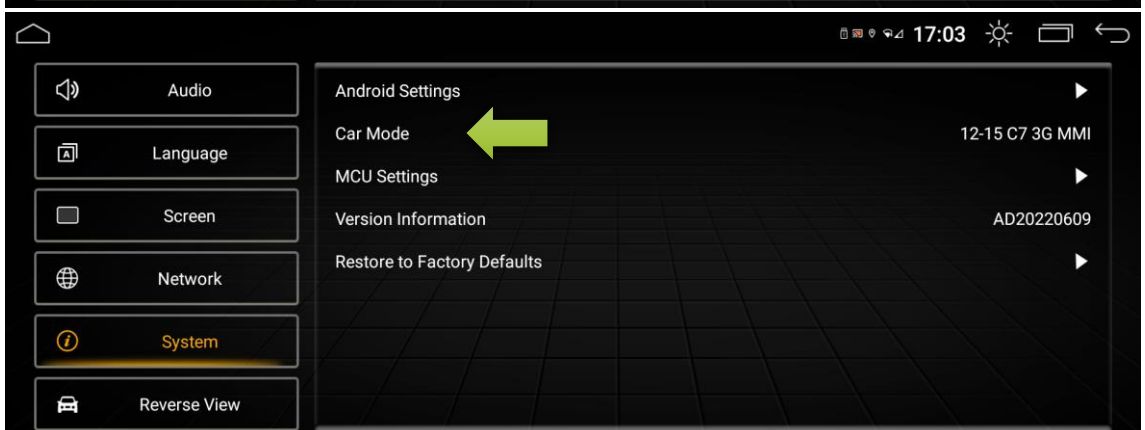
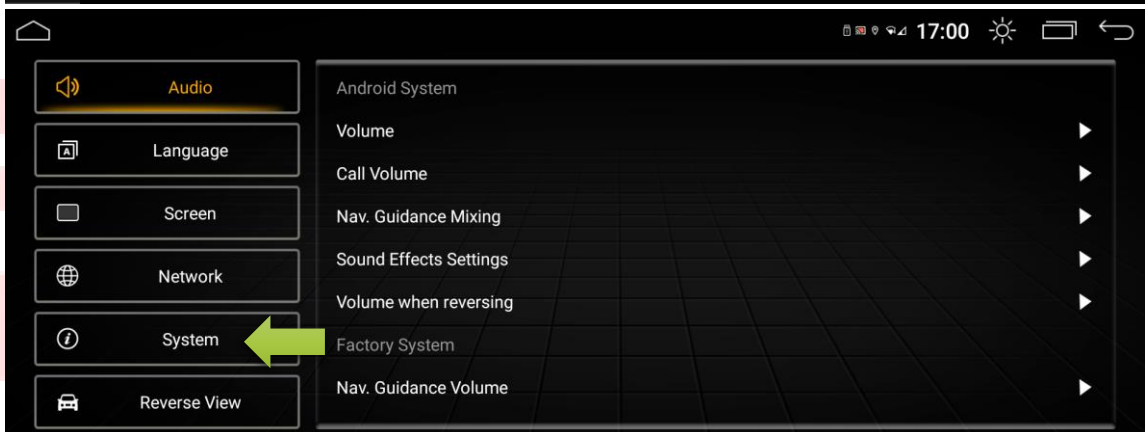
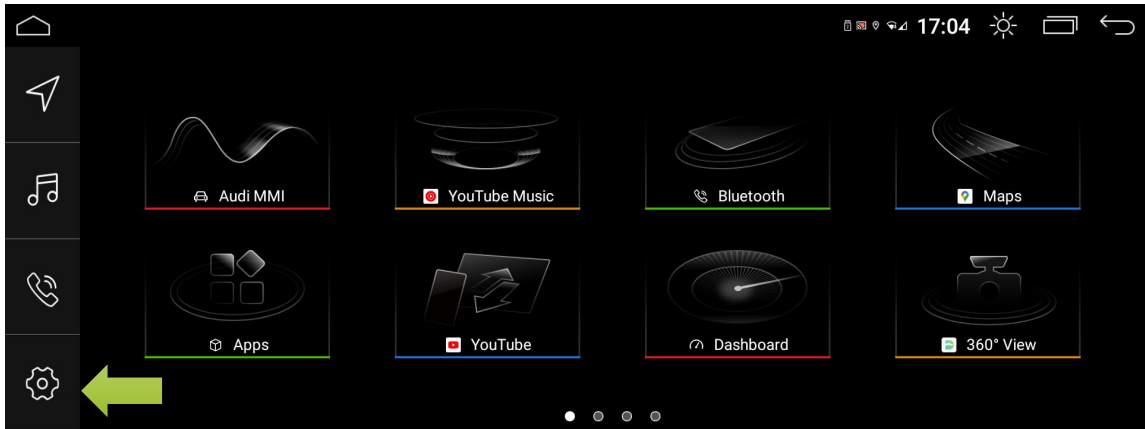


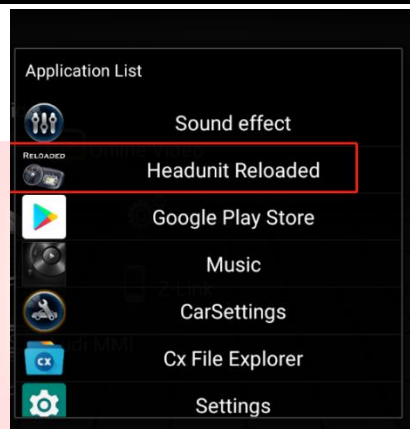
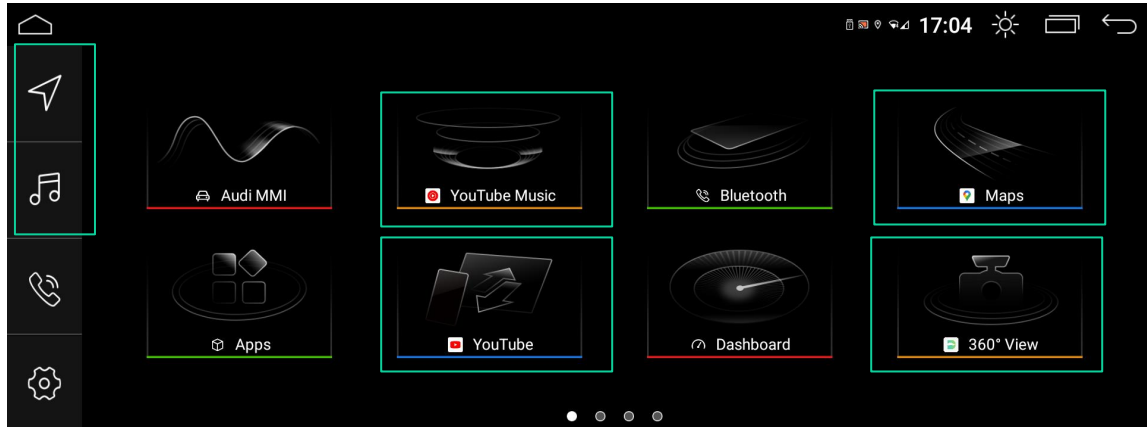
Quick Start Guide: Post Installation Setup

- A. Go to 'Settings'→'System'→'Factory Settings' →Password '8866' → Car mode. **Choose right car model for your vehicle.**



B. Some main menu icons (marked below) are customizable.

Press and hold the icon until an app gallery popup appears.



Choose a desired app to associate with the icon. Click once for execute the app.

C. Setting time

Connect to the internet using Wi-Fi or Mobile Data. Check if your time is correct. If incorrect, go to **'Apps' → 'Settings' → 'General' → 'Time and Date'** and deactivate automated time and date. Set correct time zone manually, and then reactivate automated time and date.

At booting, the system may briefly show a wrong time. This is because GPS sync is not complete. Once GPS time sync is complete, the correct time will be displayed automatically. If time does not update within a minute or consistently wrong, check GPS antenna or GPS Y cable connection. GPS reception is essential to maintain clock in offline mode.



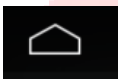
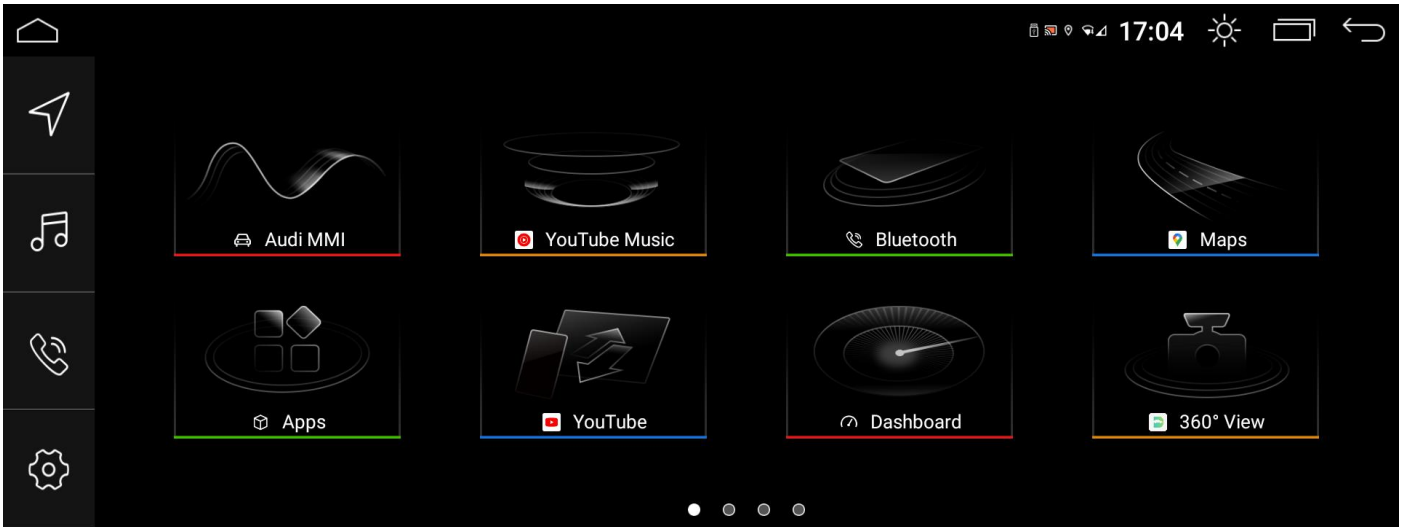


Contents

Main User Interface	4
Swipe down menu.....	6
Car Settings.....	7
Audio	7
Language	9
Screen.....	9
Network.....	10
System.....	11
Reverse View	22
Apps	24
Sound Effect app	27
MMI console button support.....	29
Using split screen	31
Running Wired CarPlay	32
Running Wired Android Auto	32
Running wireless CarPlay and wireless Android Auto for the first time	33
'3G MMI' User Interface – Display your car model in the left carousel.....	35
Frequently Asked Questions	36

User Manual

MAIN USER INTERFACE



Home button: bring the interface back to the main user interface.



Light Off: Turn off the screen completely until user touch the screen. Background tasks such as music playing in background will be kept.

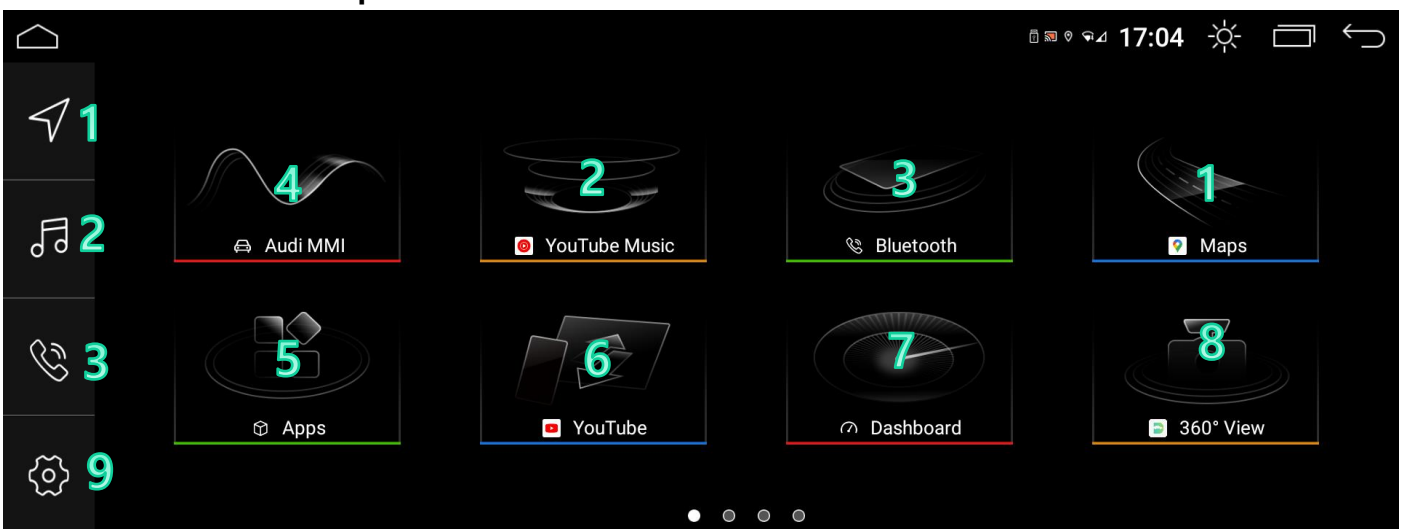


Recent apps: Show recently used apps. Also, used for split screen feature




Back button: bring the app/interface back to previous activity.

