NAV-TV
INTERFACING THE FUTURE

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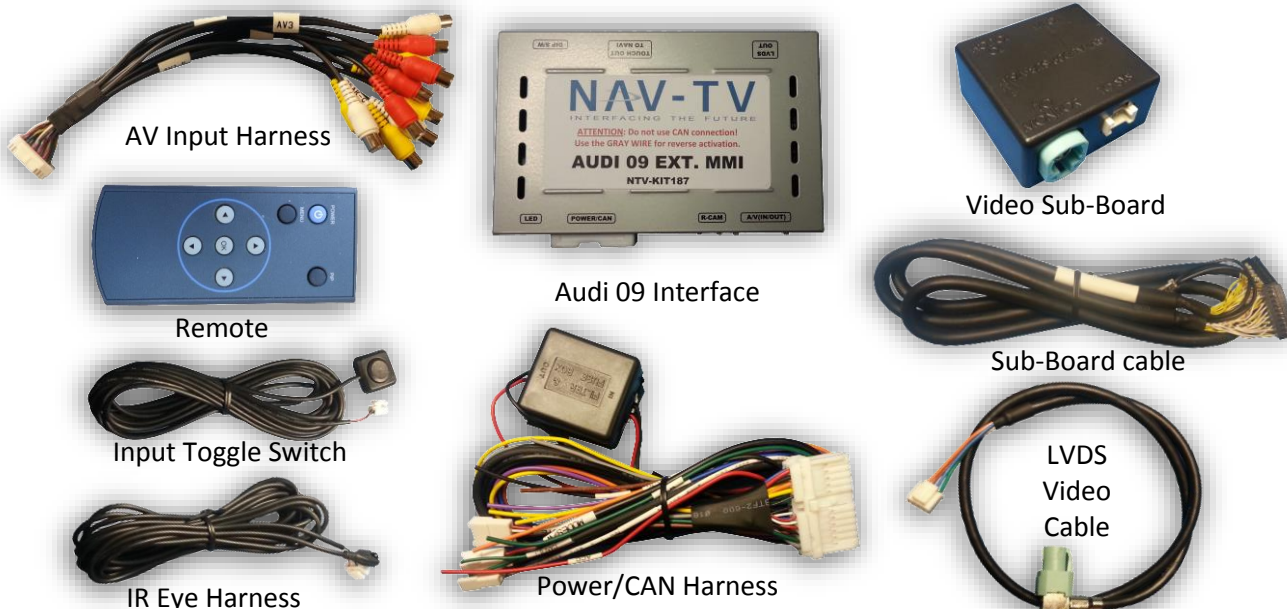
AUDI-09 EXT MMi

NTV-KIT187

Overview

The AUDI-09 EXT MMi Kit allows the user to add up to 3 video inputs and a backup camera input to the factory media screen in select Audi vehicles with the *external MMi media system* (MMi controls on console, not the radio face). Audio integration requires that the vehicle have a factory audio input.

Kit Contents

AV Input Harness

Remote

Input Toggle Switch

IR Eve Harness

Audi 09 Interface

Power/CAN Harness

Video Sub-Board

Sub-Board cable

LVDS Video Cable

Interface Connectors

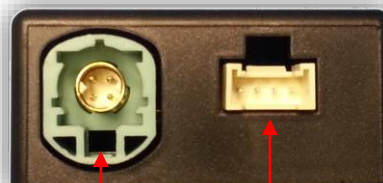Status LEDs   Power/CAN   Camera power   AV IN/OUT

LCD IN/OUT (Sub-Board Cable)   Touch OUT   Dip Switches

Sub-Board Cable (from main   LCD-IN (from OEM cable)   LCD OUT (To monitor)

