

# Android Head Unit Installation

BMW Z4 E85/86

S677 HiFi System Professional DSP



# Precheck

- Make sure you have a factory installed amp with DSP
  - S677 HiFi System Professional DSP
  - <https://www.rubmw.ru/vincode/en/>
- Correct harnesses and adaptors
  - Connects2 [CTSBM004.2](#) interface for steering wheel controls – [amazon US link](#) Current prices
  - Head unit [patch lead](#) for Connects2 interface – generic (key 1, key 2, gnd) \$58
  - [Resler USB I-BUS](#) module incl. cable \$15
  - [I-BUS App](#) with DSP licence purchased \$72
  - Wire connectors ([butt](#), soldering, etc), [crimp/strip tool](#), electric tape, etc \$25
  - Aftermarket Radio [Antenna Adapter Plug](#) (*optional*, if you want radio function) \$20\*
  - \$6\*
- Android head unit with USB input
  - I used Joying 10.1 single din android 10 unit – [link](#) \$409
  - Dash Kit – [link](#) and M5 screw | do not use this [alternative](#), as it is very flimsy, and unit slips through \$17

[Video](#) of working setup posted on Fb [group](#).

# Let's begin...

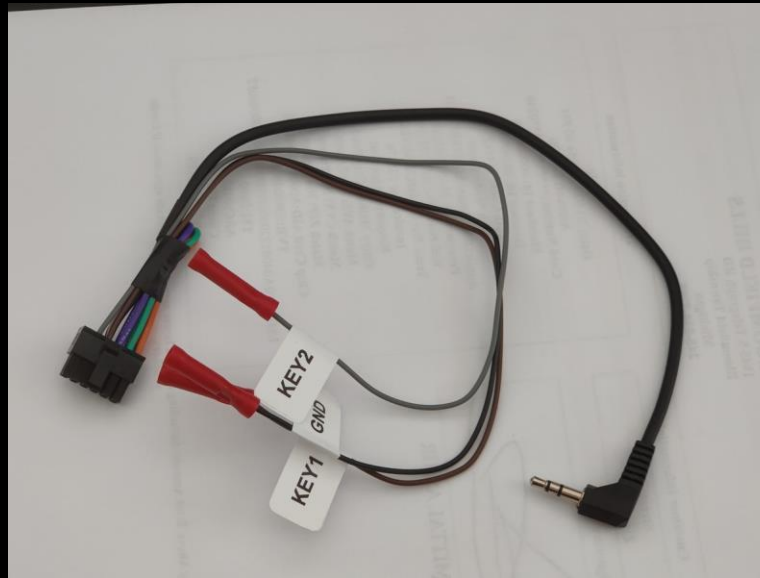
Joying 10.1 single din Android 10 package



## Additional harness/modules



Connects2 [CTSBM004.2](#)



[Patch lead](#)



[Resler USB I-BUS](#)

*We will first make all the connection outside the car, then it is just plug-n-play replacement of the original radio.*