A. Function icon explanation



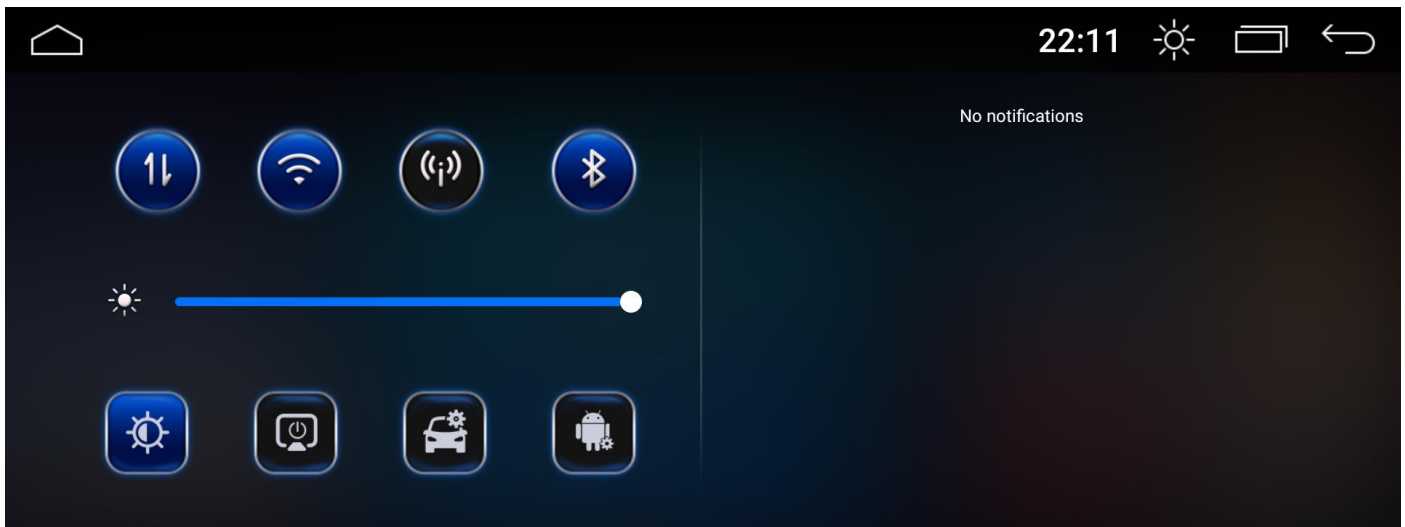
1. **Navigation app:** Press long to assign an navigation app such as Google Maps, TomTom, Sygic, iGo, Open street. Tap once to run the assigned app. It is



associated with MMI hardware key A(see below). Left side column items are always appearing even if you swipe the app pages for something else.

2. **Music app:** Press long to assign a music app such as YouTube Music, Apple Music, Spotify, etc. Tap once to run the assigned app. It is associated with MMI hardware key B(see below). Left side column items are always appearing even if you swipe the app pages for something else.
3. **Bluetooth Handsfree app:** Tap once to run Bluetooth handsfree app. You can choose GOCSDK(RSNAV proprietary and default) or Audi Original Factory Handsfree under Car Settings.
4. **Audi MMI Interface:** Tap once to see Audi's original factory interface. In this mode, touching will bring back you to the Android interface. Operate the MMI system in conventional way using knobs and buttons on the radio.
5. **User installed apps drawer:** All the apps installed to the device can be found and run here.
6. **CarPlay:** By default, it is blank icon marked with 'CarPlay'. Assign the Z-link app appeared as CarPlay in the app drawer prompt by pressing and holding the icon. Tap once to run the assigned function. The app name will be changed into appropriate one automatically like 'YouTube' example above. It is associated with MMI hardware key C(see below).
7. **Dashboard app:** This is RSNAV proprietary app to display real-time RPM, Speed, Remaining Fuel Capacity, Outside Temperature, Seat belt status, Parking brake status. The measurement unit displayed here can be changed under the car settings, measurement unit option.
8. **DVR shortcut:** AHD(Third party AHD 720p front view camera), CVBS(conventional low resolution analog video camera), USB (C500 ADAS driving recorder), 360 APP(Ultimate version 3D surround view app) will be available here by pressing and holding the icon. Assign a desired function. It is associated with MMI hardware key D(see below).
9. **Car settings:** Important settings of RSNAV device is available here. It is explained well in later pages.

SWIPE DOWN MENU.



This menu will appear if you swipe your finger from the top of the screen to the bottom in most apps. Notification area is reserved for apps to alert your attention.



Cellular Data On/Off toggle: Turns on/off the internal modem. (mobile data)



Wi-Fi On/Off toggle: Turns on and off the Wi-Fi.



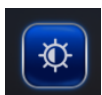
Hotspot On/Off toggle: Turns on and off the Hotspot created by S4 device.



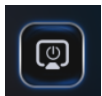
Bluetooth On/Off toggle: Turns on and off RSNV S4 Bluetooth, not effective on Audi original Bluetooth interface.



Brightness Control Bar: Controls backlight intensity.



Brightness override: Turn the backlight on maximum value regardless of your headlight status. Useful in cloudy day situation.



Screen turn-off: Change the screen into a black screen keeping the background apps.



Car Settings: Runs Car Settings for RSNV device.

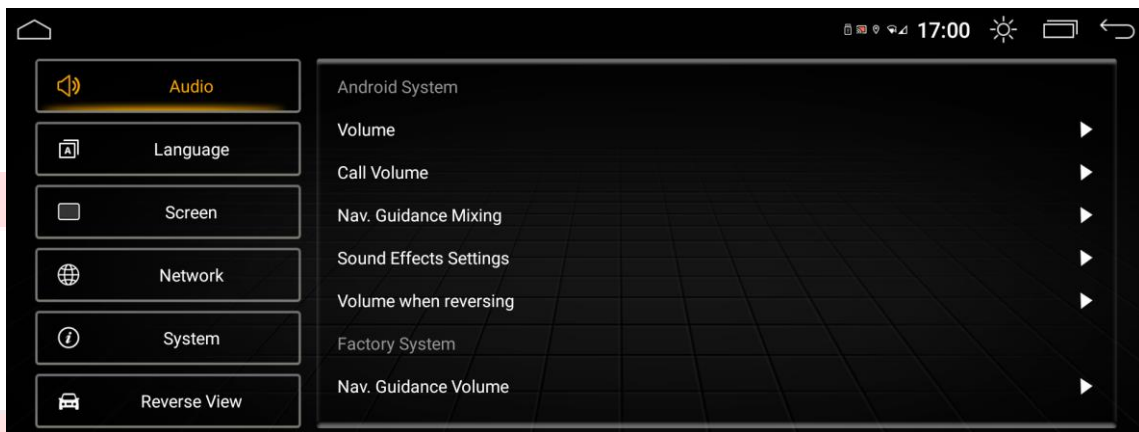


Android Settings: Runs Android System Settings.

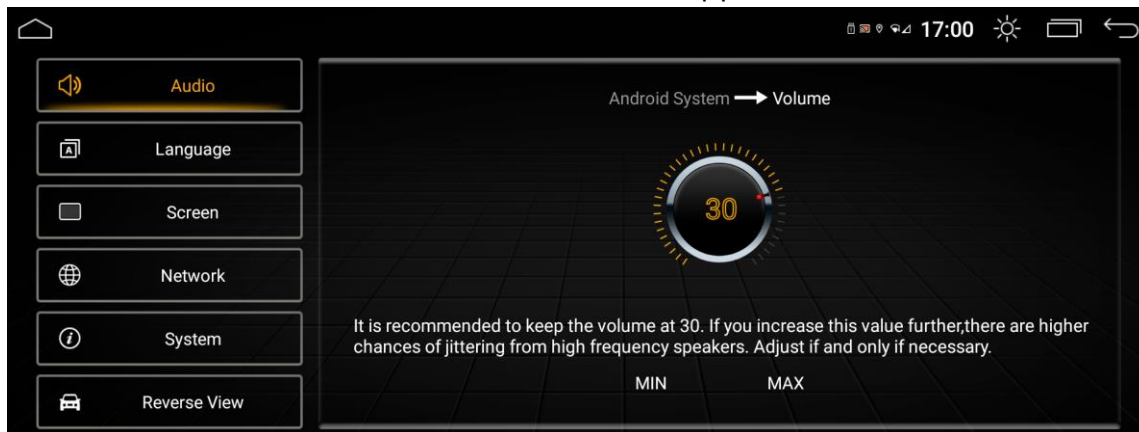
CAR SETTINGS

Various configuration and settings are available at this app. It is important to make your setting exact for your car model or configuration.

Audio

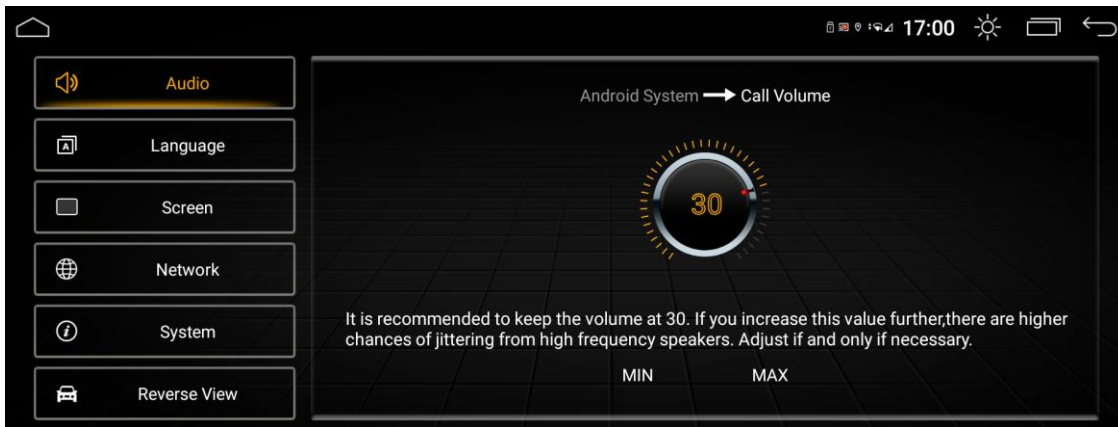


- **Volume:** Master volume for Android apps.



It is recommended to keep the volume at 30. If you increase this value further, there are higher chances of jittering from high frequency speakers. Adjust if and only if necessary. For example, you may regulate it if you removed Audi's factory amp and replaced with an aftermarket DSP amplifier and need 100% output.

- **Call Volume:** Separate volume control for handsfree call(GOCS SDK) and android navigation voice guide volume.



- **Nav. Guidance Mixing:** This is to regulate the volume balance between the Audi original radio function (AM/FM/Satellite) and inserted sound from Android app's voice guidance. Value 5 means radio volume and the Android navigation voice guidance is mixed 1:1 ratio. If you want to hear the navigation guidance louder, increase this value.



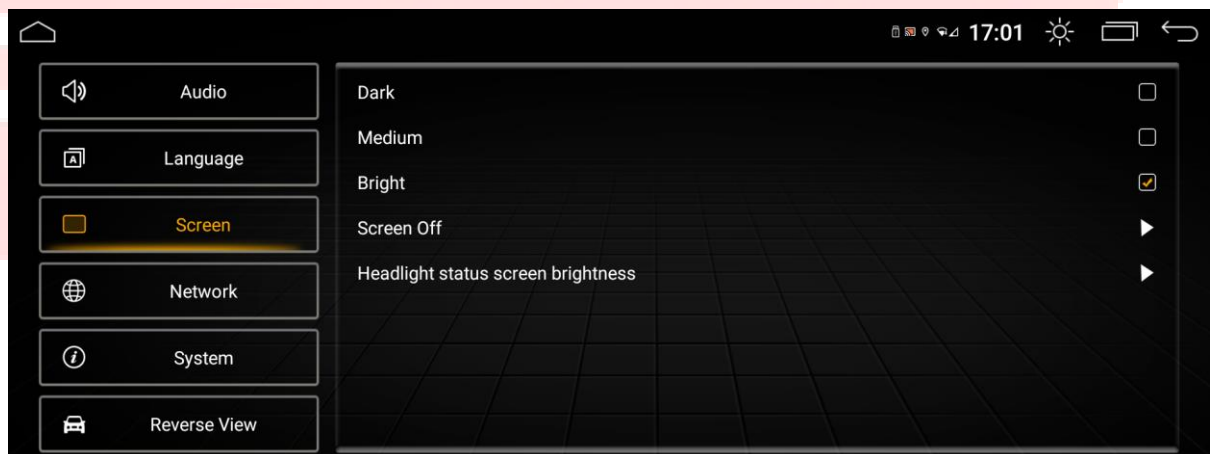
- **Sound Effects:** See 'Sound Effects' app.
 - **Volume when reversing:** This is to regulate the master sound volume only when you are in reverse. By default, it is 0, meaning that all sound will be muted if you shift to reverse.
- **Nav. Guidance Volume:** This controls the volume of center speaker(left front speaker for B8 variants) individually when used for handsfree and navigation guidance announcement. Nav. Guidance mixing functionality must be enabled (and center speaker bypass must be connected properly at the time of installation except B8 cars). It is not applicable to those cars without center speaker. For B8 cars, by default, the RSNV harness is equipped with left front speaker bypass module.

