



# **Installation Instructions**

## Active DAB+ Antenna Interior

### Universal

v1.2 (13.07.2018)

## Contents

<b>1</b>	<b>Liability Exclusion</b>	<b>3</b>
<b>2</b>	<b>Copy Right</b>	<b>4</b>
<b>3</b>	<b>General notes</b>	<b>4</b>
<b>4</b>	<b>Safety instructions</b>	<b>5</b>
<b>5</b>	<b>Requirements for the determinable operation</b>	<b>5</b>
<b>6</b>	<b>How to connect a cable to another</b>	<b>6</b>
<b>7</b>	<b>Note Cable Inscription/Color</b>	<b>7</b>
<b>8</b>	<b>Assembly Instruction</b>	<b>8</b>
<b>9</b>	<b>Assembly DAB+ antenna (antenna film)</b>	<b>9</b>
<b>10</b>	<b>Assembly DAB+ antenna (antenna line)</b>	<b>10</b>

# 1 Liability Exclusion

Dear Customer

Our cable sets are developed according to the connection- and circuit diagrams of the corresponding car manufacturer. Before the original production the cable sets will be tested on an original car. Therefore, the integration into the car electronics will be executed according to the instructions of the manufacturer. Regarding the necessary pre-understanding and the accuracy of the presentation of texts and pictures our mounting guidelines correspond to the usual ones in car technology and car electronics. Practically, they have been proved one's worth a hundred times.

However, should there be any difficulties during the installation of our products we will be at your disposal any time for support by phone or by mail. Moreover, we offer you to execute the installation at our works in Bad Segeberg.

Costs which may arise because a third person will execute the installation of our products will not be supported by us in any case. Only if there is a mistake caused by our product we will pay the proved costs of the installation as well as the costs of the removal of the defective product. The refund of expenses will be limited to gross EUR 110,- ; we reserve the right to check the described mistake in our works in Bad Segeberg. In case of a proved reclamation the costs for dispatch for the check in our factory will be transferred to you.

According to our experience each specific factory which has the necessary diagnostic device, diagnostic software and the circuit diagrams of the manufacturer can find possible mistakes at our products within a short time. So the installation and removal including diagnostic inspection can be realised in at most 60 minutes.

We also made the experience that many specific factories cannot work with the circuit diagrams of the manufacturer, and that they cannot read usual wiring diagrams. Therefore, very easy installation works will take many hours. You will understand that we neither take the risk to find a reliable specific factory nor the financing of the training of the staff of your favoured factory.

Costs which will arise because you buy missing parts or spare parts at other suppliers will be refunded by us up to the amount of the costs which had been arisen by additional supply (saved expenses). In this case, there would be no right for refund according to the legal guarantee right as long as we have no deadline for supplementary performance or a deadline for supplementary performance has not expired.

So if you have any problems with the installation or operation of one of our products please call us, send us an email, send us the product or take your car to our factory in Bad Segeberg. We are sure to find an appropriate solution for each concern.

With best regards

Your Kufatec GmbH & Co. KG Team

## 2 Copy Right

Our installation- and removal instructions, installation plans, software and other documentation with texts or pictures are protected by copy right.

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

## 3 General notes

Regarding the development there has especially been paid attention to your personal safety together with the most possible operating comfort, modern design and actual product technologies.

Despite most possible accuracy in case of incorrect installation or use or in case of incorrect operating, it is possible that injuries or damages of property may arise.

Therefore, please read the operating instructions you have received carefully and completely, and keep it with you.

All articles of our production will be checked at 100% — for your safety.

We reserve the right to make technical changes which serve the progress at any time.

Before the installation or startup it may be necessary, depending on the article and purpose of use, to check the legal instructions of each country.

In case of warranty claim the device has to be sent to the seller originally packed together with the sales receipt and a detailed description of the mistake. Please consider the manufacturer's instructions for return (RMA). The legal warranty instructions are valid.

The warranty claim and also the permission for startup will expire in case of:

- unauthorised changes on the device or the accessories which have not been executed or approved by the manufacturer or its partners
- opening of the box
- repair of the device on your own
- incorrect use / no normal use / startup
- influence of force on the device (falling down, wilful damage, accident, etc.)

