

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

BHM
09/28/16
NTV-DOC260

RGB-PCM3.1N

(NTV-KIT749)



Overview

The RGB-PCM3.1N interfaces 2 video inputs including a backup camera with dynamic guidelines to the factory touch screen radio in select Porsches equipped with the PCM3.1 radio. This kit connects behind the radio ***following a radio modification***. AUX Video Switching is performed using the 'NAV' button on the radio face (optional).

Kit Content



Modification PCB



RGB-PCM3.1N Interface



Modification FFC Ribbons



IR Receiver



Remote (menu control)



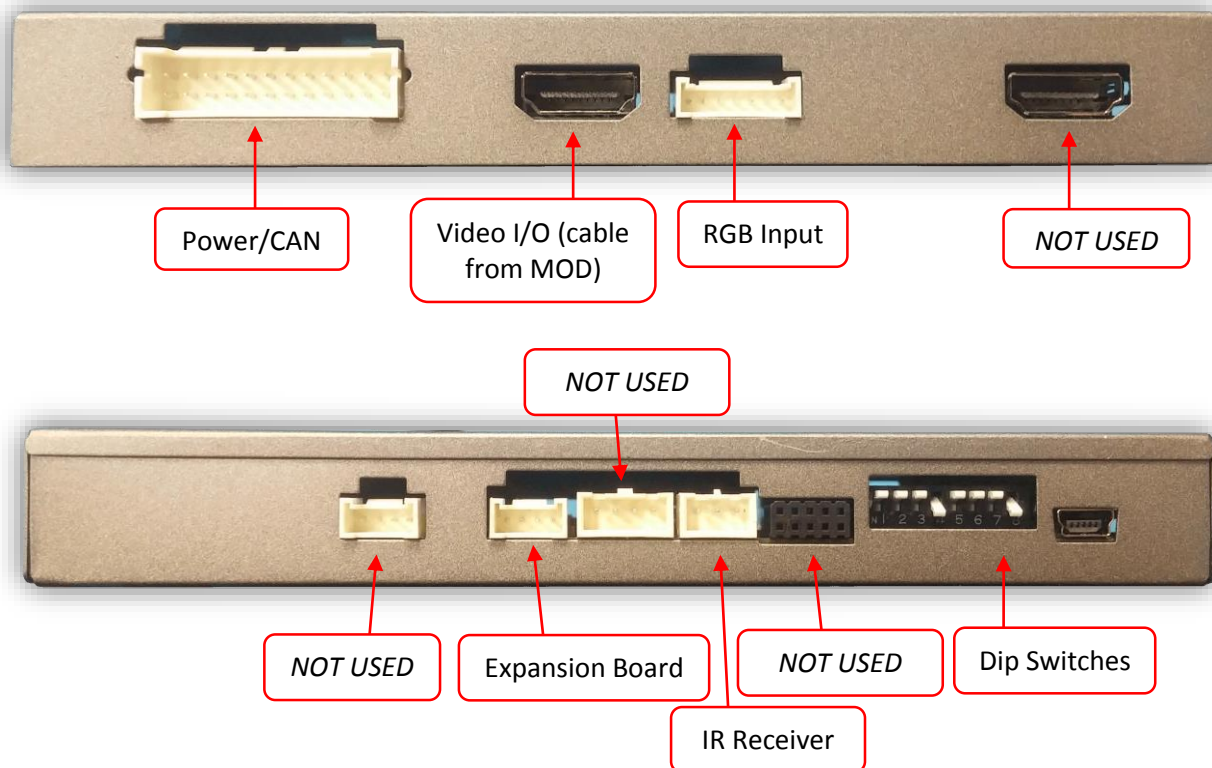
Power Harness



Video I/O Cable

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Interface Connectors



Dip Switch Settings

Dip SW:	1	2	3	4	5	6*	7	8
UP	KEEP UP	Skips V1	Skips V2	RVC OFF	N/A	N/A	N/A	N/A
DOWN	KEEP UP	Enables V1	Enables V2	RVC ON	N/A	N/A	N/A	N/A