# First connections

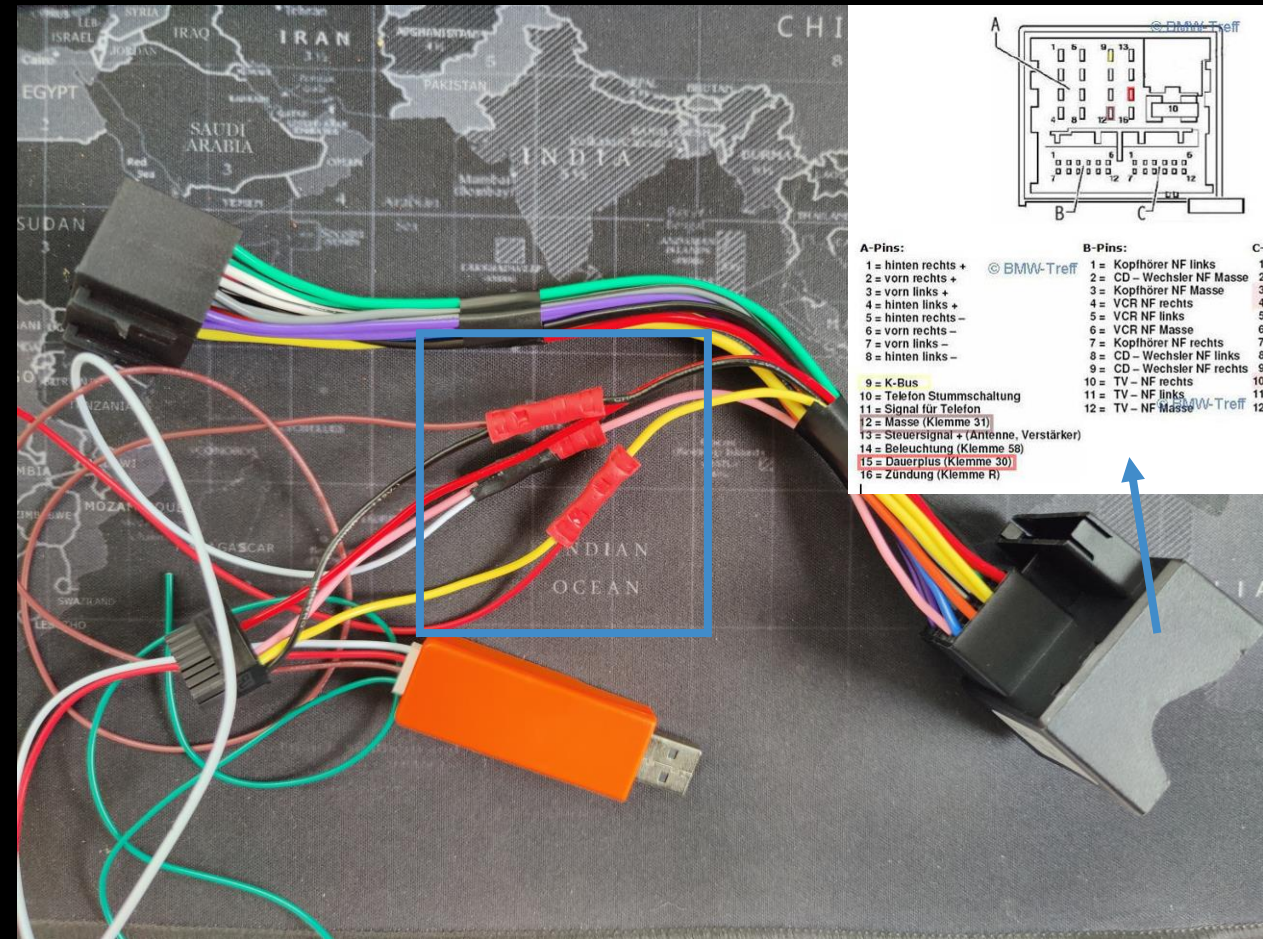
## Resler module to Connects2 harness

- Resler module (R) has 4 wires :
  - Red – 12V wire
  - Brown – Ground
  - White – I-BUS/K-BUS
  - Green – NTSC (no use, to be ignored)
- Connections to Connects2 (C2) harness :

• 12 V	Red (R)	Yellow (C2) Pin: 15
• Ground	Brown (R)	Black (C2) Pin: 12
• K-BUS	White (R)	Pink (C2) Pin: 9

Can refer the [wiki](#) from IBUS-APP for more details.

