



# **Installation Instructions**

## **Complete Set Active Sound incl. Sound Booster**

v1.4 (23.09.2019)

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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

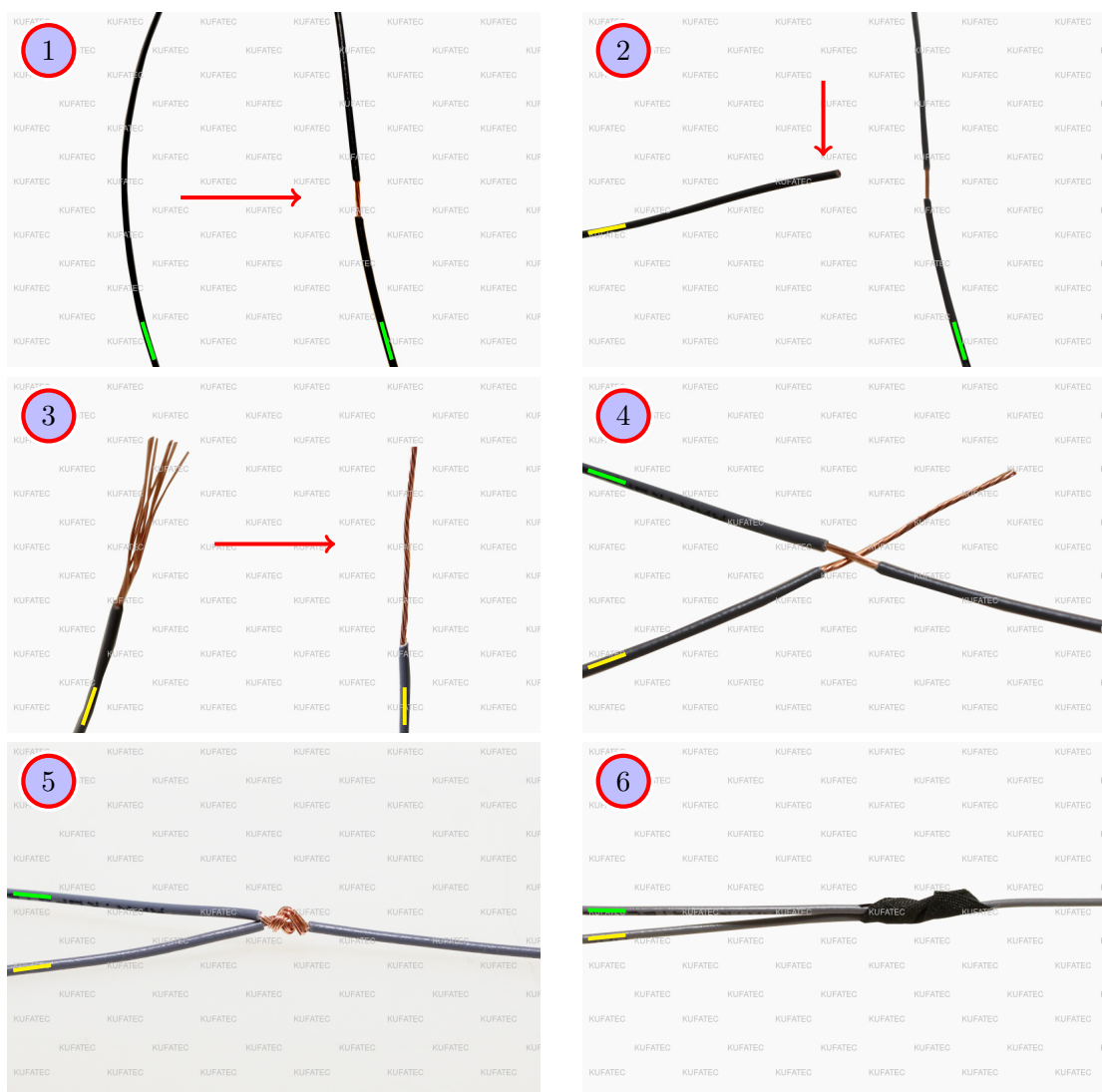


Figure 1: How to connect a cable to another

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. Solder the connection professionally.	
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

