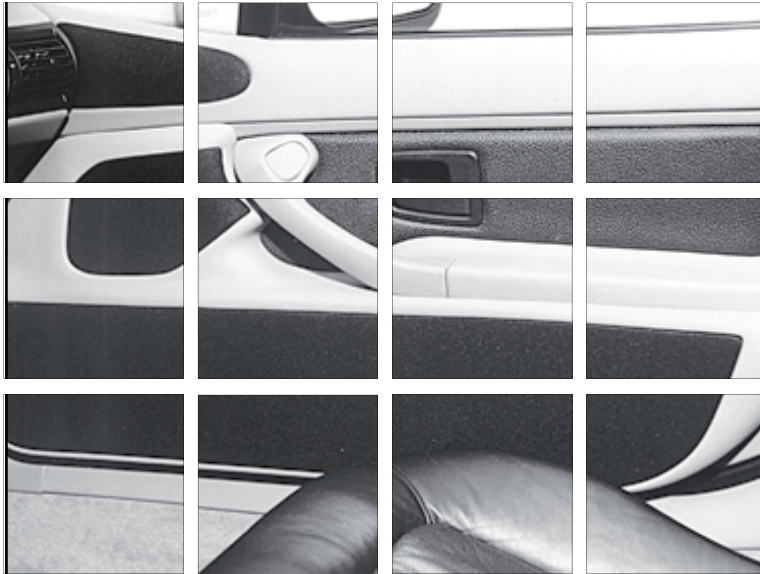


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## *Installation instructions*



Roadster / Coupé / M 3

**BMW Z 3**

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**Please follow the installation instructions  
"step by step"  
and check the package contents**

**Particularly important notes contain the following remarks:**



## Packing list 75149










### Packing unit

door panel, covered (right / left)
Speaker grill, covered (right / left)
Tweeter 26 mm (with perforated sheet metal, hex nut M4, washer Ø 12 mm)
Midrange 100 mm (each mounted on the panel with 4 Sheet metal-screws)
Woofer 165 mm (each mounted on the panel with 4 Sheet metal-screws)
Crossover (right / left)
standard cables for subwoofer (right / left)

### Check list

2	<input type="checkbox"/>
2	<input type="checkbox"/>
2	<input type="checkbox"/>
2	<input type="checkbox"/>
8	<input type="checkbox"/>
2	<input type="checkbox"/>
2	<input type="checkbox"/>

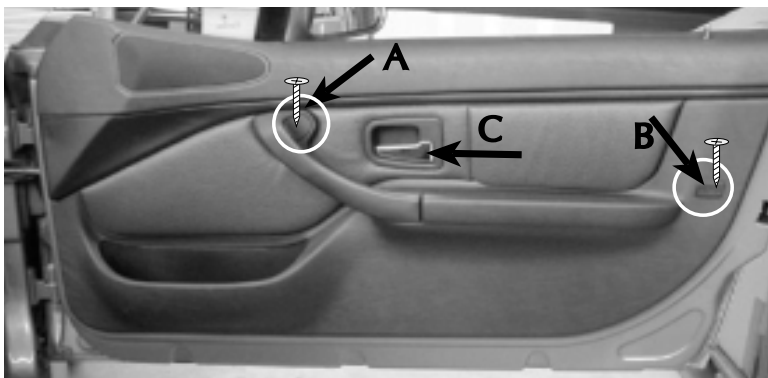
### Hardware bag:

 Hexagon head screws, M 4 x 30
 Hexagon head screws, M 4 x 40
 Hexagon head screws, M 4 x 50
 Spax screws 5,0 x 70
 Spax screws 5,0 x 80
 Hex nut M 4
 Washer Ø 20mm (incl. 4x as spacer for Velcro fastener)
 Washer Ø 12mm
 Velcro strip à 2,5 cm (reserve)

6	<input type="checkbox"/>
4	<input type="checkbox"/>
6	<input type="checkbox"/>
4	<input type="checkbox"/>
2	<input type="checkbox"/>
16	<input type="checkbox"/>
18	<input type="checkbox"/>
8	<input type="checkbox"/>
4	<input type="checkbox"/>

The product was carefully packed and checked for its completeness. If you find anything missing, damaged or defective, please notice our guarantee services on the back of these assembly instructions.

