Installation Instructions

Complete Set Active Sound incl. Sound Booster

v1.0 (04.05.2021)

Contents

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.
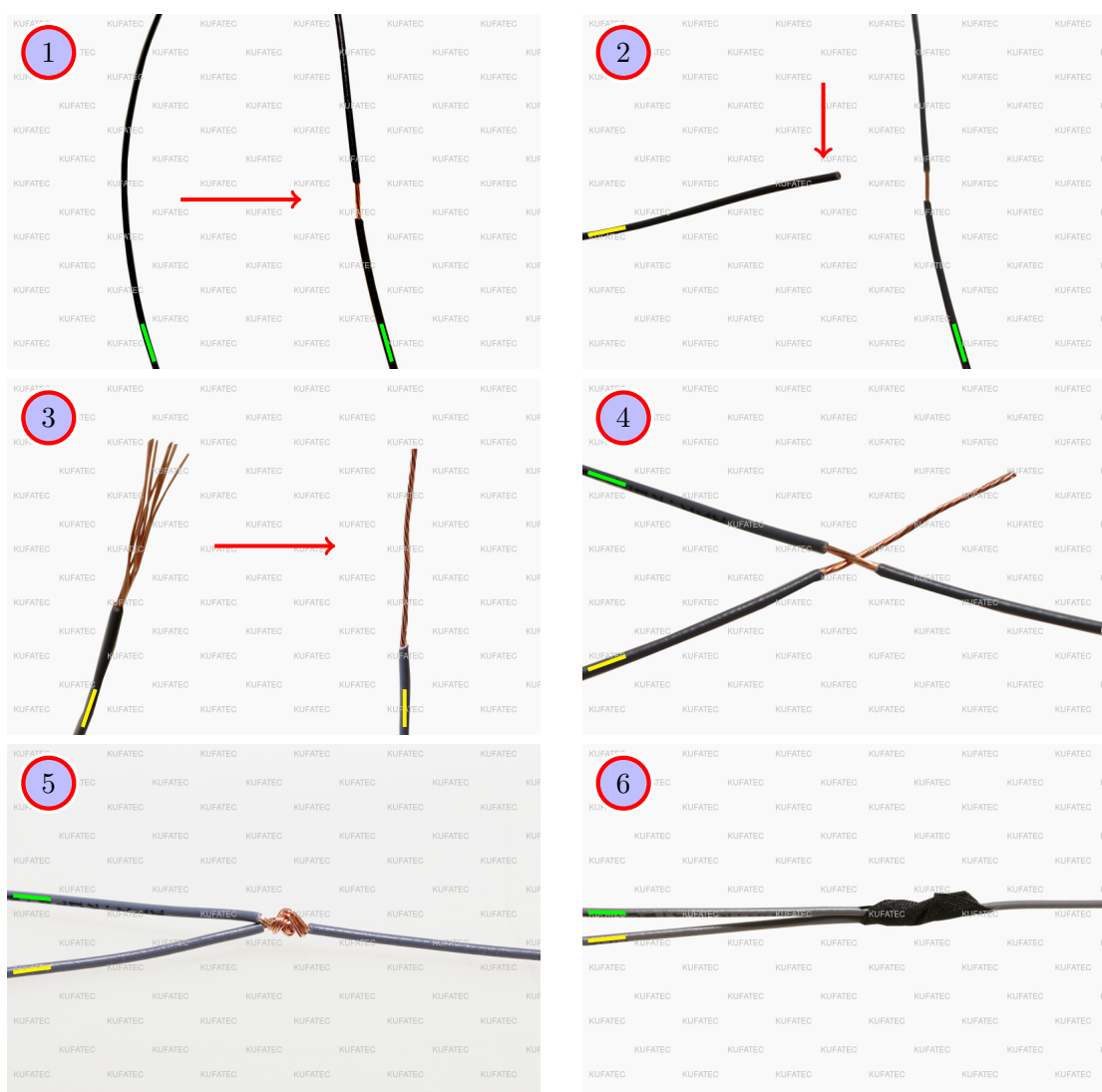
7   How to connect a cable to another

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 isolation is put onto the connection professionally to prevent corrosion.	