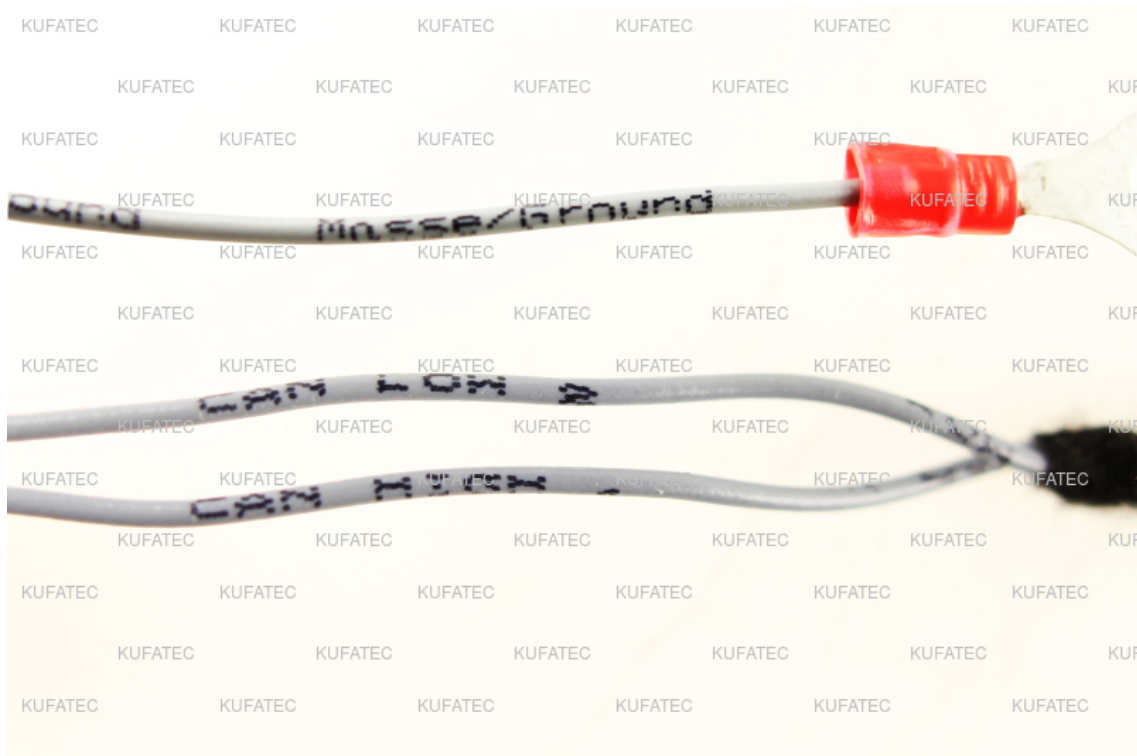


Figure 2: Cable Inscription

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 Note

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

The use of a sound booster is not permitted without registration in the vehicle papers, in the area of the german StVZO. 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.

## 9 Assembly Instructions

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

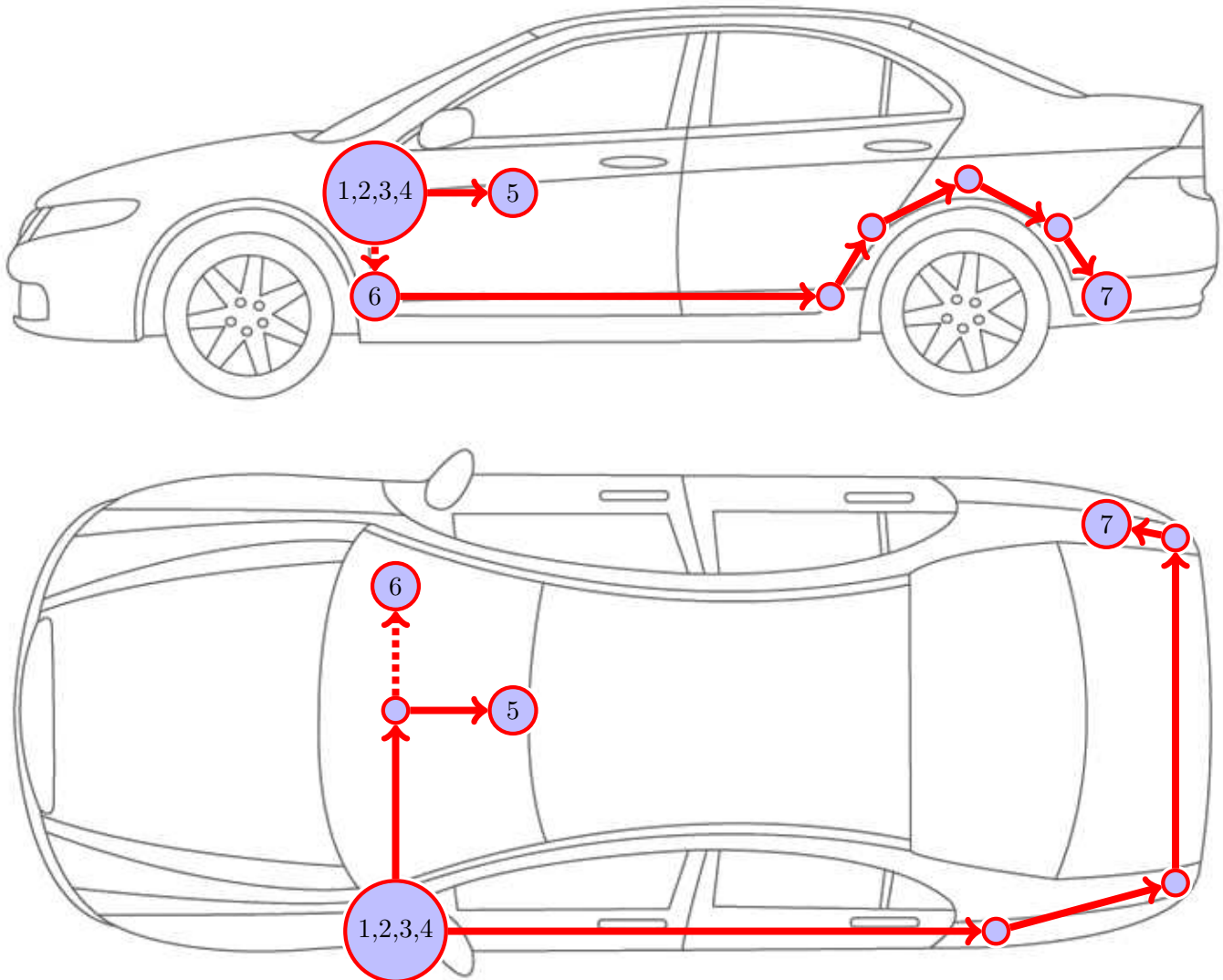


Figure 3: Vehicle Overview

- 1 Connection CAN
- 2 Control unit for engine sound generation
- 3 Sound Booster Pro (module)
- 4 Button
- 5 Connection ignition plus (pre-facelift)
- 6 Connection ignition plus (facelift)
- 7 External sound generator incl. holder

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.

## 10 Assembly Note

### Important note for the assembly

- The vehicle used for the assembly instruction was a **Mercedes V-Klasse W447**. 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.

