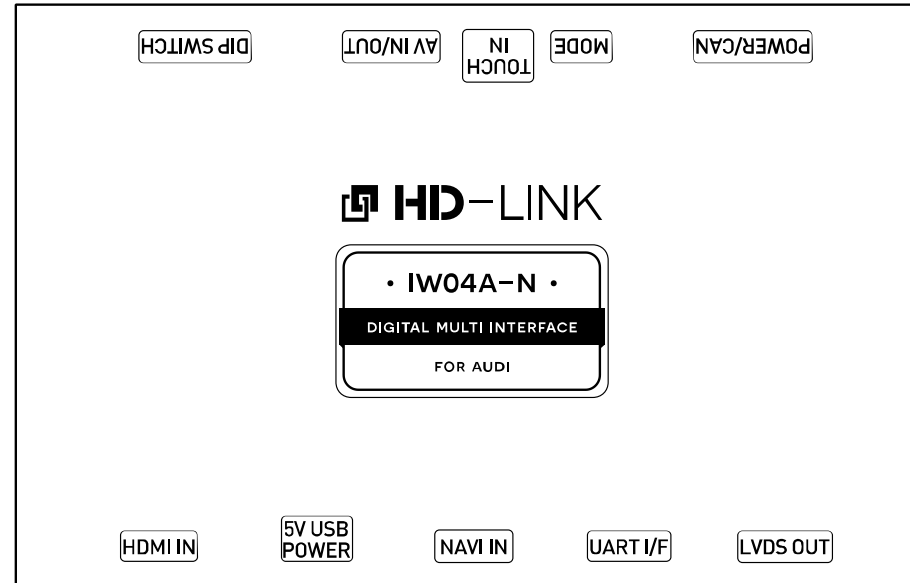


# Instruction Manual

## High-Definition Link for Audi IW04A-N



|                      |                |
|----------------------|----------------|
| Model Name           | IW04A-N        |
| Latest Firmware Date | 2017 - 02 - 02 |
| Manual Version       | Rev. 3.8       |
| Language             | English        |

# Contents

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## Cautions

### ▪ IW04A-N\_related

- You should check the names and colors of each wires exactly, before you connect the wires.  
ex) CAN HIGH: White wires / CAN LOW: Blue wires
- The 'POWER / CAN Cable' should always be connected last and be disconnected first.
- The 'Mode Switch' is an optional part to change modes forcibly without CAN-BUS.  
Generally, the CAN-BUS wires are connected for changing modes by original buttons.
- When the reverse gear is not detected by CAN-BUS,  
the 'REVERSE 12V IN wire' should be spliced with 12V power of reverse light.

### ▪ HDMI device\_related

- HDMI mode accepts general-screen resolution of HDMI devices(1080P / 1920\*1080).  
If screen size of HDMI does not fit on the monitor, should adjust screen size & position in 'settings mode'.
- Generally, '5V 1A Power output(5V USB POWER)' is a standard voltage for charging smartphone.  
If you need higher voltage than 5V, you should add a separate power supply.

