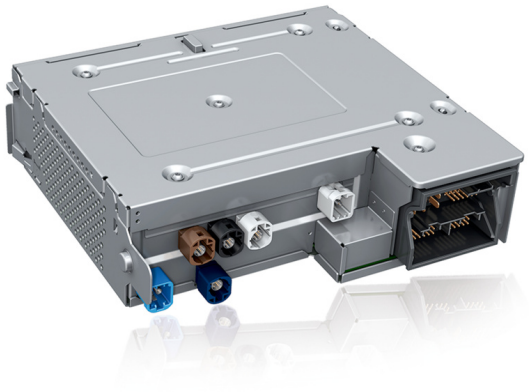




Third-generation modular infotainment matrix

Self-study programme SSP 679

For internal use only

Audi Service Training

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This document contains information about vehicles sold in various international markets. Although most of the information provided in this document will be of assistance to Canadian dealers, it may contain information about vehicle model configurations, systems, or features that are not available or applicable to products sold in the Canadian market. Information has been made available to Canadian dealers on an “as is” basis and for reference or educational purposes only. Please refer to accessaudi.com and ELSA for current and additional information about features, specifications and processes for vehicles sold in Canada

This self-study programme provides basic information on the design and function of new vehicle models, new components or new technologies.
It is not a Workshop Manual. Any figures given here are for explanatory purposes only and refer to the data valid at the time of writing.
Content is not updated.
It is essential that you refer to the latest technical literature when carrying out maintenance and repair work.
In the glossary at the end of this self-study programme you will find an explanation of all terms which are shown in *italics* and indicated by an arrow ↗.


Note

Reference

Introduction

Introduction

Three years after the launch of the MIB2+ in the Audi A8 (type 4N), Audi has brought the third generation of the modular infotainment matrix onto the market.

While the customer may only notice small changes, the system actually represents a significant conceptual advancement. Hardly any of the control units for the infotainment system are the same as in the previous version; with newly externalised functions, new transmission methods and much more, the MIB3 is a new construct, which you will explore in this self-study programme. You will find an introductory overview of the different generations of the modular infotainment matrix, as well as the plan for initial implementation of the MIB3 in the Audi range and the underlying offer concepts.

You will learn about the similarities and differences to the previous MIB generations and, with the help of the AR application “MIB3: Aerial connections on MLB and MQB vehicles”, you can take a deep dive into the details of the aerial infrastructure of vehicles constructed on the modular longitudinal matrix or modular transverse matrix platform. All this and much more is contained in this self-study programme.

Versions of the modular infotainment matrix

With the MIB3, Audi has introduced the fourth level of the modular infotainment matrix. In the following illustration, only pictures of the High versions of the various MIB generations are shown in order to provide a general overview of all the generations.

679_075

MIB generations and the versions used by Audi

MIB1	MIB2	MIB2+	MIB3
Entry			
Entry plus			
Standard	Standard	Standard	Basic
	Scale		
High	High	High	High
			Premium

Reference
For more information on the individual MIB generations, please refer to self-study programmes 618, "Audi Modular Infotainment System (MIB)", 648, "Audi Second-generation Modular Infotainment System", 666, "Audi A8 (type 4N) Infotainment and Audi connect" and SSP 673, "Audi Q3 (type F3)"

MIB3 versions

The third generation of the modular infotainment matrix was introduced in 2019 in the product upgrade of the Audi A4 (type 8W). In order to be able to equip all model ranges with the MIB3, three different versions are used at Audi:

- MIB3 Basic
- MIB3 High
- MIB3 Premium

The main distinguishing features of the three versions and their differences are explained below.

MIB3 Basic

Control unit 1 for information electronics J794 in the MIB3 Basic version can be easily distinguished from the other two versions by the absence of the LVDS connection to control unit in dash panel insert J285.



679_019

As of the time of writing, the Basic version is only fitted in modular transverse matrix (MQB) vehicles.

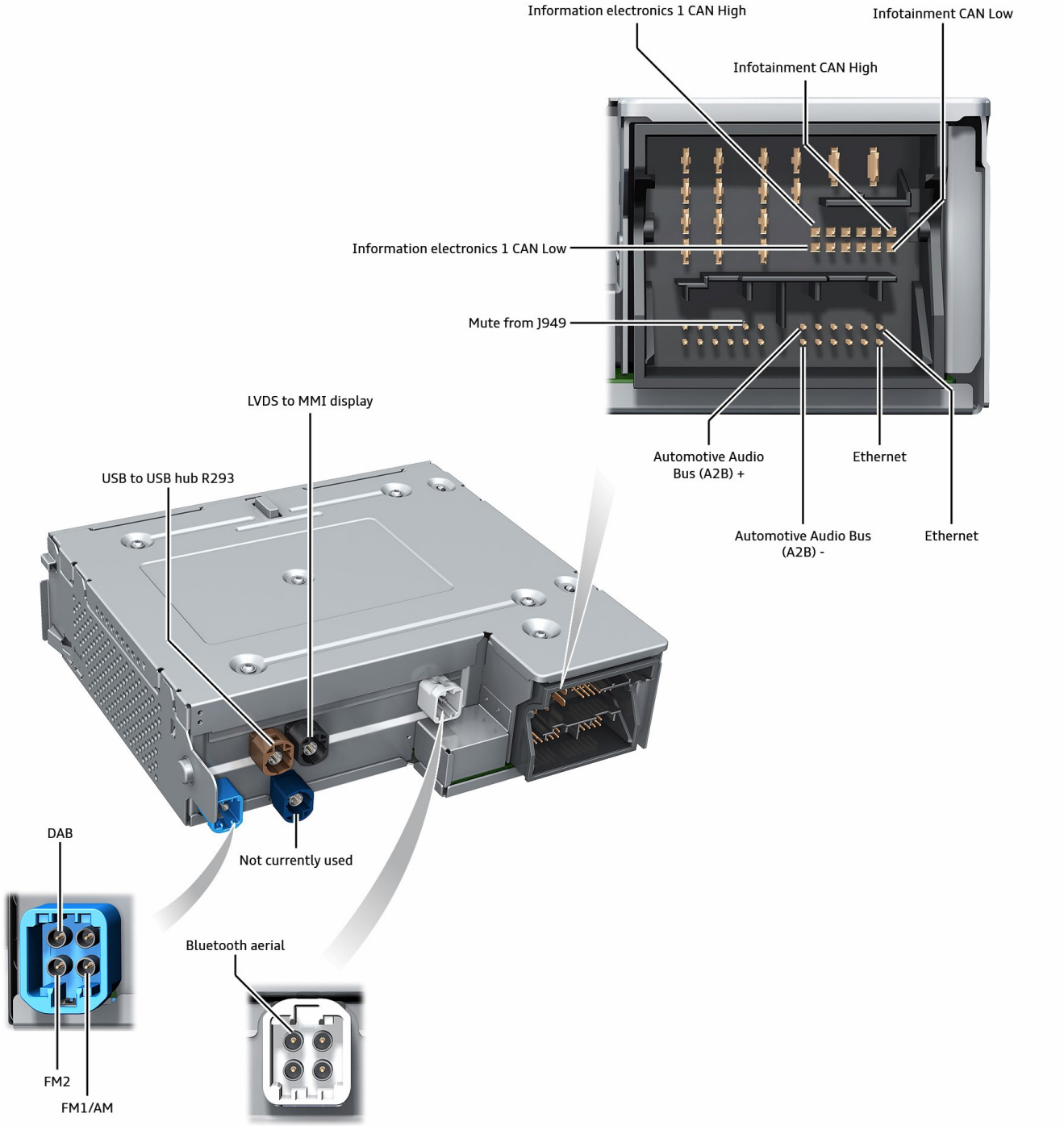
Depending on the country version and vehicle equipment, the features of the MIB Basic include:

- Radio with phase diversity and FM dual tuner (very high frequency), AM tuner (medium frequency) and DAB tuner (QV3)
- Internal audio amplifier with up to 180 W
- Bluetooth interface for 1x HFP and A2DP
- Speech dialogue system (basic version)
- Display output with 1280 x 720 pixels for the MMI touch display
- Audi music interface 2x USB socket[1]
- Audi smartphone interface with 2x USB socket[2]
- Audi phone box (9ZE) - for some countries Audi phone box light (9ZV), only for wireless charging
- Bang & Olufsen Premium Sound System with 3D Sound with up to 755 W[3] (combined output of J794 and J525)

[1] Depending on the model and model year, either 1x USB-A and 1x USB-C or 2x USB-C may be fitted.

[2] Depending on the model and model year, either 1x USB-A and 1x USB-C or 2x USB-C may be fitted.

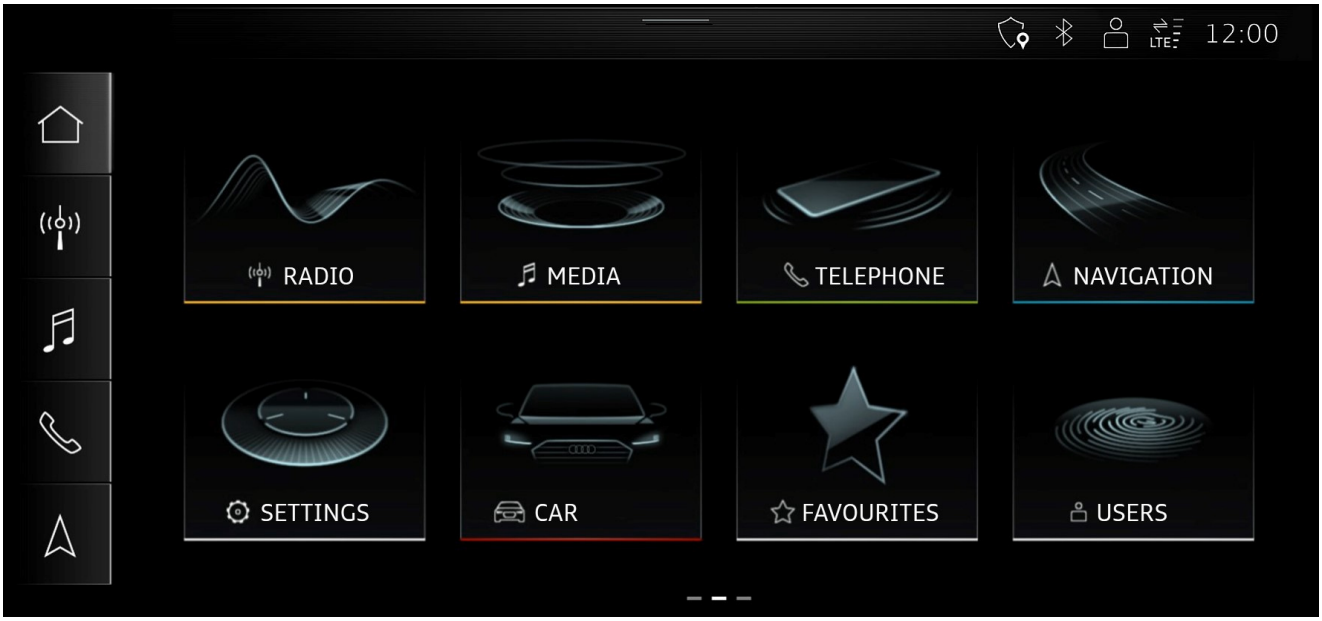
[3] The value given here represents the maximum possible total output for the system. The total output that is actually available in a given model depends on the configuration of the sound system in question.



679_076

MIB3 High and Premium

Control unit 1 for information electronics J794 on the MIB3 High and MIB3 Premium can be recognised by its white connector (LVDS to control unit in dash panel insert J285).



679_077

The MIB High and MIB3 Premium differ from one another primarily in their software and the other hardware components in J794 itself.

Depending on the country version and vehicle equipment, the MIB3 High and Premium have features including:

- Radio with phase diversity and FM dual tuner (very high frequency), AM tuner (medium frequency) and background tuner
- DAB dual tuner (QV3)
- 3D navigation with data on SSD with 3D city models
- Navigation with online routing (for some countries)
- Audi connect infotainment services (IT3/IT4) with three-year licence period
- Wi-Fi hotspot with a bit rate of up to 150 Mbit/s
- Internal audio amplifier with up to 180 W
- Speech dialogue system
- One display output with 1520 x 720 pixels for MMI touch display (only for 10.1” display), or one display output for both touch displays with 1280 x 720 and 1280 x 660 pixels (for 8.8” display and 8.6” display) or one display output with 1520 x 720 and 1280 x 660 pixels (for 10.1” display and 8.6” display)
- Display output with 1440 x 540 pixels for Audi virtual cockpit plus, 12.3” (9S9)
- Audi music interface with 2x USB socket[4]
- Audi smartphone interface with 2x USB socket[5]
- Bluetooth interface[6] for 2x HFP, A2DP and MAP
- Audi phone box (9ZE)[7] or, for some countries, Audi phone box light, only for wireless charging (9ZV) [8]
- Bang & Olufsen Premium Sound System with 3D Sound with up to 755 W[9] (combined output of J794 and J525)
- Bang & Olufsen Advanced Sound System with 3D Sound with up to 1920 W[10] (total output of J794 and J525)
- Vehicle-specific services (IW3)

[4] Depending on the model and model year, either 1x USB-A and 1x USB-C or 2x USB-C may be fitted. For example, the Audi A3 (type 8Y) was fitted with 1x USB-A and 1x USB-C when it was launched; this was later changed to 2x USB-C.

[5] Depending on the model and model year, either 1x USB-A and 1x USB-C or 2x USB-C may be fitted. For example, the Audi A3 (type 8Y) was fitted with 1x USB-A and 1x USB-C when it was launched; this was later changed to 2x USB-C.

[6] The Bluetooth interface offers 2x HFP only in combination with the Audi phone box; without the Audi phone box, only 1x HFP is supported.

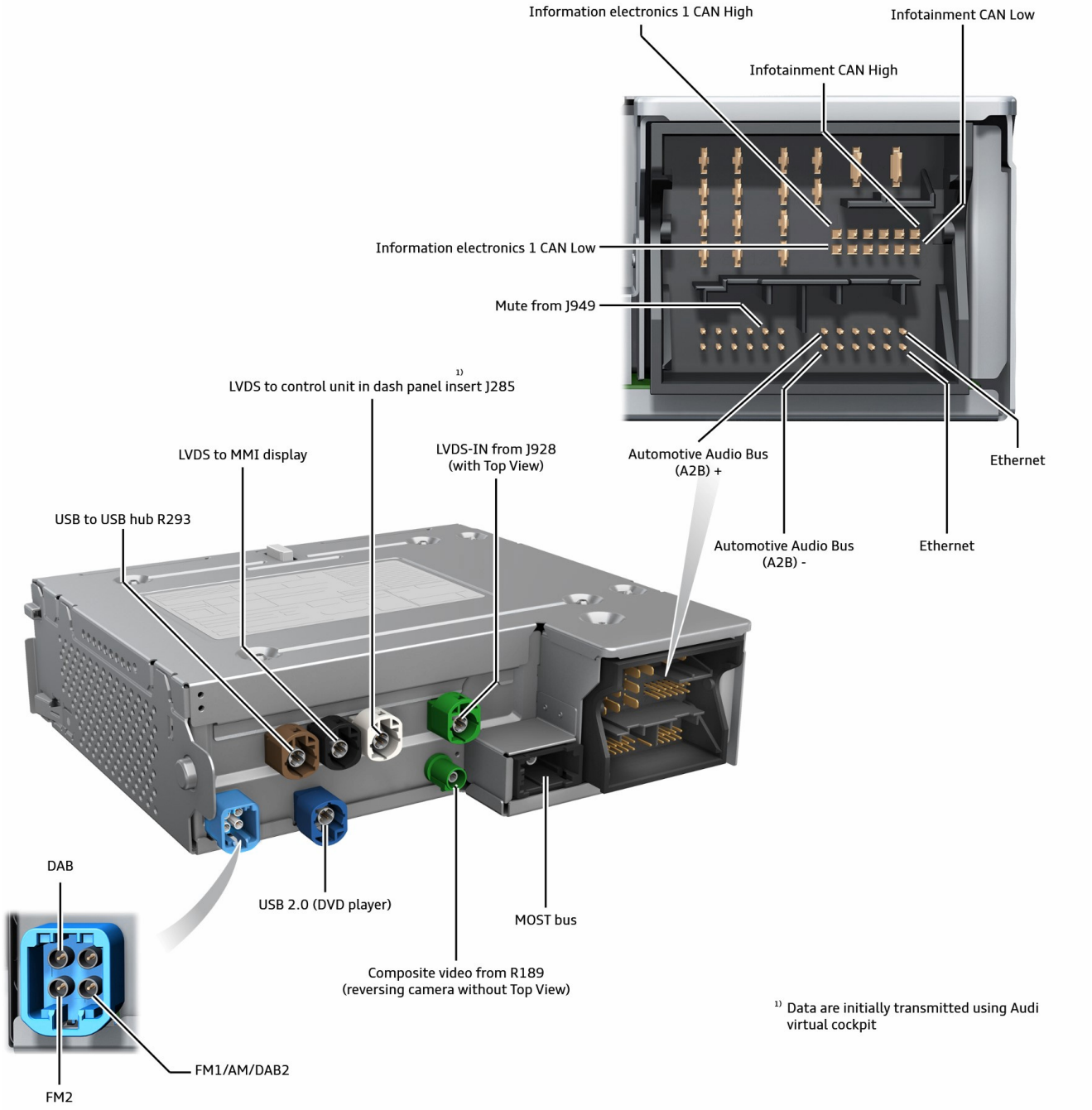
[7] The Bluetooth interface offers 2x HFP only in combination with the Audi phone box; without the Audi phone box, only 1x HFP is supported.

[8] The Bluetooth interface offers 2x HFP only in combination with the Audi phone box; without the Audi phone box, only 1x HFP is supported.

[9] The value given here is the maximum possible total output for the system. The total output that is actually available in a given model depends on how the sound system is configured.

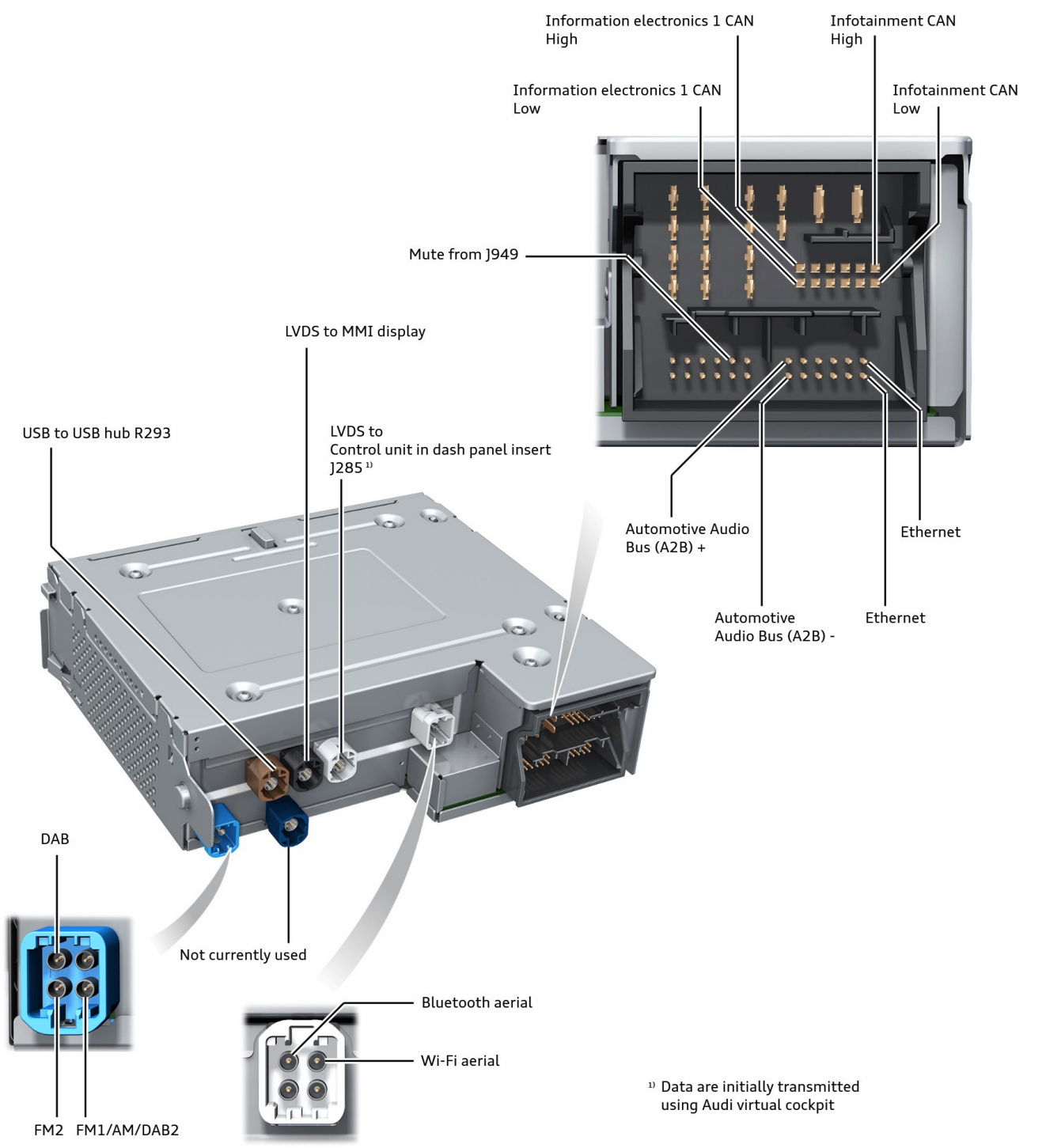
[10] The value given here is the maximum possible total output for the system. The total output that is actually available in a given model depends on how the sound system is configured.

J794 on MIB3 High in an MLB vehicle



679_078

J794 on MIB3 High in an MQB vehicle



680_087

Hardware

Control unit 1 for information electronics J794

Control unit 1 for information electronics J794 on the MIB3 High can be distinguished from the one on the previous version, the MIB2+ High, by the fact that it is no longer fitted with a mobile network module. On the MIB3, the mobile network module (now the only one in use) is integrated in emergency call module control unit and communication unit J949. All Audi connect services now run via the embedded SIM card in J949. In addition, the SD card reader and SIM card reader are no longer fitted in the MIB3. Two USB connections are provided so that customers are still able to play audio or video files.

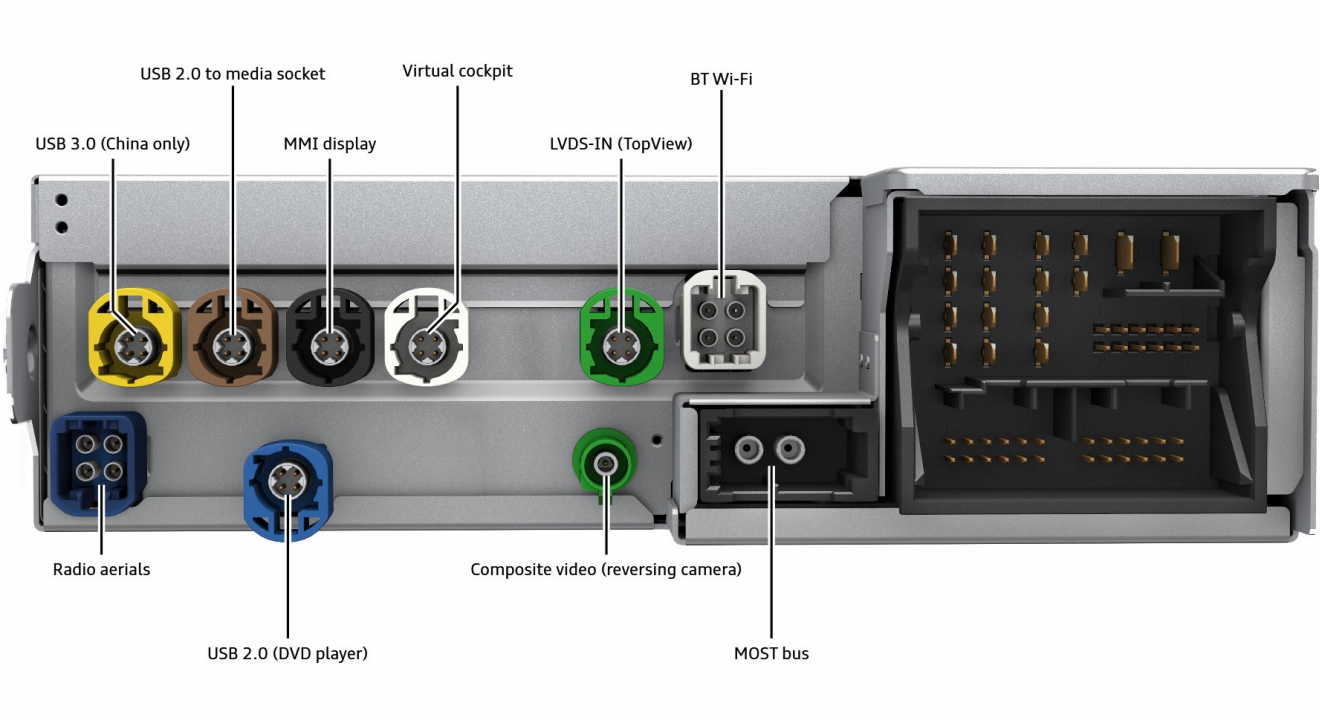
A MOST bus connection is fitted on some models only in connection with the following optional equipment:

- TV tuner
- Audi virtual cockpit
- Head-up display

Different hardware versions of J794 may be fitted depending on the model and platform (MQB or MLB).

