

# NAV-TV

INTERFACING THE FUTURE

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BHM  
11/20/17  
NTV-DOC254

## BMW09N-DYNAMIC Kit

NTV-KIT725



Screen Connector



### Overview

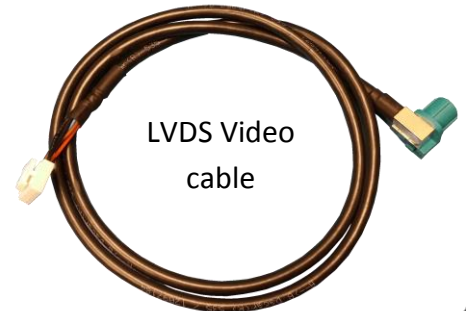
The BMW09-N kit interfaces 2 video inputs (including a backup camera) to the factory media screen in select '09-'13 BMWs. This fully plug and play kit connects behind the factory screen.

### Kit Content

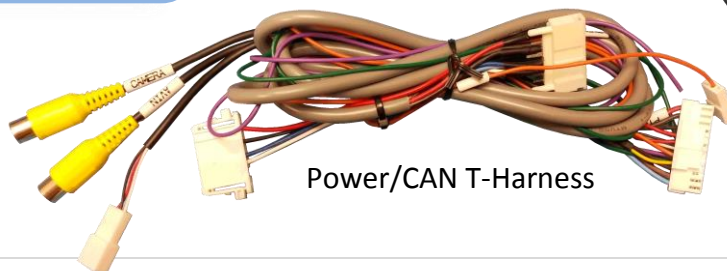
#### HD-LINK Optional KIT800



BMW09-N Interface  
NTV-INT246



LVDS Video  
cable



Power/CAN T-Harness



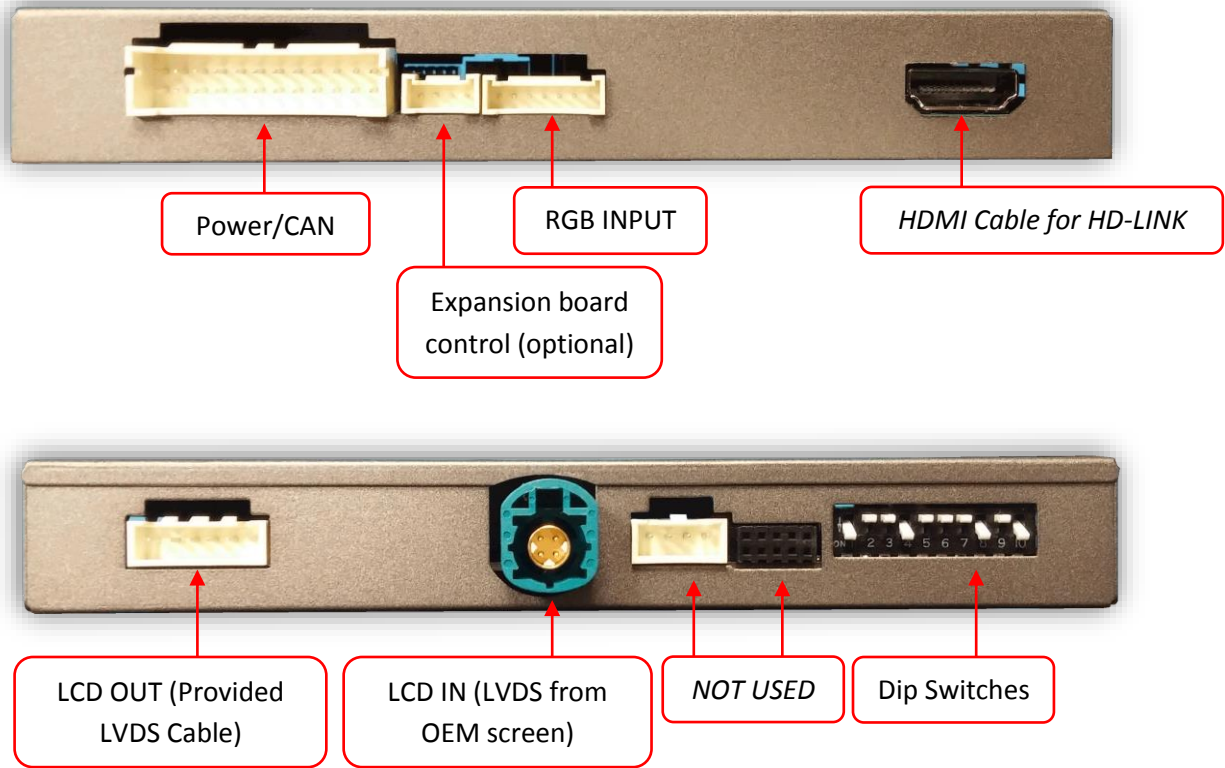
Remote  
(menu control)