During the installation please consider all safety and legal instructions. The device may only be installed by trained qualified personnel or persons who are similar qualified.

**In case of installation- or function problems please reduce the search of the mistake to approx. 0,5 hours for mechanical works or 1,0 hours for electronic works.**

To avoid unnecessary additional work and expenses, please send immediately an inquiry to our technical support with the Kufatec contact form (<http://www.kufatec.de/shop/de/infocenter/>)

Please absolutely mention the following:

- car chassis number
- part number of the add-on kit
- exact description of the problem
- work steps already made

## 4 Safety instructions

The installation may only be executed by trained qualified personnel. Please execute the installations only in a condition of dead voltage. Here please separate for example the battery from the main power supply and consider the instructions of the car manufacturer.

- In order to not endanger your own driving safety please never use security relevant screws, bolts or other fixation pieces at steering, brake system or other components.
- Connect the device only at 12V wiring system voltage with ground connection to the autobody. This assembly is not allowed for the use in trucks or other cars with 24V wiring system voltage.
- Please avoid the installation of the device at positions where the driving safety or the functional efficiency of other subassembly integrated in the car are restricted.
- This module may only be used together with the following mentioned car types and models; the installation may be executed exclusively by use of the circuit points mentioned in the assembly instructions.
- Kufatec GmbH & Co. KG does not assume liability for damages which are caused by incorrect installation, the use of inapplicable circuit points or the installation into car types and -modules which are not foreseen.
- We would like to draw your attention to the fact that the module processes the data of the MOST-protocol of the car mentioned below. Therefore, during the installation of the module it will be used a model-specific complete system which we as the manufacturer of the mentioned construction line only know partly.
- Especially in case of changes within the same model line and the same year we therefore cannot guarantee the applicability of our construction line in each case. Kufatec GmbH & Co. KG does not assume liability for the applicability of our construction line with changes made by the manufacturer.
- Kufatec GmbH & Co. KG does not assume liability that the installation of the here described component has been permitted according to the guarantee instructions of particular car manufacturers. Therefore, please consider the guidelines for installation and guarantee conditions of your car manufacturer before installation.
- The manufacturer reserves the right to change components without giving reasons.
- Subject to errors and changes