Language



You can select user interface language. More language will be available in future update. You can contact us if you want to contribute the translation of menu to correcting error(s) and improvement(s).

Screen



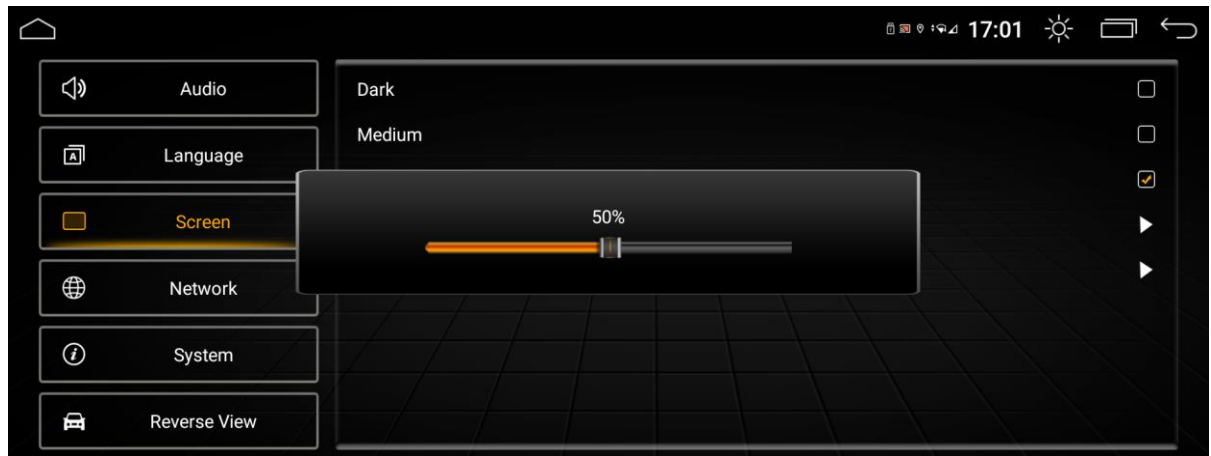
Dark: keep the backlight brightness at 50%

Medium: keep the backlight brightness at 80%, default.

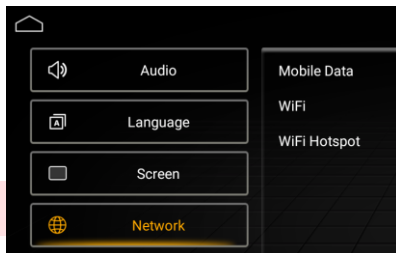
Bright: keep the backlight brightness at 100%

Screen off: Change the screen into a blackscreen. Backlight will be kept on.

Headlight status screen brightness: You can set up desired backlight brightness when headlight is turned on. If you think the screen is too bright on night time, lower this value.

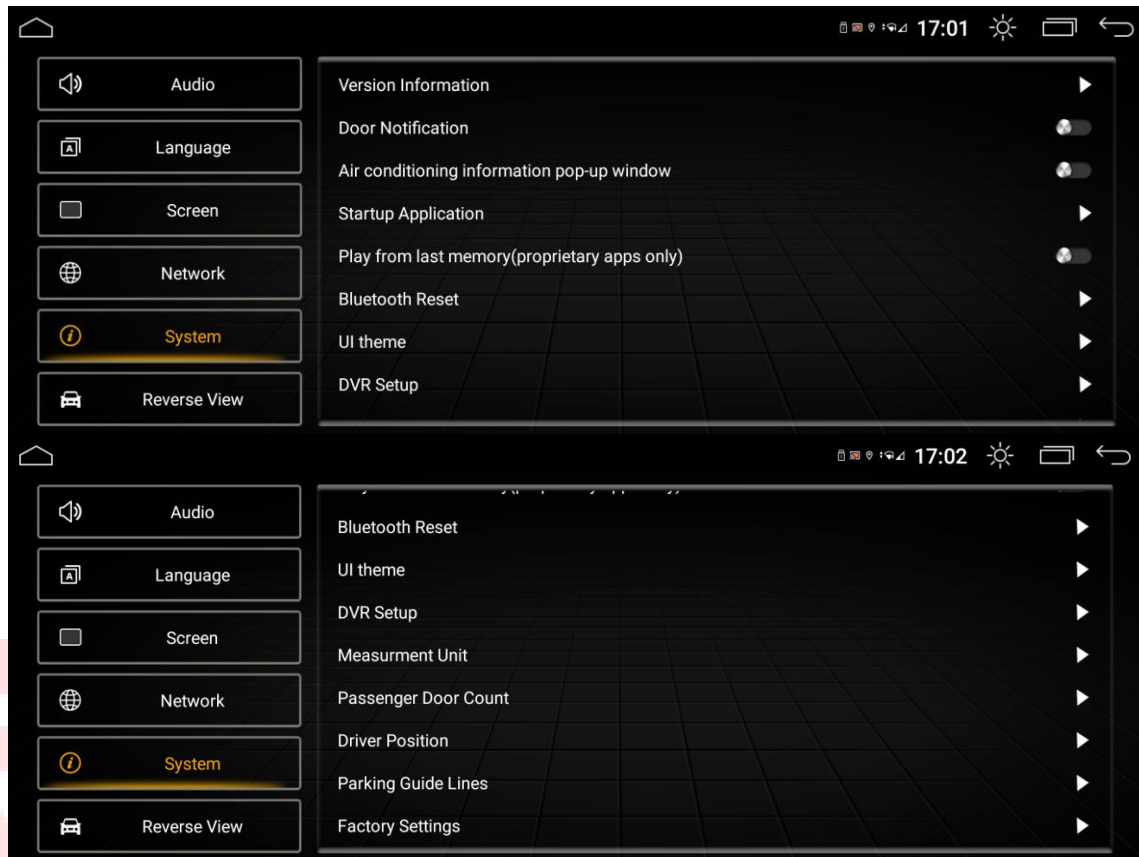


Network



- **Cellular Data toggle:** Turn on/off the mobile data feature using SIM card. Separate data service subscription required.
- **Wi-Fi:** Open Android native Wi-Fi menu.
- **Wi-Fi Hotspot:** Open Android native Hotspot menu.

System



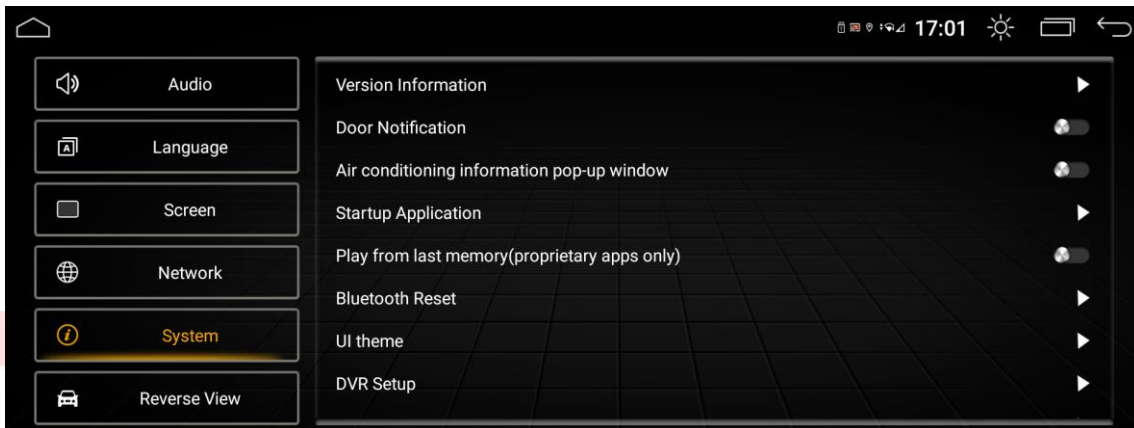
a) Version Information

MCU version	46_02_2022.06.13.15.65
8844 version	AD4G0_HD_103
System version	SC665SCEUA_02.12.05.02.01.20220618165050.01
USB update	▶
MCU update	▶

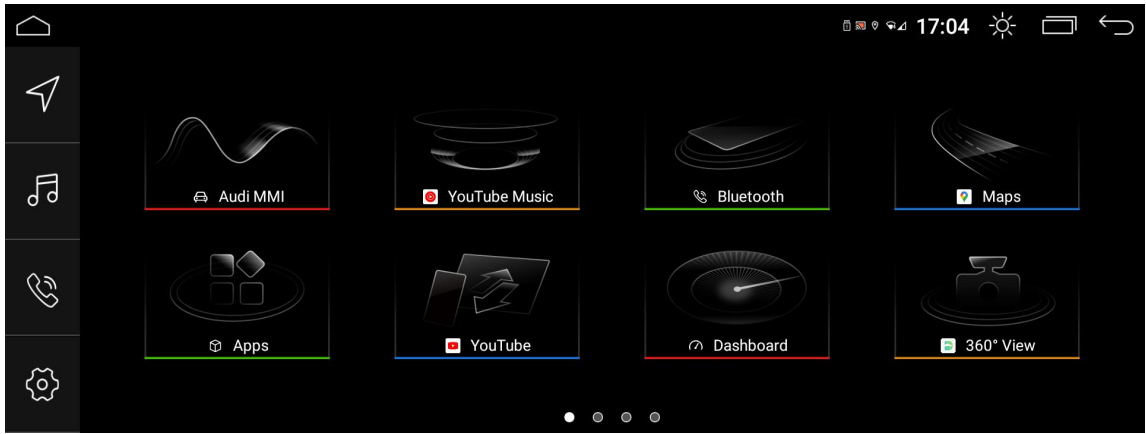
Displays system software version information.

- **MCU version:** This is related to the hardware functionality and communication with the original car system. Tap this 10 times fast will bring you to a logging menu. You may be asked from us to bring the system log, and we will be providing how to generate a system log from the logging menu.
- **8844 version:** This is display driver and parameter version information.
- **System version:** This is the version information of the RSNV Android software. '20220618165050' above means that the release time of this software is June 18, 2022, 16:50 PM(China Standard Time).

- **USB Update:** Perform the system software (Android) update. The update zip archive must be in following path: USB Drive/update/update_ADXXXX_XX.zip ('XX' is sub-model number)
- **MCU update:** Perform the microcontroller firmware update. This affects display, sound, CANBUS function of the device. The mce update file must be in following path: USB Drive/update/mcuupdate/mcuUpdate_ADXXXX_XX.mce



- b) **Door notification:** Enable/Disable the graphic overlay when a door is opened.
- c) **Air conditioning information pop-up window:** Enable/Disable the graphic overlay when climate control is being used. Supports most of B8 cars. Not available for C7 or some other car models as they come with digital temperature display.
- d) **Startup Application:** You can set up an application to run automatically at boot.
- e) **Play from last memory (proprietary apps only):** will resume music playing from where it was left last time. Not all the music apps support this.
- f) **Bluetooth Reset:** Reset GOCSDK Bluetooth feature. Perform this GOCSDK Bluetooth is erratic. You need to erase existing GOCSDK profile in your mobile phone manually. This has no effect on HPF+A2DP mode or SPP+HID mode.
- g) **UI theme:** toggle between MIB3 style interface and MMI style interface
MIB3 style



3G MMI style

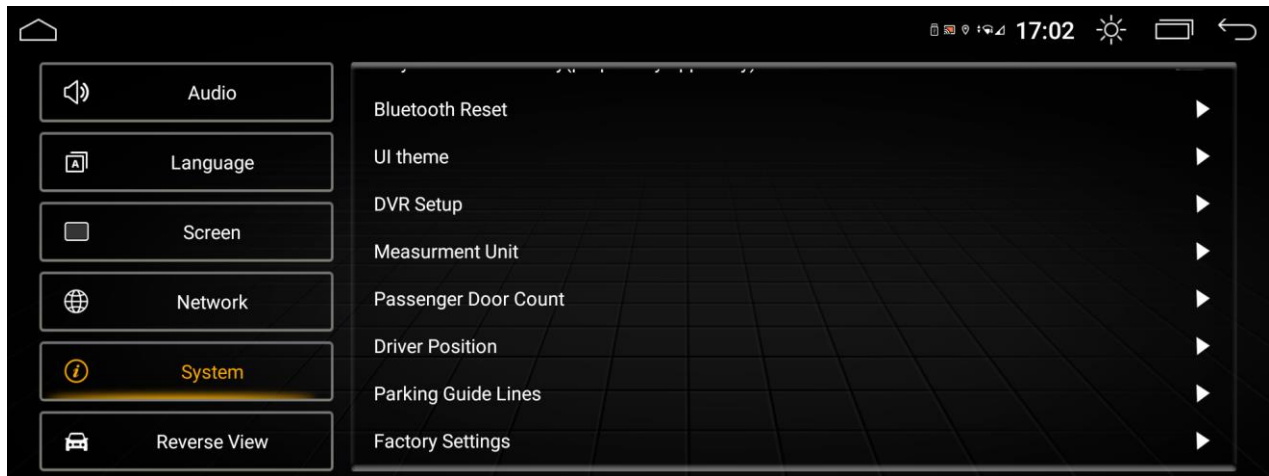


h) **DVR setup:** AHD/CVBS/USB/NONE

If set for AHD or CVBS, will show the video feed from auxiliary video input labelled DVR on the main harness. AHD is Analog High Definition camera and up to 720p 25hz is supported. CVBS is Analog composite video and usually ~520 TV-lines are standard ones.

