HARDSTONE

HS RC-AU50

AUDI (Virtual Cockpit 12.7")
A4-A6-A7-TT-Q7 2016

INTERFACCIA RETROCAMERA + Ingresso GPS
con visualizzazione sensori di parcheggio
linee guida sterzanti - PLUG&PLAY

Overview

The *AUDI-VC* Kit interfaces a backup camera input (with active parking lines), 1 additional composite video input and an HDMI source into the *Virtual Cockpit* cluster screen equipped in select 2017 Audi A4, Q7, TT or R8 vehicles. Installation is performed behind the radio (inside glove box).
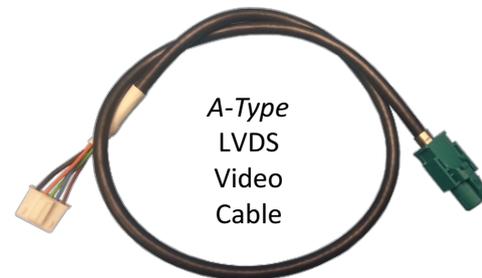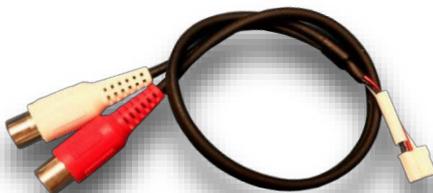
Kit Contents

Infrared Receiver

AUDI-VC Interface

A-Type LVDS Video Cable
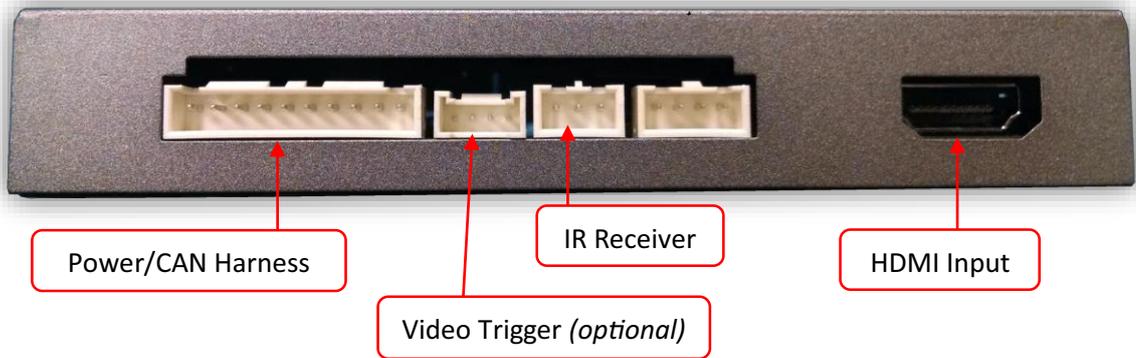
Audio Output Cable

Power/CAN Harness

OSD Menu Remote

Interface Connectors

HDMI Audio OUT

Dip Switches

Video OUT (to cluster LCD)

Video IN (from radio)

Power/CAN Harness

IR Receiver

HDMI Input

Video Trigger *(optional)*

Dip Switch Settings

Dip SW:	1	2	3	4 (trans)	5	6
UP	No HDMI	A4 / Q7	*See below*	AUTOMATIC	*Leave UP*	*Leave Down*
DOWN	Adding HDMI	TT	*See below*	MANUAL	*Leave UP*	*Leave Down*

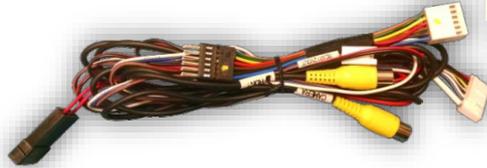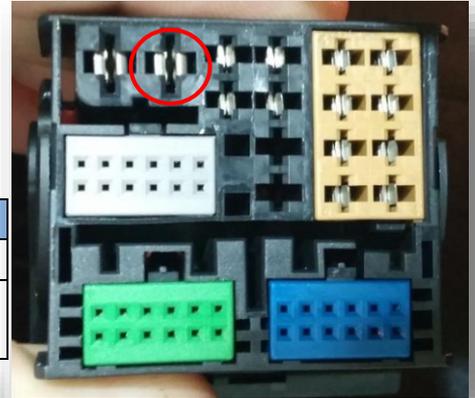| *Dip Switch 3*	HDMI Activation choice (steering wheel)
UP	
DOWN	