IR Receiver  
Harness

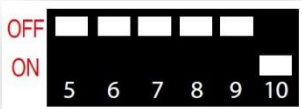
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Interface Connectors

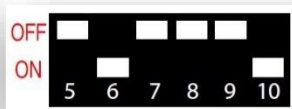


Dip Switch Settings

Dip SW:	1	2	3	4	5	6	7	8	9	10
UP	KEEP UP	SKIPS V1	SKIPS V2	RVC OFF	KEEP UP	CAN (OLD)	VEH SETTING	HIGH RES	VEH SETTING	KEEP DOWN
DOWN	KEEP UP	Skips V1	Skips V2	RVC ON	KEEP UP	CAN (NEW)	VEH SETTING	LOW RES	VEH SETTING	KEEP DOWN



Typical setting for 8.8" or 10.2" screen



2013 5 series, GT 10.2" screen



Typical setting for 6.5" screen (no MINI)



MINI 6.5" screen



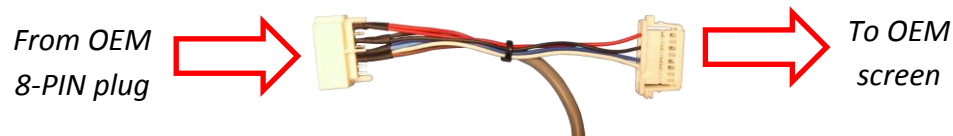
Z4 8.8" or 10.2" screen



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

## BMW09-N Installation

1. The BMW09-N intercepts the **OEM screen video cable and power harness**, both are located at the screen. You must gain access to behind the screen for proper installation.
  - a. Remove any dash panels secured to the sub-dash to access the Torx screws which secure the screen. Remove the screen and set aside.
2. Connect the provided 8-PIN T-Harness (located on the main power harness) in between the OEM screen harness and the screen.



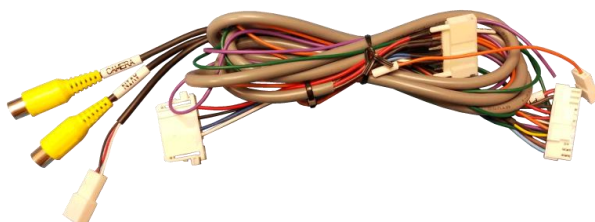
3. Connect the provided LVDS video cable to the port on the BMW09-N interface labeled 'LCD OUT' and the other end back to the screen at the LVDS port.



4. Connect the OEM LVDS video cable (originally connected to the screen) to the port on the BMW09-N interface labeled 'LCD IN'.



5. Install and run the reverse camera power and signal to the BMW09-N interface location and connect to the RCA labeled 'CAMERA'. Power your camera with an ACC source or use the **violet wire** for reverse 12v (+) only. *NOTE: this wire outputs 500 mA MAX – do not use to supply power to more than 1 camera. Use this wire to trigger a relay if you're concerned with current supply.*
6. **Optional:** If installing a secondary camera or AUX video source, connect signal RCA to the RCA on the BMW12-N interface labeled 'AVIN'.
7. After DIP switch settings have been set (see page 2), connect the 24-PIN power connector to the BMW09-N interface labeled 'POWER CAN'. Proceed to **Menu Options** section if necessary (front camera settings, etc) or to **BMW09-N Operation**.



