



INSTALLING AN AFTERMARKET ANDROID HEAD UNIT

This document is intended to be a broad overview of the installation process, rather than a comprehensive step-by-step guide.

Android devices, either phones or head units, are similar but not identical from device to device or version to version. I have two different Android head units for different cars. Some of the settings/features found on one is different on the other -- either in a different place or missing altogether.

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**Disconnect your car's
battery before starting.**



**Protect your hands
from sharp edges --
both metal and plastic.**



Stock photo of my factory stereo.

This install is for my 2017 Mustang GT 6-speed with the base stereo system -- 6 speaker, 4-inch screen -- and the Android head unit kit that I bought.

Your Android system may be exactly the same, similar, or not similar.

I bought my kit on eBay. It was an 8GB model for \$300. I've seen this head unit advertised as a **"Fioria S9008P"** or just **"S9008P."**



This is an actual image from the eBay listing.

OS	Android 14
CPU	UIS7862S 8-Core (2.0GHz)
RAM	8GB
STORAGE	128GB
DISPLAY	9-INCH QLED TOUCH
RESOLUTION	1280 x 720 HD
CONNECTIVITY	WiFi 2.4G/5G 4G LTE BLUETOOTH 5.0 (2) USB PORTS
AUDIO	DSP (BU32107EFV) Amplifier IC TDA7851 Radio IC TDA7708 AM/FM RDS

TOOLS NEEDED

- 7mm Socket
- Torx T-10 OR T-10H
- Small Phillips screwdriver
- Small flat head screwdriver or pick tool
- Plastic trim removal tool(s)
- Cordless screwdriver

The pick tool is used to undo various connectors and harnesses. The cordless screwdriver is optional, but it helps with removing all of the torx screws.

FAQ

How long does the screen take to start?

On first boot (after reconnecting the battery), it takes about 30-45 seconds to get to the home screen. When I start my car every morning, it's ready in about 3 seconds, so it seems to "sleep" and not power off. I would imagine that after a few days the unit shuts down completely.

Does the factory reverse camera work?

Yes. The factory camera works without any modification.

Does Apple CarPlay and Android Auto work?

Yes. My unit came pre-installed with an app called "Zlink" and it works wirelessly with my iPhone 12 Mini. Android Auto also worked with my Samsung Galaxy A32.

Does the factory CD player work?

No. The CD player has two connectors that the new head unit will need in order to operate. The factory "CD player" *is* the factory head unit, so it is replaced.

Does the factory microphone work?

No. The new unit will come with a microphone that will need to be mounted somewhere in the cabin.

Do steering wheel buttons work?

Yes. My controls did not work out of the box. I had to change the CANBUS settings on the Android head unit to match the decoder I had.

Do the factory USB ports work?

Yes and No. You can use the factory ports if you have the right adapter(s). You need USB A Male to USB B Mini Female. If you have no adapter, the new unit should come with two new USB cables/ports that can be used instead of the factory ones.

Will I need to modify the factory stereo motherboard?

No. The factory stereo PCB can be used as is.

Does the Mustang dash block the top of the display?

Yes. The top of the "status bar" is partially obstructed. I have included pictures of this.

How does internet work?

I have an iPhone with AT&T and a hotspot plan. My phone automatically connects via Bluetooth and the internet just works.

PACKAGE CONTENTS 1

I received one box, but there were two distinct “packages” inside. The first package contained all of the Mustang-specific items.

The front bezel is cheap plastic and nowhere near as high-quality as the OEM bezel, but I knew that going in. It looks good and is dimensionally accurate, but I can see this being scratched up if you’re not mindful during installation. I wanted to put that out there to manage expectations.



**FRONT
BEZEL**



**METAL
BACKPLATE**



**MAIN
HARNESS**



**RADIO
ANTENNA
ADAPTER**



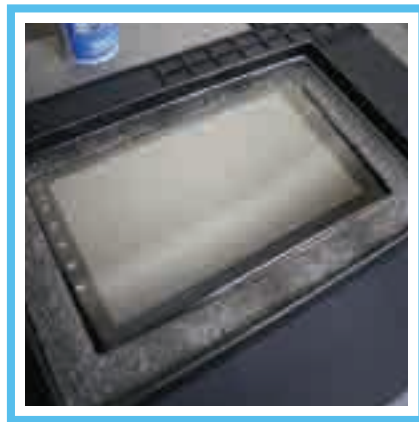
The main harness comes with a CANBUS decoder. Take pictures of this or make note of which one you have.

You will need to know the CANBUS model for certain things to work -- for example, steering wheel controls.

PACKAGE CONTENTS 2

This is the “generic” head unit package. It comes with a generic main wiring harness, but the Mustang-specific harness is used instead.

You also get some screws and a manual.



4G ANTENNA



MICROPHONE



**BREAKOUT CABLE
SIM CARD CARRIER
MIC INPUT
AMP REMOTE**



**WIRING HARNESS
(NOT USED)**



**USB
6-PIN CONNECTOR
(2) Ports**



**USB
4-PIN CONNECTOR
(1) PORT**



**REAR CAMERA
ADAPTER**

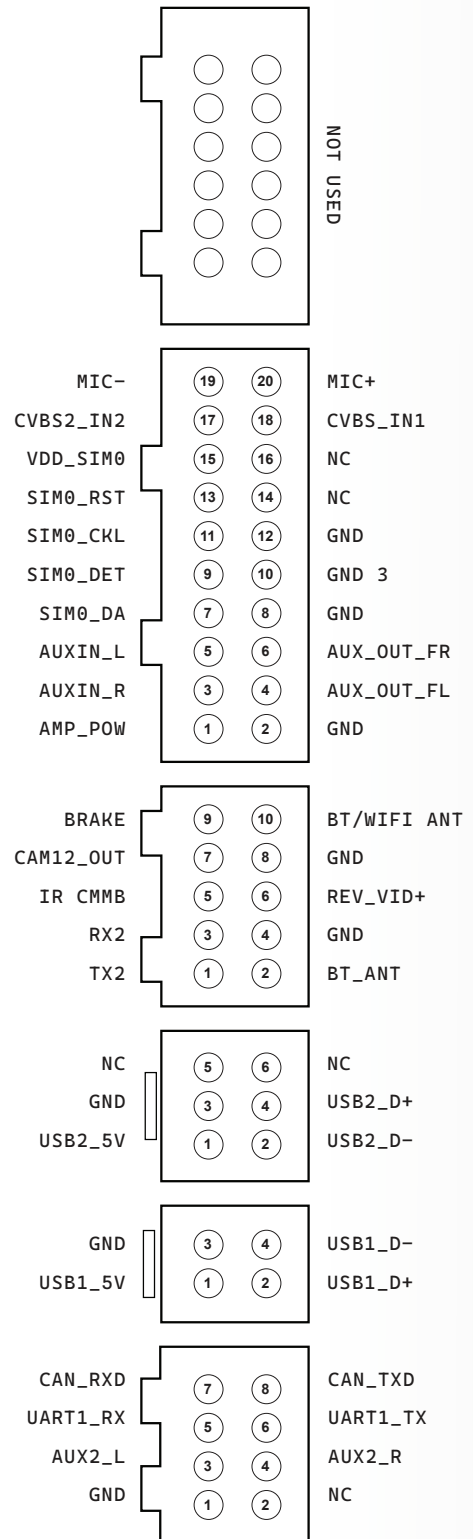
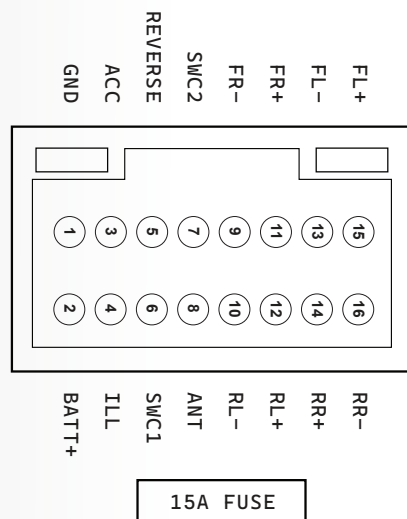
**WIFI & BLUETOOTH
ANTENNA BREAKOUT**



GPS ANTENNA

HEAD UNIT WIRING DIAGRAM

This diagram is useful if you need to do some custom wiring -- an external amplifier for example. All of the main connectors are keyed to fit only one way.



