



# **Installation Instructions**

## Complete Set Active Sound incl. Sound Booster

v1.0 (14.01.2022)

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# 1 Liability Exclusion

Dear Customer,

Our cable sets are developed according to the connection- and circuit diagrams of the corresponding car manufacturers. Before the serial production, the cable sets will be adjusted and tested on an original vehicle. Therefore, the integration into the vehicle electronics follows the guidelines provided by the car manufacturer. Our installation instructions correspond to what is common in the vehicle electric/electronic regarding the required pre-understanding and the accuracy of the description in text and picture. They have proven its worth in practice hundreds of times.

If you should experience any difficulties while installing one of our products, we are available to provide support via phone or email. Additionally, we offer you to execute the installation in our workshop in Bad Segeberg.

Costs, arising from third parties assigned with the installation of our products, are not being covered by us. We will only compensate the proven costs of the assembly and the costs of the disassembly of the defective product, if it turns out that there is an issue with our product. We limit the reimbursement of costs up to 110 Euro gross and reserve the right to verify the claim in our workshop in Bad Segeberg. The costs for shipping will be refunded if the claim is justified.

We made the experience, that every professional workshop that is equipped with the necessary diagnostic devices, the diagnostic software and the manufacturer's circuit diagrams, is able to find any possible defects in one of our products in a short period of time. The assembly and disassembly including troubleshooting the issue should therefore only take up to 60 minutes.

We also made the experience, that many professional workshops are not able to cope with the manufacturer's circuit diagrams and can't read common wiring schemes, which results in the calculation of several hours for the simplest installations. You will understand the fact, that we can neither take the risk of finding a reliable workshop for you, nor can we finance the training of the employees of your trusted workshop.

Costs, arising from purchasing missing parts or replacements for defective parts from other suppliers, are covered by us up to the amount that the subsequent delivery would have caused (saved expenses). According to the legal warranty law, there would be no reimbursement right, if there was no deadline for the subsequent fulfilling set or the deadline for a subsequent fulfilling hasn't expired.

That being said, if you have any problems during the installation or operation of one of our products call us, write us an email, send us the product or come by our workshop in Bad Segeberg with your vehicle. We are certain, that we can find a solution for any kind of concern.

Kind regards,  
Your Kufatec GmbH & Co. KG Team

## 2 Copyright

Our installation and operation instructions, installation plans, software and other written and/or pictured documentations are protected by copyright.

The publication or distribution of these documentations is only permitted with a written approval of Kufatec GmbH & Co. KG.

## 3 General notes

While developing this product, your personal safety combined with the best operating service, modern design and an up-to-date production technique was especially taken into account.

Unfortunately, despite the utmost care injuries and/or damages might occur due to improper installation and/or use.

Therefore, please read the following instruction manual fully and thoroughly and keep it!

All articles of our production line pass through a 100% check – for your safety and security.

We reserve the right to carry out technical changes which serve the improvement at any time.

Depending on each product and purpose, it might be necessary to check each country's legal regulations before installing and starting it.

In case of warranty claims, the product has to be sent back to the seller in the original packaging with the attached bill of purchase and detailed defect's description. Please, pay attention to the manufacturers return requirements (RMA). The legal warranty directions are valid.

The warranty claim as well as the operating permission becomes invalid due to:

- unauthorized changes to the device or accessories which have not been approved or carried out by the manufacturer or its partners
- opening the casing of the device
- repairing the device on one's own
- improper use/operation
- brute force to the device (drop, willful damage, accident etc.)

During the installation, please pay attention to all safety relevant and legal directions. The device should only be installed by trained personnel or similarly qualified people.

**In case of installation problems or problems concerning the functionality of the device, limit the time to approx. 0.5 hours for mechanical or 1.0 hours for electrical troubleshooting.**

To avoid unnecessary costs and time loss, send in an immediate support request via the Kufatec contact form (<http://www.kufatec.de/shop/de/infocenter/>).

In case of, let us know the following:

- Car chassis number/vehicle identification number
- Five-digit part number of the device
- Exact description of the problem
- Steps you have taken to solve the problem

## 4 Safety Instructions

The installation should only be performed by trained personnel. Only perform installations while in a voltage-free state. For example, disconnect the battery. Please pay attention to the instructions provided by the manufacturer.

- Never use bolts or nuts from the car's safety devices for installation. If bolts or nuts from the steering wheel, brakes or other safety devices are used for installation of the device, it may cause an accident.
- Use the device with a DC 12V negative ground car. This device cannot be used in large trucks which use a DC 24V battery. If it is used with a DC 24V battery, it may cause a fire or accident.
- Avoid installing the device in places that would restrict you from driving safe or where it could damage the car's other fittings.
- This device should only be used in combination with the mentioned vehicles. Only connections described within this instructions guide are allowed or required to use for installation.
- For damages caused by faulty installation, unsuitable connections or inappropriate vehicles, Kufatec GmbH & Co. KG assumes no liability.
- We advise you that these devices process data from the MOST – protocol of the vehicle. As the supplier of this device we don't know the overall system you are working with. If your device causes damage, due to other changes made to the vehicle, Kufatec GmbH & Co. KG assumes no liability.
- Kufatec GmbH & Co. KG supplier does not guarantee the use of the product for changes within a new vehicle series.
- If the car manufacturers don't agree with the installation of our device by reason of warranty, Kufatec GmbH & Co. KG assumes no liability. Please, check conditions and warranty before you begin the installation.
- Kufatec GmbH & Co. KG reserves the right to change the device specifications without notice.
- Subject to errors and changes.

## 5 Requirements for the intended use

**Only use this device in its intended area.**

**In case of unprofessional installation, improper use or modification, the permission for the operation and the warranty claim will expire.**

