

VW T6.1 California

Sound package

Assembly instruction

Status: 24.10.2023

Art. No. 69420-82**JEHNERT**
Sound Design
A U T O M O T I V E**3-way cab system T6.1 California****Subwoofer for mounting under passenger seat and amplifier****Packing List:**

2x XE 26 - neodymium tweeter ø 26mm
2x XE 80 - high-end midrange driver, ø 80mm
1x midrange-tweeter module (right + left) VW T6.1, cover: imitation leather
2x XM 165 - low-midrange driver „Power-Woofer“ ø 165mm
incl. adapter rings
2x 3-way crossover VW T6.1 2-piece - part no. 65420
1x digital 5-channel amplifier High Power incl. 2,2m connection cable
1x Subwoofer 17022 incl. 1m connection cable
2x Mounting template for A-pillar

1x mounting kit subwoofer:

4x mounting angle 21,5x3x1cm
8x self-tapping screw Torx 4,8 x 22
4x countersunk screw M4 x 16 (hexagon)
4x Polystop nut M4
4x washer ø 12mm
2x felt 40cm

Mounting kit woofer

8x M4 x 25 screws
8x washer 4mm
8x M4 polystop nuts
16x raised countersunk head screws 3,9 x 16

Mounting set midrange module

8x M4 x 30 screws
8x washer 4mm
8x M4 polystop nuts

**Optional accessories:**

- Vehicle-specific radio connection cable for factory VW radio (glove box)
- Remote control to control the subwoofer and to control the sound setup
- Bluetooth function integrated in the amplifier
- Rocker switch

Installation note:

To avoid vibration noise, secure all wiring harnesses with insulating tape or similar.

Radio Adjustment Notice:

To achieve the best sound, all settings on the radio (bass, treble, loudness, etc.) should be set to zero or neutral.

Warranty:

As the manufacturer, we warrant these sound systems for 2 years from the date of purchase from the dealer. Within this warranty period, we will, at our option, repair or replace free of charge all defects that are based on material or manufacturing defects. Excluded from the warranty are damages caused by improper use or installation, wear and tear or interventions by third parties. The warranty does not cover consequential damage or defects that only insignificantly impair the value or usability of the sound systems. A warranty obligation is not triggered in the case of damage caused by external influences. Systems with additional or incorrect mounting holes are excluded from exchange. These are damages to the components that cannot be repaired.

1. Disassembly of the door panels

1.1. Lower the window pane completely.



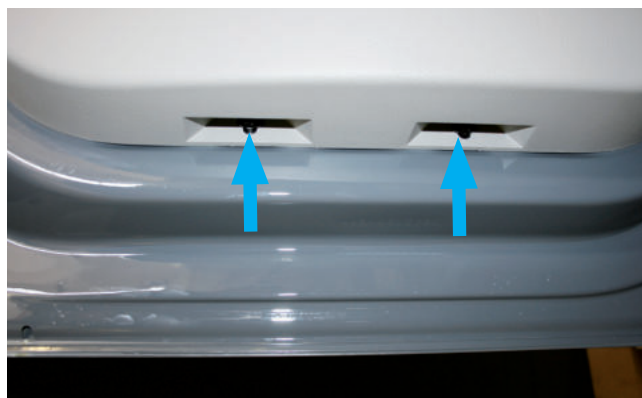
1.2. Unclip door handle



1.3. Switch unit, starting at the door lock switch, lever out (example illustration)



1.4. Remove the screw in the center of the door panel.



1.5. Lower edge of the door trim:
Unscrew 2x plastic rivets

1.6. Starting from the bottom, unclip the door trim by pulling and lift upwards.
(Clamping strip on the lower edge of the window is still attached).

1.7. Unclip the door release bowden cable - pull the cable sheathing on the opening lever by 1 cm - then unhook.

1.8. Disconnect the „alarm light, window regulator and mirror adjustment“ connector.



1.9. Disconnect original speaker terminal and remove factory woofer (drill out and remove fastening rivets)
->> make sure that the metal pieces do not fall into the inner area of the door.