8 Note Cable Inscription/Color
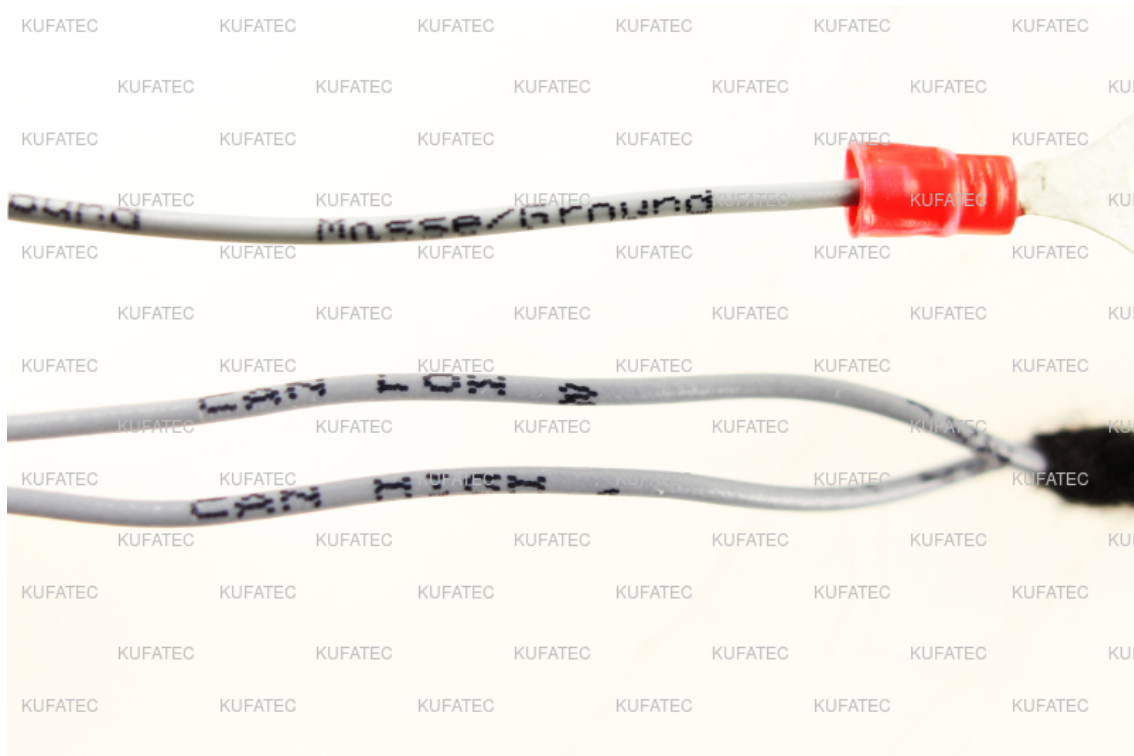
Figure 2: Cable Inscription

> **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.
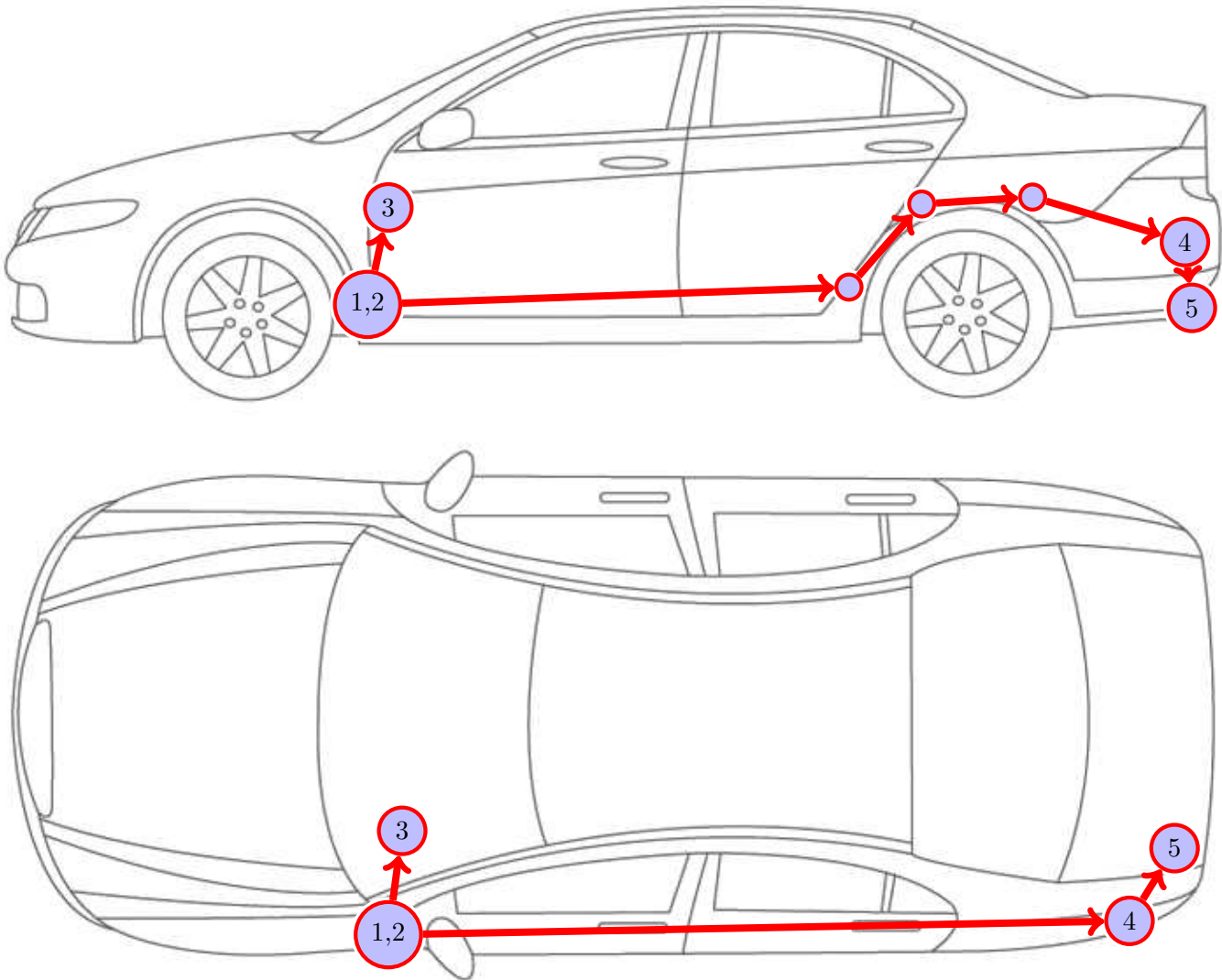