REMOVING TRIM 1



Small trim piece next to glove box.



Disconnect your car's battery before starting.

With your hands or a pry tool, remove the small trim piece to the right of the glove box.



Back of small trim piece next to glove box.

Three clips hold it in place.



Main dash trim

Starting above the center air vents, use pry tool(s) and get separation on the main dash trim.

With your hands, begin pulling trim out towards you. **Do not** pry up or down or left or right. Pull out towards you.

REMOVING TRIM 2



Main dash trim anchor points

The dash trim has several clips on the top and bottom running its length.

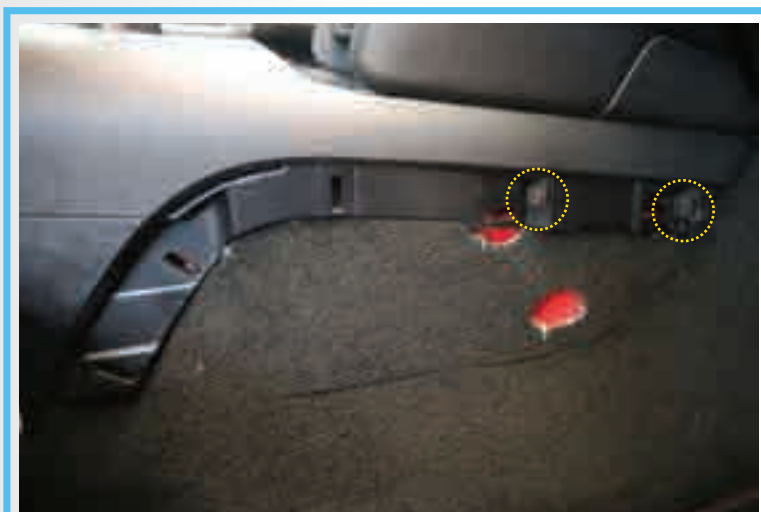
Work your way from left to right until the entire trim is free.



Scuff plate, passenger foot well

With your hands, remove the passenger side scuff plate in the foot well.

There are five clips and a strong magnet holding it in place.



(2) 7mm bolts

Remove (2) 7mm screws circled in yellow.

Repeat for driver side.

REMOVING TRIM 3



(2) 7mm bolts

Remove the rubber insert in the catch-all tray.

Remove the (2) 7mm screws.



Armrest storage area

Open the arm rest compartment. Use pry tool(s) to get separation on the center console.

Lift up to undo clips and work your way forward.

When most of the center console is free, pull it up and away from the stereo.



Center console detached

You do not need to remove the center console. Only bring it backwards a few inches.

This will give you enough clearance to remove factory head unit.



Note: I do not know if this process is the same for the Automatic

REMOVE STEREO 1



Plastic catch-all tray

You should have enough room to remove the plastic catch-all tray.

You can begin to remove the factory stereo.



(2) 7mm bolts

Remove (2) 7mm upper bolts from top of factory stereo.



(2) 7mm bolts

Remove plastic cover to the left of the cigarette lighter.

Remove (2) 7mm lower bolts from bottom of factory stereo.

REMOVE STEREO 2



Factory bezel

Tilt the top of the factory bezel towards you.

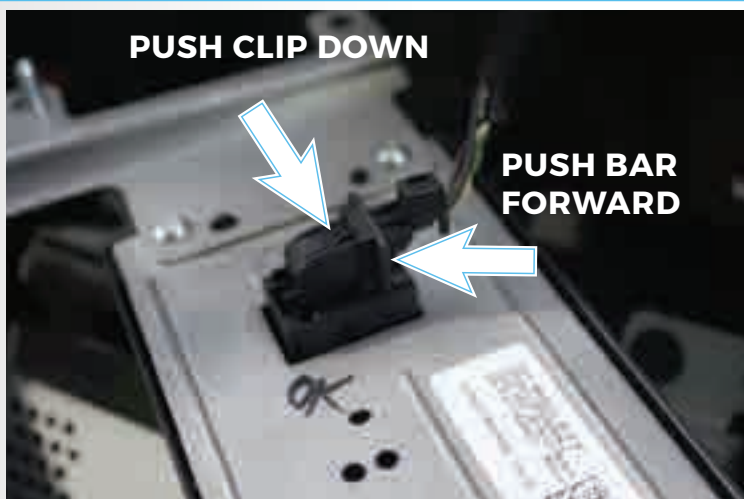
And undo the (4) cables at the bottom -- (2) wide harnesses, the cigarette lighter, and USB port.



(8) 7mm bolts

Remove the (4) 7mm bolts holding the screen.

Remove the (4) 7mm bolts holding the CD player.



Connector for 4-inch factory screen

Remove the 4-inch factory screen and disconnect the cable.

Remove the CD player and disconnect the (2) harnesses connected to it and the radio antenna plug.

REMOVE STEREO 3



After complete removal of the factory unit, there should be (7) factory connectors:

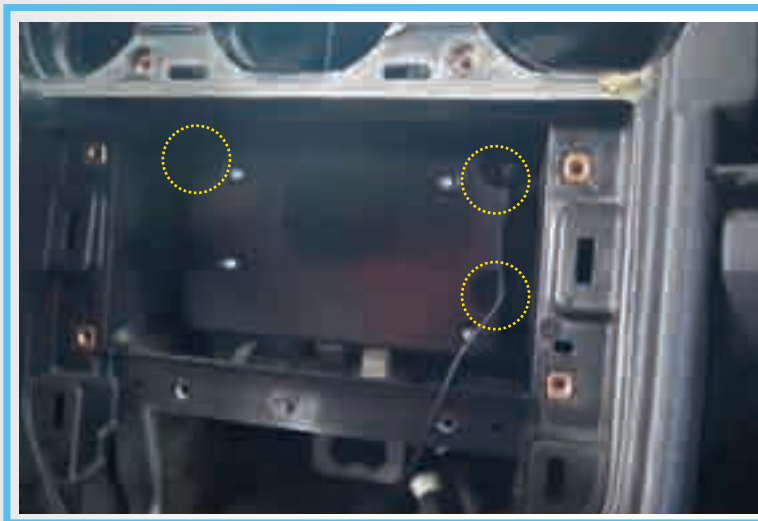
- | | |
|-----------------------------|--|
| 1. Engine start | 5. CD connector 2 |
| 2. Drive mode | 6. Screen connector |
| 3. Cigarette lighter | 7. Radio antenna (not visible in the photo) |
| 4. CD connector 1 | |

The rear connectors of the two factory USB ports are still plugged in.

REMOVE SYNC MODULE

If you want to use the factory USB ports, you will need to unplug the two cables from the Sync module -- sometimes called the communications module. Both factory USB ports plug into the bottom. I removed mine because I didn't know what it was until I got it out. **You can unplug the cables without taking this out.**

It is a black box, Ford Part# FR3T-14D212-SA. I believe it handles Bluetooth and voice recognition. I don't think you need to reinstall it. It's not in the way, so I installed it back in my car after I was done.



