



Installation Instructions

Complete set active sound incl. sound booster $_{\rm v1.0~(26.05.2020)}$



Contents

1 Liability Exclusion	3
2 Copyright	4
3 General notes	4
4 Safety Instructions	5
5 Requirements for the intended use	5
6 Note	5
7 How to connect a cable to another	6
8 Note Cable Inscription/Color	7
9 Assembly Instructions	8
10 Assembly Note	9
11 Disassembly trunk coverings	10
12 Disassembly tail lights (body)	12
13 Disassembly rear bumper	13
14 Assembly sound generator	15
15 Disassembly fuse box passenger's side	16
16 Disassembly driver's seat	17
17 Disassembly coverings driver's side	18
18 Cable routing & connection CAN / ground	20
19 Assembly button	21
20 Cable routing & connection power supply	22
21 Cable sound generator	23
22 LED Status Display / Troubleshooting	25
23 Important Information Sound Booster	26
24 Configuration	26
25 Assembling the vehicle	26
26 Software	27
27 Software	28
28 Software	29
29 Connection / troubleshooting cable set	30



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 form the car's safety devices for installation. If bolts or nuts form 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 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.



7 How to connect a cable to another

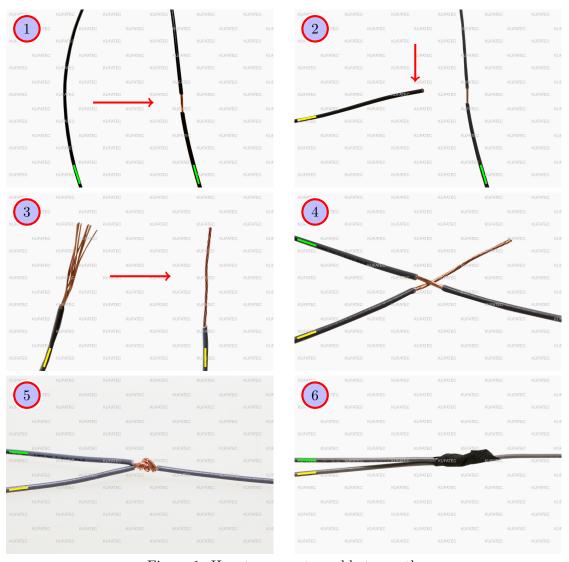


Figure 1: How to connect a cable to another

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 isola-	
	tion is put onto the connection professionally to prevent corrosion.	



8 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.



9 Assembly Instructions

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

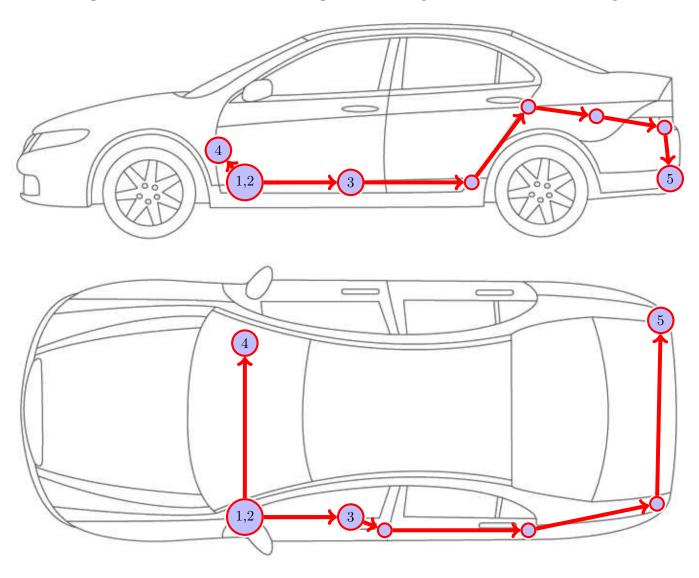


Figure 3: Vehicle overview

- 1 Control unit engine sound generation
- 2 Sound booster pro (module)
- 3 CAN gateway, ground pin
- 4 Fuse box
- 5 Exterior 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 **Audi e-tron**. 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 Disassembly trunk coverings