## 6 How to connect a cable to another

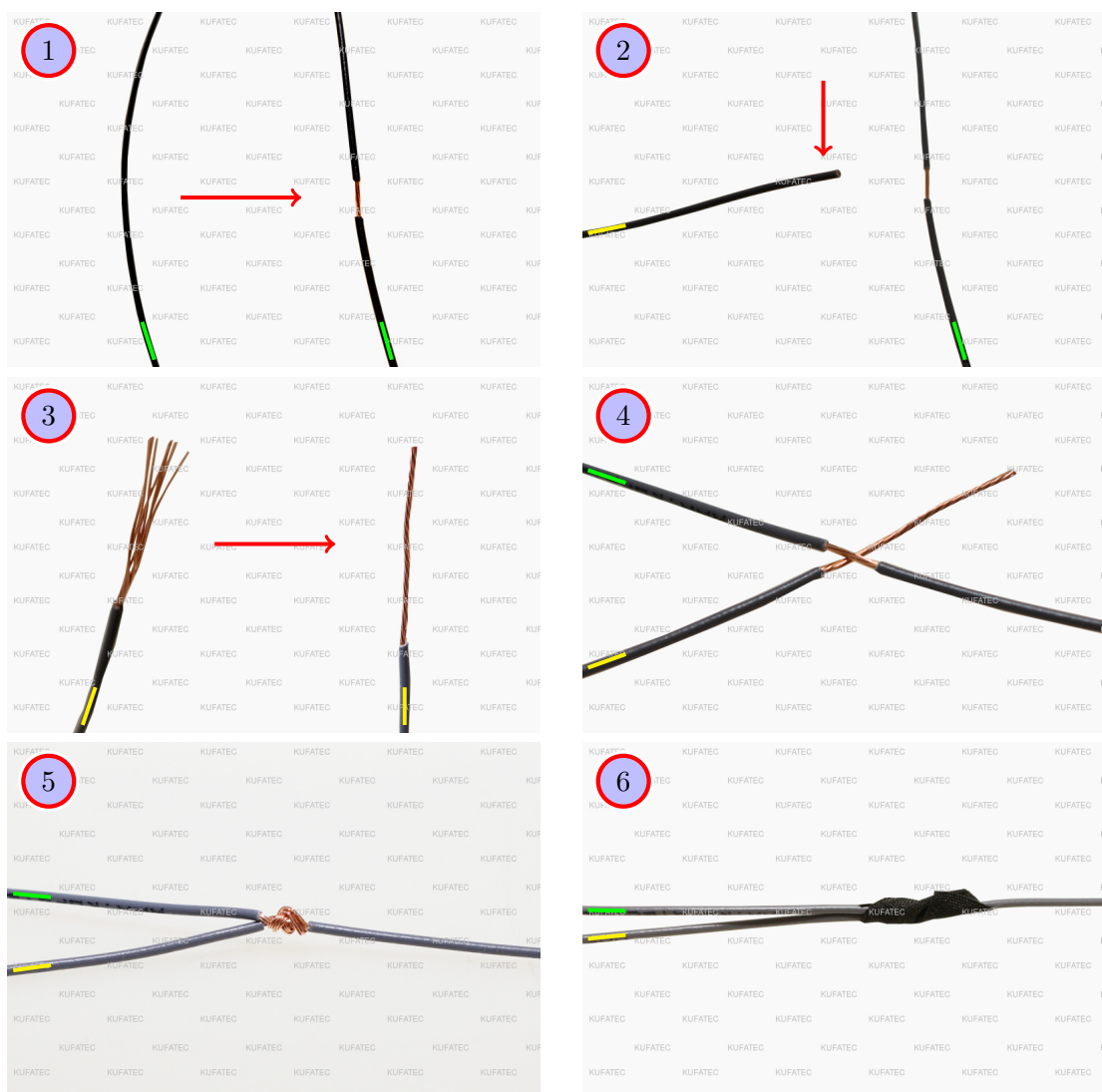


Figure 1: How to connect a cable to another

Table 1: How to connect a cable to another

No.	Work step	Note
1	Take the cable of the vehicle, to which you want to connect, (green marked here) and strip the insulation at one point with a suitable tool (cable stripper/cutter knife).	
2	Now take the cable of the cable set, which you want to connect, (yellow marked here) and strip the insulation at the end.	
3	Twirl the wires of the stripped cable together.	
4	Place the end of the cable you want to connect under the stripped point of the cable of the vehicle...	
5	... and wrap the cable you want to connect around the cable of the vehicle.	
6	Lastly, stick insulating tape around the connection point. Make sure that the isolation is put onto the connection professionally to prevent corrosion.	

## 7 Note Cable Inscription/Color

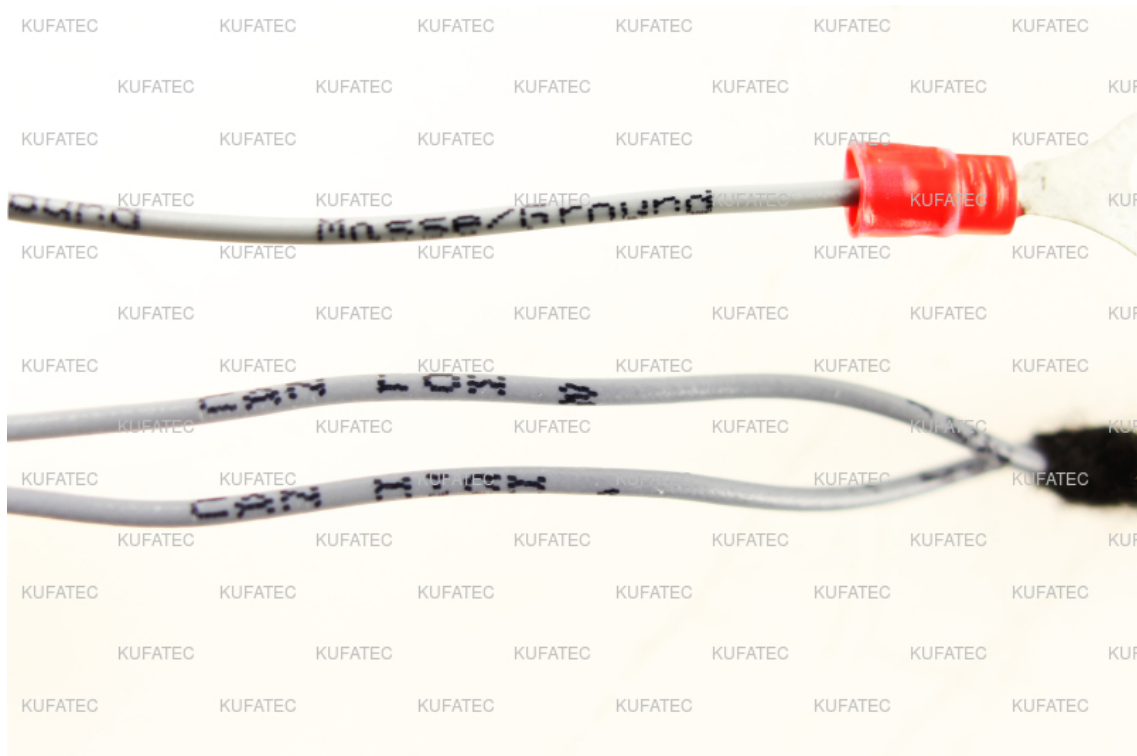


Figure 2: Cable Inscription

**If the cable set consists of colored cables, connect the cables according to the color. If all cables of the cable set have the same color, connect the cables according to the cable inscription.**

## 8 Assembly Instructions

The following illustration shows the cable routing as well as the position of the individual components.