If set for USB, then will launch ADAS app for USB ADAS Camera. (C500 driving recorder)

If set for none, it will do nothing when DVR feature is requested in various situations.



i) Measurement Unit

Select the measurement unit system wide

Km/h, Celsius, Liter

Mph, Fahrenheit, Gallon

Mph, Celsius, Imperial Gallon

j) Passenger door count: Choose 2 door coupe or 4 door sedan to display the door notification correctly.

k) Driver position: Left for driver seat on the front left or Right for driver seat on the front right of the vehicle as in UK, AUS, Ireland, NZ, JP, etc.)

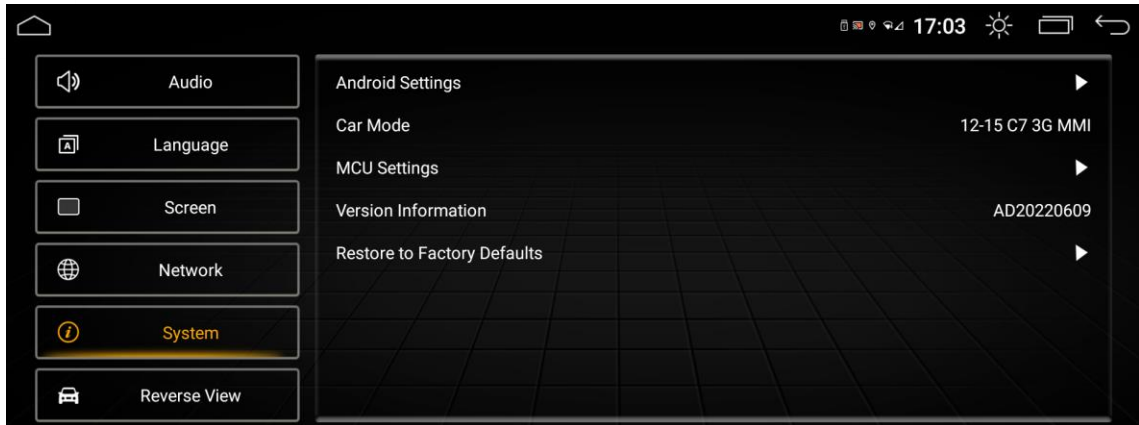
l) Parking Guidelines: Turn on and off the graphic overlay of dynamic parking guidelines when the reverse view is on AHD, CVBS, 360-DET. No effect on Audi factory original rearview/surround view system or RSNV Ultimate system.

m) Factory Setting

To access the factory settings, enter '8866' and press ok.

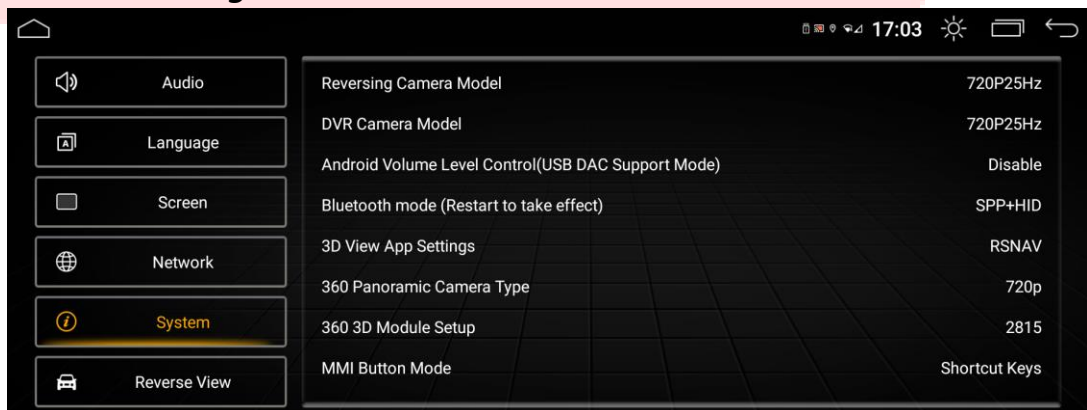
If 8866 password is not working right after the factory reset, then the system is busy working in background. Try again later.






- 1) **Android Settings:** Android function related settings.
- 2) **Car Mode:** Very Important to select the exact model for your car model and model year.
- 3) **MCU Settings:** Hardware function related settings.
- 4) **Version Information:** Reserved for RSNVW technician
- 5) **Restore to Factory Defaults:** Reset the system into the factory default and it will be erasing all the apps and personal data in the device. **This process is irreversible.** Enter 8866 to proceed.

(1) Android settings

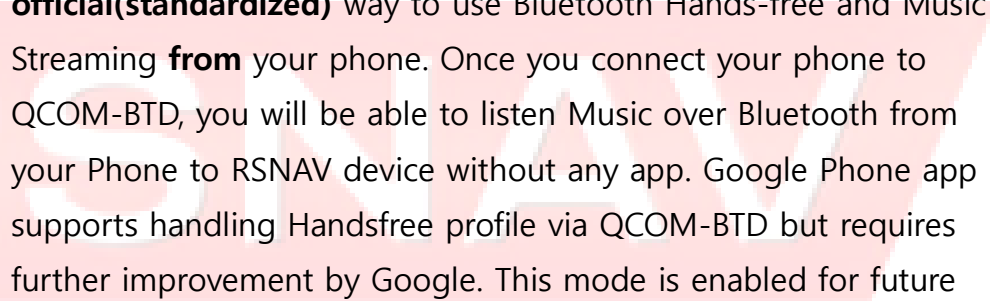


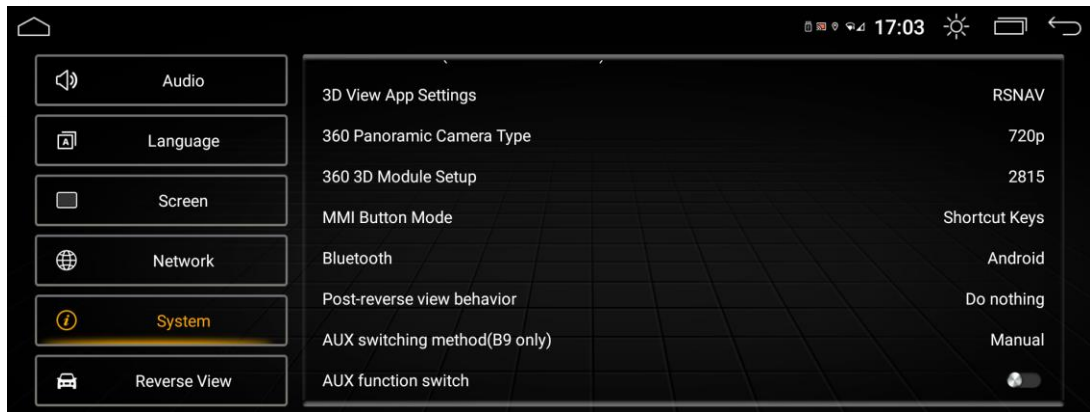
- (a) **Reversing Camera Model:** CCD labelled RCA plug supports both AHD and CVBS. The right camera type must be set here. Contact your supplier to verify the true technical spec of your camera.
- (b) **DVR Camera Model:** DVR labelled RCA plug is reserved for front facing camera and the plug supports both AHD and CVBS. The right camera type must be set here. Contact your supplier to verify the true technical spec of your camera.
- (c) **Android Volume Level Control(USB DAC Support Mode):**



To protect the pre-tuned value with Audi factory amplifier(s) Android volume levels are fixed to certain values. Android volume level control can be found 'App'-'>'Settings'-'>'Sound'. Enable this option if you are using external USB DAC or there is a specific reason to regulate those volumes manually such as some notification sound is too loud.

(d) Bluetooth mode (Restart to take effect)

- **GOCSDK mode:** for Conventional (RSNAV bluetooth module, GOCSDK) Handsfree and Music Streaming with the supports for Wireless CarPlay and Wireless Android Auto.
 - **HFP+A2DP mode: 'Bluetooth Sink'** using Android 10.0 native BT library. It may look like GOCSDK mode but using Qualcomm's **official(standardized)** way to use Bluetooth Hands-free and Music Streaming **from** your phone. Once you connect your phone to QCOM-BTD, you will be able to listen Music over Bluetooth from your Phone to RSNAV device without any app. Google Phone app supports handling Handsfree profile via QCOM-BTD but requires further improvement by Google. This mode is enabled for future use. Many apps will be requiring this mode in coming future. Only wired CarPlay and Wired Android Auto would work in this mode. (Wireless CarPlay, Wireless Android Auto are disabled in this mode),
 - **SPP+HID mode:** Normal Bluetooth mode that RSNAV device can connect to your Audi Original BT system to stream music (like you connect your phone to use Audi Bluetooth system for phone call and music streaming - 3G MMI High Plus or up only). Also, you can connect to specialty Bluetooth devices such as radar detector system, *OBD Eleven*, Bluetooth joypads, etc. that require full Bluetooth 5.0/4.2 BLE feature in this mode. Wireless CarPlay, Wireless Android Auto are disabled in this mode, but only Wired CarPlay and Wired Android Auto would work in this mode.
- 



(e) 3D View App Settings (applicable to Ultimate only): Choose RSNAV. Other modes are reserved for certain market (low-cost version).

(f) 360 Panoramic Camera Type (applicable to Ultimate only): Select the right camera type that you are supplied with. By default, RSNAV supplies **720p**. Here, 720p or 1080p can be set. You might use 1080p AHD camera for surround cameras (front, rear, left, right), but 1080p AHD camera generates a lot of heat and may hinder the system performance. If continuously overheated the system and/or cameras will fail prematurely.

(g) 360 3D Module Setup: Choose 2815. The other option is reserved for certain market (low-cost version).

(h) MMI Button Mode: Shortcut keys or Directional keys. See shortcut key support on the later part of this manual. Default is Shortcut keys.

(i) Bluetooth: Choose the primary Bluetooth Handsfree application. Choose Android if you are using GOCSDK. Choose Audi if you are using Audi factory handsfree system using the factory mic.

(j) Post reverse view behavior:

Do nothing: Will be back to Android interface immediately

Show front cam: Will show DVR(front camera) feed once you switch from reverse to drive until you reach 15km/h or up to 30 seconds. Parking View Button support must be disabled to ensure smooth operation of this feature.

Keep Audi OEM: Will show Audi original rear view/surround view until you reach 15km/h or up to 30 seconds. Parking View Button

support must be disabled to ensure smooth operation of this feature.

Keep 360: Will show CCD labelled RCA input video feed triggered by 360-DET signal detection wire or 360-CAN mode until you reach 15km/h or up to 30 seconds. Parking View Button support must be disabled to ensure smooth operation of this feature.

(2) Car Model

The image displays three screenshots of a car infotainment system's 'System' menu, showing a list of car models with checkboxes for selection. The 'System' menu is highlighted in yellow in each screenshot. The time 17:03 is visible in the top right corner of each screen.

