

BMW Motorrad

Installation Instructions

BMW Motorrad Communication System for System Helmet 5



Before commencing work, you must read these Installation Instructions through carefully and make sure you understand everything they contain.

This kit should be installed by a specialist workshop equipped with the requisite special tools, preferably an authorised BMW Motorrad retailer.

Work not performed to expert standards can result in consequential damage and the associated safety risks. Under these circumstances, BMW Motorrad refuses to accept any liability whatsoever.

In such cases, moreover, all warranty claims are voided.

The symbols used to draw attention to safety instructions in this manual are as follows:



Warning

This symbol stands for precautions and measures which are essential in order to protect the rider and other persons from possibly severe or fatal injury.



Attention

Specific instructions and safety precautions intended to prevent damage to the motorcycle and accessories. Non-compliance can void the warranty.



Note

Specific instructions on how to operate, control, adjust or look after items of equipment on the motorcycle.



Tightening torque

Screws, bolts and nuts are tightened in accordance with the applicable DIN/ISO standards. Tightening torques that deviate from the standards are stated. Non-compliance can result in damage to the motorcycle or accessories or can endanger the rider.

- Start of the main activity
- ▷ Start of the secondary activity
- Instruction

- ◄ End of the main activity
- ◁ End of the secondary activity

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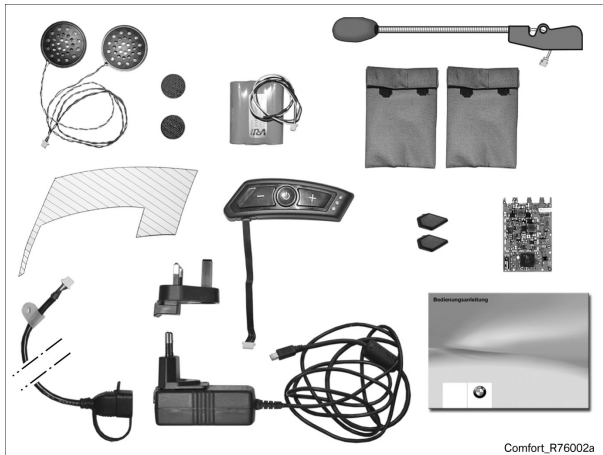
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BMW Motorrad Communication System for System Helmet 5

Requisite tools

- Torque wrench T10
- Allen wrench 2.5 mm
- Flathead screwdriver
- Key file
- Blade
- Helmet assembly ring



BMW Motorrad Communication System for System Helmet 5

- Right/left loudspeaker with cable
- Looped disk 2 of
- Microphone with bracket and wind shield
- Battery pack
- Watertight bag for battery pack and motherboard 2 of
- Self-adhesive template for installation of the keypad
- Keypad with cable
- Cable guide cover 2 of
- Charging cable with clip
- Plug-in power pack
- Motherboard
- Operating Instructions
- Installation Instructions

Required for function test:

- A second helmet with BMW Motorrad Communication System or a mobile phone with Bluetooth functionality

General instructions



Attention

Risk of damaging components.

When removing components, always make a note of the screws/bolts used to secure the individual components. Set these screws safely aside and, if nothing is indicated to the contrary, re-use these screws for assembly, reinstalling them in their original positions.



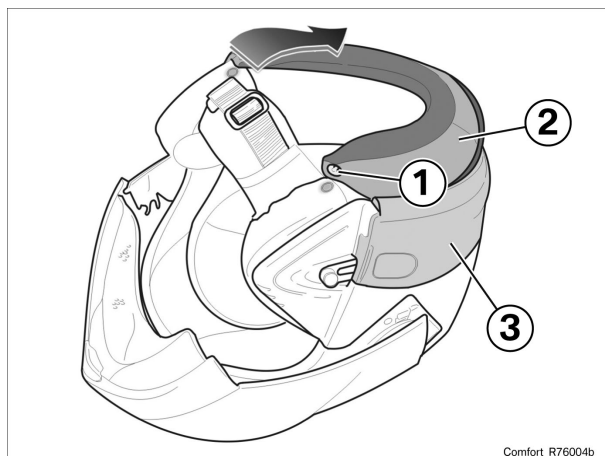
Note

Once the retrofit kit has been installed by the workshop, these installation instructions must be handed over to the customer.

Make sure that these installation instructions accompany the retrofit kit when it is passed on to a third party.

