



Technical Service Bulletin

46 Audi frequency analysis

46 21 22 2051095/4 February 10, 2021. Supersedes Technical Service Bulletin Group 46 number 19-05 dated March 14, 2019 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
All	2010 - 2022	All	Not Applicable

Condition

REVISION HISTORY		
Revision	Date	Purpose
4	-	Revised header (Added model year)
3	03/14/2019	Revised header (Added model year) Revised <i>Service</i> (Added Step 12)
2	05/14/2018	Revised <i>Service</i> (Updated User ID description)

This bulletin is informational only and can help technicians to identify noise frequency for specific concerns related to the brake system, especially brake squeal.

Technical Background

Brake squeal is the most common brake noise concern received from customers. This bulletin will help you to identify the correct frequency for the concern.

Knowing the exact frequency can help Audi of America to understand the issue and find a feasible solution (for example new pad materials, new pad geometry, new backing plate, new spring design, balance weight, and etc.).

Remember that brake squeal is a normal result of multiple factors acting on the brake system.

Brake squeal is not a defect.

Production Solution

Not applicable.



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Service

Download the Audi Frequency Analysis App according to the instructions below:

1. Go to Audi B2B App Shop at <https://b2bappshop.audi.de>.
2. Sign in with your Global (GeKo) User-ID and Password.
3. Click on “Sign In” (Figure 1).
4. Select the type of device: iOS or Android (Figure 2).

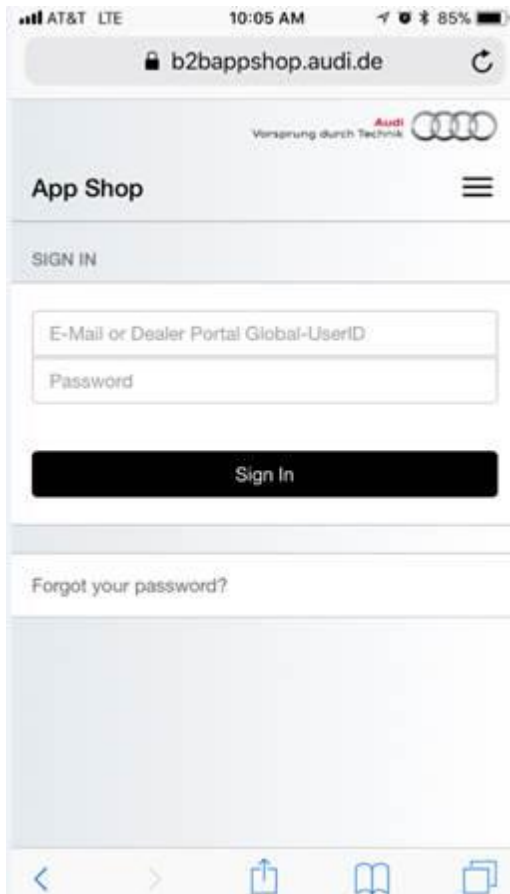


Figure 1. Sign in screen.



Figure 2. Select the type of device.



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5. Click on “Install” to start downloading the App (Figure 3).
6. Example of the downloaded App in an iPhone (Figure 4).