## 1 . Disassembly of the door lining



**A = switch for rear mirror  
(driver's side)**

**B = airbag grill**

**C = door latch lever**

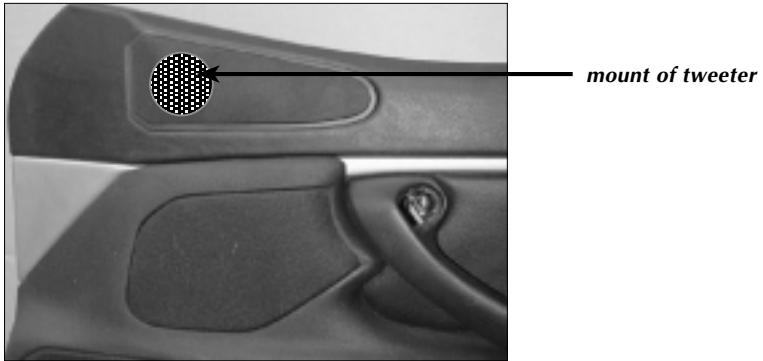
1. roll down window completely.
2. carefully push the switch of the rear-view mirror (driver's side) and the grill on the door handle (co-passenger's side) out of the catch.  
Remove the Torx-screw underneath and disconnect the cables.
3. for door-airbags: push off the airbag grill (B).  
Unscrew Torx-screw underneath.
4. remove the plastic frame round the door latch lever (C) to the door hinge and take it away
5. carefully remove the plastic clips on the door-lining edges and move the door-lining forward away from the inner door metal



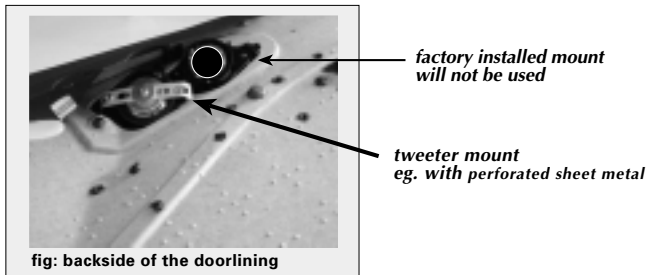
**IMPORTANT:** Please, avoid any way of forceful yanking at the door lining.  
It could break!

6. remove the Bowden pull wire of the door latch lever
7. disconnect the original loudspeaker plugs of the tweeter.

## 2. installation of tweeter



- 2.1. dismount factory installed tweeter
- 2.2. install JEHNERT tweeter in the large mount opening beside the factory installed mount. Screw in washers and hex nut M4 on the perforated sheet metal and the original fastening points.



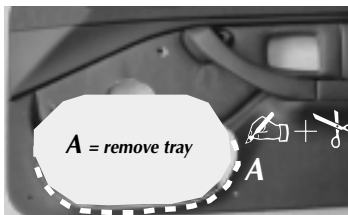
- 2.3. Connect tweeter and lead cable (1,5 - 4 mm <sup>2</sup>) to the cross-over (length: crossover mounted behind the panel or alternatively under the dashboard - see page 10) .


### 3. Panel alignment

- 3.1. Place the door lining on a plane surface.
- 3.2. Dismount the loudspeakers attached to the panel for transport protection.  
Retain the screws for later assembly.


Place the panel without loudspeakers and grill on the door lining and align it:

- 3.3. remove factory installed tray acc. to fig line (A) by means of a compass saw.  
check for precise fitting and  
remove overlapping parts of the  
door-lining



 **All cutting edges of the panel must fit to the door lining snugly all around without gap**

#### Reference points for fitting:

 **Only precise alignment of the panel with the door lining warrants optimal fit.**

#### 3.4. Reference line 1:

the lateral front panel edges and the upper panel edge has to be aligned flush to the inlet edge of the door lining

#### 3.5. Reference line 2:

the lower edge of the panel is parallel to the lower edge of the door lining.  
The back upper panel edge is flush under the extending part of the door handle.

#### 3.6. Reference line 3:

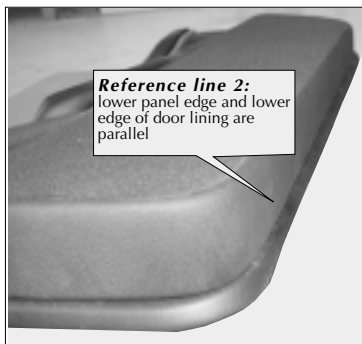
the short lateral panel edge (on the midrange) has to be aligned flush to the door handle ( see fig.).