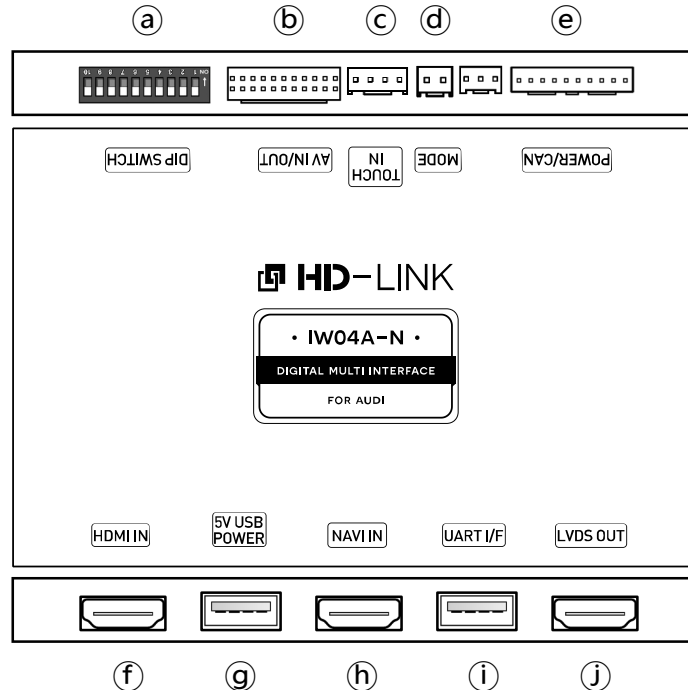
### ▪ Navigation(GPS) box\_related

- When you connect the power wires(B+, ACC) to the navigation(GPS) box,  
the 'NAVI 12V OUT' wire supported by IW04A-N should be spliced with an ACC wire of navigation box.
- After installation is done, select an applicable navigation(GPS) box model in the 'Navigation model selection menu' of setting mode.
- The navigation box should be powered off before unplugging the HDMI cable.

## Dimension



## Exterior



- (a) DIP SWITCH
- (b) AV IN / OUT
- (c) TOUCH IN (Not Used)
- (d) MODE
- (e) POWER / CAN
- (f) HDMI IN
- (g) 5V USB POWER
- (h) NAVI IN
- (i) UART I/F
- (j) LVDS OUT

## Components



Power / CAN Cable



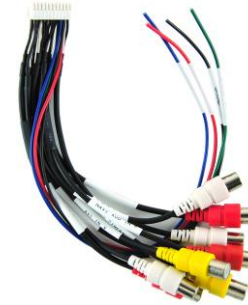
LVDS Cable



LVDS PCB



HDMI Cable



AV IN / OUT Cable



5-pin Micro USB Cable

## Optional Parts (sold separately at the indiwork)



HDMI Cable  
(Male to Male)



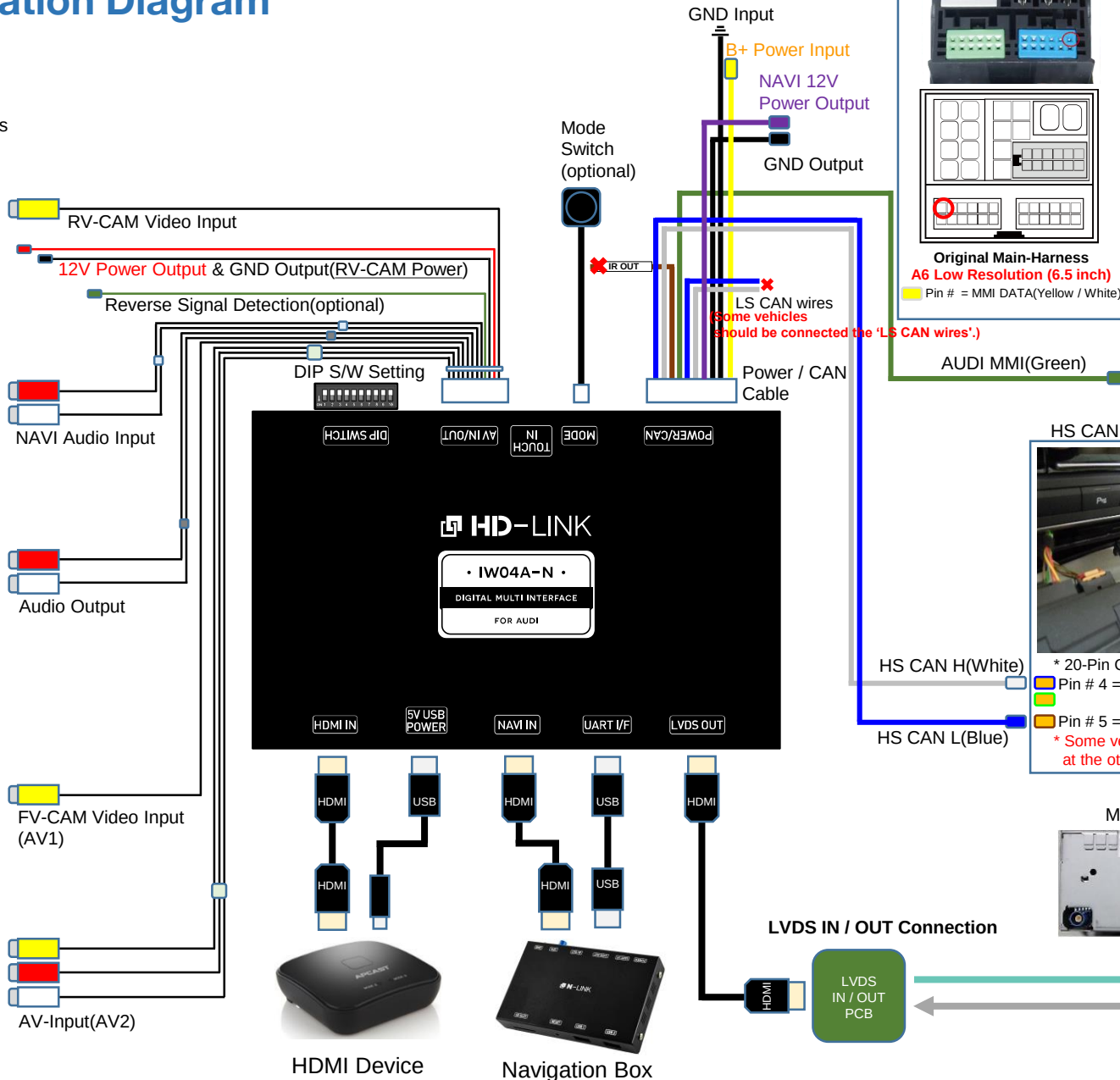
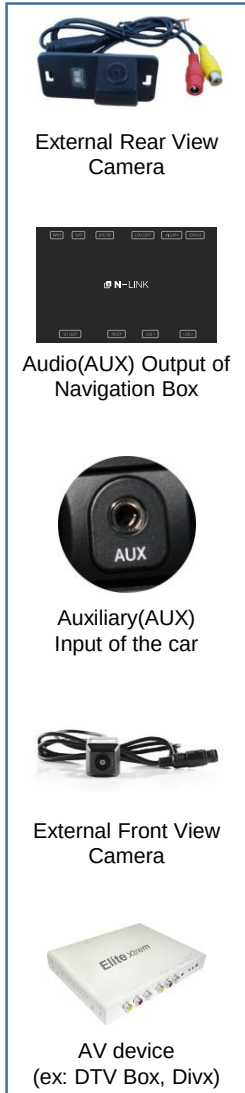
HDMI Extender  
(For stick type HDMI device)