The following illustration shows the entire range of possible connections from the different versions of J794 used by Audi; it does not represent any real control unit.

Schematic overview of connections for all MIB3 control units



679_021

Although users will only notice small differences in comparison to the MIB2+, the hardware setup is fundamentally different. The following section provides a few key points on this subject.

Aerials

One distinguishing feature of the MIB3 is that there is no GPS aerial connected to J794. In this system, emergency call module control unit and communication unit J949 is used as a GPS receiver as well as a mobile network receiver. All of the mobile network aerials are connected to J949, which transmits the mobile network data via Ethernet to J794.

If the J794 in question is fitted in an MLB vehicle, the Wi-Fi and Bluetooth aerials are also connected to J949. On MQB vehicles, on the other hand, the Wi-Fi and Bluetooth aerials are connected to J794. As a general rule, only the radio aerials are still connected to control unit 1 for information electronics J794 on MLB vehicles.

Navigation

Just as on the previous versions, control unit 1 for information electronics J794 on the MIB3 calculates the location shown on the navigation system. Unlike on the previous versions, J794 no longer determines the GPS position itself, but rather receives this information from emergency call module control unit and communication unit J949. To determine the location, it also receives additional data from the vehicle sensors, e.g. gyroscope data. All other navigation functions, such as route calculation, are still carried out by J794.

J794 receives the following data:

- The vehicle sensor data via the infotainment CAN bus on all platforms (MLB, MQB)
- The GPS position via Ethernet from J949 on all platforms (MLB, MQB)

In addition, the MIB3 receives the satellite map data from HERE[11].

The Audi connect service online traffic information[12] is also available on the MIB3 to provide optimised route calculation and display the current traffic data.

Telephone functions

Beginning with the MIB3, there is no longer the option to make calls directly via the MMI, i.e. using a SIM card inserted in the vehicle or via the Bluetooth profile SAP (SIM Access Profile). However, it is still possible to connect a smartphone via HFP (hands-free profile) and make calls using the hands-free system.

If the MIB3 High system is fitted in a vehicle with the optional Audi phone box, two smartphones can be connected to the MMI at the same time and used for making calls.

Note
The MIB3 is fundamentally based on the MIB2+; this self-study programme therefore focuses primarily on the changes that have been made.

Radio tuners

Implementation

New radio tuners have been introduced with the MIB3. One of the main differences is that the radio aerials can no longer be allocated definitively; instead, they are used for various radio signals as required.

All of the radio functions are carried out in control unit 1 for information electronics J794. Diagnosis is therefore performed using address word 005F – information electronics 1.

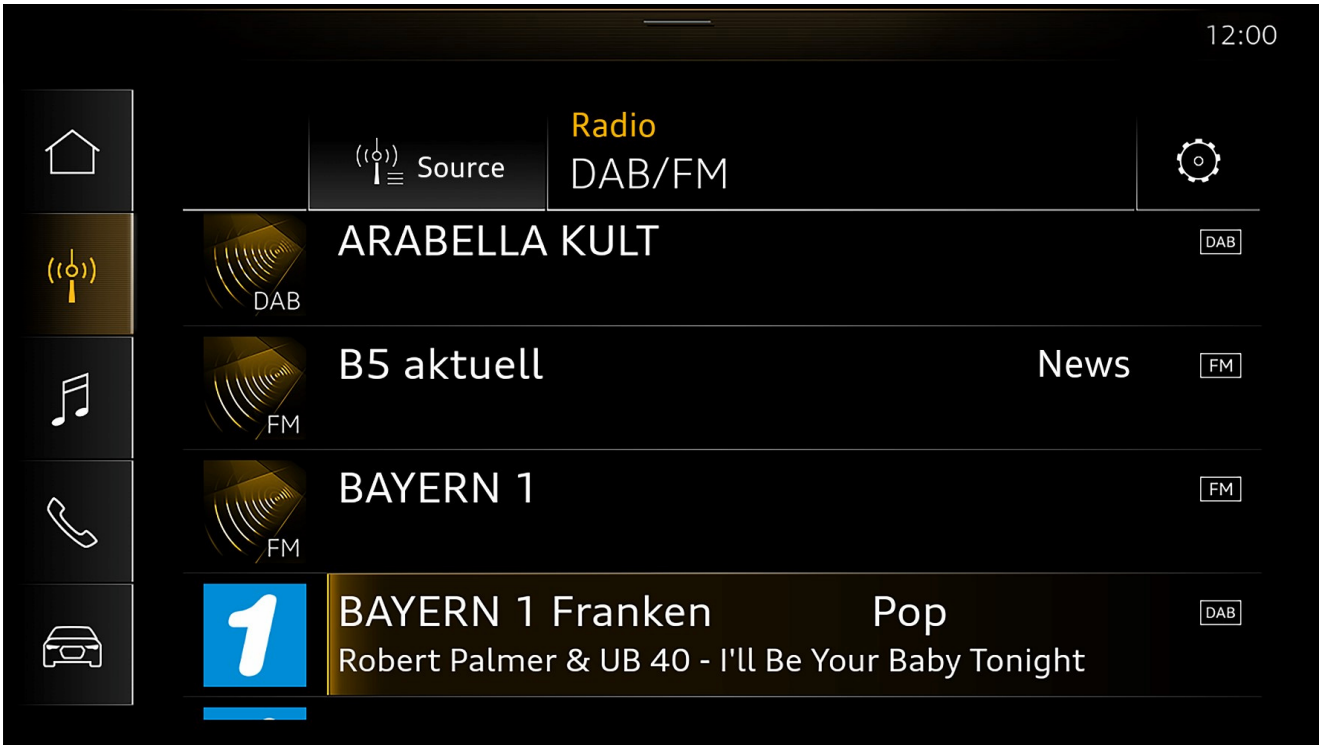
Note
As the data module in emergency call module control unit and communication unit J949 is used to receive online radio stations, it is important that it be included when investigating related problems or complaints.

Radio tuners for MIB3 Basic

The radio module of control unit 1 for information electronics J794 is fitted with three tuners that can be used simultaneously. The schematic layout of the radio module is shown below.

[11] HERE is a provider of geolocation data; in 2015, the company was taken over by a group of automobile manufacturers, among them AUDI AG.
[12] This requires a valid Audi connect licence.

Radio menu on MIB3 Basic



679_022

Schematic layout showing an ECE radio tuner as an example

Tuner 1 is a universal tuner; it can carry out each of the following three reception types:

- FM audio for phase diversity
- AM audio
- DAB audio with station list

The FM1/AM aerial and the DAB aerial are connected to the universal tuner. The tuner switches to the required aerial depending on the desired reception type.

Tuner 2 is a dedicated FM audio receiver and always transmits the audio signals to the FM phase diversity. It acts as a single tuner if tuner 1 is not currently transmitting FM audio. Tuner 2 is connected to the FM2 aerial.

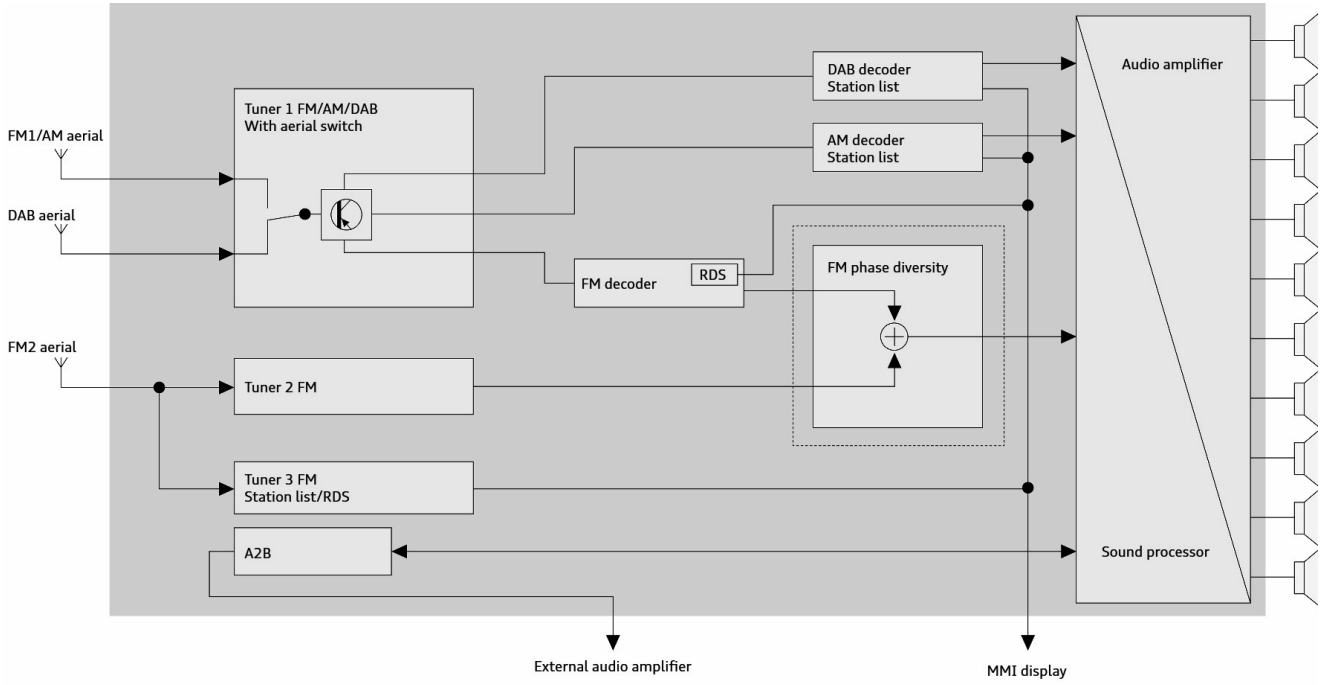
In FM operation, the signals from tuner 1 and tuner 2 are combined via the FM phase diversity in order to achieve better reception.

Tuner 3 is designed for FM RDS reception and does not provide FM audio reception. It is connected to the FM2 aerial and updates the FM radio station list automatically.

Note
DAB is only available in certain countries.

Reference
For more information on the various RDS services, please refer to page 34 of SSP 435, "3rd Generation Audi MMI System".

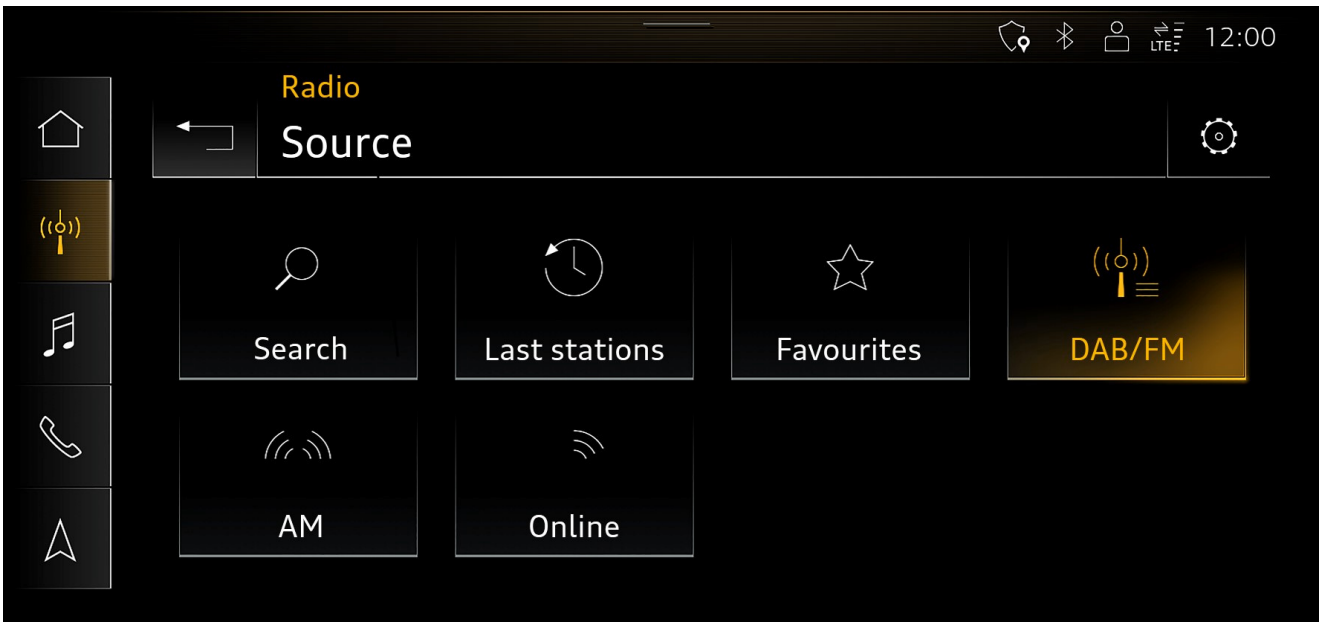
Schematic diagram of the radio tuner on the MIB3 ECE



679_069

Radio tuner for MIB3 High

The radio tuner for the MIB3 High has very different technical characteristics than the one for the MIB3 Basic. For this reason, a more detailed explanation will be given here.



679_023

Note
As the data module in emergency call module control unit and communication unit J949 is used to receive online radio stations, it is important that it be included when investigating related problems or complaints.

Analogue radio tuner (FM/AM reception)

On the MIB3, there are three separate receivers (tuners) and two aerials for analogue radio reception. As a result, station reception and automatic station search take place at the same time.

In the case of FM radio, the two tuners 1a and 1b provide continuous reception of the selected station. The signal is then merged into a combined signal (diversity function). This provides the best possible reception.

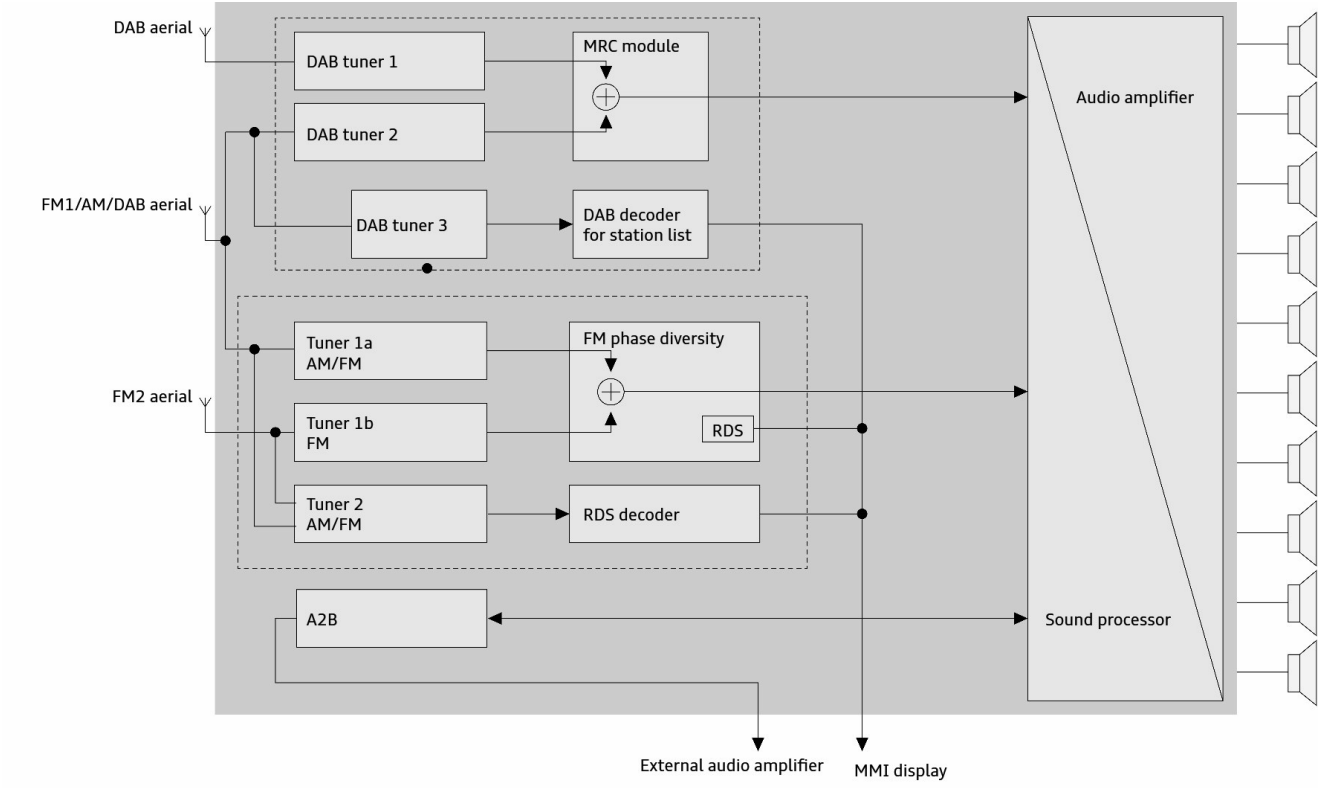
Tuner 2 is used as a separate tuner for continuous AM/FM station search, and to receive TMC data and monitor spoken traffic announcements. It is not used for audio reception of the radio station that is currently set. By using the continuous station search function, the radio menu on the MMI display can always show the FM radio stations that can currently be received. The station list is therefore updated on a continual basis.

AM reception is provided by tuner 1a. Tuner 2 is an additional AM tuner that continuously updates the AM list in the background.

The following types of metadata are supported:

- Radio text (dynamic label)
- Radio text plus (dynamic label plus)
- Traffic announcements
- Station logo images (online automatic update)
- Cover art images (Gracenote™ album cover art by acoustic fingerprinting)

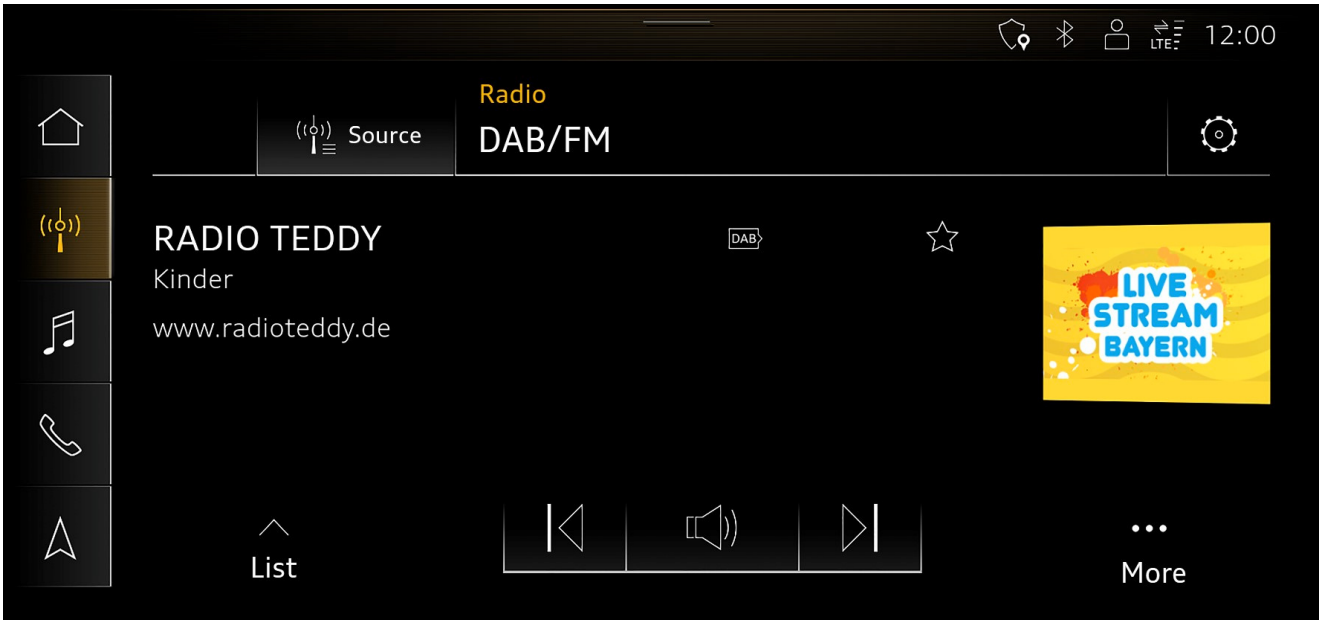
Schematic diagram of the radio tuner on the MIB3 High ECE



679_024

Digital radio tuner (DAB)

The DAB tuner for the MIB3 High has three tuners and two aerials. Tuners 1 and 2 receive and decode the signal from the selected station. The bits of both tuners are then compared in the MRC module (maximal ratio combining). If bits are found to be missing for one of the tuners, they can be replaced by bits from the other tuner. This provides better reception. Tuner 3 acts as a background tuner, searching for new stations to update the station list on a continual basis.