Tip: stick adhesive tape behind the rivets).

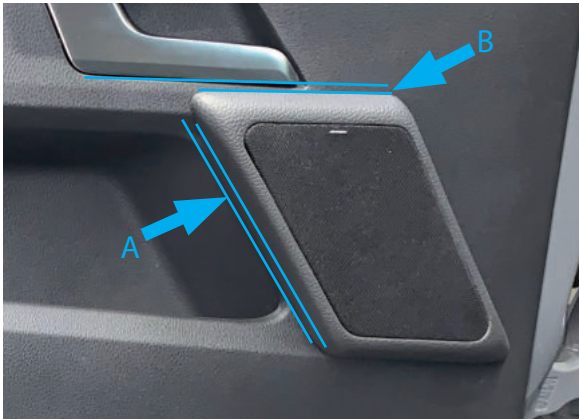
Alternatively, loosen the original screws and store them for later assembly.



2. Mounting mid-high module on the door panel

2.1. Place the door panel on a flat and padded work surface.

Tip: to protect the door trim against scratches, mask the area to be worked on all around with adhesive tape.

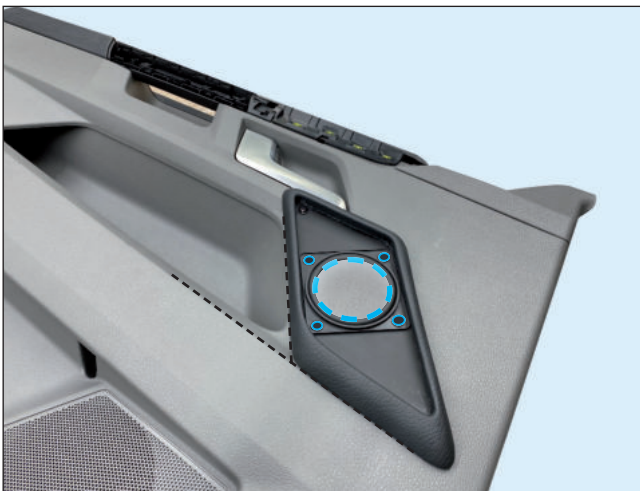


When aligning the mid-range module, make sure that there is still approx. 8mm space between the door handle and the module.

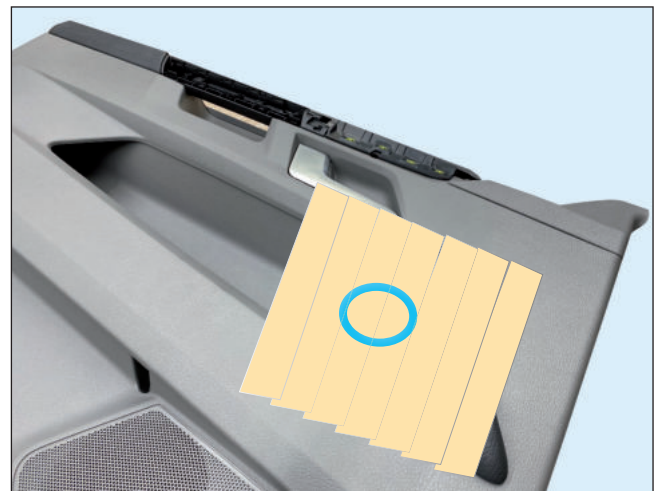
A gap of approx. 3mm should be left between the edge of the card tray and the module.

