



Installation and User Guide

BMW i8

For the Carplay MMI Prime

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Introduction

Thank you for making a purchase from BimmerTech! The CarPlay retrofit is do it yourself friendly, but if you're not fond of working on your car don't worry. You can always take your kit along with these installation instructions to one of our recommended installers:

<https://www.bimmer-tech.net/dealers>

or to any other professional installer in your area. If you will be handing the installation over to a shop from outside our recommended list ideally it should specialize in BMW vehicles.

If you will be installing the kit by yourself then it is recommended to do so in a clean, spacious, well lit and climate controlled garage without pressing time constraints. It's also possible to perform the installation in a driveway or parking lot if you prepare the correct tools and are accompanied by nice weather.

The installation requires disassembling various trim pieces of the vehicle so it's best to take your time, be gentle, careful and diligent in keeping track of which screw and clip came from where in order to reinstall the parts correctly. Make sure to test the devices operation before final reassembly.

Please read the instructions in full before beginning the installation and also make sure to have a look at the below installation videos.

The first one shows a previous version of our CarPlay MMI being installed in a 3-Series BMW. Because of this, the cable connections, DIP switches and settings will be different but the CarPlay MMI installation will be very similar.

<https://www.youtube.com/watch?v=EcFeoReDXkA>

Kit contents

- MMI WCPAA-BM12
- Plug and Play Harness
- USB/AV Harness
- LVDS (LCD) Video Output Cable
- WiFi Antenna



Recommended and useful tools

- BimmerTech Trim Tool Kit (Highly Recommended)
- T-20, T-25, and T-30 Bits
- Phillips Head Screwdriver
- Electrical Tape
- Zip Ties
- Pliers
- 8mm and 10mm Socket and Ratchet
- Double Sided Mounting Tape (Recommended)
- Sturdy Wire or Thin Hanger for Feeding wire
- Flashlight

Setting up the DIP switches on the MMI

The Multi Media Interface (MMI) included in your kit is the piece equipment that allows to transfer additional video signals different from the original iDrive view onto your BMW's factory screen. In order for the MMI module to work correctly the little DIP switches on the side of the MMI module will have to be set up according to your vehicles specification.

Important Note: Every time you change DIP switch settings make sure to disconnect the MMI modules POWER connector for 10 seconds. This will allow the new DIP switch settings to take effect. After that you can reconnect the power cable.

DIP switch 1: Always ON

DIP switch 2: Always ON

DIP switch 3:

DIP switch 3 is responsible for correct cooperation between the MMI module and your factory screen, ensuring that the image is displayed correctly with our device being connected between the original head unit and screen.

For big 10.2" and 8.8" panoramic screens set **3 to ON**

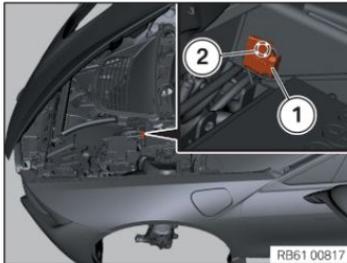
For the smaller 16:9 aspect ratio 6.5" screens set **3 to OFF**

DIP switches 4-8: Default OFF

Remember to disconnect the MMI from power after changing the DIP switch setup.

Disconnect high-voltage system from power

Before disconnecting the high-voltage safety connector, ensure that the vehicle is in "sleep" state. Disconnect any connected charging cables, open engine compartment lid, switch the ignition off, take the car key fob away from the car and wait at least 15 minutes before you proceed.

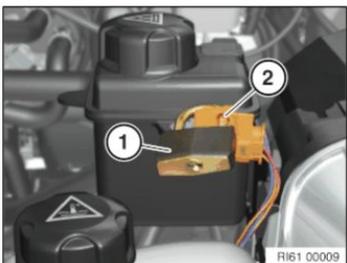


Disconnect high-voltage system from power:

Important:

The high-voltage safety connector cannot be fully disconnected.

Unlock high-voltage safety connector (1) and pull out until holes (2) on connector and connecting are fully exposed. The labeling "OFF" is visible on the high-voltage safety connector.

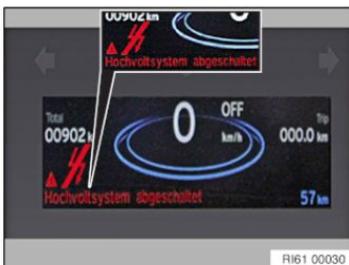


Secure high-voltage system against being switched back on:

Insert and lock shackle lock (1) in exposed hole (2) of high-voltage safety connector (2).