Car Model	Selection Status
7. B9 MIB High-res	<input type="checkbox"/>
6. B9 MIB low-res	<input type="checkbox"/>
5. 09-12 B8 3G MMI HNAV	<input type="checkbox"/>
4. 09-12 B8 Concert/Symphony	<input type="checkbox"/>
3. Reserved 3	<input type="checkbox"/>
2. 2013+ B8.5 Concert/Symphony	<input type="checkbox"/>
1. Reserved 2	<input type="checkbox"/>
0. Reserved 1	<input type="checkbox"/>
12. 10-11 C6 3G MMI HNAV	<input type="checkbox"/>
11. Audi A3 8V MIB2 Hi-res	<input type="checkbox"/>
10. Audi A3 8V RMC	<input type="checkbox"/>
9. Q3 PQ35 3G MMI	<input type="checkbox"/>
8. Q3 PQ35 RMC	<input type="checkbox"/>
7. B9 MIB High-res	<input type="checkbox"/>
6. B9 MIB low-res	<input type="checkbox"/>
5. 09-12 B8 3G MMI HNAV	<input type="checkbox"/>
4. 09-12 B8 Concert/Symphony	<input type="checkbox"/>
20. 05-09 2G MMI A4	<input type="checkbox"/>
19. 12-15 C7 RMC	<input type="checkbox"/>
18. 16-18 C7 MIB2	<input type="checkbox"/>
17. 09-18 B8 3G BNAV	<input type="checkbox"/>
16. 13-18 B8.5 3G BNAV	<input type="checkbox"/>
15. 12-15 C7 3G MMI	<input checked="" type="checkbox"/>
14. 10-11 Audi Q7 3G MMI	<input type="checkbox"/>
13. 2013+ B8 3G MMI HN+	<input type="checkbox"/>

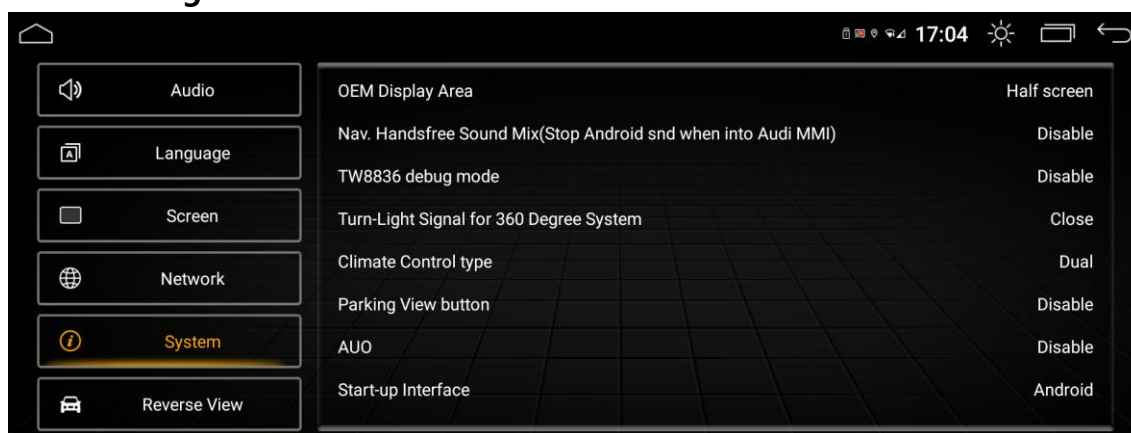
It is important to select right car model, model year of your car. One hardware **does not support** different radio models. E.g., Concert/Symphony B8 model hardware cannot be used for 3G MMI models. (vice-versa).

If this setting is not valid, Audi Original MMI won't be displayed correctly, MMI console will be off-line, there will be multiple warnings on your dashboard warning parking brake malfunction, ACC malfunction, etc.

It is generally allowed to switch between previous and next model year(09-12 to 13+). Check in what mode your car's original system works the best. You need to check the functions of original Audi interface display, MMI control, Climate control overlay graphic, Dashboard app.

If system hangs in scrambled screen, perform the hard reset by pressing reset hole with sharp object. After reset, the device will boot into Android normally for 5 minutes. If the screen stays scrambled, then disconnect the LVDS cable and perform the hard reset again. Within the 5 minutes, you must select the right profile for your car, otherwise the system will go into sleep.

(3) MCU Settings



(a) OEM Display Area: Half/Full: If set in half, the aspect ratio of Audi factory interface will be kept. If set in full, the Audi factory interface will be shown in stretched to fill the display.

(b) Nav. Handsfree Sound Mix: Enable/Disable. If disabled, then Centre speaker no longer works for handsfree/navigation guidance announcement. If this is enabled, Android music player will automatically stop when you switch into Audi original interface to listen to AM/FM/Satellite radio.

(c) **TW8836 debug mode: Reserved for hardware engineers. If enabled system may act erratically.**

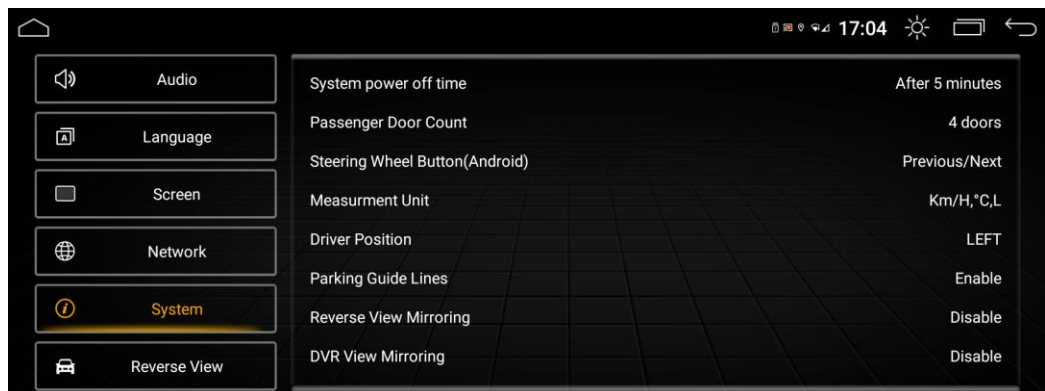
(d) **Turn-light signal for 360 Degree System:** If enabled, whenever a positive current detected through the 360 labelled detection wire, the system will automatically trigger the reverse view. This feature is useful for aftermarket 360-degree surround view system or aftermarket side view camera system that can signal RSNV device when your turn lights are on.

(e) **Climate Control Type:** Dual/Single. This option allows RSNV system to recognize your air conditioning system configuration.

(f) **Parking View button:** It switches the reverse view mode when the Parking view button is pressed. If you are using 'post-reverse view behavior' from Android setting menu, it is recommended to disable this function to ensure the smooth switching between cameras.

(g) **AUO:** Factory Reserved. **Do Not Switch unnecessarily.** It is to adjust display parameter and if wrong parameter is applied system will be locked up in scrambled image.

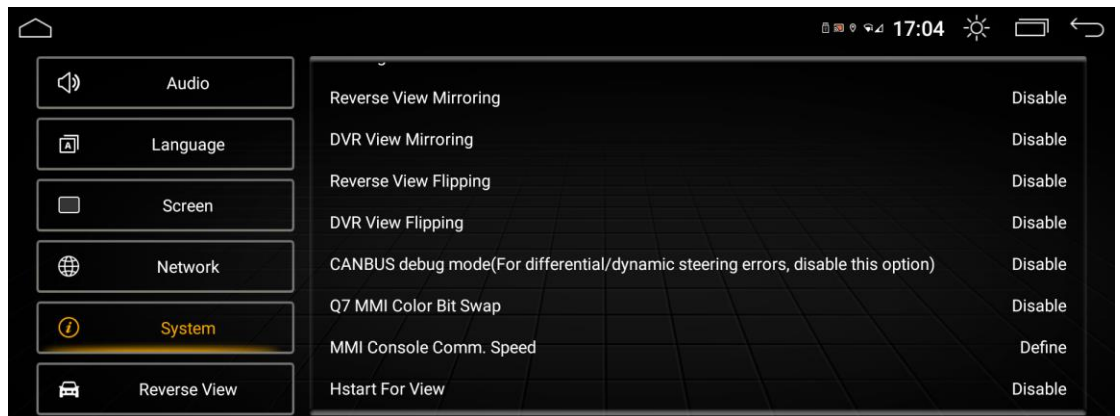
(h) **Start-up Interface:** Android/Audi. If selected Audi, it will show Audi factory interface by default at ignition. Then Android is accessible when Android Booting is complete in background and you touch the screen.



(i) **System power off time:** Immediately after ACC off/5min/10min/30min

Prevents the system to be turned off for prescribed time value after your Engine is turned off. Prolonged turn off delay time may stress your battery more.

- (j) **Passenger Door Count:** 2/4 doors. Provides the information to RSNNAV device if your car is 2 doors or 4 doors.
- (k) **Steering Wheel Button (Android):** If enabled, Steering Wheel Buttons will work both Android and Audi Instrument Cluster. RSNNAV device cannot prevent steering buttons working on instrument cluster. If you want to preserve your steering wheel buttons for Audi feature, leave it disabled.
- (l) **Measurement Unit:** Changes system default measurement unit's system wide except third party Android App. Supports 1) Km/h, Celsius, Liter 2) Mph, Fahrenheit, Gallon 3) Mph, Celsius, Imperial Gallon
- (m) **Driver Position:** Left/Right. If your door information displayed is opposite to the actual, then change driver position here to correct.
- (n) **Parking Guidelines:** On/Off. If Off, the dynamic parking guideline overlay will be removed from your aftermarket reverse view. Useful if you are using different parking aid system.
- (o) **Reverse view mirroring:** if Enabled, then the image of reverse video port of RSNNAV will be shown in mirrored.
- (p) **DVR view mirroring:** if Enabled, then DVR video feed will be shown mirrored.



- (q) **Reverse view flipping:** Turn the aftermarket video feed of reverse view in 180 degrees.
- (r) **DVR view flipping:** Turn the auxiliary video feed in 180 degrees.
- (s) **CANBUS debug mode:** After RSNNAV device installation, if you are getting **Sports Differential Fault, Dynamic steering error** and/or **ABS fault**, then Disable this option.

(t) **Q7 MMI Color Bit Swap:** Reserved for Q7 units. Enable if and only if Audi Original MMI color is wrong in a Q7.

(u) **MMI Console Comm. Speed.**

This is for certain 2012 B8 cars or 2008~2010 cars with retrofitted with 3G MMI High Plus.

Define: following the prescribed speed according to Car mode profile.

Low: Set 3G MMI console communication speed to 9600bps. Use this if your MMI console is manufactured between 2007~2010.(2008~2012 Car model Year)

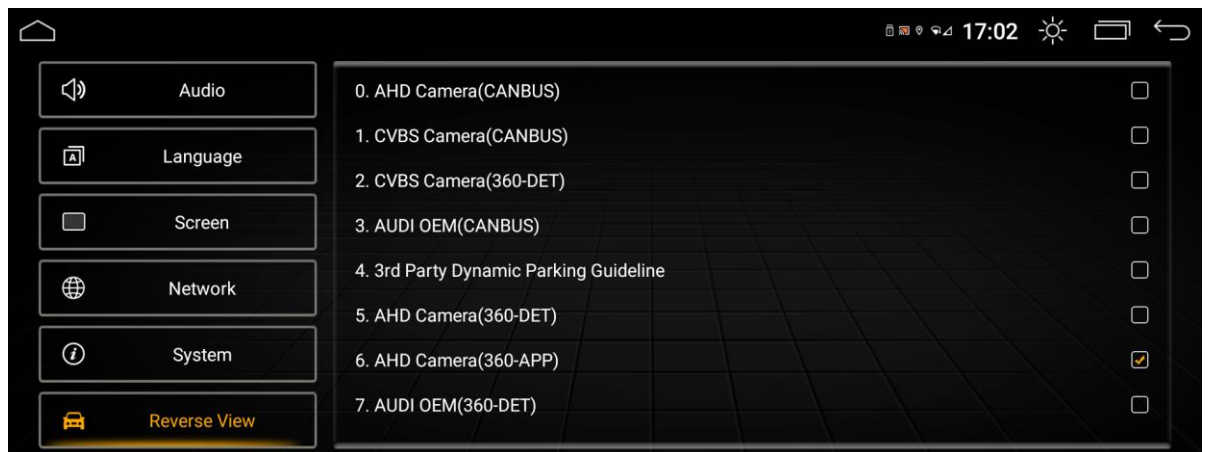
High: Set 3G MMI console communication speed to 19200bps. Use this if your MMI console is manufactured from 2011(2013+ Car model year with 3G MMI High Plus infotainment system)

(v) **Hstart for view:** a display related parameter, do not switch unless instructed by RSNV.


(4) **Restore Factory Setting**

This erases all your personal data and turn back the system into factory pre-shipping default. Password to perform this action is '8866'.

