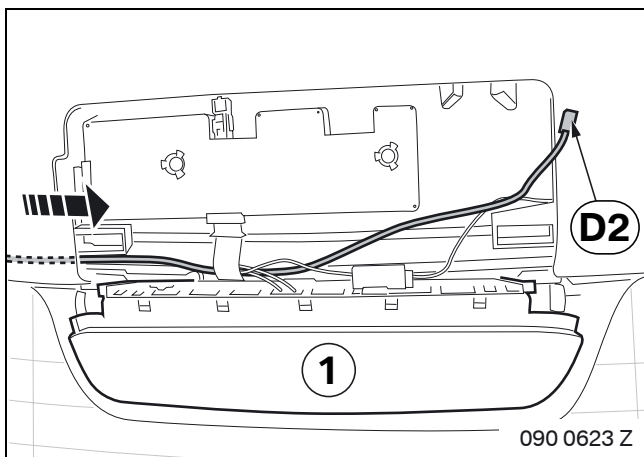


Route branch **D2** (black 2-pin) through the existing opening (1) to the C pillar.

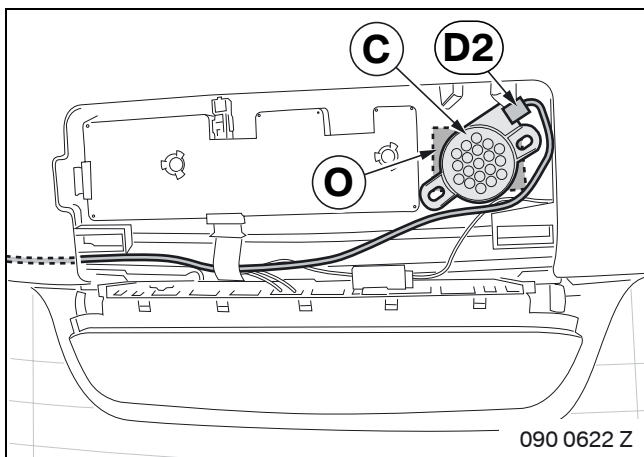


 The airbag function must not be adversely affected by the cable routing. ◀

Route branch **D2** (black 2-pin) along the standard wiring harness to the headlining.



Route branch **D2** (black 2-pin) under the headlining to the additional brake light (1).



Connect branch **D2** (black 2-pin) to signal generator **C**.

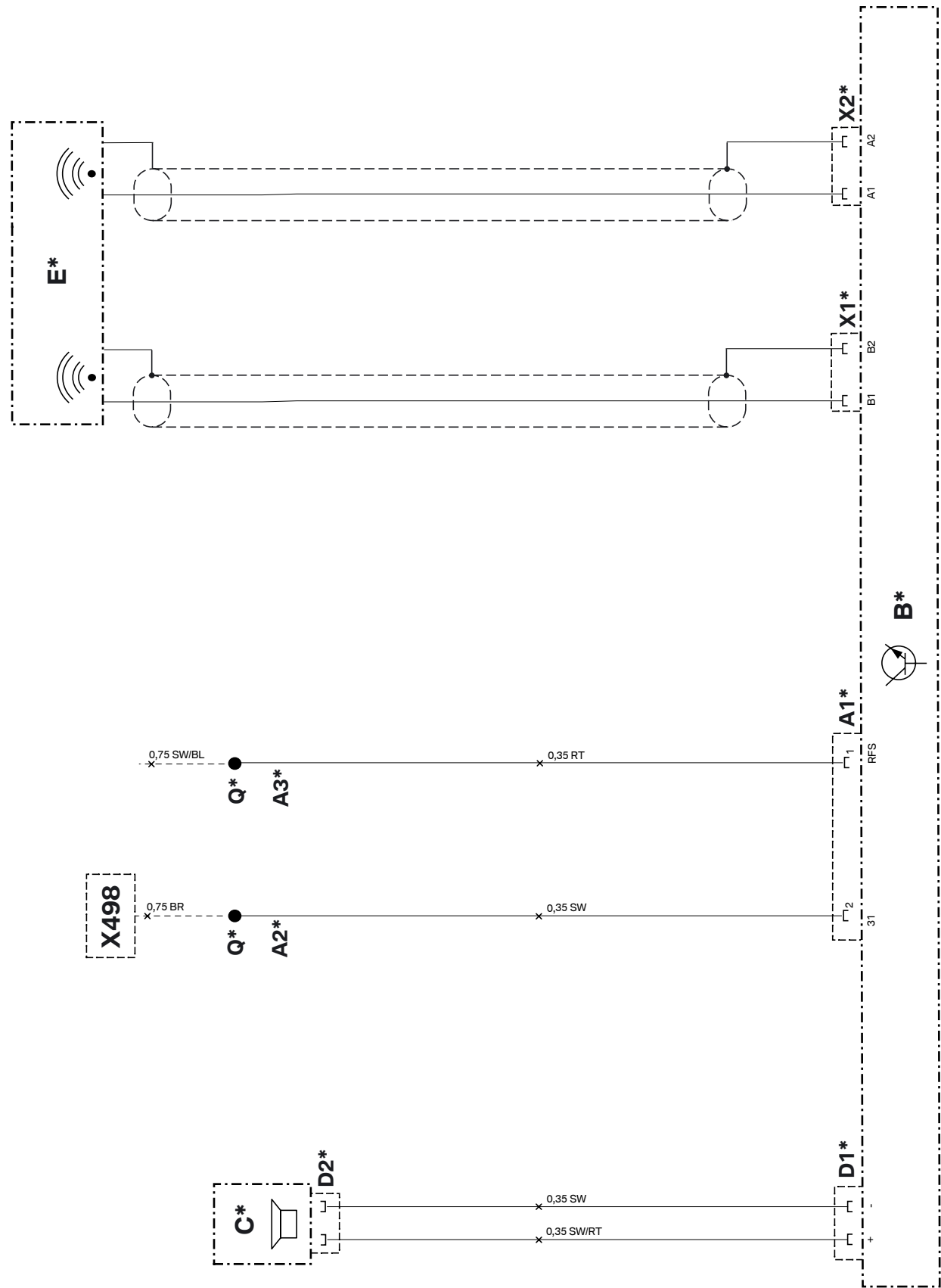
Affix signal generator **C** using Velcro strips **O**.