Figure 3: Vehicle overview

- 1 Control unit sound generator

- 2 Sound Booster Pro (module)

- 3 Button (optional)

- 4 Rubber grommet

- 5 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 **VW T6 SH**. 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. Vorsicht

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Note for assembling the vehicle

- **Before you start assembling the vehicle, the system must first be tested for proper function.**
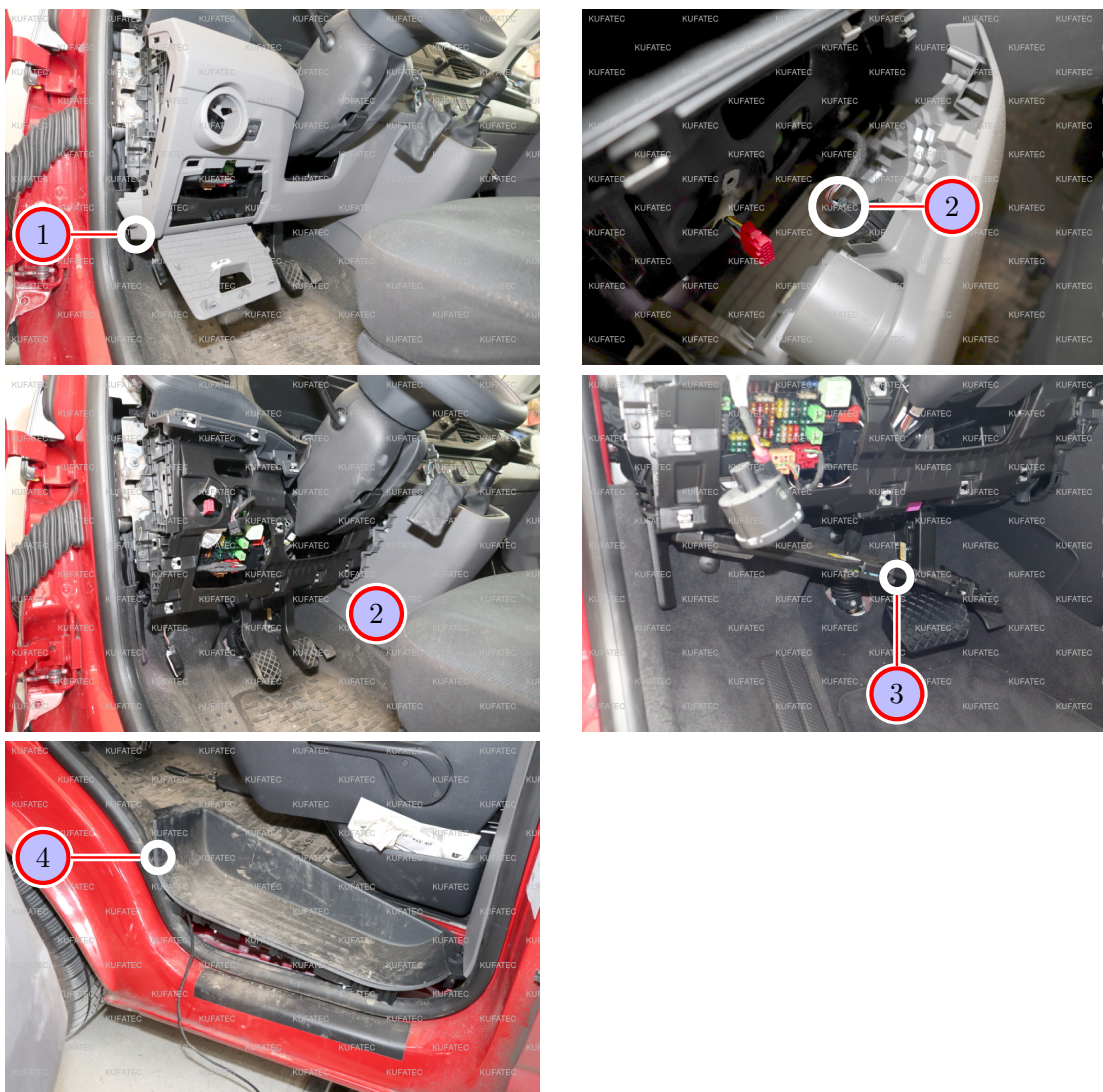
11 Disassembly coverings driver's side

Figure 4: Disassembly coverings driver's side

Table 2: Instructions to disassemble the coverings on the driver' side

No.	Work step	Note
1	Remove the covering of the ventilation first.	
2	Loosen the lateral covering of the dashboard by using an assembly lever.	
3	Turn the light switch to 0. Push in the light switch and turn it to auto. Now the light switch insert is unlocked and can be pulled out.	
4	Remove the plug and remove the light switch completely.	
5	Loosen the marked screw of the front covering.	1xT20
6	Open the compartment.	

