

# Technical Service Bulletin



## 91 Bluetooth call quality issues for caller on other end of call

91 14 20 2027718/6 January 3, 2014. Supersedes Technical Service Bulletin Group 91 number 13-11 dated October 31, 2013 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
2011-2013	A6/A7	All	Bluetooth Hands-Free Calling
2011-2013	A5 CAB	All	Bluetooth Hands-Free Calling
2011-2013	TT	All	Bluetooth Hands-Free Calling

## Condition

REVISION HISTORY		
Revision	Date	Purpose
6	-	Revised <i>Service</i> (Added diagnostic step to reinstall non-damaged microphones)
5	10/31/2013	Revised <i>Service</i> (Added note to call TAC for certain repairs)
4	6/11/2013	Revised <i>Required Parts and Tools</i> (Changed quantity) Revised <i>Service</i> (Clarified information) Revised <i>Warranty</i> (Updated Diagnostic Time) Revised header data (added model year)
3	11/12/2012	Revised <i>Warranty</i> (Adjusted TUs)
2	8/6/2012	Revised <i>Service</i>
1	10/25/2011	Original publication

When the driver uses the Bluetooth hands-free telephone system to make a call, the listener on the other end cannot clearly understand the driver. The driver's voice sounds muffled, as if it is being heard from under water.

## Technical Background

The microphone seal is damaged during installation into the roof module.

## Production Solution

Improved microphone installation procedure and optimized microphone seal starting with January 2012 vehicle production. Microphones with improved seals are at the 03S level or greater.

## Service



**Tip:** This bulletin does not allow for replacement of the microphones unless there is physical damage found to the rubber seal on the end of the microphone. Because there has been no hardware optimization to the microphone, replacing a microphone that is not damaged will not improve the sound quality.

### Confirm that the sound quality issue is not due to the phone or phone service provider:

1. Ensure that the customer's phone is an Audi-approved Bluetooth device by checking the list located at <http://microsites.audiusa.com/ngw/12/experience/bluetooth/index.html>.
2. Before making any repairs, road test the vehicle at a minimum speed of 45 mph with the top up (if applicable) and all windows closed.
3. During the road test, verify the call quality issue by making a Bluetooth call to someone at the workshop. Make sure that the *same* person will be available to answer another call after any repairs are made so that the call quality improvement can be verified.
4. If no call quality issues are confirmed during the road test, end all analysis. The issue is most likely due to the customer's phone and/or service provider, which can be demonstrated to the customer by using a different paired phone with a different service provider. In addition, it is normal to have a small amount of road noise in the A5 Cabriolet or TT Roadster, as the location of the microphone at the top of the windshield allows for noise to be easily transmitted. None of the repairs below will eliminate this small amount of road noise.

If call quality issues are confirmed, proceed with the repair procedure below.

### Remove the trim plate in order to inspect the microphone

1. Remove the roof module from the vehicle according to *ElsaWeb*>>*Repair Manual*>> *Electrical System*>>*Electrical Equipment*>>*96 Interior Lights, Switches*>>*Removal and Installation*>>*Roof Trim Lamps and Switches*.
2. Remove the decorative trim plate from the roof module in order to inspect the seal of the microphone:

For A6 and A7 vehicles:

- Remove the decorative trim from the base plate with your fingers. If necessary, gently pry the trim with a trim stick or bone tool, then finish removing it with your fingers.
- There are a number of different clips holding the trim plate to the base plate depending on the trim level of the vehicle (Figure 1).



**Figure 1.** Clip location for A6/A7 high-line roof module (left) and for mid-line roof module (right)

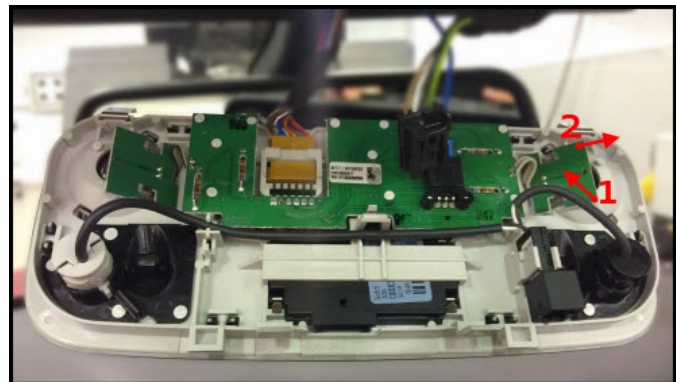
For TT and A5 Cabriolet vehicles:

- The decorative trim plate should only be pried from the base plate *after* the LED circuit boards are removed from the LED jewels in order to prevent the LED jewels from breaking and causing a rattle after reassembly.
- To remove the LED circuit boards, first pry the top of the small circuit board away from the LED jewel, in the direction indicated by arrow 1 (Figure 2). It will only need to be lifted 1-2mm. Then, pull up on the circuit board in the direction indicated by arrow 2 (Figure 2) to release the circuit board from the LED jewel. There are three different attachment points of the LED circuit board and LED jewel (Figure 3).
- Repeat for the other side.
- Once the LED jewels are free from the circuit boards, the decorative trim plate can be detached from the base plate. Use your fingers to pry the two pieces apart. There are many clip points holding the two pieces together. Sliding your finger slowly around the perimeter is the most effective way to separate the two parts without damaging them (Figure 4).

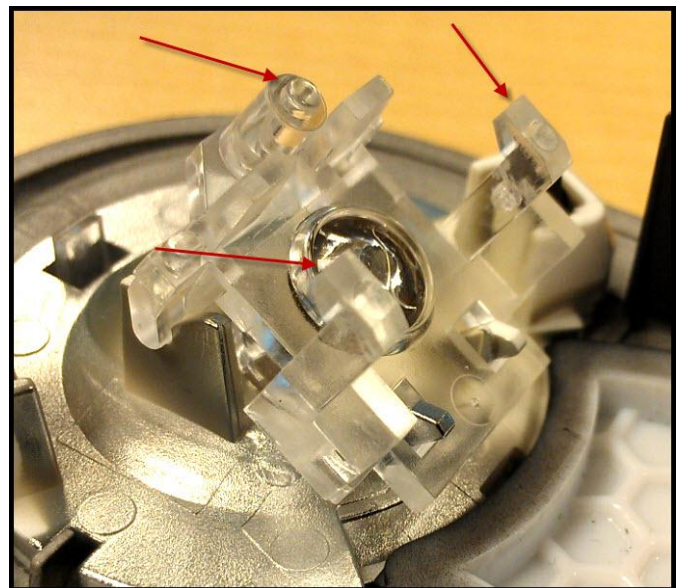


**Note:**

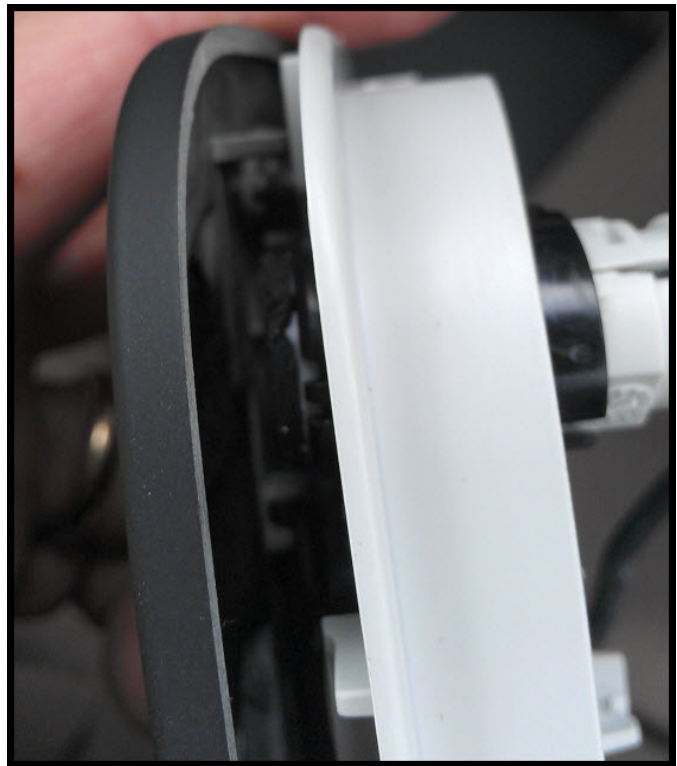
The use of a bone tool or screw driver is not recommended for this roof module assembly because it can damage the soft touch paint on the edge of the trim, which can be visible once the part is reinstalled in the headliner.