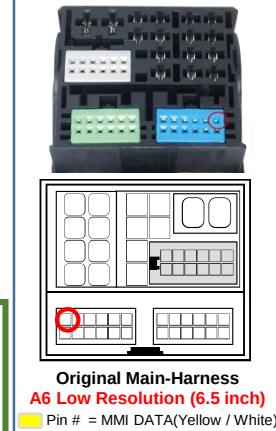
Mode Switch

# Full Installation Diagram

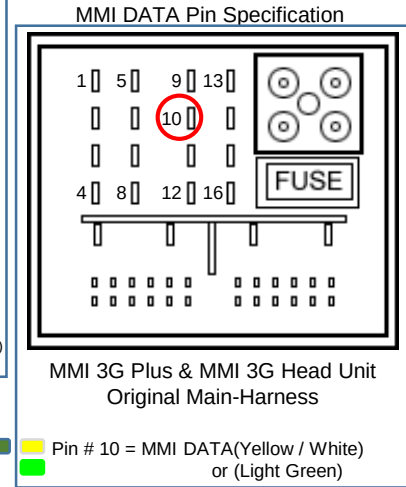
※ Optional External Devices



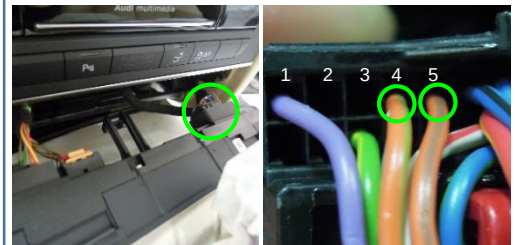
※ Speciality Connector Type



AUDI MMI (Green)



HS CAN HIGH & LOW <A4, A5, A6, A7, A8, Q7>



\* 20-Pin Connector of Climate controller

Pin # 4 = CAN HIGH (Orange / Blue) or (Orange / Light Green)

Pin # 5 = CAN LOW (Orange / Brown)

\* Some vehicles should be connected the CAN wires at the other place. (Please refer to next page.)