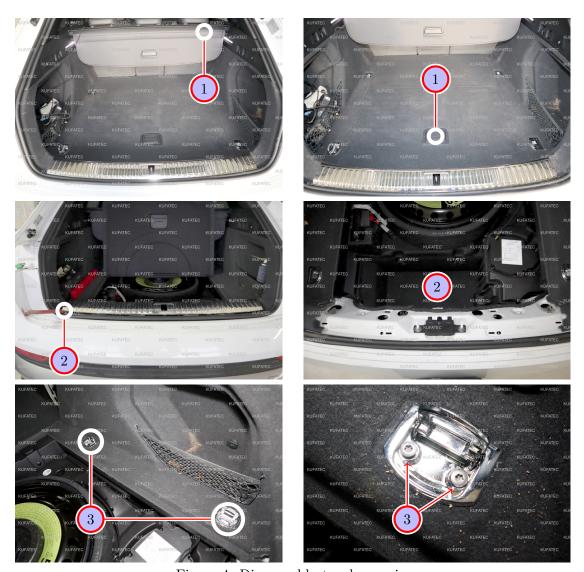


Figure 4: Disassembly trunk coverings

Table 2: Instructions to disassemble the trunk coverings

No.	Work steps	Note
1	Remove the trunk cover as well as the floor.	
2	Pull the load sill guard from bottom to top off and remove it.	
3	Loosen the two lashing eyes by removing two screws each.	2xT30



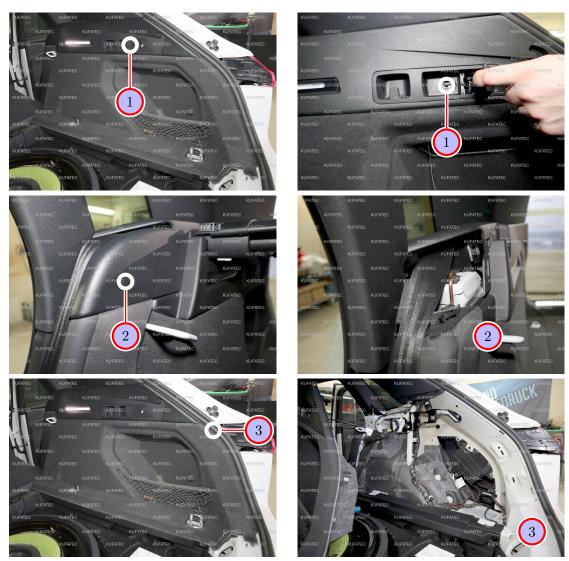


Figure 5: Disassembly trunk coverings

Table 3: Instructions to disassemble the trunk coverings

No.	Work steps	Note
1	Loosen and remove the marked screw behind the release for the back seat rest.	1xT25
2	Loosen the covering on the top of the back rest of the back seat and loosen the seat	
	belt.	
3	Loosen the side covering by using an assembly lever and remove the plug connections.	
	The side covering can subsequently be removed completely from the trunk.	
	Repeat the steps 3-6 on the other side of the vehicle as well.	



12 Disassembly tail lights (body)

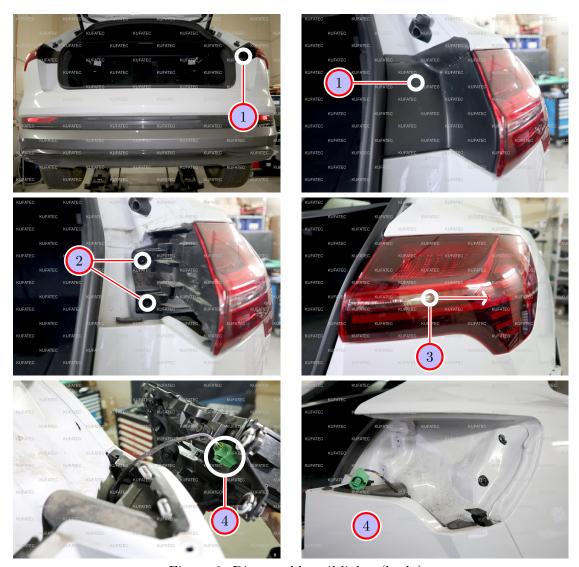


Figure 6: Disassembly tail lights (body)

