

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

BMW12-DYNAMIC KIT

NTV-KIT462



Overview

The BMW12 kit allows the user to add up to 3 video inputs and a backup camera input to the factory media screen in select BMWs. This kit connects at the screen for video and is not currently plug and play. The BMW12-DYNAMIC will emulate the factory reverse camera's steering-based guidelines when in reverse.

Kit Contents



AV Input Harness



Remote



IR Eye Harness



BMW12 Interface



Power/CAN Harness



LVDS Video cable



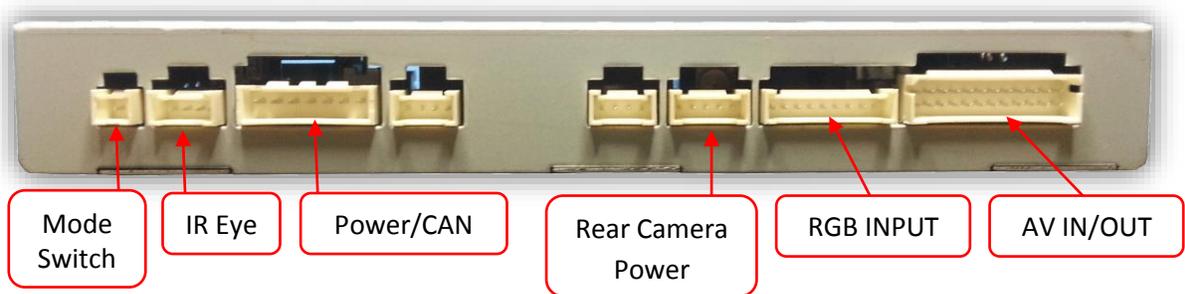
RGB Input cable



Input Toggle Switch

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	8.8"/10.2" Screen	N/A	Deactivates Rev-Cam	N/A
DOWN	Skips RGB	Skips V1	Skips V2	Skips V3	6.5" Screen	N/A	Activates Rev-Cam	N/A



***Note: after adjusting Dip Switches, you must disconnect and reconnect power to the interface 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.

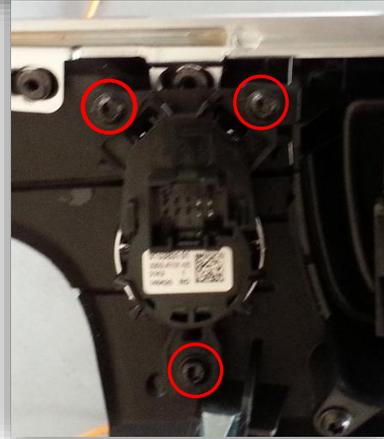
Installation

Dash Disassembly (5 Series)

1. Begin by removing the trim which surrounds the center vents and extends over the glove box with a plastic tool. There should be no screws securing this panel.



2. Disconnect all harness connected to this panel (near the vents mostly). You may want to remove the push button ignition switch so that you can test the BMW12 interface prior to replacing the dash panels. Either unclip this assembly or remove (3x) Torx screws and then reconnect to the vehicle plug:



3. Remove (2x) Torx screws securing the radio controls and climate control face, pry outwards and disconnect all harnesses:

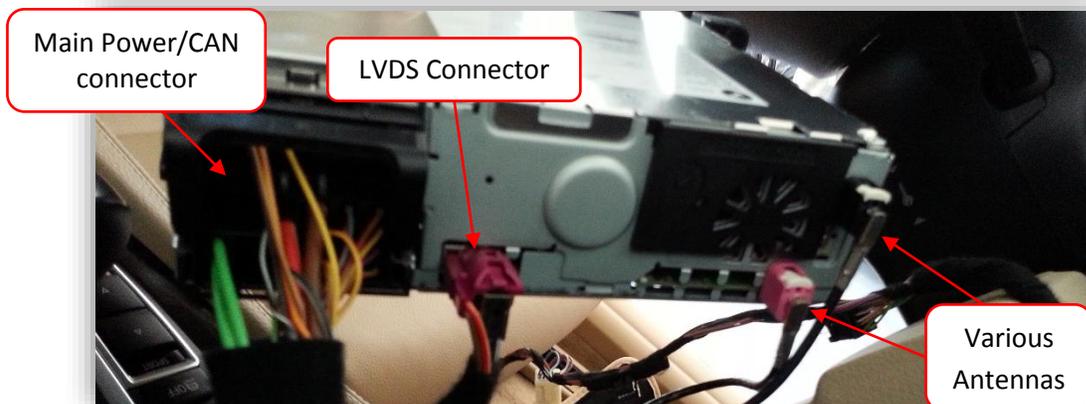


4. You should now see the disc-player portion of the radio. Remove this assembly by removing (2x) more Torx screws:



Module Installation

5. Remove the factory radio by pulling it straight out, towards you. Disconnect all connectors. These single-din radios (5 series and others) have the following connectors:



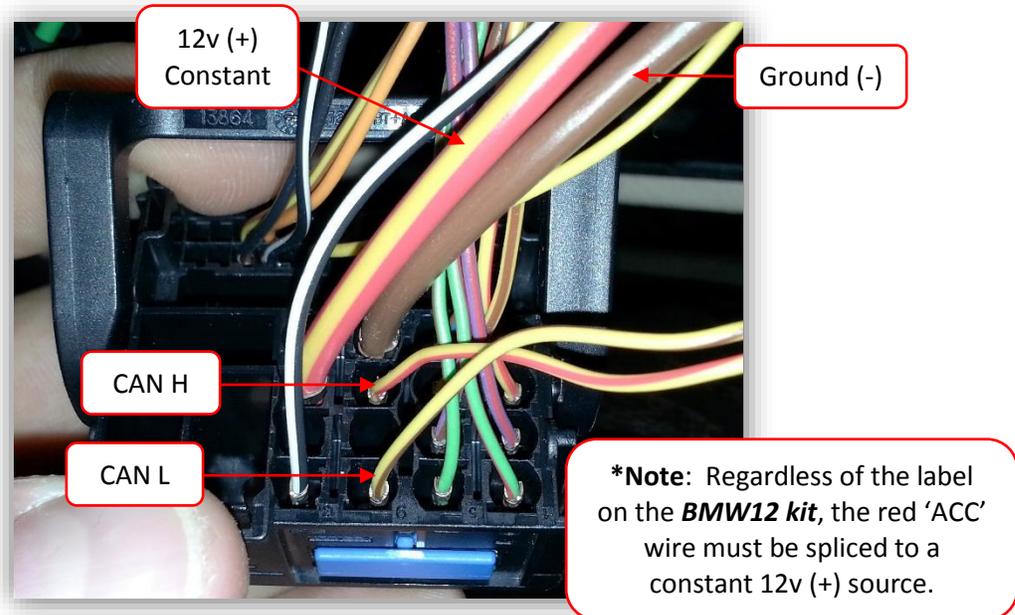
- The main 44-pin connector at this radio is where the Power (+), Ground (-) and **twisted** CAN wires must be connected. From the BMW12 interface POWER/CAN plug, connect the following:

Black wire (labeled 'GND'): to thick **BROWN** wire (pin 12)

Red wire (labeled 'ACC'): to the thick **RED/YELLOW** wire (pin 15)*

Green wire (labeled 'CAN L'): to pin **Yellow/Brown** (pin 9)

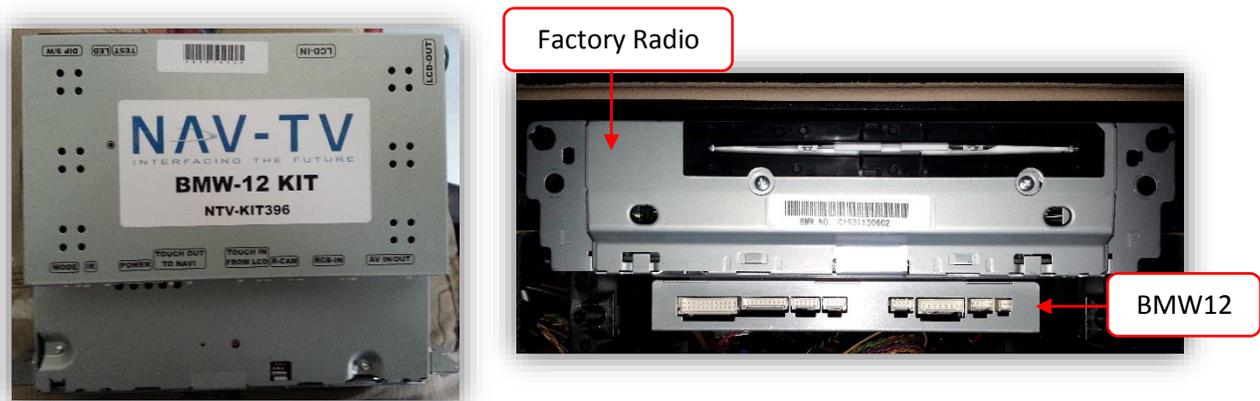
Green/Red dot wire (labeled 'CAN H'): to **Yellow/Red** (pin 11)



- After making the power/CAN connections, you must replace the factory LVDS video cable with the LVDS cable provided in the BMW12 kit. To access this plug (behind the factory LCD screen), remove (2x) Torx screws:



8. Remove the factory monitor, disconnect the LVDS video cable and remove it out of the dashboard. **This (factory) LVDS cable will connect between the radio and the BMW12 interface (LCD-IN).** Gather the LVDS video cable provided with the BMW12 kit. This LVDS cable will connect between the BMW12 interface and the factory LCD screen (LCD OUT). Use the labeled ports on the BMW12 interface to plug the cables in properly. These connectors are keyed and will only insert in one direction.
9. For single-din radios, use double stick or Velcro to secure the BMW12 interface to the underside of the radio like shown:



10. Connect the provided **LVDS video cable** to the factory BMW screen. Run the other end of the LVDS behind the vents and connect it to the BMW12 interface at the port labeled 'LCD-OUT'.