## Menu Adjustments

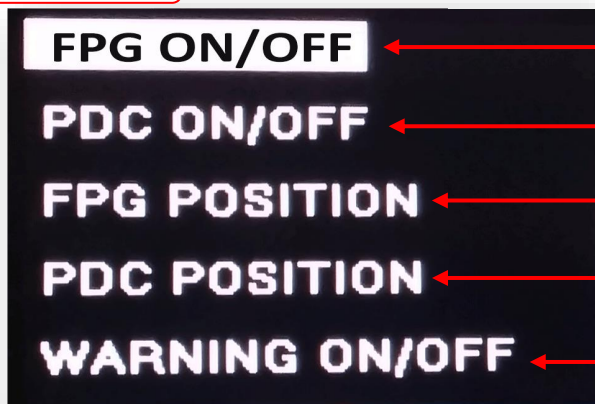
Before you start:

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



**Return**  
(AUX VID  
menu  
control)

RVC Menu



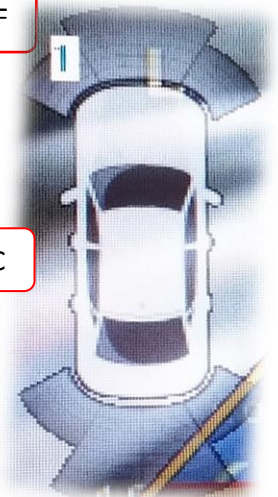
Functional Parking Guidelines ON/OFF

Parking Distance Control  
ON/OFF (while in reverse)

Adjust FPG Position

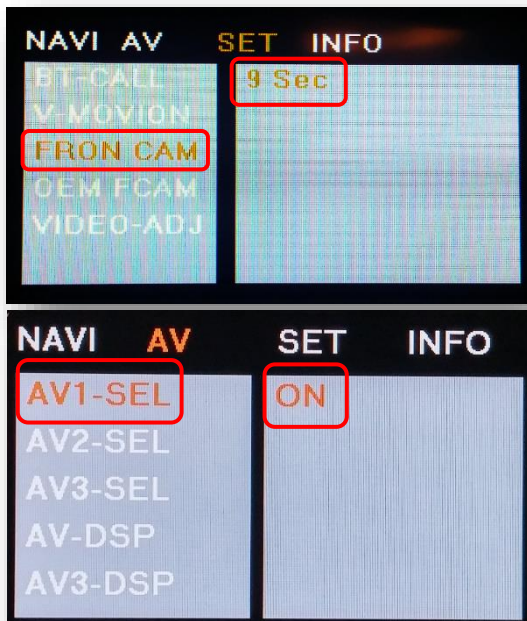
Adjust PDC Position

'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 and hold the iDRIVE knob '**MENU**' to activate the AUX screen
4. Press **OK** button on remote 4 times, then press **POWER**

**SET – FRON CAM** must be turned on if adding a *front camera* **and the user wishes for 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.

If the user wants only an AUX video input **without front camera**, set **AV1-SEL** to **ON**

**Once finished with settings**, place DIP SWITCH 1 back into the **UP position** and reset power to interface.

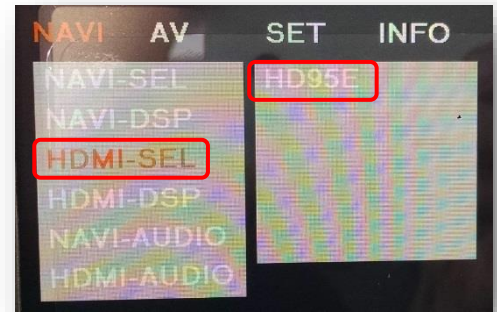
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### Adding HD-LINK Adapter (HDMI Input)

