

NAV-TV

INTERFACING THE FUTURE

3950 NW 120th Ave, Coral Springs, FL 33065 TEL 561-955-9770 FAX 561-955-9760

www.nav-tv.com info@nav-tv.com

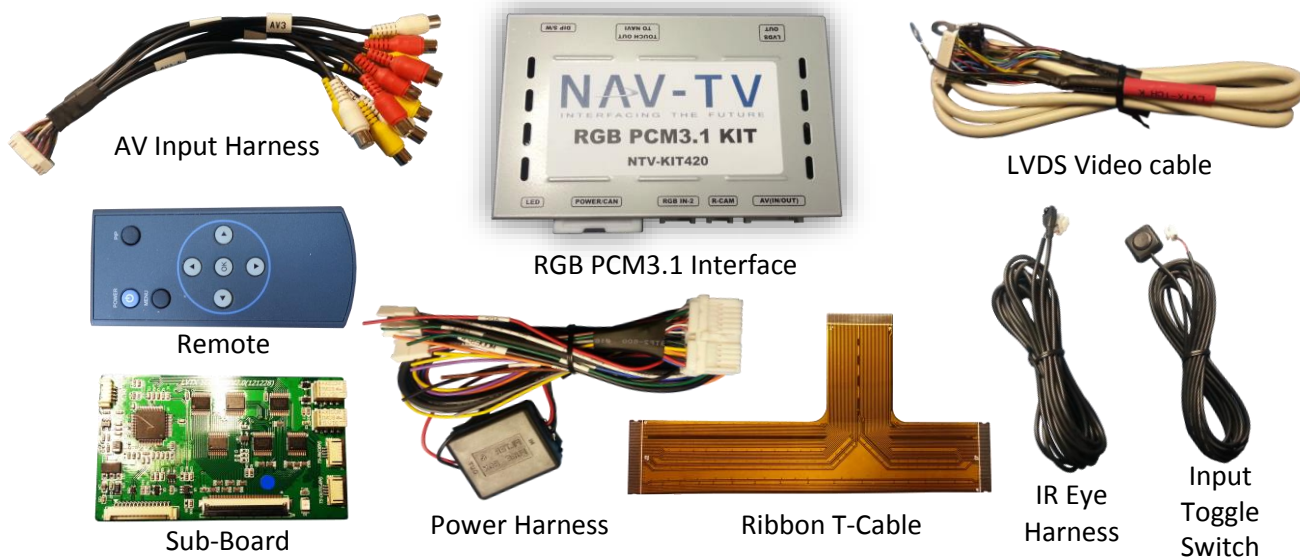
RGB PCM3.1 Kit (NTV-KIT420)