Table 4: Instructions to disassemble the tail lights (body)

No.	Work step	Note
1	Push the covering at the top / side of the tail light in and pull it out to the side so	
	that all latching noses unhook.	
2	Behind the covering are two screws. Loosen and remove them.	2xT25
3	Turn the tail lights to the outer side a bit and loosen them with an assembly lever.	
	Pay attention to the stiff locking plugs.	
4	Detach the plug connection and remove the tail light from the vehicle completely.	
	Repeat these steps on the other side of the vehicle as well.	



13 Disassembly rear bumper

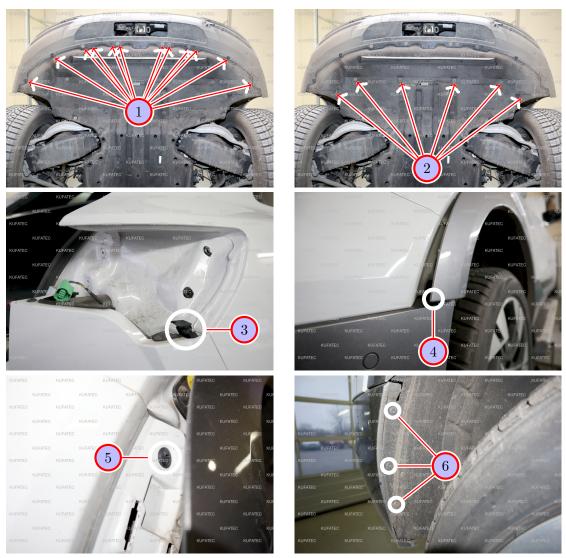
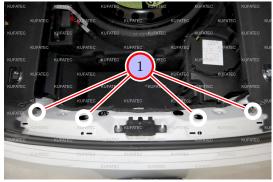


Figure 7: Disassembly rear bumper

Table 5: Instructions to disassemble the rear bumper

	r i i i i i i i i i i i i i i i i i i i	
No.	Work step	Note
1	Loosen and remove 18 screws at the underbody. 12 are located at the transition	12xT25
	between the plastic from the bumper and the cloth underbody.	
2	Six more screws are located in the direction of the front at the cloth underbody.	6xT25
3	Remove the marked pin at the point of assembly of the tail lights.	
4	Loosen the covering at the wheel house.	
5	Underneath the covering is a screw. Loosen and remove it.	1xT25
6	Loosen and remove the three marked screws inside the wheel house.	3xT25
	Repeat steps 3-6 on the other side of the vehicle as well.	







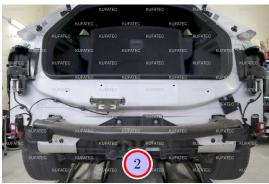


Figure 8: Disassembly rear bumper

Table 6: Instructions to disassemble the rear bumper

No.	Work step	Note
1	Loosen and remove the four screws which are located in the marked openings behind	4xSW10
	the load sill guard in the trunk.	
2	Pull off the bumper carefully and detach all plug connections. Remove the bumper	
	from the vehicle completely.	
!	Note: To prevent any damages to the vehicle/bumper due to a sudden	
	drop of the cover, only loosen and remove the bumper with the help of	
	another person.	



14 Assembly sound generator

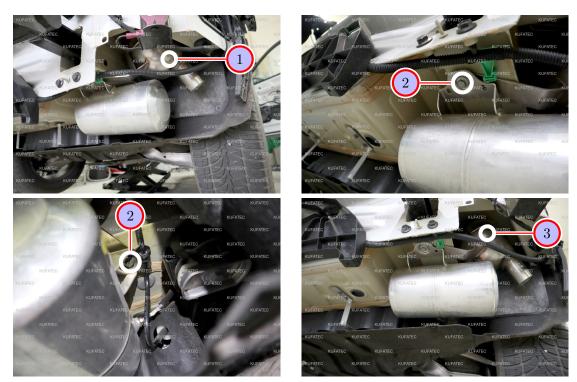


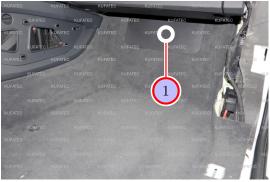
Figure 9: Assembly sound generator

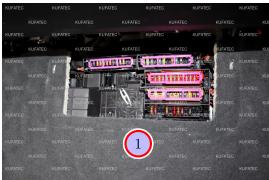
Table 7: Instructions to assemble the sound generator