76 51 001 Installing wireless communication system

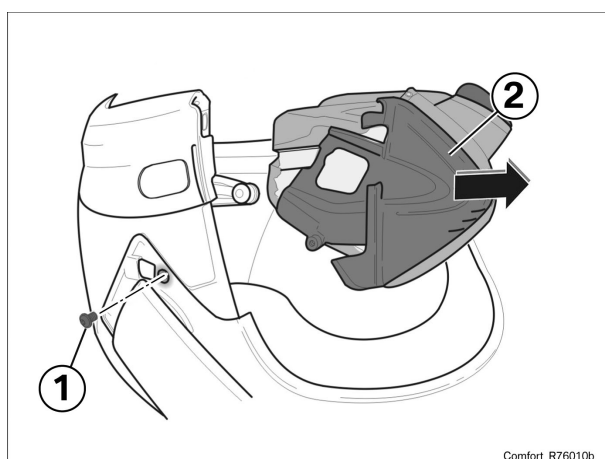
1



► Removing neck cushion

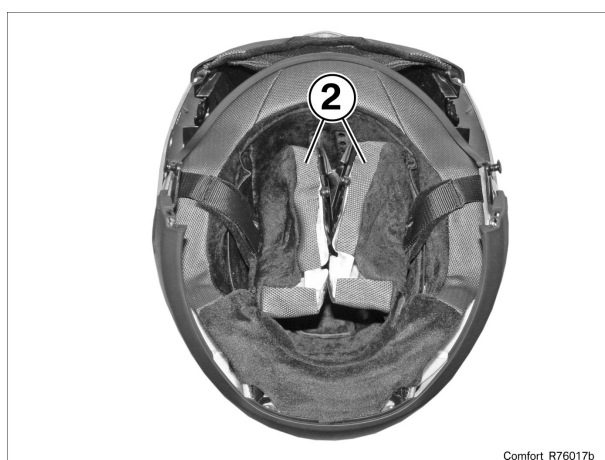
- Open the chin guard.
- Open the button fasteners **1** on both sides.
- Remove the neck cushion **2** from the collar piece **3** at one side.

2



► Removing cheek cushion

- Open the visor and chin guard.
- On both sides, undo the screws **1** and pull the cheek cushion **2** forwards and out.



- Place both cheek cushions **2** in the centre of the helmet.

► Affixing keypad template



Note

Faces that will be in contact with the adhesive must be dry and free from dust and grease.



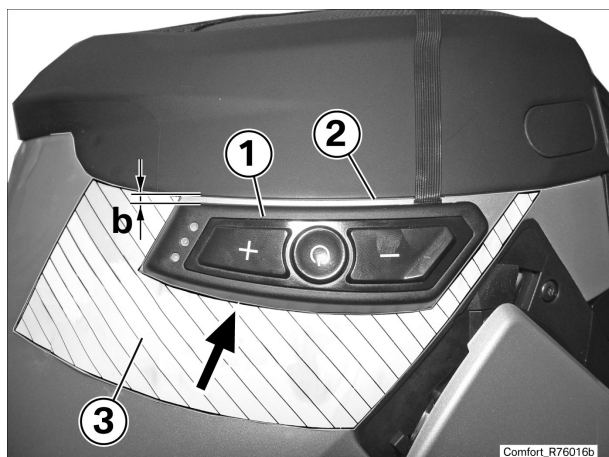
- To clean the helmet, please note the care instructions in the System Helmet 5 operating instructions.
- Peel the protective film off the template.
- Align the template 1 parallel with the face frame 2 and the collar piece 3 and stick on.

► Attaching keypad



Note

Faces that will be in contact with the adhesive must be dry and free from dust and grease.



- To clean the helmet, please note the care instructions in the System Helmet 5 operating instructions.
- Peel the protective film off the keypad.
- When sticking on the keypad 1 always ensure that the distance b to the collar piece 2 is observed. Failure to maintain this distance may mean that the collar piece can no longer be removed or the keypad cable could be damaged.



Technical data

Distance to collar piece	b	2 mm	
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- The lower edge of the keypad should be parallel with the top edge of the collar piece.
- Stick on the keypad with the top **arrowed** flush with the template 3.
- Push firmly down on the keypad for a short time.
- Remove the template.

5



► Marking keypad cable on collar piece

- With a blade, mark the passage of the cable **arrowed** in the top area of the collar piece, ensuring that the keypad cable is routed straight downwards and the marking is not too close.

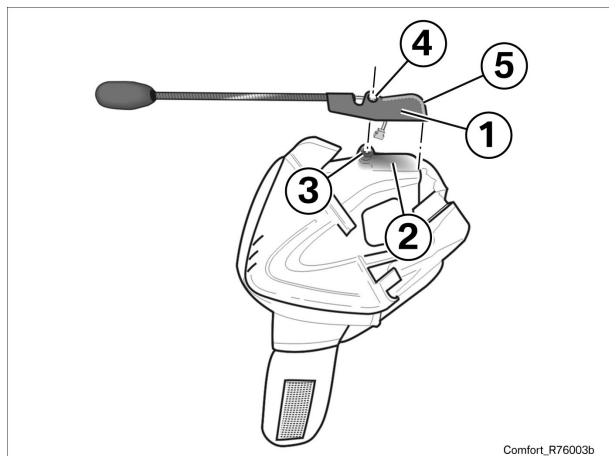
 Technical data			
Marking for keypad wiring	Distance on each side from the keypad cable	1 mm	