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

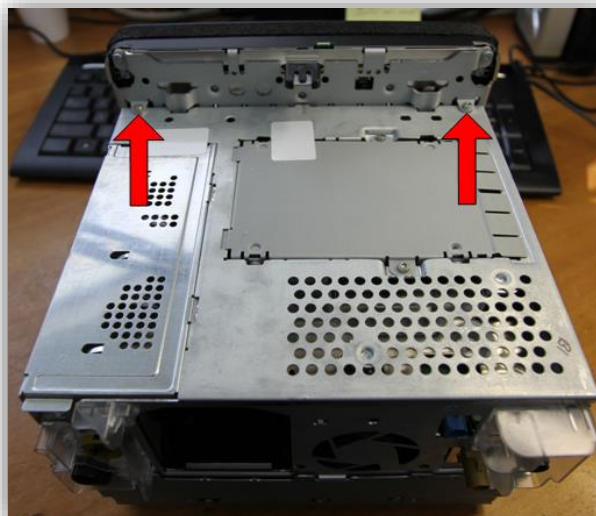
PCM3.1 Radio Modification

WARNING: This process requires strict accuracy and dexterity. If you are not comfortable performing this modification, stop now and contact NAV-TV. NAV-TV is not responsible for damage done to the radio as a result of improper installation. By continuing to follow this guide, you agree to take responsibility for any possible damage to the radio or interface.

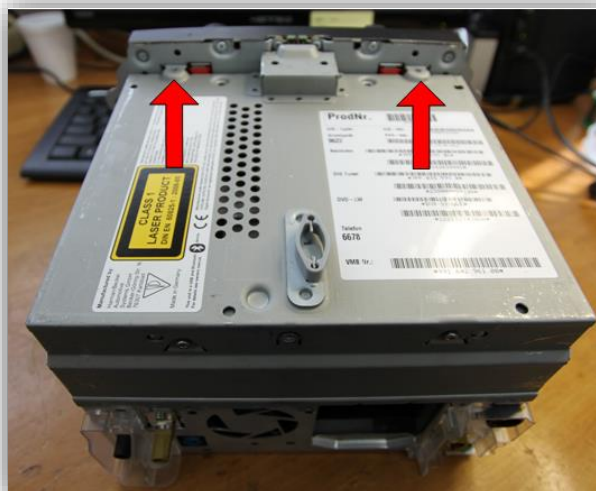
1. Remove the factory PCM3.1 radio. This requires removing any vents or dash panels that hide the radio mounting screws. Lay a protective mat down on the dash to protect from scratches.
2. Take the PCM3.1 radio to a clean workbench for disassembly.