	Table 1. Instructions to appendic the bound generator	
No.	Work step	Note
1	The point of assembly of the sound generator is the vehicle's rear end at the under-	
	body on the passenger's side.	
2	Loosen the air tank by removing the two marked screws. One is in front of the air	2xSW13
	tank, one behind it.	
3	The sound generator is assembled above the air tank with the previously removed	
	screws.	
	Attach the supplied steel cord to the sound generator and a suitable position at the	
	vehicle.	

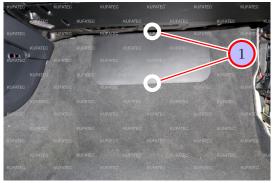


15 Disassembly fuse box passenger's side









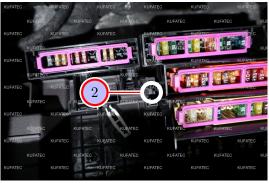


Figure 10: Disassembly fuse box passenger's side

Table 8: Instructions to disassemble the fuse box on the passenger's side

No.	Works step	Note
	The fuse box is located behind a covering at the front wall in the passenger's footwell.	
1	Remove the plastic covering by pulling it off at the top and detaching it from the	
	hooks downwards.	
2	The holder for the fuse box can be loosened by pressing in the small latching nose.	
	Pull the holder to the front, then take it off to the top.	



16 Disassembly driver's seat

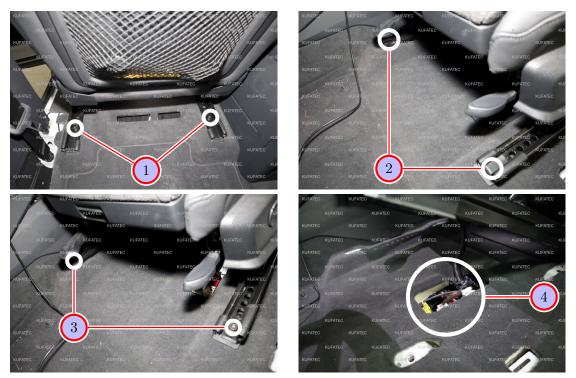


Figure 11: Disassembly driver's seat

Table 9: Instructions to disassemble the driver's seat

No.	Work step	Note
1	Move the seat all the way to the front in the final position as well as in the upper	2xVZ10
	final position. Loosen and remove the marked screws in the back.	
2	Move the seat all the way to the back in the final position afterwards and loosen the	
	covers of the screws at the support rails of the seat in the front.	
3	Loosen and remove the marked screws in the front.	2xVZ10
4	Tilt the seat to the back, disconnect all plug connections from the seat and remove	
	it from the vehicle afterwards.	



17 Disassembly coverings driver's side

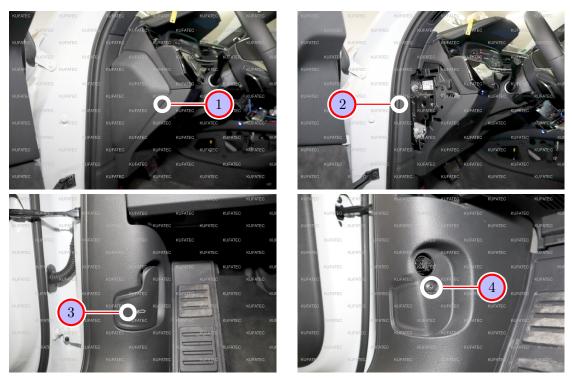


Figure 12: Disassembly coverings parts driver's side

Table 10: Instructions to disassemble the coverings on the driver's side

No.	Work step	Note
1	Loosen the lateral dashboard covering by using an assembly lever.	
2	Loosen the upper elongated A-column covering by using an assembly lever as well.	
3	Pull off the lever for the hood release.	
4	There is a screw located underneath the lever. Loosen and remove the screw.	1xT25