Overview

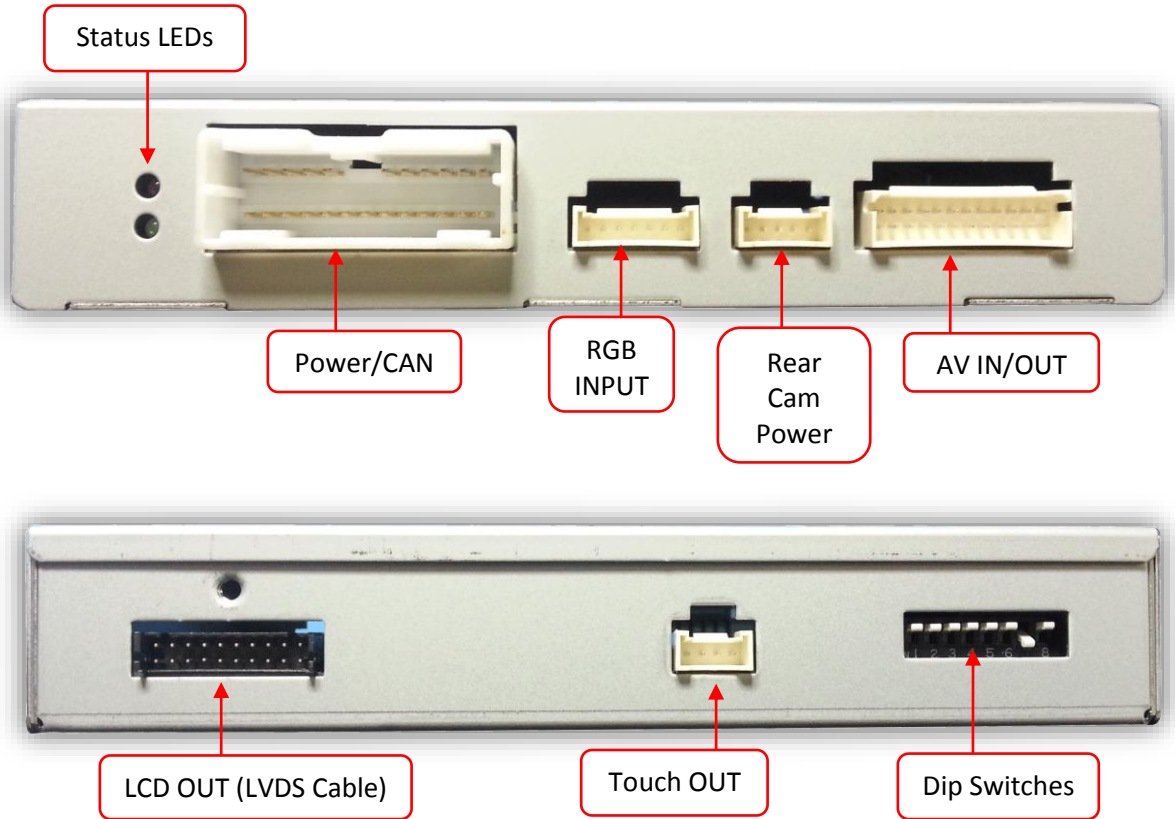
The RGB PCM3.1 kit allows the user to add up to 3 video inputs and a backup camera input to the factory touch screen radio in select Porsches with the PCM3.1 radio. This kit connects behind the radio **following a radio modification**. The kit comes with an external toggle switch and if desired, forced rear camera action is an option. This manual will provide the radio modification procedure and vehicle installation instructions.

Kit Contents



Agreement: End user agrees to use this product in compliance with all State and Federal laws. NAV-TV Corp. would not be held liable for misuse of its product. If you do not agree, please discontinue use immediately and return product to place of purchase. This product is intended for off-road use and passenger entertainment only.

Interface Connectors



Dip Switch Settings

Dip SW:	1	2	3	4	5	6	7	8
UP	Enables RGB	Enables V1	Enables V2	Enables V3	N/A	N/A	Deactivates reverse cam	Without factory NAV
DOWN	Skips RGB	Skips V1	Skips V2	Skips V3	N/A	N/A	Activates reverse cam	With factory NAV



***Note: Disconnect power to the interface before adjusting dip switches or the change will not be implemented.**

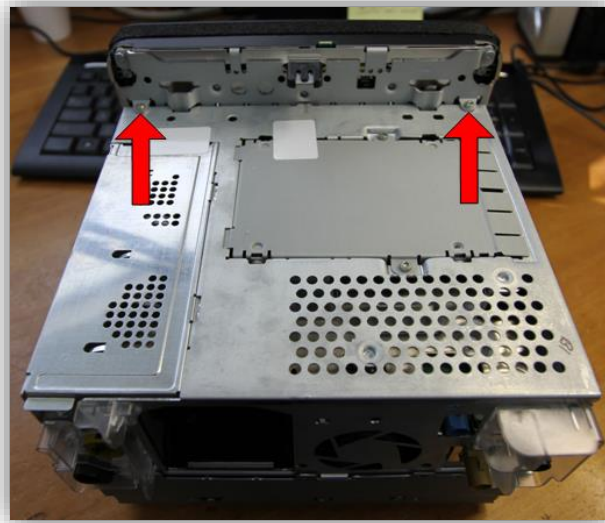
Agreement: End user agrees to use this product in compliance with all State and Federal laws. NAV-TV Corp. would not be held liable for misuse of its product. If you do not agree, please discontinue use immediately and return product to place of purchase. This product is intended for off-road use and passenger entertainment only.