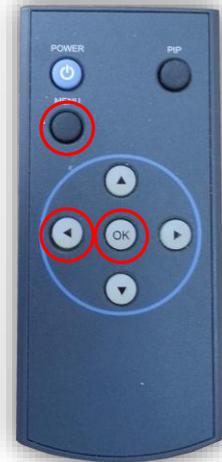
11. Connect the AV Input cable to the port on the BMW12 interface labeled '**AV IN/OUT**'. If you're only connecting a reverse camera (and no other inputs), the signal input from the camera must connect to the RCA labeled '**REAR-C**'. Refer to the dip-switch settings chart to skip/enable AV sources upon toggle switch presses (optional. Page 2).



- a. If you're installing a Nav-TV **CAM 6** or **Handle Cam** as well, the power connector plugs directly into the BMW12 interface port labeled '**R-CAM**'.



12. **Optional:** Connect the remote eye to the port labeled 'IR' and leave it 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 BMW12 interface's menu.
- 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**.
 - To switch between AV modes, press the '**OK**' button.

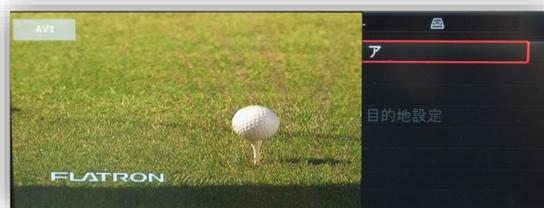


13. **Optional:** Connect the provided momentary toggle switch to the port on the BMW12 interface labeled '**MODE**'. Pressing this switch with the ignition on will cycle the screen modes as follows: **factory screen > NAVI (RGB) > AV1 > AV2 > AV3 > factory screen**.



14. Connect the BMW12 Power harness to the interface at the port labeled '**POWER**'. Start the car and test for proper functionality before replacing dash pieces.
15. **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.

If you have a PIP (picture in picture) image when in reverse after installation, press the button that corresponds to your screen size to adjust **while in reverse**:



6.5" Monitor: Press Voice Command button on steering wheel.
8.8", 10.2" Monitor: Press and hold the DOWN arrow on the iDRIVE knob.

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.

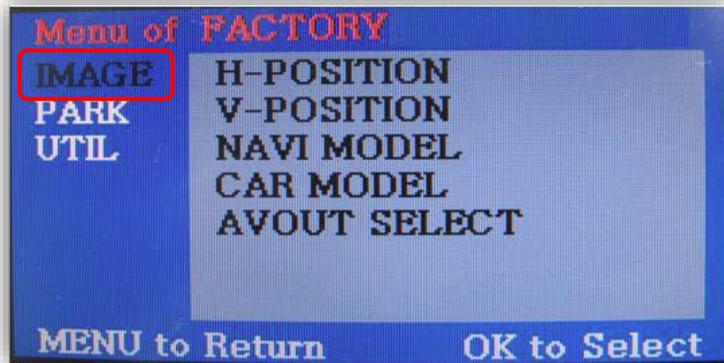
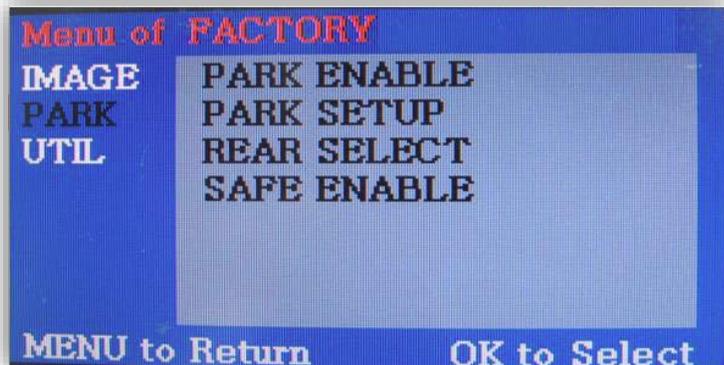


IMAGE MENU

-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'

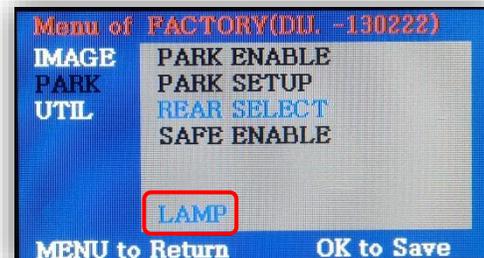
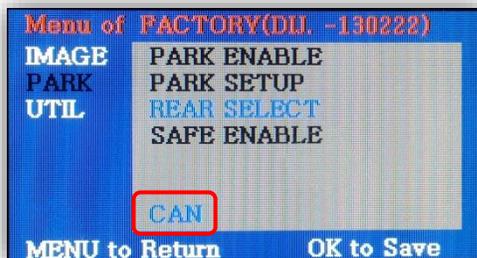
-The remaining settings are optional and install dependent.



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.