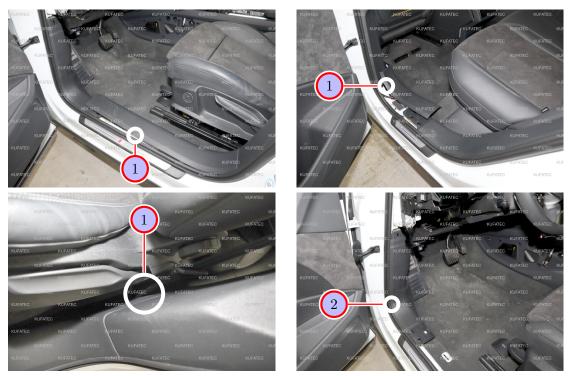


Figure 13: Disassembly coverings driver's side

Table 11: Instructions to disassemble the coverings on the driver's side

No.	Work step	Note
1	Loosen the continuous sill trim in the front and in the back by using an assembly	
	lever and remove it afterwards. Pay attention to the seat belt.	
2	Remove the lower A-column covering afterwards.	



18 Cable routing & connection CAN / ground

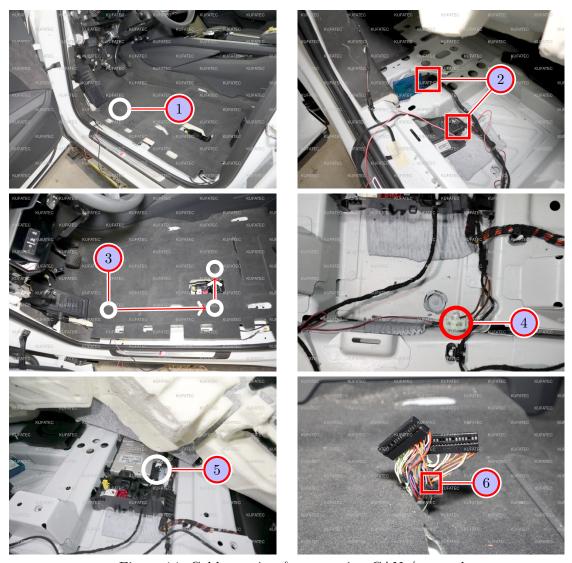


Figure 14: Cable routing & connection CAN / ground

Table 12: Instructions to route the cables and connect CAN / ground.

No.	Work step	Note
1	The control unit for the engine sound generator as well as the sound booster module	
	are assembled under the carpet covering in the driver's footwell and attached with	
	factory materials.	
2	Connect the cable set to the control unit and the module.	
3	Route the Can cable and the ground cable under the carpet to the rear end.	
4	Connect the ground cable to the marked ground pin .	
5	Remove the marked black plug from the gateway .	
6	Loosen the cover cap and connect the Can cable to the 54-pole plug as follows:	
	CAN High (black/white) to the brown cable in Pin 12	
	CAN Low (black/yellow) to the orange/brown cable in Pin 30	



19 Assembly button



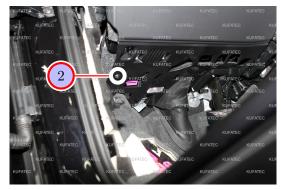


Figure 15: Assembly button

Table 13: Instructions to assemble the button

No.	Work step	Note
	If you want to control the sound generator per app or remote control	
	only, the button can be tied back. If you want to have control via the	
	button, follow these steps:	
1	Route the cable with the button from the driver's footwell up at the A-column and	
	the dashboard.	
2	Drill a hole for the button at the marked spot into the dash board covering and	$7\mathrm{mm}$
	assemble it there.	



