

# NAV-TV

INTERFACING THE FUTURE

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## BMW09 Kit

NTV-KIT174



### Overview

The BMW09 kit allows the user to add up to 3 video inputs and a backup camera input to the factory media screen in select '09-'13 BMWs. This fully plug and play kit installs behind the factory screen. The kit comes with an external toggle switch and if desired, forced rear camera action is an option.

### Kit Contents



AV Input Harness



BMW09 Interface



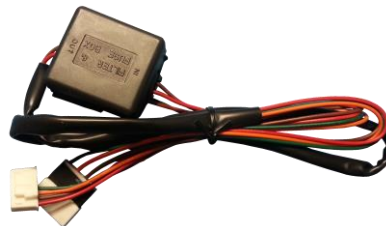
LVDS Video cable



Remote



Screen T-Harness



Power/CAN Harness



RGB Input cable



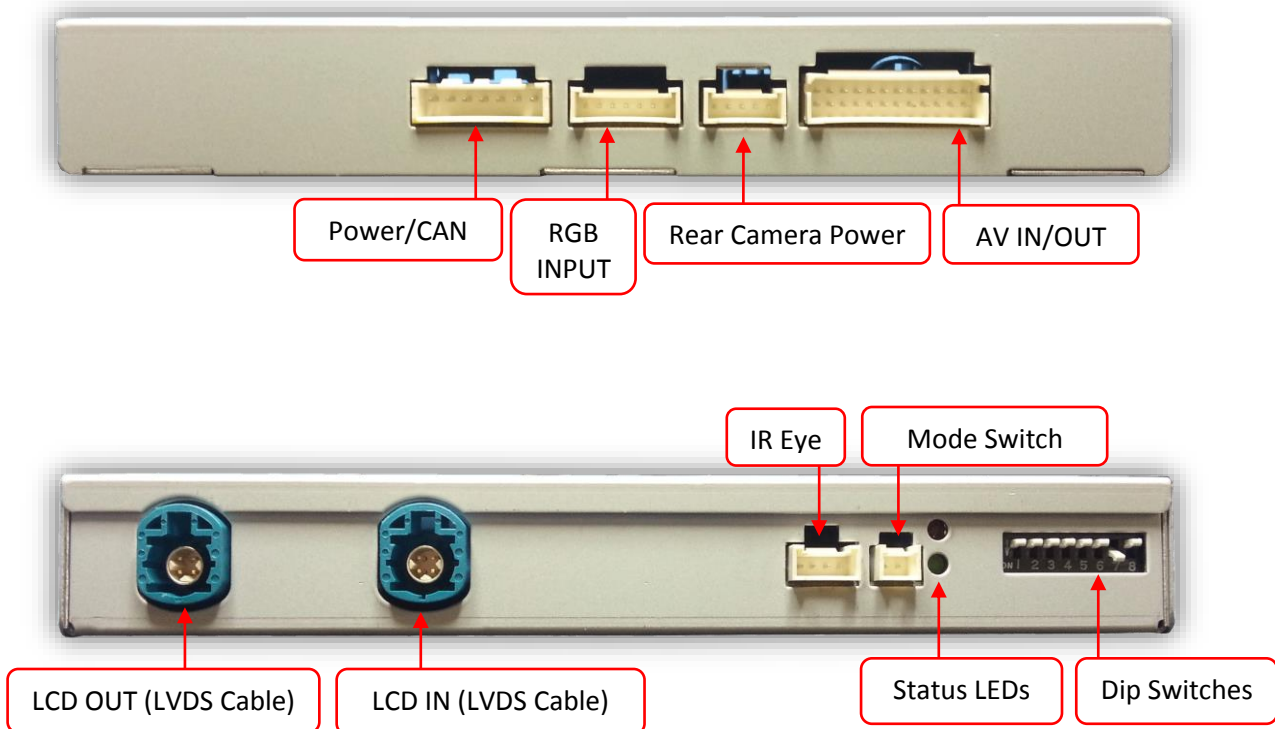
Input Toggle Switch



IR Eye Harness

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## Interface Connectors



## Dip Switch Settings

Dip SW:	1	2	3	4	5	6	7	8
UP	Enables RGB	Enables V1	Enables V2	Enables V3	10.2" Screen	N/A	Deactivates Rev-Cam	N/A
DOWN	Skips RGB	Skips V1	Skips V2	Skips V3	7.2" Screen	N/A	Activates Rev-Cam	N/A