679_025

The DAB tuner is designed to receive stations in the following formats:

- DAB
- DAB+

It supports the following types of metadata:

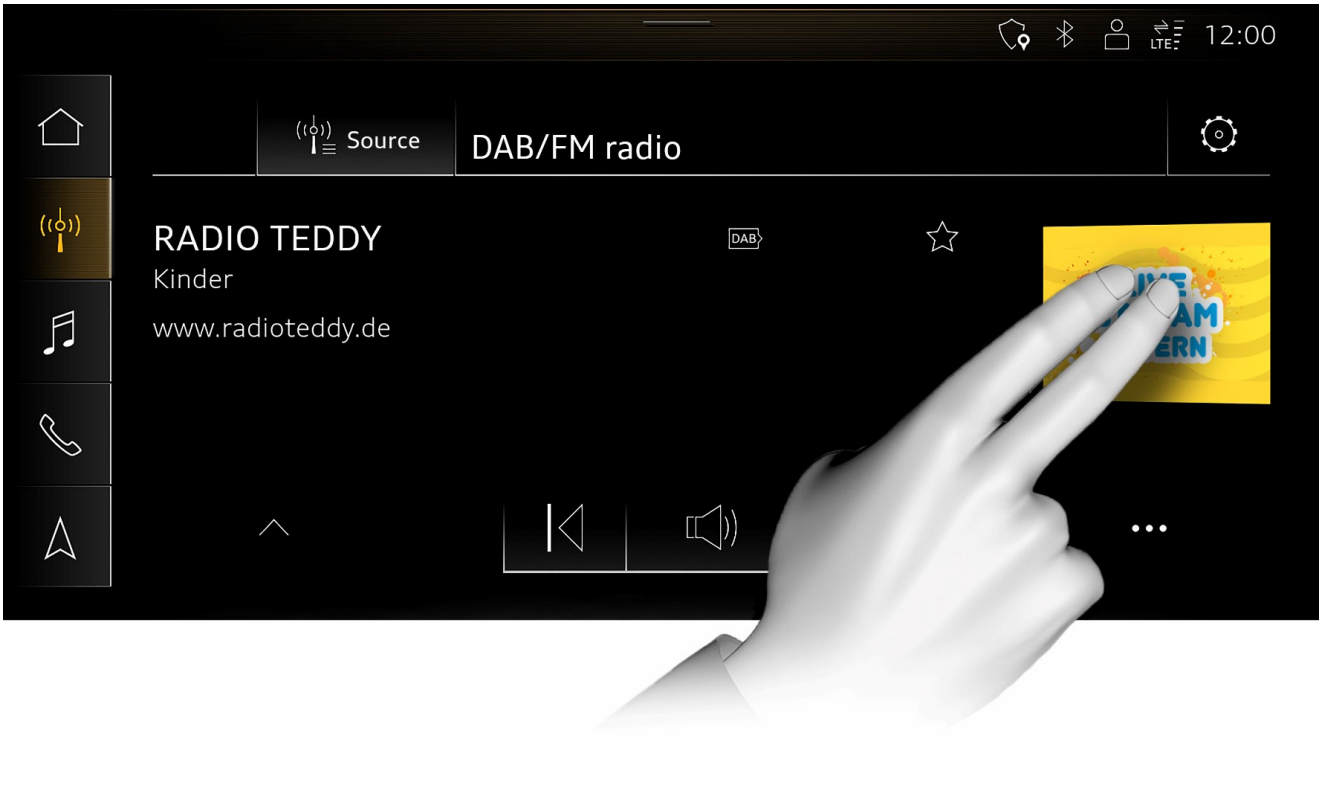
- Radio text (dynamic label)
- Radio text plus (dynamic label plus)
- Traffic announcements
- DAB announcements
- Station logo images (via DAB automatic update)
- Station logo images (online automatic update)
- Image display (slide show)
- Cover art images (Gracenote™ album cover art by acoustic fingerprinting[13])

Note
Displaying cover art requires mobile data. The user needs an active Audi connect data plan for this purpose.

The customer can set the image shown for the radio station as desired. This can be done by simply tapping on the image and then swiping to the right or left until the desired layout is shown. If no cover or slide show can be shown even with acoustic fingerprinting[14], only the station logo will be displayed.

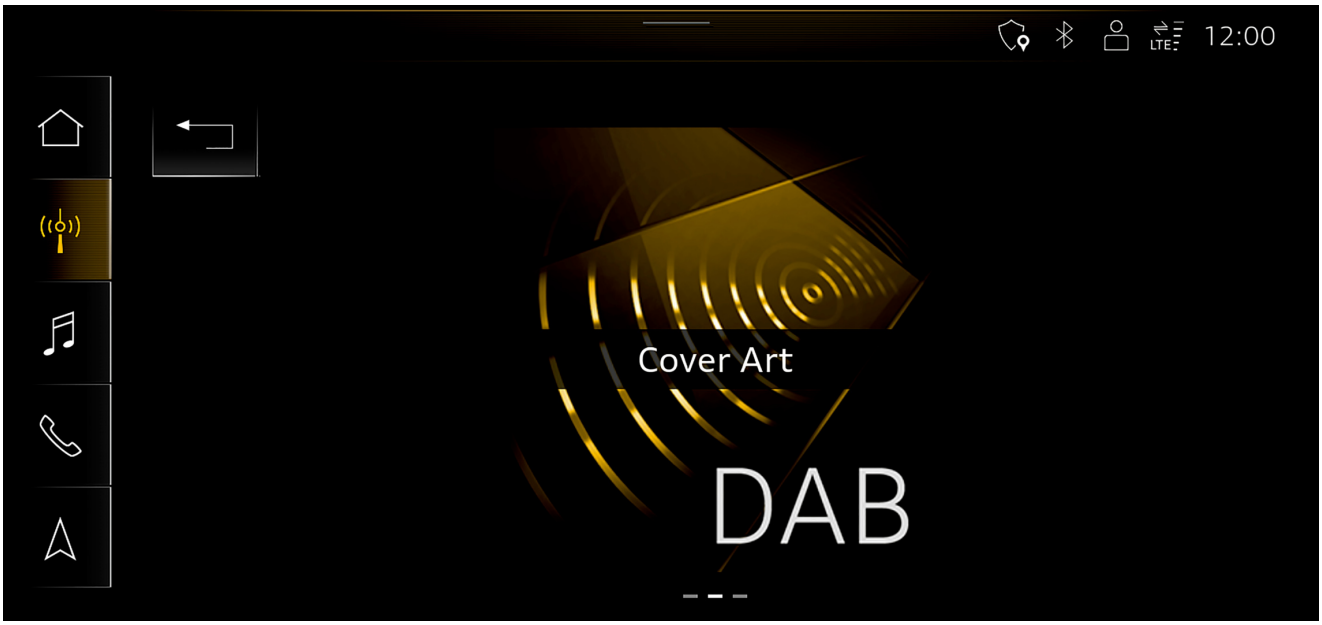
[13] Every song and every voice has its own set of acoustic characteristics. The unique “digital imprint” that this creates is known as an acoustic fingerprint.
Provided that mobile data are available, this information is evaluated for every song that plays and for the current presenter when the radio is in use. When a song is recognised, the corresponding album cover is displayed. When the presenter’s voice is recognised, the station logo may be shown. If several songs are played in a row without commentary in between, the station logo will appear initially at the beginning of a new song until the song is recognised and the album cover can be shown.

[14] Every song and every voice has its own set of acoustic characteristics. The unique “digital imprint” that this creates is known as an acoustic fingerprint.
Provided that mobile data are available, this information is evaluated for every song that plays and for the current presenter when the radio is in use. When a song is recognised, the corresponding album cover is displayed. When the presenter’s voice is recognised, the station logo may be shown. If several songs are played in a row without commentary in between, the station logo will appear initially at the beginning of a new song until the song is recognised and the album cover can be shown.



679_026

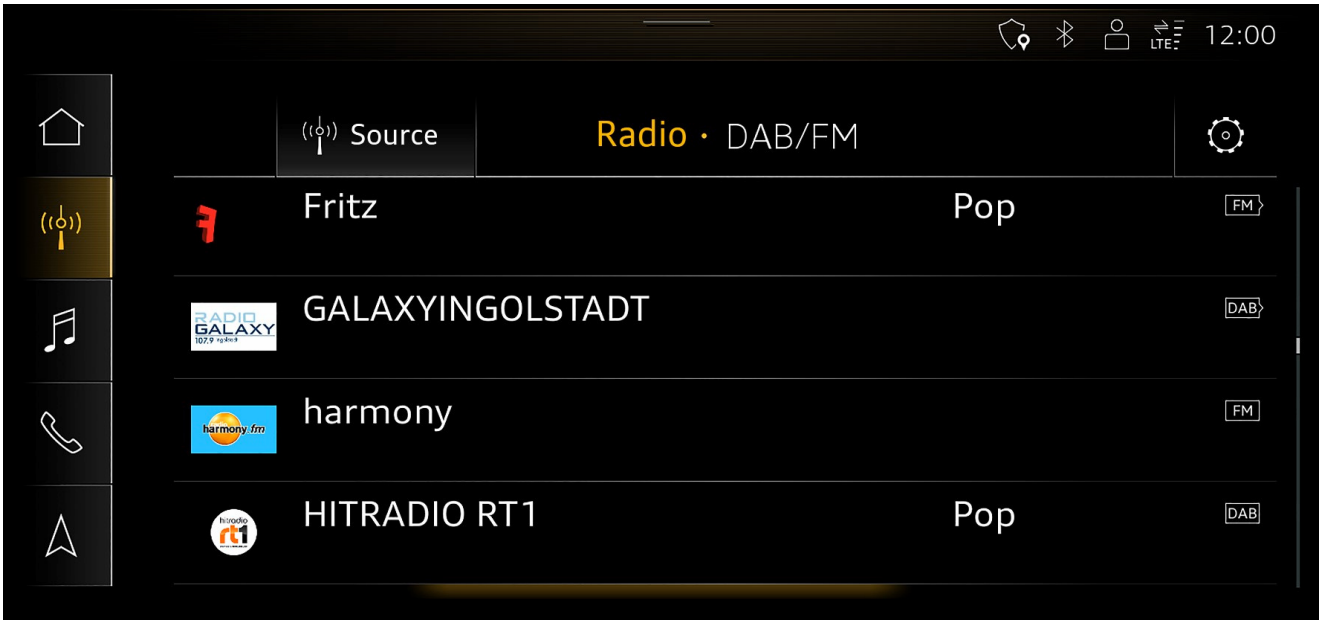
Display layout of selection menu



679_027

Note
The DAB tuner is coded for the relevant country, as different frequency separations may also be used between the individual channels. Incorrect coding will impair reception!

All radio stations that can currently be received are shown in a single list regardless of the station type (analogue or digital).

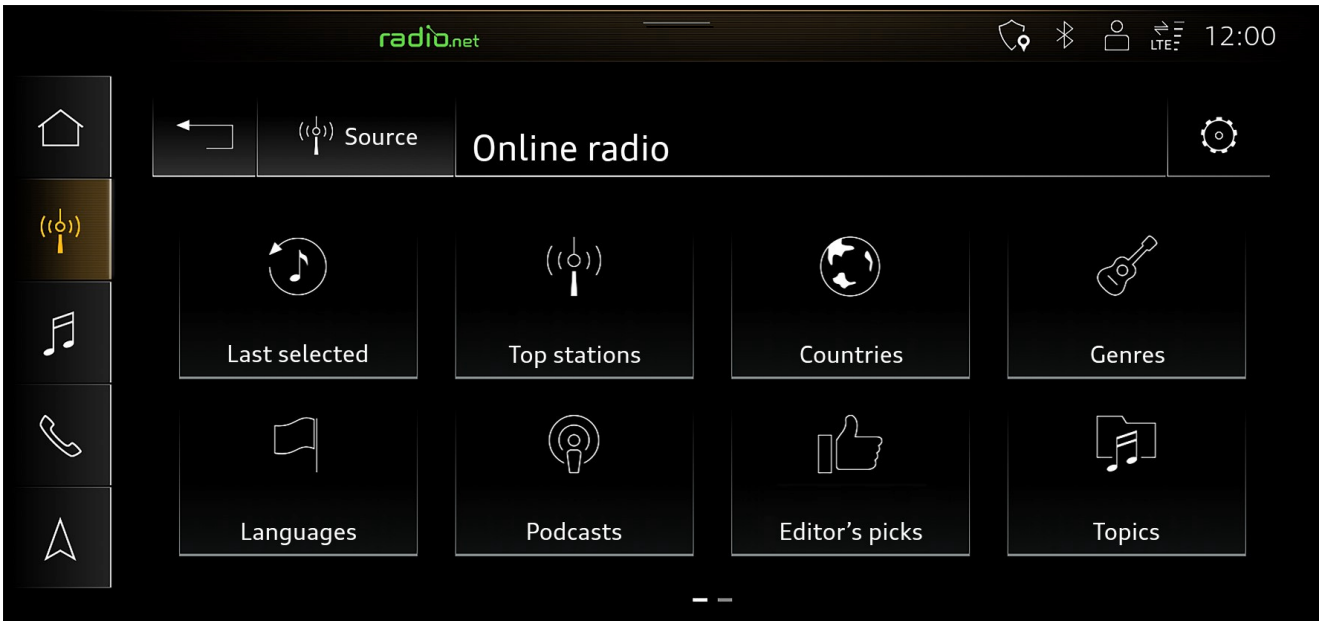


679_028

Audi connect online radio

Audi connect online radio is an Audi connect infotainment service that can be used to receive Internet radio stations directly on the MMI. Users can select from a wide range of stations suggested by the MMI, and can search for stations directly by name or category.

Online radio menu category



679_070

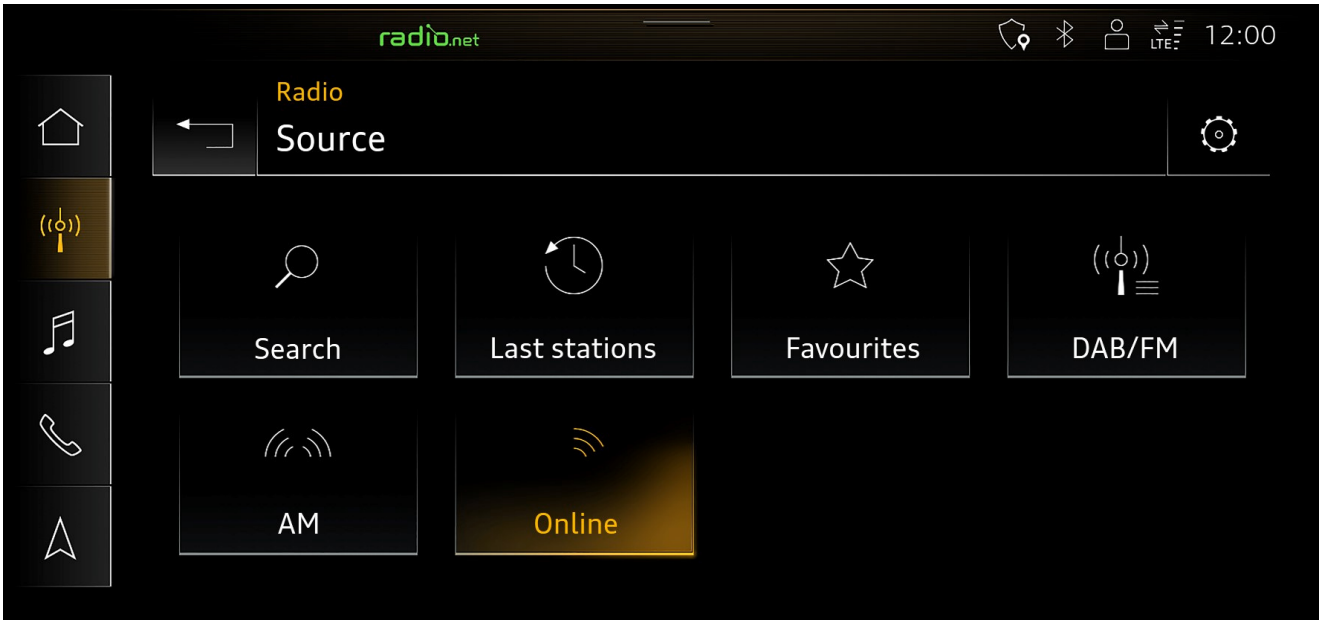
Obviously, the online radio function can offer more stations than are available via DAB or FM. However, Audi connect online radio serves primarily as a range extender for the DAB or FM station currently selected. The function behind this is known as hybrid radio.

The amount of data used to receive online radio stations varies depending on the station. The data volume is not covered by the Audi connect licence, however; to receive these stations, the customer needs an Audi connect data plan.

When online radio stations are available, the data are transmitted via emergency call module control unit and communication unit J949. As of the MIB3 generation, the user can have the system show cover art for online radio stations by tapping on the station icon.

Note
The selection of online radio stations is made available by a provider and depends on the country.

Radio source menu



679_029

Audi connect hybrid radio

The hybrid radio function makes it possible to receive some radio stations continuously, for example when travelling across the whole of Europe. In conjunction with Audi connect online radio, the hybrid radio function offers the option to receive stations via DAB and FM as well as over the Internet.

Provided that the station is available using all reception types, the following prioritisation applies:

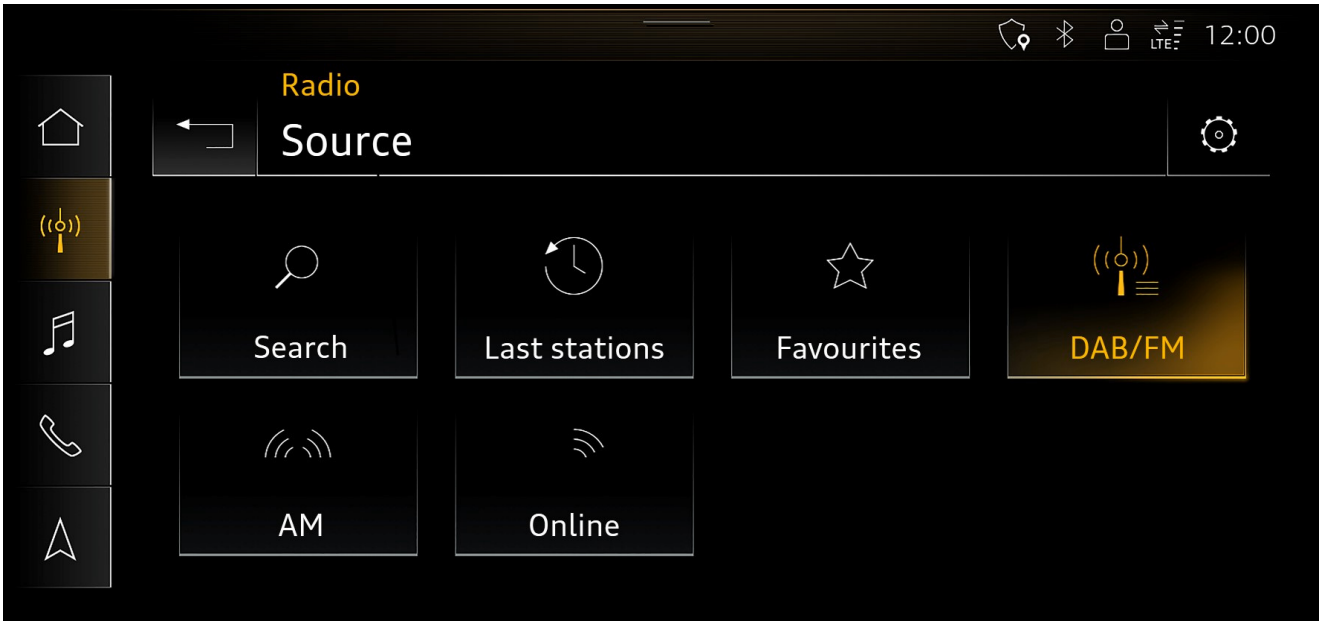
- First, reception via DAB
- Then FM
- And finally via online radio.

The unique feature here is the “seamless linking” introduced by Audi for the volume and equaliser settings across all reception types. The system works to equalise the sound output so that there are no audible interruptions or skips. It also attempts to keep the output volume of the individual sources at the same level so that the user does not notice any awkward changes in volume.

To avoid any unnecessary costs to the customer, the hybrid radio function switches immediately to DAB or FM reception when these are available.

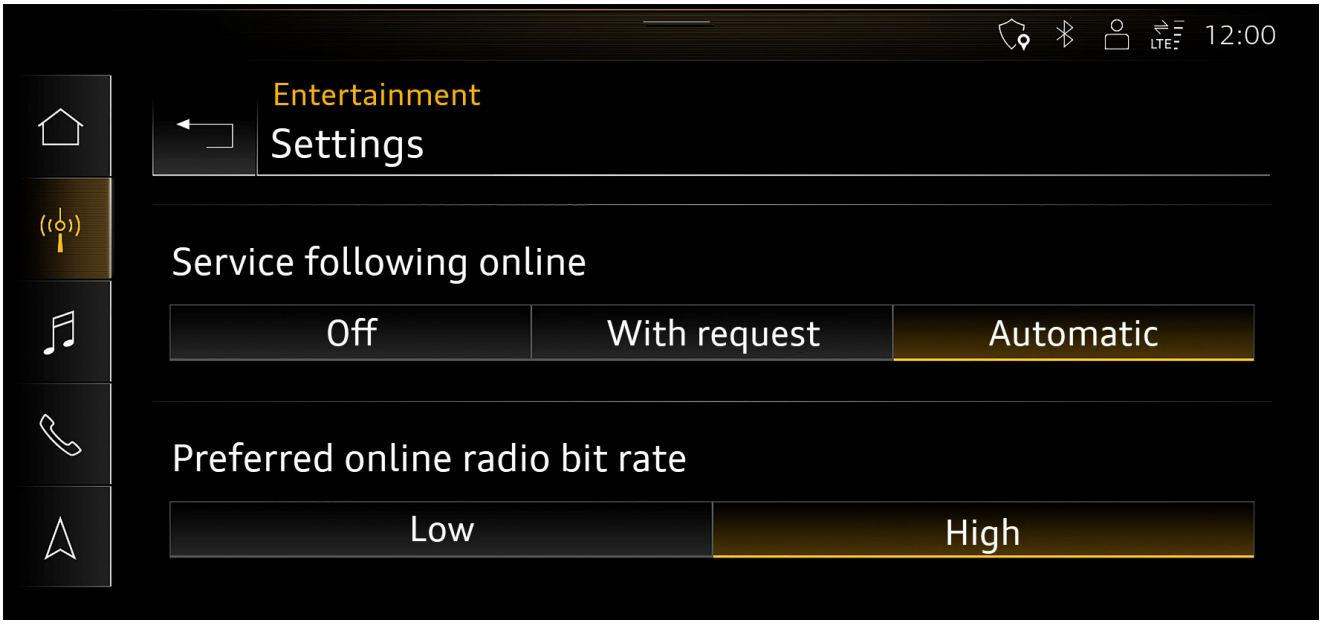
Audi connect hybrid radio is only activated via the “DAB/FM” source option (see Figure 679_023) if the corresponding setting is activated (see Figure 679_030).

Radio source menu



679_023

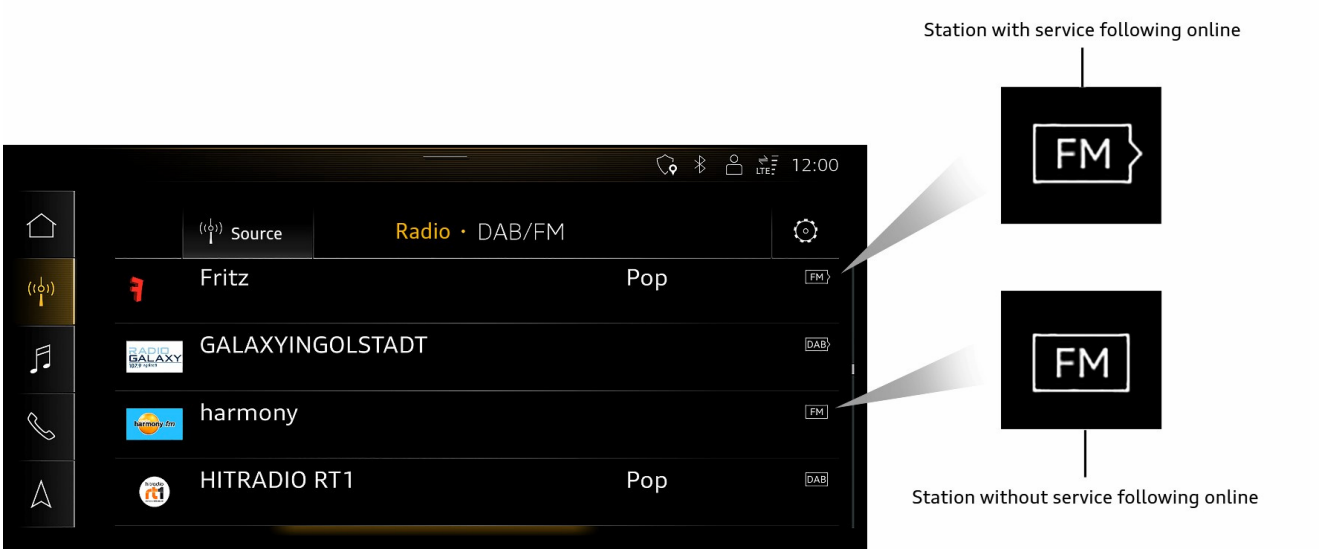
Radio settings menu



679_030

Radio stations for which an online service following function is available can be identified by a small indicator on the FM or DAB icon.

