Technical Service Bulletin

91 Apple CarPlay or Android Auto complaints (blank MMI screen, no audio, does not connect, etc.)

91 16 63 2044024/2 July 26, 2016. Supersedes Technical Service Bulletin Group 91 number 16-42 dated May 6, 2016 for reasons listed below.

Model(s)	Year	VIN Range	Vehicle-Specific Equipment
A4	2017 - 2019	All	Audi smartphone interface
Q7	2017 - 2019	All	Audi smartphone interface

Condition

REVISION HISTORY		
Revision	**Date**	**Purpose**
2	-	Revised *Condition* (Added Android Auto screen display issue) Revised *Technical Background* (Added explanation of how system works) Revised *Service* (Updated solution for issue of Android Auto not automatically starting when the phone is connected to the USB port; added Android Auto screen display issue)
1	5/6/2016	Initial publication

The customer may experience any of the following static or sporadic issues with the Audi smartphone interface (ASI) system:

- The MMI screen is blank after the phone is connected to the USB port.
- The MMI screen freezes when Apple CarPlay or Android Auto is used.
- Apple CarPlay or Android Auto does not automatically start when the phone is connected to the USB port.
- The MMI sporadically displays an "Unlock Phone" message to allow ASI to be used.
- The left thumbwheel button on the steering wheel cannot be used to start or end a phone call.
- The Android Auto screen does not fill the complete area of the MMI display.

Technical Background

The Audi smartphone interface (ASI) was introduced to the MIB2 MMI system in model year 2017 Q7 and A4 vehicles. MIB2 MMI includes two different systems: the MIB2 High Scale without Audi connect and the MIB2 High Navigation system with Audi connect. As with the older Audi music interface (AMI) system, the user experience can vary (different features and functions) based on the customer's device type and device firmware connected to the USB ports in the vehicle.

How the system works

Apple CarPlay and Android Auto both send video and audio to the MMI. The MMI displays the video signal on the screen and plays the audio signal through the speakers. This relationship is similar to how a media device (DVD player, Blu-ray player, AppleTV, etc.) connects to a home television. The MMI is the television and the smartphone is the media device. But, the MMI can send requests to the smartphone because the MMI also functions like a remote control. When the smartphone does not send a signal to the MMI, the customer may perceive this as a problem with the MMI. But, the issue almost always lies with the smartphone because the phone is providing the audio and video. It is important that the customer understands the relationship between the smartphone and MMI.

Apple CarPlay (Figure 1) Minimum Requirements

Device: Lightning-capable iPhones, starting with the iPhone 5 and including all new versions of the iPhone (iPads are not supported).

Device Firmware: CarPlay is built into Apple's iOS, so having the latest update is recommended because constant improvements in usability and stability are introduced with updates to iOS. There are significant stability improvements with the latest iOS firmware when compared to the early versions of iOS 8.X, which also supported CarPlay.

Figure 1. Apple CarPlay icon.

Android Auto (Figure 2) Minimum Requirements

Device: Any Android Device with a USB connection and support for the official Google Play Store. Amazon Fire and other Android phones using a proprietary operating system that doesn't natively come with Google Services are not supported.

Device Firmware: Android 5.0 Lollipop or higher is required, along with the Android Auto app. Android 4.0 KitKat and lower are not supported. Unlike CarPlay, the official Android Auto app must be separately downloaded from the Google Play store.

Phones that are rooted and have a "Custom ROM" installed are not officially supported. Phones where the Android Auto app is "side-loaded" by means outside of the Google Play store are not supported.

Figure 2. Android Auto icon.

Production Solution

Not applicable.

Technical Service Bulletin

Service

Before proceeding, note that ASI (Audi smartphone interface) = Apple CarPlay or Android Auto.

Issue: The MMI screen goes blank after the phone is connected to the USB port, and ASI does not function until the phone is disconnected from and reconnected to the USB port.

