

Installation Instructions Product-Ident: 75190














doorboards with soundsystem, BMW Z4 E89 Roadster

Technical Details:

| | |
|------------------------------|--|
| Car Features: | 2-doors, also for models with doorairbag, electrical top, electrical window controls |
| Model/Year: | E89 (05.2009) |
| Setup-Advice: | To reach the best performance, the setup of the radio (Bass, Loudness etc.) should be null or neutral. |
| recommended amplifier power: | from 2x 200 - 300 Watt / 4 Ohm |



Parts list:

| | |
|-----|---|
| 1x | Doorboards (right+left) BMW Z4 E89 roadster, covered |
| 1x | grills (right+left) BMW Z4 E89 Roadster, cover: acoustic fabric |
| 2x | XE 26 - Neodymium-Dome Tweeter ø 26mm (1") |
| 2x | XM 110 - High-End-midrange driver, ø 100mm (4"), incl. adapter ring |
| 8x | XM 165 - Low midrange driver, power woofer ø 165mm (6,5") |
| 1x | serial wire set for woofers (right+left) |
| 1x | 3-way frequency crossover (right+left) BMW Z4 - part no. 75190 |
| 1x | Hardware bag, BMW BMW Z4 E89 Roadster - part no. 75190/71190 |
| 2x |  flat head srew M4 x 20 |
| 2x |  flat head srew M4 x 25 |
| 2x |  flat head srew M4 x 30 |
| 3x |  flat head srew M4 x 40 |
| 2x |  flat head srew M4 x 50 |
| 1x |  flat head srew M4 x 60 |
| 19x |  hex nut M4 |
| 4x |  sheet metal nut 3,9mm |
| 4x |  sheet metal screws, black, 3,9 x 13 |
| 2x |  spax screw 5 x 50 |
| 4x |  Velcro strip à 2,5 cm (reserve) |
| 8x |  washer 12mm |
| 13x |  washer 20mm |

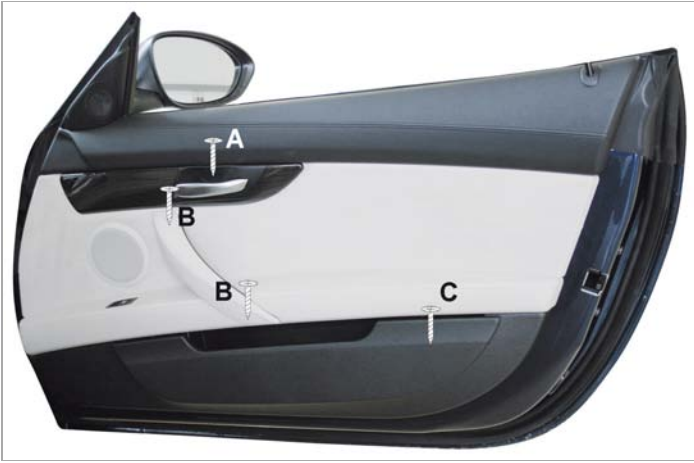
Garantee:

We grant a manufacturers guarantee of 2 years starting from the date of purchase of the doorboard or sound system from the dealer. Within this guarantee period to our choice we either repair or replace free of charge all defects due to material or workmanship. Exempt from this guarantee are damages due to improper use, wear and tear or damages which have to be led back on wear or interventions by third parties. The guarantee does not cover subsequent damages or such defects that only insignificantly impair the value or the usability of the doorboard/sound system. The guarantee does not cover damages due to external influences. Doorboards with additional or wrong assembly drill holes cannot be returned. These are damages to the doorboard which cannot be repaired again.

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1 Disassembly of the door card

1.1 Roll down window completely.



1.2 Pry out the plug behind the door latch lever and remove the screw underneath **(A)**

1.3 Co-driver's side:

pry off the cover of the door handle and unscrew the two screws **(B)** underneath.

1.4 Driver's side:

Lever out the switch module and unscrew the two screws underneath.

1.5 Remove the screw **(C)** in the pocket tray.

1.6 Unclip the door card all around.

1.7 Remove the Bowden pull wire of the door latch lever.

1.8 Unplug switch for electric window control.

1.9 Disconnect the original loudspeaker plugs and dismount the original speaker.

1.10 Dismount the pocket tray.

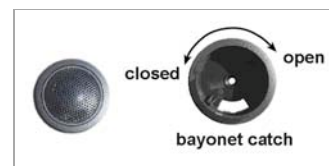
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2 Tweeter installation mirror triangle - original mount without mounting device

2.1 Dismount the mirror triangle and original tweeter. Unplug the connecting cable (the original connecting cables and the tweeter will not be used any more)

2.2 Remove the tweeter out of the catch:

---> bayonet catch: turn to the right and pull out of the holding device - by means of the screw.
(no more need of the catch)



2.3 Back side of the mirror triangle:

Remove the inner ring of the tweeter frame with a rotary tool and adapt it to the JEHNERT tweeter.