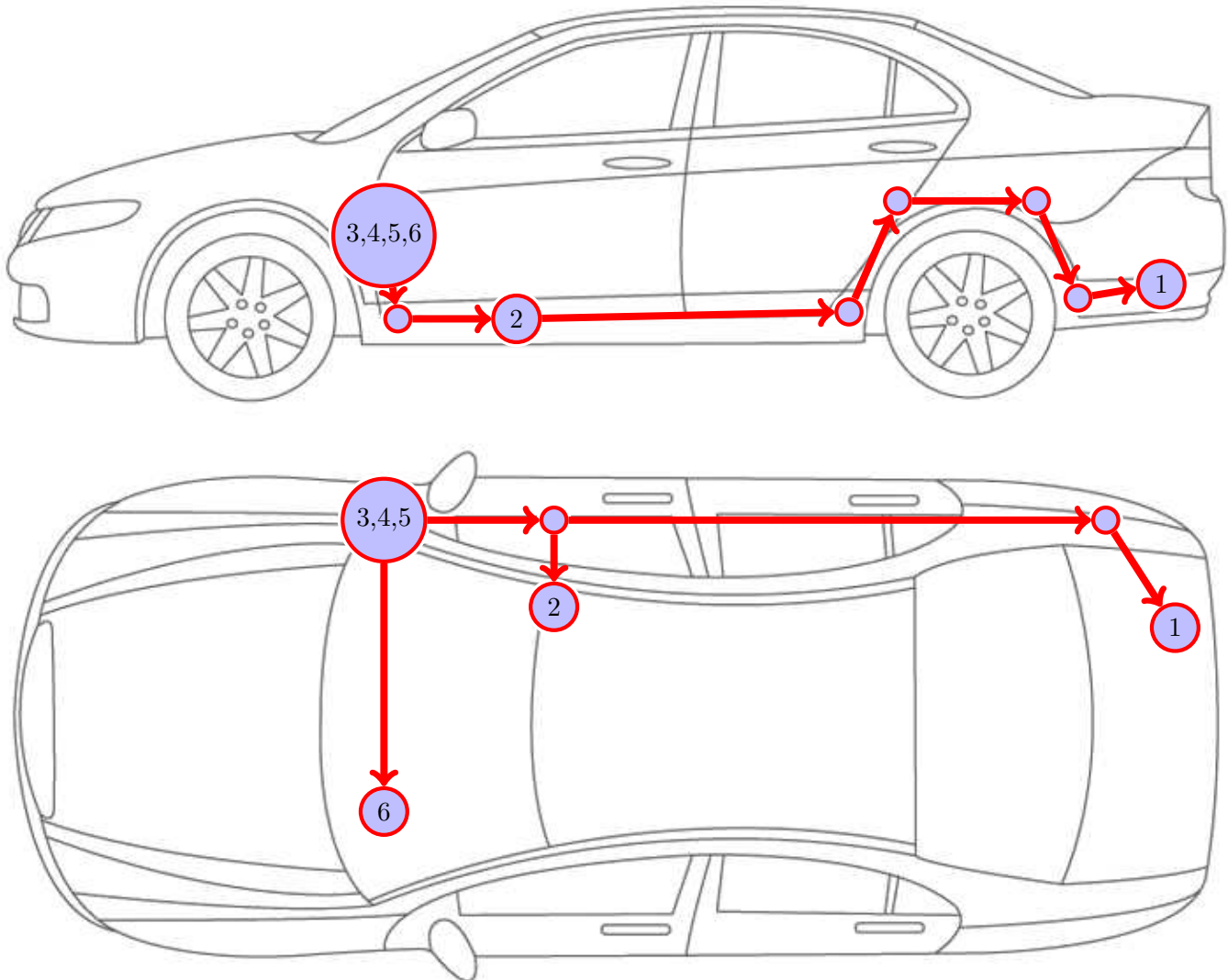


Figure 3: Vehicle overview

- 1 External sound generator incl. holder
- 2 Ground connection
- 3 Control unit for engine sound generation
- 4 Sound Booster Pro (module)
- 5 Ignition plus (Kl.15) connection
- 6 Button

Please be aware that this overview is only for **illustration purposes**. Always lay the cable set in the **most convenient and shortest way** possible. For a detailed description of the cable routing, please refer to the relevant sections of the following manual.



## 9 Assembly Note

### Important note for the assembly

- The vehicle used for the assembly instructions was a **BMW X6 F16**. We would like to point out that the disassembly of the individual parts can vary depending on the type of vehicle. Please make sure to keep that in mind.

Make sure that there is enough space at the described position. If there is no space, please cancel the installation and contact our technical support.

In the area of the German Road Traffic Act (StVZO), the use of a sound booster is not permitted without registration in the vehicle papers. The noise emission of the vehicle is increased by this retrofit. The regulations of the StVZO must be observed. It is therefore recommended to ask for a specific registration option at the responsible TÜV/DEKRA office before retrofitting. Outside Germany, please observe the laws on vehicle licensing applicable in your country.

### Note for assembling the vehicle

- Before you start assembling the vehicle, the system must first be tested for proper function.

## 10 Disassembly coverings front passenger's side

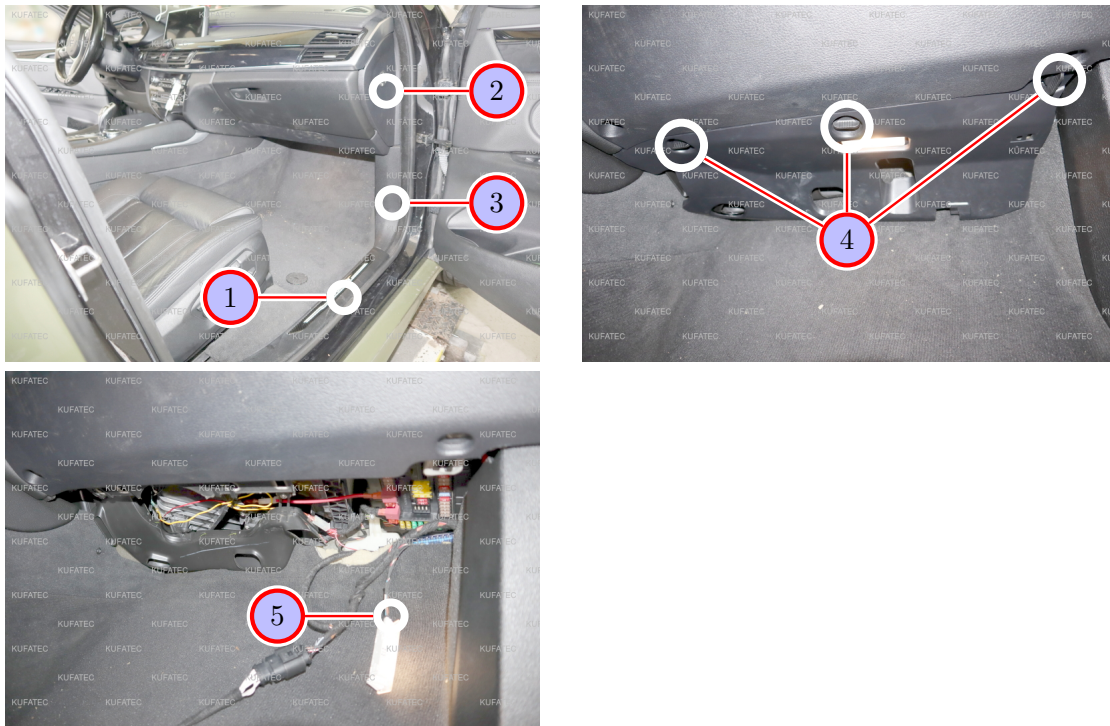


Figure 4: Disassembly coverings front passenger's side

Table 2: Instructions to disassemble the coverings on the front passenger's side

No.	Work step	Note
1	Loosen the sill trim by levering it upwards with an assembly lever.	
2	Loosen and remove the lateral dashboard covering by levering it off with an assembly lever.	
3	Loosen and remove the lower A-column covering by levering it off with an assembly lever.	
4	Turn the marked lockings at the lower dashboard covering by 90 degrees, then carefully pull the covering downwards.	
5	Disconnect the plug from the footwell lighting and remove the covering completely.	

## 11 Disassembly back seat

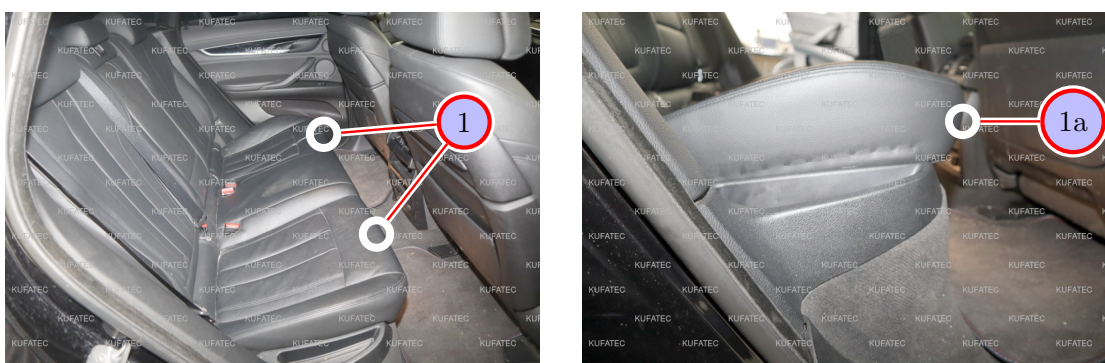


Figure 5: Disassembly back seat

Table 3: Instructions to disassemble the back seat

No.	Work step	Note
1	Pull the seating upwards until it is released from the clips. Then push it backwards and lift it up (1a).	
	Remove the back seat from the vehicle completely.	