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

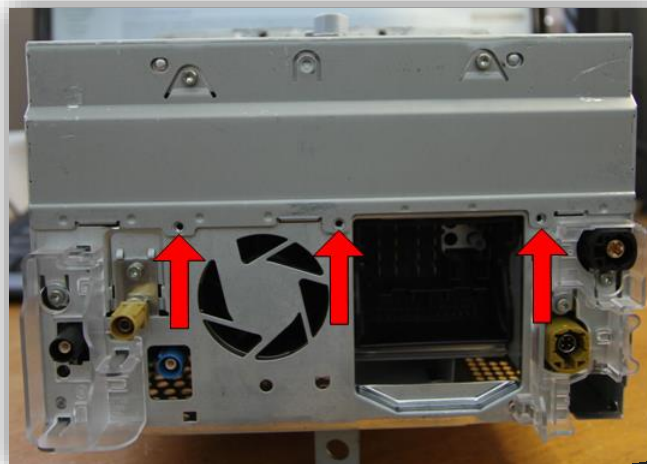


2. On the bottom of the radio, again move 2 torx screws indicated by the arrows.

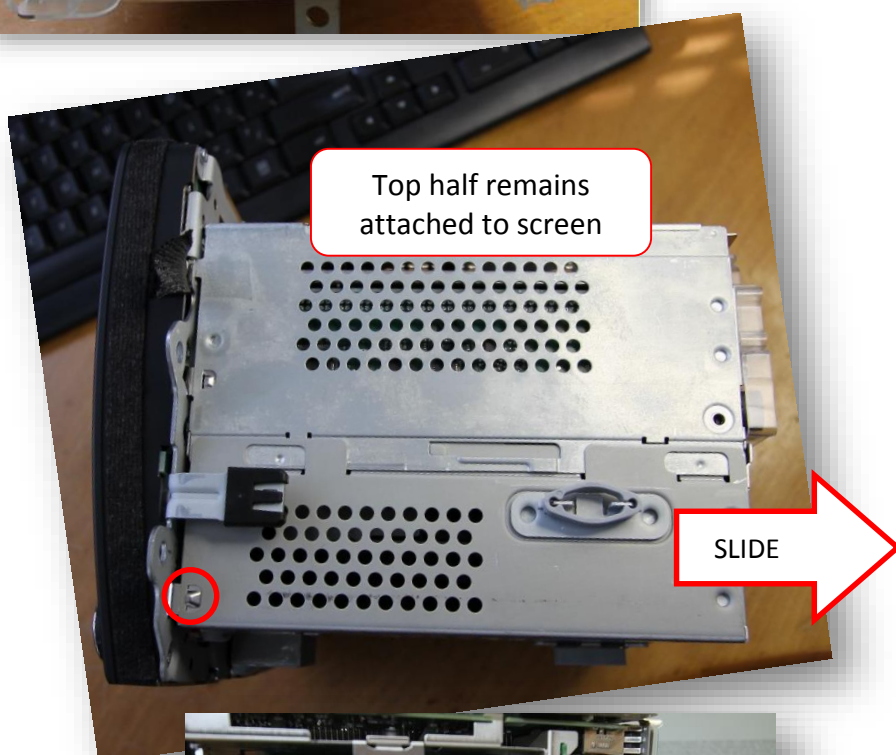


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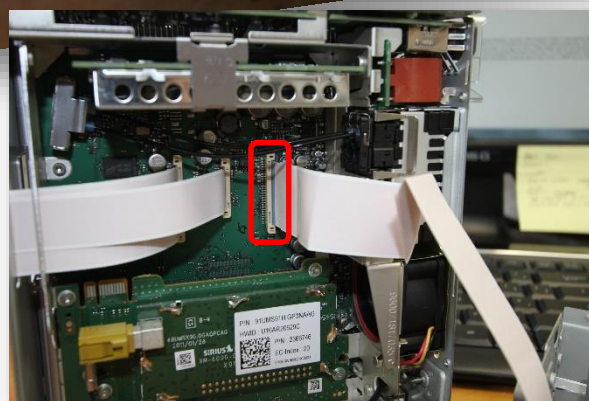
3. On the back of the radio, remove 3 torx screws.



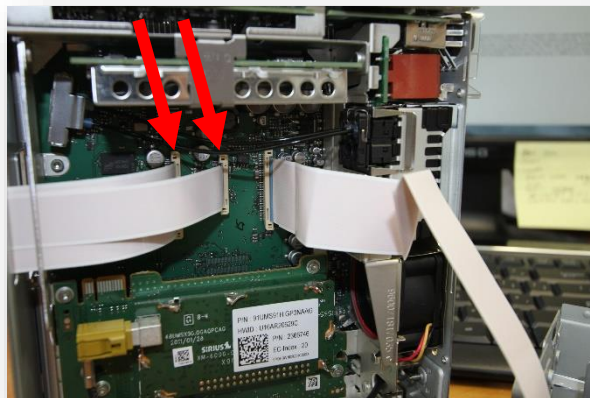
4. With the radio on its back (like shown in last step), slide the bottom half (on top while the radio is upside down) back, towards you. This will require some force, and may require slicing the stickers on the sides of the radio to free the halves. *Note the locks that may need to be depressed for this method.*



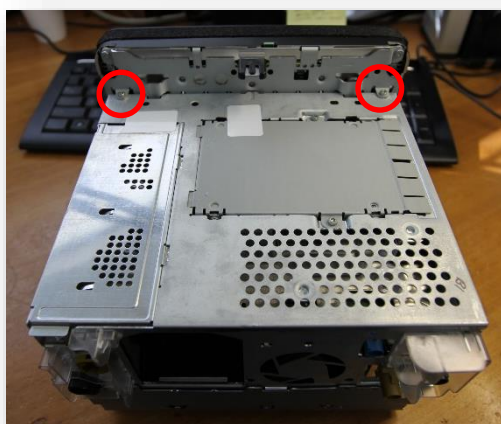
5. Carefully lift the FFC connector (connecting the disc drive) up with a flathead or fingernail, to release the ribbon. Place the disc drive aside in a safe place.