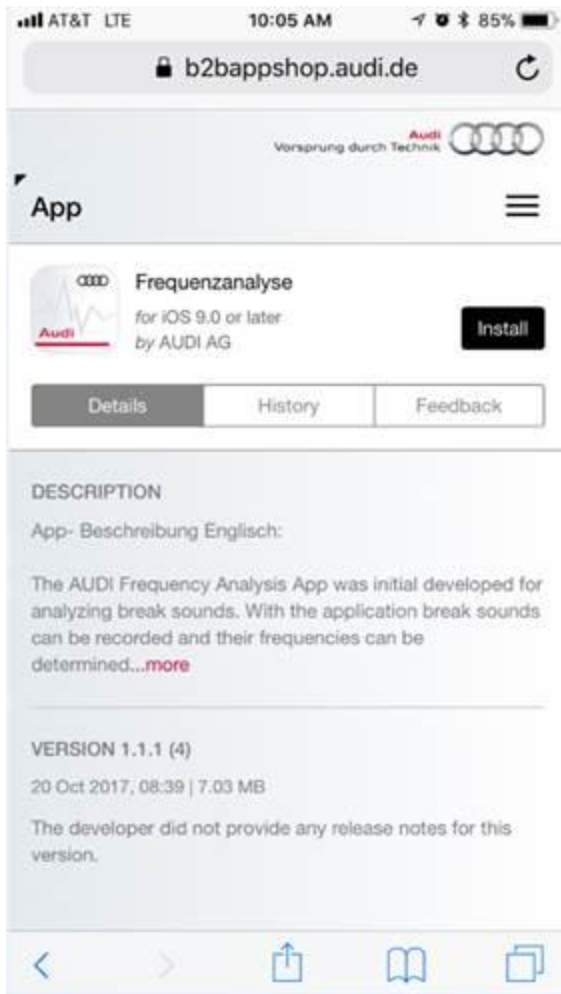


Figure 3. Installing the APP.

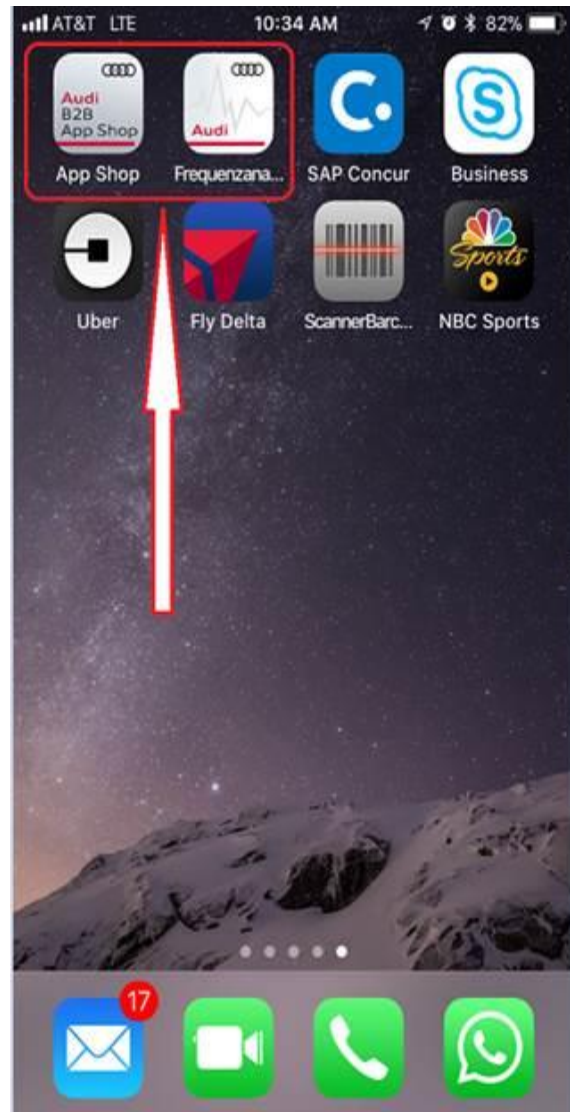


Figure 4. Example of the downloaded app and app shop.



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If you receive the following iPhone error message (Figure 5) “Untrusted Enterprise Developer” after clicking on the app then follow the Tip below. Skip to next figure for Android.



Tip: Go to: *Phone Settings >> General >> Profiles & Device Management >> Enterprise APP>>Audi AG >> Trust Audi AG.*