Reverse View



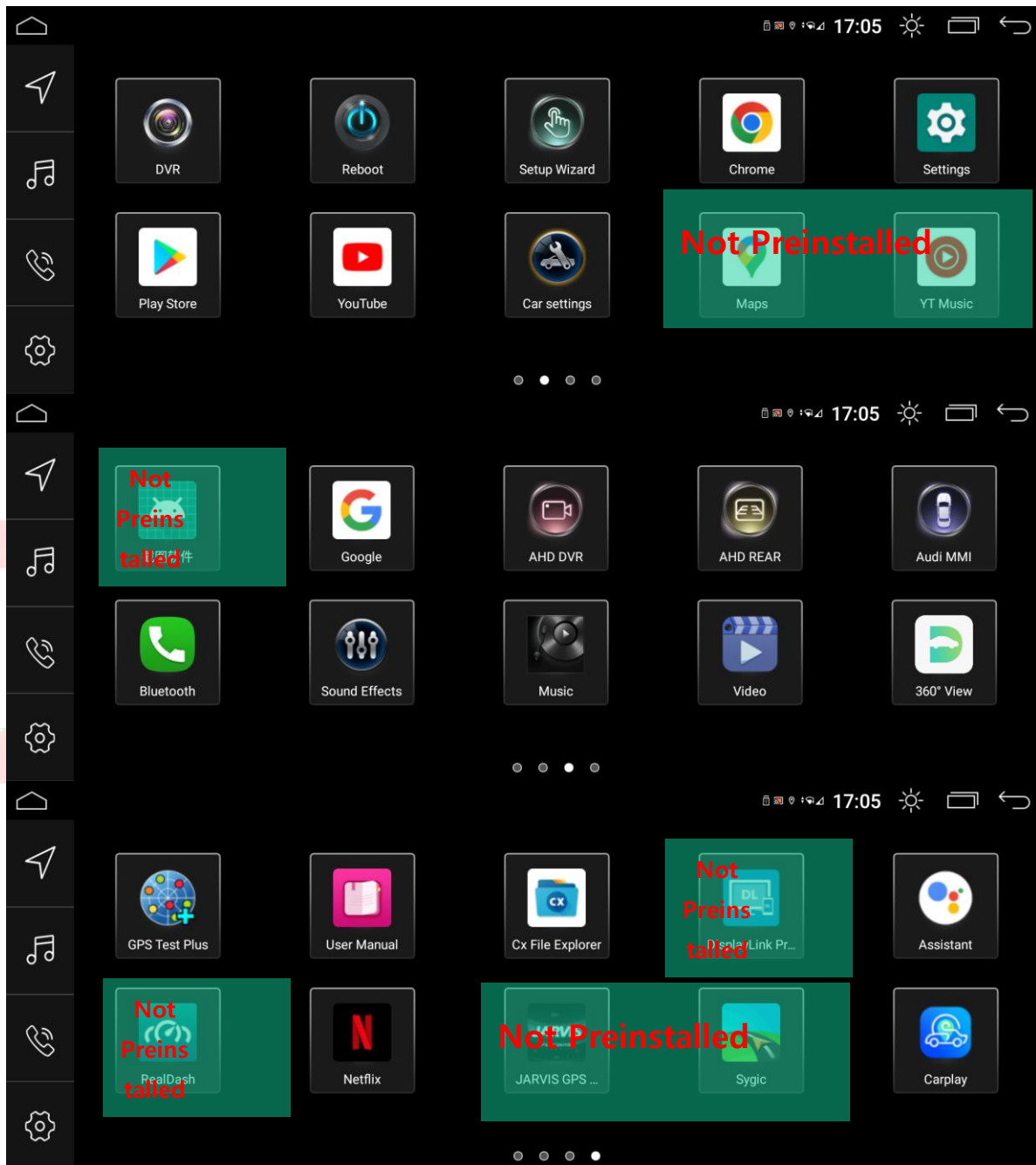
- 0. **AHD Camera (CANBUS):** Choose this if you installed RSNV supplied AHD camera and your transmission is Automatic.
- 1. **CVBS Camera (CANBUS):** Choose this if you installed third party CVBS camera and your transmission is Automatic.
- 2. **CVBS Camera (360-DET):** Choose this if you installed third party CVBS camera, your transmission is manual, choose this if your reverse/surround view system is Audi original factory equipment.

- 
3. **AUDI OEM (CANBUS):** Choose this if your reverse/surround view system is Audi original factory equipment.
 4. **3rd Party Dynamic Parking Guideline:** This is reserved for third party bumper mount ultrasonic sensor parking system.
 5. **AHD Camera (360-DET):** Choose this if you installed RSNV supplied AHD camera, your transmission is manual, and you spliced the trigger wire from the camera with RSNV device's 360-DET labelled wire.
 6. **AHD Camera(360-APP):** Choose this if your device is RSNV Ultimate system and all four cameras are successfully installed.
 7. **Audi OEM (360-DET):** Choose this if your reverse/surround view system is **Audi original factory equipment**, your transmission is **Manual**, Choose this if your reverse/surround view system is Audi original factory equipment.



RSNAV

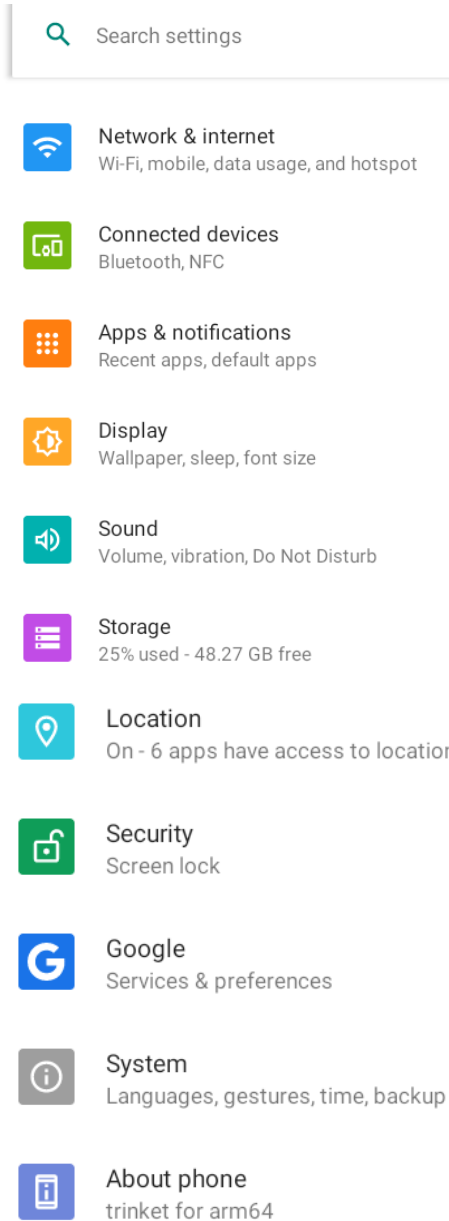
APPS



This is the application gallery where all installed apps appear.

1. **DVR:** Runs the assigned DVR function. Assignment can be done in Car Settings.
2. **Reboot:** Reboot RSNV device
3. **Setup Wizard:** runs setup wizard guide app that runs automatically after each factory reset. It guides you hardware post installation setup.
4. **Chrome:** An Internet Browser

5. **Settings:** Android 10.0 system settings. Wi-Fi, Hotspot, Mobile Data, Time and System display language and much more settings are available here.



- **QCOM-BTD** in **HFP+A2DP, SPP+HID Bluetooth** mode can be controlled under the **'Connected Devices'**
- **WiFi, WiFi hotspot related settings** including choosing 2.4Ghz or 5Ghz for hotspot(for wireless Android Auto and wireless CarPlay) are under the **'Network and Internet'**
- **App permission** related settings are under the **Apps & Notification**
- **Android Sound** related settings are under the **Sound**, but **USB DAC mode must be enabled** in car settings to use this section properly.

- **Time and Date setup** is under the **System section**. It is important to **set your time and date correctly according to your time zone**. Some security measures use time-based encryption and if time setting is incorrect, apps with such features won't work properly.
- 6. Play Store:** App marketplace that you can download/purchase Android apps.
- 7. YouTube:** Popular online video platform.
- 8. Car Settings:** Important settings of RSNV device is available here. It is explained well above.
- 9. Google:** Popular Google account service and management app.
- 10. AHD DVR, AHD REAR, Audi MMI:** Runs respective functions as they imply. If you are using a third-party launcher, these icons will appear in the launcher's app drawer. Use these icons to access their respective functions.
- 11. Bluetooth:** Runs GOCSDK Bluetooth app, Audi Bluetooth or Android Bluetooth menu according to the mode setup made in Car Settings.
- 12. Sound Effect:** See Sound effect section below
- 13. User Manual:** Shows this manual.
- 14. Music, Video:** Basic music, video player that can play music, video files from USB, Internal storage, and SD card. Supports "Continue playing from the last time" function.
- 15. 360 View (Ultimate only):** Runs 360 degree 3D surround view app.
- 16. GPS Test Plus:** Test GPS service functions.
- 17. User Manual:** Open this manual.
- 18. CX file explorer:** a pre-installed file explorer app.
- 19. Assistant:** The shortcut for Google Assistant activation. To use this service, install/update following apps to the latest from Play Store.
 - A. The 'Google' App
 - B. Google Assistant
 - C. Google Text to Speech
- 20. Netflix:** Popular video streaming service. Due to the Netflix company's policy, this app cannot be update via Play Store. Netflix allows their app to be installed from Play Store to the devices that they approved. This app is sideloaded – means installation file(.APK) was downloaded and installed manually from a file explorer. You can sideload the latest

version of Netflix if necessary, but be sure to obtain APK file from reliable sources that is free from virus or hacking tools. This does not include any subscription or mod to watch their contents free.

21. CarPlay: Also known as Z-link. This is the app to run CarPlay, Android Auto, and Phone mirroring. RSNNAV version comes with the license for Wired CarPlay, Wired Android Auto, Wireless CarPlay, Wireless Android Auto, Phone Mirroring via Apple TV, Phone mirroring via Miracast. See its manual for operation.

SOUND EFFECT APP



Equalizer function:

- 13 Frequency Bands + 3 tones
- 8 presets + Custom section
- **'Standard' is professionally tuned** to work with Audi Standard Amplifier at RSNNAV master volume 30.

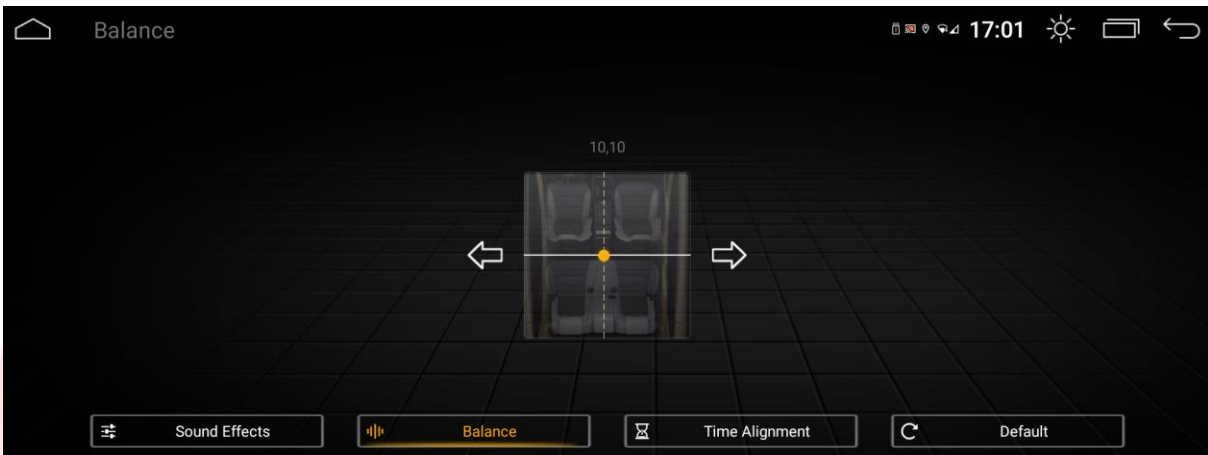
If you want more sub-woofer and/or bass power, adjust it in Audi's original interface sound settings. Also adjust the volume using radio volume knob or steering key. Adjusting RSNNAV Master volume above 30 is not recommended.

- **Each frequency band can be adjusted between -8dB to +8dB. It is important to adjust the up-down bar(s) a step by step as one step changes value by 1dB.** A 1 dB change in a sound equates to about a 26% difference in sound energy (remember that a 3 dB difference is a doubling of energy levels). In terms of subjective loudness, a 1 dB change yields just over a 7% change. If you increase value too

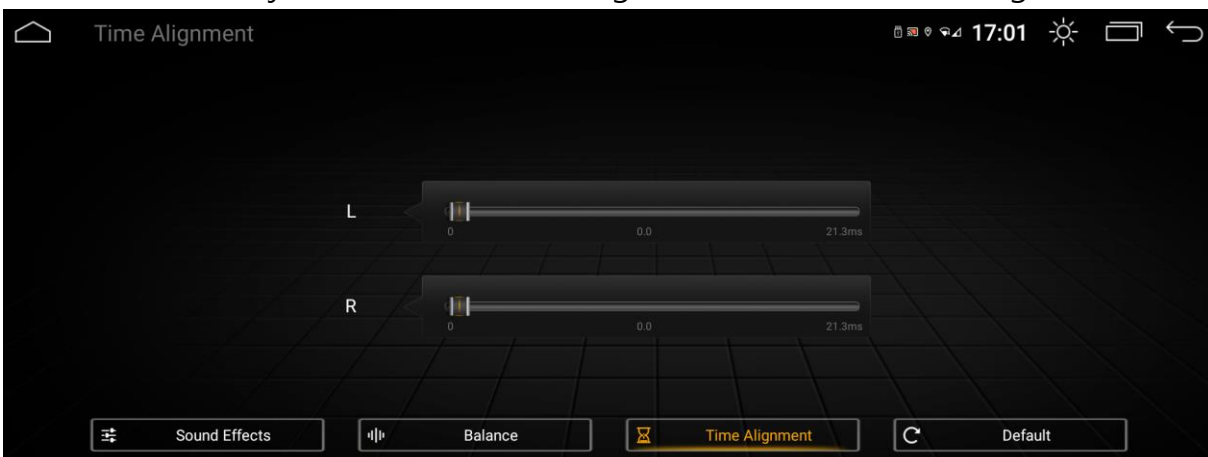
aggressively or too much, your speakers will make jittering sound telling you that the sound energy is beyond the level the speaker can handle.