Icon with indicator for service following online



679_031

Radio station lists

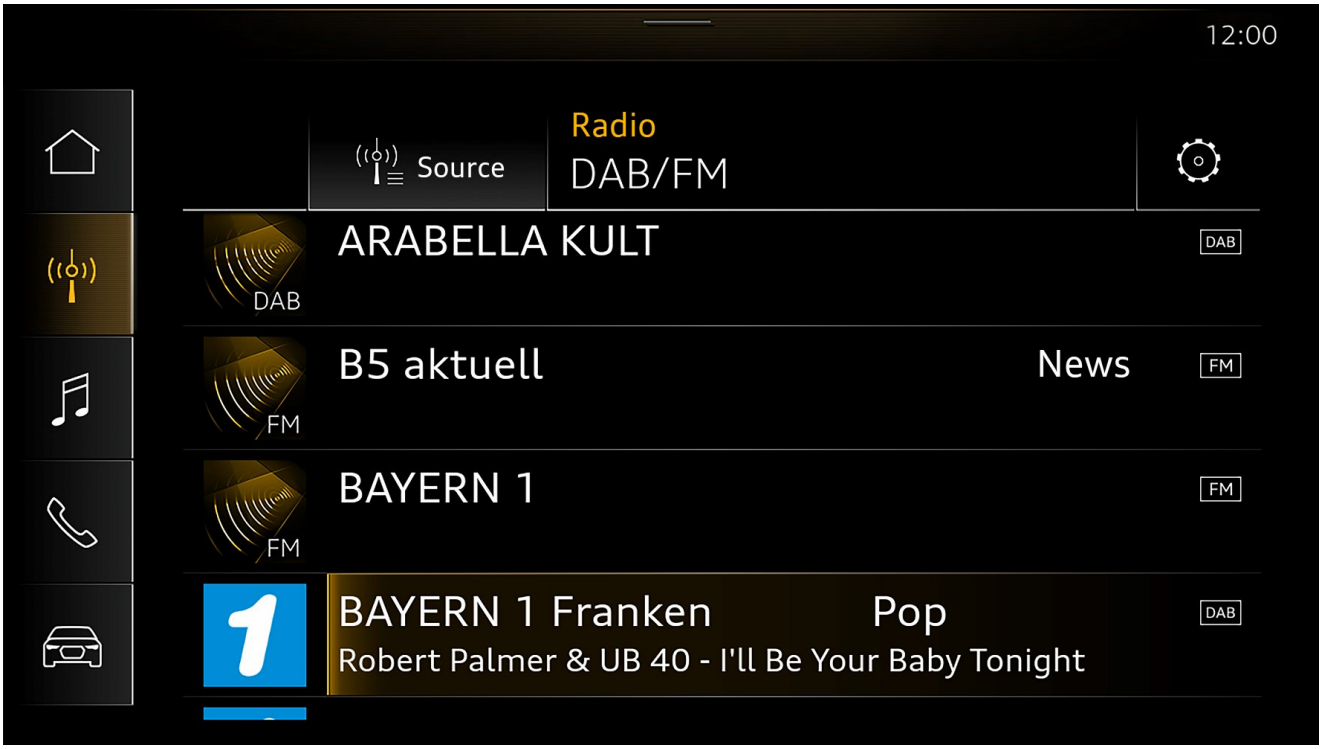
The radio station lists are automatically updated with the radio tuner of MIB3 versions from MIB3 Basic onwards.

The station list is updated as follows:

- Always for FM stations
- Always for DAB stations, but may be slower in FM reception mode
- For AM stations only when the radio is set to AM reception mode

FM radio and DAB radio support radio text (dynamic label) and radio text plus (dynamic label plus) as metadata. This allows programme-related information (e.g. artist, title, current programme) to be displayed if this is broadcasted by the radio station.

Radio menu on MIB3 Basic



679_022

Acoustic fingerprint

Every song and every voice has its own set of acoustic characteristics. The unique “digital imprint” that this creates is known as an acoustic fingerprint.

Provided that mobile data are available, this information is evaluated for every song that plays and for the current presenter when the radio is in use. When a song is recognised, the corresponding album cover is displayed. When the presenter’s voice is recognised, the station logo may be shown.

If several songs are played in a row without commentary in between, the station logo will appear initially at the beginning of a new song until the song is recognised and the album cover can be shown.

Sound

With the third generation of the modular infotainment matrix, a new concept has been introduced for the audio transmission between the control units and for the loudspeaker actuation. This is due to the fact that new versions of digital sound package control unit J525 are used. One significant change is how the components are connected to one another: in the MIB3, the audio signal are no longer transmitted via the MOST bus, but rather via the A2B (Automotive Audio Bus).

If the vehicle is equipped with a Bang & Olufsen Sound System, the loudspeakers are actuated using two different control units. Some of the loudspeakers are actuated by digital sound package control unit J525, and the rest are actuated by control unit 1 for information electronics J794.

J794 is now the master for the sound system, while this role was carried out by J525 on earlier infotainment versions with Bang & Olufsen Sound Systems. The following are now always among the functions and characteristics of J794:

- Up to eight channels for loudspeaker input
- Up to 180 W output
- Sound processor
- Audio signal processing
- Volume control
- Sound adjustment (VNC and ANC)
- Master for J525

Automotive Audio Bus

The Automotive Audio Bus, or A2B, is a bus system designed specifically for automotive applications to transmit audio signals. It has a serial system layout, meaning that several slave control units can be connected in series to a master control unit. The maximum bit rate is 50 Mbit/s. The signals on the A2B are transmitted along a twisted-pair cable. The same wiring is used here as for FlexRay.

According to the definition, the following can be transmitted via A2B in addition to audio signals:

- Data such as control commands, self-diagnosis or terminal status

- Voltage supply; not used by Audi for voltage supply, as the small amount of power can only be used for devices such as microphones. However, this phantom voltage is used to switch J525 on and off.
- In addition to the audio signal, all other data exchanged between control unit 1 for information electronics J794 and digital sound package control unit J525 are transmitted via A2B.
- On Audi vehicles, the following control units may currently be equipped with A2B:

  - Control unit 1 for information electronics J794
  - Emergency call module control unit and communication unit J949 (currently only the connectivity box version)
  - Digital sound package control unit J525

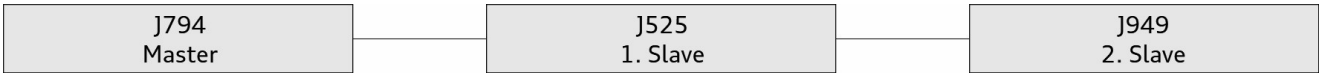
Control unit 1 for information electronics J794 is the master control unit, while J525 and J949 are connected as slaves.

Schematic diagram of A2B network



679_032

Schematic diagram of A2B network on B&O Premium Sound System and B&O Advanced Sound System



679_033

Digital sound package control unit J525

At the time of writing, two different sound amplifiers (digital sound package control unit J525) are used as a rule on Audi vehicles with MIB3. These are for:

- Bang & Olufsen Premium Sound System with 3D sound
- Bang & Olufsen Advanced Sound System with 3D sound (8RF)

A general description of the allocation of the loudspeakers of the two systems and the corresponding J525 is given below.

In addition, some models and engine versions are once again equipped with active noise cancellation (ANC)[15], which likewise requires a different sound amplifier. The difference is that, in the case of ANC, four microphones are connected additionally to digital sound package control unit J525. Their signals are digitalised by J525 and transmitted via A2B to control unit 1 for information electronics J794 for further processing.

Reference
For more information on ANC, refer to SSP 607, "Audi 4.0l V8 TFSI engine with biturbo charging".

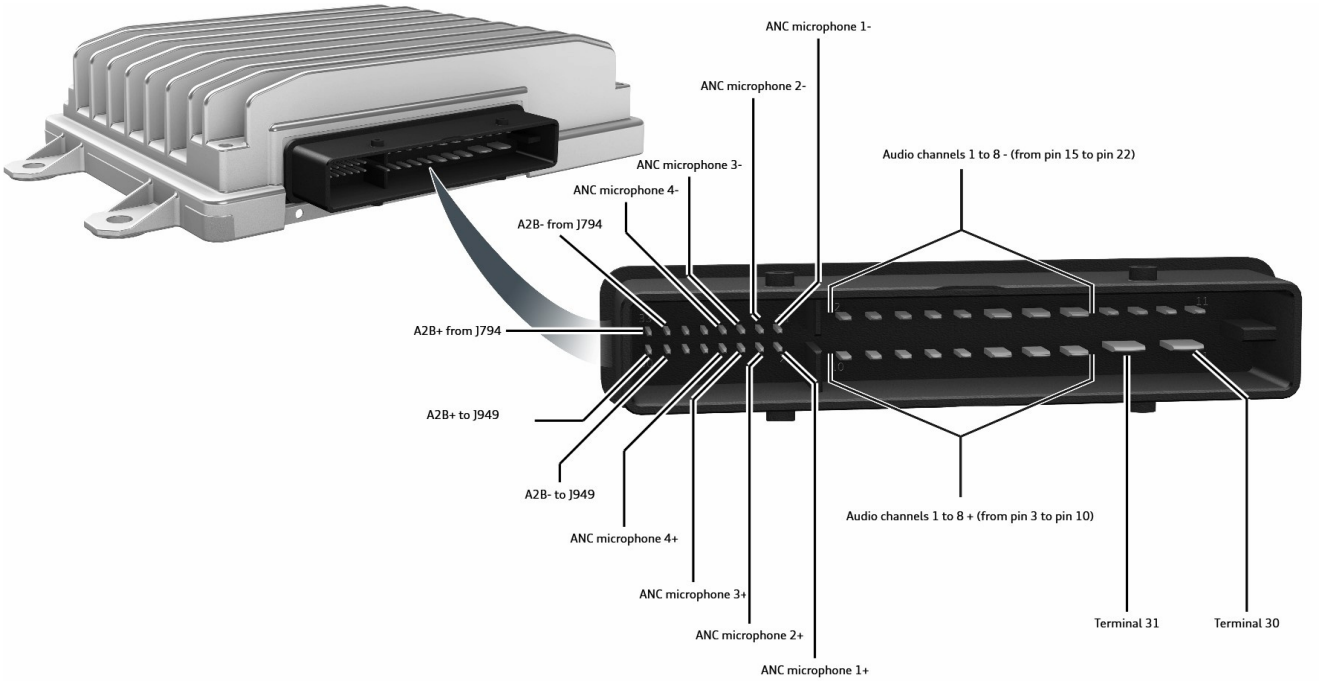
J525 for the Bang & Olufsen Premium Sound System with 3D sound

Sound amplifier J525 on the Bang & Olufsen Premium Sound System uses up to eight channels, depending on the vehicle model. Sound amplifier J525 has a maximum output of 560 W; the actual total output and the number of loudspeakers depends on the configuration in the vehicle.

Specifications for total output and loudspeakers for vehicles with MIB3 from the current sales programme:

- Audi A3: 680 W with 15 loudspeakers
- Audi A4: 755 W with 19 loudspeakers
- Audi A6: 705 W with 16 loudspeakers
- Audi A8: 730 W with 17 loudspeakers

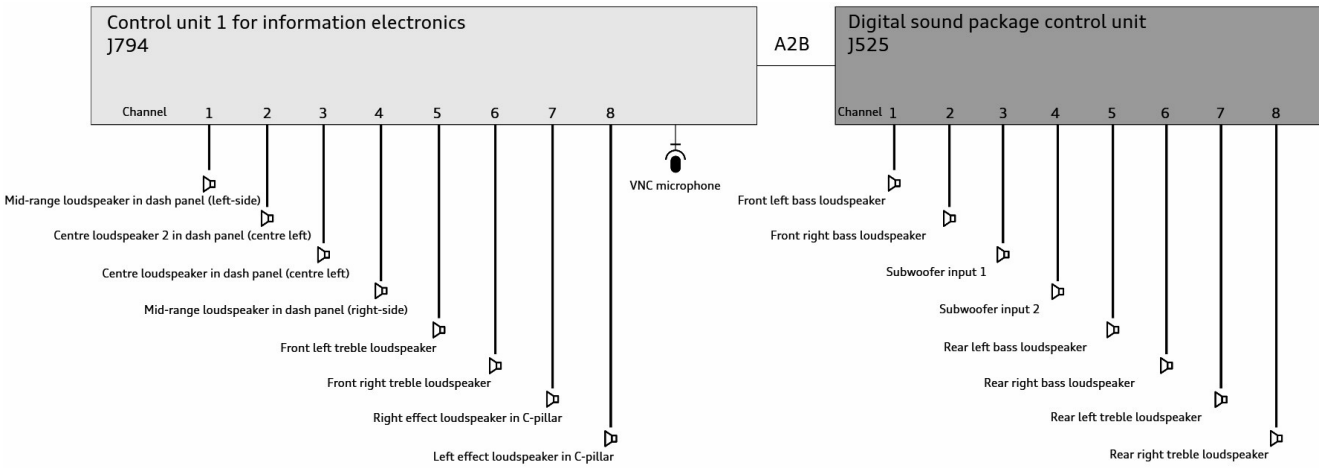
[15] Active noise cancellation is used on vehicles with large engines equipped with cylinder shut-off. As the sound in the vehicle interior changes due to the cylinder shut-off feature, the system captures the sound with four microphones and compensates for changes via the vehicle loudspeakers.



679_034

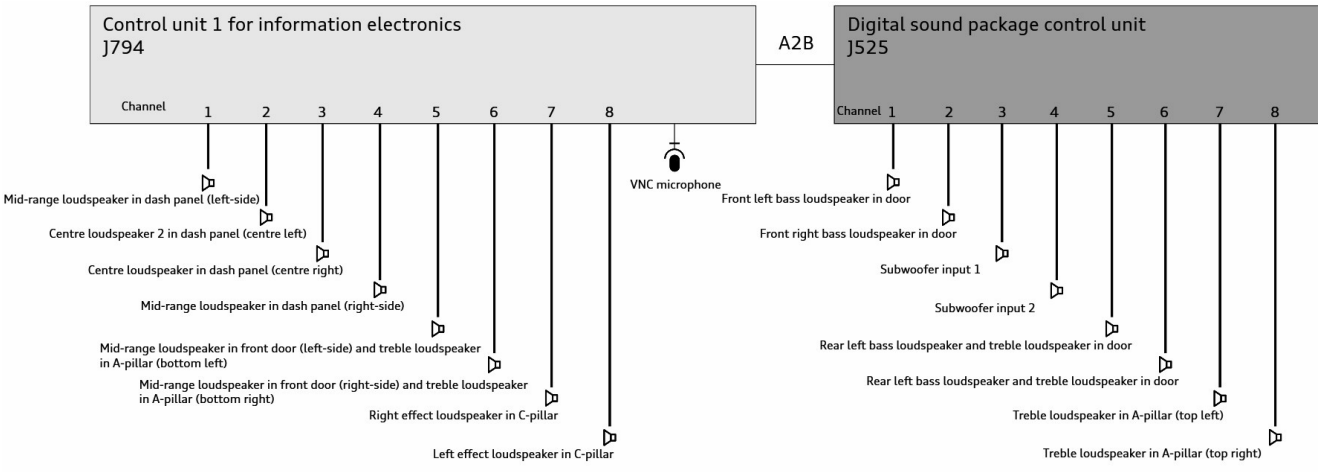
Digital sound package control unit J525 shares the task of actuating the loudspeakers with control unit 1 for information electronics J794. A schematic overview of how the loudspeakers are divided up is shown below using an Audi A3 Sportback (type 8Y) and an Audi A4 PU (type 8W) as an example.

Loudspeaker distribution in an Audi A3 Sportback (type 8Y)



679_035

Loudspeaker distribution in an Audi A4 PU (type 8W)



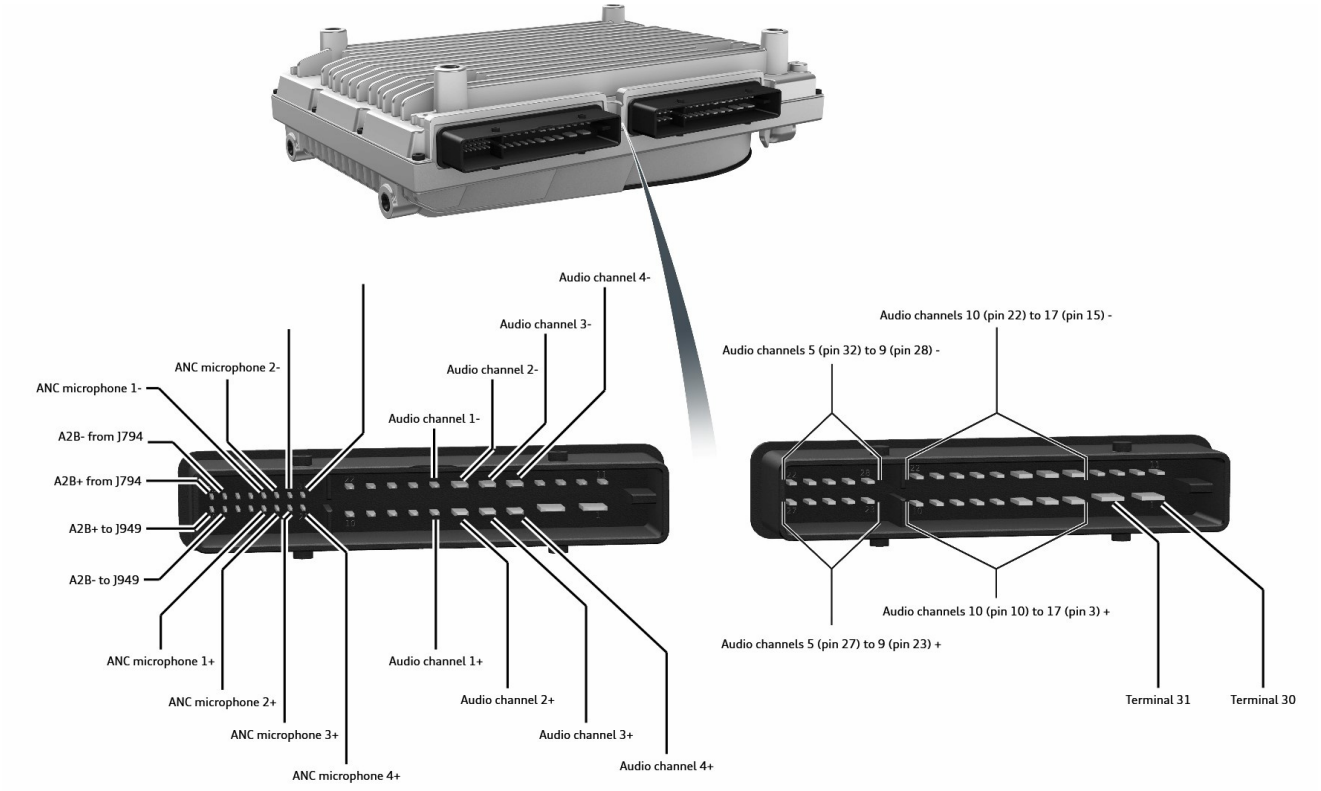
679_037

J525 for the Bang & Olufsen Advanced Sound System with 3D sound

Sound amplifier J525 on the Bang & Olufsen Advanced Sound System uses up to 17 channels, depending on the vehicle model. J525 itself has a maximum output of 1700 W; the actual total output and the number of loudspeakers depends on the configuration in the vehicle.

Specifications for total output and loudspeakers for vehicles with MIB3 from the current sales programme:

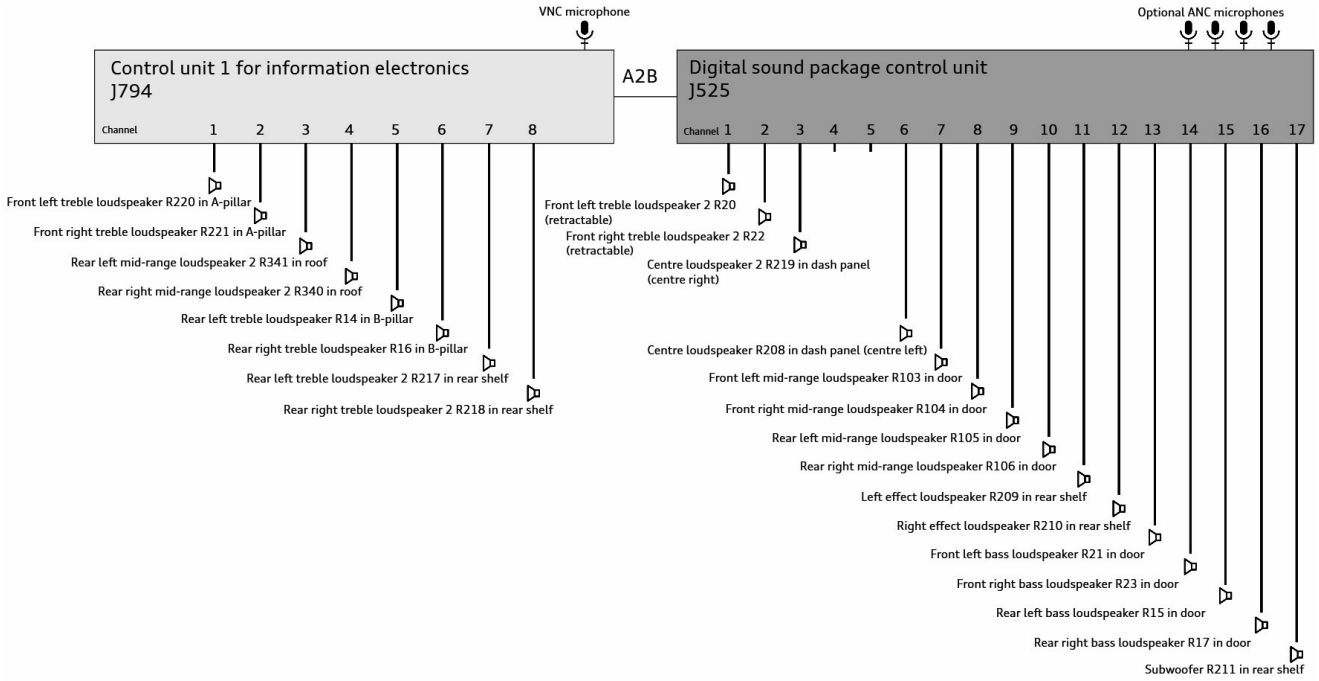
- Audi A6: 1820 W with 19 loudspeakers
- Audi A8, Audi Q7 and Audi Q8: 1920 W with 23 loudspeakers



679_072

Digital sound package control unit J525 shares the task of actuating the loudspeakers with control unit 1 for information electronics J794. A schematic overview of how the loudspeakers are divided up is shown below using an Audi A8 (type 4N) with MIB3 as an example.

Loudspeaker distribution in an Audi A8 (type 4N), model year 2021



679_073

MMI display

The positive experiences gathered from the implementation of a touch display on the MIB2+ have given Audi the confirmation needed to continue using this user-friendly, intuitive solution for the MIB3.

A “multi-touch” display is also fitted in combination with the MIB3, making it possible to use multiple fingers at the same time for certain control gestures (e.g. for the zoom function on the navigation system). For easier, more convenient operation, the MMI display includes an acoustic feedback feature that activates when the user removes their finger from the display surface. This indicates to the user that the command has been initiated. The volume of the acoustic feedback can be adjusted as required. Even if the acoustic feedback is switched off, the colour of the button that the user has just touched changes briefly so that the user still receives confirmation of their command.

C-series and D-series models are fitted with two touch displays that, in addition to acoustic feedback, feature a haptic feedback function that can be adjusted as necessary. There are three levels available for this.

There are pressure sensors behind the touch-sensitive display surface. They enable the MMI to be used more safely as they allow the user to move their finger over the display without making undesired inputs. The system only reacts to a specific amount of pressure or more on the display; this is detected by the pressure sensors.

The high-resolution MMI display delivers a very sharp picture. The maximum brightness is 900 candela; if desired, the brightness can be adjusted separately from the brightness of the instrument cluster.

Different MMI displays are fitted depending on the model and the MIB3 version.

8.8" MMI display

An 8.8" MMI display may be fitted on various models, either as a single display or (on C-series models and above) in combination with an 8.6" display.