2.4 Install the JEHNERT tweeter and affix it all around with hot melt adhesive.



2.4 affix with hot melt adhesive

2.5 Adapt the JEHNERT-tweeter cable with the speaker cable (1,5-4 qmm)
- length of cable up to where the crossover is installed in the doorboard.

🔊 In order to avoid vibration noise insulate all cables with insulating tape e.g.

2.6 Reinstall the mirror triangle.



2.3 adjust the edge

3 Installation of the woofer in the leg room, side lining

3.1 Dismount the side lining in the leg room.

3.2 The original speakers are being replaced by the JEHNERT Power Woofer:

3.3 Disassemble the original speakers and unplug connecting cables.

3.4 Connect the JEHNERT woofer with speaker cable (1,5 - 4 qmm).
Lead the speaker cable to the mount of the crossover in the doorboard.

3.5 Affix the JEHNERT woofer with the original screws all around.

3.6 Reinstall the side lining.



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4 Installation of the midrange speaker - original place

4.1 Detach the protection foil in the car door on the lower side, wrap it upwards and affix with adhesive tape.



4.2 Dismount the original midrange and the adapter plate.

4.3 Cut the adapter housing on the backside up to the half (see fig. right) and adapt it to the JEHNERT midrange.

4.4 Mount the JEHNERT midrange with the original screws on the adapter plate.



4.5 Adapt the JEHNERT-midrange cable with the speaker cable (1,5-4 qmm)
- length of cable up to where the crossover is installed in the doorboard.


4.6 Reinstall the adapter plate with JEHNERT midrange on the car door.



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5 Handling of door card: Doorboard alignment

- 5.1** Place the door card on a plane surface.
- 5.2** Dismount the loudspeakers attached to the doorboard for transport protection --> retain the screws for later assembly.
- 5.3** Place the doorboard without speakers on the door card and align it:

 **Only precise alignment of the doorboards with the door card warrants optimal fit!**



Reference points for alignment:


Reference point 1+2:

Adjust the "nose" on the end of the doorboard on the notch of the door card.

Reference line 3+4:

The upper edge of the doorboard is parallel to the armrest.
 The lower edge of the doorboard is parallel to the lower edge of the door card.

6 Marking fastening points

 Use the doorboard as template in order to mark fastening points and cut-outs and **precisely align to the fixing points of the door card!**

6.1 Mark the fixing points - premounted in the doorboard:

driver's side: 1-3

co-driver's side: 1-4

Pressing the doorboard onto the door card leaves a visible impression of the screws - the fastening positions of the door card.

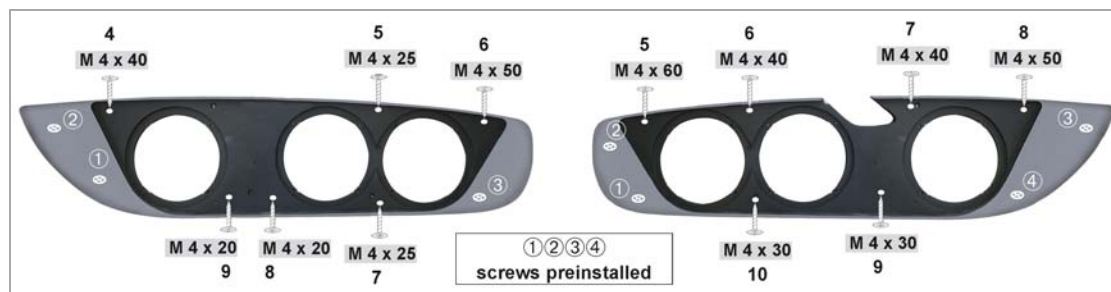


Marking of the pre-drilled fastening points:

driver's side: 4-9

co-driver's side: 5-10

Use a thin awl to set the marks on the door card.