MMI 3G & 3G+ Head Unit (OEM)

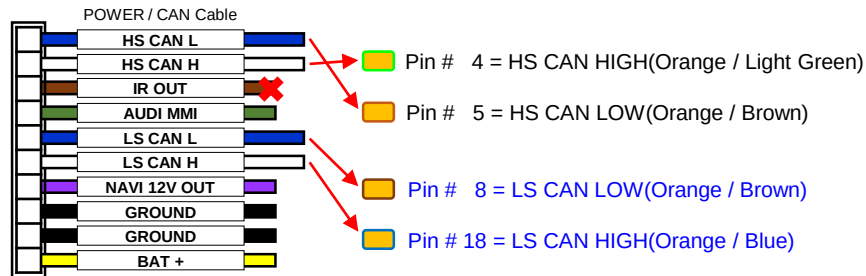
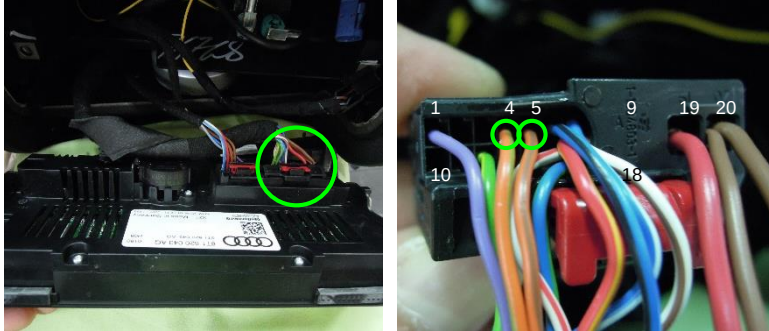




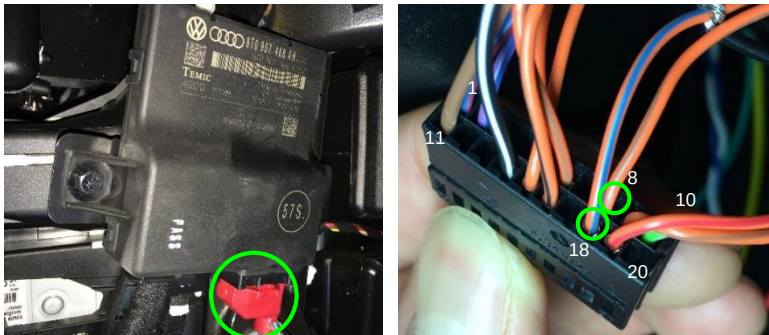
# CAN wires information(exception)

< 2010, 2011 Audi A4 >

Climate Controller – 20-Pin Connector

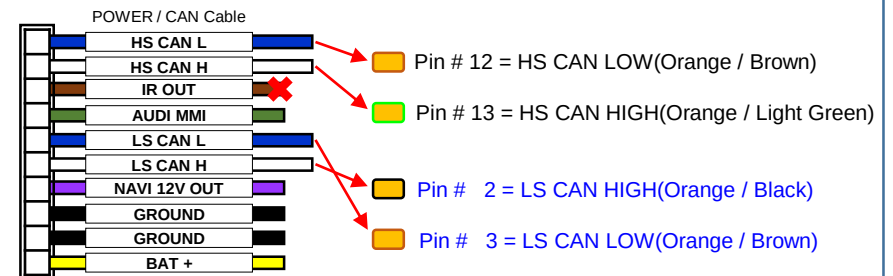
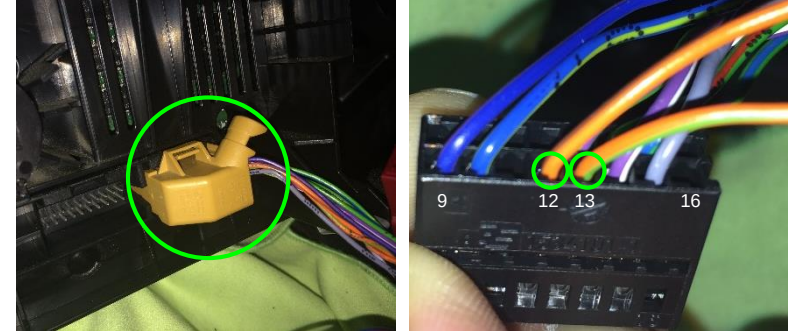