- Q: The Q parameter stands for quality and controls the shape of the EQ curve. High Q values use steeper curves, which affect a smaller range and allow you to pinpoint specific frequencies. Low Q values affect a wider range of frequencies and tend to sound gentler when used subtly.

Balance: Only left right can be adjusted here.



RSNAV S4 is made with i2S protocol to deliver 16bit 2Ch linear PCM data digitally. It does not support Dolby Digital or DTS 5.1 channel natively. It has Rohm BU32107EFV-M sound processor which supports up to 4 channels, but for sound delivery, only 2Ch is reserved for Android speaker out. Other 2Ch are reserved for the mixing of Android Voice guidance, Handsfree with Audi's radio (AM/FM/Satellite) stream. Considering the sound processor's S/PDIF limit (to 2Ch linear PCM, up to 96kHz) and Audi Auxiliary input also being 2Ch, the sound balancing is available only left to right, not front to rear. Audi's amplifiers are minimum 4ch and its sound processor can mix 2ch linear PCM from RSNAV into multi-channels. If you need further balance adjustment, use Audi's original interface sound settings.



Time Alignment: You can adjust sound delay of left or right channel here up to 21.3ms. The reason you need to set time alignment is because speakers in a car are different distances from the listener. If your car is left hand driver (the driver seat is in the front left) then increase the delay value until the center of your sound stage is aligned to the front of you. By default this value is 0 for both channels and if you are very sensitive you can feel that the sound stage from RSNAV S4 is slightly skewed to the left (for LHD, vice versa for RHD).

Default: Restore the sound effects to the factory default value.

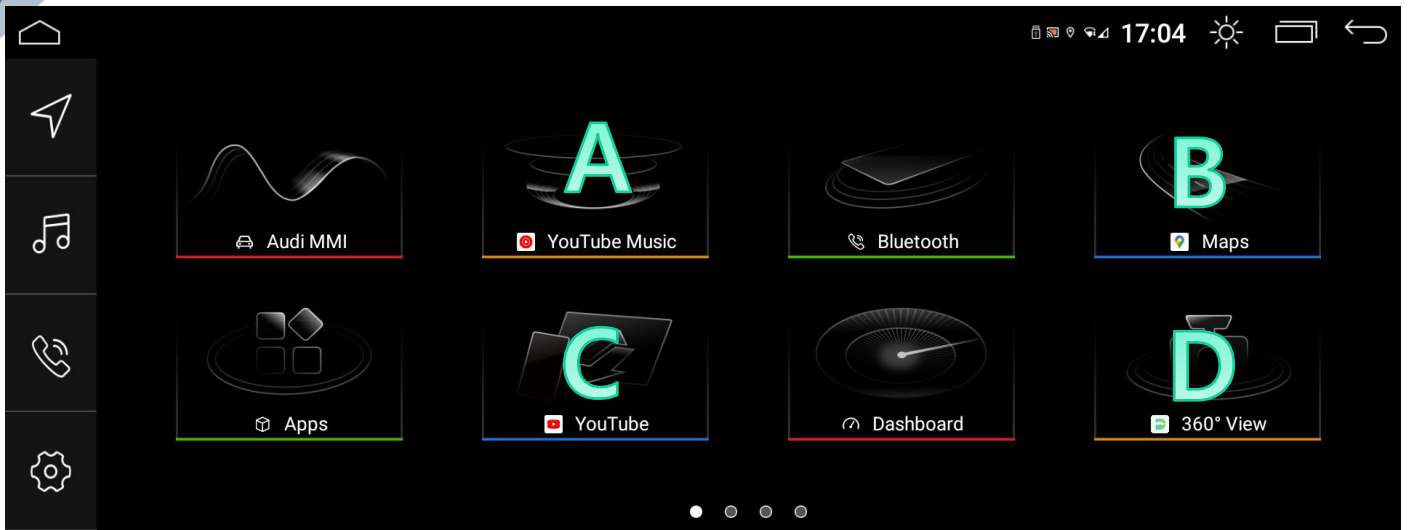
MMI CONSOLE BUTTON SUPPORT

While you can use MMI's jog dial and joystick to navigate in Android interface without touching the screen on most of the time, there are special functions assigned to the four buttons around the MMI jog dial.

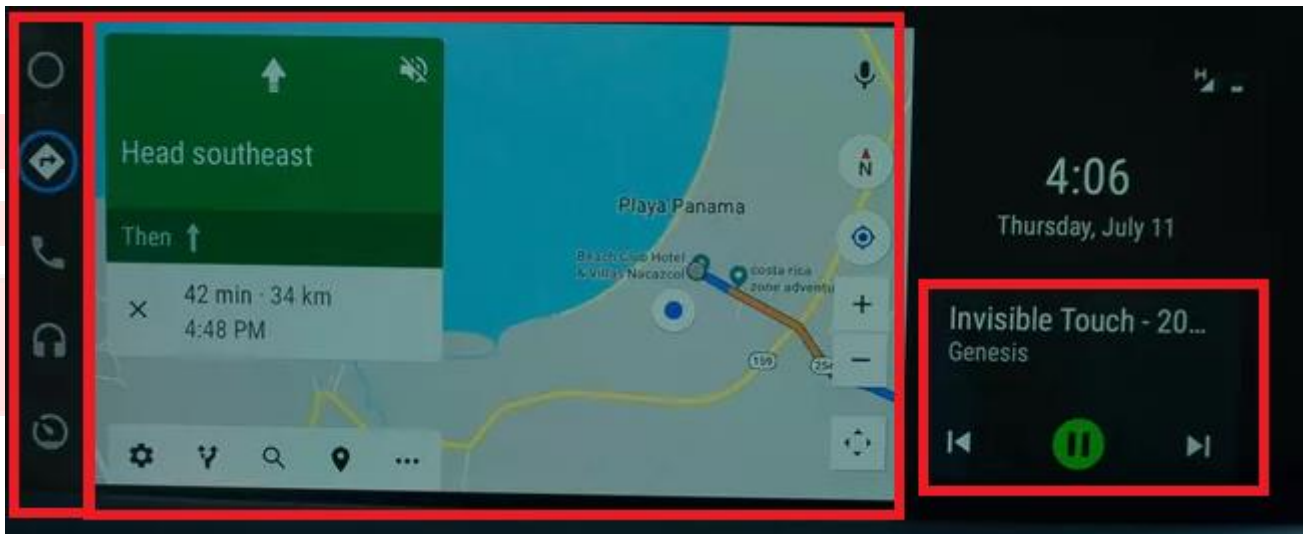
a. Shortcut key mode for general use

You can choose Audi MMI hardware buttons to run any app assigned to the A,B,C,D positions of the main interface. To use this function, select the shortcut keys under the MMI button mode settings on Android Settings of Car settings.





b. Directional key mode for Android Auto



Android Auto has 3-layer Interface in principal.

By rotating the rotary knob (green arrows) you can move around the icons only in the same layer.

To jump between layers, use upper soft keys marked with **blue directional arrows** above.


'A' button is for Google Voice Assist.

'B' button is forced toggle between night map/day map mode.

USING SPLIT SCREEN

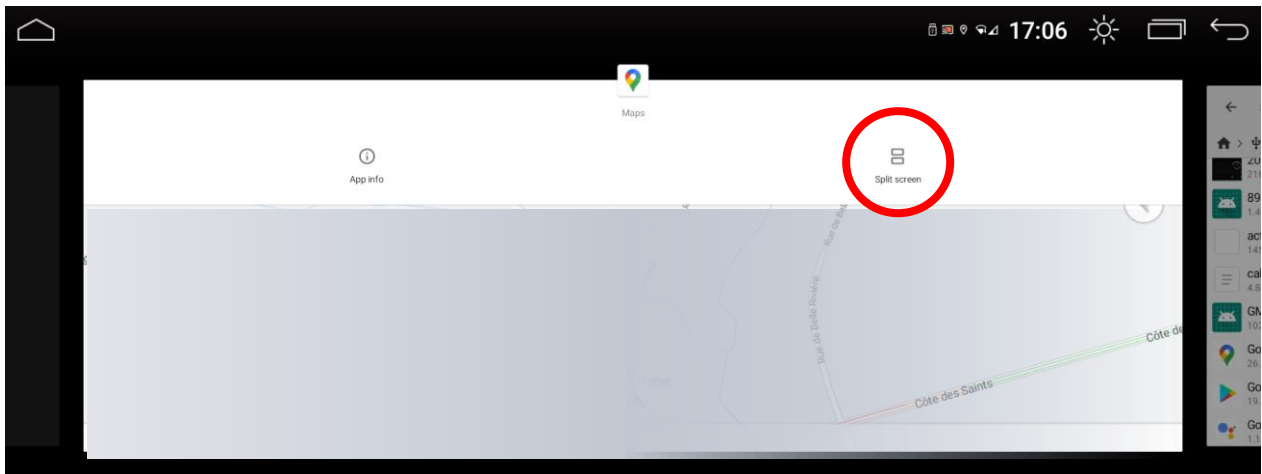
Split screen feature is NOT available for all apps. The feature must be supported by the app. If an app is not working in split screen, please contact the app developer.


Steps:

- A.  Press this button on the screen.
- B. List of the recently used app will appear. Choose the app that you want to place the left side of the screen.



- C. Tap the app's icon once.



- D. Tap split screen icon, and the app will be positioned automatically to the one side.
- E. Once your desired app is placed on the left side, choose another app you want to display in the right side. If the app is not running, tap home button  and run the app. The chosen app will run in split screen on the right.

RUNNING WIRED CARPLAY

From the app drawer run CarPlay app(Z-link)

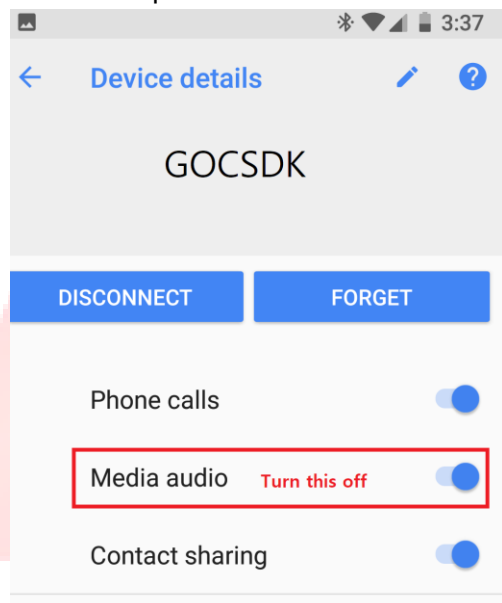
Connect your iPhone using **Genuine Lightning cable** to USB2 CarPlay labelled port. USB0 or USB1 may not work. Wired CarPlay requires OTG function via USB and USB2 port is reserved switching between OTG mode and normal mode. The switching is done automatically once the CarPlay app is running. In rare cases, if USB2 was used for another USB device, then the switching may take time. If so reboot the device and try again in USB2.

If 'connecting' message appeared in the screen but CarPlay is NOT running, then USB connection must be checked. Loose USB cable in any of one end may cause interruption. **It is important to use the Apple MFI certified lightning cable.** If you use cheap copy lightning cable, CarPlay won't run or crash.

RUNNING WIRED ANDROID AUTO

From the app drawer run CarPlay app(Z-link) and connect your Android phone using **USB-IF certified cable** to USB 0(3.0) or USB 1 port.

Note that if you are using GOCSDK for your Bluetooth handsfree, **make sure that the GOCSDK Bluetooth connection's Audio profile to be disabled in your phone's Bluetooth menu.** If not, in Android Auto, Music play will be immediately stopped after playing 0.5 seconds. It's because Android Auto is connected via USB cable while your phone's Bluetooth is connected to RSNV's GOCSDK and when you send play command, redundant command goes through both USB and Bluetooth. Because Bluetooth is slower, the late command would be accepted by your phone as if pause button is pressed. It's an Android Auto bug.



RUNNING WIRELESS CARPLAY AND WIRELESS ANDROID AUTO FOR THE FIRST TIME

Prerequisite: Bluetooth mode must be set to 'GOCSDK mode' and background connection setting in Z-link app must be enabled.

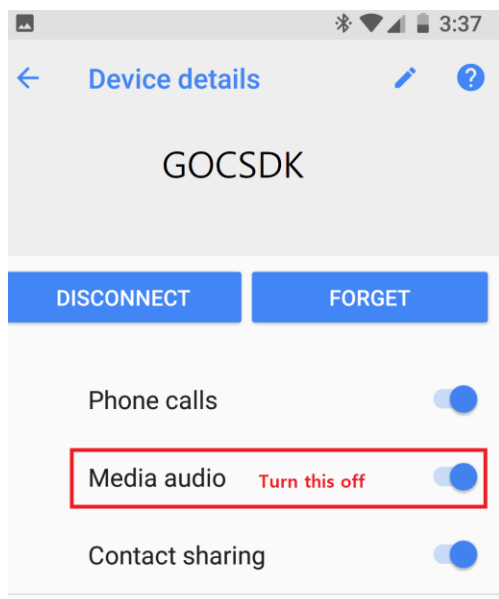
CarPlay:

1. Run Bluetooth app from the main menu
2. Go to Bluetooth settings. You must see GOCSDK name and password 0000
3. Press on 'Search' or alternatively connect your iPhone to GOCSDK Bluetooth
4. Press your iPhone searched on the screen.
5. Wait for the PIN code confirmation both in your iPhone and RSNV device
6. Accept the Bluetooth connection. Confirm allow access to the phonebook in your iPhone.