6

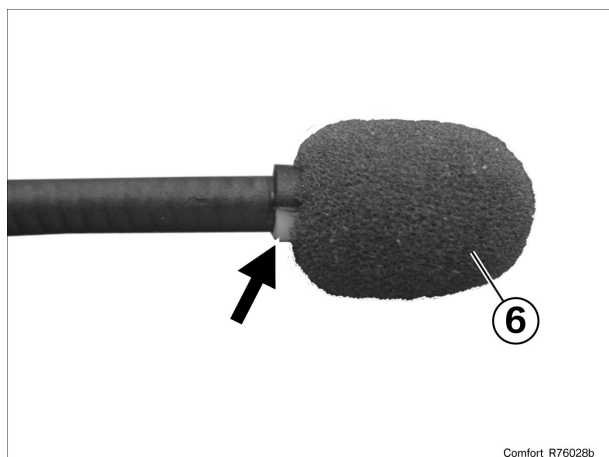
► Attaching microphone to left-hand cheek cushion

Note

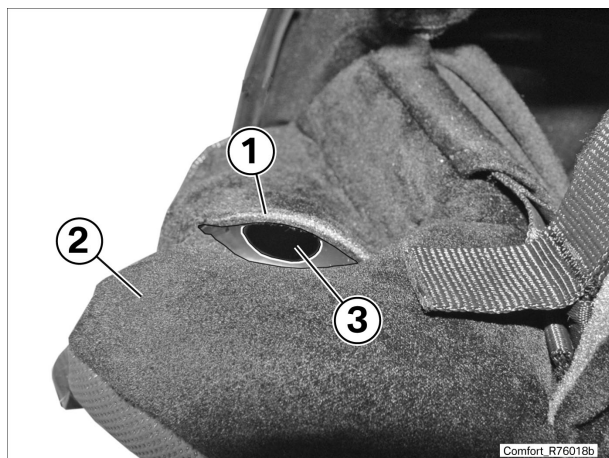
Faces that will be in contact with the adhesive must be dry and free from dust and grease.



- Peel off the protective film on the microphone bracket **1**.
- Position the microphone bracket over the cheek cushion **2** such that the screw-on pin **3** is aligned with the hole **4** in the microphone bracket.
- The bar **5** on the microphone bracket acts as a locating mechanism and positioning aid.
- Push the microphone bracket firmly onto the cheek cushion once it is correctly aligned.

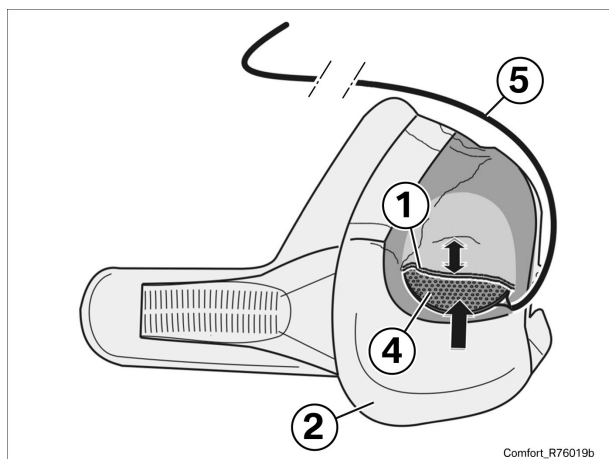


- Slide the wind shield **6** back slightly. When fitted, the white mark on the microphone must face towards the mouth.