## 5 Requirements for the determinable operation

**Please use the device only in its the corresponding area.**

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

## 6 How to connect a cable to another

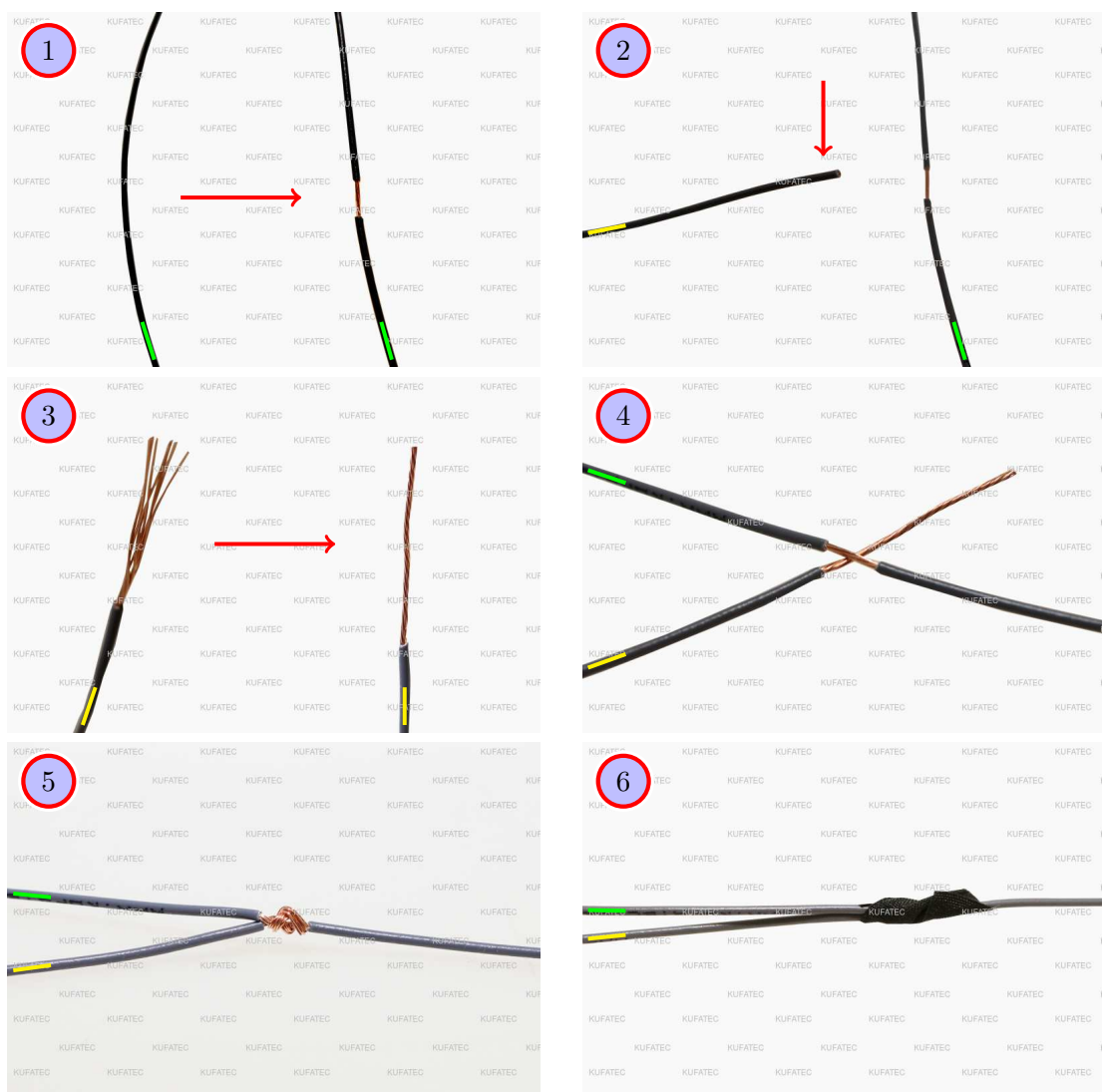


Figure 1: How to connect a cable to another

Table 1: How to connect a cable to another

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

## 7 Note Cable Inscription/Color



Figure 2: Cable Inscription

**If our cable set consists exclusively of grey wires, connect the wires according to the cable inscription.**

## 8 Assembly Instruction

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