Important:

Store shackle lock key in a safe place.



Determine voltage free status:

Warning!

Mandatory steps prior to carrying out further repair work:

- Switch on the ignition and check the instrument cluster has been de-energized. The "High-voltage system deactivated" CC message must appear on the display.
- Pay attention to active high-voltage warnings (indicator light, check control, etc.), determine cause and correct problem.
- Only **disconnect the 12V vehicle battery** once the "High-voltage system deactivated" CC message appears on the instrument cluster!

Note:

Standard, the "High-voltage system fault" CC message is displayed if the ignition is off and the high-voltage safety plug has been disconnected. Zero voltage (high-voltage system switched-off) is only displayed with the ignition on.

Warning!

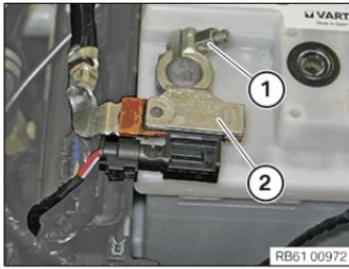
Mortal hazard!

If it cannot be established beyond doubt that the KOMBI is de-energized, work is not permitted to begin. Mortal hazard!

Before work begins, a qualified, certified electrician must verify that the system has been disconnected from the power supply (1000 V DC) using appropriate measuring devices and measuring procedures.

=> In this case, Technical Support must be contacted! Furthermore, the vehicle must be made inaccessible and blocked off with high-voltage barrier tape!

Disconnect battery ground lead (in the engine compartment)



Important:

Do not under any circumstances use force to detach or lever off IBS (2) from battery.

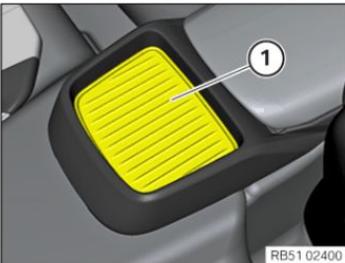
Slacken nut (1).

Disconnect IBS (2) from negative battery terminal and secure battery ground lead at side.

Remove storage compartment



Remove cup holder (1) upwards.



Note:

Only for equipment specification without cup holder:

Remove cover (1) upwards.



Release nuts (1).

Pull storage compartment (2) backwards and remove.

Remove center console cover



Lever out the cover (1) at the mark using the special tool 64 1 020.



Release screw (1).



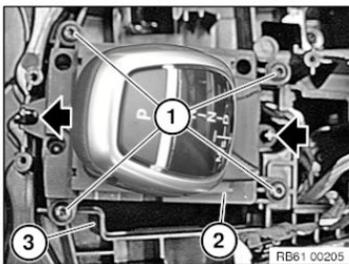
Lever out the center console trim (1) at the marked positions.
Feed out the center console trim (1) to the rear.

Important:

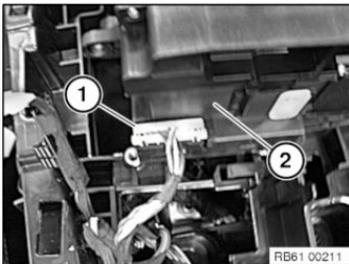
Risk of damage!

To avoid scratching the center console cover (1) when removing the gear selector switch (2), mask the gear selector switch (2) with yellow plastic adhesive tape.

Remove gear selector switch



Release all screws (1).
Lift the GWS (2) out of the support (3) upwards.

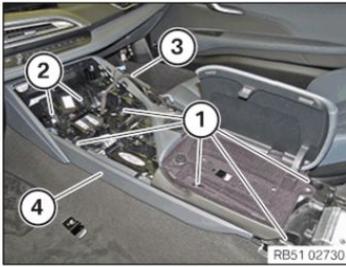


Unlock connector (1) on underside of GWS (2) and disconnect.
Remove the GWS (2).



Disconnect the plug connections.
Remove the center console trim (1).

Remove center console



Release nuts (1).
Release screws (2).
Lift center console (4) and pull out wiring harness (3).
Disconnect plug connection from 12 V power socket.
Remove center console (4).