6. Using the same method from step 5, remove the two remaining ribbons that connect the screen to the radio. *Leave the ribbons attached to the screen.*



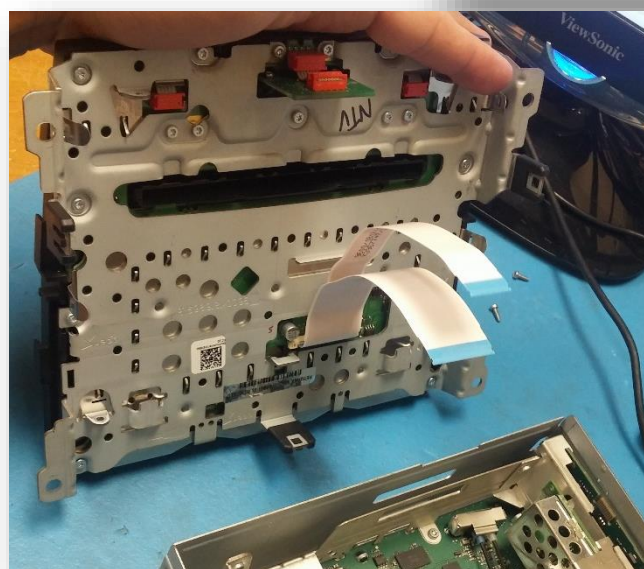
7. Flip the radio over, and remove (2x) more Torx screws (if not already removed), to release the face from the chassis of the radio.



8. Remove the screen carefully. There are metal lock tabs on the side of the screen which must be depressed for clearance.



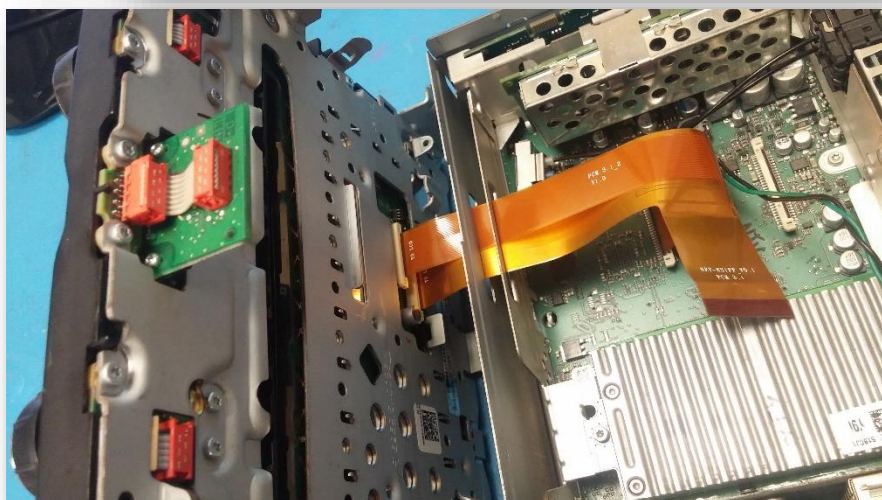
9. Just like in step 6, remove the same ribbons from the screen. ***Pay attention to the pin orientation (which way the pins face).*** These ribbons will not re-used, they will be replaced with ***provided T-Ribbons***. ***NOTE: it's a good idea to hang on to these OEM Porsche PCM3.1 ribbons, in case the kit ever needs to be removed in the future.***



10. **Carefully** connect the provided ribbons to the radio as shown, with the 'FROM RADIO' side into the FFC connectors on the PCB. The pins on these should face opposite the white lock on the FFC connector.



11. **Carefully** connect the other end of the provided T-Ribbons to the radio, just as you did to the radio in step 10.