Gateway+BEM Module(on the left of the glovebox) – 20-Pin Connector



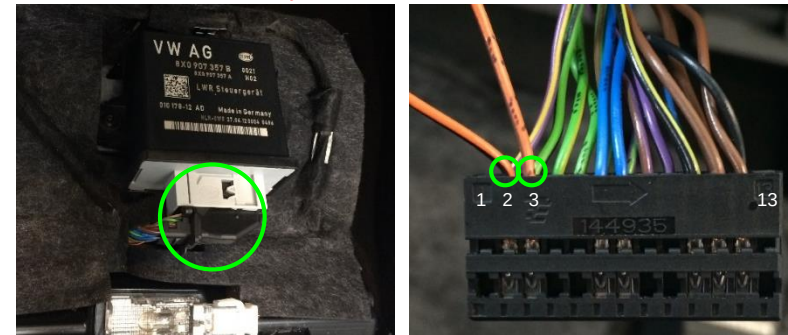
< 2012~ Audi Q3 >

Climate Controller – 16-pin Connector



LWR Steuergerät Module(on the glovebox) – 26-Pin Connector

(\*In case of Q3 / '6.5-inch' model, you do not need to connect LS CAN H, L and MMI wires.)

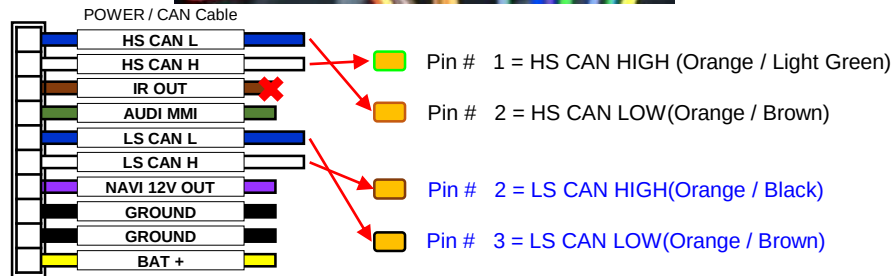
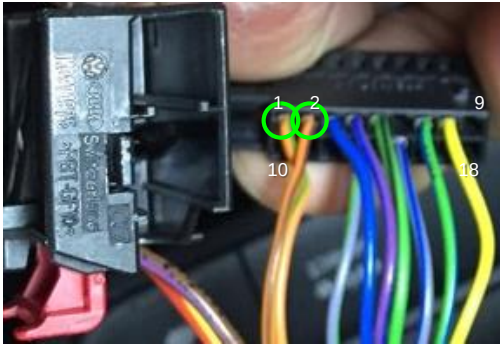


- Normally, general models of Audi should be just connected the 'HS CAN High, Low wires' at the climate controller.
- But, some models have different CAN-BUS data. Please refer to above pictures and connect the CAN wires.

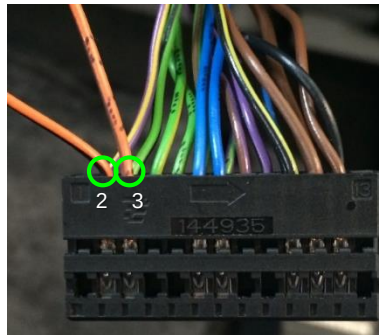
# CAN wires information(exception)