Remove head unit

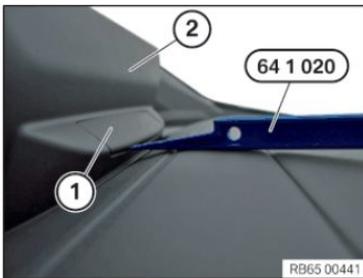


Release screws (1).
Pull the headunit (2) forward slightly.

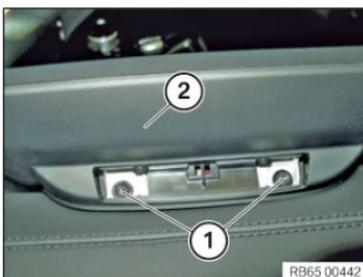


Unlock and disconnect all connectors in marked area.
Remove the headunit (1).

Remove iDrive screen



Lever covers (1) out of CID (2) using special tool 64 1 020.



Unscrew the screws (1).
Remove CID (2) towards top.
Unlock and disconnect corresponding connector.

Once the iDrive screen is out, gently remove the factory video cable from the back of the screen by pressing on the connectors securing tab and pulling the connector out. Next route it towards the MMI's final installation location and connect it (original cable) to the LCD IN socket.

Connect the LCD cable supplied with the kit to the back of the original screen (90 degree angle purple connector). Feed the other end of the supplied LCD cable towards the MMI and plug the straight purple connector into the LCD OUT socket.

Connect the supplied USB/AV harness to the MMI where it is labeled "**USB**" and route the socket to a location where you will be able to access it for connecting a USB cable to your phone or a USB stick for video/music files or a future MMI software update.

The USB cable socket can be placed inside the glovebox or more commonly routed out of the dashboard through the area where the carpet joins with the center console on the passenger side. Then, it can be tucked under the trim (between the trim and carpet) so that it ends up being hidden yet still accessible.

Connect the Power plug from the P&P harness to the MMI where it is labeled "**Power**".

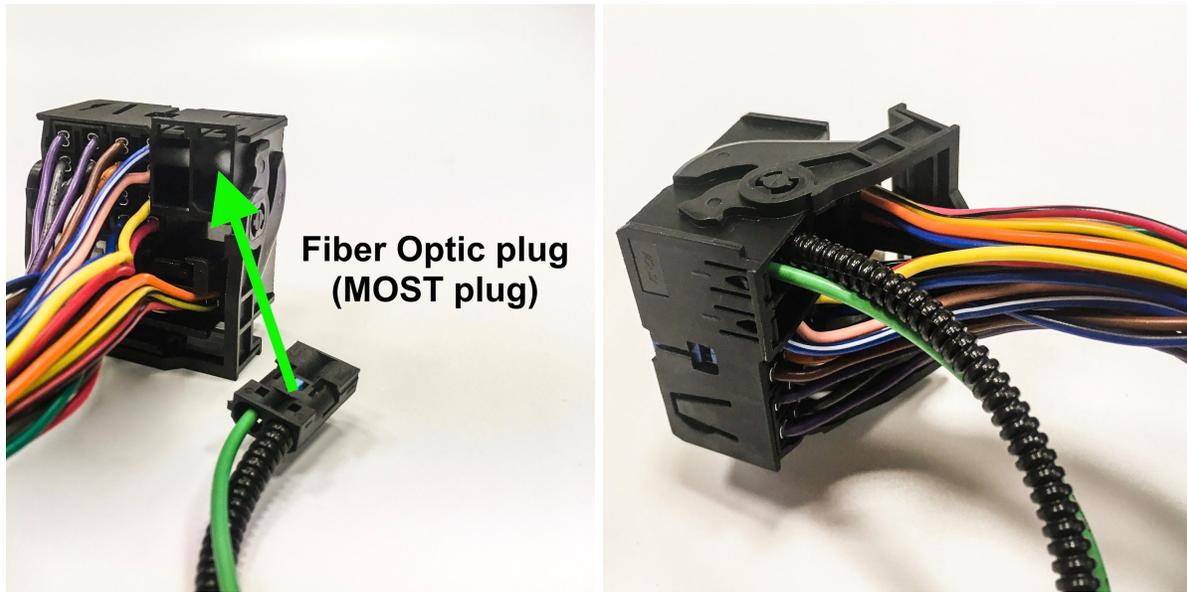
Connect the included WIFI antenna to the respective port on the MMI. You can experiment with the antenna location - just make sure to place it in a location where it is not surrounded or touching any metal brackets. As a rule of thumb, the closer the antenna is located to the iPhone - the better. In general its reception is very good and will tend to work even if your iPhone is outside of the car.