PCM3.1 Radio Modification

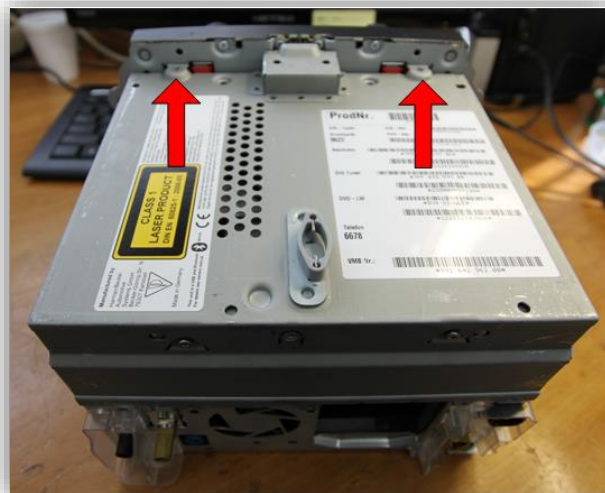
1. Remove the factory PCM3.1 radio. This requires removing any vents or dash panels that hide the radio mounting screws. Lay a protective mat down on the dash to protect from scratches.
2. Take the PCM3.1 radio to a clean workbench for disassembly.



1. On the top of the radio, remove (2x) Torx screws indicated by the arrows.

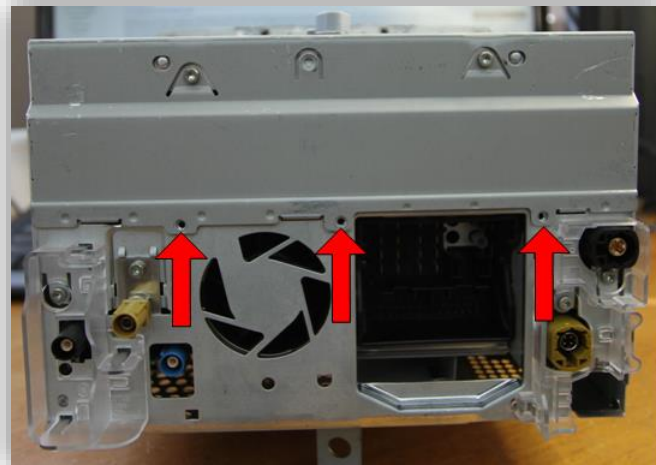


2. On the bottom of the radio, again move 2 torx screws indicated by the arrows.

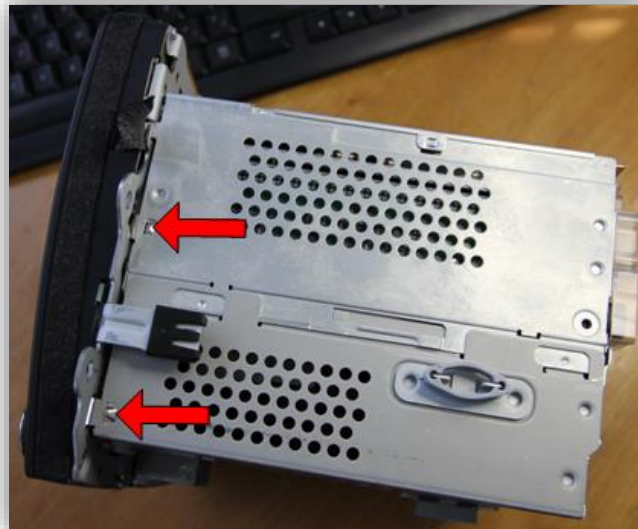


Agreement: End user agrees to use this product in compliance with all State and Federal laws. NAV-TV Corp. would not be held liable for misuse of its product. If you do not agree, please discontinue use immediately and return product to place of purchase. This product is intended for off-road use and passenger entertainment only.