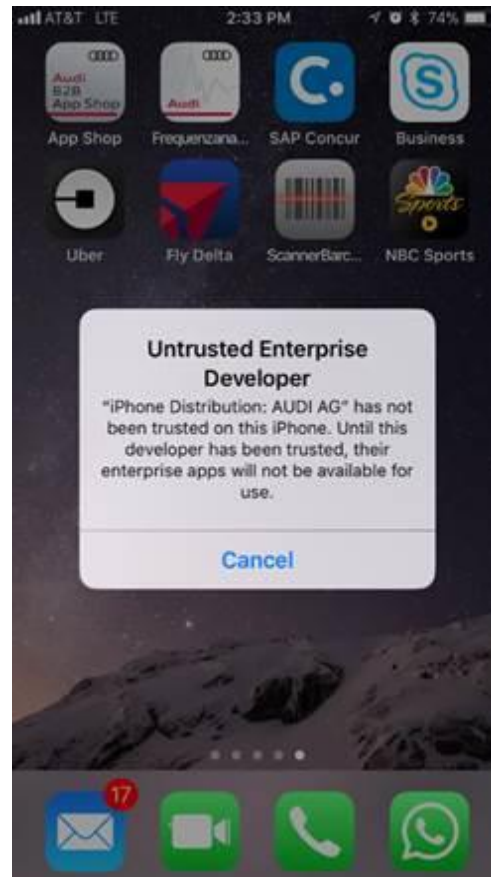


Figure 5. Error message “Untrusted Enterprise Developer”.



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If you receive the following Android error message (Figure 6): “This type of file can harm your device. Do you want to keep Waveform-release-1.9-sign.apk anyway?”



Tip: Select “OK” and proceed with the installation process.

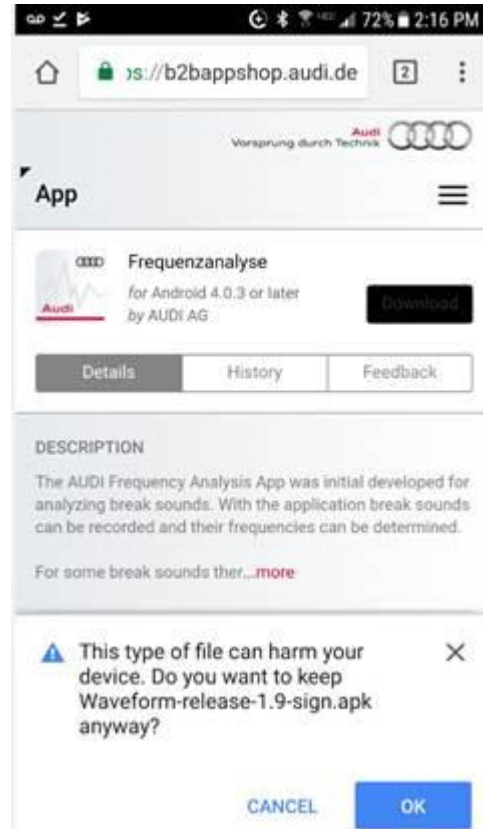


Figure 6. Error message for Android Phone.

7. After opening the app, see the following example of the main screen (Figure 7).
8. To start frequency analysis, select “Record” (Aufnehmen). There are other functions also available: Play (Abspielen), Cut (Schneiden), and Export (Exportieren) (Figure 8).



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Figure 7. Example of the main screen.



Figure 8. To start the analysis, select *Aufnehmen*.

9. You will be able to record the brake squeal from inside or outside the vehicle, depending on conditions.
10. Example of a typical brake squeal at 1,6 KHz. The red scale can be moved to identify the main frequency causing the squeal. Be aware that there are a lot of surrounding noises that can disguise the main frequency focus (Figure 9).
11. Example of a typical brake squeal at 3,2 KHz. Also at the top right the date is recorded, exact frequency, and level of noise in dB (Figure 10).