Ford Sync Module

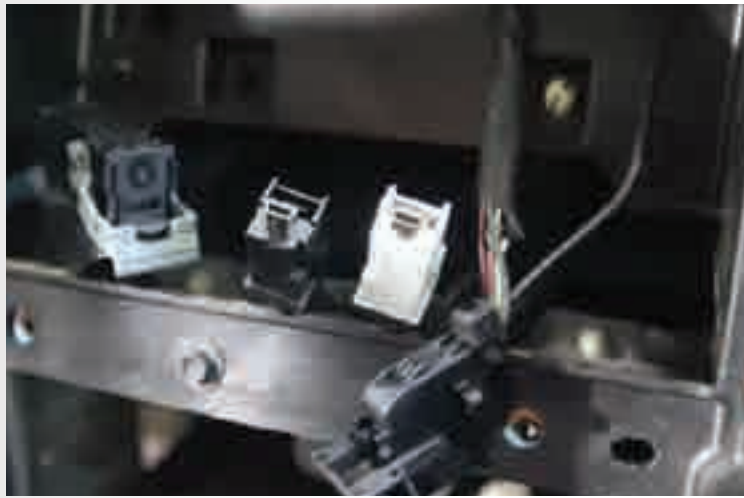
Remove (3) 7mm bolts. Take care not to drop the bolts.



Sync Module bottom view

Disconnect the three cables leading to the Sync box.

REMOVE SYNC MODULE



Factor USB plugs

Two of the cables are the USB ports. They are **Mini USB Male**.

You can plug in your adapters that will allow you to connect to the Android head unit.

You will need (2) **USB A Male to USB B Mini Female** adapters. They do not come with the kit. I bought a 3-pack on Amazon.



USB A Male to USB B Mini Female

These plug into the Mustang's factory USB plugs shown above.

Then you plug the adapters into the USB cables that come with your Android head unit.

You are essentially creating a long USB cable leading to the new head unit.

You don't have to use the adapters or the factory ports. The Android's USB cables and ports can be used on their own. You will need a way to mount them or stick them in the glove compartment.

PREPPING THE BEZEL 1



Factory bezel (left) and new bezel (right)

Remove the rear plastic cover from the factory bezel. There are several Torx T-10 screws.

Note that these screws are the long screws.



Factory PCB (left) and new bezel (right)

Remove the factory motherboard (PCB) from the factory bezel. There are several Torx T-10 screws.

Note that these screws are shorter than the ones that hold in the rear plastic cover.

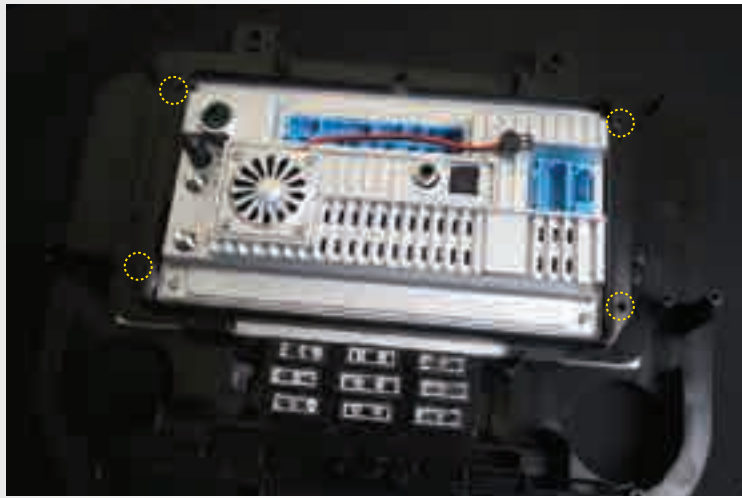


Factory PCB and button membranes

The factory PCB will be used on the new head unit.

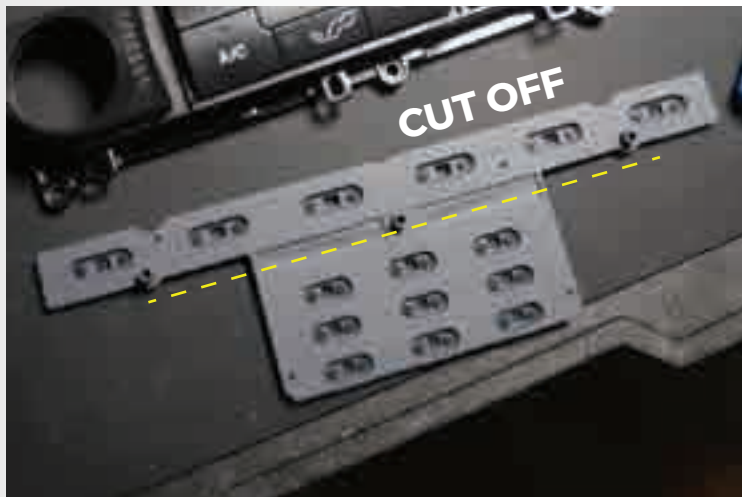
You will need the screws you've just removed.

PREPPING THE BEZEL 2



Rear of Android Head Unit -- screw mounting positions.

Use the four Phillips screws provided to secure the new Android head unit to the new bezel.



Factory membrane

The (6) factory buttons that ran underneath the factory screen are no longer used.

The button membrane will have to be cut off.



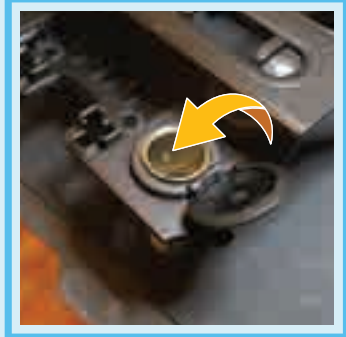
Factory buttons, membranes, CD player slot guard

Install the factory climate control and engine start button assemblies in the new bezel.

The CD player shroud should be installed, too. It can affect spacing when everything is fastened.

PREPPING THE BEZEL 3

REMOVE AND INSTALL THE FACTORY CIGARETTE LIGHTER



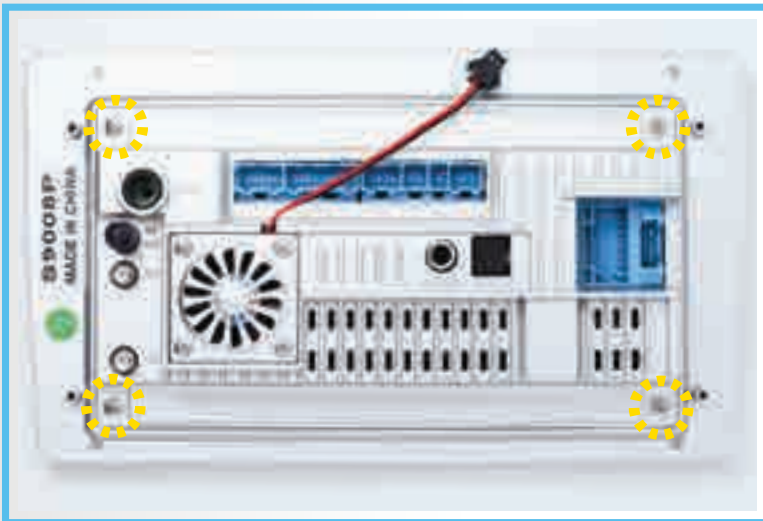
There are two plastic tabs inside the metal barrel that need to be depressed.