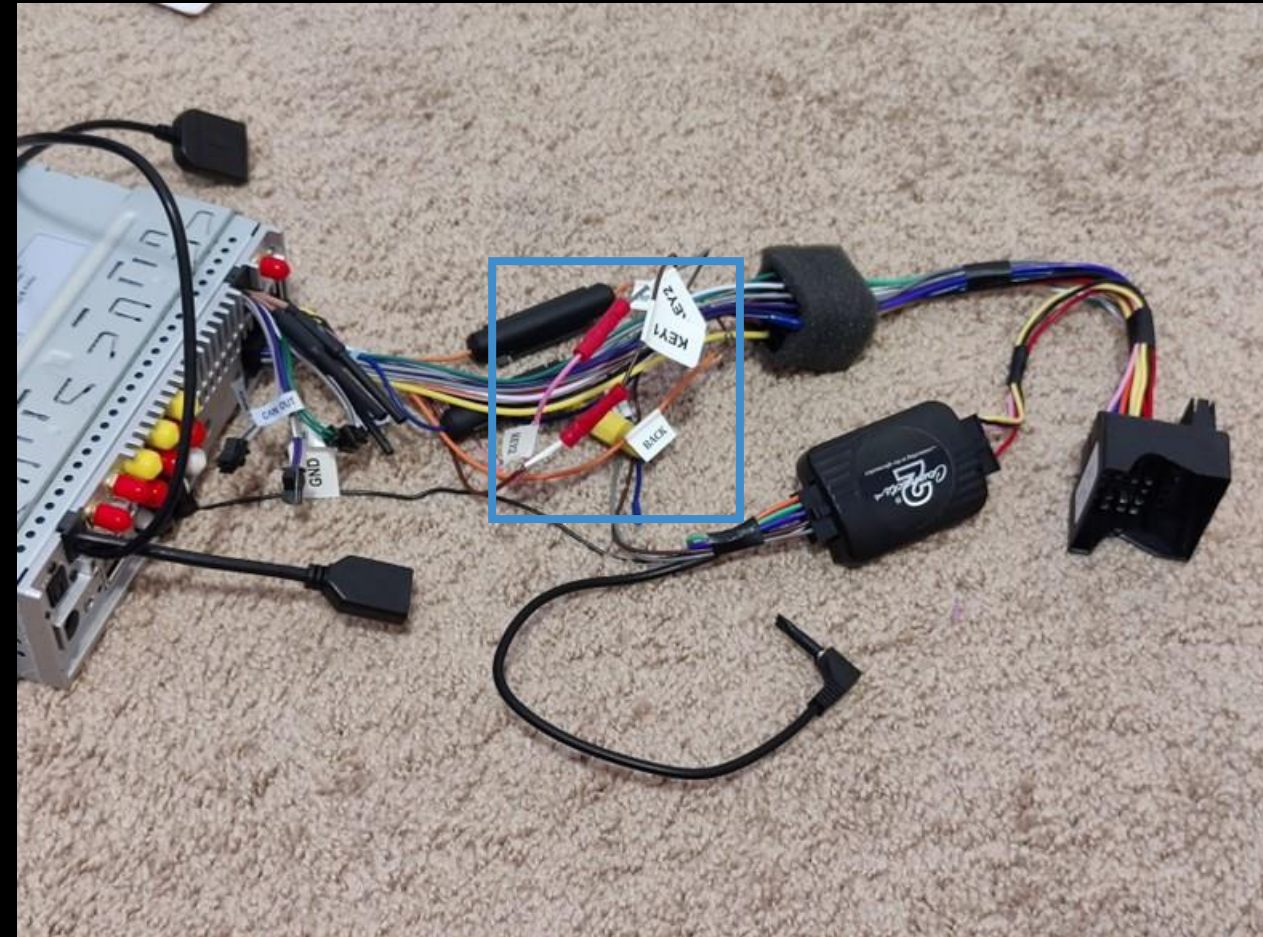
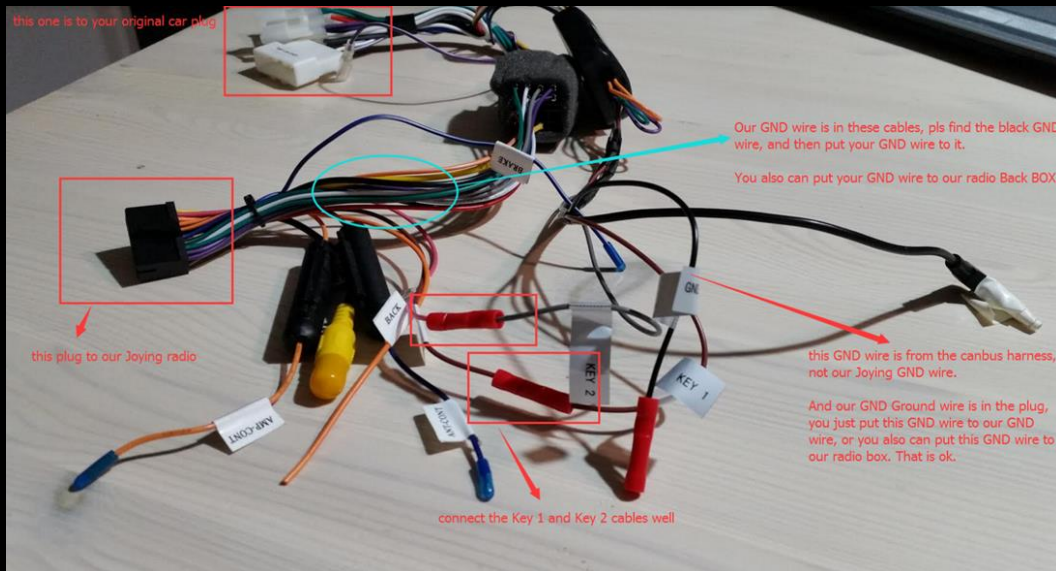
*Consider images for reference only as I did a lot of iterations. Ignore the connections which are not highlighted as they may be covered at later stage for your convenience.*