### Notes for assembling the vehicle

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



## 11 Connection CAN-High / CAN-Low

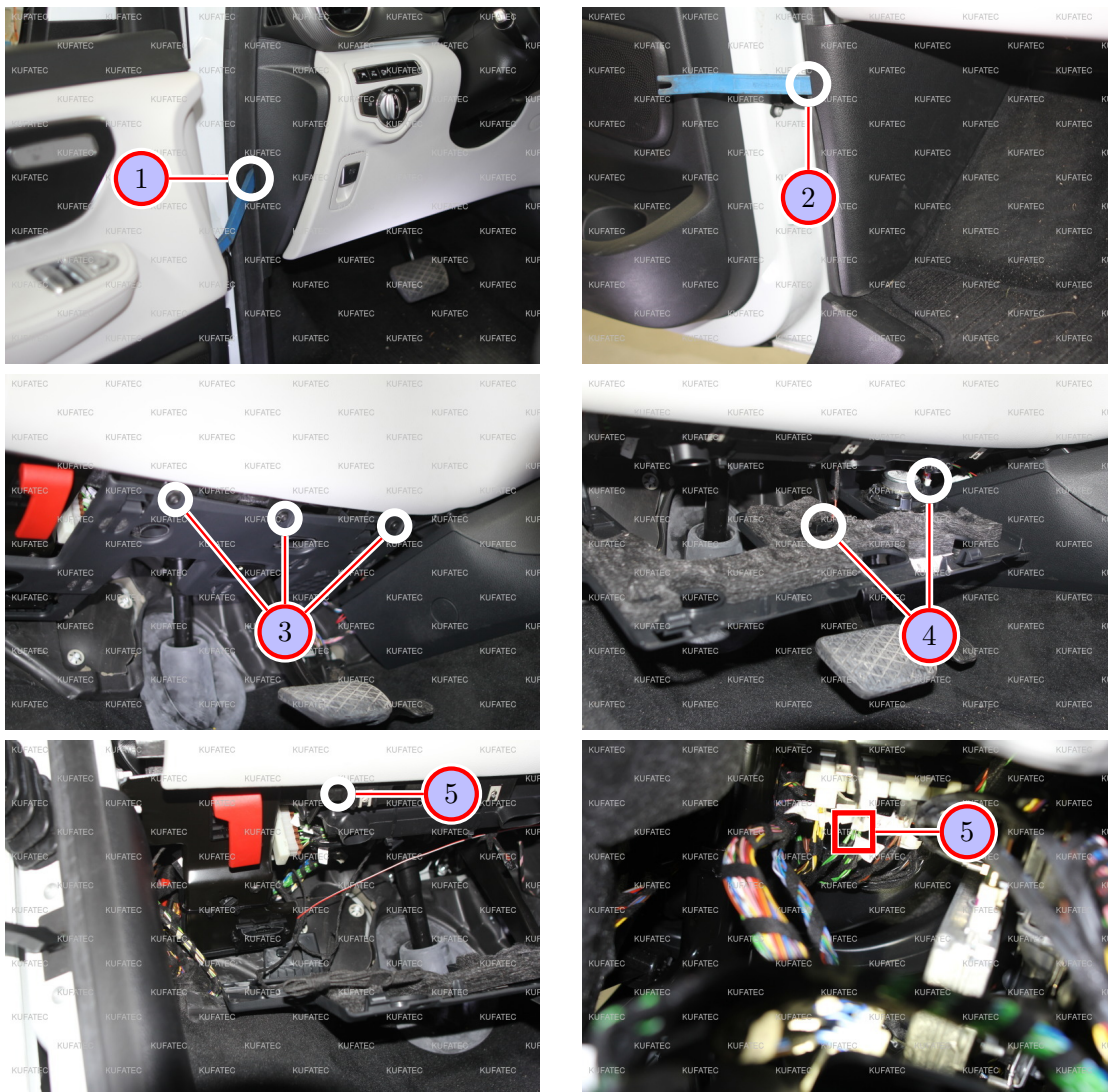


Figure 4: Connection CAN High / CAN Low

Table 2: Instructions to connect CAN High / CAN Low

No.	Work step	Note
1	Disassemble the lateral covering of the dashboard by using an assembly lever.	
2	Disassemble the lower A-column covering afterwards by using an assembly lever.	
3	Loosen the marked screws of the lower dashboard covering and carefully pull it down afterwards.	3xT25
4	Loosen the two marked plugs and remove the covering entirely.	
5	The CAN distributor is located way up behind the dashboard to the left of the steering column. Connect the 2-pole plug from the cable set to a free slot at the CAN distributor.	
	CAN High (black/white) to <b>green/white</b> (cable color CAN distributor)	
	CAN Low (black/yellow) to <b>green</b> (cable color CAN distributor)	

## 12 Connection ground

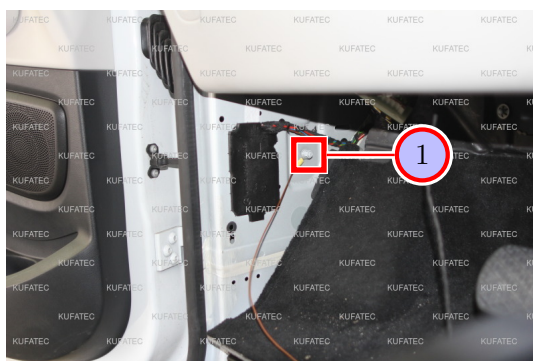


Figure 5: Connection ground

Table 3: Instructions to connect ground

No.	Work step	Note
1	Connect the ground cable (brown) to the marked ground pin at the A-column in the driver's footwell.	