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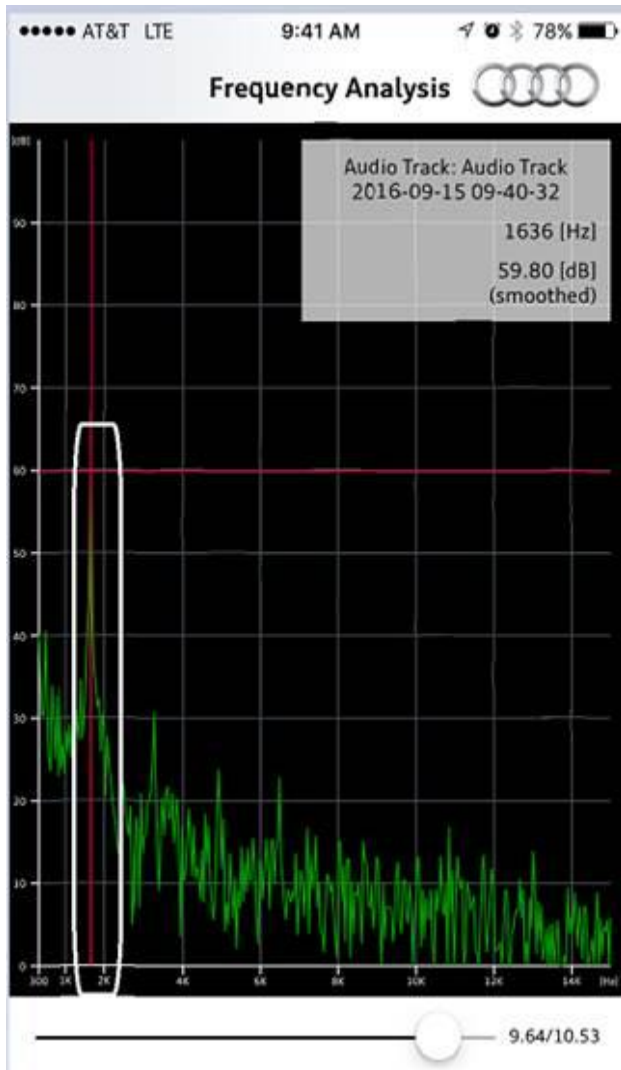
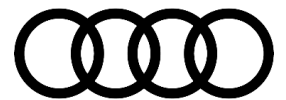


Figure 9. Other sounds can disguise the main frequency.



Figure 10. Typical brake squeal frequency recording.

12 To create an audio file from the frequency app for attachment to a TAC case, follow the steps below (Figures 11 - 13).



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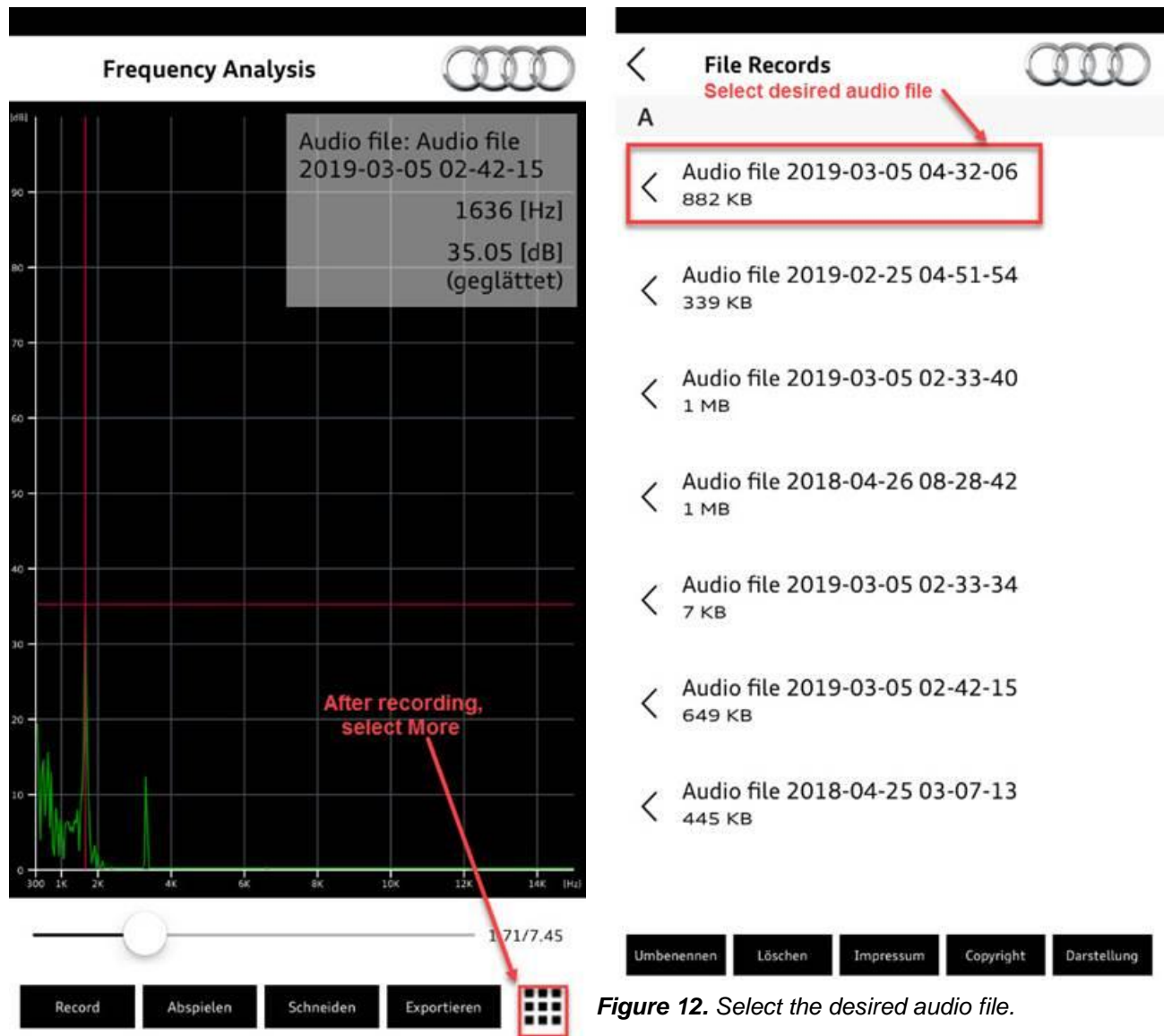