## 12 Disassembly rear sill trim passenger's side

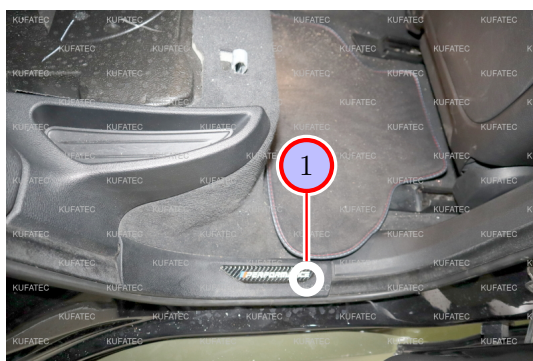


Figure 6: Disassembly rear sill trim passenger's side

Table 4: Instructions to disassemble the rear sill trim on the passenger's side

No.	Work step	Note
1	Loosen the sill trim by levering it upwards with an assembly lever.	

### 13 Disassembly coverings trunk



Figure 7: Disassembly coverings trunk

Table 5: Instructions to disassemble the trunk coverings

No.	Work step	Note
1	Fold up the trunk floor.	
2	Remove all plastic clips from the covering and remove the covering from the trunk.	

## 14 Adjustment plastic compartment trunk

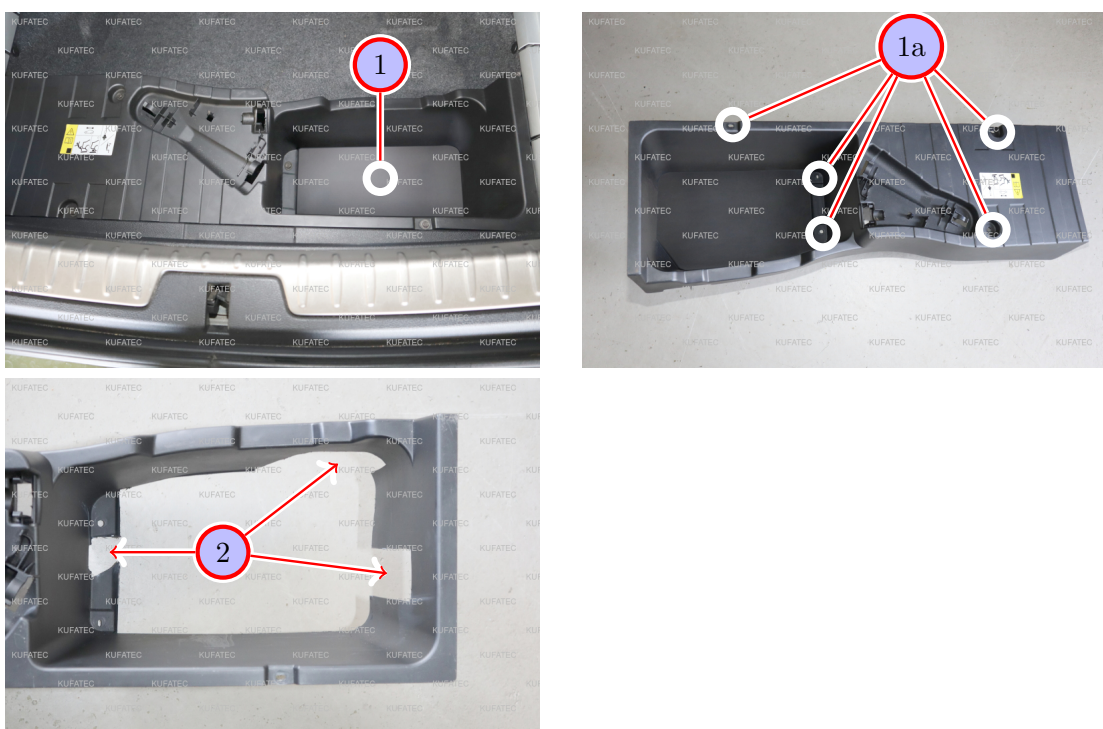


Figure 8: Adjustment plastic compartment trunk

Table 6: Instructions to adjust the covering in the trunk

No.	Work step	Note
1	Loosen and remove the five marked screws (1a) in order to remove the plastic compartment from the trunk.	
2	Use a suitable tool to cut an opening for the sound generator into the compartment.	
	<b>Note:</b> Mark the position for the cutout.	

## 15 Assembly sound generator

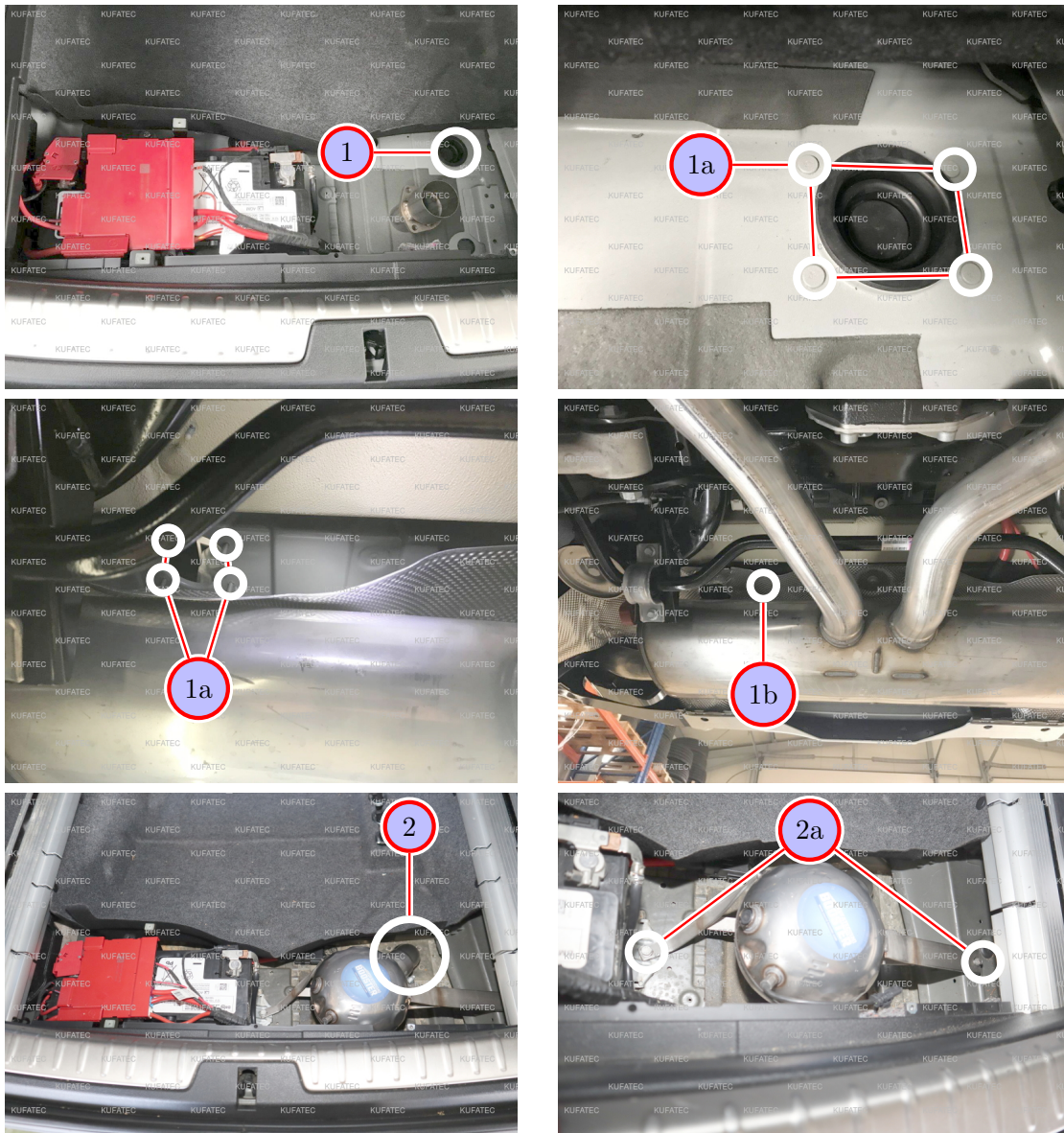


Figure 9: Assembly sound generator

Table 7: Instructions to assemble the sound generator

No.	Work step	Note
1	Remove the marked rubber grommet by loosening the four marked screws (1a) at the bottom of the rubber grommet.	
	In order to remove the screws at the rubber grommet, carefully bend the heat protection down (1b).	
2	Insert the sound generator at the installation location and fasten it with two screws at the marked positions (2a, not included in the scope of delivery).	