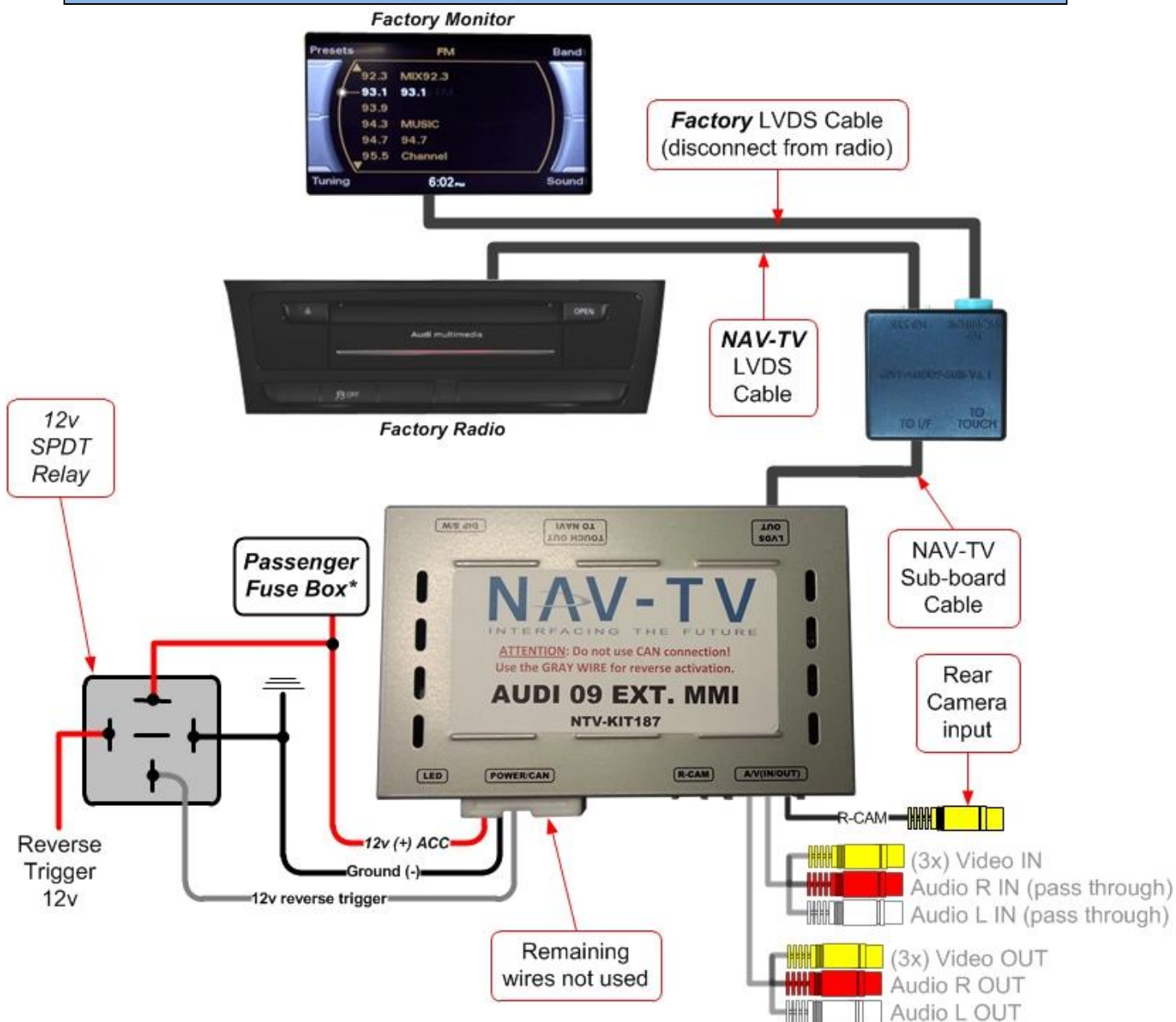## Dip Switch Settings* Configure prior to installation

Dip SW:	1	2	3	4	5	6	7	8
UP	Enables RGB	Enables V1	Enables V2	Enables V3	6.5" Monitor	Year 2011+	Factory or no Rev-Cam	N.C.
DOWN	Skips RGB	Skips V1	Skips V2	Skips V3	7" Monitor	2010 and down	Aftermarket R-CAM	N.C.

Note: If the dip switches are not configured prior to installation you must remove power to the unit prior to making adjustments to the dip switches.

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.
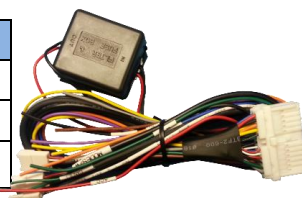
Quick Connection Guide

Factory Monitor

Factory LVDS Cable (disconnect from radio)

Factory Radio

NAV-TV LVDS Cable

NAV-TV Sub-board Cable

12v SPDT Relay

Passenger Fuse Box*

ATTENTION: Do not use CAN connection! Use the GRAY WIRE for reverse activation.

AUDI 09 EXT. MMI

NTV-KIT187

Rear Camera input

Reverse Trigger 12v

12v (+) ACC
Ground (-)
12v reverse trigger

Remaining wires not used

R-CAM

(3x) Video IN
Audio R IN (pass through)
Audio L IN (pass through)

(3x) Video OUT
Audio R OUT
Audio L OUT

- Video cable Installation happens behind the *radio (MMi), no need to remove screen*
- **Accessory can be found at the passenger fuse box, typically *black/white* or *black/blue*
- Drop the glove box for easiest install
- Navigation equipped cars: *Gray LVDS* | Non-navigation equipped cars: *Pink LVDS*
- Use reverse light to *trigger relay for reverse to Gray wire, otherwise intermittent reverse activation may result!*

Installation

1. Remove the factory radio. This usually requires pulling panels and removing a series of screws. Disconnect any associated harnesses and set the radio aside.

2. Gather the provided **'Power/CAN Harness'** from the AUDI 09 kit. Connect the following wires to the car:

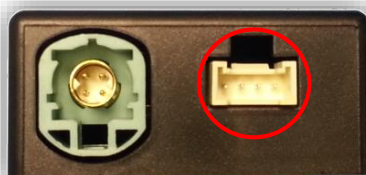| Interface wires	Connect to car
Black (GND)	Chassis Ground
Red (ACC)	Accessory
Gray (Rear)	Reverse lamp 12v **through a relay***

Connect this wire to the output (pin 30) of a 12v SPDT relay. If no relay is used, reverse activation may be intermittent.