A = 3mm

B = 8mm



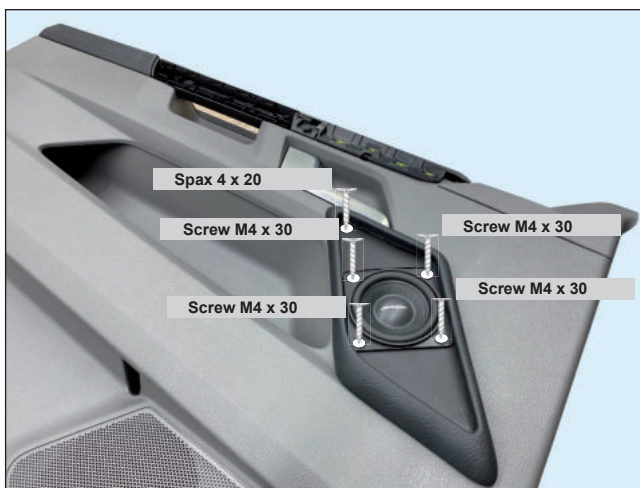
2.2. Align module without midrange speaker on door panel, as indicated in Fig.
Mark speaker opening and screw positions.



2.3. For protection, mask the area around the marked speaker opening with masking tape and cut out with a hole saw.

cut out.

-> Markings for screws must remain!!!



2.4. Mount the module incl. midrange speaker on the door panel with the supplied screws according to the illustration.



2.6. Finally, insert acoustic fabric panel flush

3. Woofer mounting - original installation location in the vehicle doors

To protect the woofer and adapter ring from water ingress, we recommend attaching a rain shield (see fig. A)



Cut plastic foil or Rainstop mat to the size of the mounting ring and make a small cut in the lower area (yellow marking) (woofer dismantled in illustration for clarity).



3.1 Fasten the mounting ring with 4x M4 x 25 screws, 4mm washers and M4 polystop nuts (Fig. B) and connect the JEHNERT speaker connector to the JEHNERT speaker (Fig. C).

3.2 Fasten the loudspeaker to the mounting ring with 8x 3.9 x 16 raised countersunk head screws and connect the original loudspeaker connector plug with the JEHNERT loudspeaker connector plug (Fig. D).

CAUTION!!! the cable connections of the woofer must not come into contact with the inner door panel --> insulate if necessary.

To avoid vibration noise, secure all cable harnesses with insulating tape or similar.

4. Insulation of vehicle doors and door panels

Important recommendation:

The use of woofers in the door panel causes vibrations due to the oscillations of the bass, which can lead to rattling noises in the vehicle door:

Measures against vibration noise:

4.1. insulation of the vehicle doors

- Cover the back of the door trim with insulating fleece (Order No. 27000) or foam material.
or
- Stabilize rear side of door trim with stiffening compound (GRP fiber filler or similar).
 IMPORTANT: Make sure to leave the cut-outs for the door airbag and speakers free!
- Cover the *backside of the door panel inside (=outer door skin) with self-adhesive bitumen mats / tar mats (see example below).
- by tapping the vehicle door, vibration noises of door mechanism parts (e.g. Bowden cables etc.) and localize cable harnesses and wrap them with foam / felt, foam rubber or similar.
- cut off protruding cable ties (rattling noises!)
- glue felt or foam under the original wiring harness

4.2. insulation of the rear side of the door panel

- Apply insulation fleece (Order No. 27000) to the back of the door trim.
 or foam
 or
- Stabilize the rear side of the door trim with stiffening compound (GRP fiber filler or similar).

IMPORTANT: Make sure to leave the cut-outs for the door airbag and speakers free!



ATTENTION / Danger !!!

No insulating material behind side airbags

IMPORTANT:

No insulating material behind speakers and door releases. Leave out fastening clips



First insulation layer with alubutyl mats



Second insulation layer with insulation fleece mats

5. Mounting the door panels on the vehicle doors

5.1. connect midrange speaker to crossover (step 3.2.) (red or marked cable =>).