## 16 Connection in passenger's footwell

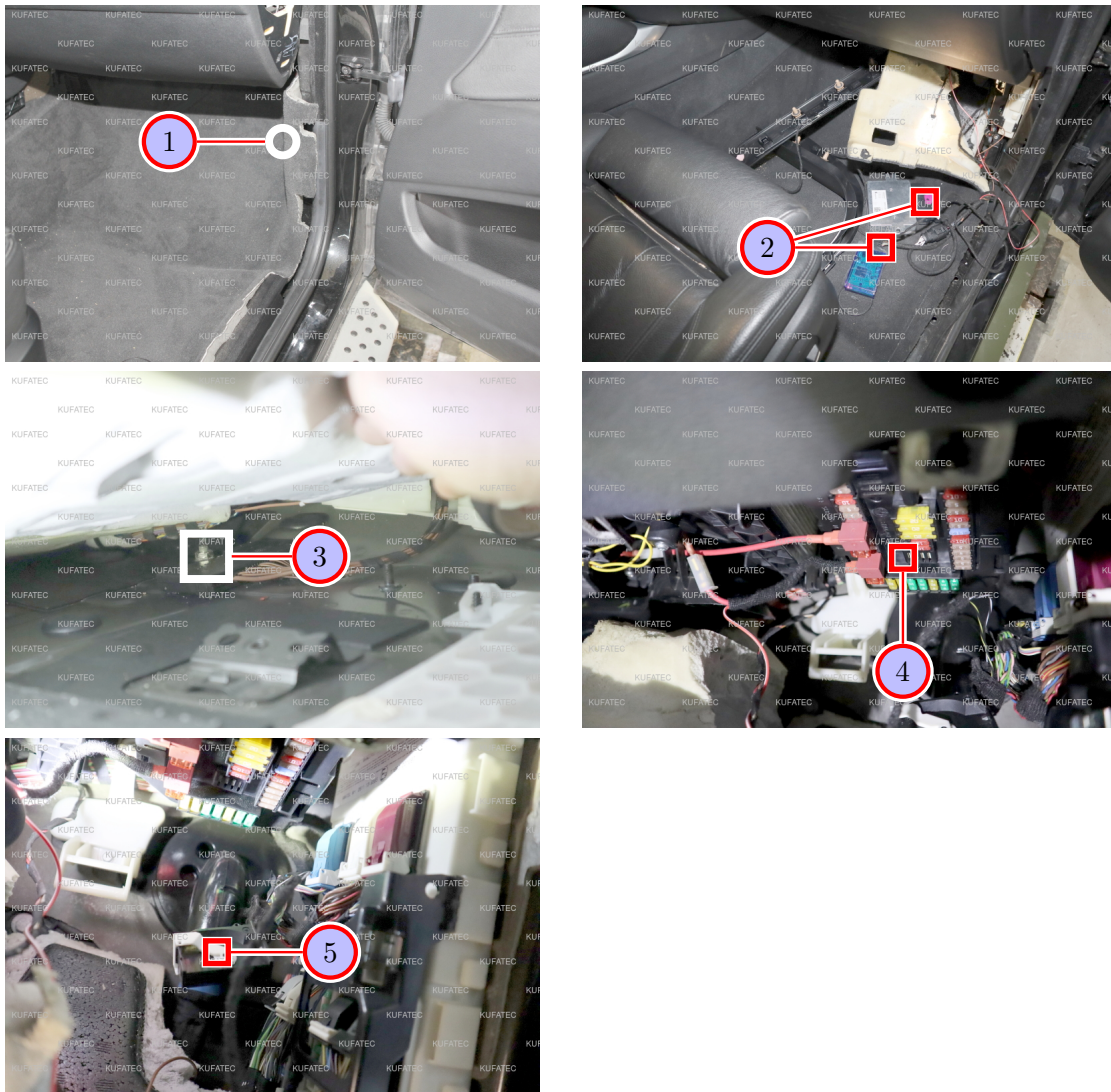


Figure 10: Connection in passenger's footwell

Table 8: Instructions to connect the cable set in the passenger's footwell

No.	Work step	Note
1	Carefully pull the carpet at the A-column from under the glove compartment towards the center console.	
2	Connect the Kufatec module and the control unit to the cable set and store them at an appropriate position behind the carpet at the A-column. <b>Note:</b> If no button is to be installed but the sound generator is to be operated via app only, the button cable can be tied back. If a button is to be installed, follow the instructions given in chapter 10.	
3	Connect the <b>ground cable</b> to the marked ground pin under the carpet in the passenger's footwell.	
4	Connect the cable for <b>ignition plus (Kl.15)</b> to the fuse carrier.	
5	Disconnect the black plug from the control unit at the A-column and connect <b>CAN High</b> and <b>CAN Low</b> as follows: Connect <b>CAN High (black/white)</b> to the red cable. Connect <b>CAN Low (black/yellow)</b> to the blue/red cable.	