# Patch lead

- Attach Key 1 and Key 2 wires from patch lead to Joying harness. Wires are labelled on both sides.
- The ground (GND) wire is colored Black in Joying harness. Alternatively, you can also attach to stereo metal frame.
- Joying customer care sent me instructions which you can refer to.



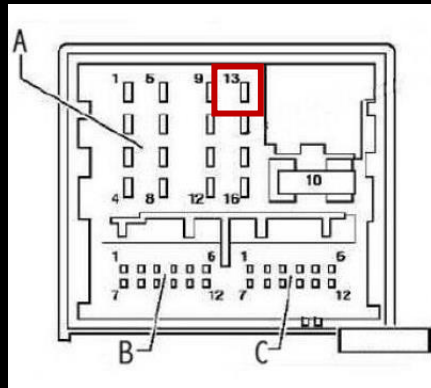
Refer [this video](#) to learn how to splice & crimp wires if its your first time.  
It is very easy. This was my first time as well 😊



# Connects2 to Joying

There are 3 types of connections here –

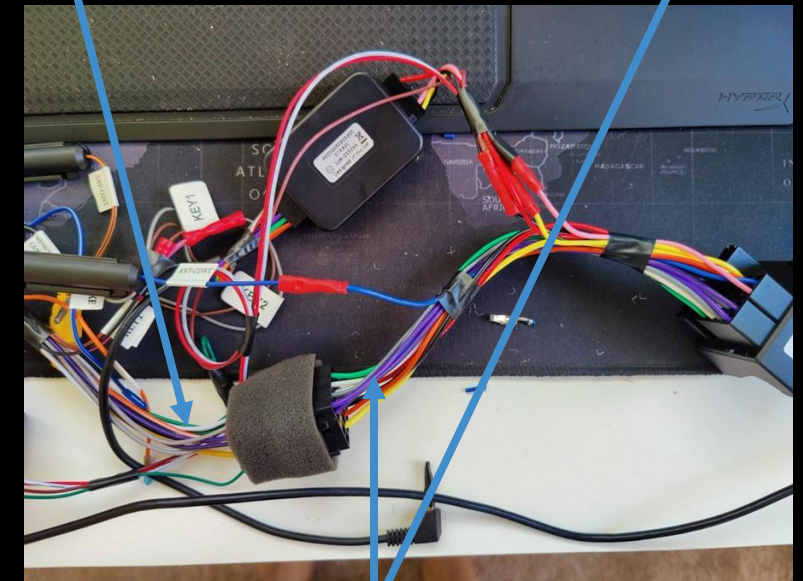
1. Patch lead (12-way molex) to Connects2 interface
2. +12V switching signal, “remote”, for AMP to switch on. Joying ANT-CONT to Connects2 wire from connector (Pin 13, blue wire).
  - Takeout or cut the single-colored blue wire on Connects2 male adaptor and attach it to ANT-CONT from Joying.
  - You can also insert Joying ANT-CONT wire into the corresponding female adaptor using male pin connector



3. Connects2 male adaptor to Joying harness female adaptor.

Can refer Connects2 [fitting guide](#) and more details on step 2 [here](#).