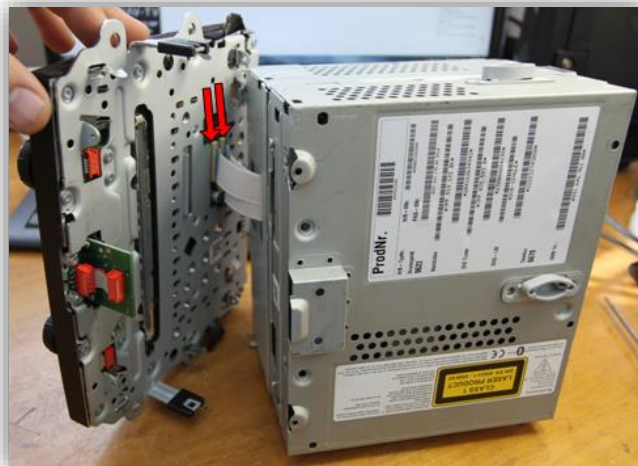
3. On the back of the radio, remove 3 torx screws.



4. On the sides of the radio, pry the 2 silver clips to release the LCD face from the rest of the chassis. The LCD face must swing forward from the **bottom**. The clips are indicated by the following arrows (repeat on opposite side):

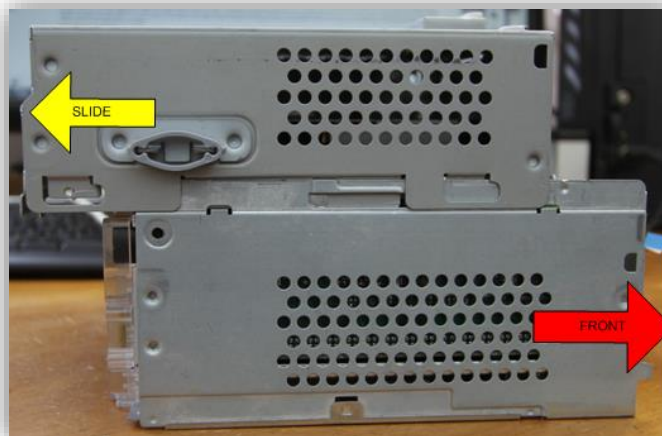


5. Carefully disconnect the ribbons with a small flathead indicated by the red arrows.

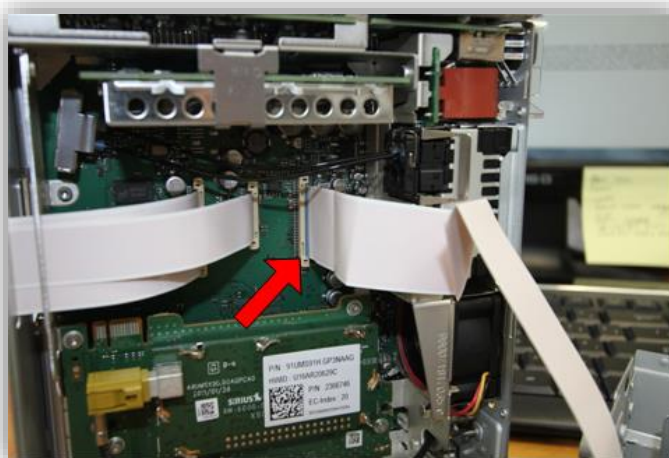


Agreement: End user agrees to use this product in compliance with all State and Federal laws. NAV-TV Corp. would not be held liable for misuse of its product. If you do not agree, please discontinue use immediately and return product to place of purchase. This product is intended for off-road use and passenger entertainment only.

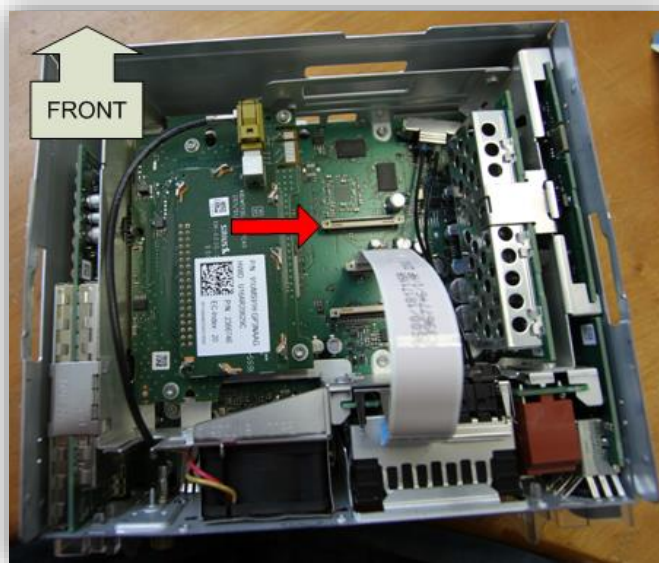
- Slide the top half of the radio chassis towards the **rear**. It may be easier after you remove white QC sticker on the left side.