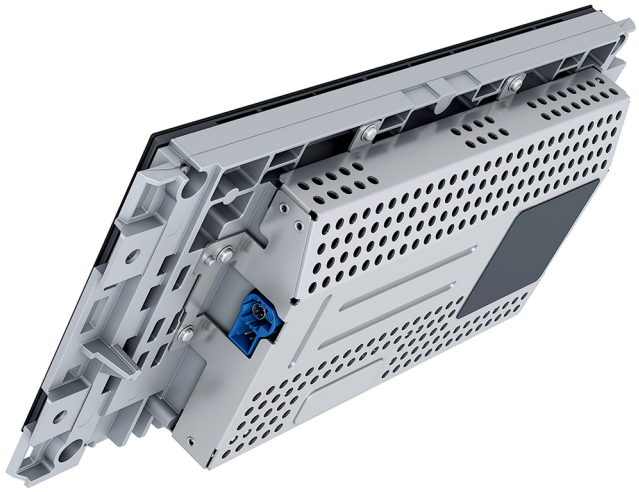
Although the dimensions of these two 8.8" displays are the same, they are two different devices.

8.8" MMI display J685 from the Audi A1 (type GB)



679_036

8.8" MMI display J685 from the Audi A1 (type GB)



679_037

Features of the MMI display (display unit for front information display and operating unit control unit J685):

- 8.8"
- 1280 x 720 pixels
- Active area: approx. 194 x 109 mm
- Acoustic feedback
- Haptic feedback incl. pressure recognition (C-series and above)
- Multi-touch

The 8.8" MMI display is easily recognisable by the 6 tiles on the main menu.

The underlying MIB3 version depends on whether or not this is the only display.

- If it is the only display, the underlying MIB3 version is the Basic version.
- If the display is fitted in combination with a second display (lower touch display J1060, C-series models and above), the underlying MIB3 version may be either the Basic or the High version.

10.1" MMI display

A 10.1" MMI display may be fitted on various models, either as a single display or (on C-series models and above) in combination with an 8.6" display.

Although the dimensions of these 10.1" displays are the same, they are different devices.

10.1" MMI display J685 from the Audi A4 PU (type 8W)



679_040

10.1" MMI display J685 from the Audi A4 PU (type 8W)



679_041

Features of the MMI display (display unit for front information display and operating unit control unit J685):

- 10.1"
- 1540 x 720 pixels
- Active area: approx. 233 x 109 mm
- Acoustic feedback
- Haptic feedback incl. pressure recognition (C-series and above)

› Multi-touch

The 10.1" display is easily recognisable by the 8 tiles on the main menu.

› If it is the only display, the underlying MIB3 version is the High version.
› If the display is fitted in combination with a second display (lower touch display J1060, C-series models and above), the underlying MIB3 version is the Premium version.

8.6" lower touch display

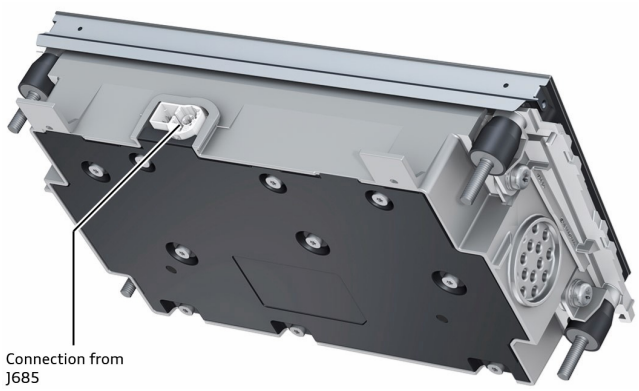
Two MMI displays are fitted on C-series models and above. The lower display (display unit for front information display and operating unit control unit J1060) includes the controls for the air conditioner settings.

8.6" lower touch display



666_014

8.6" lower touch display



666_043

Features of the MMI display (display unit for front information display and operating unit control unit J1060):

› 8.6"
› 1280 x 660 pixels
› Active area: approx. 194 x 100 mm
› Acoustic and haptic feedback, incl. pressure recognition
› Multi-touch

Depending on the type of upper display (MMI display J685), different MIB3 versions are possible:

› If an 8.8" MMI display is fitted, the underlying MIB3 version is either the Basic or the High version.
› If a 10.1" MMI display is fitted, the underlying MIB3 version is the Premium version.

Networking

The MMI display is controlled by control unit 1 for information electronics J794 and is connected to it via the CAN bus for control unit 1 for information electronics. All fault memory entries and adjustments are stored/made in J794. The picture is transmitted by J794 via LVDS. If there are two displays fitted in the vehicle, the infotainment control unit J794 transmits the shared picture (known as a super frame) to the MMI display J685 via two LVDS wire pairs. J685 then sends the part of the image for the lower touch display J1060 to that display via two LVDS wiring pairs. To ensure that they are not mixed up, the two LVDS connectors on J685 are of different colours and have different mechanical codings.

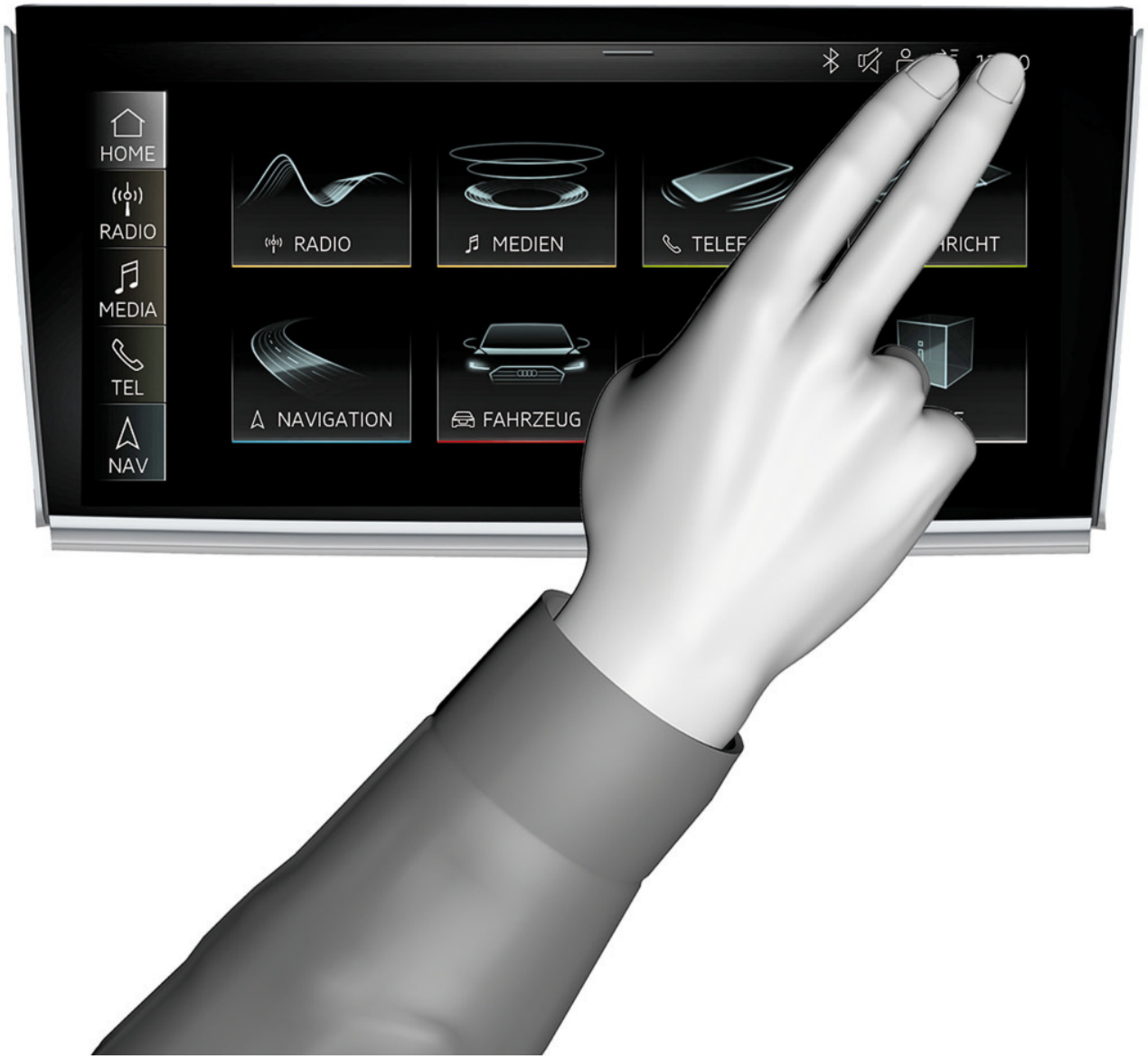
Other features

The MMI display has hardened shatter-proof glass and a special coating that allows fingerprints to be removed more easily. There is a freeze function which allows the user to clean the surface of the display without making changes to the system.

Engineering menu

To access the engineering menu, touch the MMI display J685 at the top right with two fingers for at least three seconds.

Touch location for engineering menu



666_045

Diagnosis

The MMI displays are connected to infotainment control unit J794 via CAN bus and are diagnosed via diagnostic address 005F.

Reference
For more information on the MMI displays, refer to 666, "Audi A8 (type 4N) Infotainment and Audi connect".

Operating unit

The implementation of the MMI touch display across all models has greatly reduced the number of controls in the centre console; however, driver side volume regulator E67 is still fitted in all models. This controls the following functions:

- Next/previous track, radio station, etc.
- Activating/deactivating the mute function
- Switching the MMI on/off

System reset

The MMI can be reset by holding down driver side volume regulator E67 until the home screen is shown on the MMI display (approx. 10 s).

Driver side volume regulator E67 in the Audi A8 (type 4N)



679_050

For the four-way control on the Audi A3 (type 8Y), this operation is carried out on the upper area (on/off) of the control element.

Driver side volume regulator E67 in the Audi A3 (type 8Y)



679_051

Diagnosis

Driver side volume regulator E67 is connected via CAN bus to infotainment control unit J794 and is diagnosed via diagnosis address 005F.

DVD player R7

The optional DVD player is, in functional terms, the same drive as was used in MIB generation 2 in control unit 1 for information electronics J794. The drive is inserted in its own ½ DIN housing and fitted in the glove box.

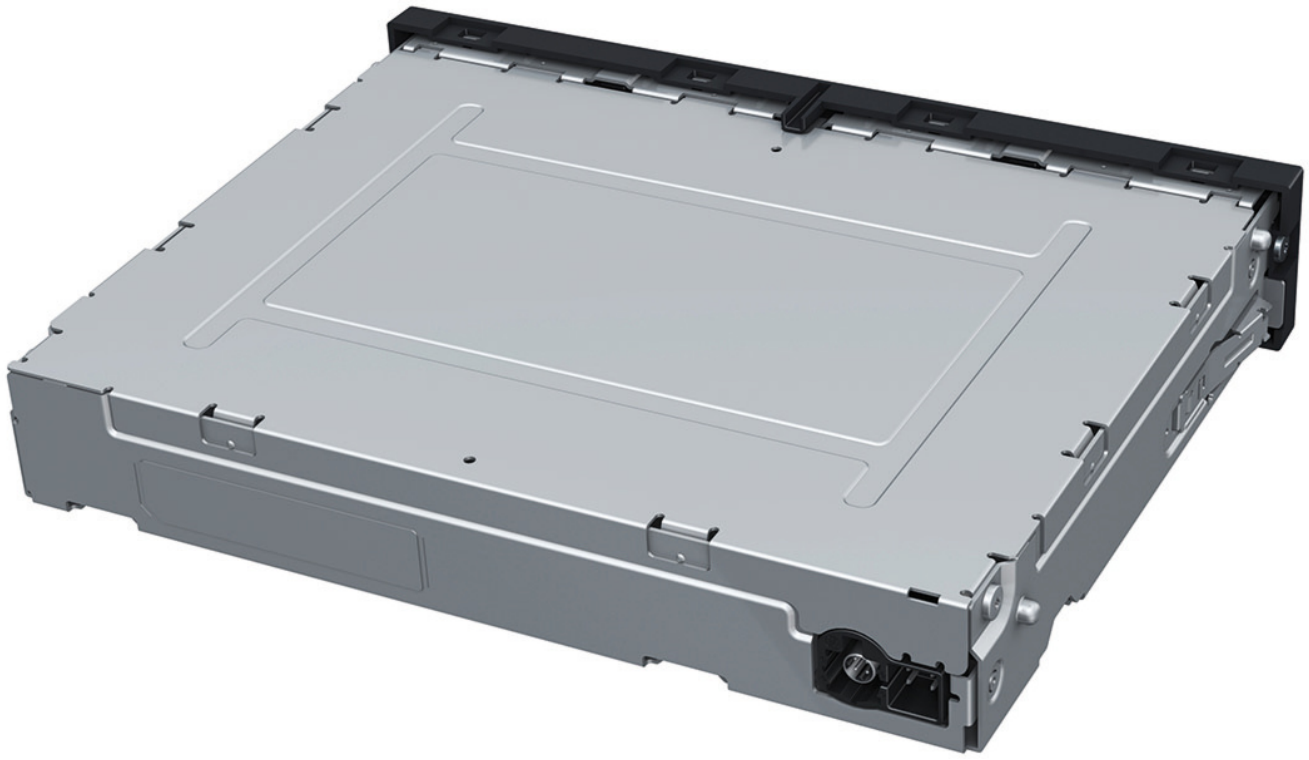
The DVD player is connected to control unit 1 for information electronics J794 via a USB interface. The DVD player does not have its own address word, as it is a sub-control unit of J794. The DVD player is therefore diagnosed via address word 005F.

DVD player R7



666_018

Rear face of DVD player R7



666_019

Supported media and file formats

The DVD player and the USB sockets support the media and file formats listed in the table.

Audio/video files	
Supported media	**DVD drive:** Audio CDs (up to 80 min.) with CD text (artist, album, track); CD-ROMs with a capacity of up to 700 MB; DVD±R/RW; video DVDs; audio DVDs with video DVD player compatible audio track **Audi music interface:** mobile devices (e.g. iPhone, MTP player, USB mass storage devices with “USB Device Subclass 1 and 6” and USB 2.0 standard: USB sticks, USB MP3 players (plug-and-play capable), external USB flash storage devices and USB hard drives)
File system	**USB mass storage device:** exFAT, FAT, FAT32, NTFS **USB mass storage partitions (primary/logical):** two per USB connection **CD/DVD file systems:** ISO9660, Joliet, UDF
Metadata	**Album covers:** GIF, JPG, PNG with max. 800 x 800 px. If available, the album cover is shown from the current medium or from Gracenote.
Playlists	.M3U; .PLS; .WPL; .M3U8; .ASX
Number of files	**DVD drive:** max. 1000 files per medium **USB mass storage device:** max. 50000 files per medium; max. 1000 files per playlist/folder

Audio files		
Format	**File extension**	**Properties**
MPEG-1/-2 Layer-3	.mp3	Up to max. 320 kbit/s and 48 kHz sampling frequency
Windows Media Audio 9/10	.wma	
MPEG-2/-4	.m4a; .m4b; aac	
Opus	.opus; .ogg; .oga	
FLAC	.flac	48 kHz sampling frequency
ALAC	.m4a	
Monkey's Audio	.ape	

Video files		
Format	**File extension**	**Properties**
MPEG-1/-2	.mpg; .mpeg	Up to max. 15 Mbit/s and 1920 x 1080 px at max. 30 fps
MPEG4 AVC (H.264)	.mp4; m4v; .mov; .avi	
Windows Media Video 9	.wmv; .asf	
MPEG-H (H.265/HEVC)	.mp4; .mov	
VP8/VP9	.webm	
Flash video	.flv; .f4v	

TV tuner R78

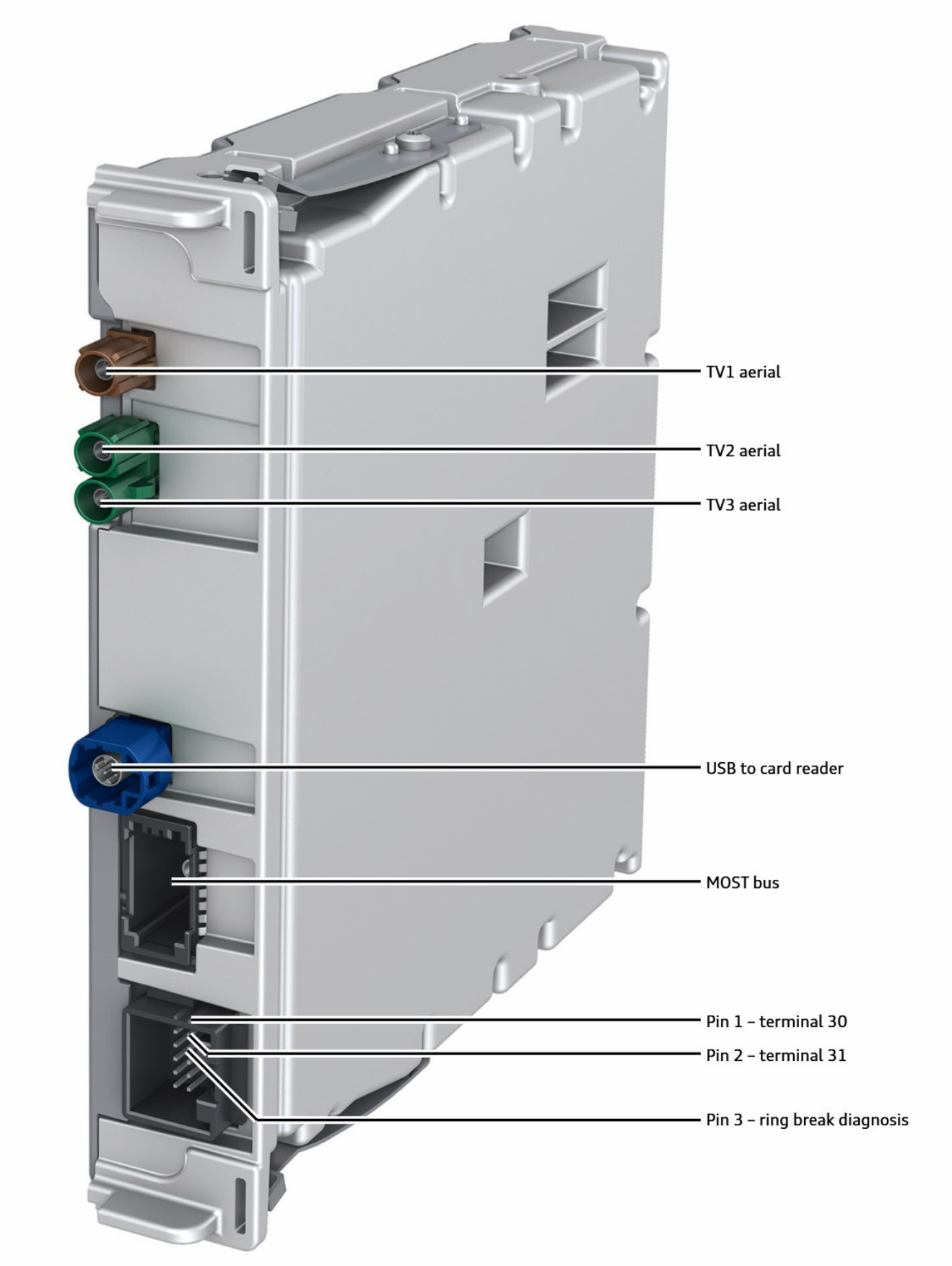
The TV tuner is designed to receive the digital TV broadcast standards DVB-T and DVB-T2. It supports the following video codecs:

- MPEG-2
- MPEG-4
- HEVC (MPEG-5)

The TV tuner is also able to decrypt pay TV channels and, depending on the country, may be equipped with a TV card reader for this purpose.

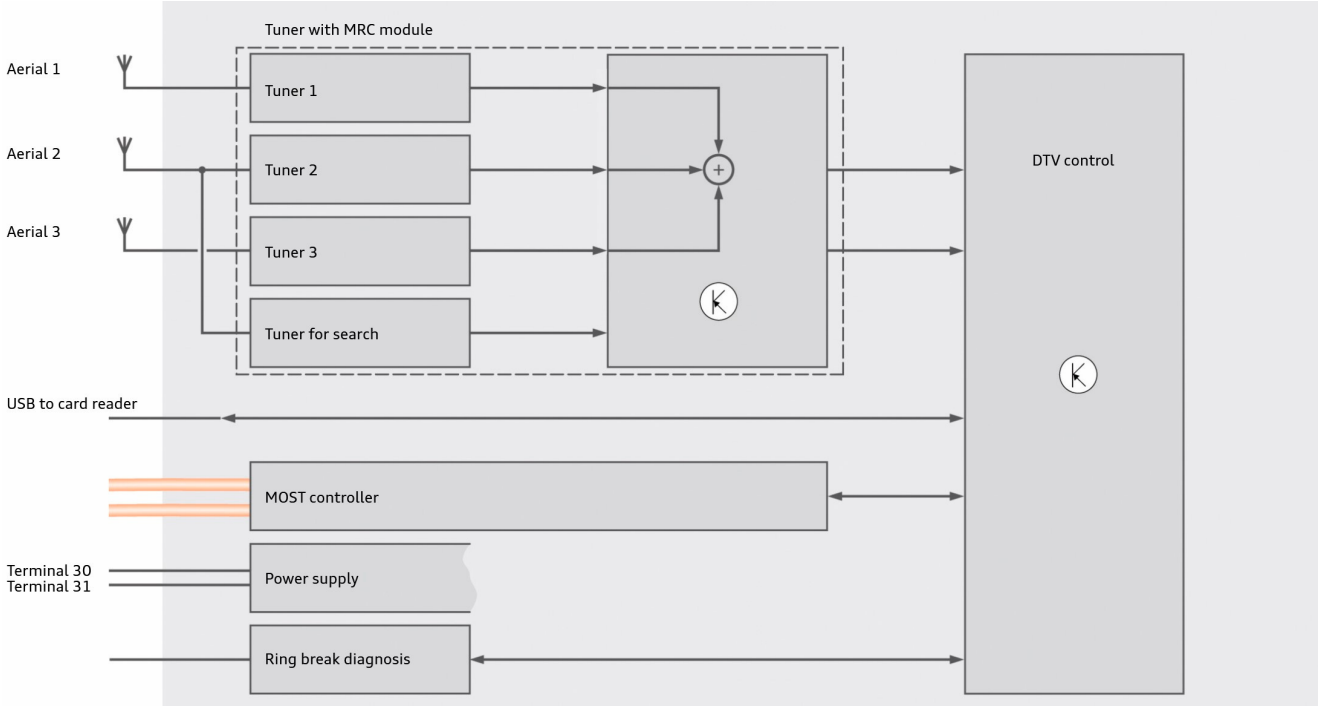
The TV tuner is fitted with three reception modules, which receive the set channel in parallel. Combining the three signals optimises the reception for the best result. A fourth reception module is solely responsible for the channel search function. The channel list is always updated automatically via the fourth module. TV reception module 2 and the channel search reception module receive their signals via the aerial input TV2.

All information from TV tuner R78 (including video and audio data) is exchanged with control unit 1 for information electronics J794 via the MOST bus. The TV tuner is fitted on the right-hand side of the luggage compartment.