The metal barrel slides up and out of the plastic cover.



The metal barrel and plastic cover are "keyed" and will only fit together one way.



Rear of Android head unit

The next step requires partially dismantling the head unit.

While still installed on the new bezel, remove the four small Phillips screws shown in the photo.

This will separate the front LCD from the rear control board.

For the next part, I hang the bottom off the edge of a table to install the PCB.

The weight of the head unit keeps everything in place.

Don't drop the thing.



Rear of Android head unit and bezel

PREPPING THE BEZEL 4



Head unit detached heat sink

The back of the head unit can be lifted up slightly.

Do not disconnect anything or put strain on the cables.

Position the factory PCB between the screen and back of head unit.



Factory PCB

Maintaining button alignment can be tricky.

With the PCB on the new bezel, begin securing the PCB down with the short torx screws.

As you are fastening screws, reach around to the front of the bezel to manipulate the knobs and push the buttons.

If the knobs are hard to turn or the buttons feel stuck, you may need to reposition the PCB and/or button membranes.



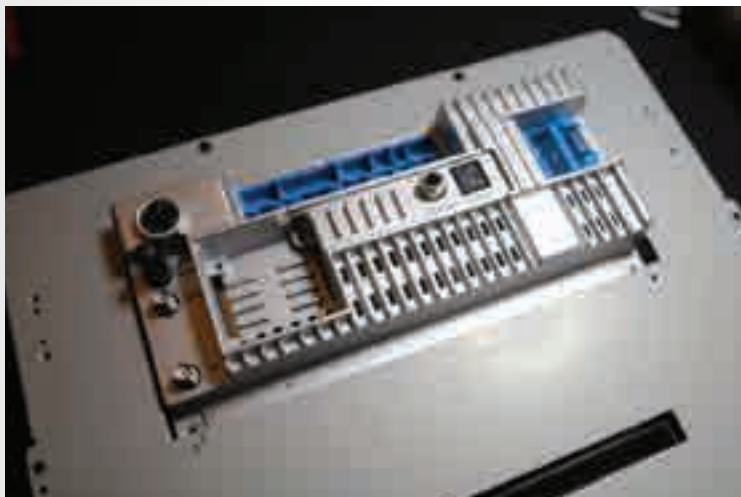
Factory PCB in position.

PREPPING THE BEZEL 5



Metal backplate

After you're confident the PCB is fastened correctly, you can begin to attach the metal backplate.



Android heatsink

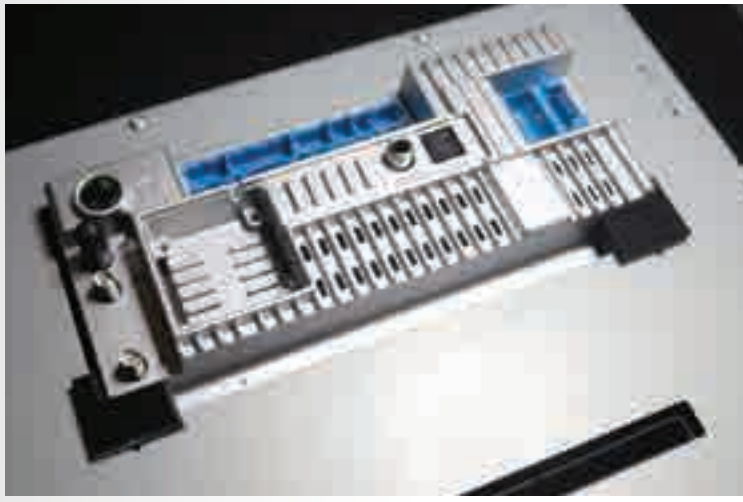
The problem now is the head unit back is "floating" -- it isn't actually secure. It won't fall out, but it will shift around.



3D-printed spacer/support.

I ended up 3D-printing some supports that slot into the backplate. When everything is bolted down, the backplate and supports keep the rear of the head unit from moving around.

PREPPING THE BEZEL 6



Rear head unit with supports.

The supports keep it from moving up and down or side to side. It is solid.

If you don't have a 3D printer to do this, I would suggest using Gorilla tape along the edges.

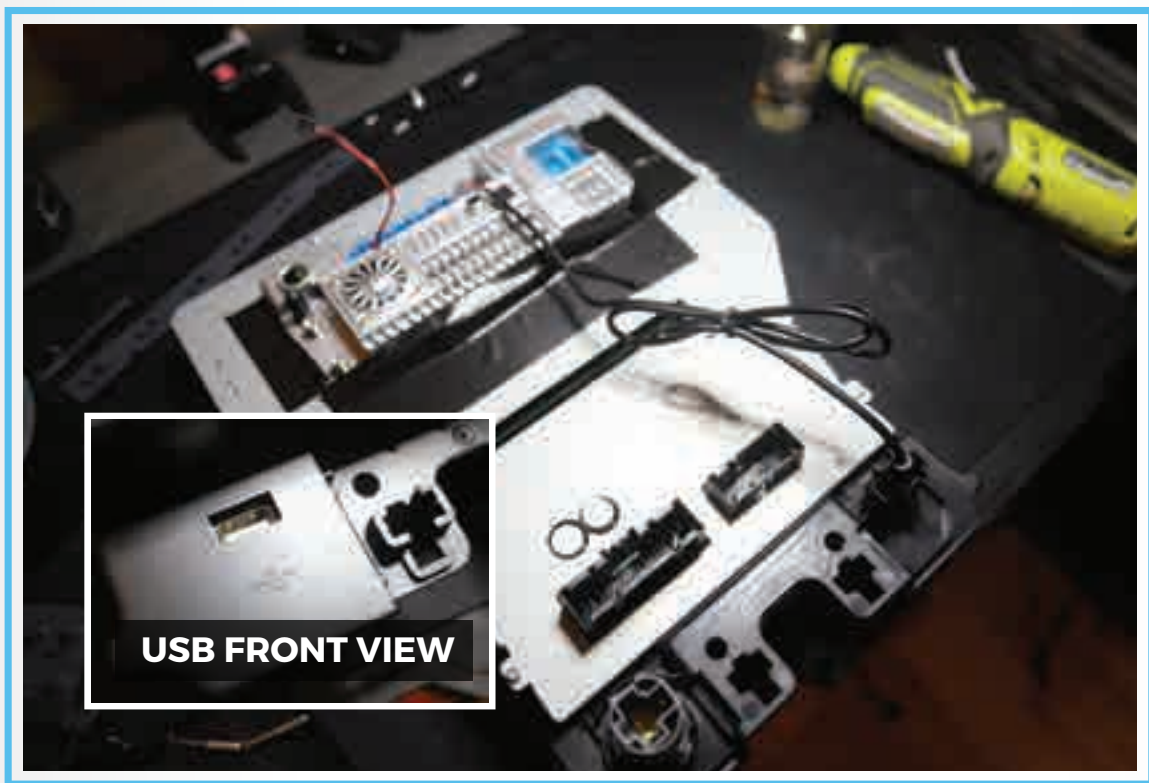


Front of populated bezel

Do a final check of the knobs and buttons. If everything looks good, it's time to install it in the car.

PREPPING THE BEZEL 7

A few more things.



One the aftermarket USB ports plugged in.

1. If you are not using the factory USB ports, it's easy to install one of the aftermarket USB ports in the bezel right now. You can plug one of them into the head unit, and shove the USB port into the lower part of the bezel. It's a snug fit and from here you can hot glue it, tape it, or whatever.
2. Above, you'll see how I taped the head unit early on while I was figuring out other stuff. I used Gorilla tape along the edges. It's a little janky but that's how I am sometimes.
3. I have an external amplifier and I've modified my wiring harness. You may see some extra wires in some of the photos going forward and I will point it out to avoid confusion.