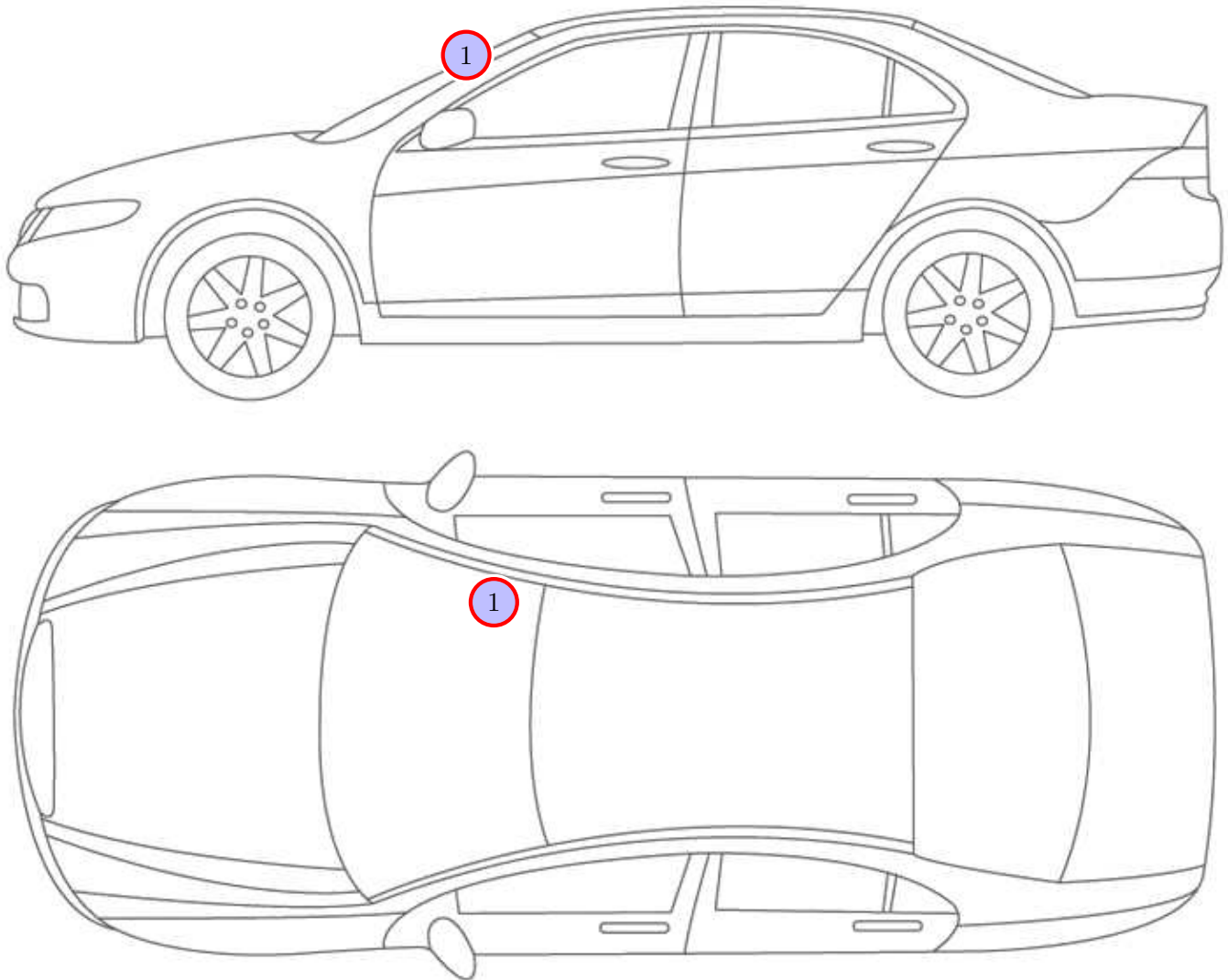


Figure 3: Vehicle overview

- 1 Antenna



## 9 Assembly DAB+ antenna (antenna film)

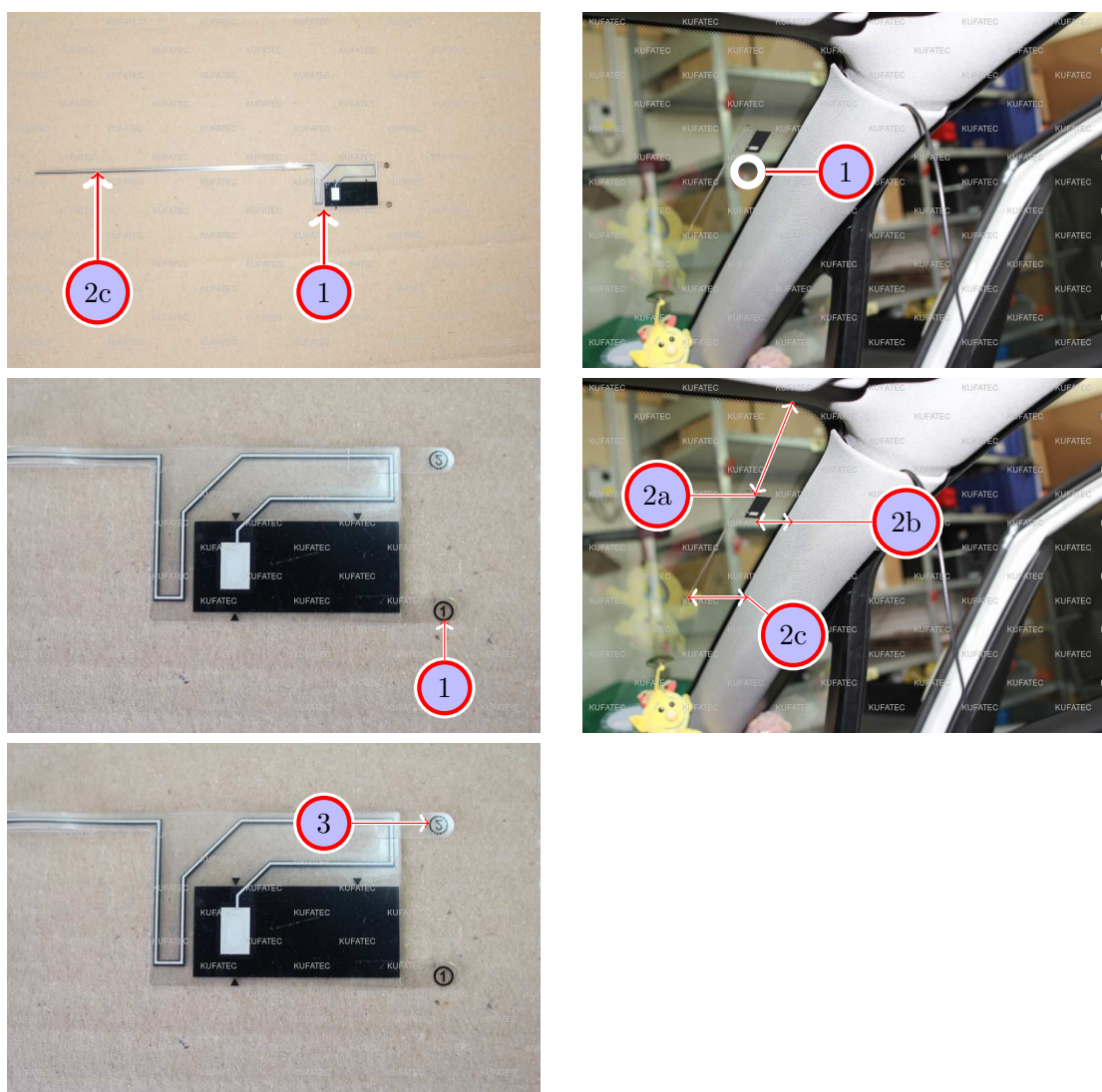


Figure 4: Assembly DAB+ antenna (antenna film)

Table 2: Instructions for the assembly of the DAB+ antenna (antenna film)

No.	Work step	Note
1	Mount the antenna film right above in the wind screen (passenger's side) by firstly removing the protective film with the <b>marking 1</b> carefully. <b>Please clean the mounting position thoroughly from dirt and grease residues, prior to mounting the antenna.</b>	
2	Please pay attention to the distances of the antenna to the window frame. They are absolutely necessary in order to guarantee proper functioning of the antenna.	
a	The distance from the window frame on top to the antenna must be at least 150 mm.	
b	The distance from the window frame right to the antenna must be 55 mm.	
c	The distance from the window frame right to the antenna (narrow strip) must be at least 70 mm.	
3	Afterwards pull the protection film with the <b>marking 2</b> from the antenna film carefully.	