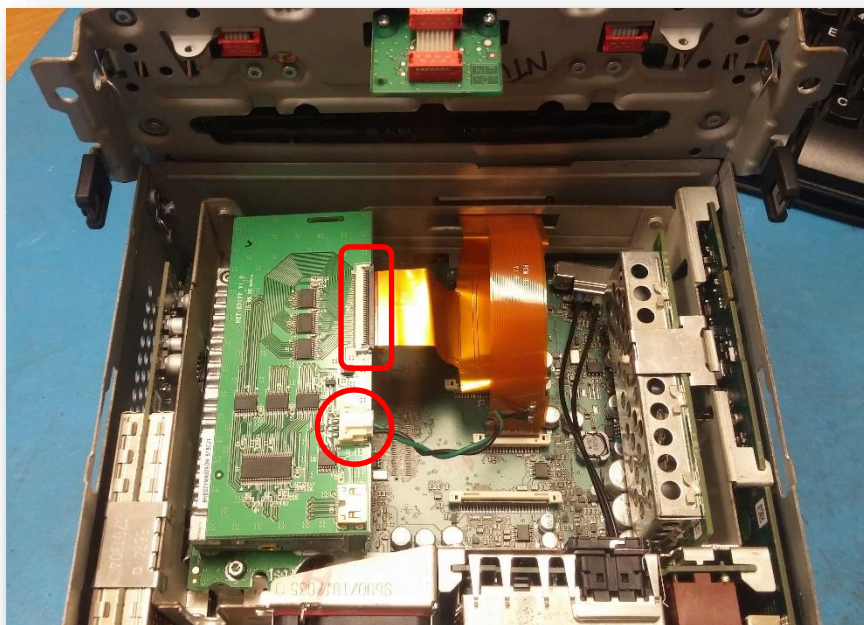


12. It is acceptable to place a **slight** crease in the ribbon to allow slack for the smaller ribbon (you'll notice the smaller ribbon is very tight until this is done).

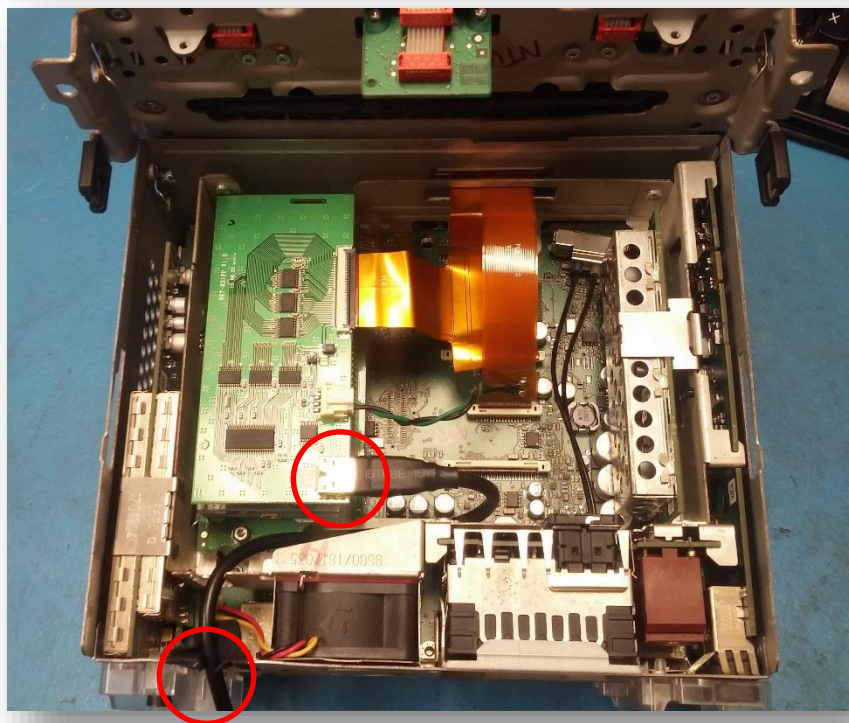


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13. Connect the T-ribbon and 2-PIN connector (from second ribbon) properly into the provided **modification PCB**, and secure down nearby using double-sided tape (in this case, on top of the SAT tuner)



14. Connect the provided **Mini-HDMI Cable** carefully to the port on the **modification PCB**, and run it out the back of the unit. **You may need to cut a notch into the chassis of the radio to allow for clearance. Do so carefully.**



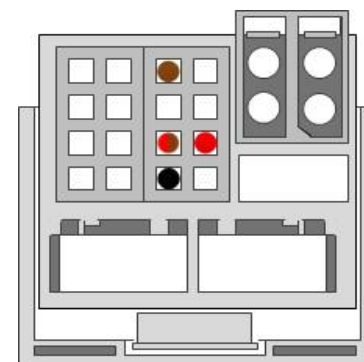
15. Replace all Torx screws and put the radio back together. Proceed to **RGB-PCM3.1 Installation** to complete the install.

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RGB-PCM3.1N Installation (in vehicle)

1. From the main power harness, solder the following connections to the **main radio quad-lock connector**:

PCM3.1N Wire	Description	Connect to Radio Plug
Black	Ground (-)	PIN 12 (-)
Red	Constant 12v (+)	PIN 15 (+)
Blue	CAN HI	PIN 11 (Brown/Red)
White	CAN LO	PIN 9 (Brown)



Wire side view of quad-lock

2. Connect the HDMI connector (LVDS standard) from the previously modified radio to the port on the interface labeled **'VIDEO OUT'**.



