

ATTENTION:

- GENERAL MANAGER
- PARTS MANAGER
- CLAIMS PERSONNEL
- SERVICE MANAGER

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.

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QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: All Models with Harman Audio / Infotainment **NUMBER:** 15-231-18
SUBJECT: Troubleshooting Audio Related Concerns **DATE:** 08/21/18

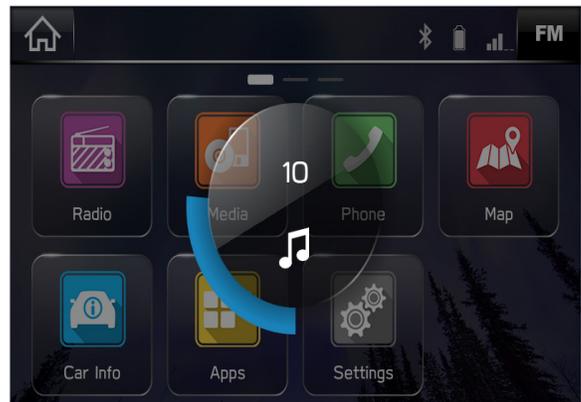
INTRODUCTION:

This bulletin provides troubleshooting steps to use when diagnosing specific and general audio/sound related concerns. Please start by completing the Harman Investigation Guide-Questionnaire as it gathers important details which will assist you with this diagnosis and is required should the condition not be resolved by this troubleshooting. Once the questionnaire is completed, follow the question flow based on the customer concern. Answer each related question noting the results to each in detail while performing the diagnostics. Review the entire bulletin before beginning to understand the flow for the listed concerns. If the concern you have is not listed, check the Service Manual: Infotainment (Diagnostics) > Diagnostics with Phenomena section as a starting point.

SERVICE PROCEDURE / INFORMATION:

- 1) Confirm the condition as reported by the customer.
- 2) If the concern is for **no audio is heard**, answer the questions under item 2 (a-f). If not, skip this item and proceed to Item 3 below.

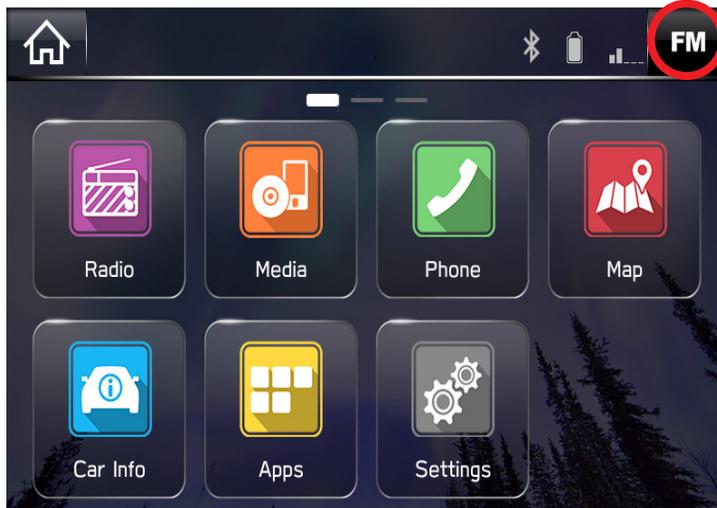
- a. Check if the MUTE mode is turned on. If not, go to (b). **NOTE:** If MUTE was on, turn it off and confirm normal system operation.
- b. Check the volume adjustment. Does the system display the volume indicator when the volume knob (or volume steering switch) is adjusted? (See image to the right and check each controller).



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<p>CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.</p> <p>Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.</p>	<p style="text-align: center;">Subaru of America, Inc. is ISO 14001 Compliant</p> <p>ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.</p>
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- c. Check each audio source option. What source(s) do or do not have audio? (See figure below showing Audio Source Widget in the upper right corner). Does the audio widget in the top right corner of the screen show the correct source? Note the results for each as you confirm both the widget display and, if sound is produced.



- d. Does the system show indication that playback is occurring? For example, if using a media device (CD, iPod, USB, etc.) does the playback timer update?
- i. If using a tuner (AM, FM, SXM), is there station data displayed and is it updating?
- e. If the vehicle is equipped with a Harman/Kardon amplifier, go over items **i** through **iii** below:
- i. Confirm connections are proper between HU and Amplifier.
 - ii. Does disconnecting and reconnecting the amplifier address the concern?
 - iii. Does disconnecting and reconnecting the head unit address the concern?