Note: *Remove power to the unit prior to making adjustments to the dip switches*

1. Remove the MIB radio module located in glove box – this will require an 8mm socket and possibly a right-angle driver. Disconnect any associated harnesses and set the radio aside.

2. Grab the provided **'Power/CAN Harness'** from the AUDI-VC kit. Connect the following wires to the *car:*

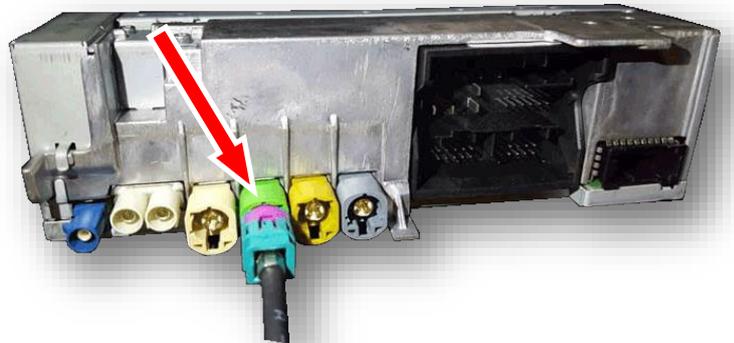| Interface wires	Connect to car	Location
Black (Ground)	Chassis Ground	PIN 15 (Radio plug)
Red (ACC 12v)	ACC 12v (+)	Black/White or Black/Blue @ pass fuse box

3. Locate the factory *Pink (For AUDI's with NAV, this connector is GRAY)*, 4-pin round connector that was removed from the radio in step 1. Connect this factory plug to the AUDI-VC interface at the port labeled **'LVDS OUT'**.*
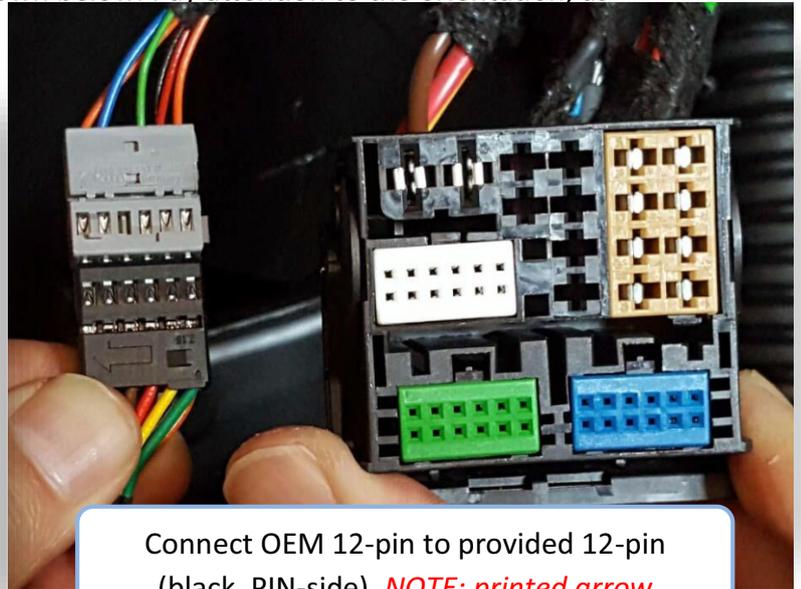
4. Connect the smaller white plug side of the provided **LVDS Video Cable** to the port on the AUDI-VC interface labeled **'LVDS IN'**.