MOUNTING THE MICROPHONE

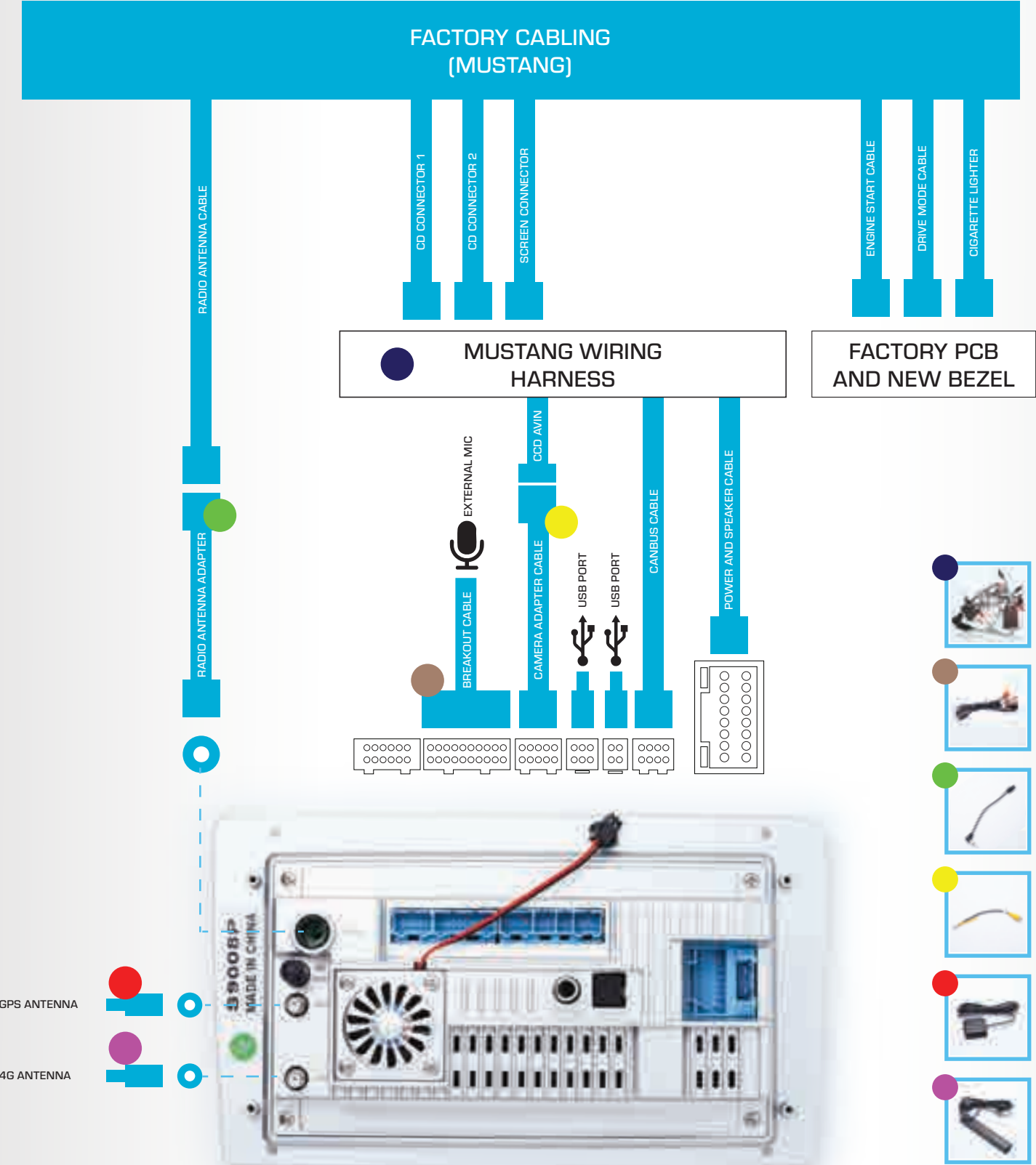


You can hide the mic wire behind all the trim pieces you've removed.

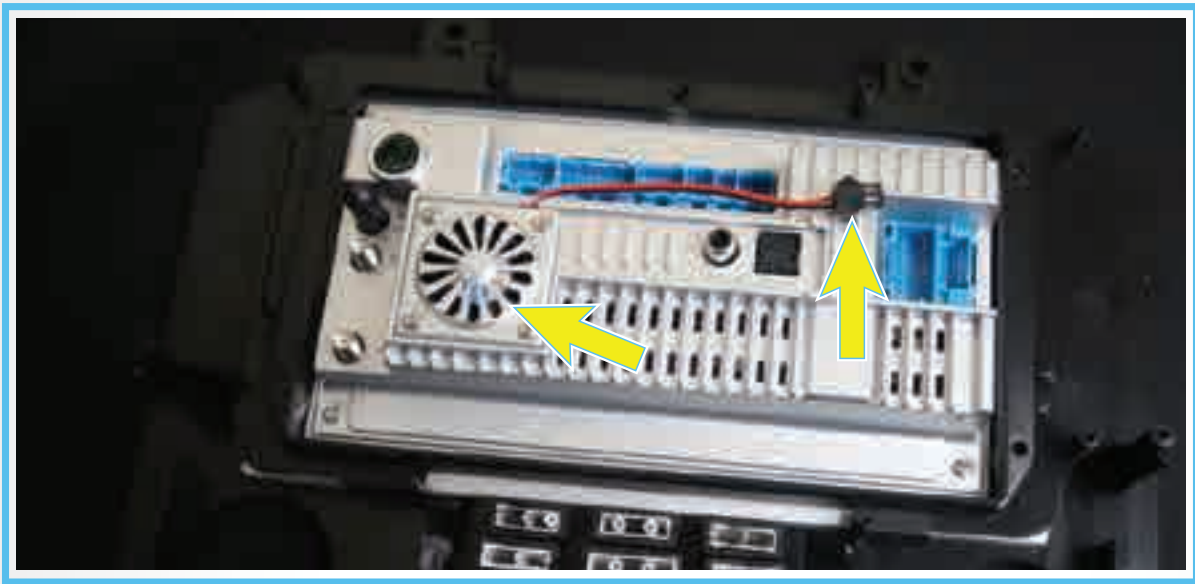
I ended up designing and 3D-printing a small "holder" for the mic. I used some double-sided tape to stick it to the steering wheel column.



WIRING BLOCK DIAGRAM



COOLING FAN POWER CONNECTION



50mm cooling fan and power input

On the back of the head unit, there is a small 12v cooling fan with a two-prong power connector.



"Amp Power" connector/cooling fan power source

The fan power will be supplied by the "Amp Power" cable. This is a 12v signal from the Android head unit that is meant to turn on an external amplifier, but you can also use it to power the fan whenever the head unit turns on.

COOLING FAN POWER SETTINGS

Refer back to this page after your head unit is installed.