**Reference line 1:**  
lateral and upper panel edges are flush to the inlet edges of the door lining

**Reference line 3:**  
door handle flush to panel edge





**Reference line 2:**  
lower panel edge and lower edge of door lining are parallel




## 4. Handling of door lining / Panel installation - Fastening

1. use the precisely aligned panel as template in order to mark fastening points 1- 8:

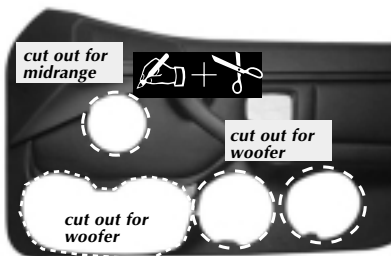
• **mark the fastening points 1-8 (do not use marks A + B, see fig. below):**   
use a thin awl to set the marks on the door-lining.

2. draw the speaker cut-outs on the door-lining. 

3. remove the panel again.

Cut out the speakers' outlines marked before by means of a compass saw.   
(see fig.)

4. use a 6mm drill for the screws according to the marks set before



 **Important – fastening points 1 + 6:**

as the door lining is padded at this part first cut out these 2 points with a carpet knife – material may be damaged.


5. **carefully screw in the M4 screws**, supplied with. **Please keep exactly to the succession 1-8 ( see fig.).** Affix the door build to the door-lining, screw all M4 screws only hand-tight.

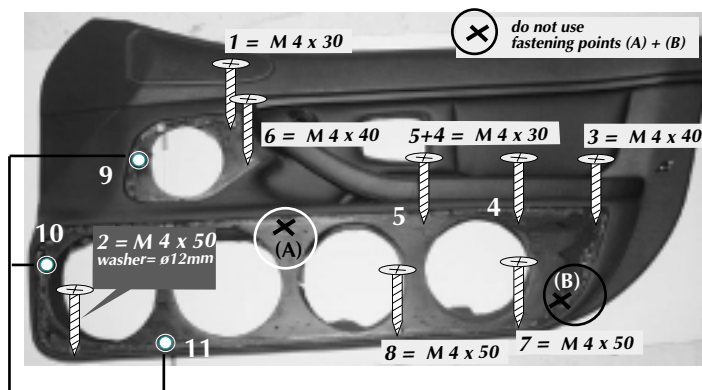
Secure all screws with the washers and nuts.

 **only fastening point 2 :** Washer  $\varnothing$  12mm

**fastening point 1, 3 - 8 :** Washer  $\varnothing$  20mm

6. check again for precise fitting and tighten screws.

 **All cutting edges of the panel must fit to the door lining snugly all around without gap**



fastening point 9-11: = funnel shaped fastening points for screws, tighten the screws on final installation of the complete door lining (see page no. 9).

## 5. Loudspeaker cables

5.1. carefully remove the moisture protection foil

5.2. **Important tips against vibration-noise (s.page.8)**



***It is absolutely necessary to insulate the car doors***

5.3. install cables:

***installation of crossover - behind the door panel (see page 10):***

lead 1 speaker cable (1,5 - 4mm <sup>2</sup>) from amplifier through door pin/ wiring harness into the car door.

- TIP:**
- close the car door
  - open the boot / hood
  - door pillar – passage for plastic cable : loosen the upper screw
  - open the car door
  - door pillar- passage for plastic cable: loosen the lower screw

Or alternatively:

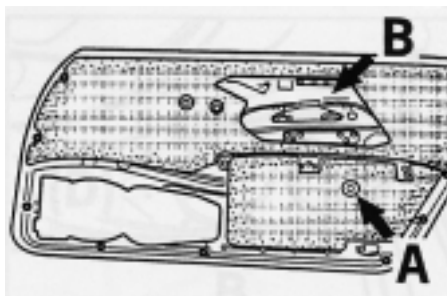
***Installation of crossover under the dashboard (see page no.10):***

Lead 3 speaker cable (1,5 - 4mm <sup>2</sup>) from amplifier for woofers midrange and tweeter into the car door.

5.4. reinstall the moisture protection foil



## 6. insulation of the door lining



**attention – danger !!**  
**No insulation behind the side-airbags (fig. B)**



**Important:**  
**No insulation material behind**  
- loudspeaker  
- doorbolts  
- (fig. A): drill a hole for the installation clip

fig.: backside of the door lining – insulation with our article no.: 27000



### **Important tip:**

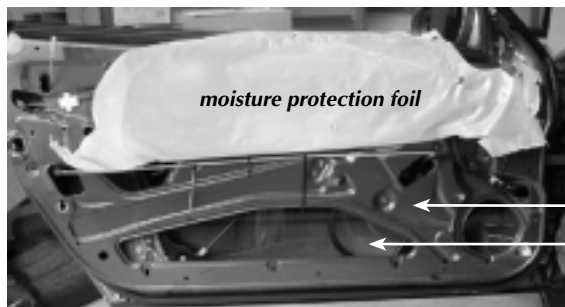
the use of 4x165mm mid-woofer /side may cause vibrations which lead to annoying rattle noises in the car door

### **some helpful tips:**

- use the self-adhesive insulation fleece (art.no.: 27000) 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




**moisture protection foil**

**front side of inner door metal**

**\* door metal outside = back side of the inner door metal**

## 7. installation of the door-lining onto the the car doors

### 7.1. 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 lining! No touch with any mechanic parts of the car doors ! (please shorten if necessary).