## 13 Variation pre-facelift: Disassembly center console

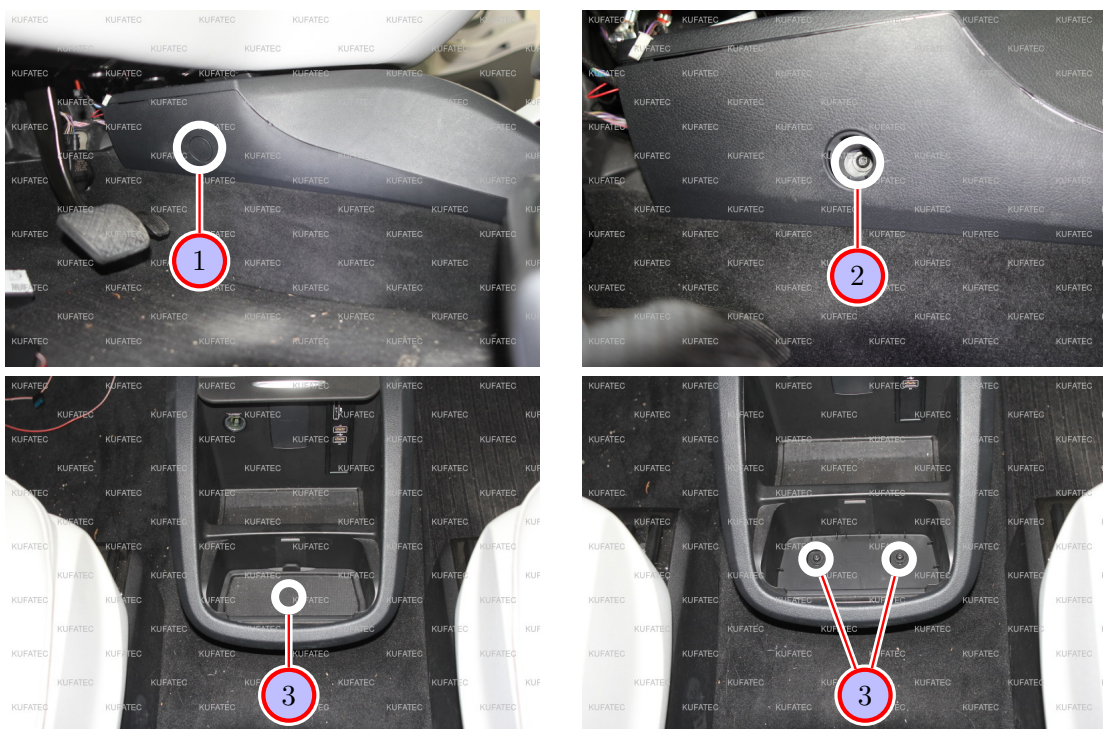


Figure 6: Disassembly center console (pre-facelift)

Table 4: Instructions to disassemble the center console (pre-facelift)

No.	Work step	Note
!	<b>Attention: If your vehicle is a facelift variation, please proceed to follow the instructions starting at section 15 Variation facelift: Disassembly fuse box.</b>	
1	Remove the marked cover of the center console on the driver's side as well as on the passenger's side.	
2	Remove the marked screws of the center console on the driver's side as well as on the passenger's side afterwards.	2xT25
3	Remove the cover from the compartment of the center console and loosen the screws that are located behind it afterwards. Carefully pull the center console to the back.	2xT25



## 14 Variation pre-facelift: Connection ignition plus / control unit / module

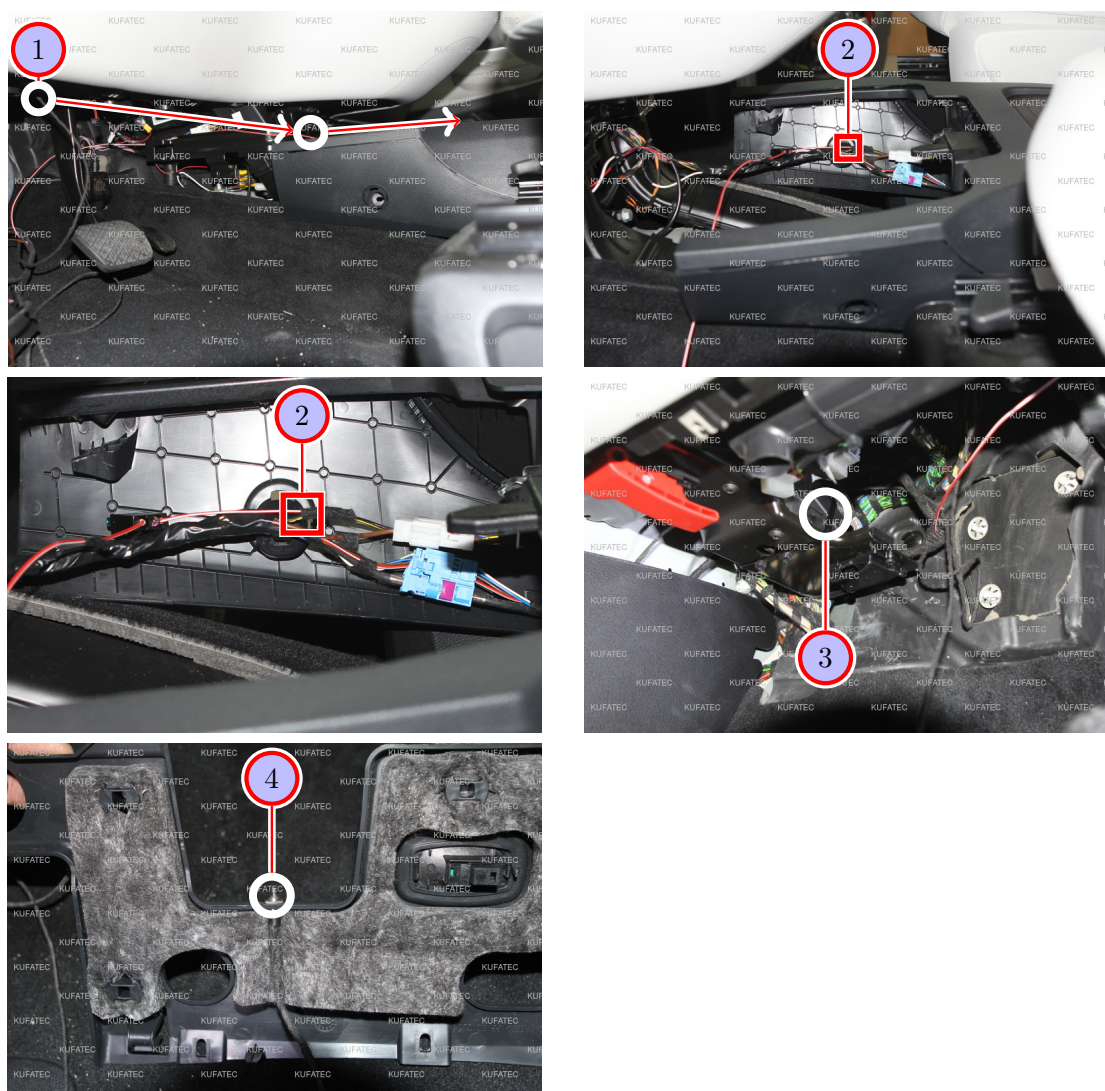


Figure 7: Connection ignition plus / control unit / module (pre-facelift)