Figure 5: Disassembly coverings driver's side

Table 3: Instructions to disassemble the coverings on the driver's side

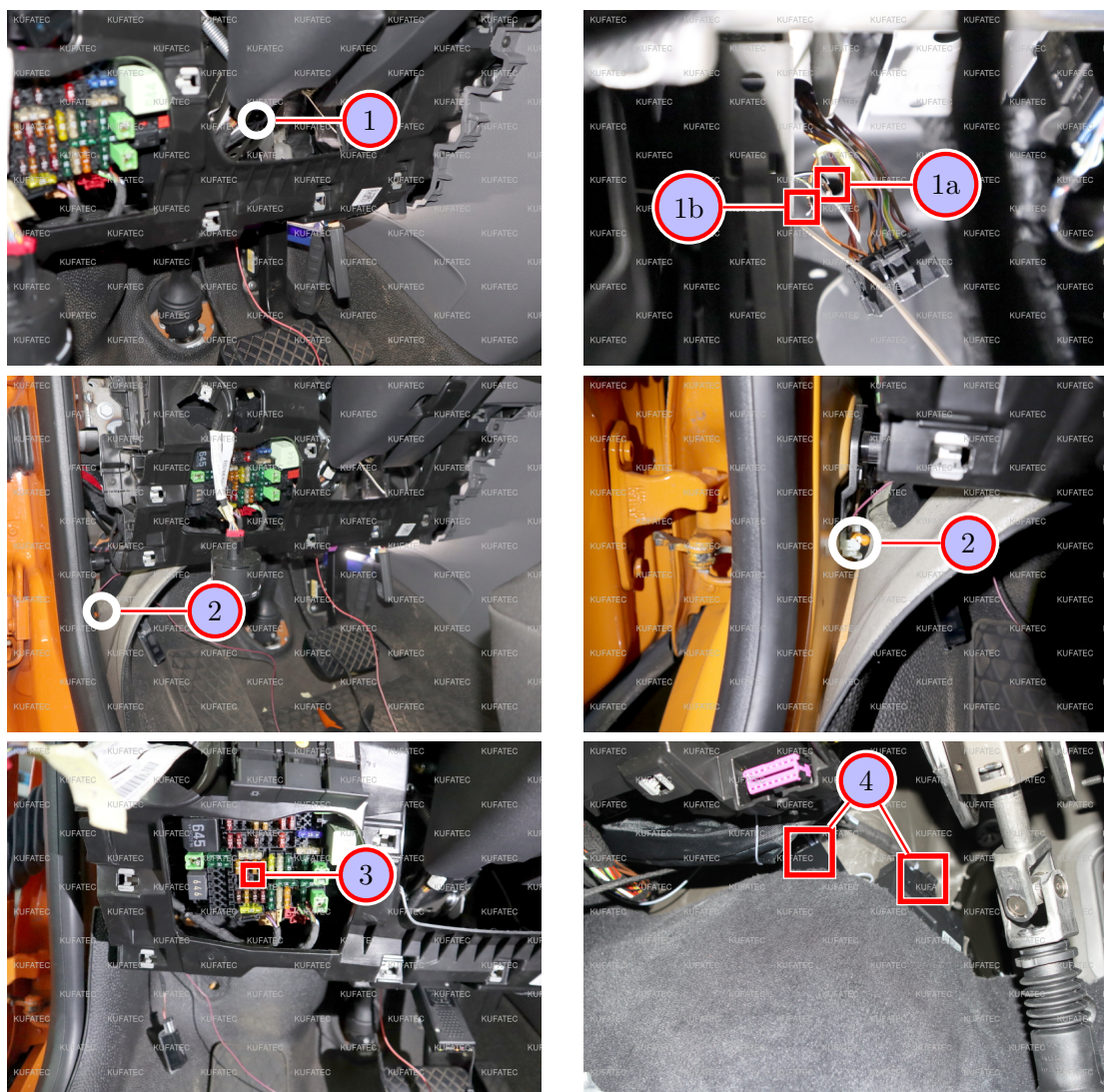| No.	Work step	Note
1	Loosen the front dashboard covering by using an assembly lever and pull it out a bit carefully.	
2	Remove the plug of the covering and remove it completely.	
3	Detach the marked lower dashboard covering from the clips and remove it. Pay attention to the lighting.	
4	Loosen the sill trim by using an assembly lever and pull it up a bit.	

12   Connection cable set

Figure 6: Connection cable set

Table 4: Instructions to connect the cable set

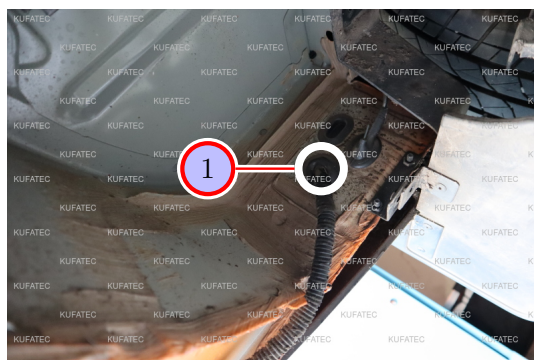| No.	Work step	Note
1	The gateway is located under the dashboard. Connect the cables for CAN High and CAN Low as follows:	
1a	CAN High with **Pin 18 (white cable)**	
1b	CAN Low with **Pin 8 (orange/brown cable)**	
2	Connect the ground cable with the ground pin at the A-column on the driver's side.	1x10er nut
3	Connect the cable for **ignition plus** (clamp 15; red/white) to the fuse box in the dashboard. Use a multimeter to look for an **ignition plus Kl. 15** carrying slot. Pin the cable for ignition plus to the slot and secure it with a **10A fuse**.	
4	Connect the cable set with the module as well as with the control unit and store both at a suitable spot in the dashboard close to the BCM.	