**Figure 2.** Prying the LED circuit-board of the jewel.



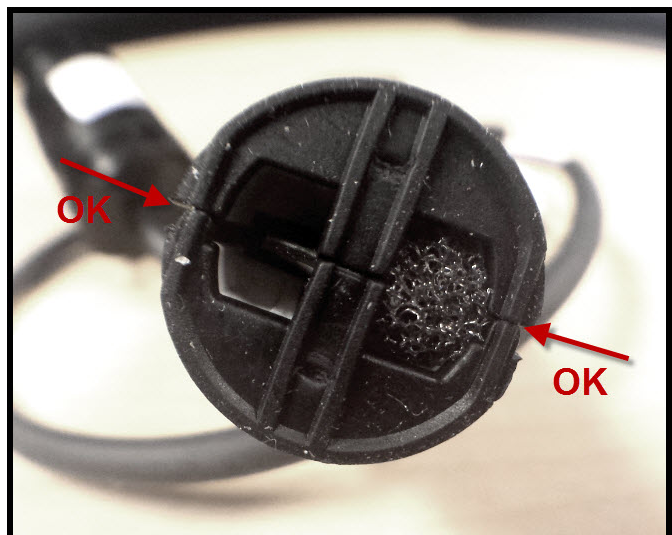
**Figure 3.** LED jewel attachment points.



*Figure 4. Prying the trim plate from the base plate.*

## Inspect and replace the microphone

1. Inspect the seal of the microphone for damage:
  - There are two splits in the rubber seal. This is normal as long as the two halves of the seal are touching each other (Figure 5).



*Figure 5. Undamaged seal*

- If the two halves of the seal are loose and move freely, the seal is damaged (Figure 6).



Figure 6. Examples of damaged seals

2. If none of the seals are damaged:

- Reinstall the microphones into the roof module. Ensure that the microphones are firmly seated. A loud snap can be heard and felt when the microphone is fully seated. Reinstall the roof module and retest for the complaint before proceeding with diagnosis. If the complaint cannot be reproduced, no additional action is necessary.

If any of the seals are damaged:

- If the vehicle is a 2013+ A6/A7 built after VIN DN005481, contact TAC prior to proceeding with repairs for special instructions. When calling, please provide repair order number, as well as part numbers for microphones and interior light assembly.
- If the vehicle does not fall into the above range, replace the microphone set by installing the replacement microphone while the decorative trim is removed from the base plate. Take care when doing so to prevent damaging the new microphone's seal by slowly installing it perpendicular to the base plate (Figure 7). Do not install the microphone at an angle, as this may pinch the seal (Figures 8 and 9)



Figure 7. Proper installation.



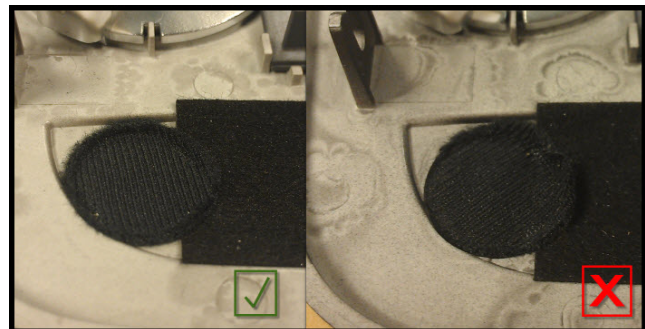
Figure 8. Incorrect installation at an angle, showing a pinched seal on the left.