20 Cable routing & connection power supply

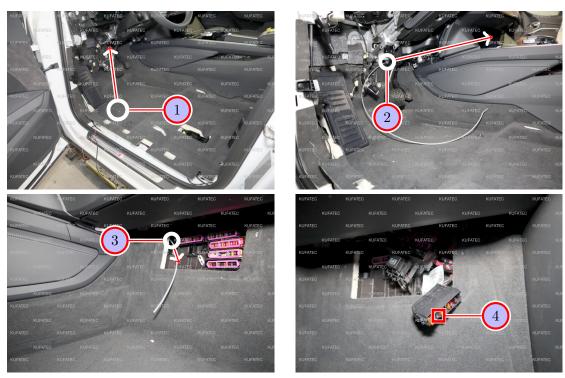


Figure 16: Cable routing & connection power supply

Table 14: Instructions to route the cables and connect the power supply

No.	Work step	Notes
1	Route the power supply cable of the cable set from the driver's footwell under the	
	carpet covering to the front wall.	
2	Route the cable along the front wall behind the center console from the driver's side	
	to the passenger's side. Use a pulling tool.	
3	Pull the cable into the passenger's footwell from behind the carpet covering.	
4	Use a multimeter to look for a ignition plus Kl. 15 carrying slot in the fuse box	
	(for us in the black fuse holder). Pin the cable for ignition plus to the slot and secure	
	it with a 15A fuse .	



21 Cable sound generator

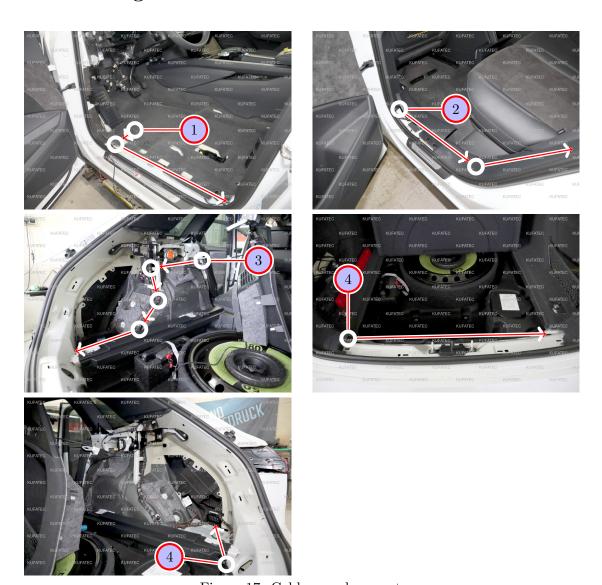


Figure 17: Cable sound generator

Table 15: Instructions to route the cables to the sound generator

No.	Work step	Note
1	Route the cable with the 2-pole plug for the sound generator from the driver's	
	footwell under the front sill trim on the driver's side to the B-column.	
2	Route the cables from the B-column further to the back seat.	
3	Pull the cable from the back seat behind the side covering into the trunk. Use a	
	pulling tool.	
	Route the cable along the original cable set to the vehicle's rear end.	
4	Route the cable in the trunk along the load sill guard behind the side covering on	
	the passenger's side.	



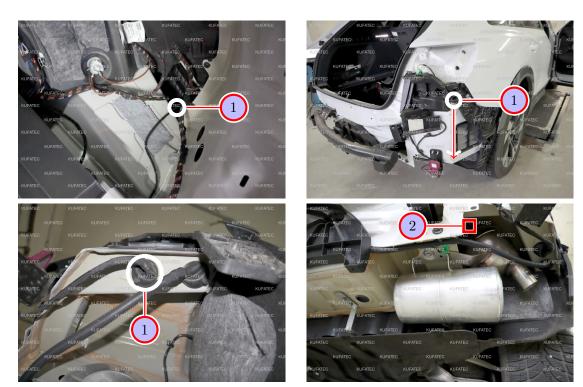


Figure 18: Cable sound generator

Table 16: Instructions to route the cables to the sound generator

No.	Work step	Note
1	Pull the cable from the side covering through the marked rubber grommet down to	
	the underbody of the vehicle.	
2	Connect the plug of the cable to the sound generator.	