13 Cable routing driver's footwell to the back

Figure 7: Cable routing driver's footwell to the back

Table 5: Instructions to route the cables from the driver's footwell to the back

No.	Work step	Note
1	Route the cables from the driver's footwell under the sill trim to the front to the B-column.	
2	Route the cables up the B-column and from the B-column behind the covering to the back of the vehicle.	
	Note: Make sure not to obstruct the seat belt with the cable.	

Figure 8: Cable routing driver's footwell to the back

Table 6: Instructions to route the cables from the driver's footwell to the back

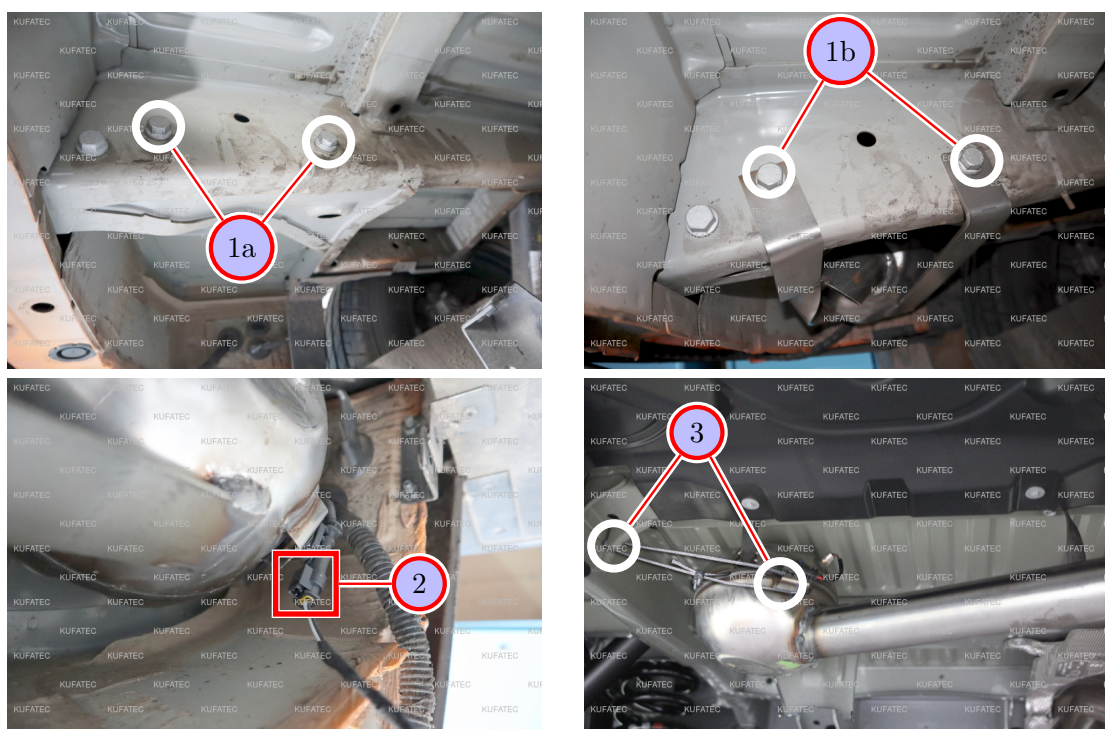| No.	Work step	Note
1	Route the cable through the rubber grommet to the underbody. If PDC is already assembled you can use the same rubber grommet that was used there.	

14 Assembly sound generator

Figure 9: Assembly sound generator

Table 7: Instructions to assemble the sound generator

No.	Work step	Note
1	Loosen and remove both screws at the cross bar on the driver's side (1a) and attach the sound generator with these screws to the cross bar (1b).	2x16er nut
2	Connect the cable to the sound generator.	
3	Connect the steel rope to the sound generator and to the vehicle.	