Table 5: Instructions to connect ignition plus / control unit / module (pre-facelift)

No.	Work step	Note
1	Lay the cable for <b>ignition plus</b> (red/white) under the dashboard towards the center console.	
2	Connect the cable for ignition plus (red/white) to the <b>black/yellow cable of the cigarette lighter</b> .	
3	Connect the plug of the cable set to the module and the control unit and place it behind the hood release on the beam and attach it by using factory materials.	
4	Drill a hole for the button at the marked spot of the dashboard covering and assemble the button there.	7mm drill

## 15 Variation facelift: Disassembly fuse box

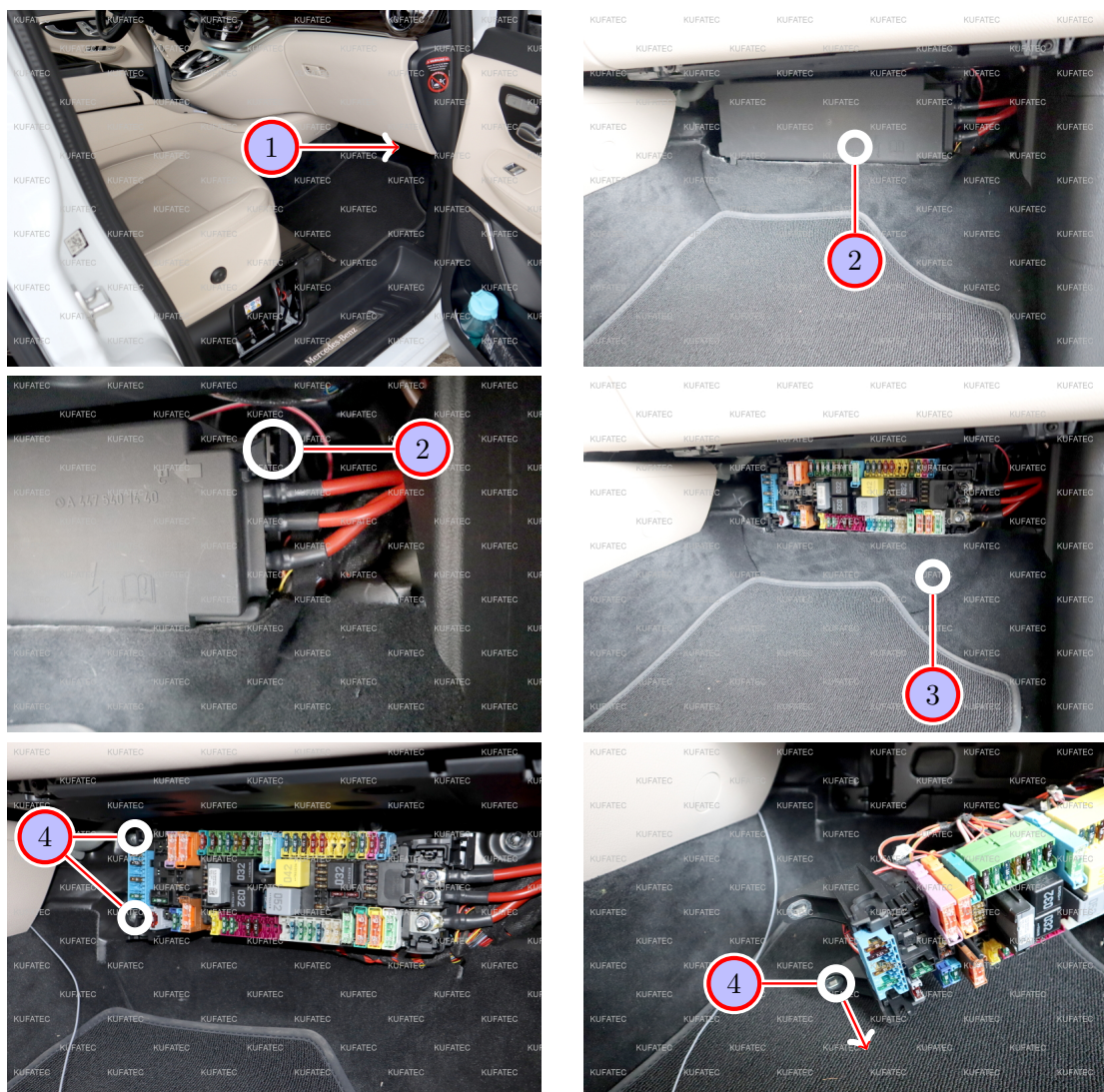


Figure 8: Disassembly fuse box (facelift)

Table 6: Instructions to disassemble the fuse box (facelift)

No.	Work step	Note
1	The fuse box is located under the dashboard at the bulkhead in the passenger's footwell.	
2	Remove the marked cover from the fuse box. Loosen the latch on the right side and unhook the cover on the left side to do so.	
3	Remove the marked foam cover that is located in front of the fuse box.	
4	Loosen and remove the two screws that are located on the left of the fuse box. The fuse box can be pulled forward afterwards.	2xT30