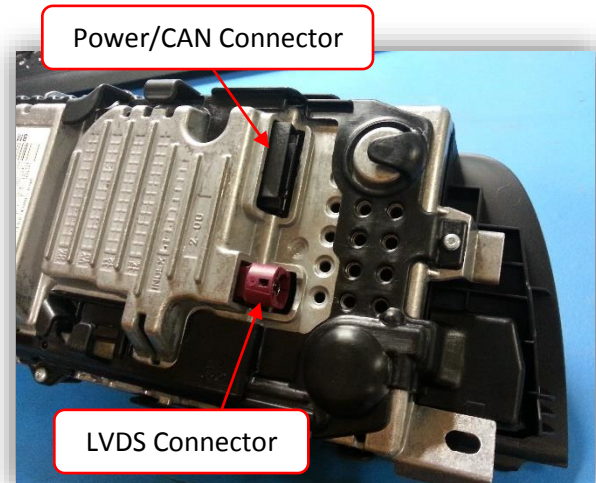


***\*Note: Disconnect power to the interface before adjusting dip switches or the change will not be implemented.***

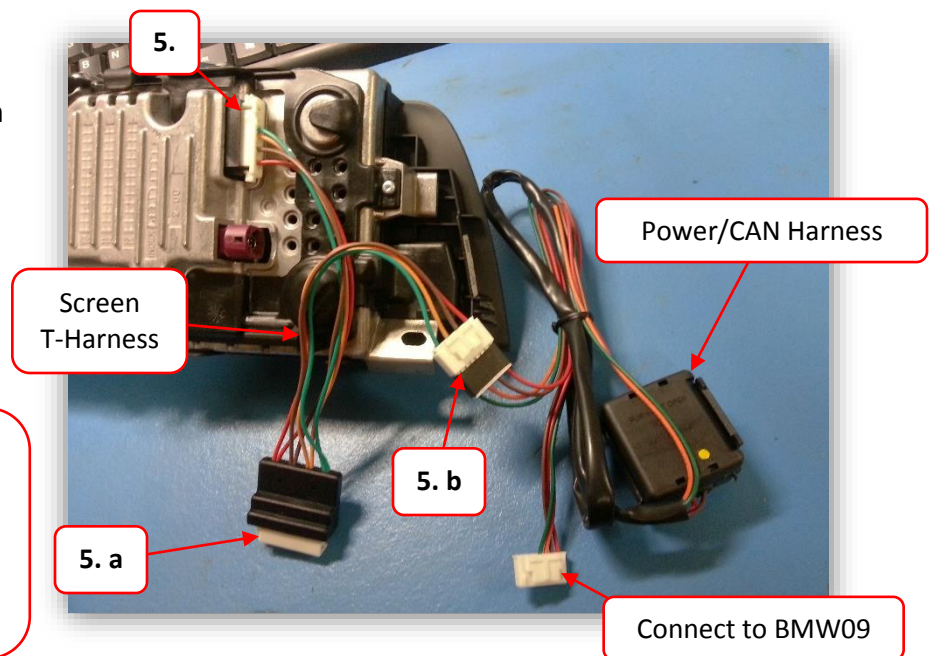
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## Installation

1. Begin by removing the trim which surrounds the center vents and radio with a plastic tool, disconnect all harnesses connected to this panel and set it aside.
2. Remove any screws securing the radio. Remove the radio from the dashboard and disconnect any harnesses. Set the radio aside.
3. Remove the upper media screen. This usually requires removing (2x) Torx screws firing up into the screen hood, or (2x) Torx screws securing the bottom corners of the screen.
4. Pull the media screen from the dashboard. Disconnect the power/CAN harness and the LVDS cable.



