

Installation Instructions Product-Ident: 45140






doorboards with soundsystem, BMW 3 series E30, all models

Technical Details:

Car Features:	2-doors, 4-doors, electrical window controls
Model/Year:	E30 (11.1982 - 05.1993)
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 100 - 200 Watt / 2 Ohm



Parts list:

1x	Doorboards (right+left) BMW 3series E30 convertible/sedan/tourin/M3 -2+4 doors, covered
1x	grills (right+left) BMW 3series E30 sedan/touring/m3 - 2+4 doors, cover: acoustic fabric
4x	XM 160 - Low midrange driver, power woofer ø 160mm (6")
2x	XM 110 - High-End-midrange driver, ø 100mm (4"), incl. adapter ring
2x	XE 26 - Neodymium-Tweeter ø 26mm (1") incl. mounting device, Hex nut M4, washer ø 12mm
1x	3-way frequency crossover (right+left) BMW E 30 convertible/sedan/touring - part no.45140
1x	Hardware bag, BMW E 30 convertible/sedan/touring - part no.45140/41140
2x	flat head srew M6 x 20
2x	hex nut M8
2x	 sheet metal nut 3,9mm
2x	 sheet metal nut 4,2mm
2x	 sheet metal screws, black, 3,9 x 13
6x	 spax screw 5 x 40
2x	 Velcro strip à 2,5 cm (reserve)

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 Turn off the door pin (**A**).

1.3 Pull the frame (**B**) of the door catch out of the arresting device (in direction of arrow)

1.4 Press the switch of the rear-view mirror (driver's side) and the grill (co-passenger's side) on the door handle (**C**) out of the catch and unplug the cables. Remove the screw underneath.

1.5 Unscrew the 2 screws under the door handle (**D1 + D2**).

1.6 Loosen the door handle out of the catch.

1.7 Loosen the connection between door handle and tray (move the handle forward away out of the groove).

1.8 Unclip the door card. Start from the bottom and move it upward away.

1.9 Dismount the tray.

Replacing the window winding motor:

1.10 Carefully remove the moisture protection foil.

1.11 Remove the bottom screw of the window lifting motor and replace it by the screw M6x20 supplied with. Clamp in the nut attached between door sheet metal and motor (the motor "moves" 5mm in direction of the middle of the door).

This measurement does not effect the function of the window mechanism but is important to grant a smooth installation of the doorboard.

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2 Tweeter installation mirror triangle -with housing

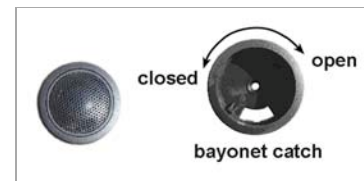
2.1 Insert the tweeter in the housing --- >bajonet catch: turn to the left

2.2 Position the tweeter with housing on the mirror triangle.

angle of radiation:

driver's side to the co-driver

co-driver's side to the driver



Remove the tweeter (by means of the bajonet catch). Mark the position for the screws and the opening for the cables on the mirror triangle.

2.3 Dismount the mirror triangle.

2.4 Drill the opening for the cable in the mirror triangle (use a 5mm drill).

2.5 Lead the connecting cable JEHNERT tweeter through the opening behind the mirror triangle downwards and adapt 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.

2.7 Install the housing with the sheet metal screw 3,9 x 13 on the mirror triangle.

2.8 Insert the tweeter.

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3 Handling of door card: Doorboard alignment

3.1 Place the door card on a plane surface.

3.2 Dismount the loudspeakers attached to the doorboard for transport protection --> retain the screws for later assembly.

3.3 Door handle:
Straighten the steel edge on the bottom edge with pliers.

3.4 Hang in the steel edge on the door handle in the notch of the doorboard.
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 line 1:

The edge of the doorboard is flush with the edge of the door handle.

Reference line 2

The bottom edge of the door handle fits exactly the relief of the doorboard.