**Follow the instructions below when adding the HDMI adapter (HD-LINK) to enable HDMI input to the OEM screen:**



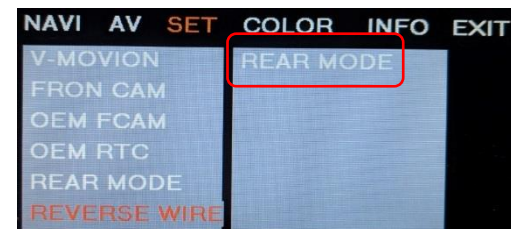
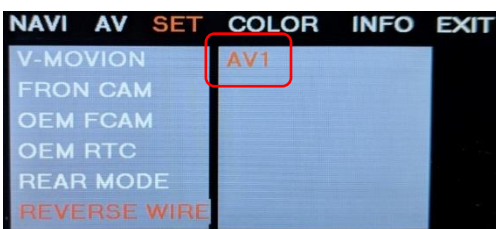
1. Put dip switch #1 in the **DOWN** position.
2. Activate the 'NAV INPUT' by **holding** the 'MENU' button on the iDRIVE knob.
3. Once 'NAV INPUT' shows on the screen, on the remote press the **OK BUTTON 4 times**, then press **POWER**.
4. Navigate to the 'NAVI' section.
  - a. Select 'HDMI-SEL'
  - b. Choose 'HD95E'
  - c. Press **MODE** on the remote to return and exit the OSD menu (or let it time out).
5. Replace dip switch #1 to the **UP** position.
6. Connect the **black wire** to ground (-) and the **red wire** to ACC power (+) from the main power connector on the HD-LINK adapter. The RCA's on this plug provide audio from the HDMI source.



### Green Trigger wire setup

This module includes a green *input* wire for analog triggering of either the Reverse camera input or the 'AVIN' input (yellow RCAs), selectable through the AV menu. This allows for adding multiple cameras through the use of an SVS-6 switcher, etc. Follow the steps below adjust this feature. **NOTE: by default, the green wire will trigger the Reverse camera input RCA.**

1. Put dip switch #1 in the **DOWN** position. When this section is complete, return switch #1 **UP**.
2. Activate the 'NAV INPUT' by **holding** the 'MENU' button on the iDRIVE knob.
3. Once 'NAV INPUT' shows on the screen, on the remote press the **OK BUTTON 4 times**, then press **POWER**.
4. Navigate to the 'SET' section.
  - o Select 'REVERSE WIRE'
  - o Choose 'AV1', 'REAR' or 'REAR MODE' (explanations below)
  - o Press **MODE** on the remote to return and exit the OSD menu (or let it time out).
  - o Test by sending temporary power (12v +) to the **green wire** labeled reverse.