- Carefully disconnect the disc drive ribbon cable from the lower half of the radio.



- Carefully disconnect the front most ribbon cable (previously connected to the LCD).

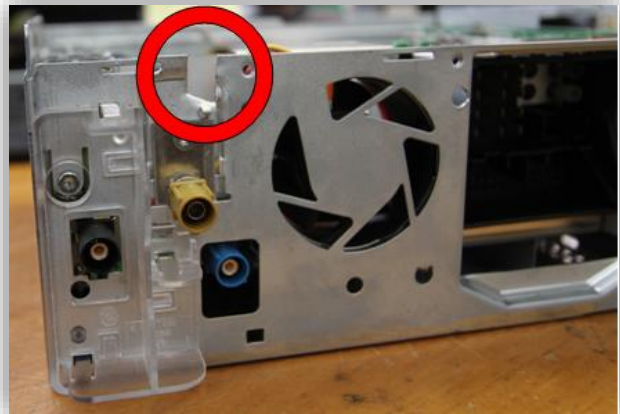


Agreement: End user agrees to use this product in compliance with all State and Federal laws. NAV-TV Corp. would not be held liable for misuse of its product. If you do not agree, please discontinue use immediately and return product to place of purchase. This product is intended for off-road use and passenger entertainment only.

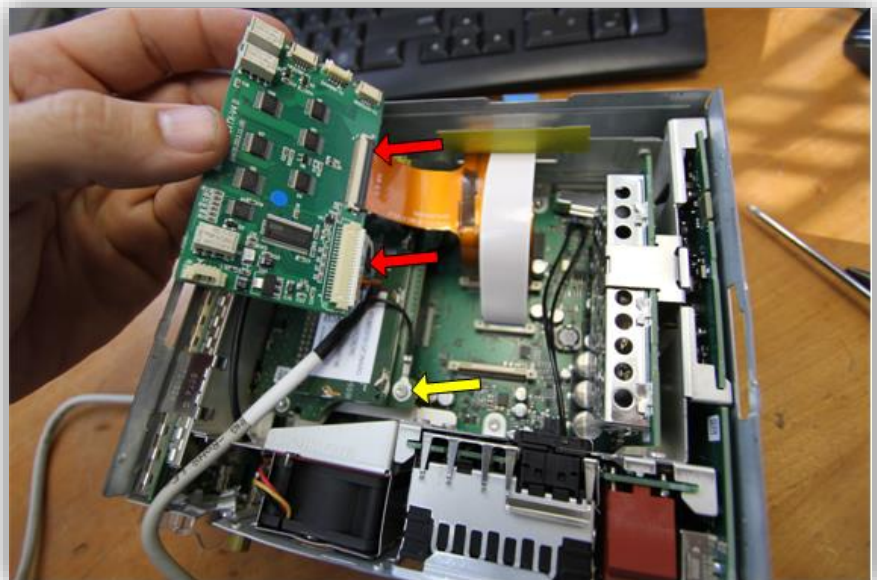
9. Connect the brown, 3-way ribbon to the same connector from step 8. Be certain the ribbon is seated fully, squarely and securely. The end of the ribbon labeled 'From System BD' connects to the circuit board, the end labeled 'To LCD' goes towards the LCD. Run both ribbons through the access holes on the PCM chassis like shown.