5. Connect the free end of the provided **LVDS Video Cable** (green) back to the factory radio at the bright **GREEN** cluster LCD port.
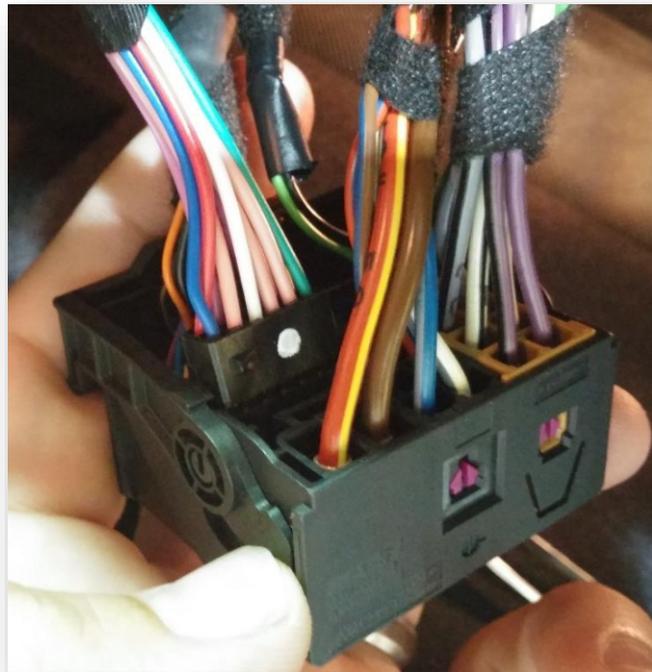
6. Connect the provided 12-pin plug & play portion from the main power harness to the main factory MIB radio connector as shown below. Pay attention to the orientation, as this is vital to proper operation:

Remove gray OEM 12-pin

Connect OEM 12-pin to provided 12-pin (black, PIN-side). *NOTE: printed arrow location on provided 12-pin plug vs OEM plug.*

Connect the female 12-pin side of the plug & play portion to the OEM main MIB connector as shown. *Note the paint dot must face towards the thick power wires.*

If the connector does not secure properly, zip tie the harness in place to surrounding wires *leaving slack so that the connector stays in place.* Use a spot of glue on the back side if you're still concerned with this.

Note: sometimes it is easier to connect the main plug back to the MIB module first and then connect this 12-pin in.
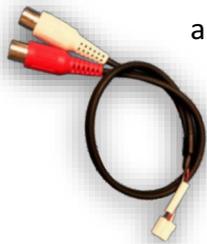
7. Connect ground and power for your camera, you may use the provided **brown** wire (labeled 'REAR12VOUT') for power for convenience. **NOTE:** *This power source will only supply 12v when the vehicle is in reverse (if forced rear camera is desired at any time, you'll need to use an ACC source for power instead).*

8. Connect the video feed from the camera to the RCA among the main power harness labeled 'CAMERA'.

9. Connect the white plug from the **Power/CAN Harness** to the port on the AUDI-VC interface labeled *'POWER CAN'*.

10. Connect the HDMI Cable *(not provided)* from the HDMI source to the *HDMI-IN* port on the AUDI-VC.
   a. If using HDMI, audio is extracted from the module via the provided *Audio Output Cable* from the port on the interface labeled '*HDMI AUDIO OUT'.*

11. ***Optional:*** If adding an additional composite video input (including front camera), connect the video signal to the RCA among the Power/CAN Harness labeled 'CVBSIN'**.**