< 2015 Audi A1>

Climate Controller – 20-Pin Connector



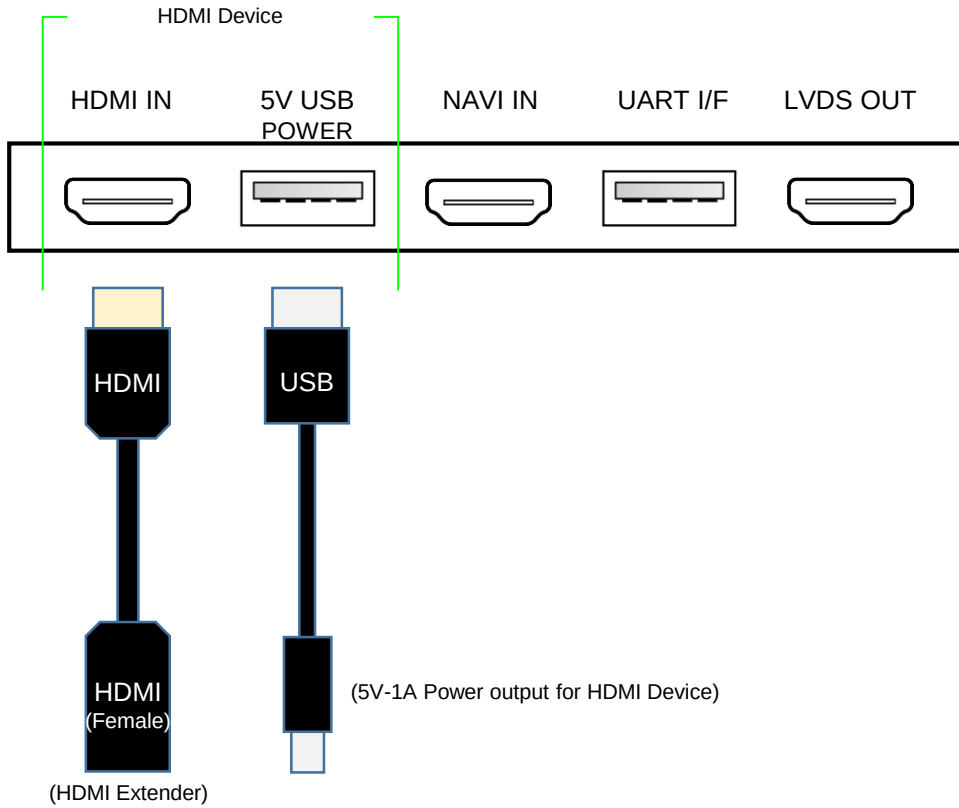
LWR Steuergerät Module(on the glovebox) – 26-Pin Connector



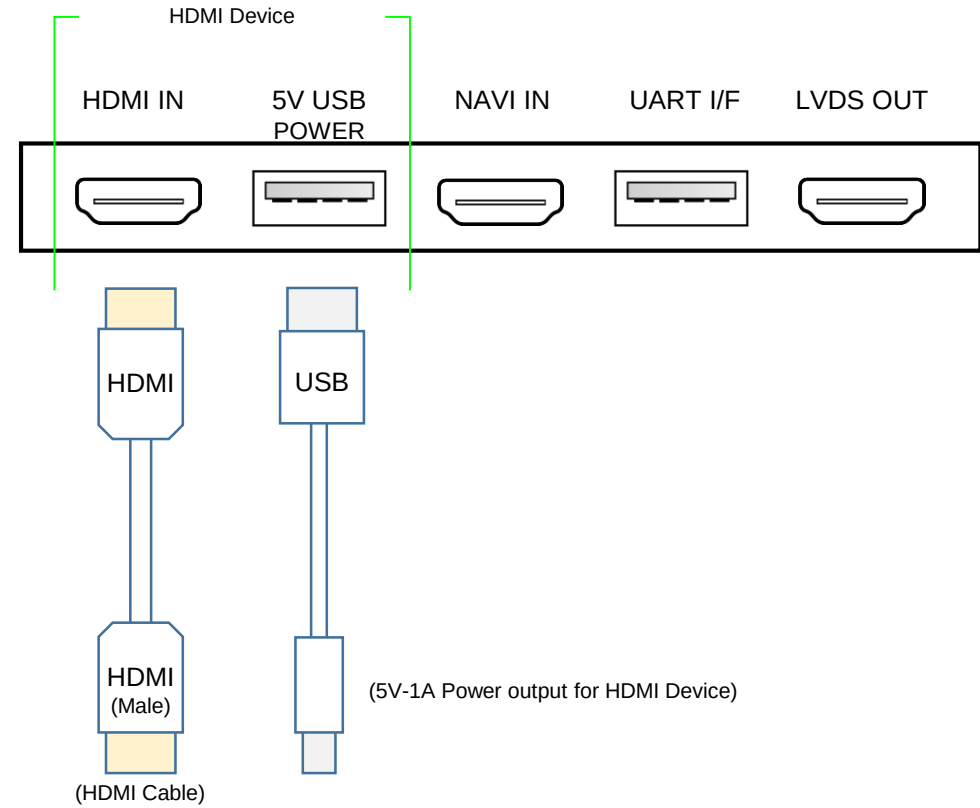
- Normally, general models of Audi should be just connected the 'HS CAN High, Low wires' at the climate controller.
- But, some models have different CAN-BUS data. Please refer to above pictures and connect the CAN wires.