10. With tin-snips, cut a notch on the back side of the PCM chassis to run the LVDS cable through.

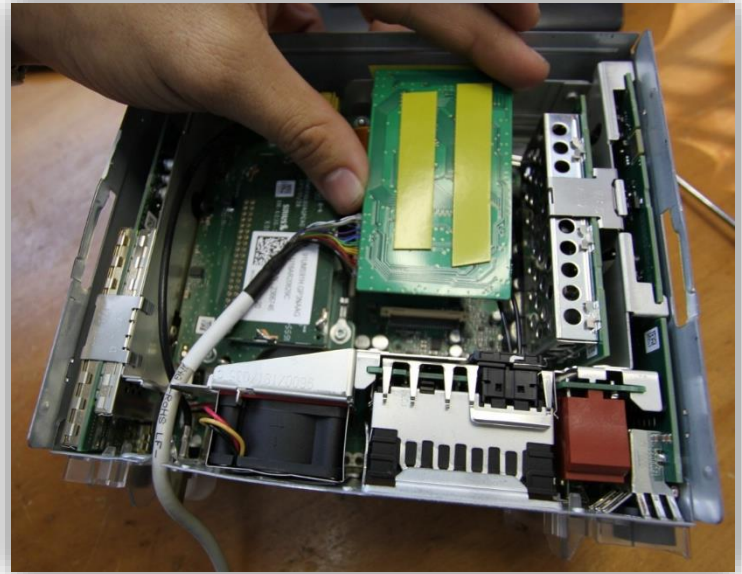


11. Collect the LVDS cable and relay circuit board from the ribbon kit. Connect the brown T-ribbon from step 9 and the LVDS cable to the relay circuit board as shown below. The LVDS cable can only be inserted properly one way. Lastly, secure the ground terminal wire from the LVDS cable to the Torx screw indicated by the yellow arrow.

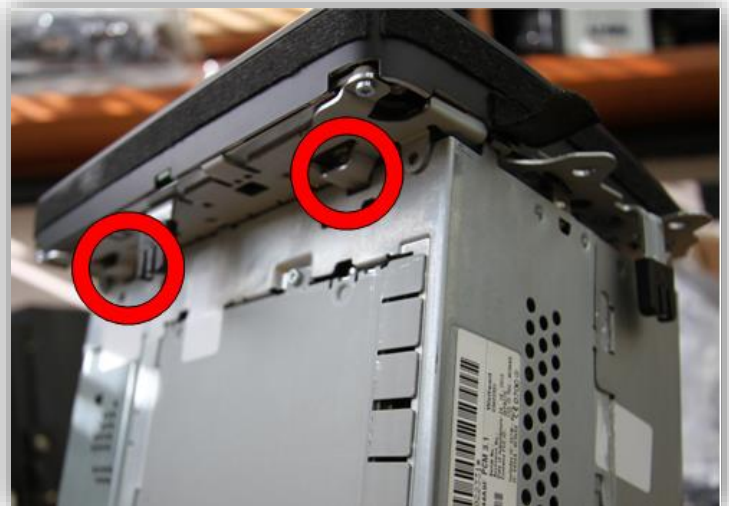


Agreement: End user agrees to use this product in compliance with all State and Federal laws. NAV-TV Corp. would not be held liable for misuse of its product. If you do not agree, please discontinue use immediately and return product to place of purchase. This product is intended for off-road use and passenger entertainment only.

12. Flip the circuit board over, as it will be sandwiched between the drive and the lower half of the chassis. There will be adequate clearance. Run the LVDS cable through the notch you made from step 10. Keep an eye on this cable when closing the chassis so it won't be pinched.

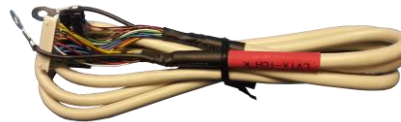
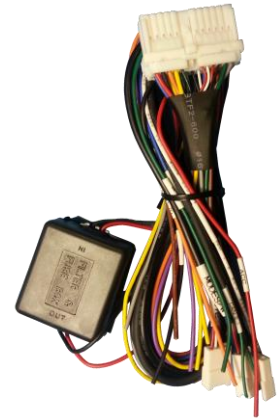