12. Start the car and test for proper functionality before replacing any dash pieces.
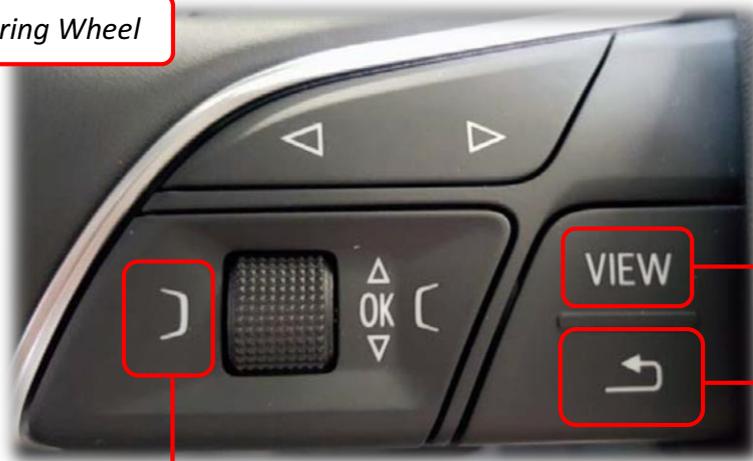
- If a rear camera was installed, placing the vehicle in reverse will show the connected camera's image, with dynamic guidelines for convenience.
- In order to use HDMI on the cluster, you must **begin in Navigation mode on the cluster.** See below for activating HDMI or additional video inputs:

HOLD 4 Seconds to change current screen in AUDI Virtual Cockpit Cluster from middle to full-size

Steering Wheel

VIEW

With Dip Switch #3 UP:
Press & hold *LEFT TAB (2 seconds)* to cycle through installed & active video input options. Order: **OEM-AV1-AV2-AV3-HDMI-OEM**
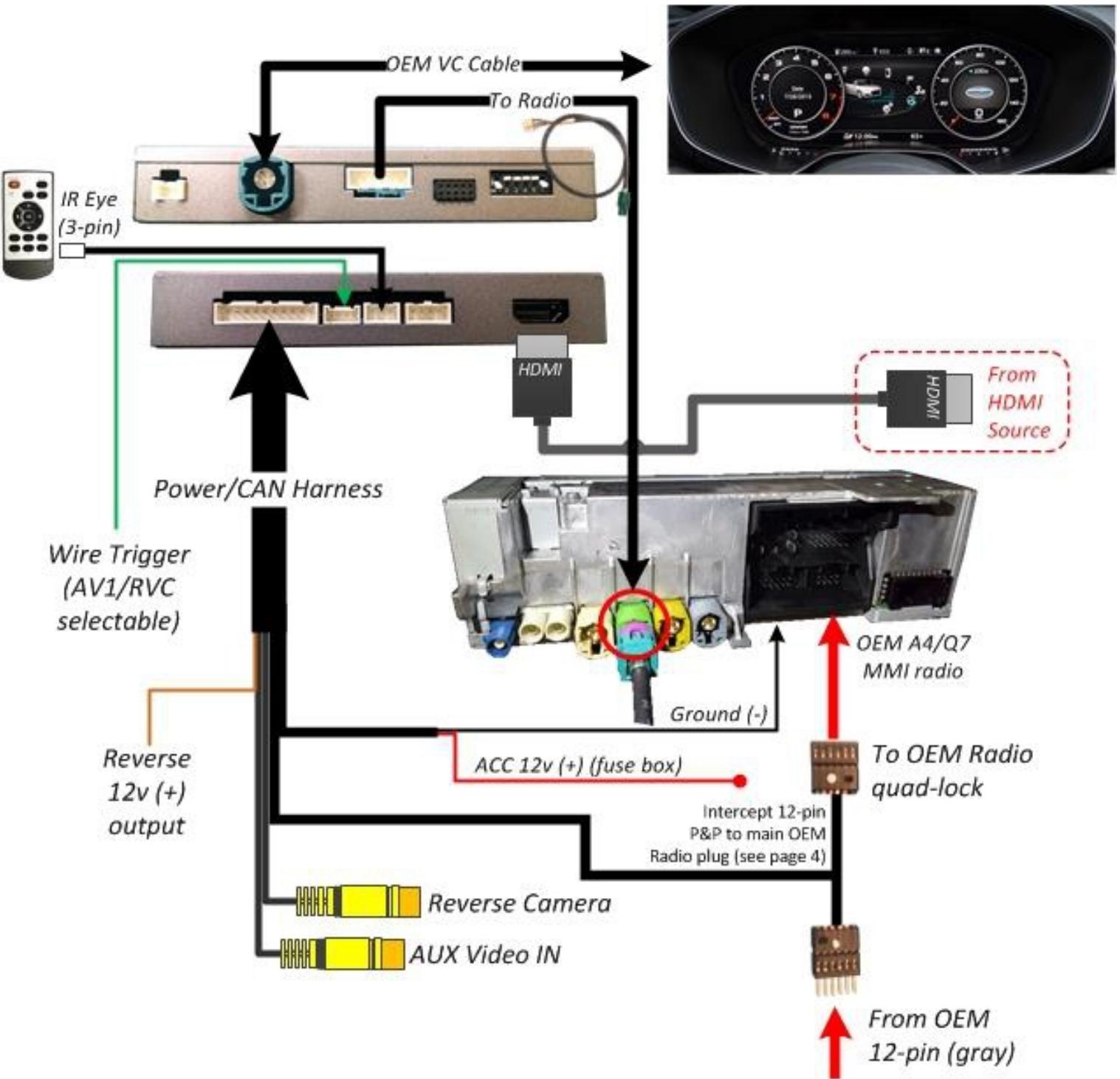
With Dip Switch #3 DOWN:
Press & hold *BACK ARROW* (2 seconds) to cycle through installed & active video input options. Order: **OEM-AV1-AV2-AV3-HDMI-OEM**