Figure 12. Select the desired audio file.

Figure 11. Take a clear sound recording and then select the "More" icon.



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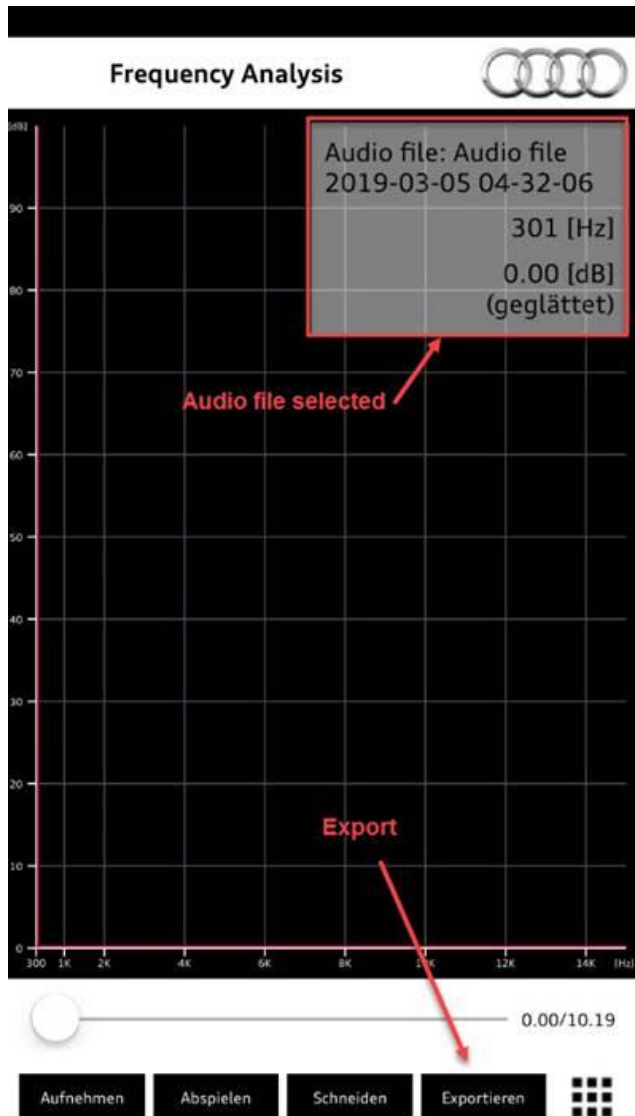


Figure 13. Then select “Exportieren (Export)” and send the file to the source used to attach the document to a TAC case.

Warranty

This TSB is informational only and not applicable to any Audi Warranty.



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Additional Information

All parts and service references provided in this TSB (2051095) are subject to change and/or removal. Always check with your Parts Department and/or ETKA for the latest information and parts bulletins. Please check the Repair Manual for fasteners, bolts, nuts, and screws that require replacement during the repair.

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