(-> when installing a fully active system, the corresponding loudspeaker cable harness must be routed from the amplifier to the loudspeaker installation location).
to the loudspeaker installation location)

5.2 Reconnect „alarm light, window regulator and mirror adjustment“ connector.

5.3 Hook the door trim into the top of the door shaft.

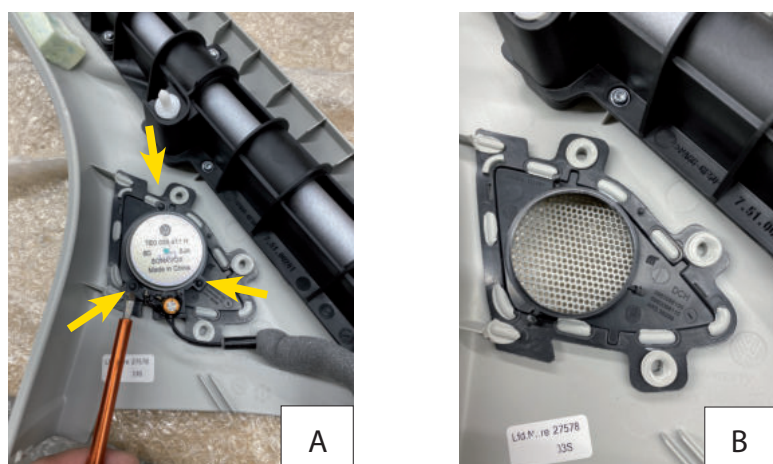
5.4 Reattach door trim in reverse order (tighten screws, install cover strip).



Final check after door panel assembly:

Check all functions of controls such as seat adjustment, glove box opening, window regulator, etc.

6. Mounting the tweeters at the original installation position in the A-pillar



5.1. Use a tapered rasp (electric screwdriver or Dremel) to loosen the welded points of the original high tone grille incl. the mounting (Fig. A/B).



5.2 Install the tweeters as shown (Fig. C/D).

5.3. insert the plug of the tweeter cable into the corresponding socket of the vehicle tweeter connector.

5.4. install the A-pillar trim incl. the tweeter in reverse order to the steps.

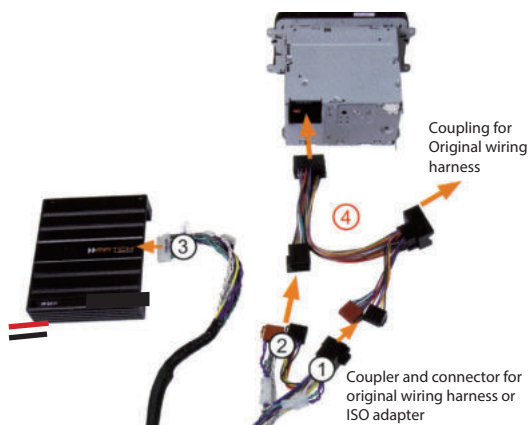
5.5. Before installing the door panel, please check the locking of all door panel clips.
 Otherwise, the door panel will not fit properly.

5.6 Repeat the same installation steps only on the other side of the vehicle and finally install all removed vehicle parts such as door trim, A-frame, etc.

7. Amplifier connection

Ideally, the amplifier can be mounted to the subwoofer in the passenger seat console, see step 8.
 (However, the installation location may vary, depending on the vehicle equipment and available space).

Connection to the car radio



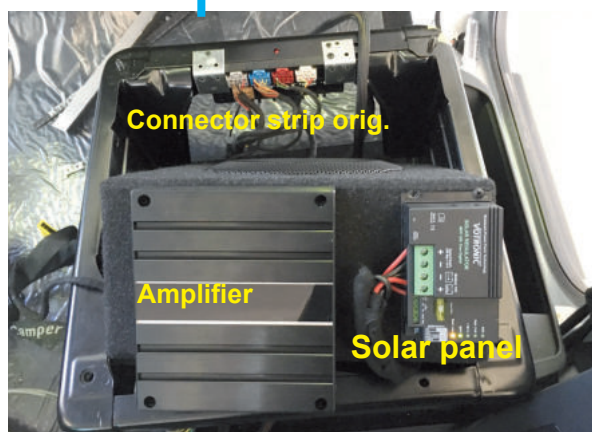
- 1 ISO coupling - here is the wiring harness of the original radio or an ISO adapter is plugged in.
- 2 ISO plug - these are plugged into the original radio or into the ISO-adapter.
- 3 This 20-pin connector is plugged into the amplifier.
- 4 **Optional:** ISO adapter - if the ISO plugs of the supplied wiring harness do not fit the original radio, a vehicle-specific ISO adapter must be used.
- 5 The power connection is made directly to the battery using a 10mm² cable - the positive wire must be fused just before the battery (60A).