Next, we'll need to work in the Head Unit area:

Remove the large square harness (Quadlock) from the back of the head unit by pressing on the center tab of the latch and pulling it back. Once the latch is pressed and pulled back, the square connector will begin to slide out.

Please, move the fiber optic cable from the factory quadlock (if you have one in the original quadlock as not all vehicles do) by unfastening the securing tab and pulling the Fiber Optic cable out. The cable will not resist being removed if the securing latch is gently lifted. Reinsert it in the PnP harnesses quadlock in the same spot.

Once the Fiber Optic Cable has been moved to the new harness, plug in the square harness into the back of the head unit at one end and to the harness coming out of the dashboard at the other.



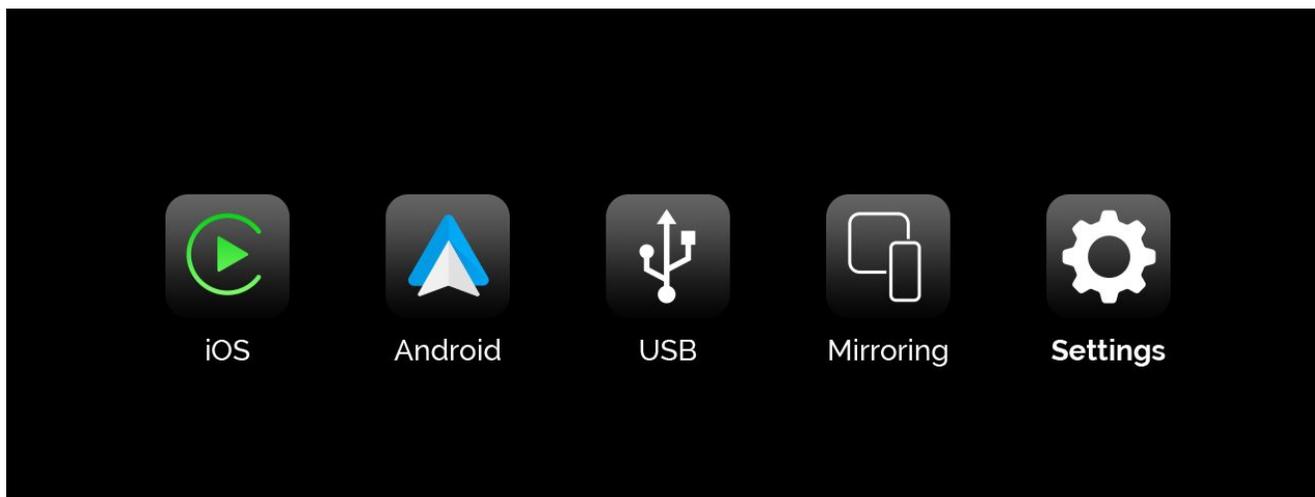
Please see video below for fiber optic rewiring:



Operating the MMI

The MMI allows to greatly expand the functionality of the original iDrive system with:

- Apple CarPlay
- Android Auto
- USB Media Playback
- Apple AirPlay and Android AutoLink Mirroring
- Front and Reversing Cameras with Dynamic Parking Lines and PDC Sensor Display



To enter the main menu of the MMI press and hold the iDrive controller MENU button for 3s until the MMI menu appears on the screen or press the #8 radio memory button.

If you've just started the car it may take a few moments for the MMI to boot up. To navigate the MMI's menu and CarPlay/Android Auto mode you can use the iDrive controller knob & BACK button or the scroll knob on the steering wheel along with the Voice Command and Phone Handle buttons.

The iOS and Android icons in the main menu will only be filled out with color when a phone is paired to the MMI in either CarPlay or Android Auto mode. Otherwise they will remain in a black and white color scheme.

To go back from CarPlay mode to the MMI's Settings menu double click on the iDrive controller BACK button - just like a double click on a mouse - two clicks in quick succession.

To switch back from the MMI mode back to iDrive Press and hold the iDrive Controller MENU button.

Long pressing the iDrive controller BACK button will cause the MMI to reboot.

The MMI uses the iDrive AUX audio input so make sure to set the input to AUX in the Multimedia section of iDrive. Immediately after selecting the AUX input we highly recommend to press and hold the #8 memory button in order to program it to select the AUX input every time the #8 memory button

is pressed. Thanks to this, it will be possible to quickly engage CarPlay while also changing the audio source all with a single push of a button.