## 17 Cable routing from passenger's footwell into the trunk

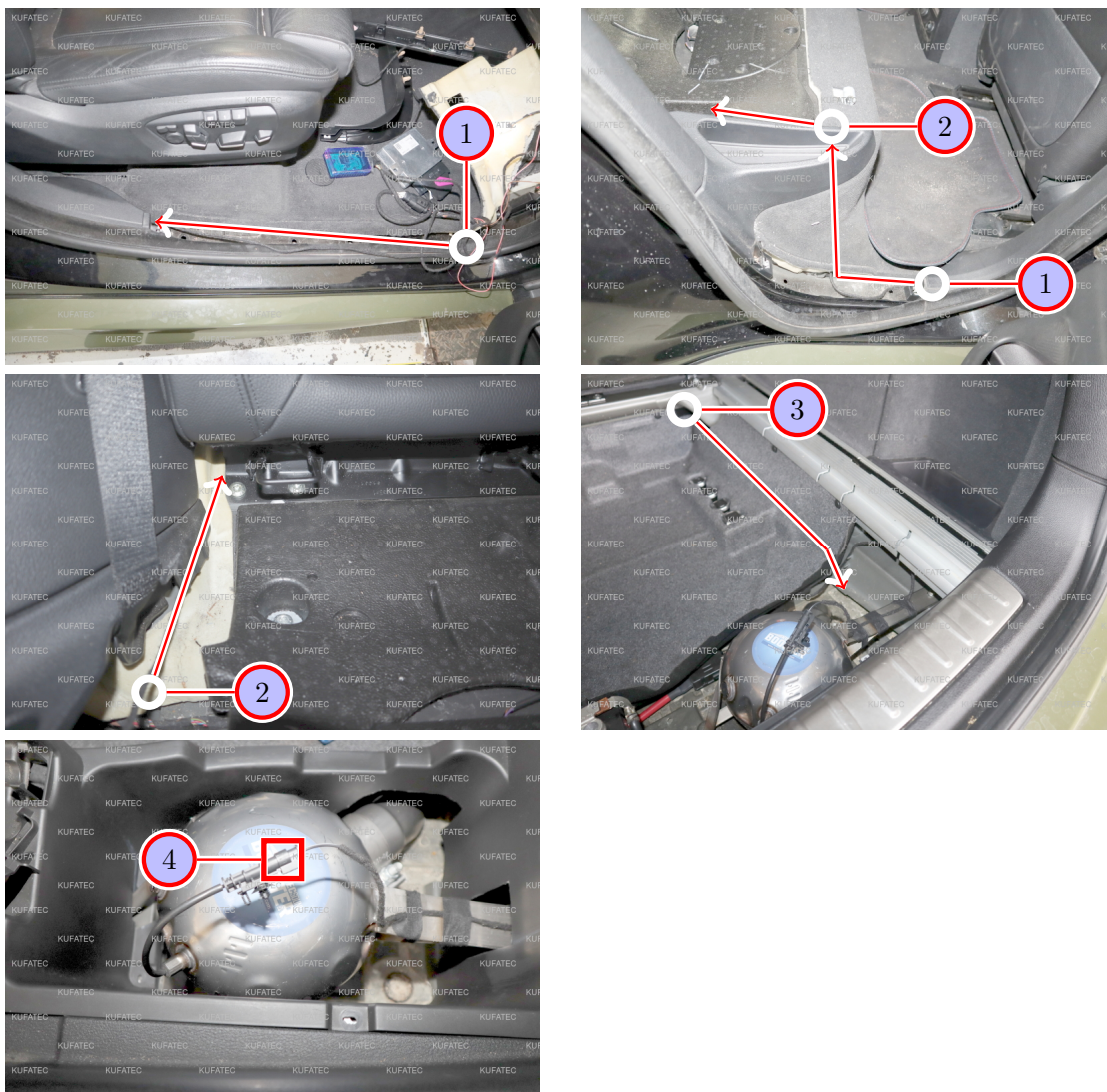


Figure 11: Cable routing from passenger's footwell into the trunk

Table 9: Instructions to route the cable from the passenger's footwell into the trunk

No.	Work step	Note
1	Route the cable from the passenger's footwell under the sill trim and behind the B-column covering towards the back seat. To do so, use a pulling tool.	
2	Route the cable across the back seat into the trunk using a pulling tool.	
3	Route the cable in the trunk towards the sound generator using a pulling tool.	
4	Connect the cable to the sound generator.	
	Afterwards, the plastic compartment can be remounted.	

## 18 Assembly button

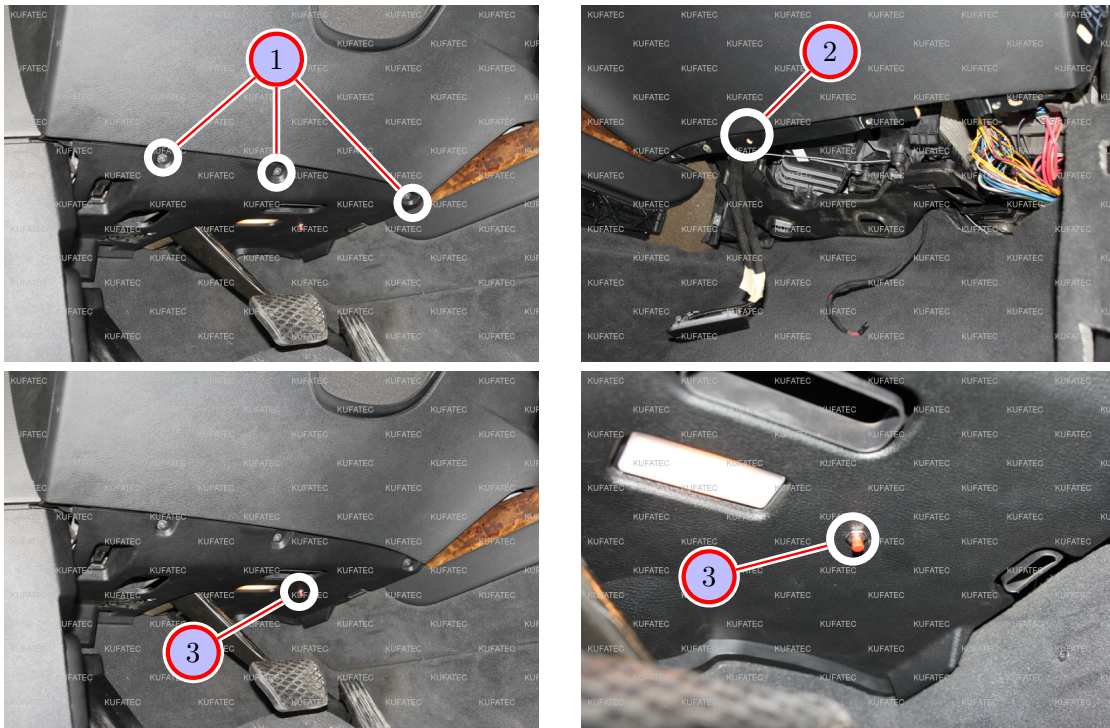


Figure 12: Assembly button

Table 10: Instructions to assemble the button

No.	Work step	Note
1	Loosen the marked screws of the lower dashboard covering on the driver's side. Carefully pull it down.	
2	Route the button cable behind the center console towards the driver's side using a pulling tool.	
3	Pull the cable from behind the center console and mount the button at the marked position. To do so, drill a hole for the button.	7mm