*Figure 9. Damage caused by a pinched seal.*

- Carefully inspect the new microphone seal after it has been snapped into place.
3. If the vehicle is a TT or A5 Cabriolet:

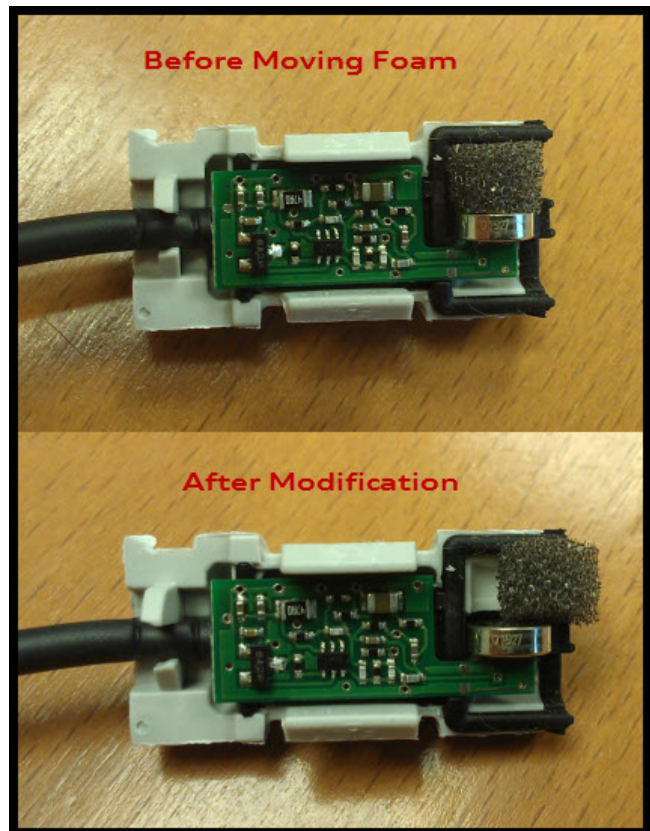
- Visually inspect the round felt material on the underside of the decorative trim (Figure 10). The felt material pushes against the microphone's rubber seal and forms a barrier. The decorative trim should be replaced (see ETKA) if the material is bunched up or not centered perfectly, as it can potentially affect the call quality.



*Figure 10. Felt on backside of decorative trim.*



- Before installing the new microphone, partially pull out the foam that is inserted in the microphone to allow for a better seal against the felt material (Figures 11 and 12).



**Figure 11.** After modification, the foam should be partially pulled out of the microphone.



**Figure 12.** Foam is partially pulled out of the microphone.

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## Complete the repair

1. After the repair, road test the vehicle at a minimum speed of 45 mph with the top up (if applicable) and all windows closed.
2. During the road test, verify the call quality issue by making a Bluetooth call to the same person at the workshop that was called before the repair in order to verify call quality improvement.
3. If the call quality is still poor, call the Technical Assistance Center (TAC).
4. If the seals and microphones are installed properly, continue with diagnosis. Refer to TSB 2026895, *91 Microphone testing tips* and TSB 2026888, *91 Bluetooth Phone: Poor call quality*.

## Warranty

<b>Claim Type:</b>	Use applicable claim type. If vehicle is outside any warranty, this Technical Service Bulletin is informational only.		
<b>Service Number:</b>	9157		
<b>Damage Code:</b>	0010		
<b>Labor Operations:</b>	Remove and install interior light	9620 1900	See Elsa
	Remove and install telephone microphones	9157 1950	10 TU
	Extended Road Test before and after repair	9157 9999	A-Time (Not to exceed 40 TU)
<b>Diagnostic Time:</b>	GFF	No allowance	0 TU
	Road test prior to service procedure	0121 0002	10 TU
	Road test after service procedure	0121 0004	10 TU
	Technical diagnosis at dealer's discretion (Refer to Section 2.2.1.2 and Audi Warranty Online for DADP allowance details)		
<b>Claim Comment:</b>	As per TSB # 2027718/6		

All warranty claims submitted for payment must be in accordance with the *Audi Warranty Policies and Procedures Manual*. Claims are subject to review or audit by Audi Warranty.





## Required Parts and Tools

Part Number	Part Description	Quantity
See ETKA	Microphone	As needed

## Additional Information

The following Technical Service Bulletin(s) may be necessary to complete this procedure:

- TSB 2026895, *91 Microphone testing tips*
- TSB 2026888, *91 Bluetooth Phone: Poor call quality*

All parts and service references provided in this TSB (2027718) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.