

# **KUFATEC Complete Set Active incl. Sound Booster Instruction Manual**

Home » KUFATEC » KUFATEC Complete Set Active incl. Sound Booster Instruction Manual

#### **Contents**

- 1 KUFATEC Complete Set Active incl. Sound **Booster**
- **2 Liability Exclusion**
- 3 General notes
- **4 Safety Instructions**
- 5 How to connect a cable to another
- 6 Note Cable Inscription/Color
- 7 Assembly Instructions
- **8 Assembly Note**
- 9 Assembly sound generator
- 10 Disassembly coverings
- 11 Cable routing & connection
- 12 Assembly / cable routing button
- 13 Important Information Sound Booster
- 14 Configuration
- 15 Software
- 16 LED Status Display / Troubleshooting
- 17 Connection/troubleshooting cable set
- 18 Documents / Resources
  - 18.1 References
- 19 Related Posts



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



### **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 manufac-turer'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). Ac-cording 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

### 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.

#### **General notes**

- While developing this product, your personal safety combined with the best operating service, modern de-sign 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

### **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 de-scribed 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.

#### 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.

#### 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 TU" V/DEKRA office before retrofitting. Outside Germany, please observe the laws on vehicle licensing applicable in your country.

### How to connect a cable to another

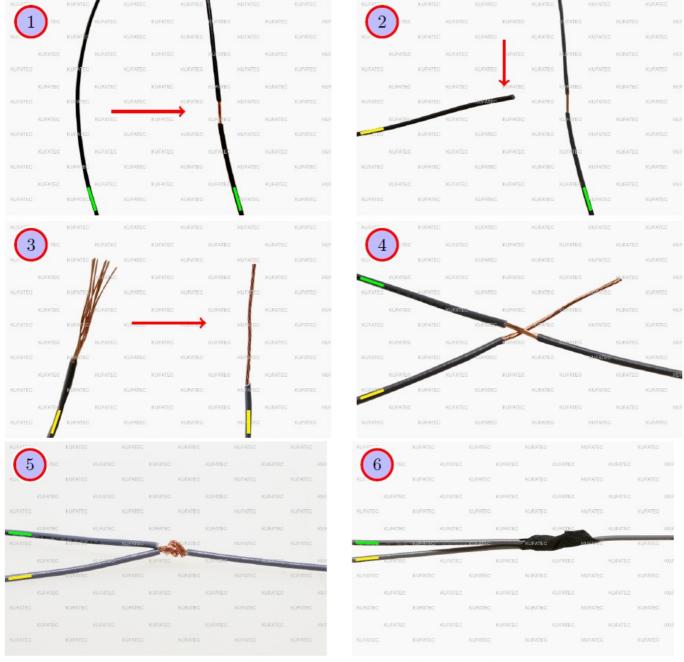


Figure 1: How to connect a cable to another

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.	

### 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.

### **Assembly Instructions**

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

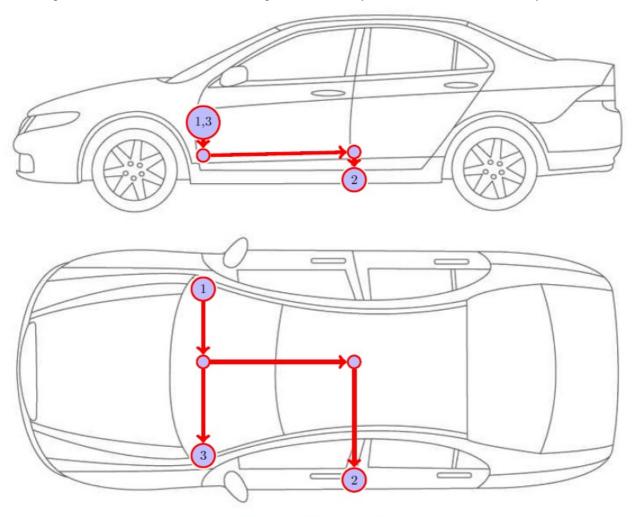


Figure 3: Vehicle overview

- 1 Connection cable set / control unit
- · 2 Sound generator
- 3 Button (optional)

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.

### **Assembly Note**

#### Important note for the assembly

• The vehicle used for the assembly instruction was a Mercedes G-Wagon W463. 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.