To engage Front Camera Mode for an indefinite period of time press and hold the iDrive Controller **"OPTION"** button for 2 seconds. To exit the camera mode press and hold the iDrive BACK button.

Pairing an iPhone with the MMI

Once you've installed all of the hardware and reconnected the battery you can pair up your iPhone with CarPlay. There are two ways to do this: wired and wireless.

First make sure you have Siri enabled in your phone to allow CarPlay operation. If Siri is toggled off CarPlay will not be accessible.

To establish a wired CarPlay connection with the MMI simply plug in an original Apple cable between the iPhone's Lightning port and the USB socket on the MMI's harness. Non original cables are not recommended - oftentimes they do not work at all so make sure to use an Apple certified cable.

Once the cable is connected you'll need to confirm a few requests on your iPhone and you'll be set. When the connection has been established please try playing music from your iPhone via the CarPlay mode to verify whether you have your AUX port input selected and set up correctly. If you can hear the music at a comparable volume to FM radio that means you're set up fine. If the volume is too low you can increase the AUX ports input volume. It shouldn't be necessary to exceed +10. The AUX volume adjustment process can be viewed here: <https://www.youtube.com/watch?v=62BIYwdOE9Y>

If you find it to be necessary you can adjust the 8-band Equalizer in the MMI Audio menu.

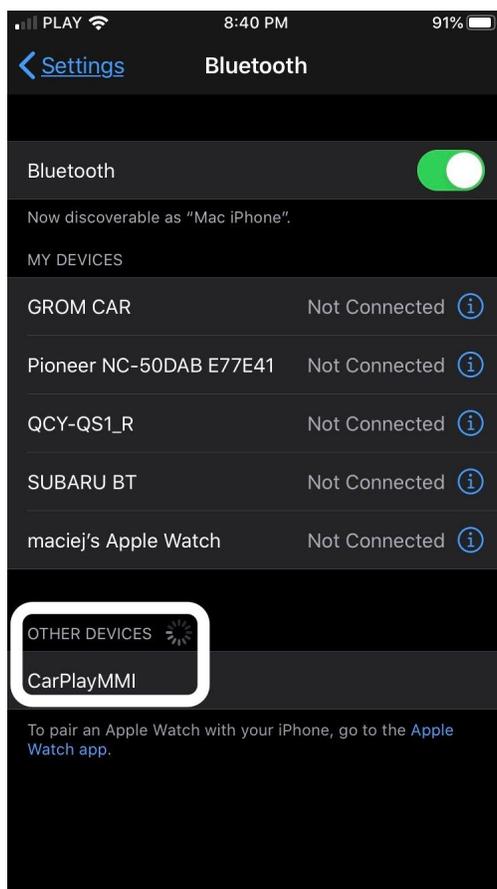
After making sure audio playback works fine you can check the microphone reception when in CarPlay mode. Press and hold the Voice Command button on your steering wheel until you hear a chime and see Siri screen on your BMW's LCD. State your command of choice to check whether Siri is hearing your voice as indicated by the waveform moving at the bottom of the screen and an answer being provided through your speakers. If it works, then you're set.

Wireless CarPlay Pairing

To pair your iPhone in wireless mode go to Settings -> Wireless Devices -> Wireless CarPlay Pairing.