TV1 aerial
TV2 aerial
TV3 aerial
USB to card reader
MOST bus
Pin 1 – terminal 30
Pin 2 – terminal 31
Pin 3 – ring break diagnosis

666_056

Schematic diagram of TV tuner R78

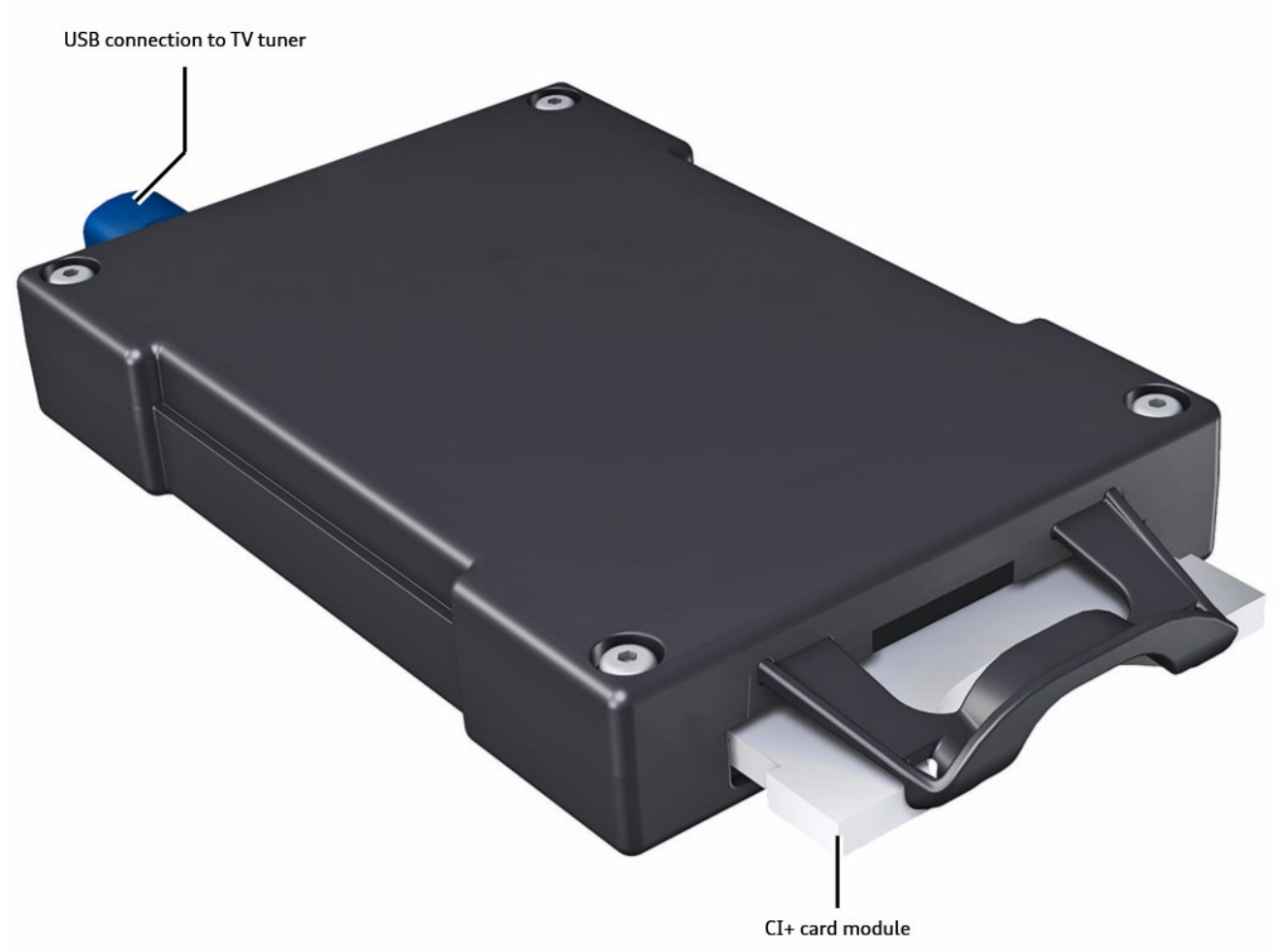


666_096

TV card reader R204 (certain countries)

The card reader may be fitted, depending on the country. It is used, for example, in Germany to decrypt pay HD channels. The card reader is designed for commercially available CI+ modules in which a smartcard from the relevant provider can be inserted.

In the Audi A8 (type 4N) for example, the card reader is fitted on the left side in the luggage compartment and can be accessed beneath a flap. It is connected to the TV tuner via USB.



666_057

CI+ module

The CI+ module receives the encrypted channel signals from the TV tuner via the TV card reader. The CI+ module decrypts the signals and sends them to the TV card reader so they can be forwarded to the TV tuner. Depending on the country, it may also be possible to insert a smartcard in the CI+ module. In Germany, for example, this is not currently necessary as the module already has all the necessary decryption codecs.

CI+ module are commercially available components which customers can purchase from specialist retailers in their countries. They are usually designed for use in the home. To avoid damage to the CI+ module, the card reader is switched off at temperatures of under 0 °C and over 50 °C. This means that pay TV channels cannot be played at these temperatures.

Diagnosis

TV tuner R78 has the address word 0057.

TV card reader R204 is a slave control unit of the TV tuner; its diagnosis is therefore also performed via address word 0057. For example, the connection status and the temperature of the card reader can be checked here.

Emergency call module control unit and communication unit J949

Introduction

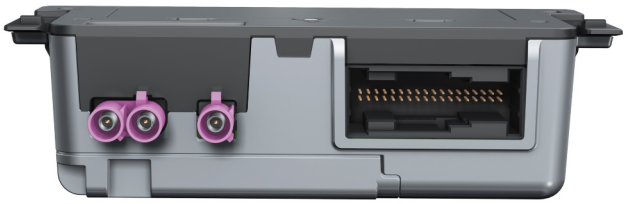
Depending on the vehicle platform, the master list term “emergency call module control unit and communication unit J949” refers to a control unit with different characteristics and with different in-house designations. On Audi models constructed on the modular longitudinal matrix platform, this control unit is referred to in-house as the “connectivity box”. On the other hand, on Audi models constructed on the modular transverse matrix platform, this control unit is referred to as the “OCU” (online connectivity unit).

J949 as connectivity box



679_074

J949 as OCU



680_098

Both the connectivity box and the OCU have gone through various development levels over the years. The information below describes the development level that is fitted in combination with the MIB3 on MLB (modular longitudinal matrix) and MQB (modular transverse matrix) vehicles.

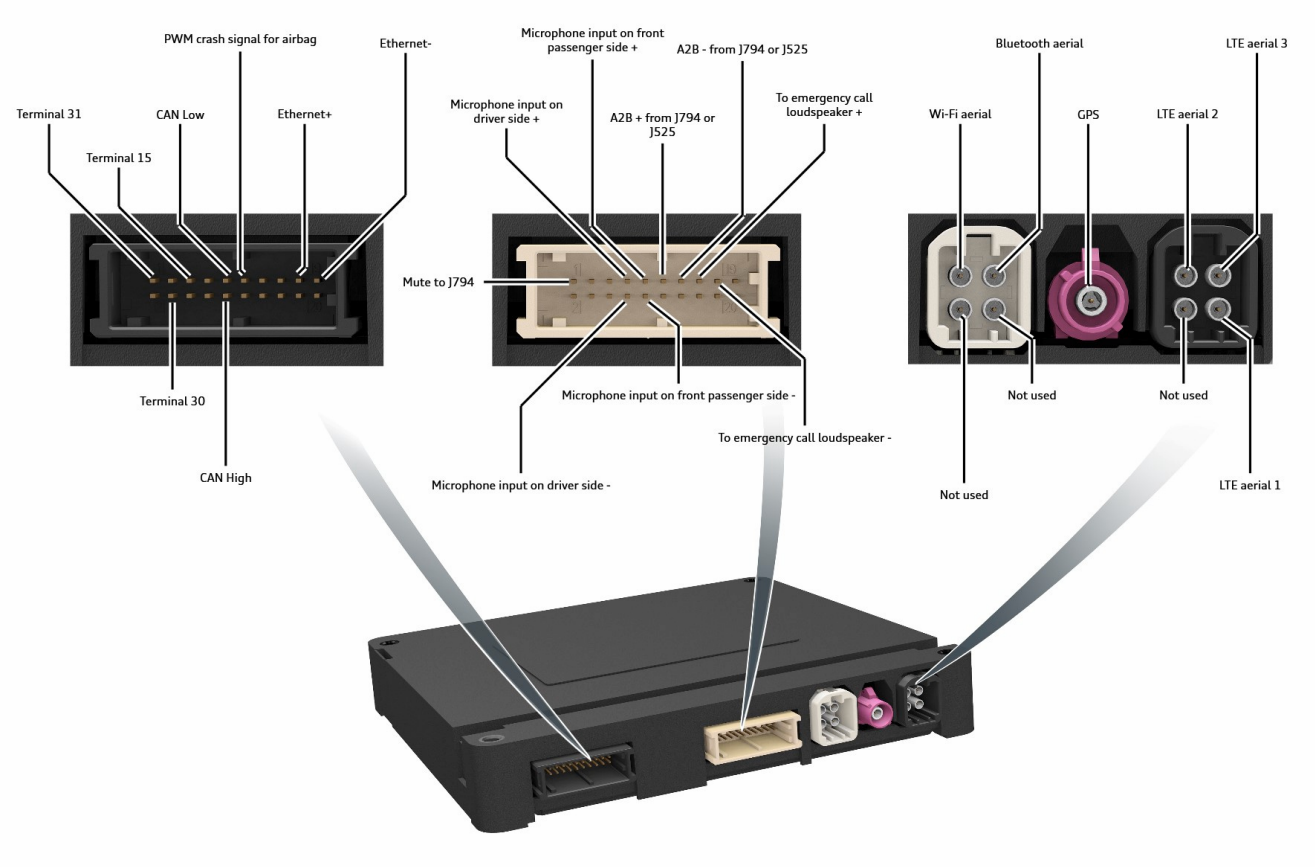
J949 in the connectivity box version

The connectivity box, familiar from the Audi A7 (type 4K) in the Low version (see SSP 669), was introduced worldwide for the first time in the High version on the product upgrade of the Audi A4 (type 8W).

The connectivity box High has the following special functions and features:

- LTE-capable mobile network module
- Three LTE aerial connections
- One GPS module for location services
- One GPS aerial connection
- One Bluetooth aerial connection
- One Wi-Fi aerial connection
- One integrated backup aerial
- Two microphone inputs
- One input for emergency call loudspeaker
- One emergency battery

Connections on J949 in the connectivity box version



679_059

An explanation of some of the components is provided below.

Data module

The integrated LTE-capable data module is fitted with an embedded SIM card that is used for all data traffic (including Audi connect). Different providers may be used depending on the market. The maximum bit rate is 1 Gbit/s. The reception status of this one mobile network module is shown on the MMI display.

Reception status



679_060

Three external LTE aerials are connected to the data module; the system always evaluates the signals from all the aerials (including the backup aerial). All the signals are then merged into one combined signal to achieve the best possible signal. The roof aerial is always the main aerial that is also used for transmitting data.

The mobile network signal that is received by the connectivity box is transmitted via Ethernet to the connected gateway (J533)/the infotainment control unit (J794). These two control units provide the vehicle-specific services and infotainment services, respectively. The connectivity box carries out three services and the corresponding telephone connection directly:

- EU eCall
- Audi emergency call
- Audi online roadside assistance

With the introduction of the third-generation modular infotainment matrix, there is no longer the option to insert a SIM card, and the range of services already covered by the connect licence can therefore only be extended by the purchase of data plans. This way, customers can keep an eye on their data usage, no longer have to worry about inserting and removing the SIM card, and only pay for the services they actually use that are not covered by the connect licence.

With the exception of the telephone connections mentioned above, the radio module in J949 can only be used as a data module. There is no provision for a telephone connection via rSAP; only the handsfree profile is available for the customer to use.

GPS module

The GPS module integrated in the connectivity box is able to receive and evaluate signals from common types of satellite navigation systems and match them against one another. Once the GPS signal has been evaluated, the GPS module in the connectivity box transmits it to the other control units via Connect CAN and Ethernet. Depending on the market requirements, the vehicle’s position is transmitted in either original or encrypted form.

Bluetooth and Wi-Fi module

The Bluetooth and Wi-Fi aerials are also connected to the connectivity box. The Bluetooth signal conforms to Bluetooth standard 4.2; the Wi-Fi signal conforms to the IEEE 802.11ac standard with 150 Mbit/s.

Other connections

The two microphones for the handsfree system are connected to the connectivity box.

If the Audi emergency call function is used to make an emergency call, the sound is sent through the vehicle’s loudspeakers; if the statutory emergency call function (e.g. EU eCall) is used, the sound is sent through the emergency call loudspeaker. Loudspeaker for emergency call module R335 has an output of 10 W. It is fitted in the driver's footwell and is connected to the connectivity box.

The connection for the mute wire to J794 is responsible for switching off other audio sources when an emergency call is placed. J949 has an A2B connection that is used for audio transmission between J794, J525 and J949. Additional information can be found in the section “Sound”.

Diagnosis and service

Emergency call module control unit and communication unit J949 has the diagnosis address word 0075 – Emergency call module. All diagnostic data are transmitted via Ethernet; if there is an interruption in the Ethernet wiring, the control unit cannot be reached.

The connectivity box is integrated in the component protection and, on vehicles with the Audi connect vehicle tracking system, in the immobiliser.

The connectivity box is fitted with a maintenance-free one-cell emergency battery. If the vehicle has a tracking system, the battery has two cells.

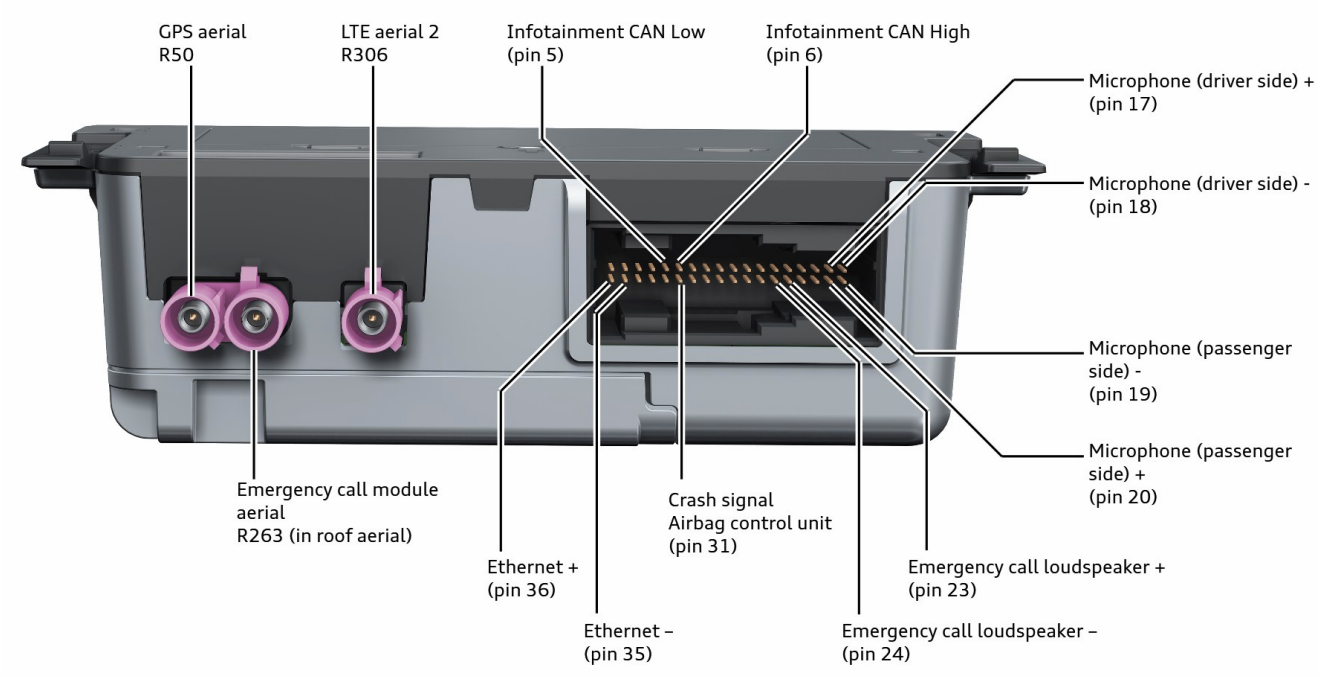
J949 in the OCU version

The third generation of the OCU (OCU3) is fitted in the Audi A3 (type 8Y). This control unit is familiar on Audi vehicles from the first generation (first fitted in the Audi A3 e-tron, type 8V) and second generation (first fitted in the Audi A1, type GB, and the Audi Q3, type F3). Here, it plays an even more important role in connecting the vehicle to the world around it.

The third-generation OCU has the following special functions and features:

- LTE-capable mobile network module
- Two LTE aerial connections
- One GPS module for location services
- One GPS aerial connection
- One integrated backup aerial
- Two microphone inputs
- One connection for emergency call loudspeaker
- One emergency battery

Connections on J949 in the OCU version



680_186

An explanation of some of the components is provided below.

Data module

The LTE-capable data module integrated in the OCU is fitted with an embedded SIM card that is used for all data traffic (including Audi connect). Different providers may be used depending on the market. The maximum bit rate is 300 Mbit/s. The reception status of this one mobile network module is shown on the MMI display.

Reception status



679_060

As is usual for LTE, there are two LTE aerials connected to the data module. Having the signal from both aerials provides the best possible reception. If an emergency call is placed and the reception from the external aerials is insufficient (e.g. if the aerials were damaged in an accident), the internal backup aerial in the OCU is used.

Unlike the connectivity box, the OCU carries out all the vehicle-specific services, including all the emergency call functions. To increase the availability of the emergency call services, the OCU has a maintenance-free emergency battery in addition to an integrated backup aerial.

The mobile network data that are used for the infotainment services are received and transmitted by the OCU. Mobile network data are exchanged with control unit 1 for information electronics J794 via Ethernet. Unlike on MLB vehicles, the gateway (J533) on the Audi A3 is only responsible for further transmission of the signal and therefore serves as a bridge between J949 and J794. On other MQB vehicles, the Ethernet wire connects J949 with J794 directly.

GPS module

The GPS module integrated in the OCU is able to receive and evaluate signals from common types of satellite navigation systems and match them against one another.

Once the GPS signal has been evaluated, the GPS module in the OCU transmits it to the other control units via CAN bus. Depending on the market requirements, the vehicle’s position is transmitted in either original or encrypted form.

Other connections

The two microphones for the handsfree system are connected to the OCU. They are also used for the speech services provided by the OCU.

If the Audi emergency call function is used to make an emergency call, the sound is sent through the vehicle’s loudspeakers; if the statutory emergency call function (e.g. EU eCall) is used, the sound is sent through the emergency call loudspeaker. Loudspeaker for emergency call module R335 has an output of 10 W. It is fitted in the driver's footwell and is connected to the OCU.

Diagnosis

Emergency call module control unit and communication unit J949 has the diagnosis address word 0075 – Emergency call module.

Unlike on the connectivity box, all the diagnostic data are transmitted via CAN bus; if there is an interruption in the CAN bus wiring, the control unit cannot be reached. The OCU is integrated in the component protection.

Aerial connections on MLB and MQB vehicles

A three-dimensional overview of the aerial connections within the MIB3 infrastructure can be found in the AR application “MIB3: Aerial connections in the MLB (modular longitudinal matrix) and MQB (modular transverse matrix)”.

In the application, you will learn about the different designs of the aerial systems in the MLB (modular longitudinal matrix) and MQB (modular transverse matrix) on the basis of the Audi A4 Avant (type 8W, product upgrade) and the Audi A3 Sportback (type 8Y).

In addition, you will find information about the aerials for the mobile network, GPS, Wi-Fi and Bluetooth, as well as information on the control units they are connected to.

Detailed instructions for using the application can be found in the Audi Knowledge Tank when you start the application.



Reference
You can access the AR application “MIB3: Aerial connections in the MLB and MQB” here

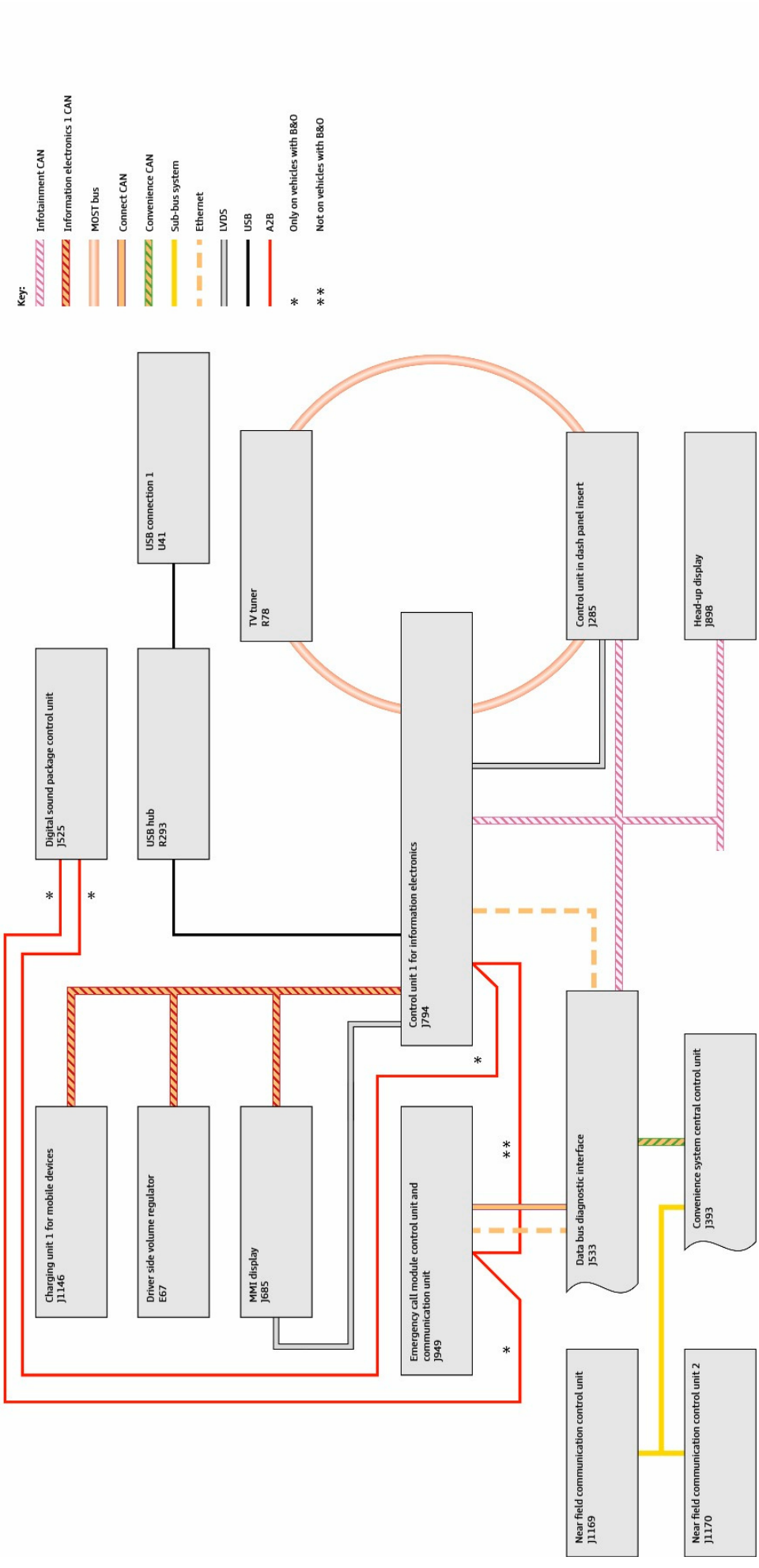
Networking

Introduction

There are different networking structures in the vehicles due to the different platforms – MLB and MQB. This affects the topology of the infotainment system. Unlike its predecessor (MIB2+), the MIB3 platform additionally features the Automotive Audio Bus, or A2B for short.