## **Assembly sound generator**

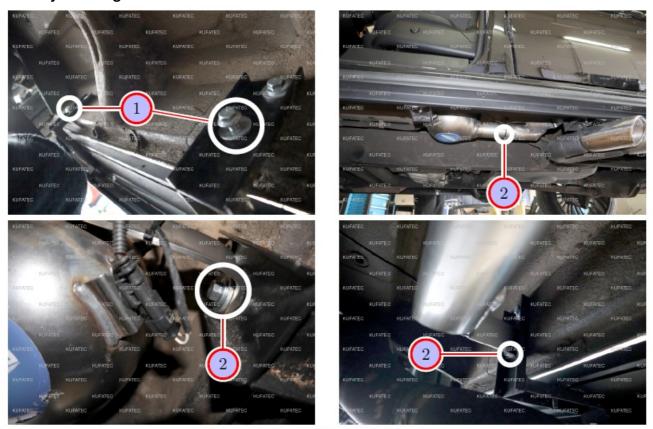


Figure 4: Assembly sound generator

## Table 2: Instructions to assemble the sound generator

No.	Work step	Note
1	Loosen and remove the two marked screws at the step under the vehicle. It is located on the driver's side in the middle in the direction of the exhaust.	2xSW14
2	Assemble the sound generator with the holders to the position of the previously removed screws at the step.	
	Secure the sound generator subsequently with a wire rope.	

# Disassembly coverings



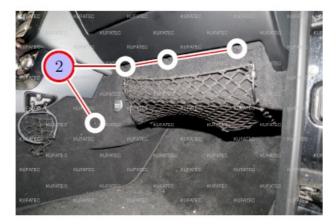




Figure 5: Disassembly coverings

# Table 3: Instructions to disassemble the coverings

No.	Work step	Note
1	Pull off the covering in the back at the center console / footwell in the middle.	
	Under the covering is a rubber grommet, which leads to the underbody.	
2	Loosen and remove the four marked screws under the glove compartment in the passenger's side.	4xT25
3	Pull off the covering, loosen the plug connections and remove the covering completely.	

# Cable routing & connection

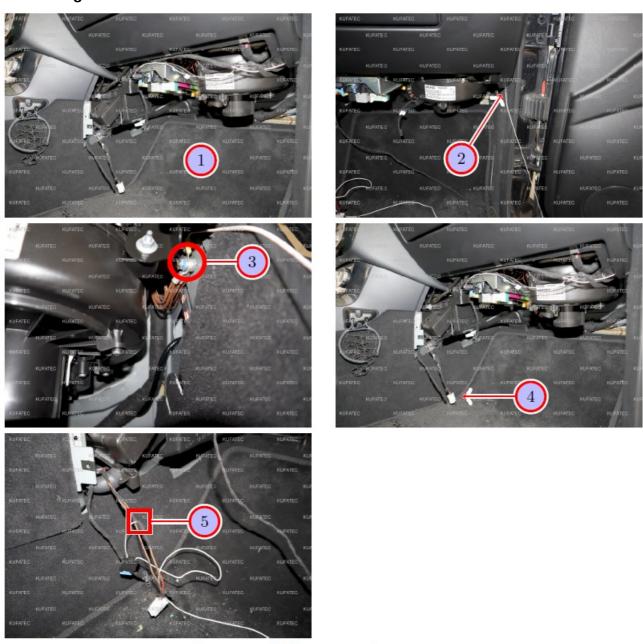


Figure 6: Cable routing & connection

Table 4: Instructions to route and connect the cable

No.	Work step	Note
1	The cable set is connected in the passenger's footwell to the modules as well as to power, ground and CAN.	
2	Route the cable for ground to the ground pin. It is located at the A-column.	
3	Connect the ground cable to the marked ground pin.	
4	Route the cable for the power supply into the direction of the center console to the connection of the cigarette lighter.	
5	Connect the cable to the red/green cable in Pin 3 of the cigarette lighters.	