Main harness from Joying

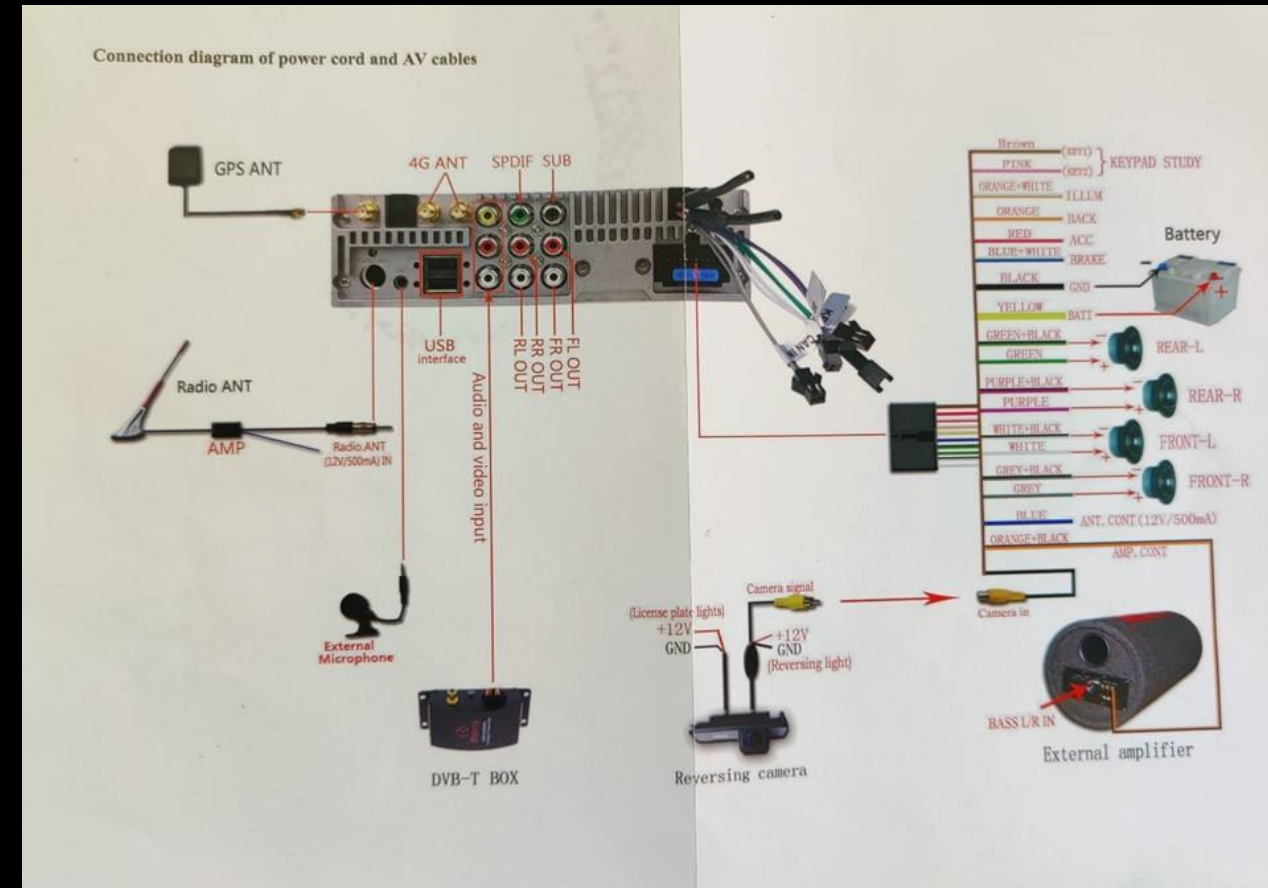


Connects2 adaptor

# Final Connections

It is time to connect all the cables to your Joying head unit.

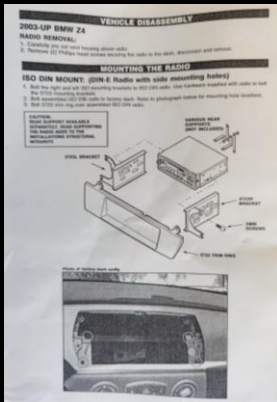
- Main ISO harness
- Resler USB device to USB port on head unit
- GPS Antenna cable
- 4G Antenna wires if you want to use internet
- MIC in cable
- Aftermarket Radio [Antenna Adapter Plug](#) (optional, if you want radio function)