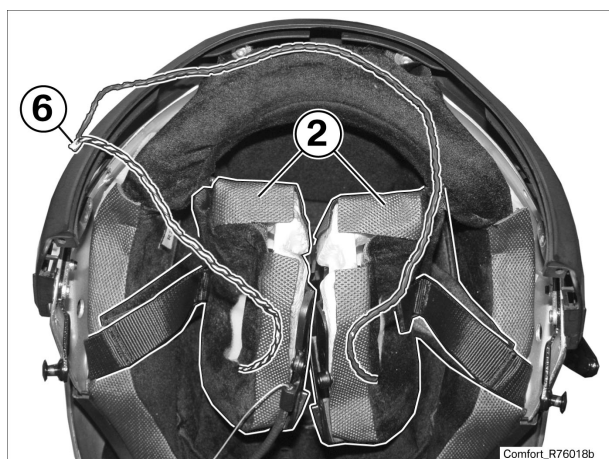


► **Inserting loudspeakers into cheek cushions on both sides**

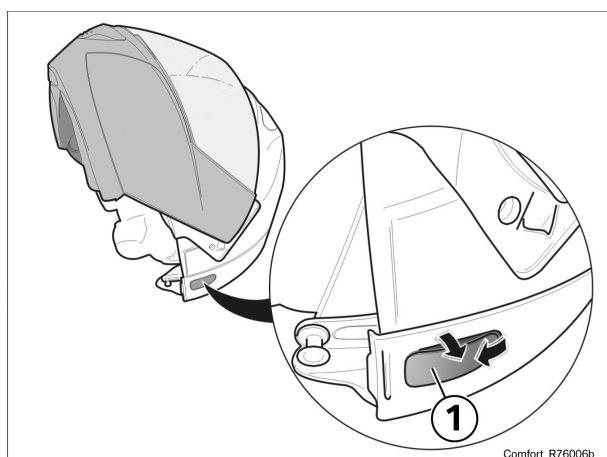
- Lift the Velcro® fastener **1** on the cheek cushion **2**.
- Glue the looped disk **3** into the Styrofoam® contour.



- Insert the loudspeaker **4** into the intended space in the left-hand cheek cushion **2** (when viewed in the direction of travel).
- Attach the loudspeaker to the looped strip and close the Velcro® fastener **1**.
- Insert the loudspeaker with the **shorter cable branch 5** in the cheek cushion.
- Route the cable through the cheek cushion.
- Proceed in the same manner with the right-hand cheek cushion (when viewed in the direction of travel).

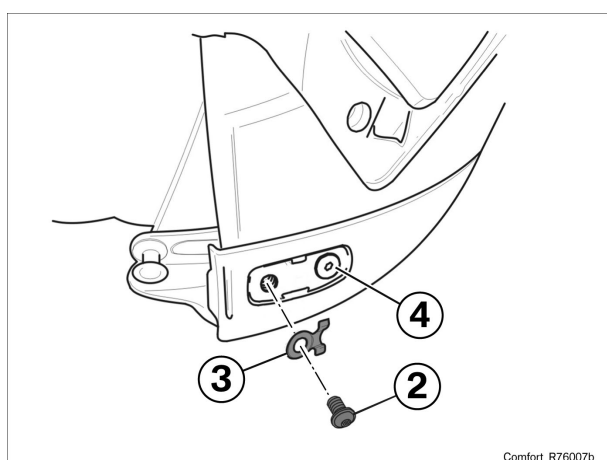


- Position both cheek cushions **2** with the loudspeakers in the centre of the helmet.
- Phase out the connector **6** of the connection cable.

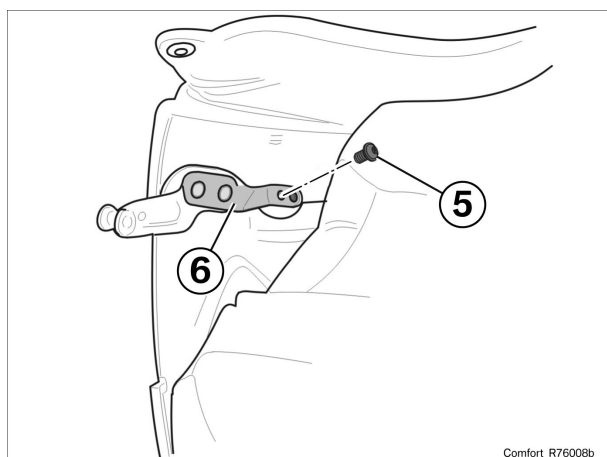


► Removing collar piece

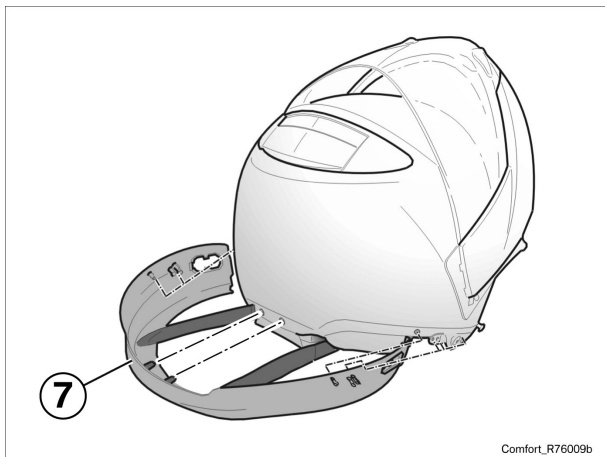
- Open the visor and chin guard.
- Push the cover plate **1** forwards at the rear edge on both sides and remove by the curved top edge.



- Undo the front screws **2** at both sides and remove together with the retaining plates **3**.
- Under **no circumstances** undo the rear screws **4** on either side.