Reference line 3:

The upper edge of the doorboard runs on the design line of the door card.

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4 Handling of door card

4.1 Use the doorboard as template in order to mark fastening points and cut-outs:

 **Precisely align the doorboard to the fixing points of the door card.**

5 Treatment of the inner door metal

5.1 Make the cut out for the midrange (see fig.) on the inner door metal (use a compass saw).



5.2 Treat the cutting edges with rust protection.

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

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

6.2 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

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

6.3 Reinstall the moisture protection foil to fit precisely.

6.4 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 adhesive tape)



7 Insulation of the back side of the door card

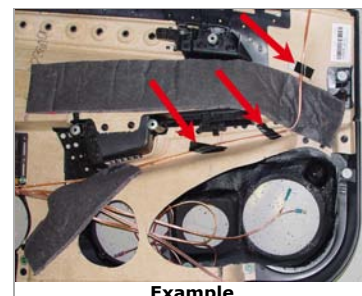
 **In order to avoid vibration noise insulate all cables with insulation tape e.g.**

7.1 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!



8 Installation of the door card onto the car doors

8.1  **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)

8.2 Put the door card into the upper sealing of the car door.

8.3 Fit the door card in contrary order of succession.

 **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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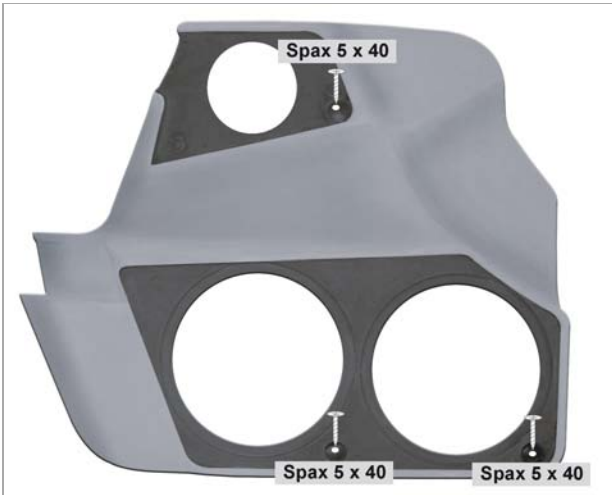
9 Fastening doorboard

9.1 Hang in the steel edge on the door handle in the notch of the doorboard and align the doorboard exactly on the door card.

9.2 Screw in the Spax screws - through the doorboard and the doorcard into the inner door metal.

⚠ Important!!!

Please observe the wiring harness when screwing the front Spax screw.