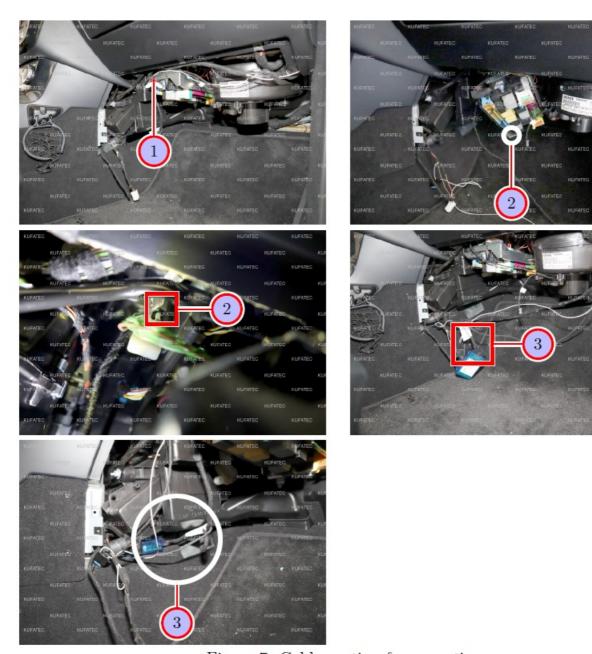


Figure 7: Cable routing & connection

Table 5: Instructions to route and connect the cable

No.	Work step	Note
1	Route the cables for CAN to the splitter bar under the glove compartment. That is located above the fuse box.	
2	Loosen the fuse box a bit and attach the plug for CAN above the green/white-green twisted cables into the splitter bar.	
3	Connect the plug (18-pole/8-pole) to the sound module as well as the bluetooth module and store it at a suitable position in the dashboard.	

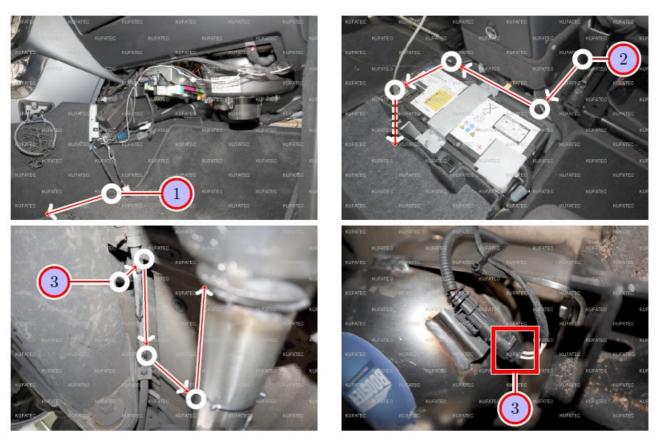


Figure 8: Cable routing & connection

## Table 6: Instructions to route and connect the cable

No.	Work step	Note
	The long cable with the 2-pole plug now has to be routed to the back to the sound generator. In order to do so, the plug maybe has to be detached and pinned to the underbody.	
!	Note: The cables with the button remain in the passenger's footwell for now.	
1	Route the cable from the passenger's footwell under the carpet covering along the center console back to the footwell of the backseat.	
2	Route the cable through the unveiled rubber grommet at the battery in the middle of the footwell down to the underbody.	
3	Route the cable under the vehicle to the sound generator and connect the plug to the sound generator. Attach the cable professionally using factory materials.	

### Assembly / cable routing button

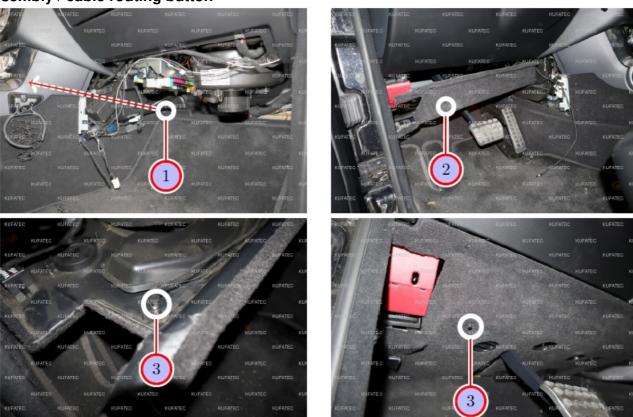


Figure 9: Assembly / cable routing button

#### Table 7: Instructions to assemble/ route the cables of the button

No.	Work step	Note
!	Note: Please only pay attention to this section, if the button cable is supposed to be assembled in the driver's footwell. If you don't want that, the cable can be tied back and stored in the passenger's footwell.	
1	Route the cable with the button from the passenger's footwell behind the center console along the front wall into the driver's footwell. Use a pulling tool.	
2	Loosen the lower dashboard covering on the driver's side.	
3	Look for a suitable position for the button and drill a 7mm hole into the covering.  Insert the button, attach it from the outside with the ring and store the cable professionally.	

### **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.

### 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



### **Software**

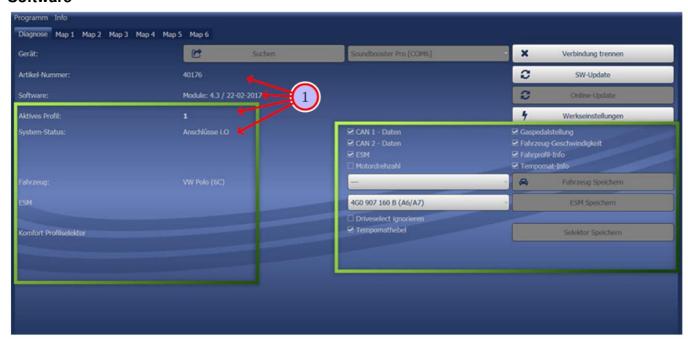


Figure 10: Software

**Table 8: 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:	
	Step 1: Download the appropriate software via the following link: <a href="https://www.sound-booster.com">https://www.sound-booster.com</a> .	
	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 c onnected correctly. If this is not the case, it could result in a damage to the computer or to t he 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.	