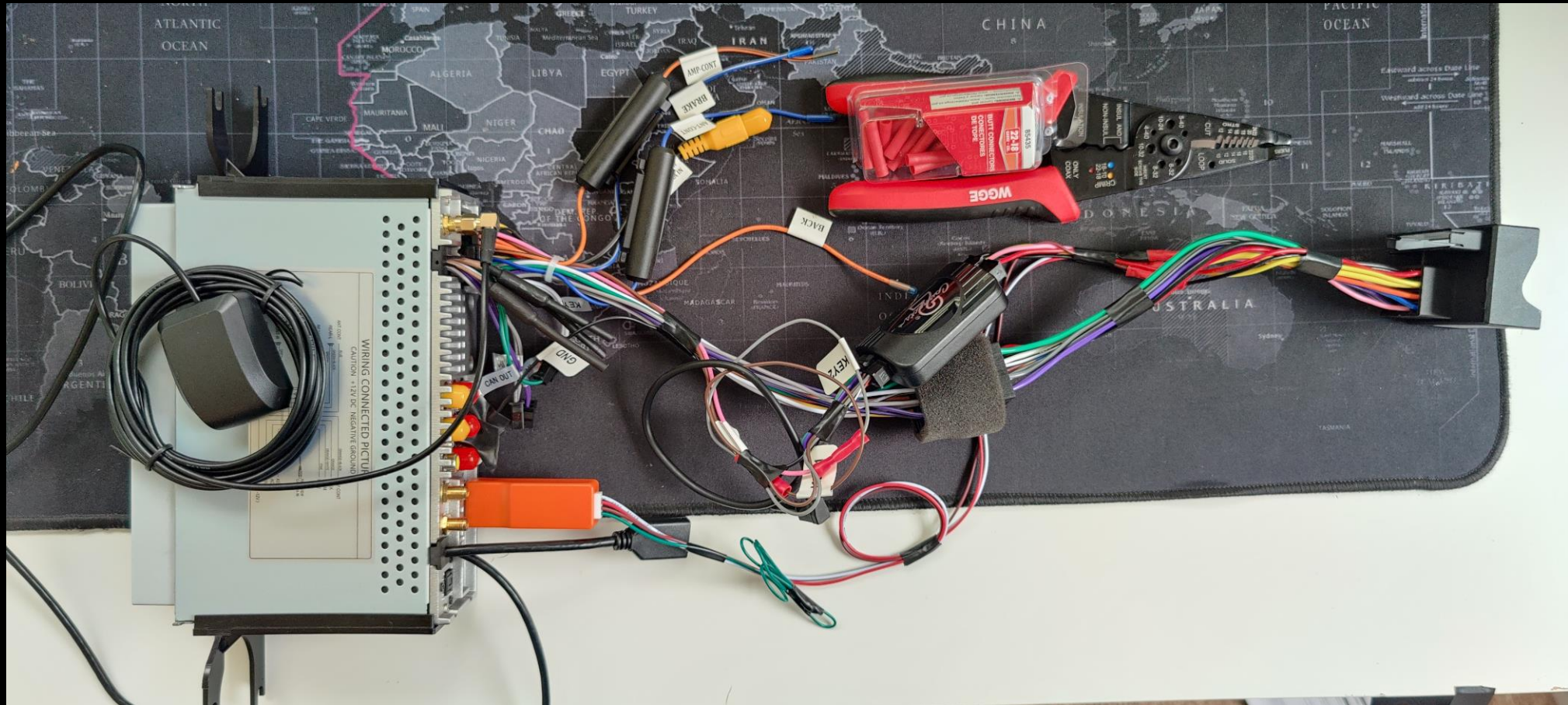


# Dash trim to stereo

- Attach your [dash trim](#) to the head unit using M5 screws.
- I removed the bracket that came with Jonying unit. It is usually useful only for cars that have a dedicated single-din slot that fits tight with the bracket.
- Assembly of screw will need some adjustment depending on your stereo. Mine could be attached only at one place; I recommend 2 screws each side, if possible.
- Refer to the installation manual if required.



# Final Connections





# Removing OEM radio

## Removing Air vents

Disconnect the battery -ve terminal in the trunk just to be safe.

You will need flat head screwdriver and a trim removal tool to remove the vents.

1. Push in the hole with screwdriver one side at a time
2. Pry from side using trim remover tool while pressing with screwdriver in the hole one side at a time
3. Repeat 1-2 for other side
4. The air vents will slide right out after you pry from both sides.
5. If you dislocated the flaps like I did, slide them back into the pivot hole on the side. It will need some force so grab the flap firmly.



Refer [this video](#) on YouTube if you are stuck.



# Removing OEM radio

## Removing Radio

1. Remove the 2 cross-head screws
2. Pull the radio and remove the Radio Antenna cable on your right side
3. Press and rotate the connector flap, the connector will pull out itself while you rotate. [Video](#)
4. Remove 2 more cross-head long screws at the bottom if you are using Scosche dash kit.



# Fitting new head unit

## Manage cables

Before connecting the car plug, first route all the cables – mic, 4G, antenna, USB, etc. depending on what cables you plan to use.