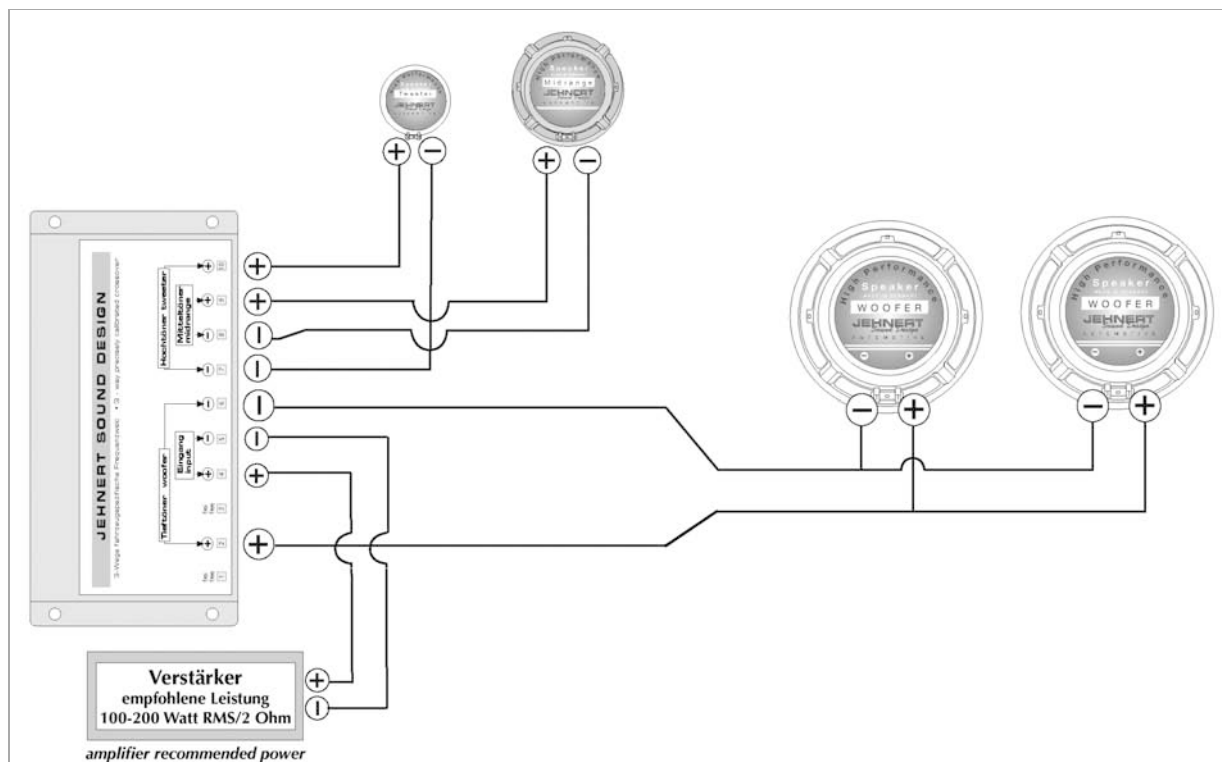


🔧 All cutting edges of the doorboard must fit to the door card snugly all around without gap!

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10 Installation of crossover circuit - speaker connection

10.1 Precable crossovers - see wiring diagram.



10.2 Install crossover in the hollow space between doorboard and door card (see fig., behind or above the 2nd woofer) and ensure precise fit.

10.3 Connect all speakers to the crossover circuit according to the wiring diagram.

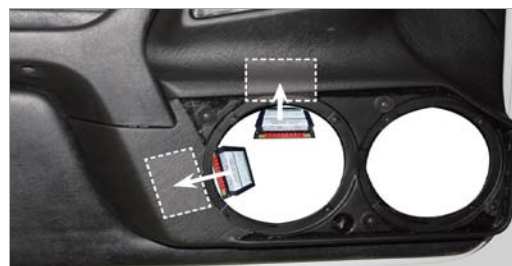
10.4 Insert woofer and midrange.

10.5 **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!**



11 Installation of the doorboard grills

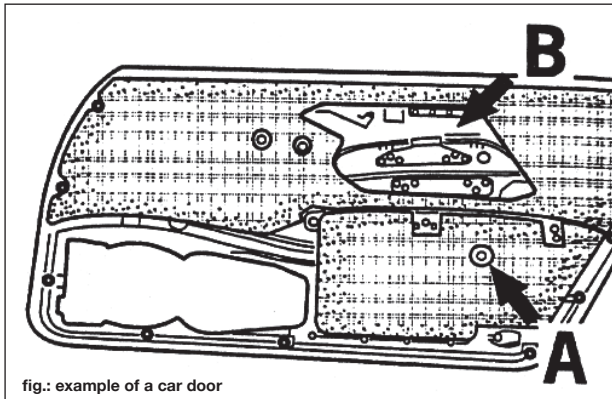
11.1 Carefully press grill with Velcro fasteners onto the doorboards:

👉 **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!