5. Connect the white, 8-pin connector on the provided **Screen T-Harness** to the **Power/CAN Connector** on the factory media screen.
  - a. Connect the factory 8-pin **Power/CAN Connector** to the black connector on the **Screen T-Harness**.
  - b. Connect the smaller, 8-pin connector from the **Screen T-Harness** to the provided BMW09 **Power/CAN Harness**.



Note: If you do not connect the **Power/CAN** extension (harness with filter box), the '**R-CAM**' port will not provide proper voltage out.

6. Connect the provided LVDS video cable to the LVDS connector on the media screen. Run the other end of the cable to where you plan to secure the BMW09 interface. Plug the free end of this cable into the port labeled '**LCD-OUT**'. *If there is no space behind/beneath the radio for the interface, drop the glove box on the pass side and secure it to a flat surface close to the radio dash opening with Velcro.*

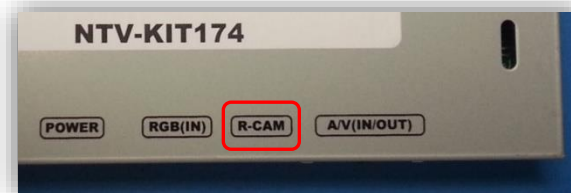


7. Run the factory LVDS video cable from the BMW09 port labeled '**LCD-IN**' to the radio dash opening (it will connect to the radio's LVDS connector later).

8. Connect the AV Input cable to the port on the BMW09 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).

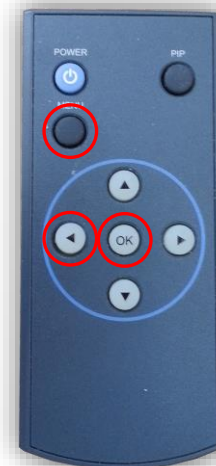


- a. If you're installing a Nav-TV **CAM 6** or **Handle Cam** as well, the power connector plugs directly into the BMW09 interface port labeled '**R-CAM**'.



9. **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 BMW09 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.



10. **Optional:** Connect the provided momentary toggle switch to the port on the BMW09 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.**

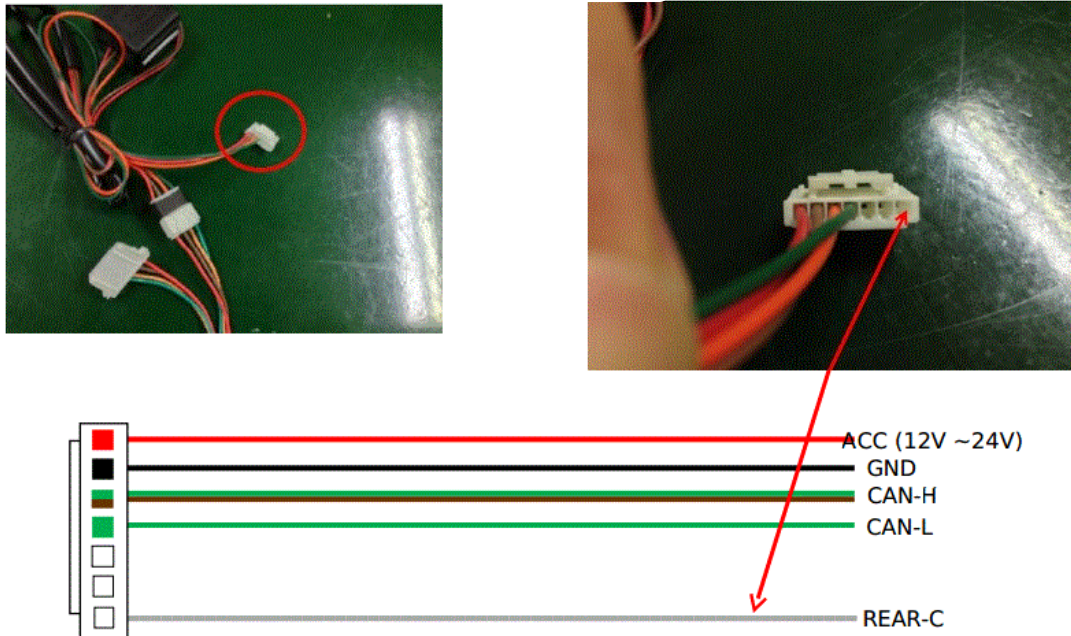




11. Connect the BMW09 **Power/CAN Harness** to the interface at the port labeled '**POWER**'. Start the car and test for proper functionality before replacing dash pieces. **Note: If you're certain your connections are proper and you still get no reverse activation, see Figure 1 (below) on this page.**