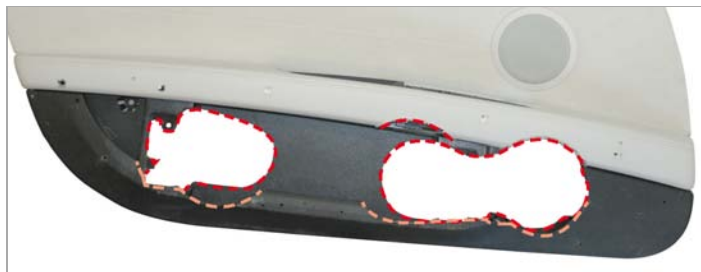


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7 Handling of door card cut-outs

The cut out behind the speakers are providing the required full volume of the car door:

7.1 Mark the cut outs for the woofers on the door card. Enlarge them approx. 1cm (= approx. outer diameter of the woofers)



Example

⚠ IMPORTANT! Check all cut-outs marked:

🔧 The fastenings of the doorboard must have to be screwed with the door card!

🔧 The fastenings of the door card must not be removed!

7.2 Remove the doorboard again and cut out the positions marked on the door card. Use a compass saw.

⚠ ATTENTION! Please observe the wiring harness!

7.3 Drill the bore holes for the **M4-screws** according to the marks set before
 - use a **4mm drill and enlarge to 7-8mm**



Example

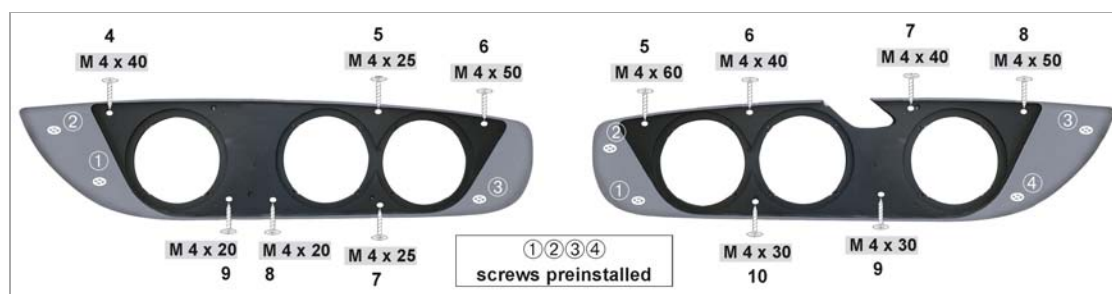


Example

8 Fastening doorboard

8.1 Screw in the M4-screws supplied with. Affix the doorboard to the door card.
 Screw all M4-screws only hand-tight . Secure all screws with washers and nuts.

TIP: Treat the screw thread with a liquid for screw-in type fuse. (Speaker vibrations may loosen the screws after some time).



Example


8.2 Check again for precise fit and tighten the screws.

🔧 All cutting edges of the doorboard must fit to the door card snugly all around without gap!

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9 Adaptation amplifier - crossover circuit / Insulation of the car doors

9.1 Carefully remove the moisture protection foil.

9.2  **Insulation of the car doors** - Important tips against vibration-noise (see attached installation recommendation)

9.3 Adaptation amplifier - crossover circuit:
 Lead 1x speaker cable (1,5 - 4 qmm) from amplifier to the crossover circuit:
 mount of crossover circuit: car door / behind the doorboard



9.4  **In order to avoid vibration noise secure all cables with insulating tape e.g.**

9.4 Reinstall the moisture protection foil to fit precisely.

9.5 For the bass performance the speakers are using the volume of the car door:
 Place the door card on the car door as template and mark the position for the woofers on the moisture protection foil. Take away the the door card and cut out (**U-form see fig.**) behind the woofers. Stabilize the lateral cutting edges in order to avoid vibration noise (e.g. use a adheasing tape).



10 Insulation of the back side of the door card

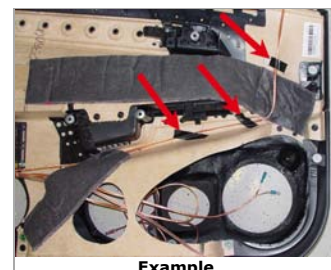
10  **In order to avoid vibration noise insulate all cables with insulation tape e.g.**

10.1 Insulate the backside of the door card e.g. with self-adhesive vibration suppressing insulation fleece
 see attached installation recommendation.

⚠ ATTENTION / danger ! No insulation behind the side-airbags!

🔧 IMPORTANT:

No insulation material behind loudspeaker, door latch lever and fastening points of the door card!



Example

11 Installation of the door card onto the car doors

11.1  **Check up length of the screws and bolts:**

In order to prevent damages of mechanic parts of the car doors, please check once again the length of all bolts and screws on the back side of the door card! No touch with any mechanic parts of the car doors! (please shorten if necessary)

11.2 Fit the door card in contrary order of succession.

11.3 Important - additional fastening point:

Screw the spax screw 5 x 50 supplied with and washer through the door card in the inner door metal (see fig.)