7. Wait few minutes while RSNV runs Z-link app automatically and creates a hotspot for your iPhone. This is an automatic process.
8. Confirm running CarPlay in your iPhone.
9. CarPlay will launch automatically and your Bluetooth connection to GOCSDK will be disconnected automatically. This is normal. Do not turn off Bluetooth, or Wi-Fi hotspot manually on your iPhone. You cannot use Wi-Fi on your iPhone while using CarPlay.

Android Auto:

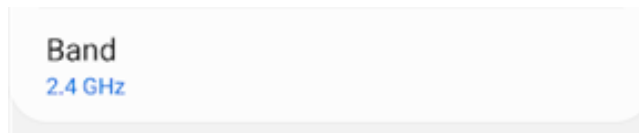
1. Run Bluetooth app from the main menu
2. Go to Bluetooth settings. You must see GOCSDK name and password 0000
3. Press on 'Search' or alternatively connect your phone into GOCSDK Bluetooth.
4. Press your Android phone searched on the screen.
5. Wait for the PIN code confirmation both in your Android phone and RSNV device. If required enter 0000 as PIN code. Only when prompted so.
6. Confirm access to the phonebook in your Android phone
7. Wait few minutes while RSNV runs Z-link app automatically and creates a hotspot for your Android phone in background. This is an automatic process.
10. Android Auto will run via wireless radio. Do not turn off Wi-Fi hotspot manually on your phone. You cannot use Wi-Fi on your phone while using Wireless Android Auto.
11. Make sure that the GOCSDK Bluetooth connection's Audio profile to be disabled in your phone's Bluetooth menu. The phone calls and contact sharing should be enabled so that Android Auto could begin next time automatically.



If you do not turn off media audio here, in Android Auto, Music play will be immediately stopped after playing 0.5 seconds. It's because Android Auto is connected via Wi-Fi hotspot while your phone's Bluetooth is connected to RSNNAV's GOCSDK and when you send play command, redundant command goes through both Wi-Fi hotspot and Bluetooth. Because Bluetooth is slower, the late command would be accepted by your phone as if pause button is pressed. It's an Android Auto bug.

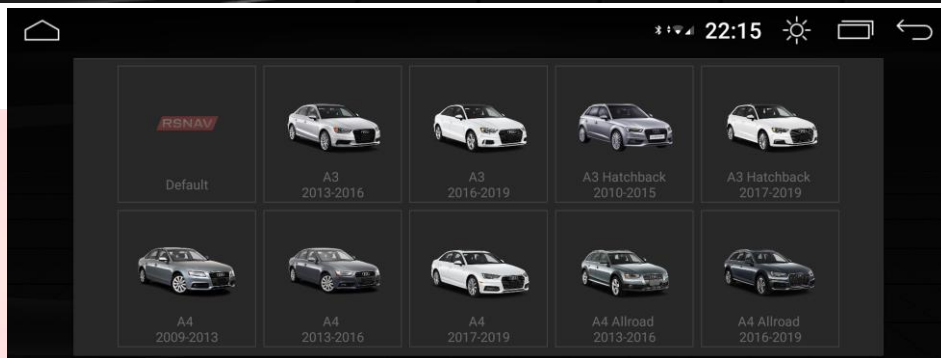
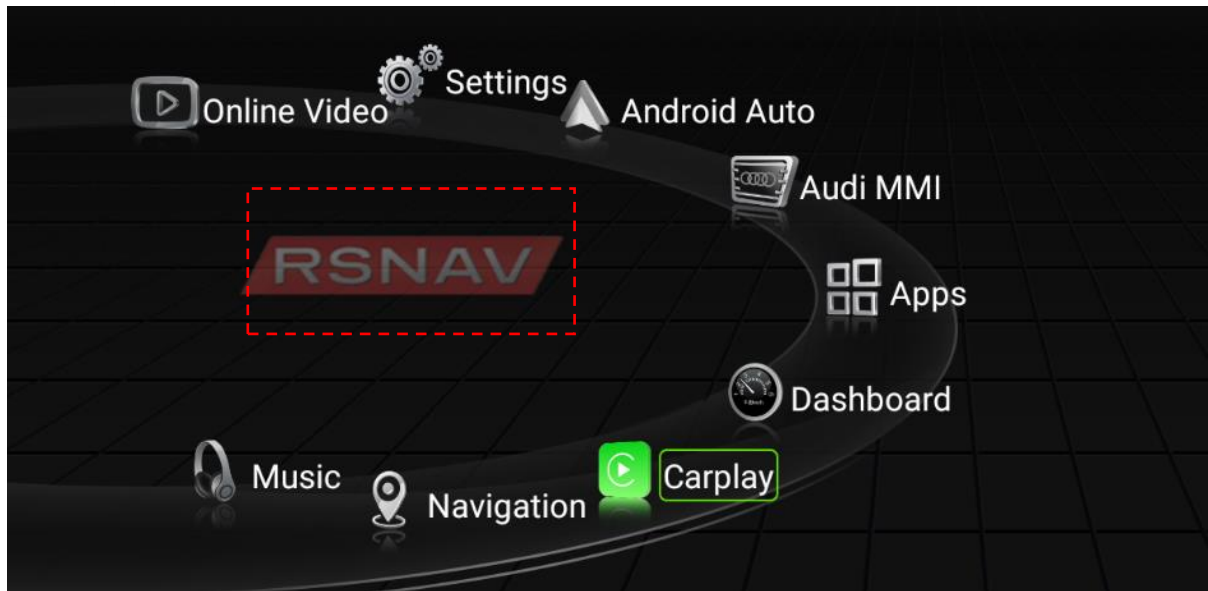
If wireless connection is not happening more than few minutes, or automatic connection is not working at some point, reset GOCSDK Bluetooth from its menu, delete GOCSDK pairing information on your phone 'manually' and repeat above steps above fresh.

You must understand that wireless CarPlay/Android Auto aren't perfect at all, and that is why RSNNAV brought back wired connection for both. CarPlay and Android Auto service are constantly updated in your phone and often those updates break up what used to work fine. If your wireless CarPlay/Android Auto crashes in the middle, then try to change the RSNNAV hotspot frequencies (2.4Ghz <-> 5Ghz) and set up the one that works stable. See Android Settings, Network and Internet, WiFi Hotspot settings, Band option in your RSNNAV device.



'3G MMI' USER INTERFACE – DISPLAY YOUR CAR MODEL IN THE LEFT CAROUSEL.

Press RSNNAV logo and hold until a car image gallery appears and select proper image for your vehicle.



Custom image is supported, and you need to copy an image file into RSNAV device using the USB storage device. The supported file format is PNG with transparent background.

The standard grid size is 720x320, but 680x380 would look best in 10.25" or up (360x200 for 8.8"). Changing image size isn't supported, thus you need to crop your custom image in multiple size and look for the best fit.

FREQUENTLY ASKED QUESTIONS

Q. Is touch operation work in Audi Interface?

A. No, it does not. Audi Interface is not made for touch interface.

Q. My Concert/Symphony radio dials and buttons are not working in Android.

A. The radio buttons are not supported. RSNAV is considering making a small device to capture the signal from those buttons.

Q. My MMI console (controls around gear shifter) is not working

A. First, make sure MMI console labelled plugs are joined to each other. It is required to join the 4-wire plug from the screen to the main harness. Second, make sure if you have selected correct car model for your car.

Q. My MMI console has two blinking lights in an interval after the car is turned off and locked.

A. This is normal. It will be turned off in 20 minutes. Its battery consumption is insignificant.

Q. I have fault codes in my VAG-com diagnostic reading.

A. Some of them are normal. For example, Error code 0295 – Missing Display Unit is just telling you that the Audi original piece is gone. We cannot fake device ID. Also, there would be intermittent communication error with MMI console E380, and this is also normal. Audi system is detecting unusual activity when the console is used by Android system.

If your car has **dual clutch transmission/dynamic steering wheel/sports differential**, and you have sports differential error, dynamic steering wheel system and/or ABS fault, please activate CANBUS debug mode from Car Settings.

If your airbag warning is on, and along with it, parking brake malfunction appears, then you may have turned your car on while Hazard button assembly was detached. This will NOT go away automatically and has to be reset by Vag Com or OBD Eleven. All the other generic OBD II tools may not work for most of the time. If this error constantly comes back, contact us.

Q. I have no sound.

A. RSNV relies on external audio input or aux of your radio/MMI headunit. Thus, you need to tune into External Audio Source or Aux in the media tab of your Audi interface. If those options are not available, refer to the installation manual. For Concert/Symphony radio and some MIB RMC radio, your installer must connect the RSNV Aux output into your car's Aux port using AMI to AUX cable or male to male audio extension cable. For 3G MMI, you do not need to connect the AMI cable's 3.5mm plug into anything. The aux connection is already configured in the supplied cable, but you need coding or AMI to AUX cable to simply activate the internal switch of AUX in MMI head unit.

Q. In general, all the sound volume from Android system is low/high.

A. Please adjust your Aux input level in Audi original media source tab by pressing setting button. In there you can adjust input level.

Q. Mobile data is not working.

A. Mobile data function requires a paid subscription to a mobile network and requires Micro size SIM card from the service provider. Check SIM card direction if you have one. The metal contact side face down toward the screen usually. The modem is worldwide unlocked, but it may be necessary to register the device's IMEI number with the service provider. IMEI number is available under Android Settings – About – Hardware info.

Q. The bottom of the screen is hot.

A. That is normal. It is where high intensity LED backlights are located. It gets quite hot in prolonged use.

Q. Wireless CarPlay used to work fine, but it is no longer connecting automatically.

A. Wireless CarPlay requires complete control and dominance of your iPhone's Wi-Fi. If you manually operate Wi-Fi in your iPhone such as connecting to a hotspot, it may behave unexpectedly. Also, often there is a bug that wireless CarPlay does not

connect to RSNAP hotspot in the background because your iPhone is already connected to a known Wi-Fi such as your home Wi-Fi. Try again in another place that there is no known Wi-Fi hotspot to your iPhone. This is an iOS bug.

Q. There is echo in phone call.

A. Adjust audio mixing ratio and/or center speaker volume in car settings. Audi's 3G MMI system is considerably old technology and has few microseconds sound processing delay, whereas RSNAP mic records sound without delay. Thus, sound played late in speakers are being picked up by mic and echoing. However, every car has different delay, thus it may be negligible in a case but serious in others. If you have too much echo, use Audi original Handsfree system.

Q. Google Maps is not working of not showing any map.

A. There is no pre-loaded maps for Google Maps and you need a internet connection to use it for live traffic information. Alternatively, you can use it offline only after you download offline maps for your area while you are connected to the internet. If desired, consider purchasing offline map apps such as Sygic, TomTom, iGo, Here from Play Store.

Q. Reverse-view is not automatically switching.

A. If your car has manual transmission, you need different wiring setup for your rear-view system. Please consult the instruction at wiki.rsnap.com
If your car has automatic transmission, it has to work. Review physical connections and power supply to your rear-view camera.
The camera trigger wire works only in 360-DET marked reverse view modes.

Q. The system is hanging in Audi original interface display and does not switch into Android with touching.

A. Android is booting, or Android is not working. Please allow 1 minutes to allow Android system to complete booting. If persist, try hard reset by poking reset hole for a click.

Q. The system is hanging in scrambled screen and unresponsive.


A. Wrong car model selected and locked. Perform hard reset poking the reset hole with a straightened paper clip. It may be necessary to disconnect LVDS plug if persist.

Q. Screen is not turning on and there is no backlight. Also, radio and MMI is not working.

A. Check your radio/MMI fuse on the passenger side. There is no separate fuse for S3 but it is getting power from your Radio/MMI.

Q. What is the warranty?

A. It is **one-year limited warranty of product replacement for hardware and material failure only**. The warranty date starts from the date you received the product. It does **NOT** cover anything related to app software issue other than Android operating system itself. For example, if certain app function such as wireless Carplay or Android Auto is not working, it is **NOT** eligible for warranty. **All the preinstalled apps and services are provided without any guarantee**. This is because modern software is overly complex and constantly being updated and such characteristic prevents hardware manufacturer to guarantee the functioning of software. **Contact the software provider or developer directly** if you have any trouble with certain



software. **No refund** is possible **14 days after the delivery**. You already agreed on it by checking 'agreed' on the terms and conditions of RSNNAV.com at the time of checkout. Consult 'legal' page of RSNNAV.com for more information.

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