1. I put the GPS antenna on a steel frame right next to the cutout since GPS module is magnetic. Works perfectly fine with full signal.
2. I guided the cables out of the gap between steering and dashboard. You can also remove the small trim above 12V plug by pushing it from the inside and customize however you want to guide the cables.
3. Mic cable is guided from under steering wheel, to gaps between the plastic panels to the side of the dashboard. Then behind the door weatherstrip along the A-pillar to the driver side sun visor. Seems to be a great placement, yet to be tested with roof down.
4. 4G antenna cables are stuck under driver's seat, I have not tested the signals yet. 4G SIM cable is just popping out from the center console trim at carpet. There is enough gap with the carpet to route the cables.

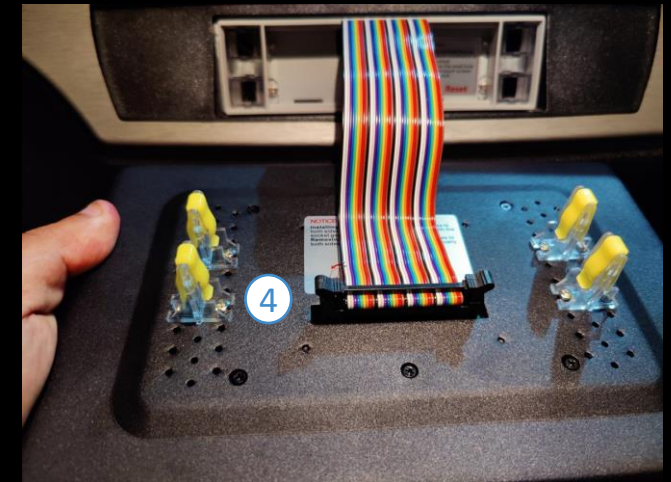


# Fitting new head unit

## Attach and insert unit

You are almost done!

1. Connect the Connects2 large connector (female) to the Car's connector (male).
2. Connect the Radio antenna via [converter](#) cable (optional). I don't use radio, so I did not connect this cable.
3. Slide the unit into the opening while placing the bunch of cables under the unit. There is a lot of space to claim under the unit but need to keep the top clear for vents. We'll attach the trims (next slide) after testing.
4. Connect the screen with the data-cable to test the connections. The cable is attached in a way that the text is facing up at assembled stage.
5. Connect the -ve terminal of battery
6. Turn on the car to acc or ignition. The screen should turn on after a few seconds.
  - If the screen does not turn on, then first switch off the car. Then flip the data cable connection behind the screen and try again.
  - If the screen does not turn on, press the reset button through a small hole (refer Joying manual).
  - If it still does not work, double check the connections, make sure connector pins are not sliding out.
  - As a last resort, either connect with me or a professional installer to get the connections checked.



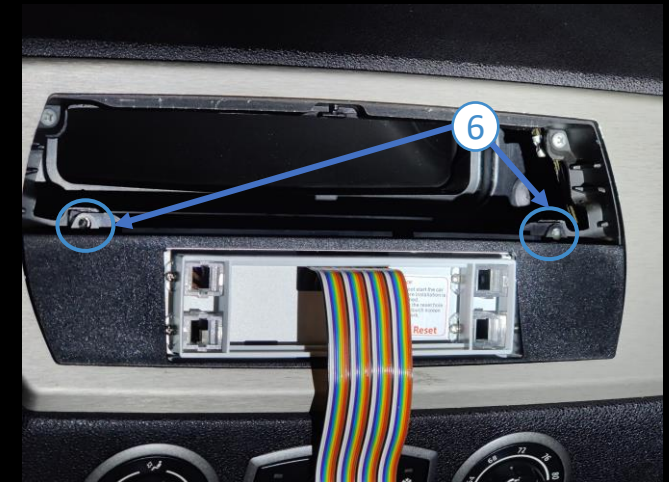
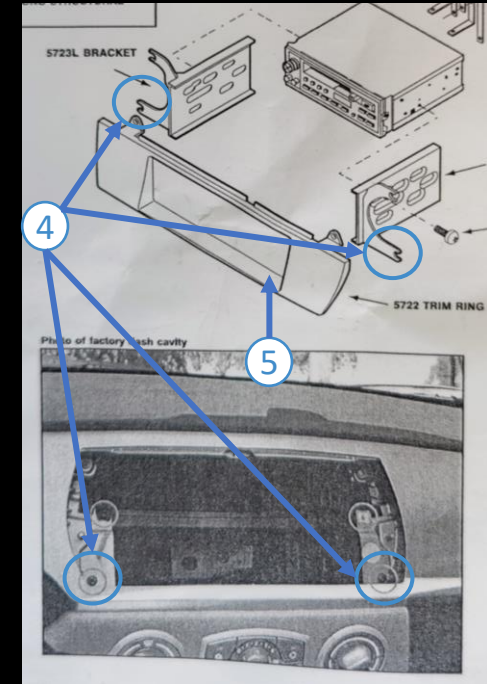