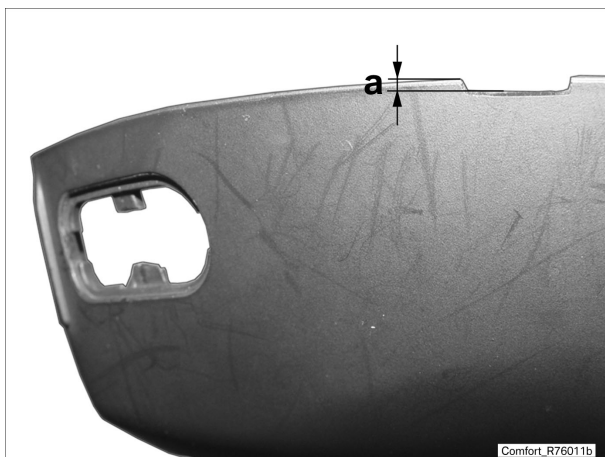


- Undo the screws **5** on both sides of the bracket **6** inside the helmet



- Force the collar piece **7** apart in the front area, unhook at the sides and pivot to the rear.
- **Under no circumstances** must the mounting screws for the neck straps be loosened!

9



► Filing out cable guide on collar piece

- At the previously marked area, use a key file to file out a passage with depth **a**, ensuring that the inside of the helmet is covered with a cloth, for example.

Technical data			
Passage depth	a	2 mm	

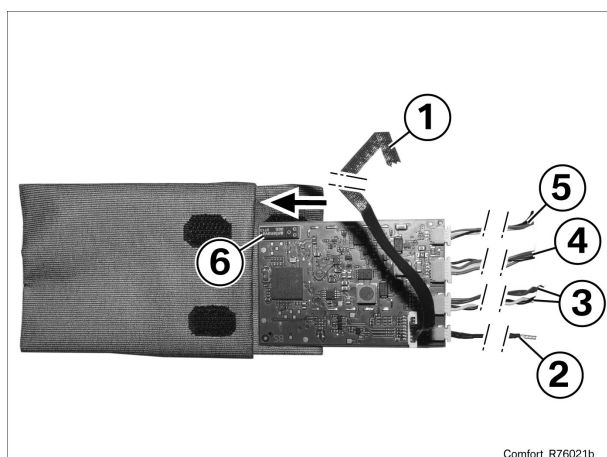
- Gently deburr the inside of the collar piece.

10



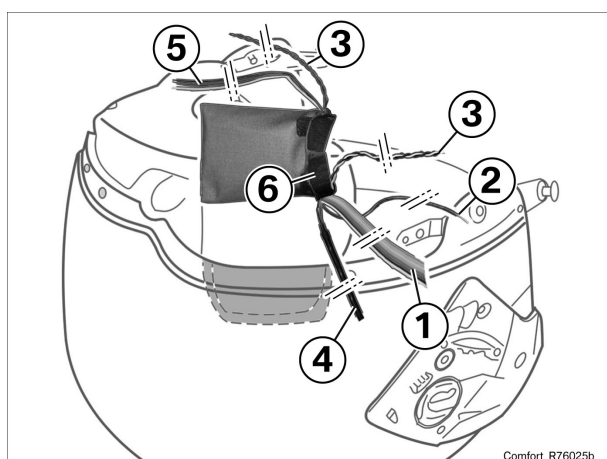
► Installing battery pack

- Insert the battery pack **1** in the enclosed watertight bag **2** and phase out the cable to the side.
- Close the watertight bag containing the battery pack.
- Insert the battery pack (on the right when viewed in the direction of travel) in the free space **3** in the helmet.
- The connection cable must (when viewed in the direction of travel) take the shortest route to the motherboard at the top rear.



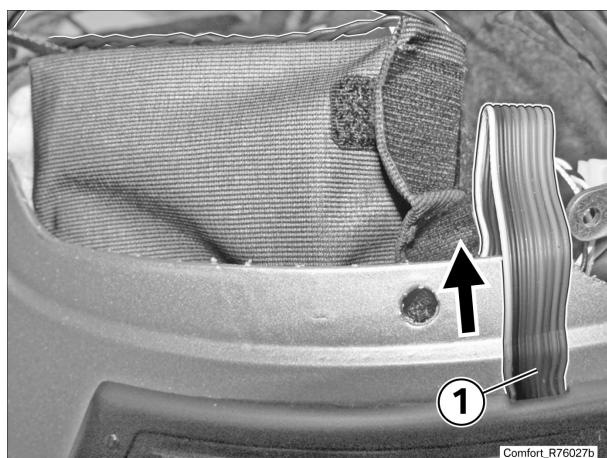
► Connecting all cables to motherboard

- Half insert the motherboard in the watertight bag.
- Connect all connection cables to the motherboard. It is not possible to mix up the cables, as all connectors are coded. The illustration shows the installation location.
- Keypad 1
- Microphone 2
- Loudspeaker 3
- Charging cable 4
- Battery pack 5
- During installation, the aerial 6 must point towards the outside of the helmet.
- If the board is fitted in the wrong direction, the signal will be too weak and the range and voice quality will be impaired.