## 16 Variation facelift: Connection ignition plus / control unit / module

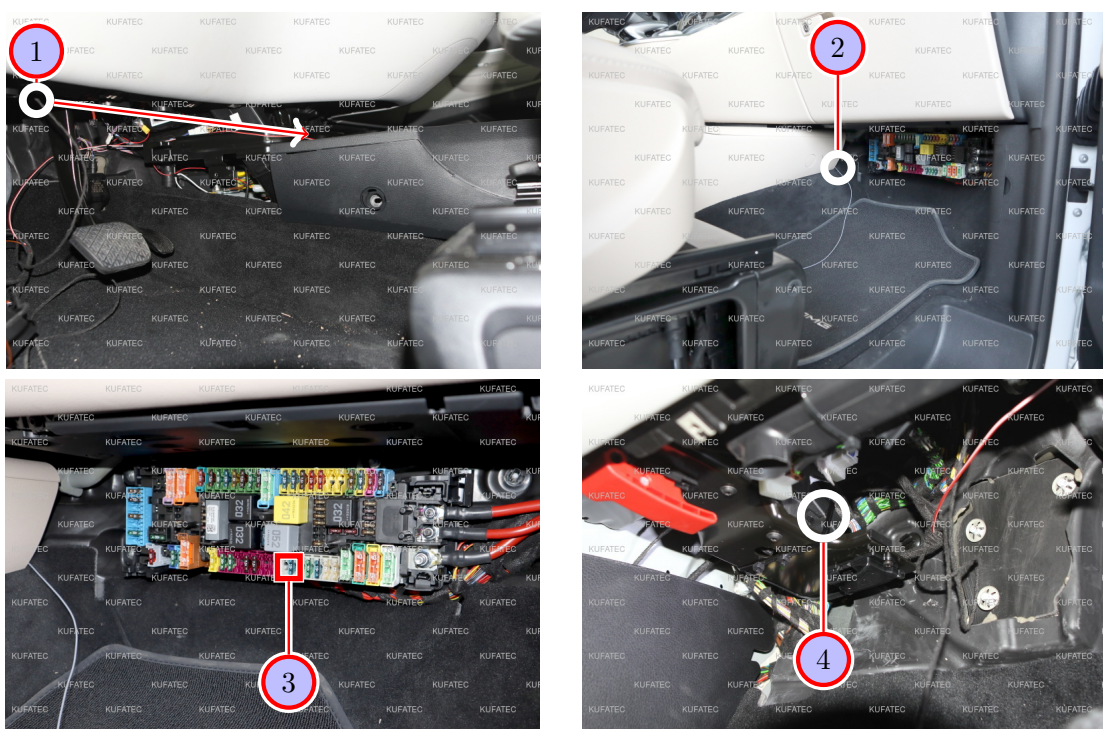


Figure 9: Connection ignition plus / control unit / module (facelift)

Table 7: Instructions to connect ignition plus / control unit / module (facelift)

No.	Work step	Note
1	Lay the cable for <b>ignition plus</b> (red/white) under the dashboard in the driver's footwell towards the center console.	
2	Pull the cable behind the center console along the bulkhead all the way into the passenger's footwell.	
3	Look for a free ignition plus slot in the fuse box by using a multimeter (we used slot 1 at the white plug insert). Pin the cable for ignition plus into the slot and secure it by using a <b>15A-fuse</b> afterwards.	
4	Connect the plug of the cable set to the module and the control unit and place them behind the hood release on the beam and attach them by using factory materials.	

## 17 Disassembly sill trim front/back



Figure 10: Disassembly sill trim front/back

Table 8: Instructions to disassemble the sill trim in the front and in the back

No.	Work step	Note
!	<b>Note: The following sections apply to both pre-facelift as well as facelift variations.</b>	
1	Remove the compartment of the driver's seat. It is only clipped on and can be pulled off easily.	
2	Loosen the sill trim in the front by using an assembly lever and carefully pull it up.	
3	Remove the marked plug from the sill trim and take the entire sill trim out afterwards.	
4	Remove the sill trim in the back by using an assembly lever and carefully pull it up.	
5	Loosen the marked plug of the sill trim and take the entire sill trim out afterwards.	