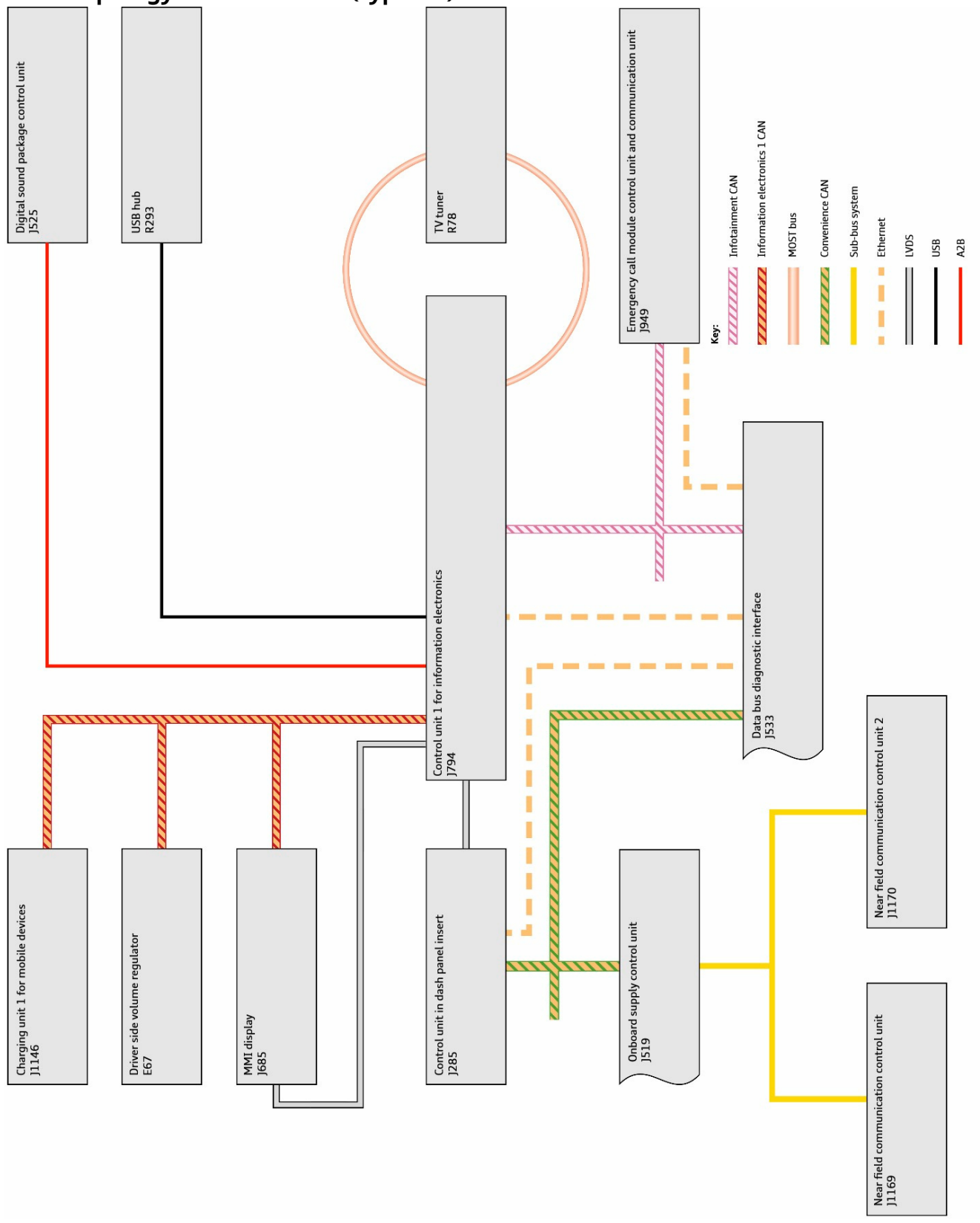
The infotainment topologies of the two platforms (MLB and MQB) are displayed below on the basis of the Audi A4 product upgrade (type 8W) and the Audi A3 (type 8Y).

MIB3 topology in the Audi A4 (type 8W)



679_062

MIB3 topology in the Audi A3 (type 8Y)



679_063

Image transmission

There are various image sources on the third-generation modular infotainment matrix. They are transferred to the devices on which they are displayed via different routes. The transfer methods are:

- MOST bus
- LVDS
- Composite video
- Ethernet
- USB

Control unit 1 for information electronics J794 receives image data from various sources, which it then forwards to other control units.

The image data sources and the transfer methods used are shown here:

- From DVD player R7 via USB
- From mobile devices connected at USB hub R293 or USB connection U41, via USB
- From TV tuner R78 via MOST bus
- From driver assist systems control unit J1121 via LVDS
- From reversing camera system control unit J772 via composite video or Ethernet (depending on version)
- From control unit for overhead view camera J928 (Top View) via LVDS or Ethernet (depending on version)

The control units to which J794 transfers images and the transfer methods used are as follows:

- MMI display J685 via LVDS
- Audi virtual cockpit (plus) J285 via LVDS for navigation map and detailed intersection maps, and via MOST bus for list menu or cover
- Head-up display J898 via LVDS or MOST bus (depending on version)

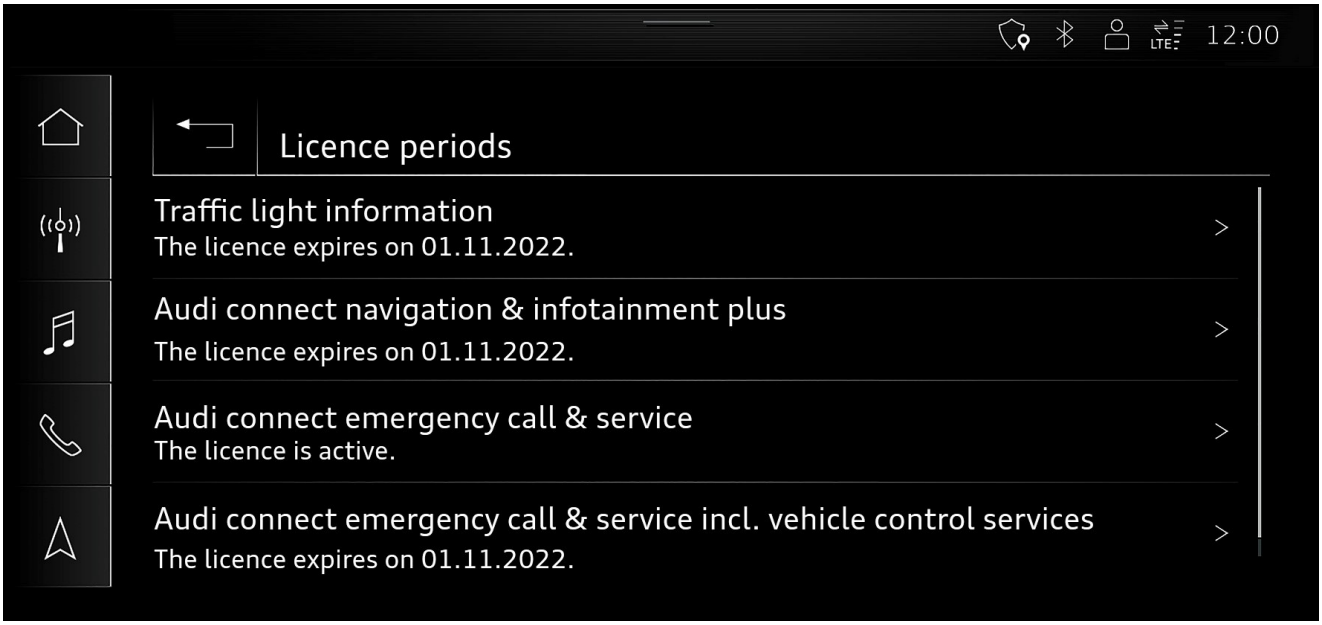
Audi connect (depending on country)

Audi connect infotainment and vehicle-specific services

In contrast to earlier MIB generations, all MIB3 models have a single mobile network module that is integrated in emergency call module control unit and communication unit J949. The SIM card fitted inside it is used for all Audi connect services and any data plans that the customer needs to purchase e.g. to receive online radio stations or to use the Internet via the Wi-Fi hotspot (provided that the appropriate equipment is fitted).

In the MIB3, the differentiation is again made between Audi connect infotainment services and Audi connect vehicle-specific services. The infotainment services are designed primarily for the customer's comfort and entertainment needs. The vehicle-specific services, however, relate to the car, for example its position, condition, air conditioning etc.

Audi connect licence periods



679_065

Different control units are responsible depending on the category (infotainment or vehicle-specific services).

As a rule, control unit 1 for information electronics J794 is responsible for delivering infotainment basic and (depending on the equipment) infotainment plus services (IT4 and IT3).

On the other hand, a distinction must be made regarding the vehicle-specific services:

- In MQB vehicles, these services are carried out by emergency call module control unit and communication unit J949.
- In MLB vehicles, they are carried out by data bus diagnostic interface J533, with the exception of the three listed below.

The three emergency services:

- EU eCall
- Audi emergency call
- Audi online roadside assistance

are carried out by emergency call module control unit and communication unit J949.

The basic package of Audi connect infotainment services (IT4) includes:

- Online traffic information
- Online traffic sign information
- Hazard alerts
- Fuel prices
- myAudi navigation
- Parking information
- Point of interest (POI) search
- Travel information
- Online news
- Weather
- Wi-Fi hotspot

The Audi connect plus package (IT3) includes:

- Navigation with Google Earth™

- Online extension of natural language interaction
- Extended 3D city views
- POI search with speech control
- Online radio
- Amazon Alexa integration (from software cluster 33xx onwards)

The vehicle-specific services include the following categories and services:

- Audi connect emergency call and service
  - Audi connect emergency call
  - Audi online roadside assistance
  - Audi service request
- Audi connect vehicle control services
  - Vehicle status report
  - Remote locking/unlocking
  - Car finder
  - Theft alarm notification
  - Remote auxiliary heating

The length of the licence period depends on the service and can be checked on the MMI under Settings > General > Licence periods.

The statutory EU eCall system has a life-long licence period and is not listed separately on the MMI.

Privacy mode 2.0

The full range of functions offered by the Audi connect services can be used only if various types of data are transmitted. Users who do not wish to disclose location information and personal data, thereby choosing not to use the full range of functions offered by Audi connect, can adjust the corresponding settings.

Users can do this in the MMI under: Settings > Privacy settings.

Privacy settings for online services

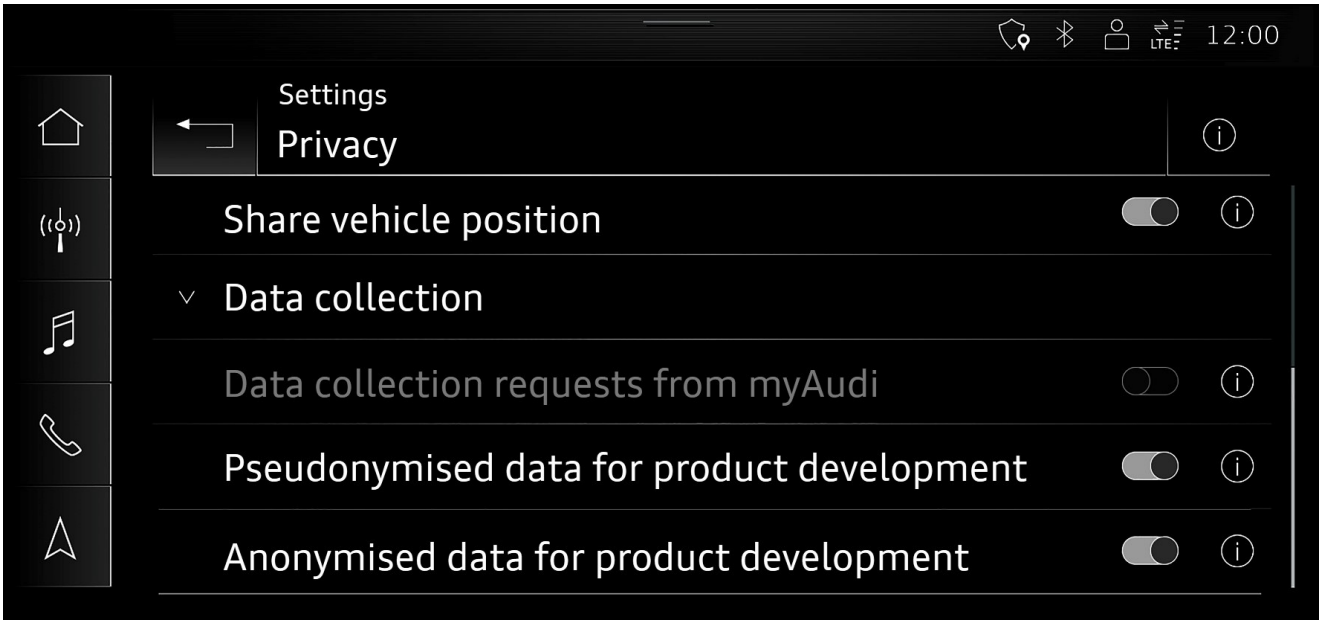


679_066

Settings put in place directly in the MMI become the master settings and cannot be modified in myAudi, not even by the key user.

In this menu, there is also the option to change settings in the category “Data collection”. This category relates to data collected for field monitoring and statistical purposes to support the continuous improvement of Audi products.

Privacy settings for data collection



679_067

Using the corresponding toggle switch, the user can decide how the data are transmitted: either in anonymous or in pseudonymous form. Regardless of which type of data transmission is allowed, it is not possible to make any inferences regarding the user's identity.

Two data collectors, one integrated in the information control unit (J794) and one in the connected gateway (J533), are responsible for collecting and transmitting various data.

The data collection category is structured differently depending on the platform, vehicle and technical equipment; the "Data collection" menu may therefore show one, two or three toggle switches.

In myAudi, key users and secondary users can see an overview of the settings currently in place. Service advisors can find all the information they need to assist the customer with this in the service portlet.

Reference
For further details on privacy mode 2.0, please refer to the Service TV films "" and "Privacy Mode 2.0 in the Service Portlet".

Personalisation 2.0

The personalisation 2.0 function makes it possible to transfer settings from one vehicle to another.

With the introduction of the MIB3, the customer has the option to call up settings from another vehicle that he or she put in place in the vehicle after logging into myAudi. This option is available provided that the vehicles are fitted with the corresponding technology and both vehicles support the second-level personalisation function.

The profiles stored in myAudi do not require that a specific vehicle key be used; if necessary, they can be protected with a four-digit PIN that the user can configure in every vehicle.

Depending on the equipment and the vehicle, the settings for the following systems can be called up:

- Air conditioning
- Position of seat and steering column
- Mirror settings
- Rain/light sensor

The personalisation 2.0 function requires a valid Audi connect licence; the licence is valid for ten years.

Reference
Further information on the personalisation 2.0 function is available in the Service TV programme on this topic.

Offer concepts for MIB3

Introduction

A general overview of the offer concepts for vehicles with MIB3 is given below. The versions offered in each model depend on the country.

Audi Q2, Audi TT and Audi R8 models are still fitted with the MIB2 and are therefore not listed here.

Offer concept for the Audi A1 (type GB) in model year 2021

MIB3 will be introduced for the Audi A1 (type GB) during model year 2021. From this time onwards, four versions will be available in principle. However, the MMI radio version is not an MIB3 system, but rather part of the MIB2+ standard. The MIB3 versions are:

- MMI radio plus (MIB3 Basic)
- MMI radio plus with MMI navigation plus pre-installation and Audi connect (MIB3 High)
- MMI navigation (MIB3 High)

Functions on demand are not planned for the Audi A1 (type GB).

MMI radio plus (I8W + 7Q0)	**MMI radio plus with MMI navigation plus pre-installation and Audi connect (I8Y + 7UH)**	**MMI navigation plus (I8Y + 7UG)**
8.8" MMI touch display with 1280 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels
Digital instrument cluster, 10.25" (9S0)	Audi virtual cockpit, 10.25" (9S1)[16]	Audi virtual cockpit, 10.25" (9S1)[17]
	Navigation system pre-installation (7UH)	3D navigation system on SSD (7UG)
AM/FM radio	AM/FM radio	AM/FM radio and connected radio (Internet radio)
DAB digital radio (QV3)[18]	DAB digital radio (QV3)[19]	DAB digital radio (QV3)[20]
Audi music interface with 2x USB-C socket (UE7)	Audi music interface with 2x USB-C socket (UE7)	Audi music interface with 2x USB-C socket (UE7)
	Audi smartphone interface (UI2)[21]	
Basic plus sound system (8RL) (six loudspeakers, 80 W)	Basic plus sound system (8RL) (six loudspeakers, 80 W)	Basic plus sound system (8RL) (six loudspeakers, 80 W)
Bluetooth interface (9ZX)	Bluetooth interface (9ZX)	Bluetooth interface (9ZX)
	Data module (JE3)	Data module (JE3)
		Audi connect basic services (IT4)
Audi connect emergency call & service including vehicle control services (IW3)[22]	Audi connect emergency call & service including vehicle control services (IW3)[23]	Audi connect emergency call & service including vehicle control services (IW3)[24]
Optional equipment		
Audi virtual cockpit, 10.25" (9S1)		
		Audi connect plus services (IT3)
Audi smartphone interface (UI2)		Audi smartphone interface (UI2)
2x USB-C charging sockets in rear (7B9)	2x USB-C charging sockets in rear (7B9)	2x USB-C charging sockets in rear (7B9)
DAB or Sirius XM (QV3)	DAB or Sirius XM (QV3)	DAB or Sirius XM (QV3)
Audi phone box including wireless charging (9ZE)[25]	Audi phone box including wireless charging (9ZE)[26]	Audi phone box including wireless charging (9ZE)[27]

[16] Compulsory item
[17] Compulsory item
[18] Standard equipment, depending on country
[19] Standard equipment, depending on country
[20] Standard equipment, depending on country
[21] Compulsory item
[22] Depending on the country (e.g. only eCall IWI, eCall and bCall IW3, ERA-GLONASS NZ3)
[23] Depending on the country (e.g. only eCall IWI, eCall and bCall IW3, ERA-GLONASS NZ3)
[24] Depending on the country (e.g. only eCall IWI, eCall and bCall IW3, ERA-GLONASS NZ3)
[25] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[26] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[27] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

MMI radio plus (I8W + 7Q0)	MMI radio plus with MMI navigation plus pre-installation and Audi connect (I8Y + 7UH)	MMI navigation plus (I8Y + 7UG)
Audi phone box light (for wireless charging only) (9ZV)[28]	Audi phone box light (for wireless charging only) (9ZV)[29]	Audi phone box light (for wireless charging only) (9ZV)[30]
Audi sound system (9VD) (180 W)	Audi sound system (9VD) (180 W)	Audi sound system (9VD) (180 W)
Bang & Olufsen Premium Sound System with 3D sound (9VS) (680 W)	Bang & Olufsen Premium Sound System with 3D sound (9VS) (680 W)	Bang & Olufsen Premium Sound System with 3D sound (9VS) (680 W)
TV tuner (QV1) (Japan only)	TV tuner (QV1) (Japan only)	TV tuner (QV1) (Japan only)

Reference
For information on the MIB2+ standard system, refer to SSP 674, "Audi A1 Sportback (type GB)"

Note
The navigation function can only be activated in combination with Audi connect basic.

Offer concept for the Audi A3 (type 8Y) from model year 2021 onwards

The Audi A3 (type 8Y) is always equipped with an MIB3 High system. However, the customer can choose between the following two versions:

- MMI radio plus
- MMI navigation plus

Depending on the country, the MMI radio plus may be equipped with retrofit options so that customers can decide whether to use additional functions later. These retrofit options are referred to as “functions on demand” (FOD). Depending on the country, customers are then offered activation options for different periods of time.

MMI radio plus with MMI touch (I8Y + 7ZU)[31]	MMI navigation plus with MMI touch (I8Y + 7UG)
10.1" MMI touch display with 1540 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels
10.25" digital instrument cluster (7J2)	10.25" Audi virtual cockpit (9S1)
	3D navigation system on SSD (7UG)
AM/FM radio	AM/FM radio
DAB digital radio (QV3)[32]	DAB digital radio (QV3)[33]
Audi music interface with 2x USB-C socket[34]	Audi music interface with 2x USB-C socket[35]
Audi connect emergency call & service including vehicle control services (IW3)[36]	Audi connect emergency call & service including vehicle control services (IW3)[37]
	Audi connect basic services (IT4)
Bluetooth interface (9ZX)	Bluetooth interface (9ZX)
Basic plus sound system (8RL)	Basic plus sound system (8RL)
Optional equipment for retrofitting (functions on demand) (FP1) [38]	
Navigation system (7UZ)	
Audi connect (IT6)	
Audi smartphone interface (IU2)	Audi smartphone interface (IU2)
Optional equipment	
	Audi connect plus services (IT3)
Audi virtual cockpit plus (9S9)	Audi virtual cockpit plus (9S9)

[28] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[29] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[30] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[31] In markets without functions on demand 7Q0
[32] Standard equipment, depending on country
[33] Standard equipment, depending on country
[34] Vehicles built before week 48/20 are still fitted with an Audi music interface with 1x USB-C and 1x USB-A.
[35] Vehicles built before week 48/20 are still fitted with an Audi music interface with 1x USB-C and 1x USB-A.
[36] Standard equipment, depending on country
[37] Standard equipment, depending on country
[38] FP1 only applies to countries with functions on demand, otherwise: 7Q0 (without navigation system), IT0 (without connect activation), IU0 (without Audi smartphone interface activation) and QV0 (without DAB).

MMI radio plus with MMI touch (I8Y + 7ZU)[31]	MMI navigation plus with MMI touch (I8Y + 7UG)
Audi smartphone interface (IU1)	Audi smartphone interface (IU1)
Audi phone box (9ZE)[39]	Audi phone box (9ZE)[40]
Audi phone box light (9ZV)[41] [42]	Audi phone box light (9ZV)[43] [44]
Audi sound system (9VD)	Audi sound system (9VD)
Bang & Olufsen Premium Sound System with 3D sound (9VS)	Bang & Olufsen Premium Sound System with 3D sound (9VS)
Digital radio or Sirius XM (QV3)[45]	Digital radio or Sirius XM (QV3)[46]
2x USB-C charging sockets in rear (7B9)	2x USB-C charging sockets in rear (7B9)
	TV tuner (QV1) (Japan only)
Audi connect key (2F1)[47]	Audi connect key (2F1)[48]

Offer concept for the Audi A4/A5 (type 8W/F5) from model year 2020 onwards

The product upgrade of the Audi A4 (type 8W) is the first Audi model to be fitted with the third-generation modular infotainment matrix (MIB3). In principle, two versions that are based on the MIB3 High are available for the Audi A4 (type 8W), Audi A5 (type F5) and their derivative models:

- MMI radio plus
- MMI navigation plus

In certain country versions, the vehicle is then equipped with retrofit options so that customers can decide whether to use additional functions later. These retrofit options are referred to as “functions on demand” (FOD). Depending on the country, customers are then offered activation options for different periods of time.