## 10 Assembly DAB+ antenna (antenna line)

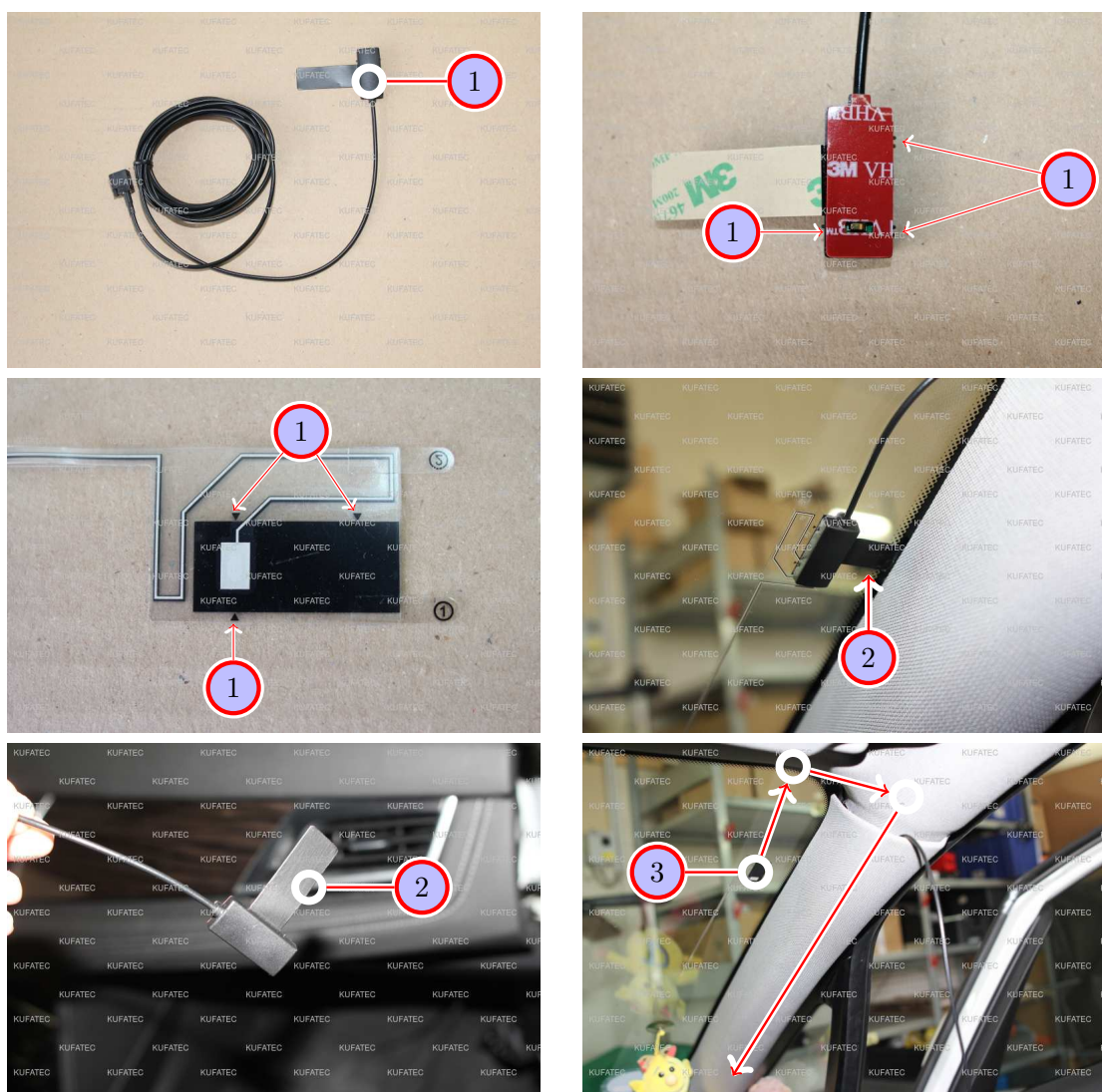


Figure 5: Assembly DAB+ antenna (antenna line)

Table 3: Instructions for the assembly of the DAB+ antenna (antenna line)

No.	Work step	Note
1	Remove the adhesive surface (red) from the underside of the antenna line and put it onto the antenna. <b>When mounting, it must be ensured absolutely, that the three marked latching noses on the line are to be stuck exactly onto the three black markings on the antenna film.</b>	
2	Detach the adhesive surface of the marked ground. Afterwards press the ground on the window screen. The ground must be connected with the car body.	
3	Please route the antenna line upwards to the vehicle headliner and afterwards through the covering of the A-pillar downwards to the DAB module.	

## List of Figures

1	How to connect a cable to another . . . . .	6
2	Cable Inscription . . . . .	7
3	Vehicle overview . . . . .	8
4	Assembly DAB+ antenna (antenna film) . . . . .	9
5	Assembly DAB+ antenna (antenna line) . . . . .	10

## List of Tables

1	How to connect a cable to another . . . . .	6
2	Instructions for the assembly of the DAB+ antenna (antenna film) . . . . .	9
3	Instructions for the assembly of the DAB+ antenna (antenna line) . . . . .	10