**12. 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.

**Figure 1**



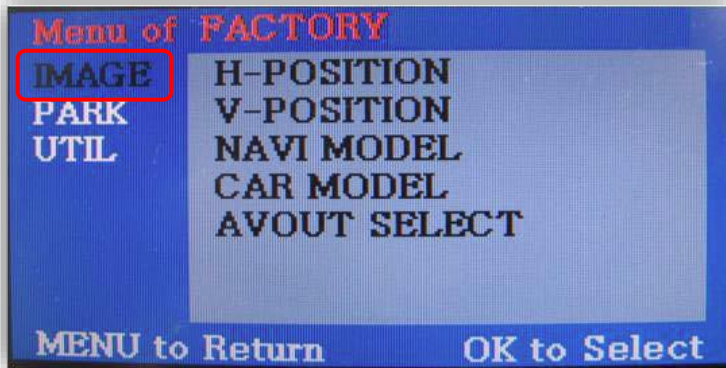
**If CAN data does not automatically activate reverse:**

1. Disconnect the main **POWER/CAN** connector from the BMW09 interface. Remove one of the CAN wires with a straight pick (green or orange).
2. Cut the removed wire from the rest of the harness.
3. Insert the removed CAN wire into pin location 7 (picture above, right)
4. Supply this wire with 12v when in reverse (reverse light 12v +)
5. Adjust menu setting to activate reverse with **lamp** instead of the default **CAN** (page 4, step 9)
6. Reconnect **POWER/CAN** harness and test for proper functionality.

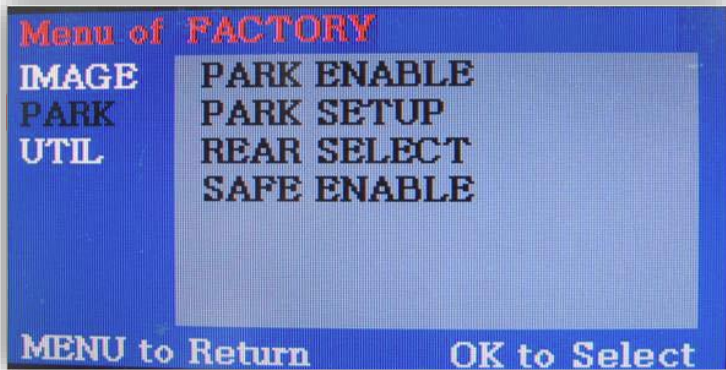
Menu Adjustments

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.

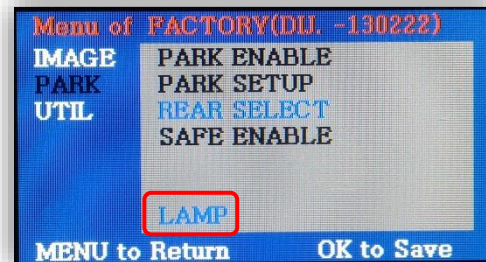
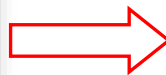
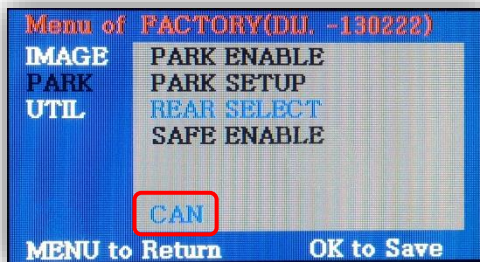


**IMAGE MENU**  
-The only setting that may need necessary adjustment here would be **CAR MODEL** (BMW/AUDI KITS)  
*Note: on some kits, this option is located under 'UTIL'*  
-The remaining settings are optional and install dependent.



**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



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## 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.