## 18 Cable routing sound generator

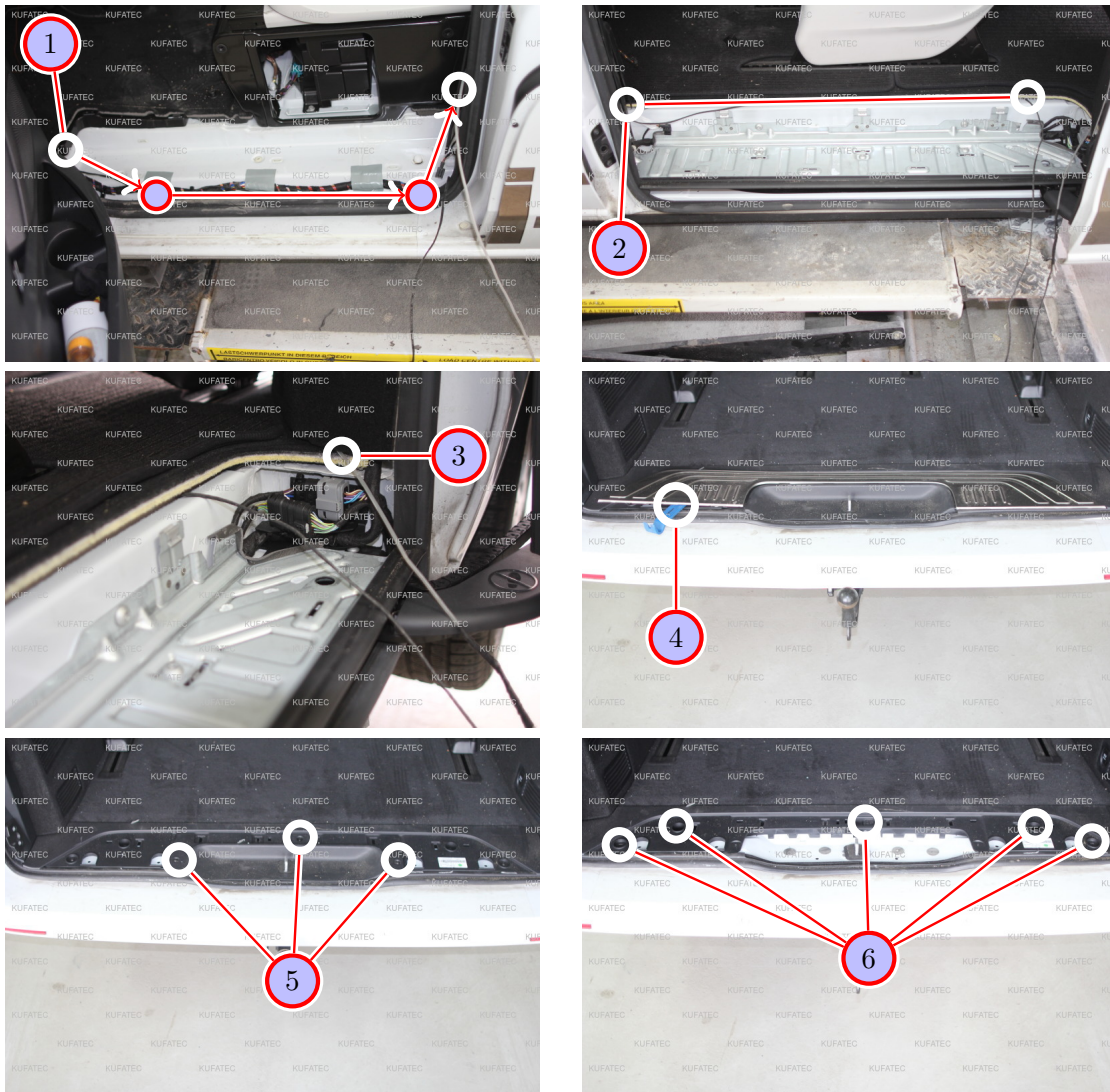


Figure 11: Cable routing sound generator

Table 9: Instructions to route the cables for the sound generator

No.	Work step	Note
1	Lay the cable for the sound generator along the original wire harness and guide it behind the B-column covering to the back using a pulling tool.	
2	Continue to pull the cable for the sound generator and lay it underneath the carpet up to the C-column.	
3	Push the cable under the carpet all the way into the trunk by using a pulling tool.	
4	Remove the load sill guard by using an assembly lever.	
5	Loosen the marked screws of the center cover and remove it afterwards.	
6	Loosen all marked screws of the lower cover and remove it afterwards.	

## 19 Cable routing sound generator to underbody

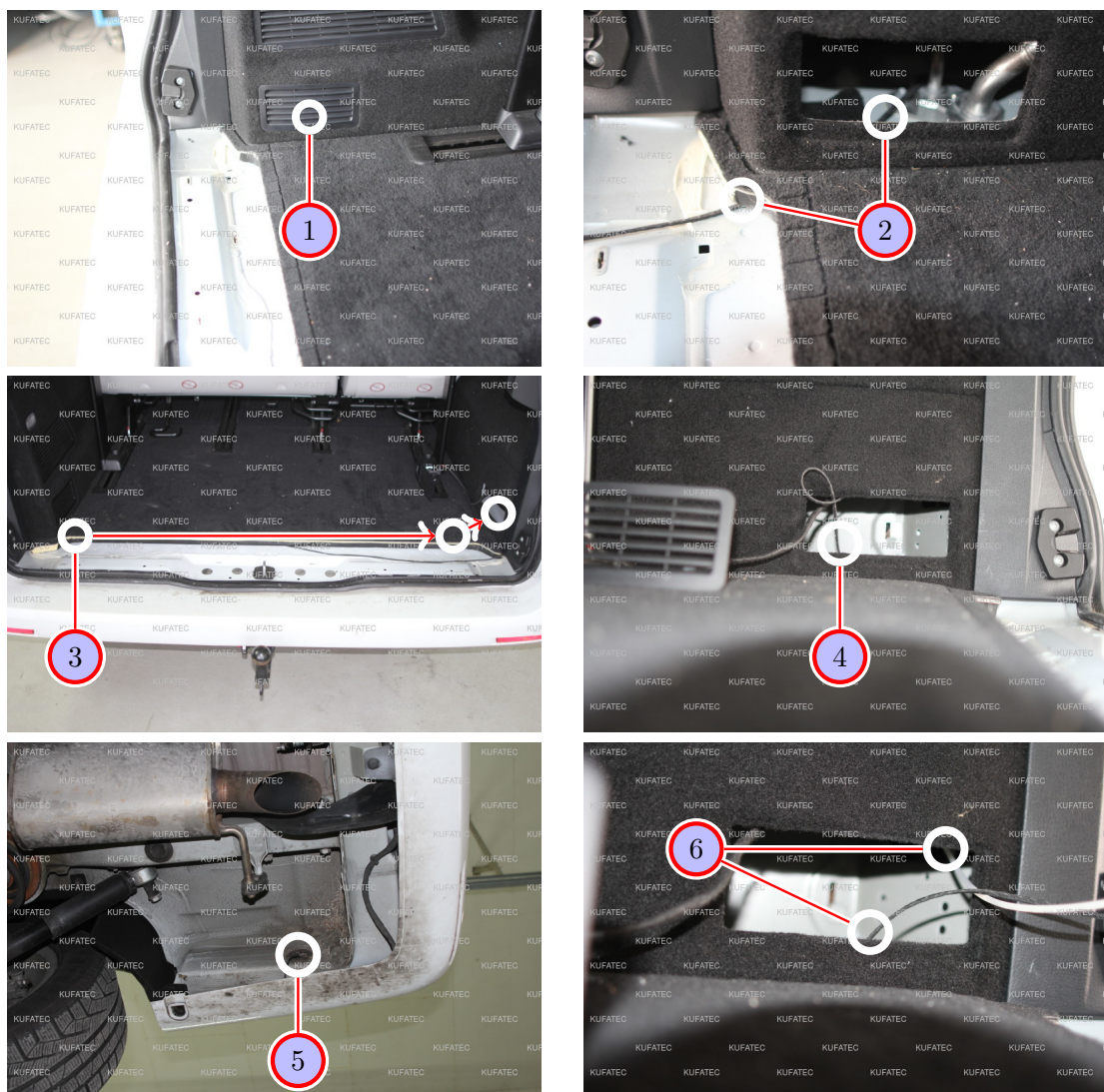


Figure 12: Cable routing sound generator to underbody

Table 10: Instructions to route the cables for the sound generator to the underbody