## 19 Software

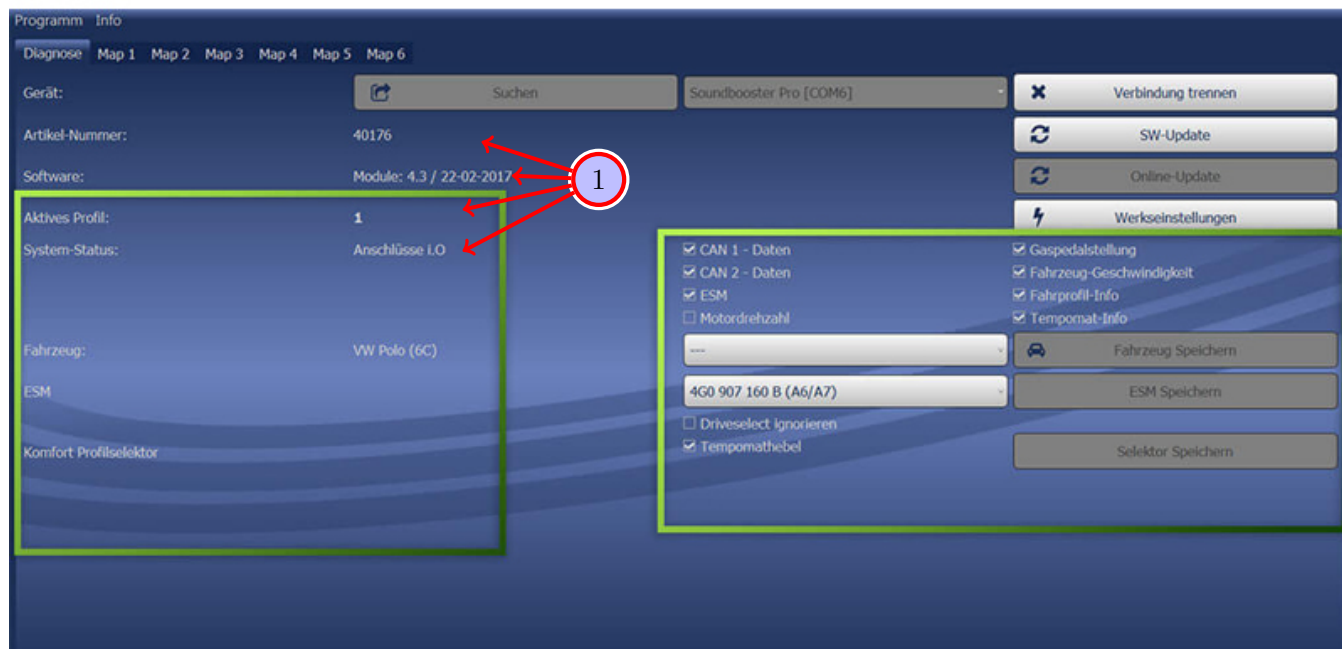


Figure 13: Software

Table 11: Notes for the software

No.	Work step	Note
1	If the system does not work after the installation, please check if the system was installed correctly by having a look on the following link: <a href="https://www.sound-booster.com/en/debugging.html">https://www.sound-booster.com/en/debugging.html</a> . Our Sound Booster Software for PC / Mac should be used for the commissioning or further debugging:	
	<b>Step 1:</b> Download the appropriate software via the following link: <a href="https://www.sound-booster.com">https://www.sound-booster.com</a> .	
	<b>Step 2:</b> Turn the ignition of the vehicle on and only then connect the PC / Mac with a USB-cable to our module. It is important to check beforehand if plus and minus are connected correctly. If this is not the case, it could result in a damage to the computer or to the control unit.	
	<b>Step 3:</b> Start the downloaded software and click on search first and then on connect. You will be automatically forwarded to the diagnosis site, on which you can see the following things at a glance:	
	<b>Software:</b> Software version / creation date	
	<b>Active profile:</b> The actually activated profile is indicated here.	
	<b>Vehicle:</b> The automatically identified vehicle is indicated here.	
	<b>System status:</b> Here you can tell, if the connections are correct.	

## 20 Software

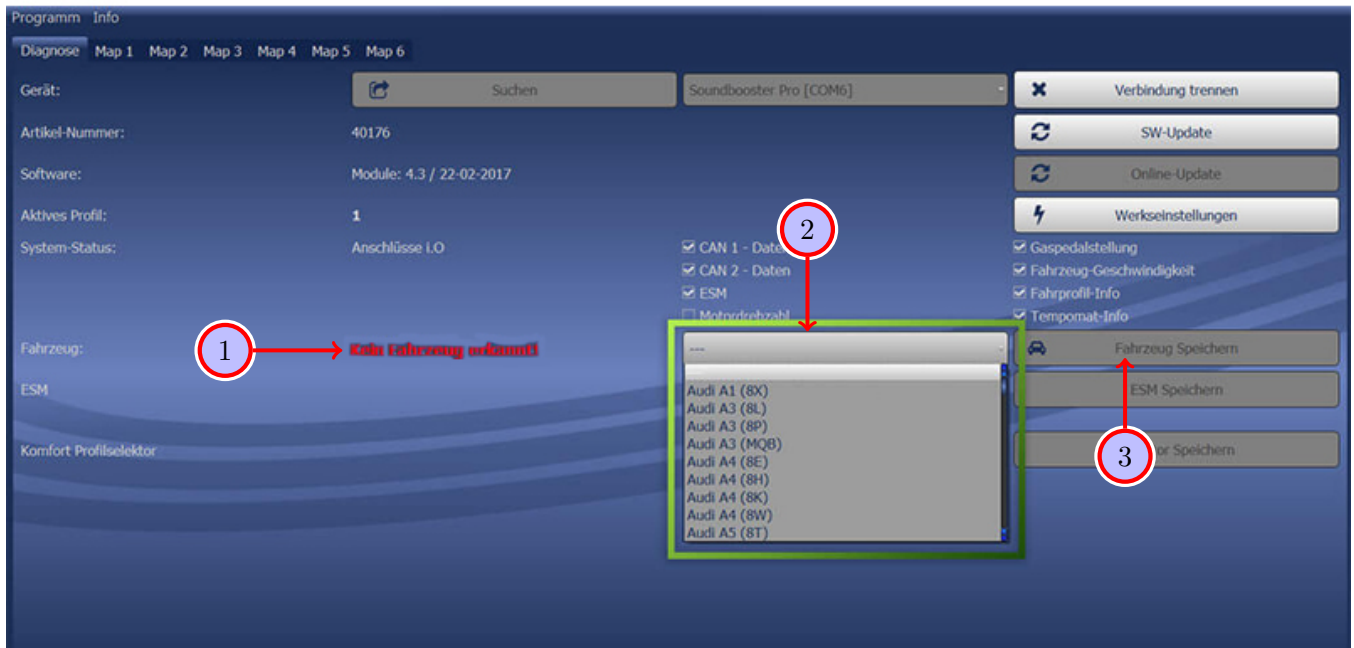


Figure 14: Software

Table 12: Notes for the software

No.	Work step	Note
1	If no current vehicle is identified, you have to select the vehicle via the manual selection as follows:	
2	Open the dropdown-menu, search for your vehicle and select it.	
3	Click on Save Car to permanently save the vehicle to the module.	
	If you don't find your vehicle in the list, it might be necessary that the software has to be adapted to your vehicle. In that case, please contact us via e-mail: <a href="mailto:info@kufatec.de">info@kufatec.de</a> or by phone: +49 (0) 4551 / 80 810 888. We will make an appointment with you, where we will adapt the software to your vehicle per Team Viewer (remote maintenance).	

## 21 Software

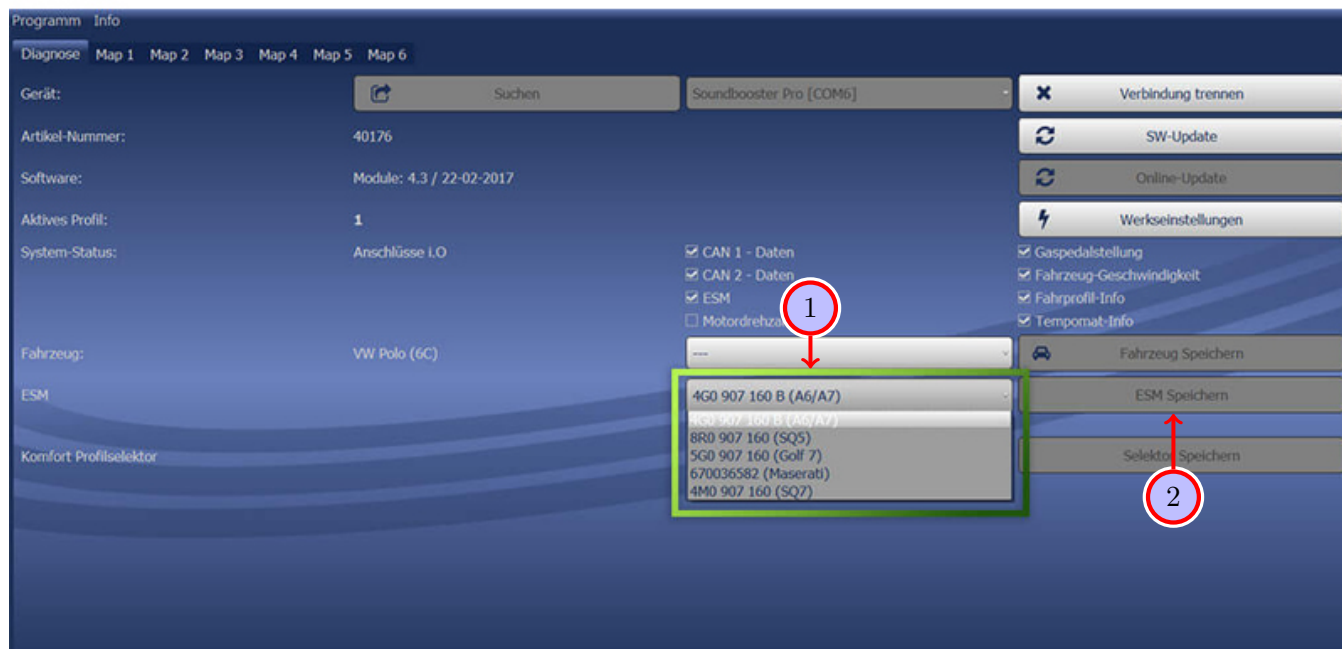


Figure 15: Software

Table 13: Notes for the software

No.	Work step	Note
1	You also need to check if the right ESM is selected in our software: Open the dropdown-menu, search for the correct ESM and select it.	
2	Click on Save ESM to permanently save the ESM to the module.	
3	For example, if you ordered a complete set with a Audi control unit you need to select the ESM <b>4G0 907 160 B (A6/A7)</b> . If you installed the Maserati control unit instead of the Audi control unit you need to select the ESM <b>670036582 (Maserati)</b> . If the system does not work after all please get in contact with us via e-mail: info@kufatec.de or by phone: +49 (0) 4551 / 80 810 888. We will check the issue as soon as possible.	