15   Assembly button (optional)
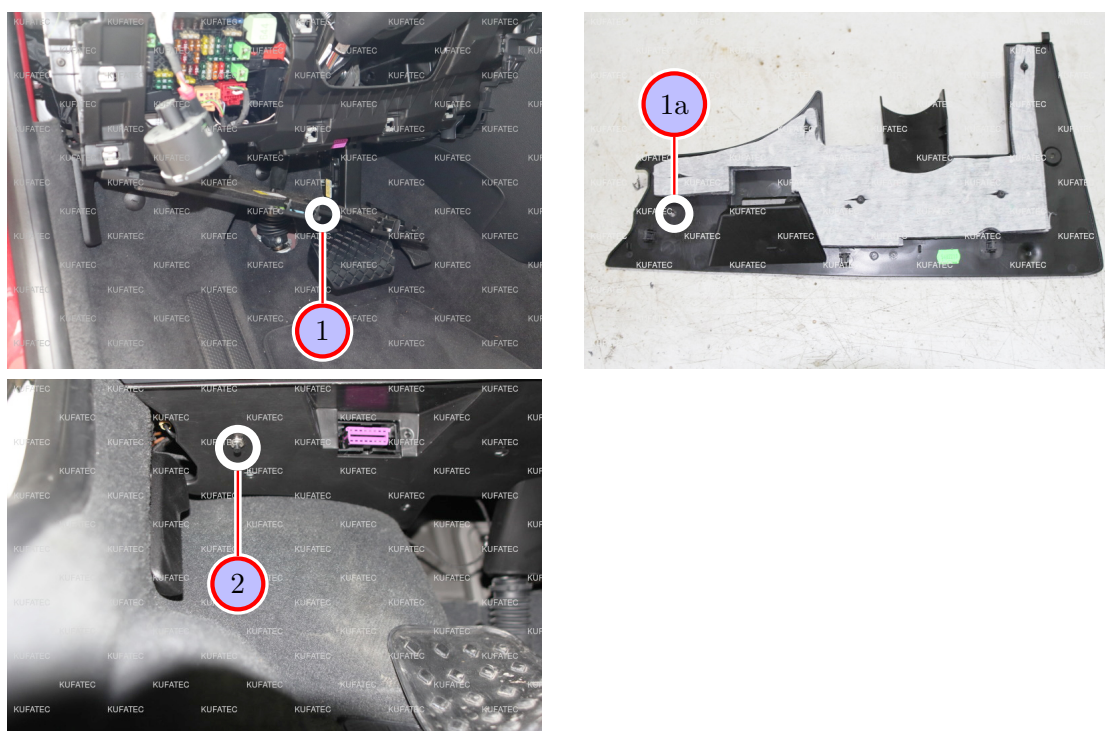
Figure 10: Assembly button (optional)

Table 8: Instructions to assemble the button (optional)

No.	Work step	Note
1	Drill a hole (1a) to the marked spot at the lower dashboard covering.	7mm
2	Assemble the button to the lower dashboard covering.	

16 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.

17 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`
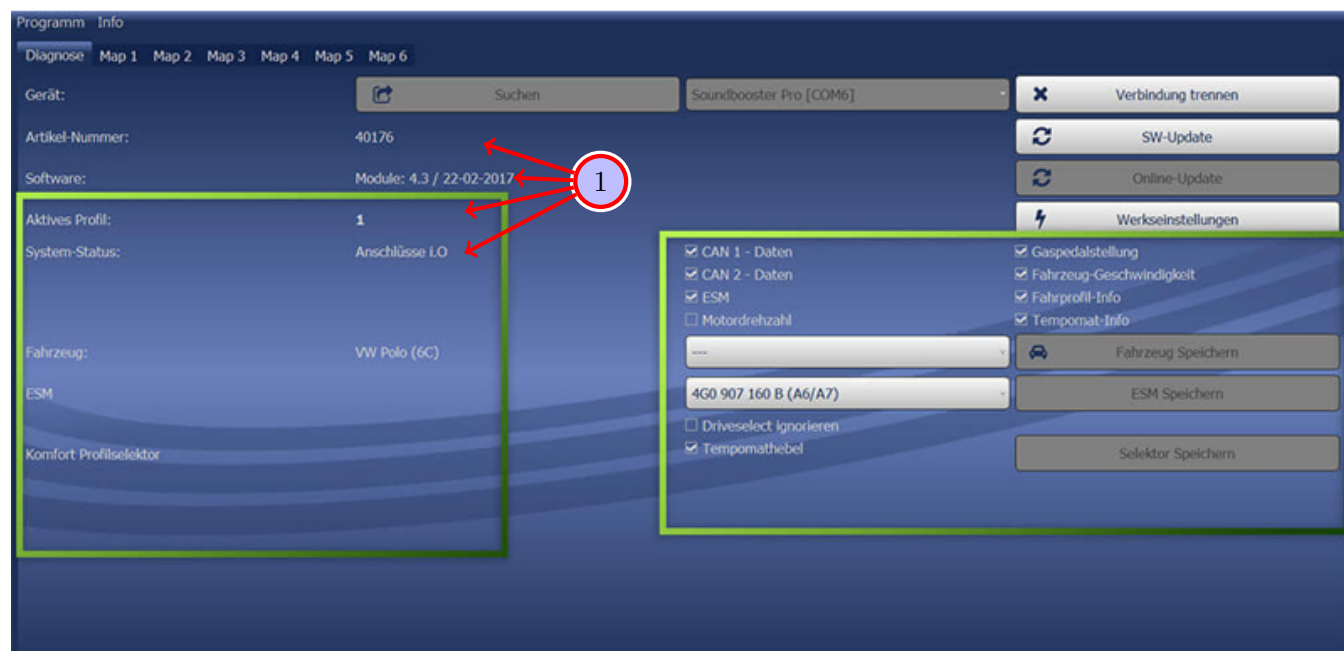
18 Software