13. After the chassis has been properly reconnected, reattach the LCD face beginning with the 2 ribbon cables. Next, connect the LCD face to the chassis starting with the **top anchors**, then swing the face down and clip it together. Proceed **CAREFULLY!**



RGB PCM3.1 Interface Installation

1. From the RGB PCM3.1 kit, gather the power harness. Connect the following wires to the car:
 - a. Connect the **black** wire to a solid chassis ground (-)
 - b. Connect the **red** wire to a 12v ACC (+ switched) source
3. Connect the **gray** wire to a (+) reverse signal. *When this wire receives 12v, the interface will display the video being fed to the RCA labeled 'R-CAM' on the AV-Harness. The CAN wires will not function with this kit.*
4. Connect the **LVDS cable** (run into the radio from the modification) to the interface at the port labeled '**LVDS OUT**'. Connect the ground terminal to the nearest screw on the interface box.



5. Connect the **AV Input** cable to the port on the RGB PCM3.1 interface labeled '**AV IN/OUT**'. If you're only connecting a reverse camera (and no other inputs), the signal input from the camera must connect to the RCA labeled '**R-CAM**'. Refer to the dip-switch settings chart to skip/enable AV sources upon toggle switch presses (optional. Page 2).



6. **Optional:** Connect the remote eye to the plug on the Power Harness labeled '**Remote**' and leave the eye in clear view of the driver (often it can be stuck inside a vent). This connection would be necessary if you want to be able to adjust anything from the RGB PCM3.1 interface's menu.
 - a. **While in any AV mode other than factory** (on the display screen), press the **MENU** button for **Menu 1** , or hold the **left arrow** to enter **MENU 2**.
 - b. To switch between AV modes, press the '**OK**' button.



7. **Optional:** Connect the provided momentary toggle switch to the port on the RGB PCM3.1 interface labeled '**MODE**'. Pressing this switch with the ignition on will cycle the screen modes as follows: **factory screen > NAVI (RGB) > AV1 > AV2 > AV3 > factory screen.**



8. Connect the RGB PCM3.1 **Power Harness** to the interface at the port labeled '**POWER/CAN**'. Start the car and test for proper functionality before securing the interface properly and replacing dash pieces.
9. **Note:** *All other included harnesses not mentioned in this manual are not needed for most installations. If you would like to know more about the full capability of this interface, contact NAV-TV tech support at 561-955-9770. Additional features not mentioned in this manual are not supported by NAV-TV at this time.*

Menu Adjustments

Before you start:

- Make sure the car's ignition is on and radio is booted/settled
- You must be in 'NAVI' (RGB), 'AV1', 'AV2' or 'AV3' mode (on display screen)
- Use the remote 'OK' button to switch modes, or use the provided input toggle switch
- Hold the **LEFT ARROW** for 3 seconds. The **Menu of FACTORY** will appear on screen.