## 22 Important Information Sound Booster

Please use suitable screws that can withstand high loads of impact to attach the sound generator. In order to avoid loosening of the screws due to the vibration, please secure the screws with appropriate factory material e.g. threadlock. Please additionally check the stability of the Sound Booster regularly and if necessary retighten the screws. In case of non-compliance we do not assume liability for possible damages.

After a successful installation we recommend to cover the sound generator with a zinc spray. Make sure that you cover the opening of the sound generator so that the zinc spray can't get inside the sound generator.

## 23 LED Status Display / Troubleshooting

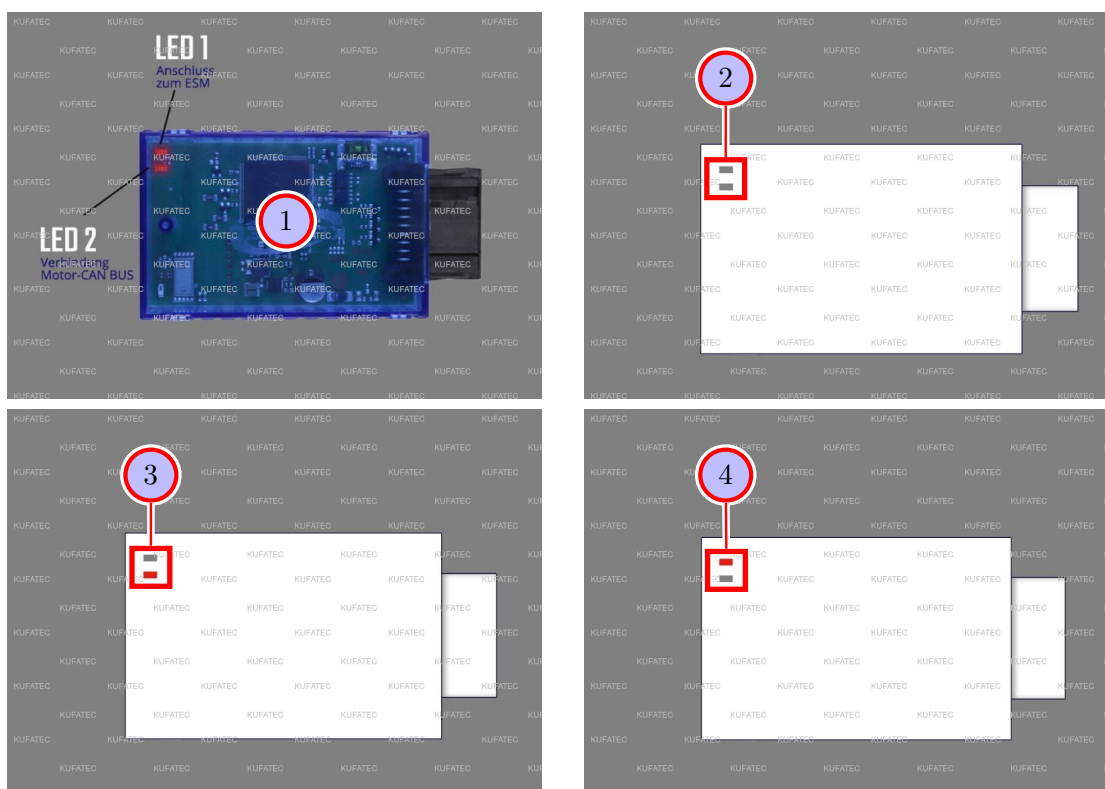


Figure 16: LED Status Display / Troubleshooting

Table 14: Instructions for the LED Status Display / Troubleshooting

No.	Work step	Note
1	If the system has been installed as described, the ignition can be switched on. After switching on the ignition, LED 1 lights up every second and LED 2 flickers very quickly. If this is the case, the system is ready to be used.	
!	<b>First of all check whether the plug connection is connected correctly.</b> The bracket of the plug must be vertical and the plug must be sunk in to the horizontal marking.	
2	<b>If no LED is shining on our module, proceed as follows:</b> <b>Option 1:</b> "Check if the module is connected to a power source. <b>Option 2:</b> Update the firmware via our software. <b>Option 3:</b> Check if the module is connected to the right CAN-Bus (Powertrain-/Motor-CAN). <b>Option 4:</b> The module has been damaged during the installation. In this case, please contact us at the following e-mail address, quoting the invoice number and a brief description of the error: info@kufatec.de.	
3	<b>If LED 1 is not flashing, proceed as follows:</b> <b>Option 1:</b> Check the connection to the ESM (External Sound Module) (error message: connection CAN 2). <b>Option 2:</b> Check if the module is connected to a power source.	
4	<b>If LED 2 is not shining, proceed as follows:</b> <b>Option 1:</b> Check if the module is connected to a power source. <b>Option 2:</b> Check if the module is connected to the right CAN-Bus (Powertrain-/Motor-CAN) (error message: connection CAN 1).	

## 24 Assembling the vehicle

### Note for assembling the vehicle

- Before you start assembling the vehicle, the system must first be tested for proper function.

## 25 Configuration

### Configuration

If a Bluetooth enabled module is available, the app „**Kufatec-Link**“ is required for the configuration. The app is available to download for free for IOS as well as for Android.

- For IOS in the Apple Store:

<https://apps.apple.com/app/kufatec-link/id1401203449>



- For Android in the Google Play Store:

<https://play.google.com/store/apps/details?id=com.kufatec.ktcLink>



## 26 Additional vehicle function

### Note additional vehicle function

- Please pay attention to the specific operation of your vehicle in order to activate/use the additional functions. You can find the information in the documents of the vehicle/log book.



## 27 Connection/Troubleshooting cable set

### Sound Booster Active Sound

#### From 18-pole plug sound booster module to:

- **Fuse carrier 2-pole**
  - Pin 1 to connector / connector to pin 2 fuse carrier
- **Ground**
  - Pin 9 to connector / connector to ground pin passenger's footwell
- **CAN Bus**
  - Pin 17 CAN Low black/yellow to red cable (control unit A-column passenger's footwell)
  - Pin 18 Can High black/white to blue/red cable (control unit A-column passenger's footwell)
- **8-pole plug sound booster control unit**
  - Pin 15 to pin 1
  - Pin 16 to pin 3
  - Pin 1 to connector / connector to pin 4
  - Pin 9 to connector / connector to pin 2

#### From 8-pole plug sound booster control unit to:

- **Fuse carrier 2-pole**
  - Pin 2 to connector / connector to ignition plus Kl. 15
- **Ground**
  - Pin 4 to connector / connector to ground pin passenger's footwell
- **18-pole plug sound booster module**
  - Pin 1 to pin 15
  - Pin 3 to pin 16
  - Pin 4 to connector / connector to pin 1
  - Pin 2 to connector / connector to pin 9
- **2-pole plug sound booster**
  - Pin 7 to pin 2
  - Pin 8 to pin 1

#### From fuse carrier 2-pole to:

- **Power supply**
  - Pin 1 to ignition plus Kl. 15

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