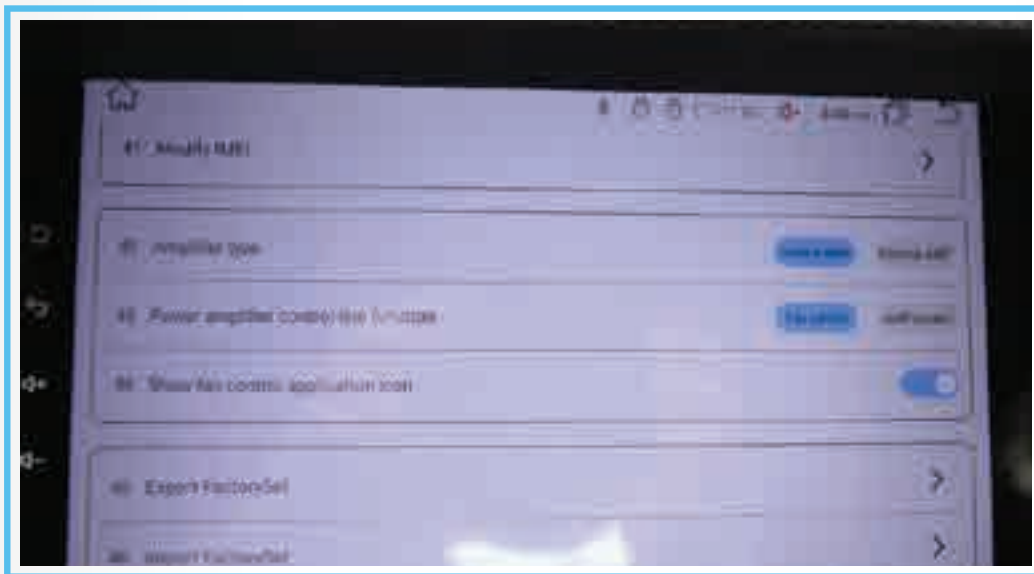
You can access the fan control from the settings.



Navigate to your **Settings**, then click **More**



Choose the **Factory** tab and type the Password -- try 8888, 1234, 1617 or 0000

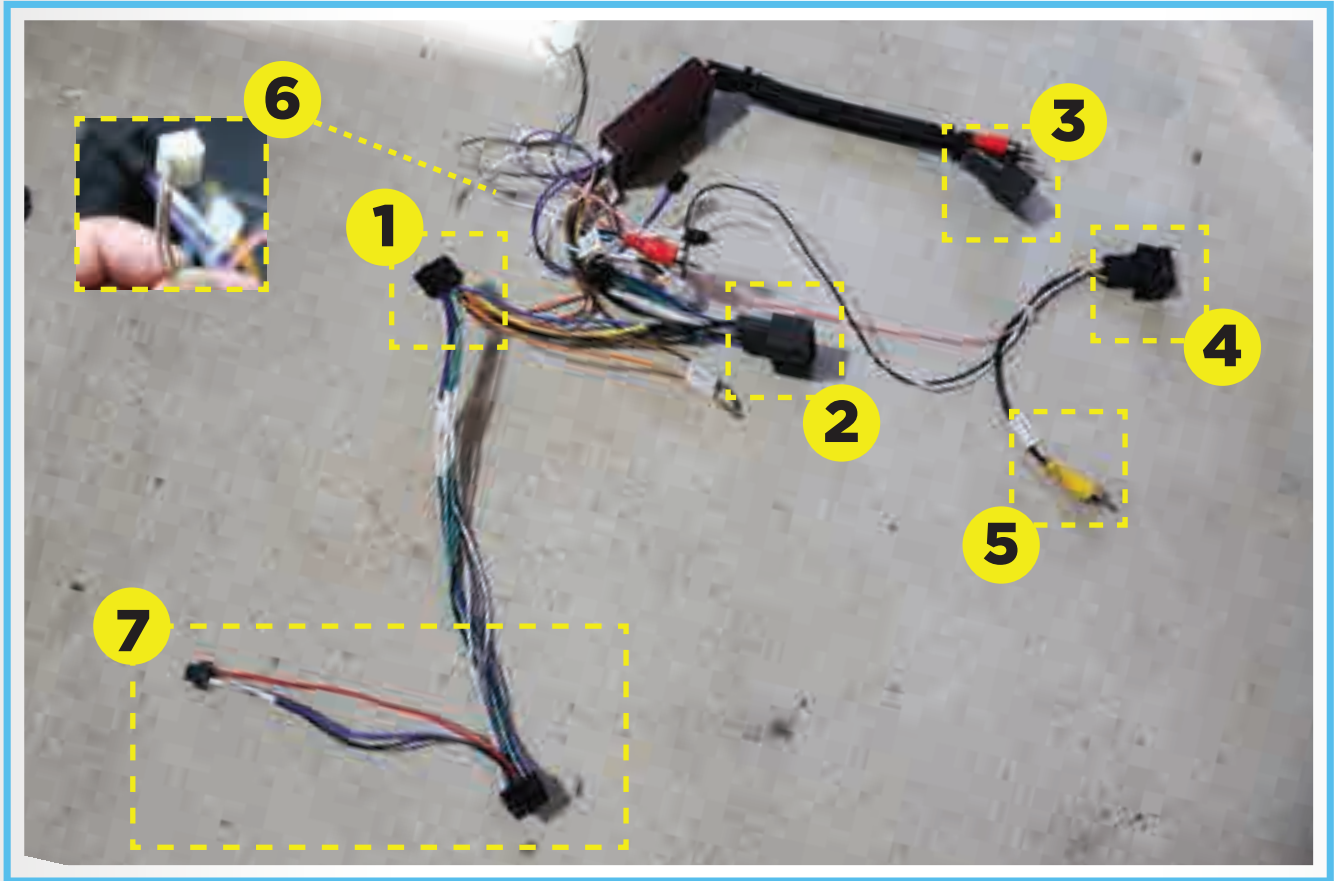


Scroll down to the settings for your external amp/fan control.

I would imagine the setting would need to be on 'External AMP', but my fan is being controlled by another remote signal. I'm not using this function so I can't verify what settings work.

INSTALLATION 1

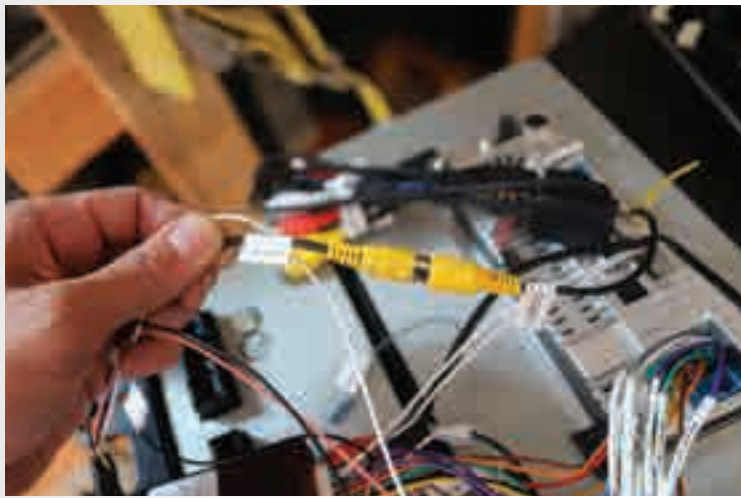
With the main wiring harness, not every “thing” is plugged into something -- e.g. RCA wires/unterminated wires. All of the major connectors will only physically be able connect to one thing.



Main wiring harness

1. **Power and speaker:** plugs directly into the Android head unit.
2. **CD Connector 1:** this plugs into one of the cables that used to be connected to the old CD player.
3. **CD Connector 2:** this is for the other cable that plugged into the old CD player
4. **Screen cable:** this connects to the 4-inch screen cable.
5. **Reverse camera:** this plugs into the reverse camera adapter, and then the Android head unit.
6. **CANBUS decoder:** I didn't get a good shot here. There are two white wires and a white connector that plugs into the back of the Android head unit.
7. I have added these connections for my external amplifier. The standard harness will not have this.