- Additionally, sending 12v (+) to the **green wire** through a toggle will force the *'CAMERA'* or *'CVBSIN'* video signal, selectable via the OSD menu. See page 8 & 9.

Note: These features will only function when active (see OSD Menu settings & Dip Switch settings)

HARDSTONE

OEM VC Cable

To Radio

IR Eye
(3-pin)

HDMI

From
HDMI
Source

Power/CAN Harness

Wire Trigger
(AV1/RVC
selectable)

OEM A4/Q7
MMI radio

Ground (-)

To OEM Radio
quad-lock

Reverse
12v (+)
output

ACC 12v (+) (fuse box)

Intercept 12-pin
P&P to main OEM
Radio plug (see page 4)

Reverse Camera

AUX Video IN

From OEM
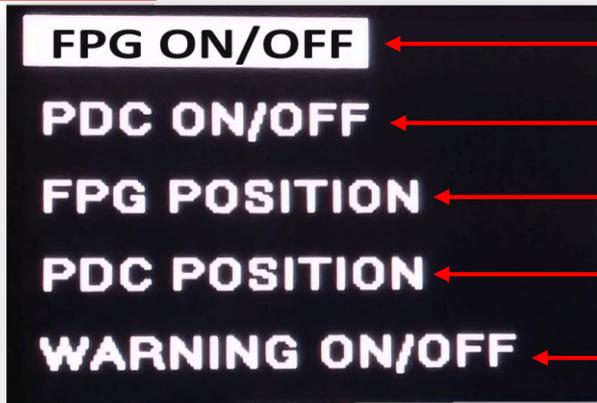12-pin (gray)

Menu Adjustments

Before you start:
- The IR-Eye must be connected
- Make sure the car's ignition is on and radio is on
- 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
- 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).
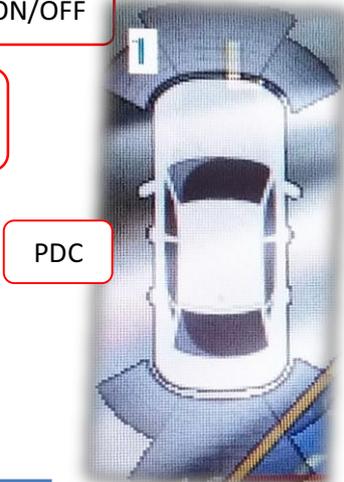
Return (AUX VID menu control)