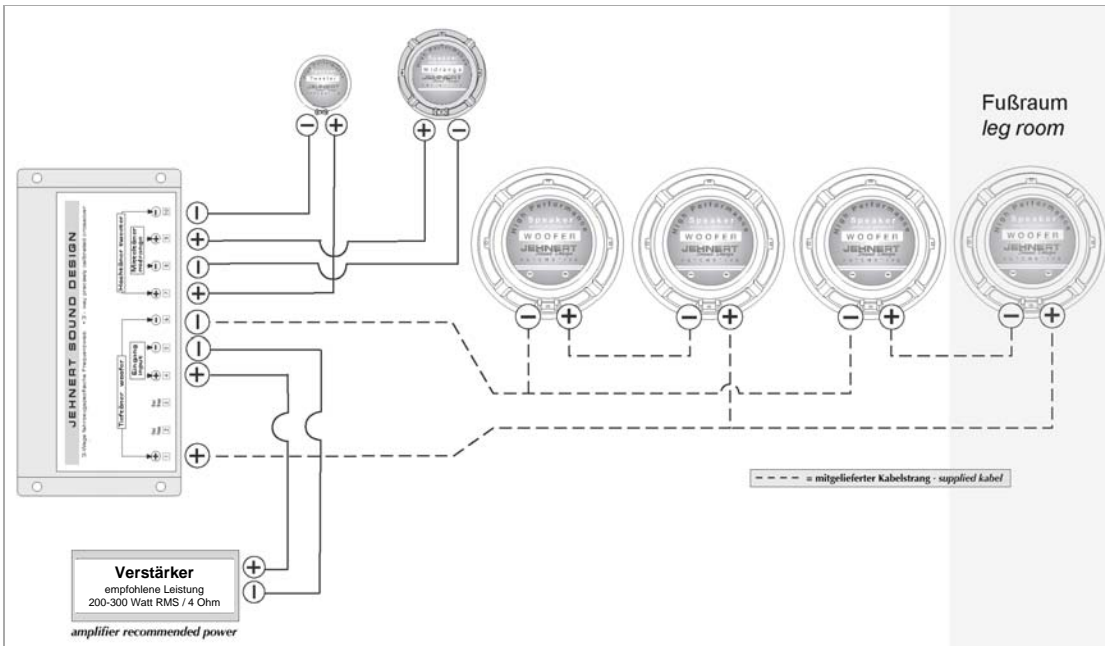
🔧 Final inspection after installation of the door card:

Please check all functions of the operating elements such as seat adjustment, opening of the glove box, window winder etc.

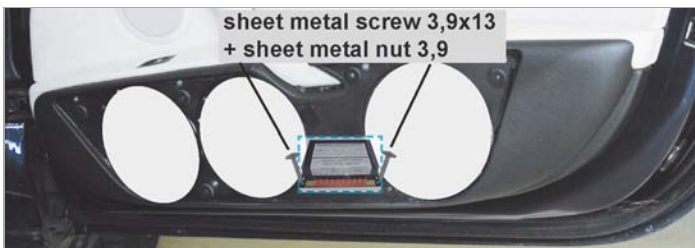
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12 Installation of crossover circuit / speaker connection

12.1 Precable crossovers - see wiring diagram.



12.2 Insert the crossover – without housing – in the hollow space between doorboard and door card (see fig.), secure with two sheet metal screws (3,9x13) and nuts (3,9) and insulate with fleece.



⚠ *Important:

Protect the sheet bar against humidity and observe that the sheet bar does not touch any metal parts – danger of short circuit!

12.3 Connect all speakers to the crossover circuit according to the wiring diagram: Series connection in parallel - cables supplied with -

12.4 Insert woofer.

12.5 Notice: You should check the polarity of all woofers after having connected them to the crossover circuit with a 9 volt battery (input cable on the side of the amplifier):

pole of the crossover circuit input + to + of a 9 Volt battery
pole of the crossover circuit input - to - of a 9 Volt battery

All woofers must move uniformly!

👉 Wrong polarity of a woofer can totally equalize the bass sound!

13 Installation of the doorboard grills

13.1 Carefully press grill with Velcro fasteners onto the doorboards:

👉 IMPORTANT: The Velcro fasteners stick very strongly!

Therefore only press the grills to the doorboard at the end of the installation of the doorboard and the soundsystem!

13.2 📖 Further tips see attached installation recommendation.