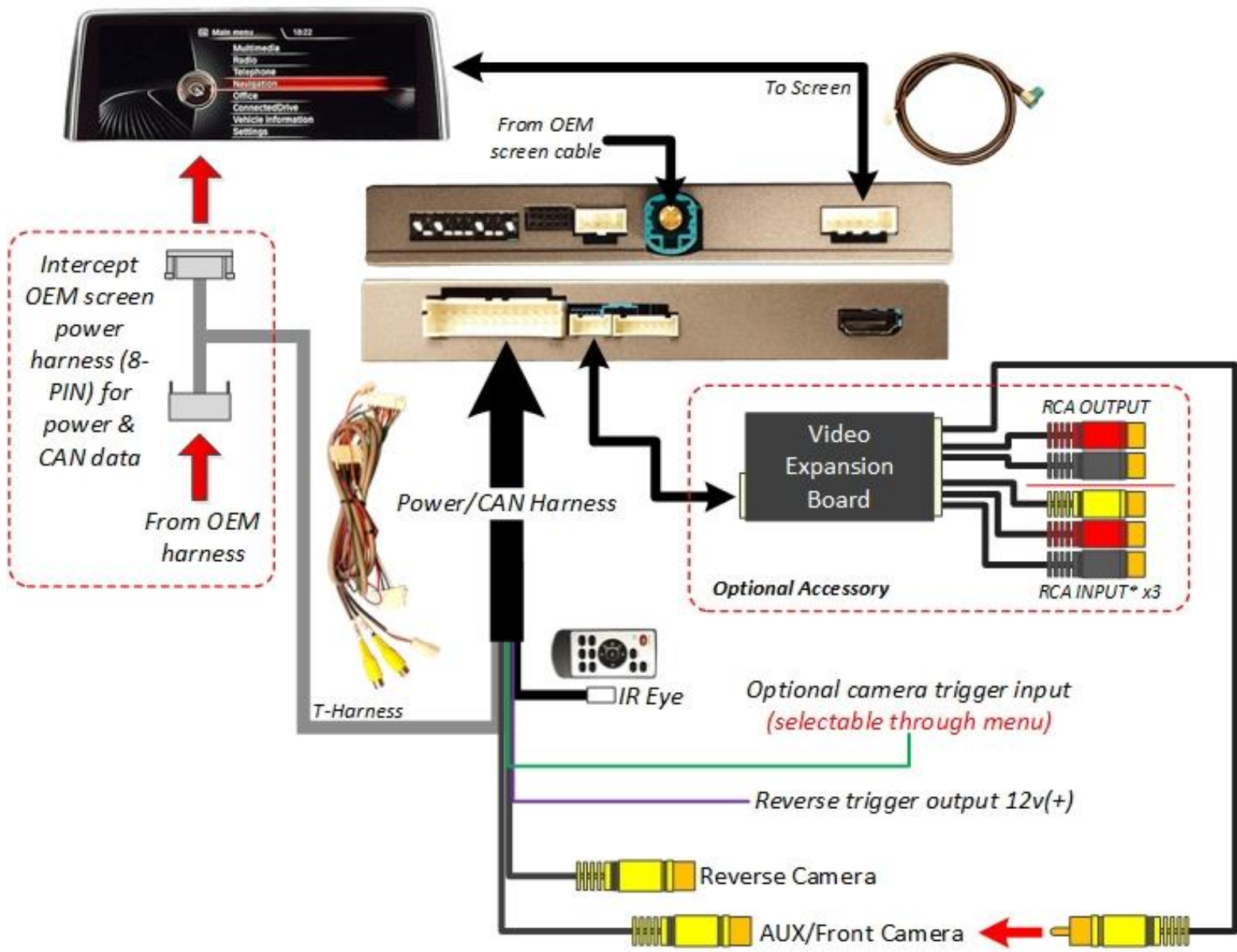
AV1 shows the 'AVIN' RCA when the green reverse wire is triggered.

REAR shows the 'CAMERA' RCA (with no lines) when the green reverse wire is triggered.

REAR MODE shows the 'CAMERA' RCA (with dynamic lines) when the green reverse wire is triggered.

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BMW09-N Install Diagram



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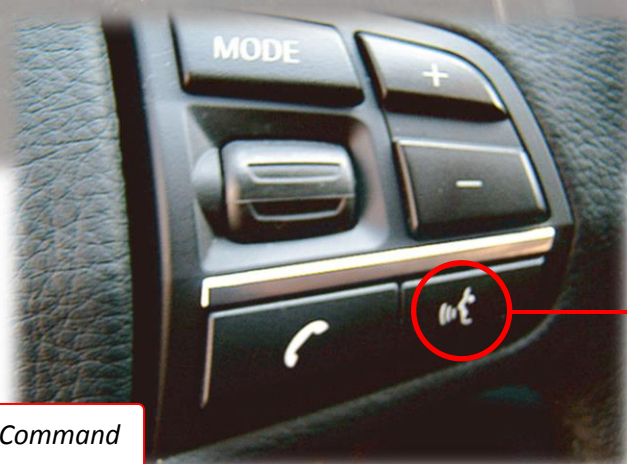
BMW09-N Operation

6. Once all connections are made and dip switches are set properly, placing the vehicle in reverse will display the connected camera with dynamic guidelines for convenience.
7. Additionally, see below for AUX/Front camera activation using factory buttons.

*iDRIVE knob*



**Hold (3 sec):** Activate  
AUX/Front Camera  
video input



**Hold (5 sec):** Toggle quick  
switch: this only needs to be  
done 1 time. After toggled on,  
pressing and releasing **once**  
will cycle through V1/V2/OEM  
screen display if active.

*Steering Wheel Voice Command*

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