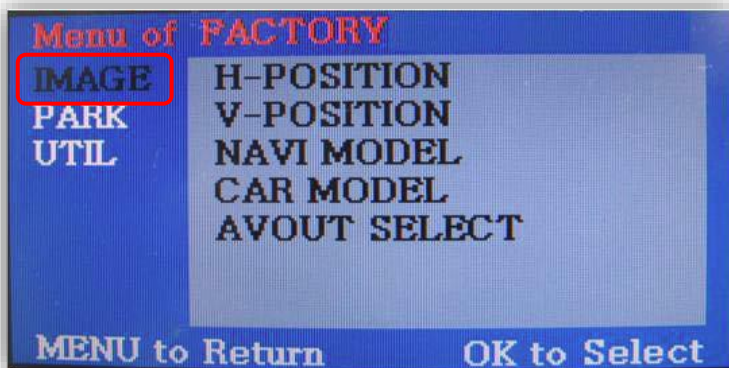
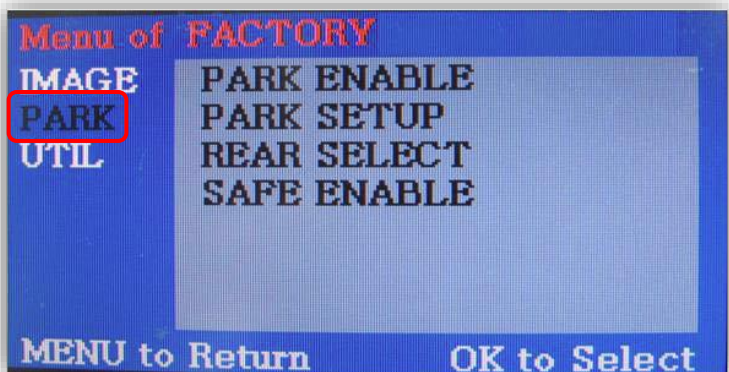
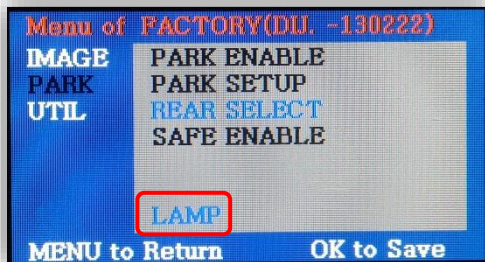
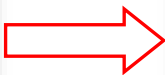
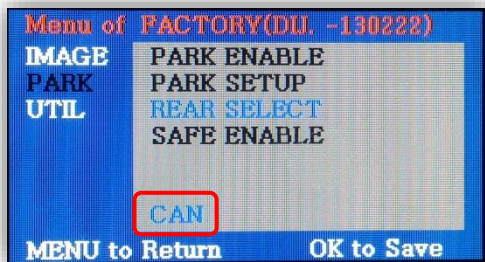


IMAGE MENU
-The only setting that may need necessary adjustment here would be **CAR MODEL** (BMW/AUDI KITS)
Note: on some kits, this option is located under 'UTIL'
-The remaining settings are optional and install dependent.



PARK MENU
PARK ENABLE: Rear-CAM guidelines ON/OFF
PARK SETUP: Rear-CAM guideline positioning
REAR SELECT: Change *rear camera activation* from CAN to LAMP (gray wire) *Note: on some kits, this option is located under 'UTIL'*
SAFE ENABLE: If 'ON', prevents AV sources from showing (unless you ground **Blue 'PARKING' wire**)

1 **Rear-Select CAN to LAMP adjustment** 2



Agreement: End user agrees to use this product in compliance with all State and Federal laws. NAV-TV Corp. would not be held liable for misuse of its product. If you do not agree, please discontinue use immediately and return product to place of purchase. This product is intended for off-road use and passenger entertainment only.

FAQs

Q. I cannot switch A/V sources.

A. Check IR or toggle switch connection. Check the LEDs on the interface, if nothing is lit up with vehicle ignition, check power/ground connections.

Q. All I see on the display is a black screen (no factory image pass-through).

A. Make sure the video cables (IN/OUT) are connected at the proper location (Screen/Radio/NAV DRIVE).

B. Make sure the video cables are seated all the way.

C. Make sure Dip Switches 5 & 6 are set correctly (resolution or screen size).

Q. Displayed image color is not proper (too dim or color seems wrong).

A. Try to select 'INITIAL' in OSD menu.

Q. Rear camera image does NOT appear.

A. Make certain Dip Switch #7 in set **down** for aftermarket camera, or **up** for a factory camera.

B. Try swapping the CAN connection wires. This will not do damage, if it is hooked up wrong it will only not work.

C. Make certain the camera is properly powered. Check voltage **at the camera itself**.

D. Try an alternative video source, don't assume the power/ground is correct unless you've checked it **with a multi-meter!**

E. If this is a CAN-connected module and you've connected the CAN wires, try using the gray wire (*not all interfaces have this wire!*) instead of the CAN connection for reverse activation. You'll also need to change the **Rear Select** option in the **Menu of Factory (MENU 2)** under **UTIL** or **PARK**. Refer to the **Menu Adjustments** section.

Q. Unwanted A/V mode is displayed upon a toggle press (A/V source switching order: OEM->RGB->AV1->AV2->AV3->OEM).

A. Check DIP Switch Setting. Refer to page 2.