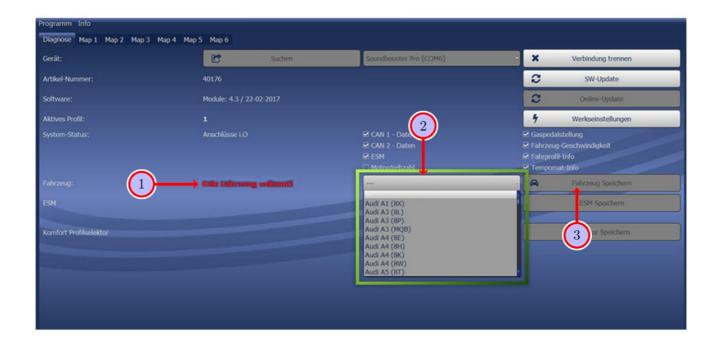


Figure 11: Software

#### **Table 9: 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 ap-pointment with you, where we will adapt the software to your vehicle per Team Viewer (remote maintenance).	

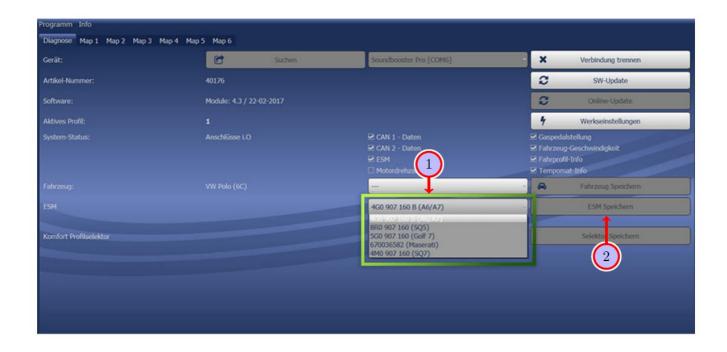


Figure 12: Software

### **Table 10: 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.	
	For example, if you ordered a complete set with a Audi control unit you need to	
3	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 is- sue as soon as possible.	

# **LED Status Display / Troubleshooting**

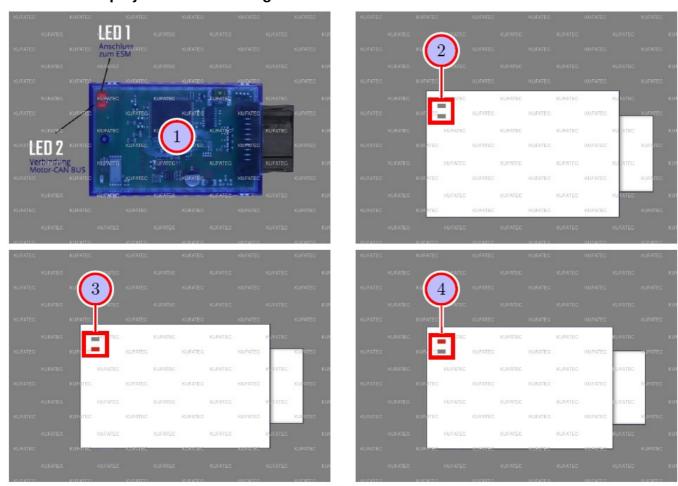


Figure 13: LED Status Display / Troubleshooting

# Table 11: 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 de scription of the error: <a href="mailto:info@kufatec.de.">info@kufatec.de.</a>	
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).	

### Connection/troubleshooting cable set

### **Sound Booster**

From sound booster control module 18-pole MQS to:

### • CAN splitter

- Pin 17 to Pin 2 (2-pole)
- Pin 18 to Pin 1 (2-pole)

### • Ground/ignition plus

- Pin 9 to ground
- $\,\circ\,$  Pin 1 to Kl.15 ignition plus, 15A

### • Control module 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 Kl.15 ignition plus
- Sound Booster 2-pole MiT
  - Pin 7 to Pin 2
  - Pin 8 to Pin 1

#### **Documents / Resources**



<u>KUFATEC Complete Set Active incl. Sound Booster</u> [pdf] Instruction Manual Complete Set Active incl. Sound Booster, Active incl. Sound Booster, Complete Set Sound Booster, Sound Booster, Booster

#### References

• K Contact form | Support, phone | KUFATEC Deutschland

Manuals+,