3. Connect your reverse camera to the yellow RCA input among the power harness labeled **'CAMERA'**. The purple wire from the main power harness provides 12v (+) when in reverse only (500mA MAX).
4. **Optional:** if adding an AUX video/front camera, connect the source signal to the secondary (female) RCA among the power harness (be certain this source is connected to ACC power).
5. **Optional:** If using the remote to adjust ANY settings from the OSD menu, connect the IR receiver to the port on the interface labeled **'IR'**. Refer to page 10 for menu adjustment details.
6. Connect the main power harness to the RGB-PCM3.1N interface and proceed to 'Operation' for testing and validation.

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.

RGB-PCM3.1N Operation

- Once all connections are made, start the vehicle and place into reverse. The connected camera will display on the main screen with dynamic guidelines for convenience.
- If desired, front camera can be setup (via OSD menu) to show for the user-set amount of time after leaving reverse gear. Forcing the AUX video/front camera is available by pressing the **NAVI** button on the radio.



*Press to cycle
video inputs*

RGB-PCM3.1N Menu Adjustments

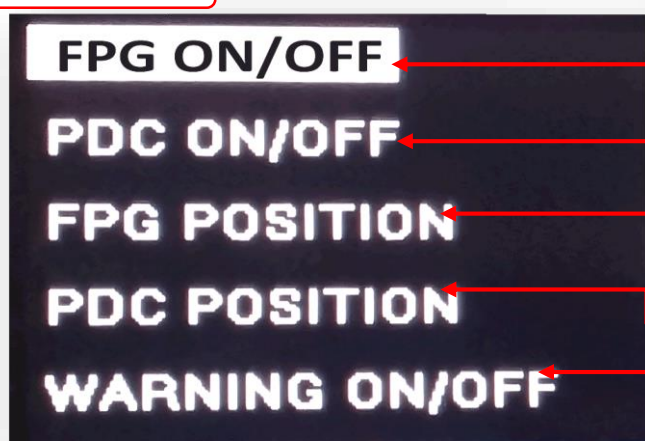
Before you start:

- The IR-Eye must be connected, (connects to main harness)
- Make sure the car's ignition is on and radio is on
- You must be in **Reverse Camera** mode.
 - Reverse Camera Mode** adjusts Reverse Camera Settings
- Press the **OK BUTTON** 4 times (numbers will display per press), then press **POWER**.
- The **OSD Menu** will appear on screen (auto-time out in about 5 seconds if no action occurs).



Select
choice &
Return

Reverse Menu



Functional Parking Guidelines ON/OFF

Parking Distance Control
ON/OFF (while in reverse)

Adjust FPG Position

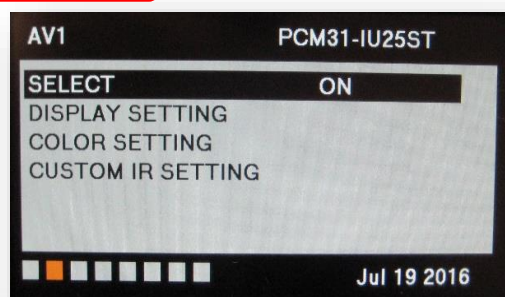
Adjust PDC Position

'Safe to move?' ON/OFF

PDC



AUX Video Menu



If adding a front camera OR Aux Video source:

1. Disconnect POWER/CAN Harness from interface
2. Place DIP SWITCH 1 in the DOWN position, reconnect power
3. Press the **NAVI** button on the radio to activate 'NAVI' screen
4. Press **OK** button on remote 4 times, then press **POWER**

If the user wants only an AUX video input **without front camera**, set **AV1 SELECT** to **ON**, scroll to the end (right side) of the menu and exit menu.

FRONT CAMERA setting is used when **the user wants automatic front camera switching**. Options for 5, 7, 9 or 11 seconds are user-selectable for the length of time the front camera input stays active once the vehicle is placed out of reverse.

Once finished with settings, place DIP SWITCH 1 back into the **UP position** and reset power to interface (if this step is not taken, the unused 'NAVI' input will show as an additional video input when cycling video inputs)