Cause: A known MMI software startup concern with iOS 9.X can cause this issue. If the customer's phone is connected before the car is started, the issue can occur. Typically, the process can be repeated if the phone is first connected to the USB port, then the vehicle is started within 1-2 seconds after the phone is connected. The condition can be sporadic.

Solution: Ask the customer to connect the phone after the car is started and the transmission is still in the park position. Inform the customer that an iOS software solution is not available at this time. However, Audi has developed MMI software to help automatically reconnect the MMI to the iPhone when the iPhone disconnects. Sign the customer up for Pending Service Solution (PSS) 2044130: _PSS 91 MMI screen goes blank after iPhone is connected to USB port._ After the customer is signed up for the PSS, the dealer will be notified when the MMI software is available.

Issue: The MMI screen freezes when Apple CarPlay or Android Auto is used.

Cause: When the phone freezes or when a background app hangs, it can cause Android Auto to hang (particularly if the app is supported in Android Auto).

Solution: Ask the customer to uninstall all non-essential apps and restart the phone. Repeat until the issue is resolved.

Issue: Android Auto does not automatically start when the phone is connected to the USB port.

Cause: Some Android devices (including Samsung Galaxy/Note devices) require the USB MTP mode to be manually enabled after the device is connected to the USB port. This is a fault of the device firmware.

Solution: Ask the customer to update the smartphone device firmware. As of June 2016, Samsung has provided a firmware update to fix this concern. If there is no firmware update available, ask the customer to manually enable USB MTP mode after connecting the device to the USB port of the vehicle.

- For most Android devices, this can be done from the notifications window from the top swipe-down menu (Figure 3).

- Find the USB notification that indicates "Connected for Charging".

- Select this notification to bring up the USB connection options.

- Select the mode that connects as "MTP – Media Transport

Figure 3. USB options in notification window.

Protocol" (Figure 4).

Unfortunately, this process will need to done each time the phone is connected to the vehicle or each time the vehicle is restarted with the phone connected to the USB port. Ask the customer to report the concern to the device manufacturer if the firmware update did not resolve the concern.

Figure 4. *Media Device (MTP) Selection*

Issue: Apple CarPlay does not automatically start when the phone is connected to the USB port.

Cause: Some versions of iOS have known software bugs that can cause the phone to freeze. If CarPlay does not start, ask the customer to check the phone by unlocking the phone to confirm that the top of the screen is blue and shows the CarPlay icon.

Solution: If the phone is not in a valid state with CarPlay running, ask the customer to force a restart by holding down the home and sleep/power buttons simultaneously (Figure 5) for at least ten seconds until the Apple Logo appears. This will close any misbehaving apps that may prevent the phone from being restarted using the normal shutdown method. The customer may want to consider uninstalling all non-essential apps.

Figure 5. *Force iOS reset.*

Issue: The MMI sporadically displays an "Unlock Phone" message to allow ASI to be used.

Cause: When a new iPhone is first connected to the ASI, iOS provides a popup notification window to ask the user to allow the Audi MMI to use the iPhone while the screen is locked (Figure 6). It is easy to miss this notification window, especially if the phone is already unlocked when it is connected. If the customer does not allow CarPlay to access the phone while it is locked, the warning message will appear in the MMI every time the phone is connected (Figure 7). The customer may subsequently unlock the iPhone using the Touch ID/fingerprint sensor every time without knowing there is an option to remove this step.

Solution: Ask the customer to enable the Audi MMI to access CarPlay with the phone screen locked. To change this setting on the iPhone, go to *Settings>>General>>CarPlay>>Audi MMI*.