► Installing motherboard

- Insert the wired motherboard fully into the enclosed watertight bag.
- Route the battery pack cable 5 and right-hand speaker wiring 3 downwards and out.
- Route the keypad wiring 1, microphone wiring 2, left-hand speaker wiring 3 and charger cable 4 upwards and out.
- Close Velcro® fastener 6.
- Insert the motherboard in the free space on the left-hand side of the helmet (when viewed in the direction of travel), with the contacts facing forwards.
- Ensure that the keypad wiring 1 makes a loop downwards, so that any penetrating water can drip away.



► **Function test of the BMW Motorrad Communication System**

- Switch on the communication system (see operating instructions)

Test

Result

If the red LED lights up permanently, there may be a system error

Measure

- Switch off the communication system (see operating instructions)
- Remove the battery pack cable from the motherboard
- Remove the charging cable from the motherboard
- Connect the battery pack cable to the motherboard
- Switch on the communication system without the charging cable

Result

System starts up normally

Measure

- Switch off the communication system (see operating instructions)
- If necessary, replace the charging cable and connect to the motherboard
- Switch on the communication system (see operating instructions)
- Communication system is OK

Result

Switch on the communication system (see operating instructions) and red LED continues to light up permanently

Measure

- If necessary, replace the motherboard
- Test the yellow LED and charging electronics

Test

- Connect the charger

Result

Yellow LED lights up

Measure

- Yellow LED, charger and charging electronics are OK

Result

Yellow LED does not light up

Measure

- If necessary, replace the charger
- If necessary, replace the charging cable and connect to the motherboard
- If necessary, check the keypad connection and replace the keypad
- If necessary, replace the motherboard

• **Function test:**

- You can activate test mode by pressing all three buttons (for longer than two seconds) at the same time
- You can switch off the communication system by pressing the on/off button (for more than four seconds)
- Test mode can only be exited by switching off the system completely.

• **Test run:**

Test

- Test mode 1: LED test:

Result

Green and red LEDs light up six times per second

Measure

- LEDs are OK

Result

LEDs do not light up

Measure

- If necessary, replace the keypad
- Charge the battery
- Check the plug-in connection to the motherboard

Test

- Press the on/off button twice to transfer to test mode 2
- Test mode 2: Keypad test:

Result

Pressing each button once will be acknowledged with a sound

Measure

- Sound is audible, keypad is OK

Result

Sound is not audible

Measure

- If necessary, replace the keypad
- Check the plug-in connection to the motherboard

Test

- Press the on/off button twice to transfer to test mode 3
- Test mode 3: Microphone/loudspeaker test:

Result

Speak into the microphone, voice signal can be heard after three seconds

Measure

- Sound is audible, microphone and loudspeaker are OK

Result

Sound is not audible

Measure

- If necessary, replace the microphone
- If necessary, replace the loudspeaker
- Check the plug-in connection to the motherboard

Test

- Press the on/off button twice to transfer to test mode 4
- Test mode 4: Audio stereo test:

Result

Output of music signal in endless loop

Measure

- Loudspeaker and sound are OK

Result

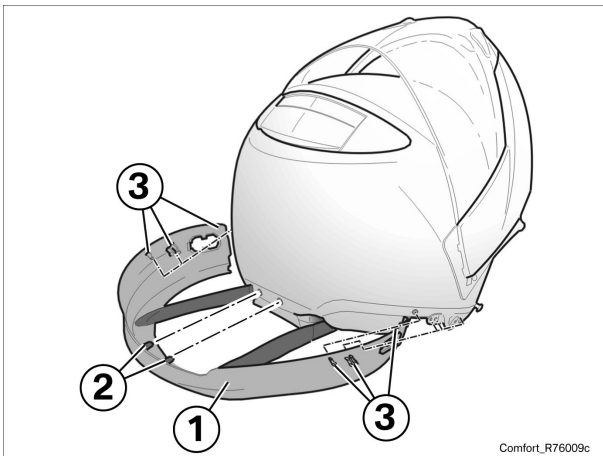
Music is not audible

Measure

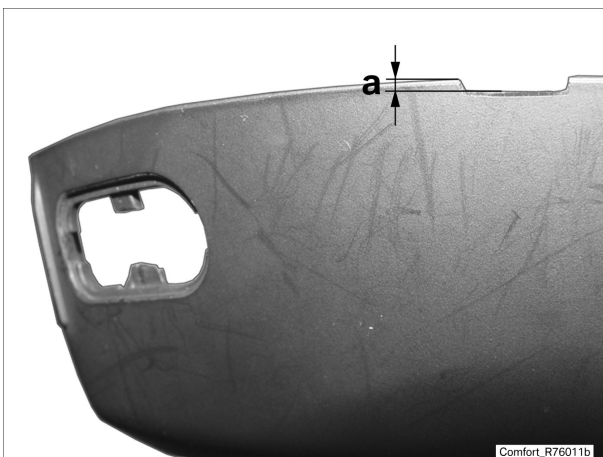
- If necessary, replace the loudspeaker
- Check the plug-in connection to the motherboard
- This test can be used for demonstration purposes
- If test is repeated, press the on/off button twice to transfer to test mode 1 etc.
- To check the Bluetooth functionality, connect the helmet to a second helmet or to a mobile phone and proceed in accordance with the BMW Motorrad Communication System operating instructions.