Figure 11: Software

Table 9: Notes for the software

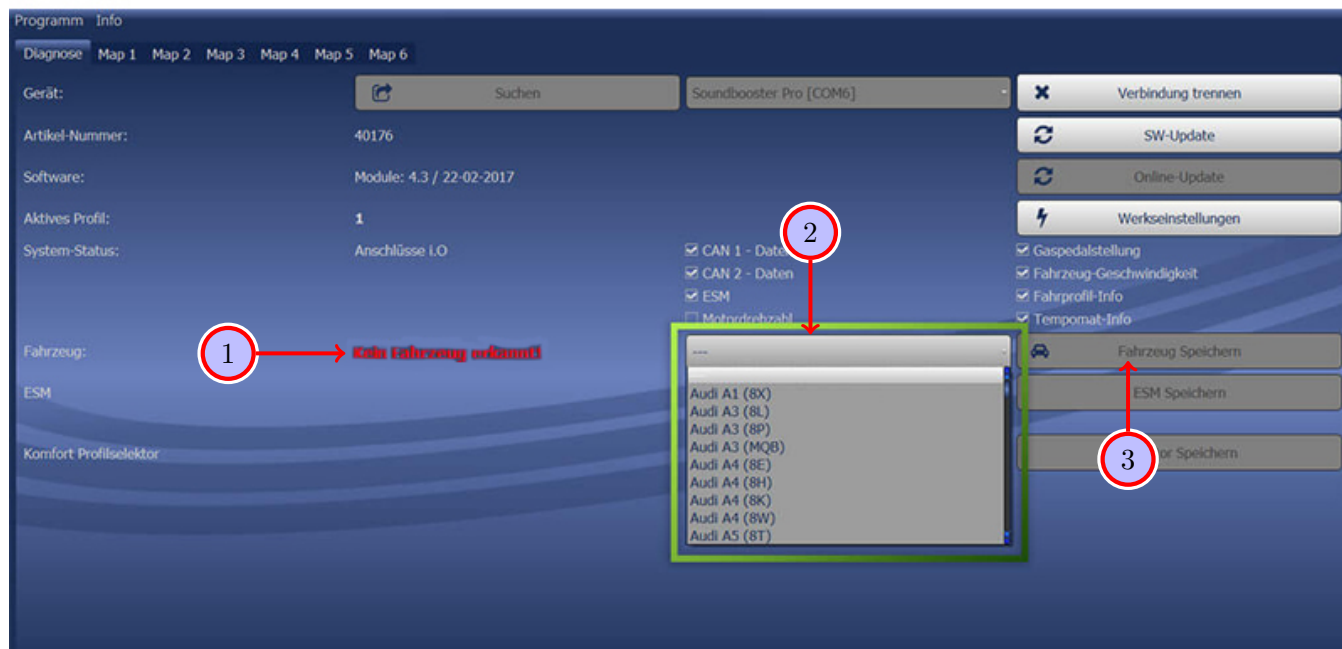| No.	Work step	Note
1	If the system does not work after the installation, please check if the system was installed correctly by having a look on the following link: `https://www.sound-booster.com/en/debugging.html`. Our Sound Booster Software for PC / Mac should be used for the commissioning or further 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.	

19 Software

Figure 12: Software

Table 10: Notes for the software

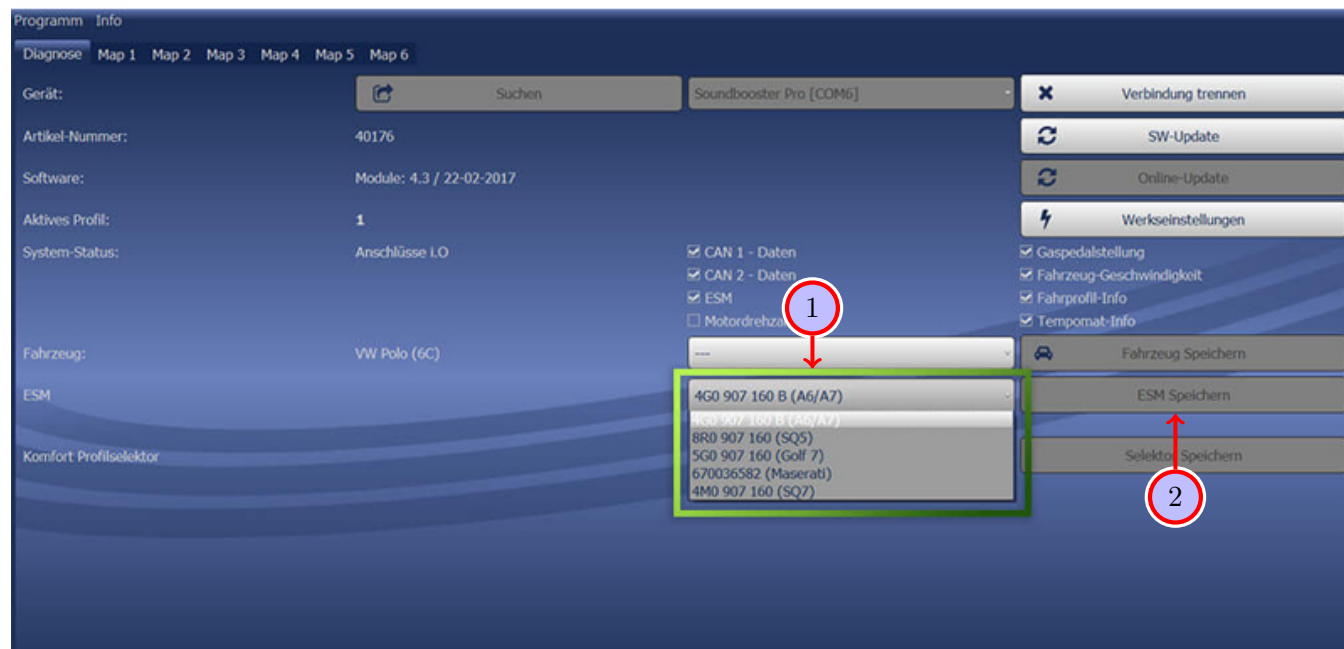| No.	Work step	Note
1	If no current vehicle is identified, you have to select the vehicle via the manual selection as follows:	
2	Open the dropdown-menu, search for your vehicle and select it.	
3	Click on Save Car to permanently save the vehicle to the module.	
	If you don't find your vehicle in the 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 appointment with you, where we will adapt the software to your vehicle per Team Viewer (remote maintenance).	