Figure 6. *Allow CarPlay when screen is locked.*

Select the "(i)" next to "Audi MMI", then select "Allow CarPlay while locked" (Figure 9).
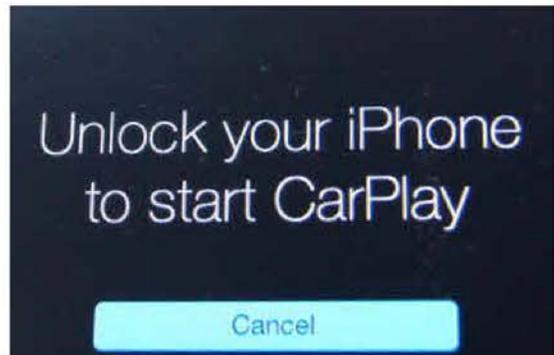
Figure 7. *Unlock iPhone message in MMI.*
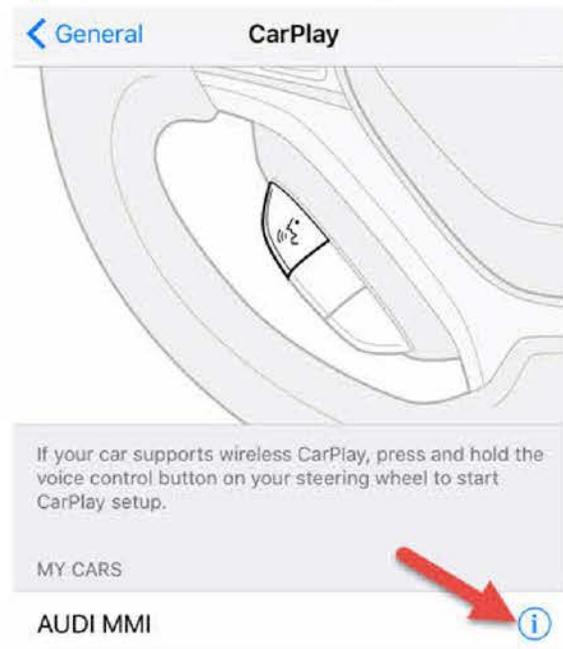
Figure 8. *AUDI MMI CarPlay Settings.*
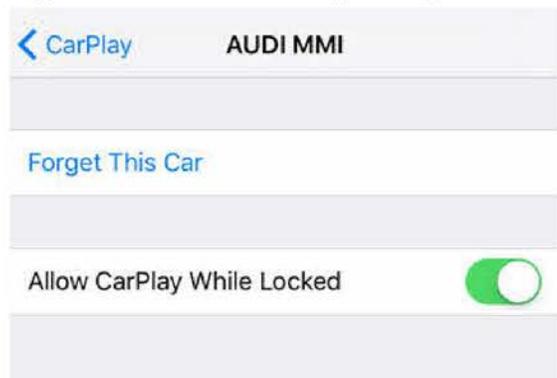
Figure 9. *Setting to "Allow CarPlay While Locked".*

Issue: The left thumbwheel button on the steering wheel cannot be used to start or end a phone call.

Cause: When the Audi Smartphone Interface is being used, all phone controls are handled directly within CarPlay/Android Auto. The left thumbwheel button on the steering wheel does not start or end calls.

Issue: The Android Auto screen does not fill the complete area of the MMI display.

Cause: There is an MMI software concern that prevents the MMI display from showing the full widescreen mode of Android Auto (Figure 10 and Figure 11).

Figure 10. Android Auto screen not in widescreen.
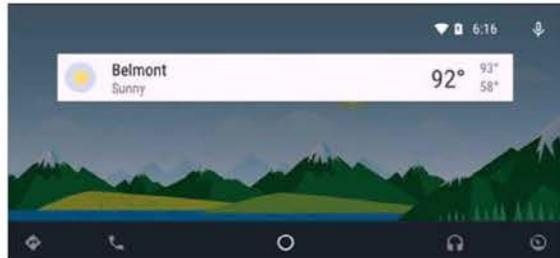
Figure 11. Android Auto screen correctly using widescreen.

Solution: Only vehicles built before calender week 07/16 can have this concern. Inform the customer that a solution is pending, and sign the customer up for Pending Service Solution (PSS) 2044860: *91 PSS Android Auto display does not fill entire MMI screen.* After the customer is signed up for the PSS, the dealer will be notified when the MMI software is available.

Warranty

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

Additional Information

All parts and service references provided in this TSB (2044024) are subject to change and/or removal. Always check with your Parts Department and service manuals for the latest information.