INSTALLATION 2



Reverse camera cable and adapter

Plug in the reverse camera cable to the adapter. Plug the adapter into the head unit.



If you're using the 'AMP Power' signal to turn on your cooling fan, connect your cooling fan power now.

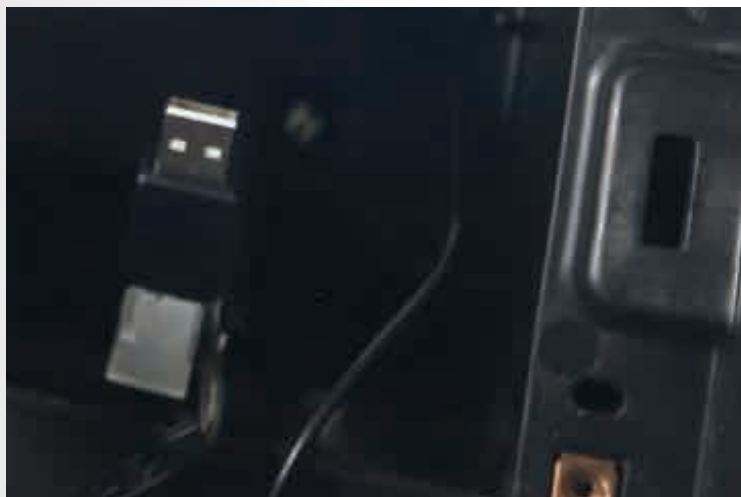


Radio antenna cable and adapter

Plug in the radio antenna cable to the adapter.

Plug this into the head unit.

This is a short cable and it will plug in last.

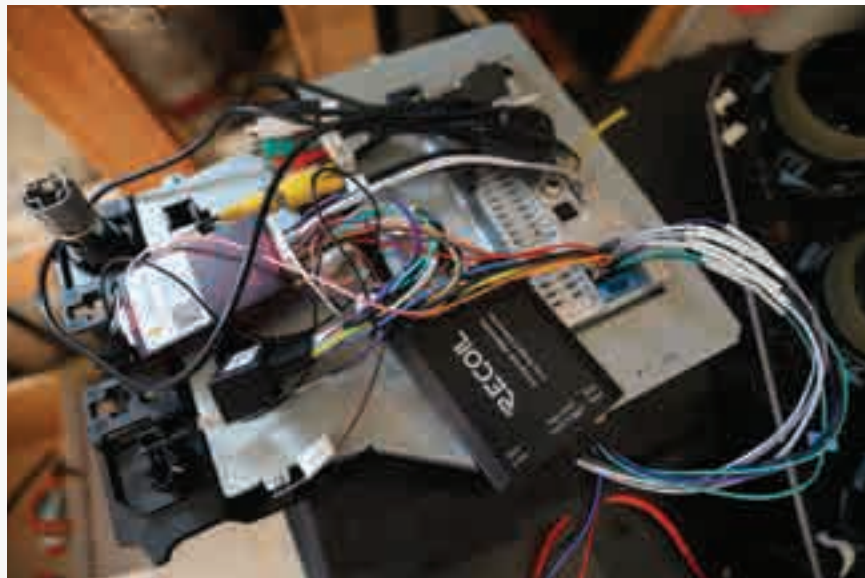


USB cable and adapter

Plug in your USB adapters if you have them.

This will then plug into the Android's USB cables.

INSTALLATION 3



There's not much else to say. Just start plugging everything into the head unit and then the car. Refer to the Wiring Block diagram on page 22. The black box that says RECOIL is something I've added.



Plug your external mic in -- it's 3.5mm jack. The GPS antenna screws on. I'm not using the 4G antenna. The radio antenna is connected last because it's so short.

My GPS antenna is in my glove box. It works, but if I start having issues, I will re-mount it somewhere more exposed.

INSTALLATION 4



Head unit showing both USB drives connected.

Connect the battery and start your car. The screen takes about 30 seconds to get to the home screen.

Verify the screen is working as expected. Verify your climate control buttons work and that all your knobs are turning as expected. Verify both USB ports work.

Secure the stereo bezel with the 7mm bolts you removed before and reinstall all trim pieces.

The “OK” buttons below the screen work, but on my unit, they need to be pushed down hard to engage. This could be bad alignment on my part, or just how these buttons were made.

The touch screen makes them redundant anyways.

CANBUS SETTINGS

My steering wheel controls and some of my center radio control buttons didn't work at first.

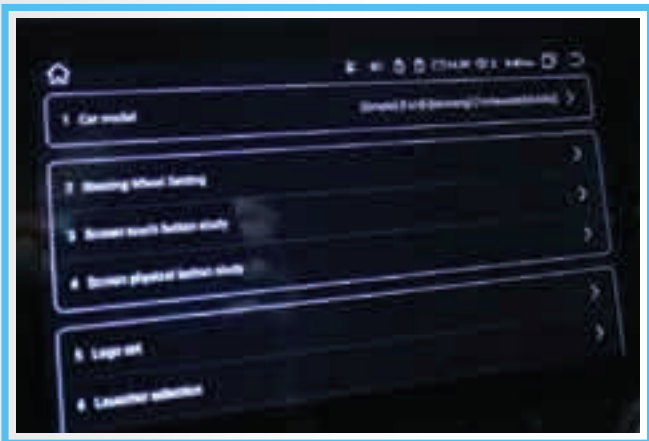
I had to change the CANBUS settings to match my CANBUS decoder and vehicle. My decoder had the words “Simple soft” on the front. The menu had an option for “Simple” so I chose that one. I don’t even know if it’s the right one but it worked.



Go into **Settings** and find the **More** option.



Choose the **Factory** tab and type the Password -- try 8888, 1234, 1617 or 0000



Look for something that says
“Car Model” or “No Canbus”



From here, choose your
CANBUS type and car model*.

* From what I understand, the options “Low”, “Middle”, or “High” refer to the trim level of your car, but I can’t tell if there’s a difference on which one you choose.

SOFT TOUCH BUTTONS

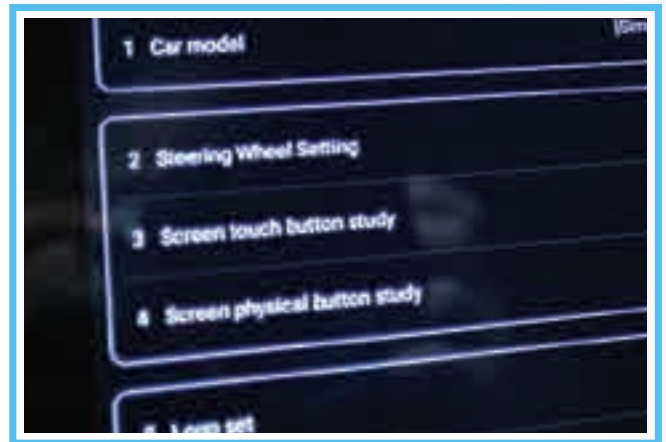


The soft touch buttons are the ones to the left of the LCD. They are part of the digitizer, but not the LCD display. They are designed to illuminate whenever your headlights are on.

If for some reason your soft touch buttons do not work, or if you wish to reprogram them, you can do so in the **Factory** settings.



Go back into the **Factory** screen.



You will need to look for the “touch button study” or similar setting.



From here you can map or re-map the functions of the soft buttons.