11.2 👉 **Further tips see attached installation recommendation.**

Insulation of the door lining



Attention / Danger !!!
No insulation behind
the side-airbags (fig. "B")



Important:
No insulation material behind
 - loudspeaker
 - door latch lever
 - drill ahole for the installation clip (fig. A)

Important tip:

the use of woofer in the door lining may cause vibrations which lead to annoying rattle noises in the car door

Preventive measurements against vibration noise:

- use our self-adhesive insulation fleece (art.no.: 27000) or a foam material for the backside of the door lining (see fig. above) or
- stabilize the backside of the door lining by means of a special material (Glass Fibre Filler or stiffening material)
 important: keep the cut-outs for the door-airbags and speakers open
- affix the *backside of the inner door metal with self-adhesive asphalt mats (see fig. *)
- by knocking on the car door, vibrations caused by mechanic parts (e.g. Bowden pull wire etc.) and wiring harness may be found out. Cover these parts with foamed material, felt or something like that
- cut off overlapping cable tie (rattle noise)
- adhere felt or foamed material under the original wiring harness

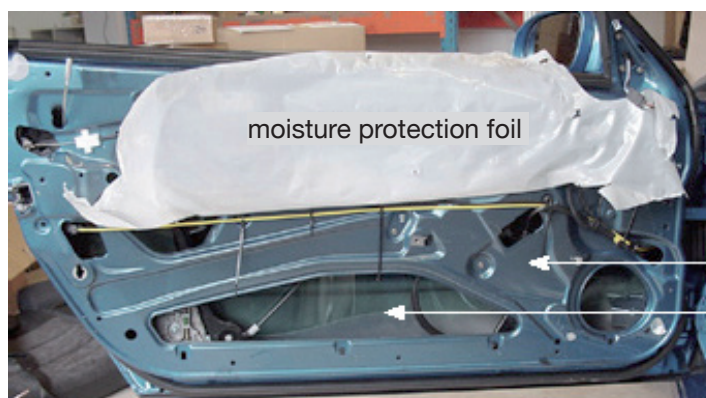


fig.: example of a car door

Installation of the speaker's grill

Precisely align and carefully press grill into the Velcro fasteners.

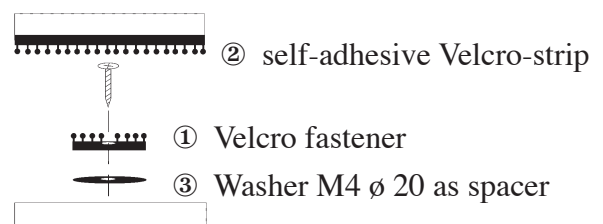
 **The Velcro fastener makes a crackling sound when it is closed correctly.**

Our Tip:

If the panel cannot be pressed on completely at some points. . .

Cause: the special form at these points and the resulting differences in material cross section of the grill.

Solution: the distance can be levelled out with spacers ③ under the Velcro disc.
(Spacers included with the screw kit)



6. Removing the grills:

The Velcro fasteners stick together very strongly! The grills can be removed anytime by carefully lifting them off. Please, avoid any way of forceful yanking at the grills. It could break!

Self-help and fault diagnosis

The following notes serve to help troubleshoot and eliminate faults or malfunctions on your own. If the following measures are not effective, please call us. **Info-Hotline Tel. 0049-7158/95699-0**

What can it be if ...	possible cause/ solution
...it doesn't sound right	<ul style="list-style-type: none"> · wrong polarity on the subwoofers (see „speaker connection“) · crossover circuit attached wrong (see „wiring diagram speaker connection“) · door lining and moisture protection foil not cut out (see. „installation of the door lining“ and „installation of the speakers grill“) · amplifier doesn't have enough power (see. „technical details“) · amplifier connection
...it doesn't fit correctly	<ul style="list-style-type: none"> · door panel customization (see „handling of the door lining“) · installation of the panels on the door lining
.....grills do not hold	observe notes (see „installation of the speakers grill“)
vibrations	observe notes (see „insulation of the door lining“)