22 LED Status Display / Troubleshooting

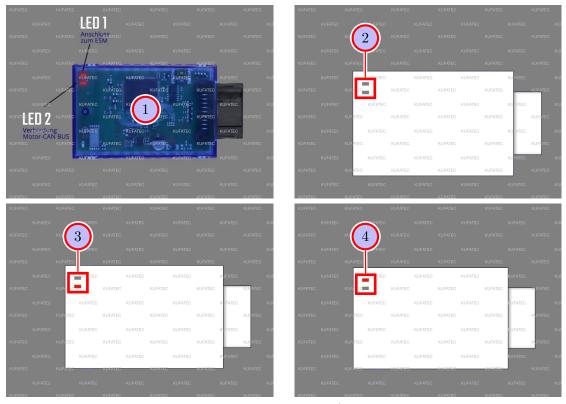


Figure 19: LED Status Display / Troubleshooting

Table 17: 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.	
!	First of all check whether the plug connection is connected correctly. The	
	bracket of the plug must be vertical and the plug must be sunk in to the horizontal	
	marking.	
2	If no LED is shining on our module, proceed as follows:	
	Option 1: "Check if the module is connected to a power source.	
	Option 2: Update the firmware via our software.	
	Option 3: Check if the module is connected to the right CAN-Bus (Powertrain-	
	/Motor-CAN).	
	Option 4: 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	If LED 1 is not flashing, proceed as follows:	
	Option 1: Check the connection to the ESM (External Sound Module) (error	
	message: connection CAN 2).	
	Option 2 : Check if the module is connected to a power source.	
4	If LED 2 is not shining, proceed as follows:	
	Option 1: Check if the module is connected to a power source.	
	Option 2: Check if the module is connected to the right CAN-Bus (Powertrain-	
	/Motor-CAN) (error message: connection CAN 1).	



23 Important Information Sound Booster

Please use suitable screws that can withstand high loads of impact to attach the sound generator. In order to avoid losening 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.

24 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



25 Assembling the vehicle

Notes for assembling the vehicle

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



26 Software

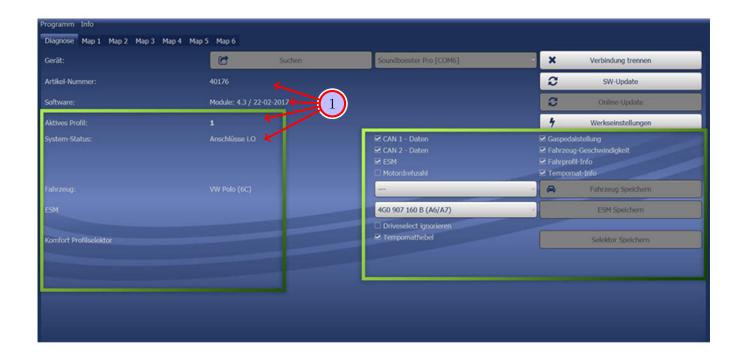


Figure 20: Software

Table 18: 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: https://www.	
	sound-booster.com/en/debugging.html. Our Sound Booster Software for PC /	
	Mac should be used for the commissioning or further debugging:	
	Step 1: Download the appropriate software via the following link: https://www.	
	sound-booster.com.	
	Step 2: 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.	
	Step 3: 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:	
	Software: Software version / creation date	
	Active profile: The actually activated profile is indicated here.	
	Vehicle: The automatically identified vehicle is indicated here.	
	System status: Here you can tell, if the connections are correct.	



27 Software

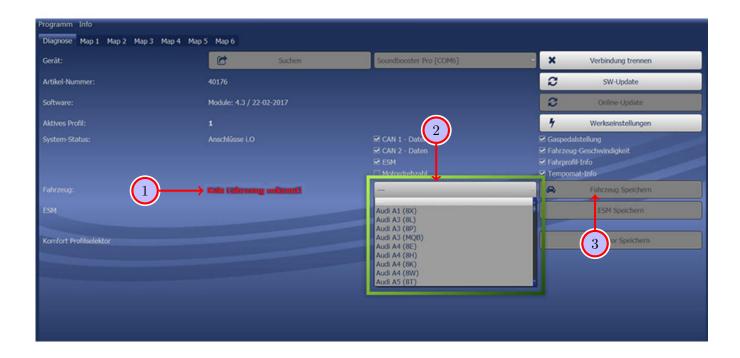


Figure 21: Software

Table 19: 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:	
	info@kufatec.de or by phone: $+49$ (0) 4551 / 80 810 888 . We will make an ap-	
	pointment with you, where we will adapt the software to your vehicle per Team	
	Viewer (remote maintenance).	