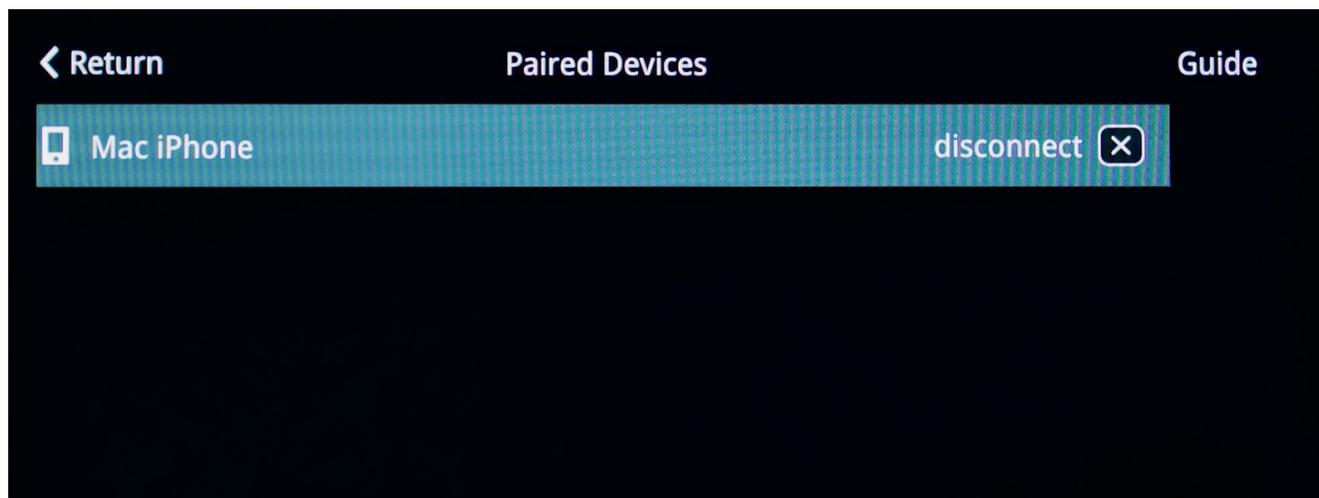


To connect an iPhone for the first time go to your iPhones Settings → Bluetooth and wait a few seconds to allow the iPhone to discover the MMI's Bluetooth network called **CarPlayMMI**:



Once the CarPlayMMI appears on the Bluetooth list, press the Start Search button in the MMI menu. As soon as your iPhone appears on the list you can stop the search by pressing the iDrive controller again. Then scroll down to highlight your iPhone's name on the list and press the iDrive controller to confirm the connection.

Wait around 10 seconds for a couple of confirmation messages to start appearing on your iPhone and confirm them. Once you confirm all of the iPhone's requests, CarPlay will connect wirelessly every time you start your car. Just give it some time to boot up when doing a cold start.



Pairing an Android with the MMI

To pair up your Android phone in Android Auto mode you must first download and install the Android Auto app onto your phone. Android Auto can only be accessed via a wired USB connection between a phone and MMI's USB port. Make sure to use a high quality USB cable as not all of them are created equal and some will simply not work at all. In such a case try a different USB cable.

Once the cable is connected you'll need to confirm a few requests on your phone and you'll be set. You can navigate the menus using the iDrive controller knob and the right steering wheel scroll wheel.

To move from the top portion of the Android Auto menu to the bottom menu strip press the iDrive controller BACK button. This is the only way to enter the lower menu. Keep in mind, if you do not see a specific app in the selection menu you can still access it on your phone and simply click play within the app.

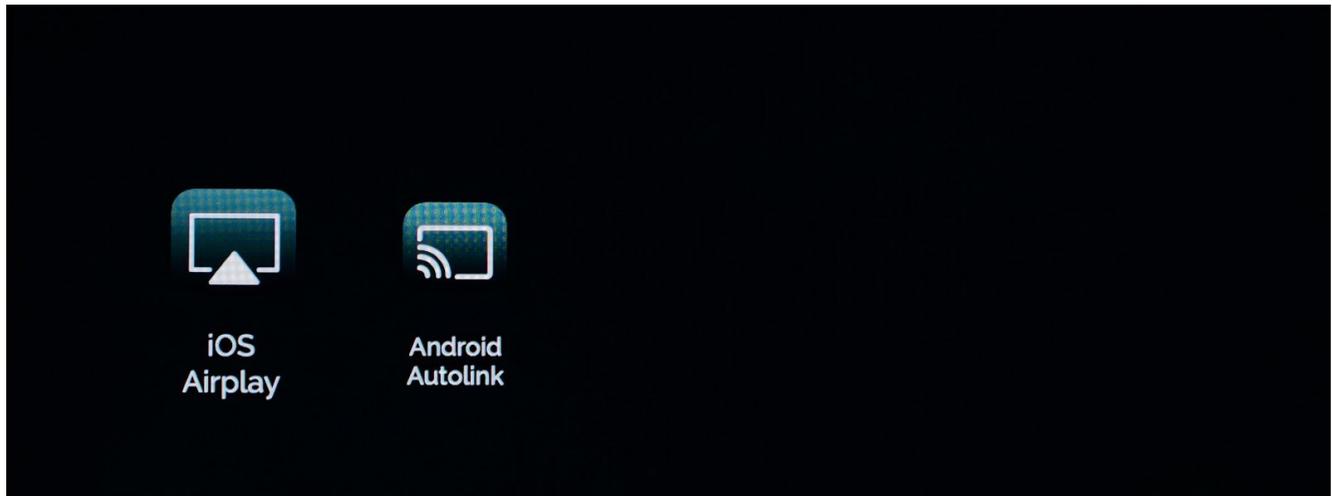
When the connection has been established please try playing music from your phone via Android Auto mode to verify whether you have your AUX port input selected and set up correctly. If you can hear the music at a comparable volume to FM radio that means you're set up fine. If the volume is too low you can increase the AUX ports input volume. It shouldn't be necessary to exceed +10. The AUX volume adjustment process can be viewed here: <https://www.youtube.com/watch?v=62BIYwdOE9Y>