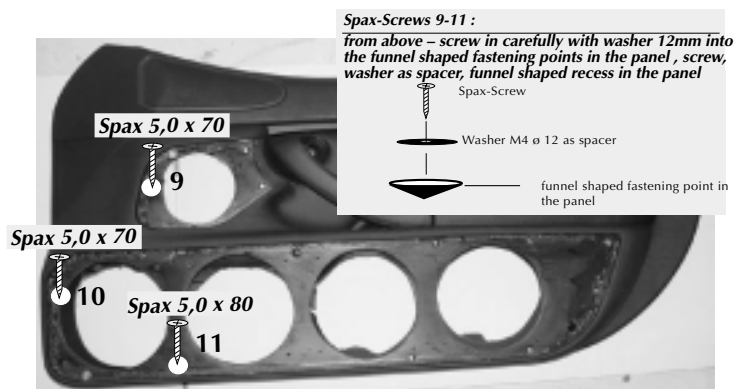
### 7.2. put the door-lining into the upper sealing of the car door

**tip:** grease the upper door sealing with a residue-free lubricant before

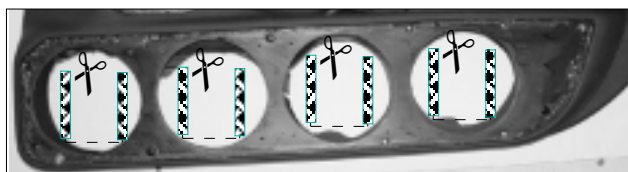
### 7.3. fit it in contrary order of succession as described on page no. 3

### 7.4. **important: Spax screws 9-11 with washers as spacer:**

**carefully tighten the screws** with  $\varnothing$  12mm washer, each from the front side of the door lining to the funnel shaped fastening points 9-11 of the panel, through the door lining directly to the door metal. The washer serves as an important spacer and prevents from screwing in too deep the door metal.



### 7.5. cut out the moisture protection foil (u-form) and stabilize the lateral cutting edges in order to avoid vibration noise ( e.g. use a packing tape)



## 8. Crossover circuit - Speaker connection



**Final inspection after panel installation:**  
please check all functions of the operating elements such as seat adjustment, opening of the glove box, window winder etc.

8.1. precable crossovers - see fig. page 11.

8.2. installation of crossover either

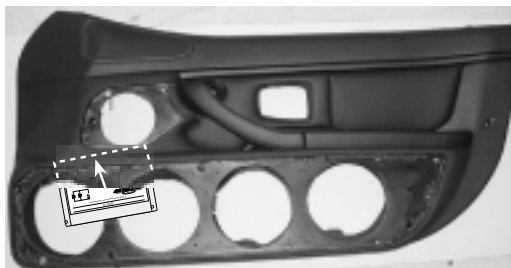
- behind the dashboard

**or alternatively**

- behind the panel - between the two front woofers and the above midrange - without housing, covered with foamed plastic\*, insert the crossover and check for precise fit



**\*Important: protect the sheet bar against humidity and observe that the sheet bar does not touch any metal parts – danger of short circuit!**



8.3. Insert subwoofer and midrange.

8.4. connect all loudspeakers to the crossover circuit with the included standard cables for subwoofer to the crossover circuit:  
parallel wiring see diagram on page 11.