NOTE: If concern is not resolved after performing steps **i** through **iii**, perform a swap of each component with a known good amplifier and head unit (see **IMPORTANT CAUTION** below) one by one. Swap the amplifier first. Check if the concern is addressed. If condition persists, swap the head unit (see **IMPORTANT CAUTION** below). If a component swap addresses the concern, request an exchange for the suspect component.

- f. Follow the Service Manual: Infotainment (Diagnostics) > Diagnostics with Phenomena for SOUND DOES NOT COME OUT FROM THE SPEAKER. Note the results for each of the 6 steps associated with this diagnostic troubleshooting.

IMPORTANT CAUTION: Always disconnect the Telematics Data Communication Module (DCM) BEFORE any swapping of head units. **DCMs must NEVER be swapped or the customer's services will not function and DCM replacement may be required to resolve.**

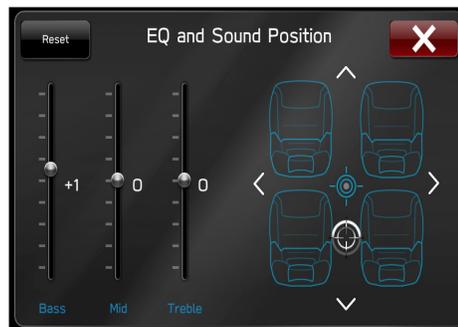
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- 3) If the concern is for **audio quality**, answer the questions under item 3 (a-c). If not, skip this item and proceed to item 4 below.

See the image below for **Line Diag** display of **Audio Check** used in this diagnosis.



- a. What source(s) have the audio quality concern? Describe the concern (please capture a video, if possible).
- For tuner (AM/FM/SXM/DAB -digital audio broadcast), is the concern on a specific frequency/channel? Please list the frequencies/channels.
 - For media (USB, BTSA- Bluetooth steaming audio, CD, etc.), list the devices used, the file type (mp3, mp4, cda, aac, etc.).
- b. Is the concern heard in each audio channel? Adjust balance and fade to confirm. Balance and fade can be adjusted by going to Home Screen > Settings > Sound > EQ. Drag the crosshair to each corner of the vehicle to check each channel for audio output (see image below).



- c. If the concern is only observed while listening to certain audio channel(s), perform items i and ii below.
- Confirm connections from head unit to speakers are not damaged.
 - If the vehicle is equipped with an Harman/Kardon amplifier, confirm the connections between amplifier and speakers are not damaged.

If the issue persists, try a known good component from a like vehicle. If component swap addresses the concern, request an exchange for the suspect component.

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- 4) If the concern is for a **buzzing noise**, answer the questions under item 4 (a-d) below. If not, skip this item and proceed to item 5 below. Describe the concern (please capture a video, if possible).
 - a. Is the vehicle equipped with an Harman/Kardon amplifier? If yes, return to item 2-f above.
 - b. What audio source(s) can the noise be heard on?
 - c. Compare the same source(s) and, if applicable, use the same media devices (CD, iPod, USB, etc.) in a like vehicle to determine if the concern occurs.
 - d. If the buzzing noise is confirmed when using certain media devices (USB, iPod, CD, etc.) try a similar device. Is the concern still reproducible? If not, gather details on the suspect device such as model, device software version (if applicable), device content such as file types, if this is a CD is it a copied CD? Data disc? Commercially sold CD?

- 5) If the concern is for **other audio issues**, please describe how to duplicate the concern (please capture a video, if possible).

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- 6) If the above steps do not resolve the customer's concern, complete a fresh Harman Investigation Guide Questionnaire documenting the customer's concern and the results of each diagnostic step in this bulletin. If possible, capture a video of the condition then contact the SOA Techline to review for next steps. Techline will request you send the completed questionnaire, step by step bulletin results and any videos of the condition.

WARRANTY / CLAIM INFORMATION:

For vehicles within the Basic New Car Limited Warranty period or covered by an active Subaru Added Security Classic or Gold plan, this repair may be submitted using the following claim information:

Labor Description	Labor Operation #	Labor Time	Fail Code	H/U Type
HARMAN AUDIO TROUBLESHOOTING	A031-161	1.0	ZRM-43	Base
			ZRN-43	Plus / Mid
			ZRO-43	High (w/ Navi)

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IMPORTANT REMINDERS:

- SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.
- Always check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.

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