KILOMETERS / MILES PER HOUR

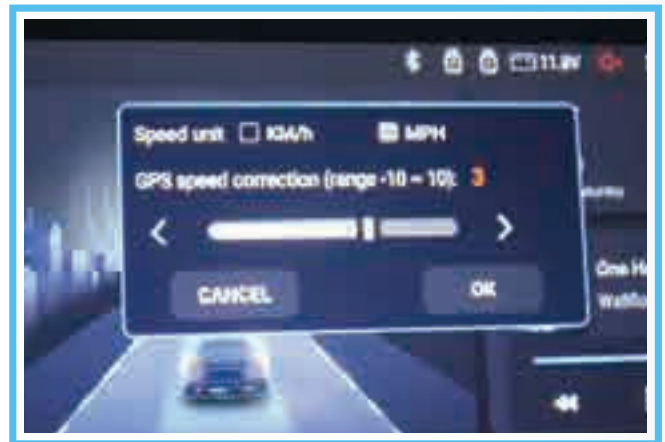


The speed unit can be changed on this sub-window. My device was in KM/h by default.



Different head units require a different touch gesture.

Use **one finger** and **touch** the digits of the MPH **OR** use **two fingers** and **pinch**.



A small box will appear allowing you to change these settings.

APPLE CARPLAY / ANDROID AUTO

Apple CarPlay and Android Auto worked **wirelessly** with both of my phones -- an **iPhone 12 Mini** and **Samsung Galaxy A32**.

The App, **Zlink**, came pre-installed on my head unit. Once your phone is paired via Bluetooth, you just need to launch the app.



Apple CarPlay



Android Auto

MISC PHOTOS



YouTube.

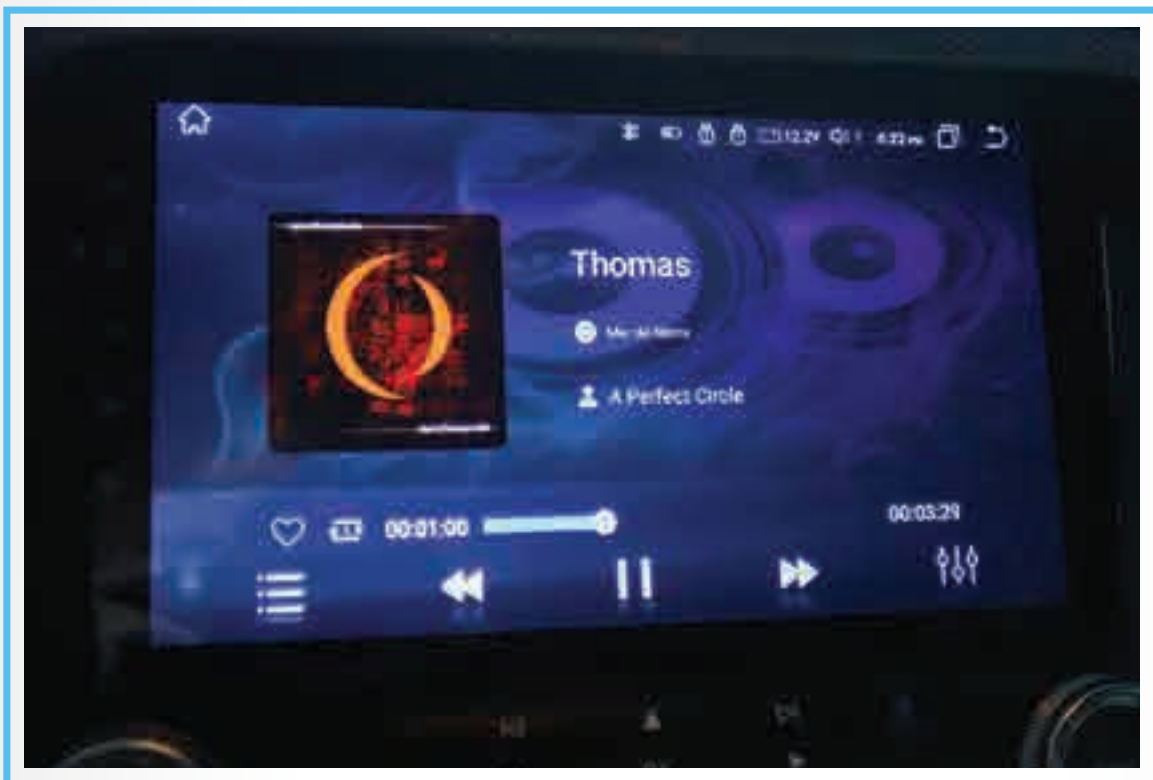


The home screen sub-window can display other things -- Navigation for example.

MISC PHOTOS



Weather.

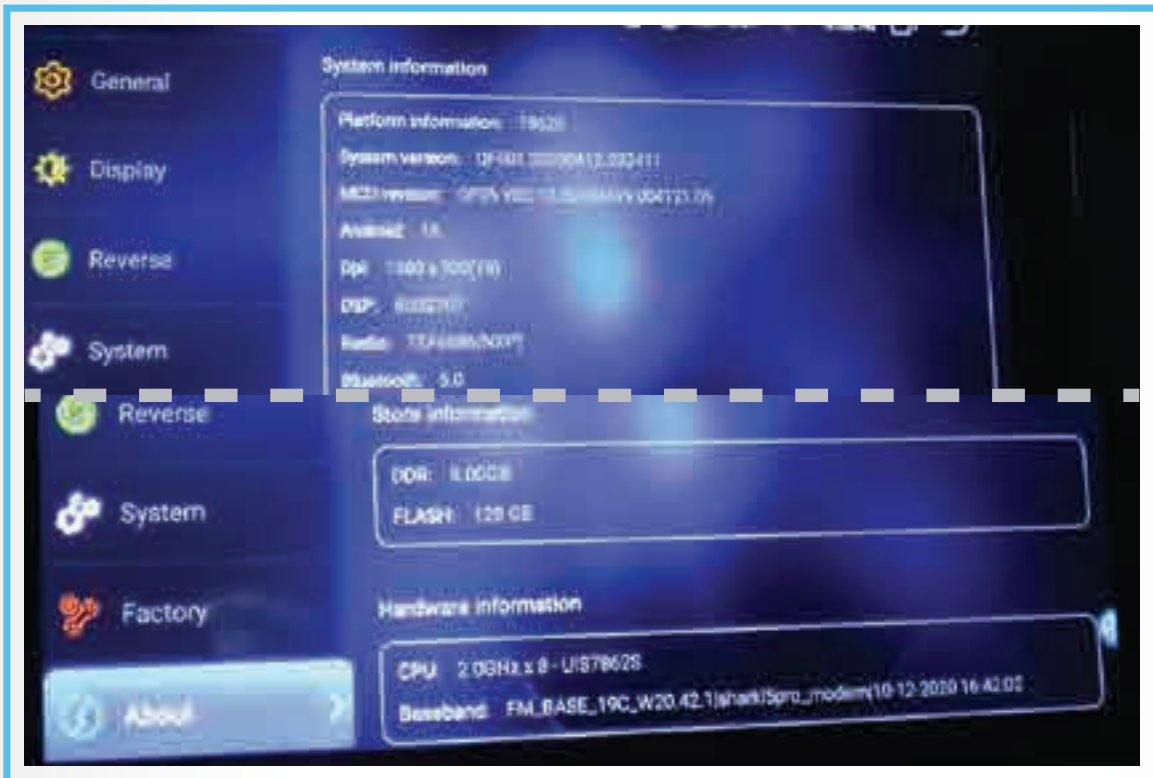


The default music player, full screen.

MISC PHOTOS



Reverse Camera.



System Information.

MISC PHOTOS



Playing video.



Playing Gran Turismo.