RVC Menu

Functional Parking Guidelines ON/OFF

Parking Distance Control ON/OFF (while in reverse)
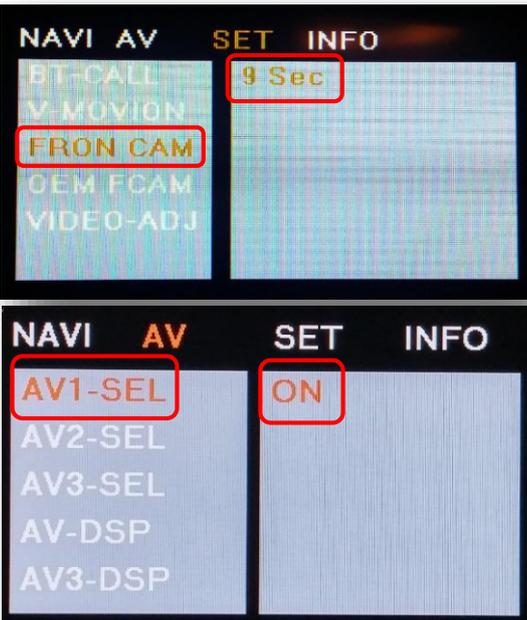
Adjust FPG Position

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 the **NAV/MAP** button on the MIB controller to activate *NAV Input*
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**, leave **FRON CAM** off.

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

- **BT-CALL:** How a (OEM setup) Bluetooth phone call is handled while in AV/HDMI mode:
  - **ON -** When in AV/NAV mode, the unit will transition to the OEM screen when a Bluetooth phone call is active, then return when call is ended.
  - **OFF -** There is no screen transition when a BT call is active. The screen will remain in whatever mode it is currently on.
- **V-MOVION:** N/A
- **FRON CAM:** Front camera timer (AV1) = without expansion board; (AV3) with expansion board
  - **5s, 7s, 9s, 11s:** Choose one (timer, in seconds), for the amount of time the *front camera (AV1)* shows after the vehicle is transitioned out of reverse gear
  - **OFF:** No timer activation
- **OEM FCAM:** N/A
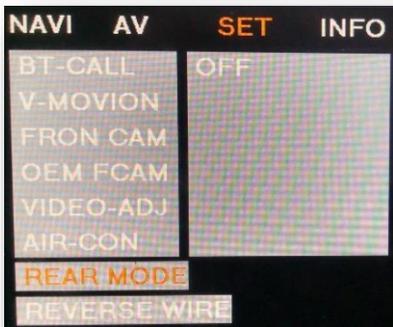- **VIDEO ADJ:** Adjust video settings for AV1/HDMI/NAV, etc
- **AIR-CON:** Used on vehicles that display the HVAC/volume information on the screen whenever an adjustment is made.
  - **ON:** When in AV/HDMI mode, the screen will transition to the OEM screen to display the HVAC/volume adjustment, then auto transition back to AV mode.
  - **OFF:** When in AV/HDMI mode, the screen will remain while HVAC/volume adjustments are made.
- **REAR MODE:** Used to determine operation when the vehicle is placed into reverse.
  - **ON:** RVC dip switch (#4) dependent (follows DS #4).
  - **OFF:** The unit will ignore the reverse gear/wire. (No screen transition in AV or OEM)
    - *DIP 4 ON*: <u>Aftermarket camera input</u>: In AV/HDMI or OEM, the screen will transition to the RVC input when reverse is detected. Will display any extra overlay info, PDC, active guidelines.
    - *DIP 4 OFF*: <u>OEM equipped camera</u>: In AV/HDMI the unit will transition into the OEM screen when reverse is detected.
- **REVERSE WIRE:** Providing 12v (+) to the **green wire** acts as an external activation for the selected input (connect through toggle switch, SVS-6, etc).
  - **REAR MODE:** Follows the REAR MODE operation (with guideline overlay and any additional options)
  - **REAR:** Displays the RVC input video in its raw form (no extra overlays)
  - **AV1:** Displays AV1 input