28 Software

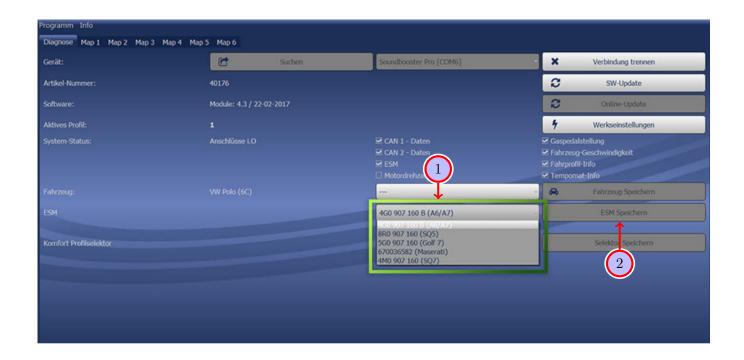


Figure 22: Software

Table 20: 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 4G0 907 160 B (A6/A7. If you installed the Maserati control unit instead of the Audi control unit you need to select the ESM 670036582 (Maserati).	
	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.	



29 Connection / troubleshooting cable set

Sound booster

From sound booster control unit 18-pole MQS to:

- CAN gateway 54-pole
 - Pin 17 to Pin 30 (orange/brown, CAN Low)
 - Pin 18 to Pin 12 (grey, CAN High)
- Ground / ignition plus
 - Pin 9 to ground
 - Pin 1 to ignition plus Kl.15, 15A (passenger's side)
- Control unit 8-pole MiT
 - Pin 15 to Pin 1 (CAN Low)
 - Pin 16 to Pin 3 (CAN High)
- Button 2-pole MiT
 - Pin 4, 13 to button

From sound booster control unit 8-pole MiT to:

- Sound generator
 - Pin 7 to Pin 2
 - Pin 8 to Pin 1



List of Figures

1	How to connect a cable to another	6
2	Cable Inscription	7
3	Vehicle overview	8
4	Disassembly trunk coverings	10
5	Disassembly trunk coverings	11
6	Disassembly tail lights (body)	12
7	Disassembly rear bumper	13
8	Disassembly rear bumper	14
9	Assembly sound generator	15
10	Disassembly fuse box passenger's side	16
11	Disassembly driver's seat	17
12	Disassembly coverings parts driver's side	18
13	Disassembly coverings driver's side	19
14	Cable routing & connection CAN / ground	20
15	Assembly button	21
16	Cable routing & connection power supply	22
17	Cable sound generator	23
18	Cable sound generator	24
19	LED Status Display / Troubleshooting	25
20	Software	27
21	Software	28
22	Software	29
	of Tables	
1	How to connect a cable to another	
2	Instructions to disassemble the trunk coverings	
3	Instructions to disassemble the trunk coverings	
4	Instructions to disassemble the tail lights (body)	
5	Instructions to disassemble the rear bumper	
6	Instructions to disassemble the rear bumper	
7	Instructions to assemble the sound generator	
8	Instructions to disassemble the fuse box on the passenger's side	
9		17
10	0	18
11		19
12	7 0	20
13	Instructions to assemble the button	21 22
14	T + + + + + + 1	٠,٠,
	1 11 0	
15	Instructions to route the cables to the sound generator	23
16	Instructions to route the cables to the sound generator	23 24
16 17	Instructions to route the cables to the sound generator	23 24 25
16 17 18	Instructions to route the cables to the sound generator	23 24 25 27
16 17	Instructions to route the cables to the sound generator	23 24 25 27 28