If you find it to be necessary you can adjust the 8-band Equalizer in the MMI Audio menu.

After making sure audio playback works fine you can check the microphone reception when in Android Auto mode. If you have Google Assistant enabled on your Android Phone you can now communicate hands free in your car. You can either say "Hey Google" and give a command, or long press (2s) the Voice Command button on your steering wheel until you hear a chime. State your command of choice. If Google Assistant hears your voice it will be indicated by the colored dots moving around at the top of the screen and an answer being provided through your speakers. If it works, then you're set.

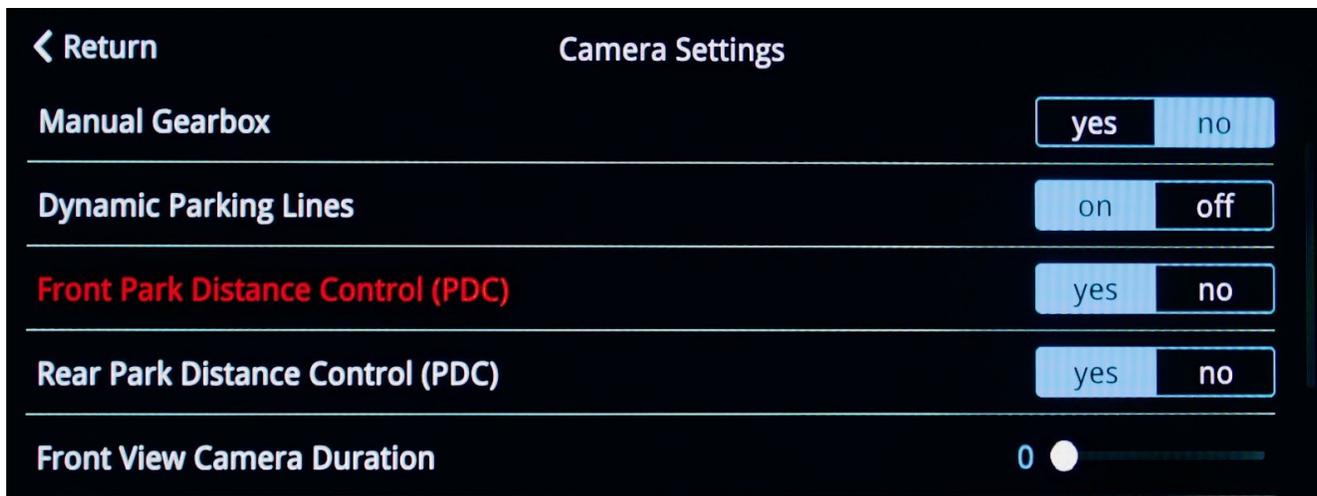
Screen Mirroring

The MMI is capable of screen mirroring both iPhones and Android phones alike. Android phones will require a wire connection and Autolink app installation.