20 Software

Figure 13: Software

Table 11: 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.	

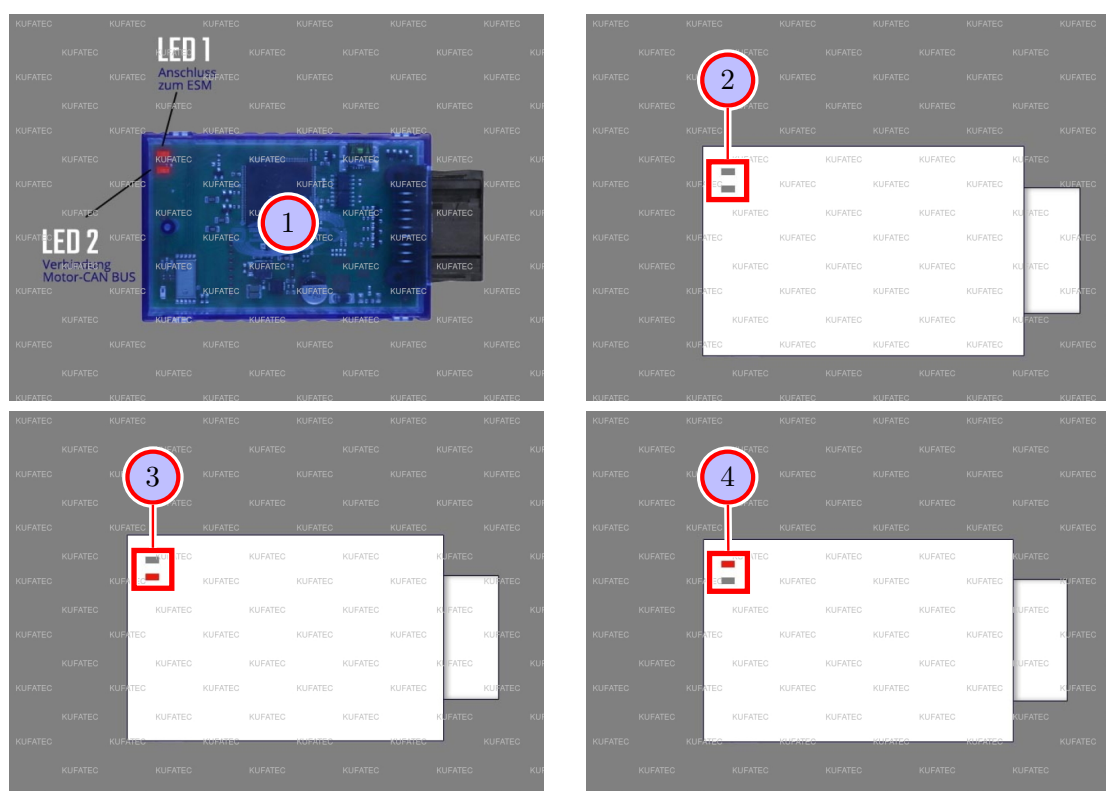# 21 LED Status Display / Troubleshooting

Figure 14: LED Status Display / Troubleshooting

Table 12: 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).	

22 Assembling the vehicle

Note for assembling the vehicle

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

23 Connection / Troubleshooting cable set

Sound Booster

From Sound Booster control module 18-pole MQS to:

- **CAN Gateway**
  - Pin 17 to Pin 8 (orange/brown CAN Low)
  - Pin 18 to Pin 18 (white CAN High)

- **Ground/ ignition plus**
  - Pin 2 to ground
  - Pin 4 to Pin 2 (2-pole plug) - Pin 1 (2-pole plug) to Kl.15 ignition plus

- **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 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 ground
  - Pin 4 to Pin 2 (2-pole plug) - Pin 1 (2-pole plug) to Kl.15 ignition plug

- **Sound Booster 2-pole MiT**
  - Pin 7 to Pin 2
  - Pin 8 to Pin 1

List of Figures

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