## **7. Concluding work and coding**

This retrofit system does not require coding.

- Connect the battery
- Conduct a brief test
- Perform a function test of the PDC (see section 9)
- Re-assemble the car

8. Circuit diagram



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## 8. Circuit diagram

### Legend

<b>A1*</b>	Black 4-pin plug
<b>A2*</b>	Terminal 31 pick-up
<b>A3*</b>	Terminal RFS pick-up on black/blue cable of standard wiring harness
<b>B*</b>	Control unit
<b>C*</b>	Signal generator
<b>D1*</b>	Black 4-pin plug
<b>D2*</b>	Black 2-pin plug
<b>E*</b>	License plate holder
<b>Q*</b>	Miniature connector
<b>X1*</b>	Black 2-pin plug
<b>X2*</b>	Black 2-pin plug
<b>X498</b>	Terminal 31 joint connector

All the designations marked with an asterisk (\*) apply only to these installation instructions or this circuit diagram.

### Cable colors

BL	Blue
BR	Brown
RT	Red
SW	Black

## 9. Customer Information for Operating the Rear Park Distance Control (PDC)

**Print out this customer information and give it to the customer.**

Pictograms



Denotes instructions that draw your attention to dangers.



Denotes instructions that draw your attention to special features.



Denotes the end of the instruction or other text.

### Function

The PDC is a system which assists you when parking and maneuvering.

Ultrasonic sensors record the position of obstacles behind the car and inform the driver by means of acoustic signals.

Acoustic signals start when an obstacle is detected by the PDC.

The closer the car approaches the obstacle, the more rapid the acoustic signals. A permanent signal sounds when the distance to the obstacle reaches 30 cm/1 ft.

### Operation

The PDC is switched on automatically as soon as reverse gear is engaged when the ignition is turned on.

The PDC is switched off automatically as soon as the ignition is turned off or reverse gear is disengaged.



Judging obstacles is exclusively the responsibility of the driver, who must drive attentively and carefully in order to avoid damaging property and injuring people. ◀



As with all ultrasonic distance measuring systems, signals may be triggered incorrectly or individual objects may not be registered sufficiently.

Due to the car, blind spots may occur in front of the bumper and at its lateral ends. Obstacles in these blind spots may not be registered sufficiently, or not at all.

The limits of what can be physically measured may be reached when encountering very low obstacles (lower than 10 cm/0,33 ft), thin obstacles (thinner than 6 cm/0,2 ft) or pointed obstacles. Such obstacles might not be registered sufficiently under certain circumstances.

To guarantee that the PDC operates properly, you should drive slowly when parking and maneuvering and also keep the ultrasonic sensors free from snow, ice or dirt.

Strong wind, falling snow or rain can trigger incorrect signals. ◀