Note: CAN connection is not supported at this time. You must use the GRAY wire for reverse lamp activation!

3. Locate the keyed, 4-pin, round connector that was removed in step 1. Connect this factory plug to the provided **Video Sub-Board** at the port labeled **'TO MONITOR'**.

4. Connect the smaller white plug side of the provided **LVDS Video Cable** to the port on the **Video Sub-Board** labeled **'TO SYS'**.
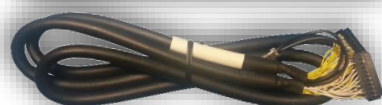
5. Connect the free end of the provided **LVDS Video Cable** back to the factory radio.

6. Connect the provided **Sub-Board Cable** to from the port at the **Video Sub-Board** labeled **'TO I/F'**.

7. Connect the free end of the **Sub-Board Cable** to the main AUDI 09 interface at the port labeled **'LVDS-OUT'**. The ring terminals on this cable are not used.

8. Connect the AV Input cable to the port on the AUDI 09 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).

9. Adjust dip switches on the AUDI 09 interface properly, refer to the chart on page 2 for qualifications.

10. Connect the white plug from the ***'Power/CAN Harness'*** to the port on the AUDI 09 interface labeled ***'Power/CAN'***.

11. ***Optional:*** Connect the remote eye to the port labeled **'IR'** (on the power harness) 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 AUDI 09 interface's menu. ***Refer to 'Menu Adjustments' for menu options.***

12. ***Optional:*** Connect the provided momentary toggle switch to the port on the AUDI 09 Power/CAN harness labeled **'MODE SW'**. Pressing this switch with the ignition ***on*** will cycle the screen modes as follows: **factory screen > NAVI (RGB) > AV1 > AV2 > AV3 > factory screen**. Please refer to the dipswitch section on page 2 for input settings.

13. Start the car and test for proper functionality before replacing dash pieces.

14. ***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.*

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.
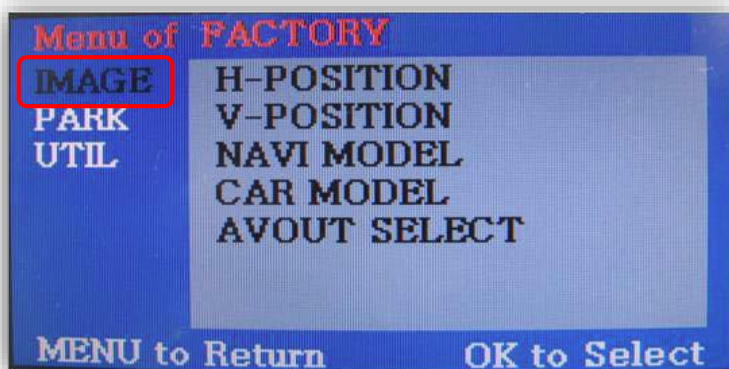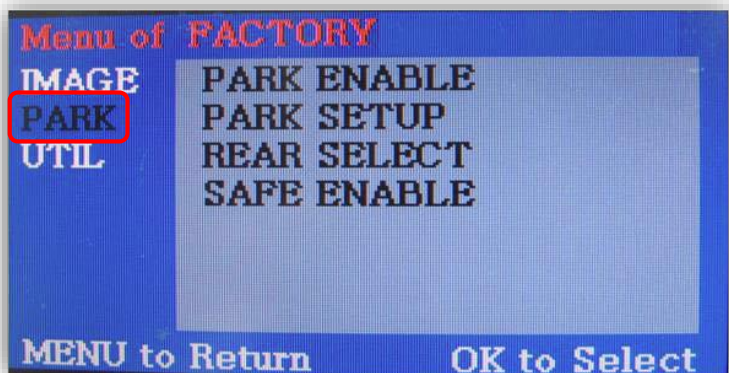

IMAGE MENU

-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'*
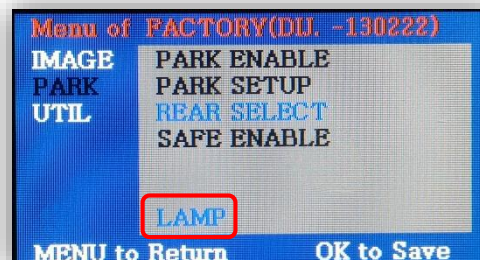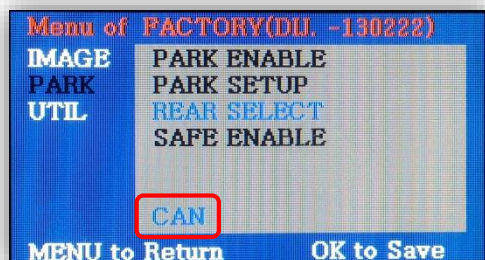-The remaining settings are optional and install dependent.

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** |

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).

D. Make sure the 10-pin, square plug from *step 3* is connected in the proper orientation (note keyway!).

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.