# Fitting new head unit

## Attach and insert unit

7. Only tighten the bottom 2 long screws, while making sure the top 2 holes match with the car. Do not attach the top 2 screws yet.
8. Insert the dash trim piece from the dash-kit. It might take some effort by rotating it forward from top and pushing it down to match the locating holes. Try attaching one side to understand and work on the other side. You will know when it snaps because it is a very snug fit once it inserts.
9. Now, attach the top 2 shorter screws.
10. Slide back the air vent inside until it snaps.

You are done!



# Jk, done now...

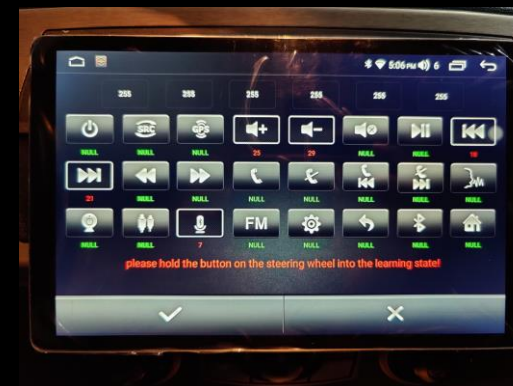
## Downloads and settings

1. Connect to wifi/internet/hotspot so that you can download your favorite apps, images, videos, etc.
2. You will not get audio yet. First install [I-BUS App](#) (free) with DSP licence purchased (paid).
3. Unlock the app, it will detect the VIN automatically which should match with the licence you purchased.
4. Press DS button to turn on DSP AMP. Your audio will work now.
5. The last step is setting the steering wheel controls using the built-in SWC app. Press and hold the steering switch, then select the function you want on the screen. My setup is highlighted in the pic. I am unable to make R/T button work yet.

Voila, its done!

*The Android environment is yours to explore now.*

*I recommend Nova launcher for better UI.*





# Links for more information

Dumping all relevant links, I referred to.

- <https://www.joyingauto.com/joying-10-25-inch-single-din-touch-screen-android-10-0-car-head-unit-support-android-auto-carplay.html#additional>
- [https://www.pelicanparts.com/techarticles/BMW\\_Z4M/165-ELEC-Radio\\_Replacement/165-ELEC-Radio\\_Replacement.htm](https://www.pelicanparts.com/techarticles/BMW_Z4M/165-ELEC-Radio_Replacement/165-ELEC-Radio_Replacement.htm)
- <https://www.joyingauto.com/blog/category/head-unit-problems-solved/>
- [https://wiki.ibus-app.de/index.php?title=Einbauanleitung\\_f%C3%BCr\\_Resler\\_Modul\\_und\\_Resler\\_Interface](https://wiki.ibus-app.de/index.php?title=Einbauanleitung_f%C3%BCr_Resler_Modul_und_Resler_Interface)
- [https://xtrons.ibus-app.de/index.php?title=Kein\\_Ton\\_nach\\_Radio-Einbau](https://xtrons.ibus-app.de/index.php?title=Kein_Ton_nach_Radio-Einbau)
- [https://wiki.ibus-app.de/index.php?title=Videos\\_zur\\_App](https://wiki.ibus-app.de/index.php?title=Videos_zur_App)
- DSP Amplifier replacement  
<https://www.zpost.com/forums/showthread.php?t=1708128>
- <https://z4-forum.com/forum/viewtopic.php?t=105337>
- <https://z4-forum.com/forum/viewtopic.php?t=122211>
- <https://z4-forum.com/forum/viewtopic.php?t=114552&start=75>
- <https://forum.xda-developers.com/c/head-units.3833/>
- This manual online <https://z4-forum.com/forum/viewtopic.php?t=143528>

Feel free to ping me on my socials. I may not respond immediately but will reply as soon as possible.

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