MMI radio plus (I8Y + 7UZ)[49]	MMI navigation plus (I8Y + 7UG)
10.1" MMI touch display with 1540 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels
5” monochrome display in instrument cluster with driver information system (9S5)	7” colour display in instrument cluster with driver information system (9S7)
	3D navigation system on SSD (7UG)
AM/FM radio, HD radio (for North America)	AM/FM radio and connected radio (Internet radio), HD radio (for North America)
Audi music interface with 1x USB-A and 1x USB-C socket (UE4)	Audi music interface with 1x USB-A and 1x USB-C socket (UE4)
Basic sound system (8RM)	Basic sound system (8RM)
Bluetooth interface (9ZX)	Bluetooth interface (9ZX)
	Audi connect plus services (IT3)[50]
Speech dialogue system[51]	Speech dialogue system online
Audi connect emergency call & service including vehicle control services (IW3)[52]	Audi connect emergency call & service including vehicle control services (IW3)[53]
Optional equipment for retrofitting (functions on demand) (FP1) [54]	
Navigation system including Audi connect (7UZ)	
Audi smartphone interface (IU2)	Audi smartphone interface (IU2)
Optional equipment	

[31] In markets without functions on demand 7Q0

[39] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[40] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[41] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[42] Can only be ordered in conjunction with the Audi smartphone interface (IU1)

[43] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[44] Can only be ordered in conjunction with the Audi smartphone interface (IU1)

[45] DAB only offered for countries outside the European Union, Sirius XM for the North American market

[46] DAB only offered for countries outside the European Union, Sirius XM for the North American market

[47] Can only be ordered in conjunction with the convenience key

[48] Can only be ordered in conjunction with the convenience key

[49] In markets without functions on demand 7Q0

[50] Audi connect plus services (IT3) always includes the Audi connect basic services (IT4)

[51] Speech dialogue system for media and telephony only

[52] For markets without Audi connect vehicle-specific services (IW0)

[53] For markets without Audi connect vehicle-specific services (IW0)

[54] In markets with functions on demand; otherwise FP0

MMI radio plus (I8Y + 7UZ)[49]	MMI navigation plus (I8Y + 7UG)
7” colour display in instrument cluster with driver information system (9S7)	
Audi virtual cockpit plus, 12.3” (9S9)	Audi virtual cockpit plus, 12.3” (9S9)
Audi smartphone interface (IU1)	Audi smartphone interface (IU1)
2x USB-A charging sockets in rear (9JE)	2x USB-A charging sockets in rear (9JE)
Audi phone box including wireless charging (9ZE)[55]	Audi phone box including wireless charging (9ZE)[56]
Audi phone box light (for wireless charging only) (9ZV)[57]	Audi phone box light (for wireless charging only) (9ZV)[58]
Audi sound system (9VD)	Audi sound system (9VD)
Bang & Olufsen Premium Sound System with 3D sound (9VS)	Bang & Olufsen Premium Sound System with 3D sound (9VS)
DAB digital radio or Sirius (QV3)	DAB digital radio or Sirius XM (QV3)
	TV tuner (QV1) (Japan only)
Audi connect key (2F1)[59]	Audi connect key (2F1)[60]

Offer concept for the Audi A6/A7 (type 4A/4K) in model year 2021

In principle, three systems are available for the Audi A6 (type 4A), Audi A7 (type 4K) and their derivative models. Depending on the country, the customer can select from the following versions:

- MMI radio plus (MIB3 Basic)
- MMI navigation (MIB3 High)
- MMI navigation plus (MIB3 Premium)

In certain country versions, the vehicle is then equipped with retrofit options so that customers can decide whether to use additional functions later. These retrofit options are referred to as “functions on demand” (FOD). Depending on the country, customers are then offered activation options for different periods of time.

MMI radio plus (I8W + 7Q0)	MMI navigation (I8Y + 7UG)	MMI navigation plus (I8Z + 7UG)
8.8" MMI touch display with 1280 x 720 pixels	8.8" MMI touch display with 1280 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels
8.6" touch display	8.6" touch display	8.6" touch display
7” colour display in instrument cluster with driver information system (9S7)	7” colour display in instrument cluster with driver information system (9S7)	Audi virtual cockpit plus, 12.3” (9S9)
	3D navigation system on SSD (7UG)	3D navigation system on SSD (7UG)
AM/FM radio	AM/FM radio	AM/FM radio and connected radio (Internet radio), HD radio (for North America)
DAB digital radio (QV3)[61]	DAB digital radio (QV3)[62]	DAB digital radio (QV3)[63]
Audi music interface with 2x USB-C socket (UF7)	Audi music interface with 2x USB-C socket (UF7)	Audi smartphone interface with 2x USB-C socket (IU1)
Basic sound system (8RM)	Basic sound system (8RM)	Audi sound system (9VD)
Bluetooth interface (9ZX)	Bluetooth interface (9ZX)	Bluetooth interface (9ZX)
	Audi connect basic services (IT4)	Audi connect plus services (IT3)[64]
Audi connect emergency call & service including vehicle control services (IW3)[65]	Audi connect emergency call & service including vehicle control services (IW3)[66]	Audi connect emergency call & service including vehicle control services (IW3)[67]
Optional equipment for retrofitting (functions on demand) (FP1) [68]		
	Audi smartphone interface (IU2)	

[49] In markets without functions on demand 7Q0

[55] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[56] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[57] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[58] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[59] Can only be ordered in conjunction with the convenience key

[60] Can only be ordered in conjunction with the convenience key

[61] Standard equipment, depending on country

[62] Standard equipment, depending on country

[63] Standard equipment, depending on country

[64] Audi connect plus services (IT3) always includes the Audi connect basic services (IT4)

[65] Standard equipment, depending on country

[66] Standard equipment, depending on country

[67] Standard equipment, depending on country

[68] FP1 applies only to countries without functions on demand; otherwise FP0

MMI radio plus (I8W + 7Q0)	MMI navigation (I8Y + 7UG)	MMI navigation plus (I8Z + 7UG)
Optional equipment		
Single DVD drive (7D5)	Single DVD drive (7D5)	Single DVD drive (7D5)
DAB digital radio or Sirius XM (QV3)	DAB digital radio or Sirius XM (QV3)	DAB digital radio or Sirius XM (QV3)
	Audi smartphone interface (IU1)	
2x USB-C sockets in rear (UF8)[69]	2x USB-C sockets in rear (UF8)[70]	2x USB-C sockets in rear (UF8)[71]
Audi phone box including wireless charging (9ZE)[72]	Audi phone box including wireless charging (9ZE)[73]	Audi phone box including wireless charging (9ZE)[74]
Audi phone box light (for wireless charging only) (9ZV)[75]	Audi phone box light (for wireless charging only) (9ZV)[76]	Audi phone box light (for wireless charging only) (9ZV)[77]
Audi sound system (9VD)	Audi sound system (9VD)	
Bang & Olufsen Premium Sound System with 3D sound (9VS)	Bang & Olufsen Premium Sound System with 3D sound (9VS)	Bang & Olufsen Premium Sound System with 3D sound (9VS)
Bang & Olufsen Advanced Sound System with 3D sound (8RF)	Bang & Olufsen Advanced Sound System with 3D sound (8RF)	Bang & Olufsen Advanced Sound System with 3D sound (8RF)
		TV tuner (QV1)[78]
Preparation for Rear Seat Entertainment (9WQ)	Preparation for Rear Seat Entertainment (9WQ)	Preparation for Rear Seat Entertainment (9WQ)
Audi connect key (2F1)[79]	Audi connect key (2F1)[80]	Audi connect key (2F1)[81]

Offer concept for the Audi A8 (type 4N) in model year 2021

In principle, two systems are available for the Audi A8 (type 4N); both systems are always MIB3 Premium.

No functions on demand are planned for this model in model year 2021; there is no provision for functions on demand for the Audi A8 (type 4N).

MMI radio plus (I8Z + 7Q0)	MMI navigation plus (I8Z + 7UG)
10.1" MMI touch display with 1540 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels
8.6" touch display	8.6" touch display
Audi virtual cockpit, 12.3" (9S8)	Audi virtual cockpit plus, 12.3" (9S9)
	3D navigation system on SSD (7UG)
AM/FM radio	AM/FM radio and connected radio (Internet radio), HD radio (for North America)
DAB digital radio (QV3)[82]	DAB digital radio or satellite radio for North America (Sirius XM) (QV3)[83]
Audi music interface with 2x USB-C socket (UF7)	Audi music interface with 2x USB-C socket (UF7)
Basic sound system (8RM)	Audi sound system (9VD)
Bluetooth interface (9ZX)	Bluetooth interface (9ZX)
	Audi connect plus services (IT3)[84]

[69] They can be used for charging as well as for providing data for the Audi music interface

[70] They can be used for charging as well as for providing data for the Audi music interface

[71] They can be used for charging as well as for providing data for the Audi music interface

[72] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[73] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[74] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[75] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[76] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[77] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[78] TV tuner (QV1); TV tuner with CI card reader (Q0A). In combination with DAB for Europe: TV tuner and DAB are packaged as (QU1); TV tuner with CI card reader and DAB are packaged as (Q0B)

[79] Can only be ordered in conjunction with the convenience key

[80] Can only be ordered in conjunction with the convenience key

[81] Can only be ordered in conjunction with the convenience key

[82] Standard equipment, depending on country

[83] Standard equipment, depending on country

[84] Audi connect plus services (IT3) always includes the Audi connect basic services (IT4)

MMI radio plus (I8Z + 7Q0)	MMI navigation plus (I8Z + 7UG)
Audi connect emergency call & service including vehicle control services (IW3)[85]	Audi connect emergency call & service including vehicle control services (IW3)[86]
Optional equipment	
Single DVD drive (7D5)	Single DVD drive (7D5)
DAB digital radio (QV3)	DAB digital radio (QV3)
Audi smartphone interface (IU1)	Audi smartphone interface (IU1)
2x USB-C sockets in rear (UF8)[87]	2x USB-C sockets in rear (UF8)[88]
Audi phone box including wireless charging (9ZE)[89]	Audi phone box including wireless charging (9ZE)[90]
Audi phone box light (for wireless charging only) (9ZV)[91]	Audi phone box light (for wireless charging only) (9ZV)[92]
Telephony in rear including rear Audi phone box (QF7 for 4-seat vehicles/QF8 for 5-seat vehicles without wireless charging)	Telephony in rear including rear Audi phone box (QF7 for 4-seat vehicles/QF8 for 5-seat vehicles without wireless charging)
Rear Seat Remote (QW5)	Rear Seat Remote (QW5)
Rear Audi phone box light (for 4-seat vehicles and wireless charging only) (QF6)	Rear Audi phone box light (for 4-seat vehicles and wireless charging only) (QF6)
Bang & Olufsen Premium Sound System with 3D sound (9VS)	Bang & Olufsen Premium Sound System with 3D sound (9VS)
Bang & Olufsen Advanced Sound System with 3D sound (8RF)	Bang & Olufsen Advanced Sound System with 3D sound (8RF)
	TV tuner (QV1)[93]
Audi connect key (2F1)[94]	Audi connect key (2F1)[95]

Offer concept for the Audi Q3 (type F3) in model year 2021

MIB3 will be introduced for the Audi Q3 (type F3) during model year 2021. From this time onwards, four versions will be available in principle. However, the MMI radio version is not an MIB3 system, but rather part of the MIB2+ standard. The MIB3 versions are:

- MMI radio plus (MIB3 Basic)
- MMI radio plus with MMI navigation plus pre-installation and Audi connect (MIB3 High)
- MMI navigation (MIB3 High)

Functions on demand are not planned for the Audi Q3 (type F3).

MMI radio plus (I8W + 7Q0)	MMI radio plus with MMI navigation plus pre-installation and Audi connect (I8Y + 7UH)	MMI navigation plus (I8Y + 7UG)
8.8" MMI touch display with 1280 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels
Digital instrument cluster, 10.25" (9S0)	Audi virtual cockpit, 10.25" (9S1)[96]	Audi virtual cockpit, 10.25" (9S1)[97]
	Navigation system pre-installation (7UH)	3D navigation system on SSD (7UG)
AM/FM radio	AM/FM radio	AM/FM radio and connected radio (Internet radio)
DAB digital radio (QV3)[98]	DAB digital radio (QV3)[99]	DAB digital radio (QV3)[100]

[85] Standard equipment, depending on country
[86] Standard equipment, depending on country
[87] They can be used for charging as well as for providing data for the Audi music interface
[88] They can be used for charging as well as for providing data for the Audi music interface
[89] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[90] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[91] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[92] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[93] TV tuner (QV1); TV tuner with CI card reader (Q0A). In combination with DAB for Europe: TV tuner and DAB are packaged as (QU1); TV tuner with CI card reader and DAB are packaged as (Q0B)
[94] Can only be ordered in conjunction with the convenience key
[95] Can only be ordered in conjunction with the convenience key
[96] Compulsory item
[97] Compulsory item
[98] Standard equipment, depending on country
[99] Standard equipment, depending on country
[100] Standard equipment, depending on country

MMI radio plus (I8W + 7Q0)	MMI radio plus with MMI navigation plus pre-installation and Audi connect (I8Y + 7UH)	MMI navigation plus (I8Y + 7UG)
Audi music interface with 2x USB-C socket (UE7)	Audi music interface with 2x USB-C socket (UE7)	Audi music interface with 2x USB-C socket (UE7)
	Audi smartphone interface (UI2)[101]	
Basic plus sound system (8RL) (six loudspeakers, 80 W)	Basic plus sound system (8RL) (six loudspeakers, 80 W)	Basic plus sound system (8RL) (six loudspeakers, 80 W)
Bluetooth interface (9ZX)	Bluetooth interface (9ZX)	Bluetooth interface (9ZX)
	Data module (JE3)	Data module (JE3)
		Audi connect basic services (IT4)
Audi connect emergency call & service including vehicle control services (IW3)[102]	Audi connect emergency call & service including vehicle control services (IW3)[103]	Audi connect emergency call & service including vehicle control services (IW3)[104]
Optional equipment		
Audi virtual cockpit, 10.25" (9S1)	Audi virtual cockpit plus, 12.3" (9S9)	Audi virtual cockpit plus, 12.3" (9S9)
		Audi connect plus services (IT3)
Audi smartphone interface (UI2)		Audi smartphone interface (UI2)
2x USB-C charging sockets in rear (7B9)	2x USB-C charging sockets in rear (7B9)	2x USB-C charging sockets in rear (7B9)
DAB or Sirius XM (QV3)	DAB or Sirius XM (QV3)	DAB or Sirius XM (QV3)
Audi phone box including wireless charging (9ZE)[105]	Audi phone box including wireless charging (9ZE)[106]	Audi phone box including wireless charging (9ZE)[107]
Audi phone box light (for wireless charging only) (9ZV)[108]	Audi phone box light (for wireless charging only) (9ZV)[109]	Audi phone box light (for wireless charging only) (9ZV)[110]
Audi sound system (9VD) (180 W)	Audi sound system (9VD) (180 W)	Audi sound system (9VD) (180 W)
Bang & Olufsen Premium Sound System with 3D sound (9VS) (680 W)	Bang & Olufsen Premium Sound System with 3D sound (9VS) (680 W)	Bang & Olufsen Premium Sound System with 3D sound (9VS) (680 W)
		TV tuner (QV1) (Japan only)

Offer concept for the Audi Q5 (type FY) in model year 2021

In principle, two versions that are based on the MIB3 High are available for the Audi Q5 (type FY):

- MMI radio plus
- MMI navigation plus

In certain country versions, the vehicle is then equipped with retrofit options so that customers can decide whether to use additional functions later. These retrofit options are referred to as “functions on demand” (FOD). Depending on the country, customers are then offered activation options for different periods of time.

MMI radio plus (I8Y + 7UZ)[111]	MMI navigation plus (I8Y + 7UG)
10.1" MMI touch display with 1540 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels
5" monochrome display in instrument cluster with driver information system (9S5)	7" colour display in instrument cluster with driver information system (9S7)
	3D navigation system on SSD (7UG)
AM/FM radio HD radio for North America	AM/FM radio and connected radio (Internet radio) HD radio for North America
Audi music interface with 1x USB-A and 1x USB-C socket (UE4)	Audi music interface with 1x USB-A and 1x USB-C socket (UE4)
Basic sound system (8RM)	Basic sound system (8RM)

[101] Compulsory item
[102] Depending on the country (e.g. only eCall IWI, eCall and bCall IW3, ERA-GLONASS NZ3)
[103] Depending on the country (e.g. only eCall IWI, eCall and bCall IW3, ERA-GLONASS NZ3)
[104] Depending on the country (e.g. only eCall IWI, eCall and bCall IW3, ERA-GLONASS NZ3)
[105] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[106] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[107] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[108] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[109] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[110] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[111] In markets without functions on demand 7Q0

MMI radio plus (I8Y + 7UZ)[111]	MMI navigation plus (I8Y + 7UG)
Bluetooth interface (9ZX)	Bluetooth interface (9ZX)
	Audi connect plus services (IT3)[112]
Speech dialogue system[113]	Speech dialogue system online
Audi connect emergency call & service including vehicle control services (IW3)[114]	Audi connect emergency call & service including vehicle control services (IW3)[115]
Optional equipment for retrofitting (functions on demand) (FP1) [116]	
Navigation system including Audi connect (7UZ)	
Audi smartphone interface (IU2)	Audi smartphone interface (IU2)
Optional equipment	
7" colour display in instrument cluster with driver information system (9S7)	
Audi virtual cockpit plus, 12.3” (9S9)	Audi virtual cockpit plus, 12.3” (9S9)
Audi smartphone interface (IU1)	Audi smartphone interface (IU1)
2x USB-A charging sockets in rear (9JE)	2x USB-A charging sockets in rear (9JE)
Audi phone box including wireless charging (9ZE)[117]	Audi phone box including wireless charging (9ZE)[118]
Audi phone box light (for wireless charging only) (9ZV)[119]	Audi phone box light (for wireless charging only) (9ZV)[120]
Audi sound system (9VD)	Audi sound system (9VD)
Bang & Olufsen Premium Sound System with 3D sound (9VS)	Bang & Olufsen Premium Sound System with 3D sound (9VS)
DAB digital radio or Sirius (QV3)	DAB digital radio or Sirius (QV3)
	TV tuner (QV1) (Japan only)
Audi connect key (2F1)[121]	Audi connect key (2F1)[122]

Offer concept for the Audi Q7/Q8 (type 4M) in model year 2021

In principle, two versions, both based on the MIB3 High, are available for the Audi Q7 (type 4M) and Audi Q8 (type 4M):

- MMI radio plus
- MMI navigation plus

In certain country versions, the vehicle is then equipped with retrofit options so that customers can decide whether to use additional functions later. These retrofit options are referred to as “functions on demand” (FOD). Depending on the country, customers are then offered activation options for different periods of time.

MMI radio plus (I8Z + 7Q0)	MMI navigation plus (I8Z + 7UG)
10.1" MMI touch display with 1540 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels
8.6" touch display	8.6" touch display
7" colour display in instrument cluster with driver information system (9S7)	Audi virtual cockpit, 12.3" (9S8)
	3D navigation system on SSD (7UG)
AM/FM radio	AM/FM radio and connected radio (Internet radio) HD radio for North America
DAB digital radio (QV3)[123]	DAB digital radio or satellite radio for North America (Sirius XM) (QV3)[124]
Audi music interface with 2x USB-C socket (UF7)	Audi music interface with 2x USB-C socket (UF7)

[111] In markets without functions on demand 7Q0
[112] Audi connect plus services (IT3) always includes the Audi connect basic services (IT4)
[113] Speech dialogue system for media and telephony only
[114] For markets without Audi connect vehicle-specific services (IW0)
[115] For markets without Audi connect vehicle-specific services (IW0)
[116] In markets with functions on demand; otherwise FP0
[117] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[118] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[119] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[120] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[121] Can only be ordered in conjunction with the convenience key
[122] Can only be ordered in conjunction with the convenience key
[123] Standard equipment, depending on country
[124] Standard equipment, depending on country

MMI radio plus (I8Z + 7Q0)	MMI navigation plus (I8Z + 7UG)
Audi sound system (9VD)	Audi sound system (9VD)
Bluetooth interface (9ZX)	Bluetooth interface (9ZX)
	Audi connect plus services (IT3)[125]
Audi connect emergency call & service including vehicle control services (IW3)[126]	Audi connect emergency call & service including vehicle control services (IW3)[127]
Optional equipment for retrofitting (functions on demand) (FP1) [128]	
Audi smartphone interface (IU2)	Audi smartphone interface (IU2)
Optional equipment	
	Audi virtual cockpit plus (9S9)
	Single DVD drive (7D5)
DAB digital radio (QV3)	DAB digital radio (QV3)
Audi smartphone interface (IU1)	Audi smartphone interface (IU1)
	2x USB-C sockets in rear (UF8)[129]
Audi phone box including wireless charging (9ZE)[130]	Audi phone box including wireless charging (9ZE)[131]
Audi phone box light (for wireless charging only) (9ZV)[132]	Audi phone box light (for wireless charging only) (9ZV)[133]
Bang & Olufsen Premium Sound System with 3D sound (9VS)	Bang & Olufsen Premium Sound System with 3D sound (9VS)
	Bang & Olufsen Advanced Sound System with 3D sound (8RF)
	TV tuner (QV1)[134]
Preparation for Rear Seat Entertainment (9WQ)	Preparation for Rear Seat Entertainment (9WQ)
Audi connect key (2F1)[135]	Audi connect key (2F1)[136]

Offer concept for the Audi e-tron (type GE) in model year 2021

In principle, two systems are available for the Audi e-tron (type GE); both systems are always MIB3 Premium.

Depending on the country, the MMI radio plus may be equipped with retrofit options so that customers can decide whether to use additional functions later. These retrofit options are referred to as “functions on demand” (FOD). Depending on the country, customers are then offered activation options for different periods of time.

MMI radio plus (I8Z + 7Q0)[137]	MMI navigation plus (I8Z + 7UG)
10.1" MMI touch display with 1540 x 720 pixels	10.1" MMI touch display with 1540 x 720 pixels
8.6" touch display	8.6" touch display
Audi virtual cockpit, 12.3" (9S8)	Audi virtual cockpit, 12.3" (9S8)
	3D navigation system on SSD (7UG)
AM/FM radio	AM/FM radio and connected radio (Internet radio) HD radio for North America
DAB digital radio (QV3)[138]	DAB digital radio or satellite radio for North America (Sirius XM) (QV3)[139]
Audi music interface with 2x USB-C socket (UF7)	Audi music interface with 2x USB-C socket (UF7)

[125] Audi connect plus services (IT3) always includes the Audi connect basic services (IT4)
[126] Standard equipment, depending on country
[127] Standard equipment, depending on country
[128] On markets with functions on demand; otherwise FP0
[129] They can be used for charging as well as for providing data for the Audi music interface
[130] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[131] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[132] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[133] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.
[134] TV tuner (QV1); TV tuner with CI card reader (Q0A). In combination with DAB for Europe: TV tuner and DAB are packaged as (QU1); TV tuner with CI card reader and DAB are packaged as (Q0B)
[135] Can only be ordered in conjunction with the convenience key
[136] Can only be ordered in conjunction with the convenience key
[137] On markets without functions on demand 7Q0
[138] Standard equipment, depending on country
[139] Standard equipment, depending on country

MMI radio plus (I8Z + 7Q0)[137]	**MMI navigation plus (I8Z + 7UG)**
Basic sound system (8RM)	Audi sound system (9VD)
Bluetooth interface (9ZX)	Bluetooth interface (9ZX)
	Audi connect plus services (IT3)[140]
Audi connect emergency call & service including vehicle control services (IW3)[141]	Audi connect emergency call & service including vehicle control services (IW3)[142]
Optional equipment for retrofitting (functions on demand) (FP1) [143]	
Navigation system including Audi connect (7UZ)	
Audi smartphone interface (IU2)	Audi smartphone interface (IU2)
Optional equipment	
	Audi virtual cockpit plus, 12.3” (9S9)
	Single DVD drive (7D5)
DAB digital radio (QV3)	DAB digital radio (QV3)
	Audi smartphone interface (IU1)
	2x USB-C sockets in rear (UF8)[144]
Audi phone box including wireless charging (9ZE)[145]	Audi phone box including wireless charging (9ZE)[146]
Audi phone box light (for wireless charging only) (9ZV)[147]	Audi phone box light (for wireless charging only) (9ZV)[148]
Audi sound system (9VD)	
Bang & Olufsen Premium Sound System with 3D sound (9VS)	Bang & Olufsen Premium Sound System with 3D sound (9VS)
	TV tuner (QV1)[149]
Preparation for Rear Seat Entertainment (9WQ)	Preparation for Rear Seat Entertainment (9WQ)
Audi connect key (2F1)[150]	Audi connect key (2F1)[151]

[137] In markets without functions on demand 7Q0

[140] Audi connect plus services (IT3) always includes the Audi connect basic services (IT4)

[141] Standard equipment, depending on country

[142] Standard equipment, depending on country

[143] In markets with functions on demand; otherwise FP0

[144] They can be used for charging as well as for providing data for the Audi music interface

[145] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[146] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[147] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[148] If an Audi phone box is fitted, two smartphones can be connected via handsfree profile at the same time using the Bluetooth interface.

[149] TV tuner (QV1); TV tuner with CI card reader (Q0A). In combination with DAB for Europe: TV tuner and DAB are packaged as (QU1); TV tuner with CI card reader and DAB are packaged as (Q0B)

[150] Can only be ordered in conjunction with the convenience key

[151] Can only be ordered in conjunction with the convenience key

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