No.	Work step	Note
1	Remove the marked cover in the trunk on the left.	
2	Continue to pull the cable for the sound generator through behind the side covering.	
3	Continue to lay the cable underneath the carpet up to the right side in the trunk.	
4	Take the cover from the ride side covering in the trunk on the right and pull the cable for the sound generator behind the side covering.	
5	Push a pulling tool through the marked body opening towards the trunk.	
6	Pull the pulling tool further through the opening of the side covering. Connect the pulling tool to the cable for the sound generator and pull the cable down afterwards.	



## 20 Assembly sound generator

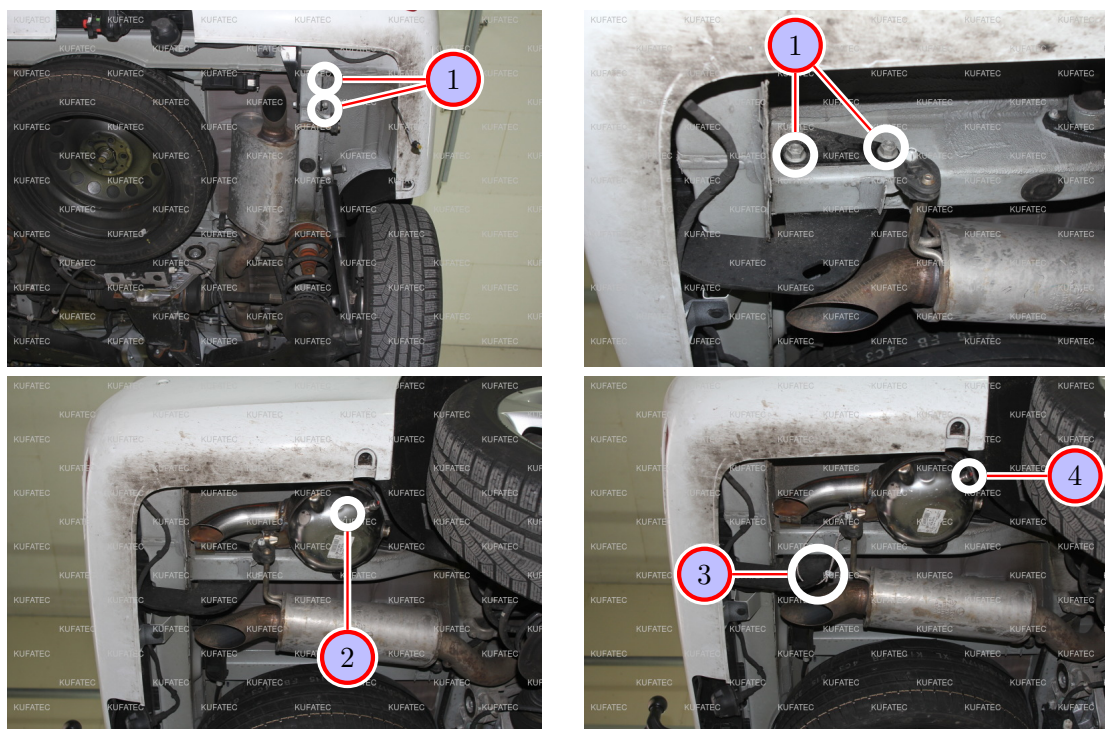


Figure 13: Assembly sound generator

Table 11: Instructions to assemble the sound generator

No.	Work step	Note
1	Loosen the two marked screws from the impact protection.	18er nut
2	Assemble the sound generator to the body of the vehicle using the two loosened screws.	18er nut
3	Assemble the safety rope to the impact protection as well as to the sound generator.	
4	Connect the cable, that was layed down, to the sound generator.	

## 21 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.

As additional safety the delivered steel cable and the retaining clips have to be attached to the Sound Booster as well as at a suitable position to the car. This safety cable is an additional security should the tightening screws be released due to the vibration.

## 22 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>



## 23 Assembling the vehicle

### Notes for assembling the vehicle

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



## 24 Connection/Troubleshooting cable set

### Sound Booster

From Sound Booster control unit 18-pole MQS to:

- **CAN distributor**
  - Pin 17 to green (CAN Low/CAN distributor)
  - Pin 18 to green/white (CAN High/CAN distributor)
- **Ground/Ignition plus**
  - Pin 9 to Connector/Connector to ground
  - Pin 1 to Connector/Connector to Kl.15 ignition plus, 15A
- **Control unit 8-pole MiT**
  - Pin 15 to Pin 1 (CAN Low)
  - Pin 16 to Pin 3 (CAN High)
- **Push-button 2-pole MiT**
  - Pin 4, 13 to Push-button

From plug connection control unit 8-pole MiT to:

- **Sound Booster control unit 18-pole MQS**
  - Pin 1 to Pin 15 (CAN Low)
  - Pin 3 to Pin 16 (CAN High)
- **Ground/Ignition plus**
  - Pin 2 to Connector/Connector to ground
  - Pin 4 to Connector/Connector to Kl.15 ignition plus
- **Sound Booster 2-pole MiT**
  - Pin 7 to Pin 2
  - Pin 8 to Pin 1

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