**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 subwoofers must move uniformly!**

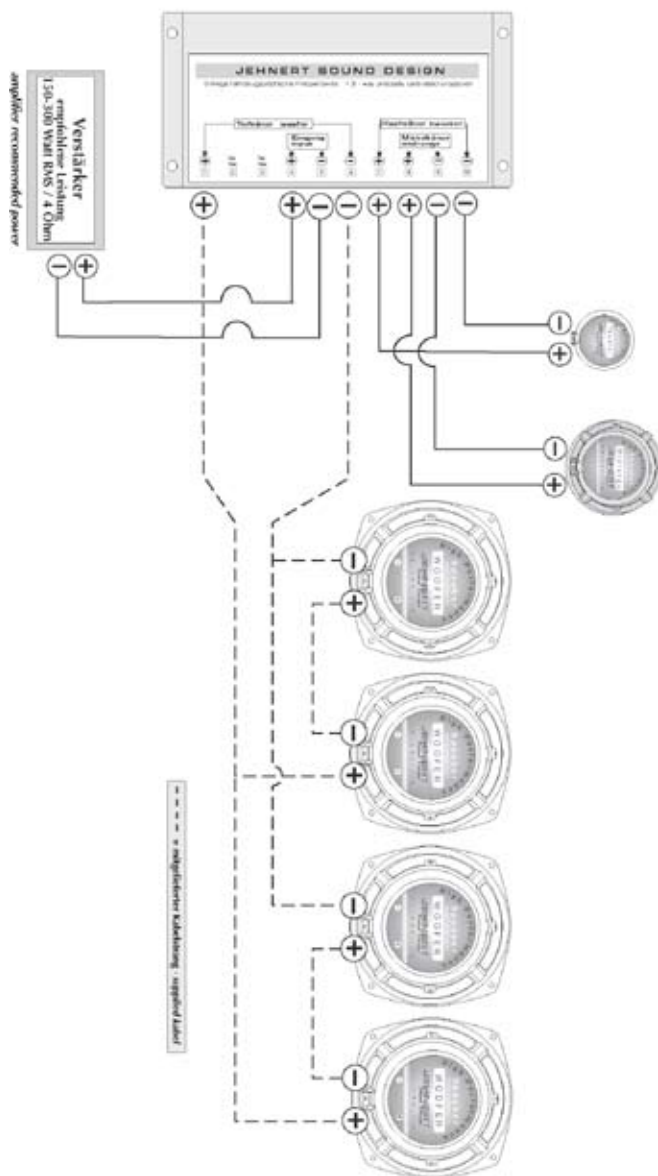


**Wrong polarity of a subwoofer can totally equalize the bass sound!**

## Loudspeaker wiring diagram

Connect all loudspeakers and crossover circuits:

### *Circuit diagram of 3-way crossover / 4x subwoofer*



## 9. Installation of the speaker's grill :

9.1. Precisely align and carefully press grill into the Velcro fasteners.



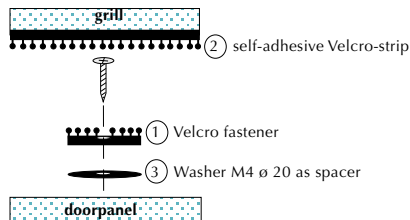
***The Velcro fastener makes a crackling sound when it is closed correctly.***

### 9.2. 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)



### 9.3. **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!

## Technical information

Equipment:	electric window control
Model/ year :	Roadster / Coupé / M3
Insulation:	<b><i>is absolutely necessary !</i></b>
Note about setting:	To obtain optimal stereoscopic sound, all settings on the radio (bass, treble, loudness etc) should be set to zero or neutral.
Recommended amplifier power :	from 2x 200 - 360 Watt RMS / 4 Ohm
Metal cutwork :	not necessary
Cut-outs for loudspeaker/ each side	4 x 144mm (max.outer dimensions subwoofer 165 mm) (max.installation depth subwoofer 65 mm) <b>DIN-Euro-Norm-standard basket ø 6"</b> made it fit 1 x 92mm (max.outer dimensions midrange 100 mm) (max.installation depth midrange 50 mm)
Sound-System:	3-ways 4 x 165 mm subwoofer/ side 1 x 100 mm midrange / side 1 x 26 mm tweeter / side car-customized crossover network max.continuous Watt/RMS: 2 x 300/500Watt car specific frequency range: 49-22.000 Hz Total impedance: 4 Ohm

We reserve the right to make technical changes, as well as development.

## ***It is our pleasure to help you!***

### ***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.

<b>What can it be if ...</b>	<b>possible cause/ solution</b>
<b>...it doesn't sound right.</b>	wrong polarity on the subwoofers (→ page 10) crossover circuit attached wrong (→ page 11) Doorlining and moisture protection foil not cut out (→ page 7+ 9) amplifier doesn't have enough power( → page 13) amplifier connection
<b>...it doesn't fit correctly.</b>	door panel customization (→ page 6) installation of the panels on the door lining (page 7)
<b>.....grills do not hold.</b>	observe notes on → page 12!
<b>vibrations</b>	insulation, see notes on page → 8

## ***Guarantee***

We grant a manufacturers guarantee of 2 years starting from the date of purchase of the door panels 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 panels/sound system. The guarantee does not cover damages due to external influences.



Panels with additional or wrong assembly drill holes cannot be returned. These are damages to the panel which cannot be repaired again.