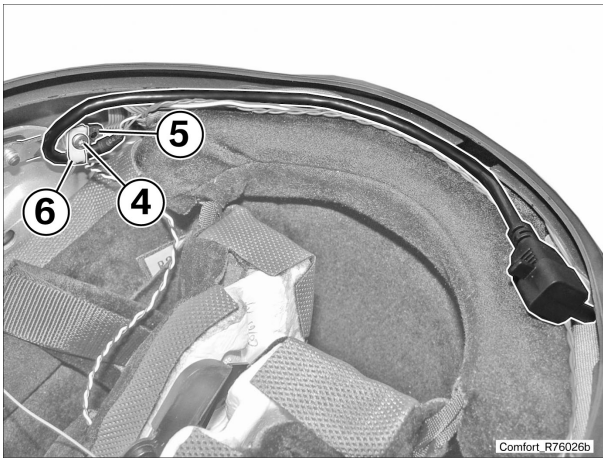
14

**► Installing collar piece**

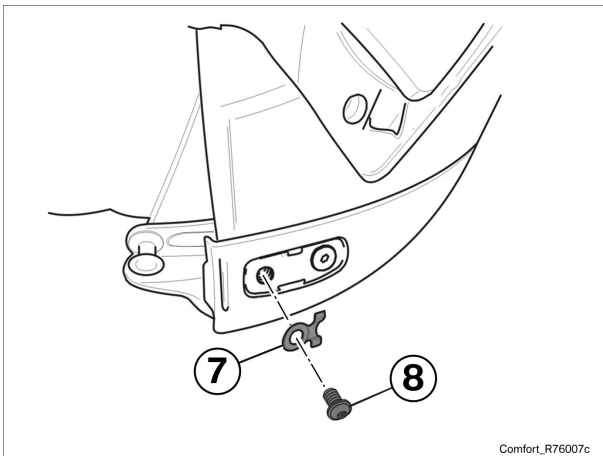
- Offer up the collar piece 1 to the helmet shell such that the mounting domes 2 and locking pins 3 sit in the appropriate holes in the helmet shell.



- Check whether area a is large enough to prevent the keypad cable from being crushed.



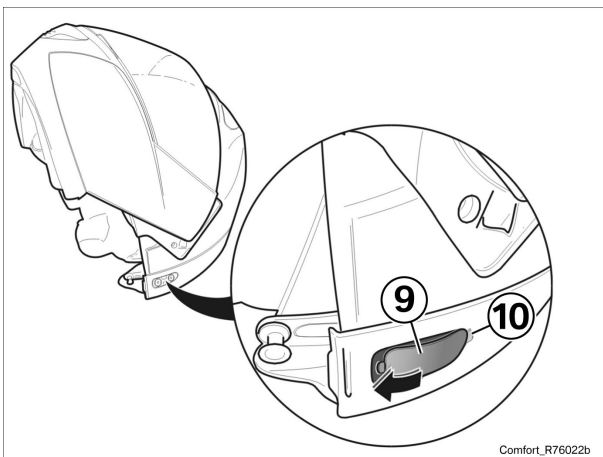
- Screw in screw **4** in the bracket **5** on both sides again and finger tighten. At the same time fit the clamp **6** for the battery charging cable on the left-hand side.
- Route the battery charging cable further as shown.



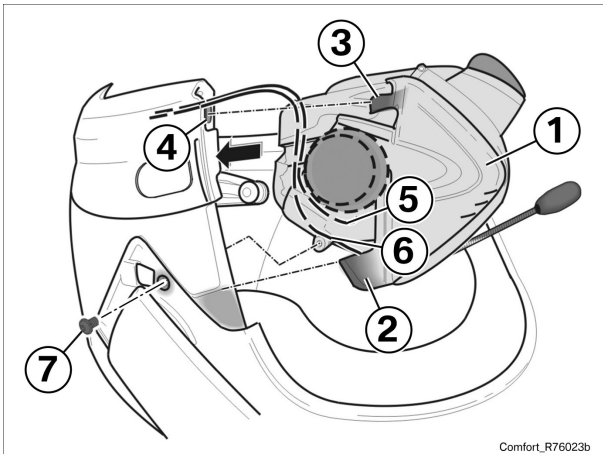
- On both sides, offer up the retaining plate **7** to the collar piece and fit the screws **8**.