8. Amplifier and subwoofer mounting

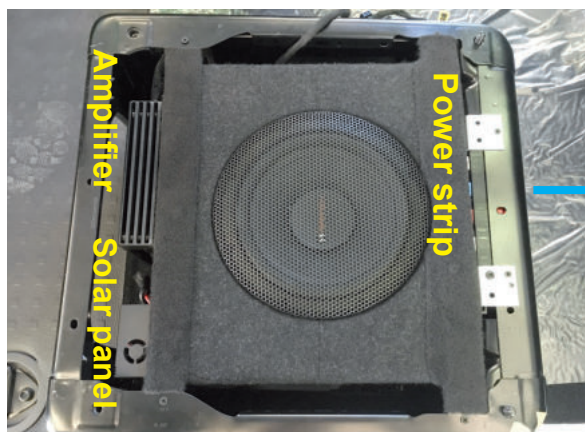


Optimal mounting location for subwoofer and amplifier: under the passenger seat (depending on vehicle equipment)

Dashboard



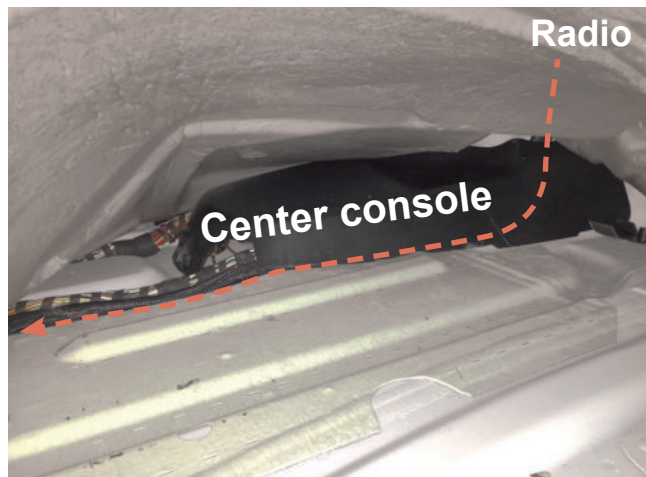
Example of subwoofer and amplifier mounting with offset modules under the passenger seat. The modules were mounted to the subwoofer and the seat frame.



Dashboard

Subwoofer ready mounted in the passenger seat console

Dismantle the passenger seat.



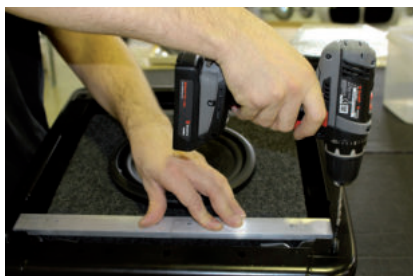
ISO cable from the radio, under the carpet and under the center console cover to the passenger seat console lead.



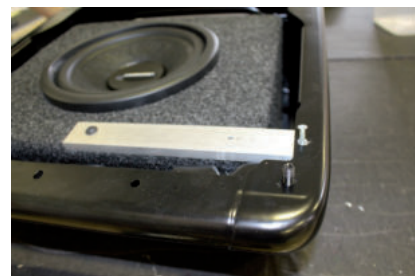
Loosen the screw on the seat bracket and pass the ISO cable underneath.



Attach mounting bracket and secure with 4.8 x 22 to secure.




Pre-drill screw holes for fastening to the seat bracket (slightly countersink the drill hole).




Mounting bracket with countersunk screw M4 x 16, washers and nuts to the seat bracket.



subwoofer ready mounted and strips covered with covered with felt fabric.

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Notes:

Our team in Pliezhausen will be happy to provide you with advice and assistance at any time:

JEHNERT Sound Design

„Development and production of car audio systems“.

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