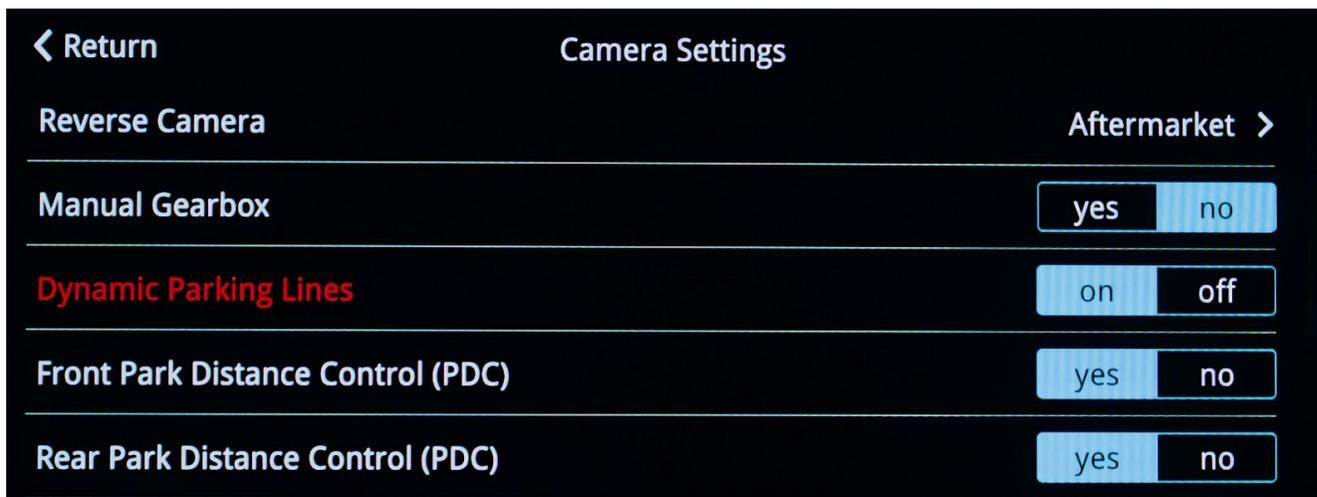
Park Distance Control (PDC) Settings

If your Vehicle is equipped with rear and/or front PDC sensors you can adjust the settings accordingly:



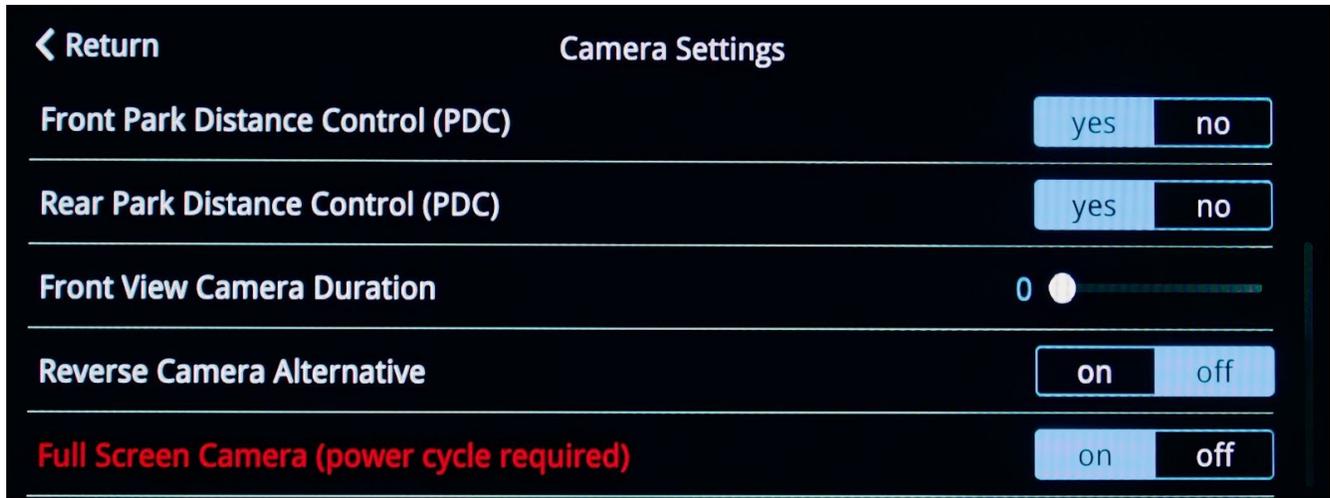
Dynamic Parking Lines

To enable Dynamic Parking Lines toggle the switch to yes:



Full Screen Camera Mode

In BMW's with 8.8" or 10.2" panoramic screens it is possible make the cameras display in full screen mode. Once the setting is toggled to on it will be necessary to either disconnect the MMI from power for 10 seconds. If you already have the MMI installed and sealed up you'll need to turn the car off, exit it and close all of the doors. Lock it with your key fob and then please take all keys of this vehicle at least 15m or 50ft away from the car and wait 10-15 minutes. This will put the car into a "sleep" mode which will also kill any power going to the MMI.



Reassembly

Carefully reinsert the head unit, being careful with the new harness and reinsert the securing screws. If you are having a hard time sliding the head unit back into place that most likely means some cable behind the head is obstructing the way and needs to be adjusted.