 Tightening torques		
Collar piece on helmet shell		
	2.5 Nm	

- The bronze-coloured retaining plate must be mounted on the left and the silver-coloured plate on the right. An additional marking with **L** for left and **R** for right is embossed on the plates.

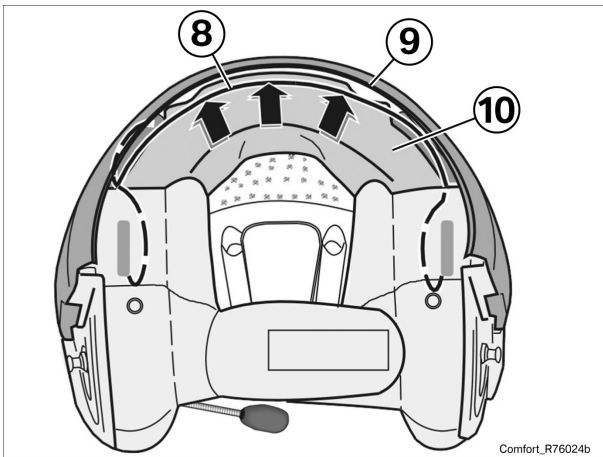


- On both sides, insert the cover plate **9** with the lug pointing to the rear **10** first.
- Push the cover plate to the rear until it arches upwards and the front lug snaps into place.
- Cover plates are marked on the back with **L** for left and **R** for right. Ensure that the cover plates are mounted on the correct sides.

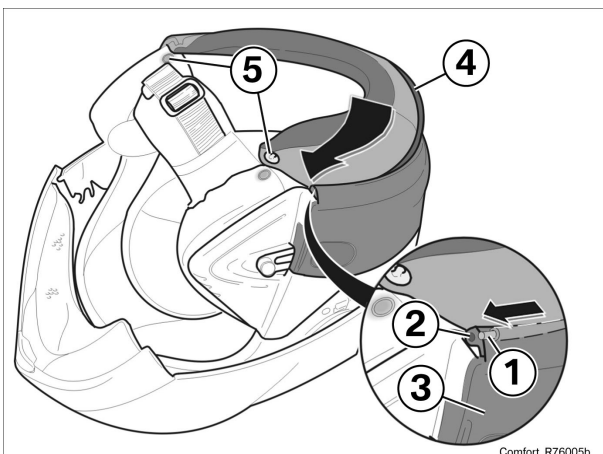


► Installing cheek cushion

- Mount the cheek cushion 1 such that the guide aid 2 is on the outside of the helmet shell and the pin 3 sits in the opening 4.
- During assembly, ensure that the speaker wiring 5 and microphone wiring 6 are routed out to the underside between the cheek cushion and neck piece, and do not bend the microphone wiring, as this could damage it.
- Excess cable is stored beneath the neck cushion when the cushion is fitted.
- Do not trap the microphone during assembly.
- Finger-tighten the screws 7 for the cheek cushions on both sides.



- Using a suitable tool, insert the long cable branch 8 of the right-hand (when viewed in the direction of travel) cheek cushion (speaker) between the collar piece 9 and neck piece 10.



► Installing neck cushion

- First insert the tensioner 1 in the corresponding hole 2 on one side of the collar piece 3 **arrowed**.
- Place the beading 4 under the collar piece 3 around circumference, then insert the tensioner on the other side in the appropriate hole of the collar piece
- Close the button fasteners 5 on both sides.

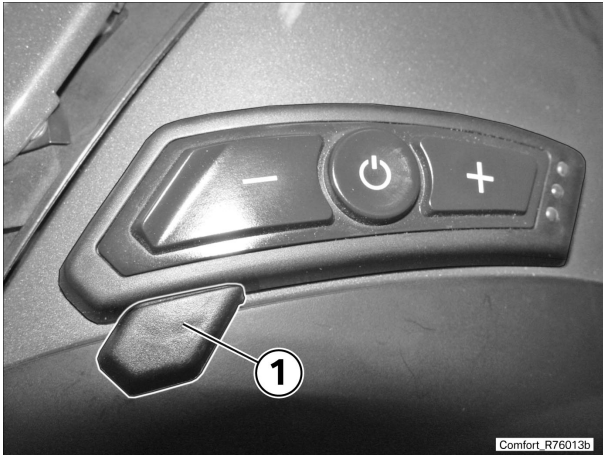
► **Attaching cable guide cover**



Note

Faces that will be in contact with the adhesive must be dry and free from dust and grease.

- Peel off the protective film and stick on the cover **1** for the cable guide.



Always comply with the regulations regarding approval in the country of use.



Note

The System Helmet 5 is homologated with the retrofitted BMW Motorrad Communication System and complies with ECE standard 22-05.