## HDMI Connection Diagram



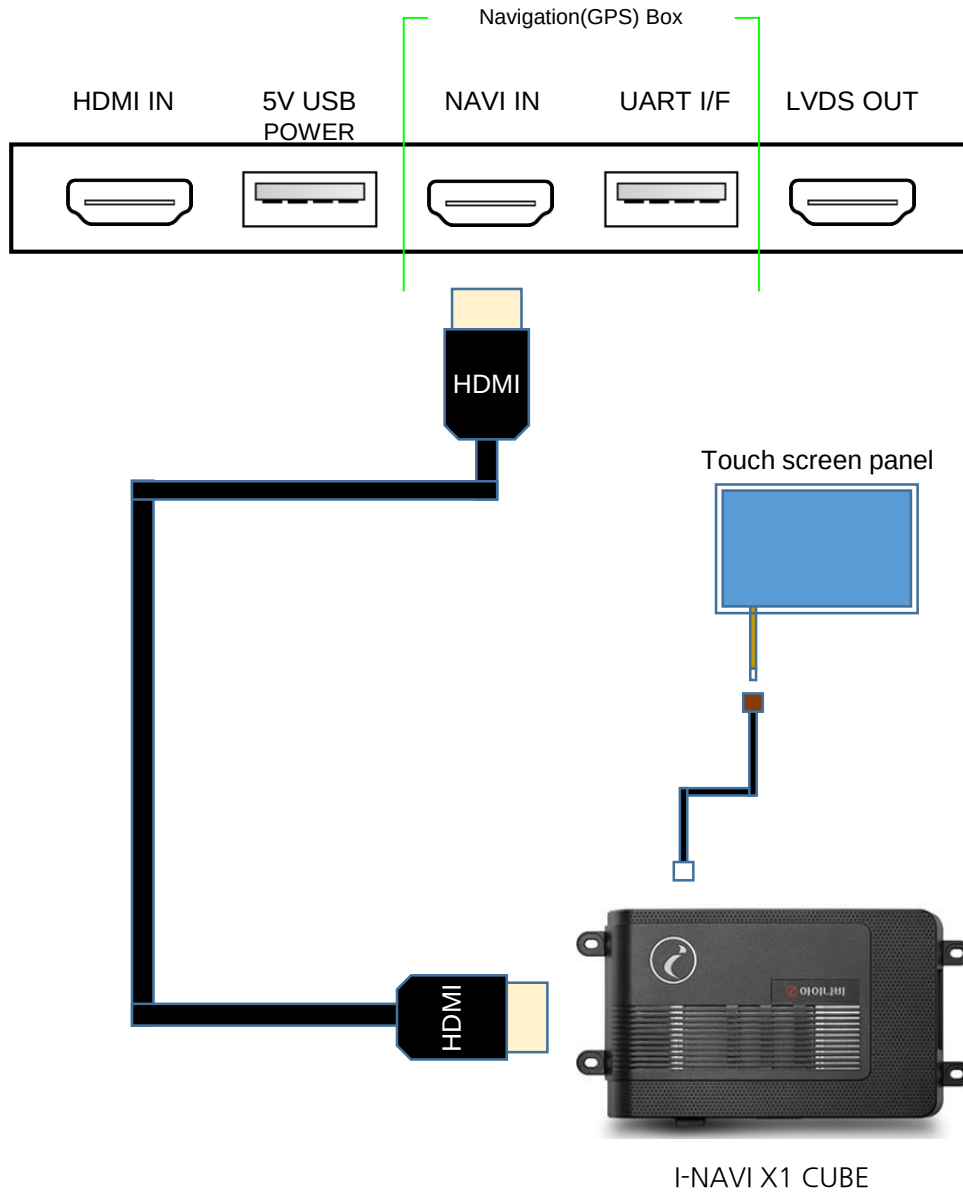
'Stick Type' HDMI Devices



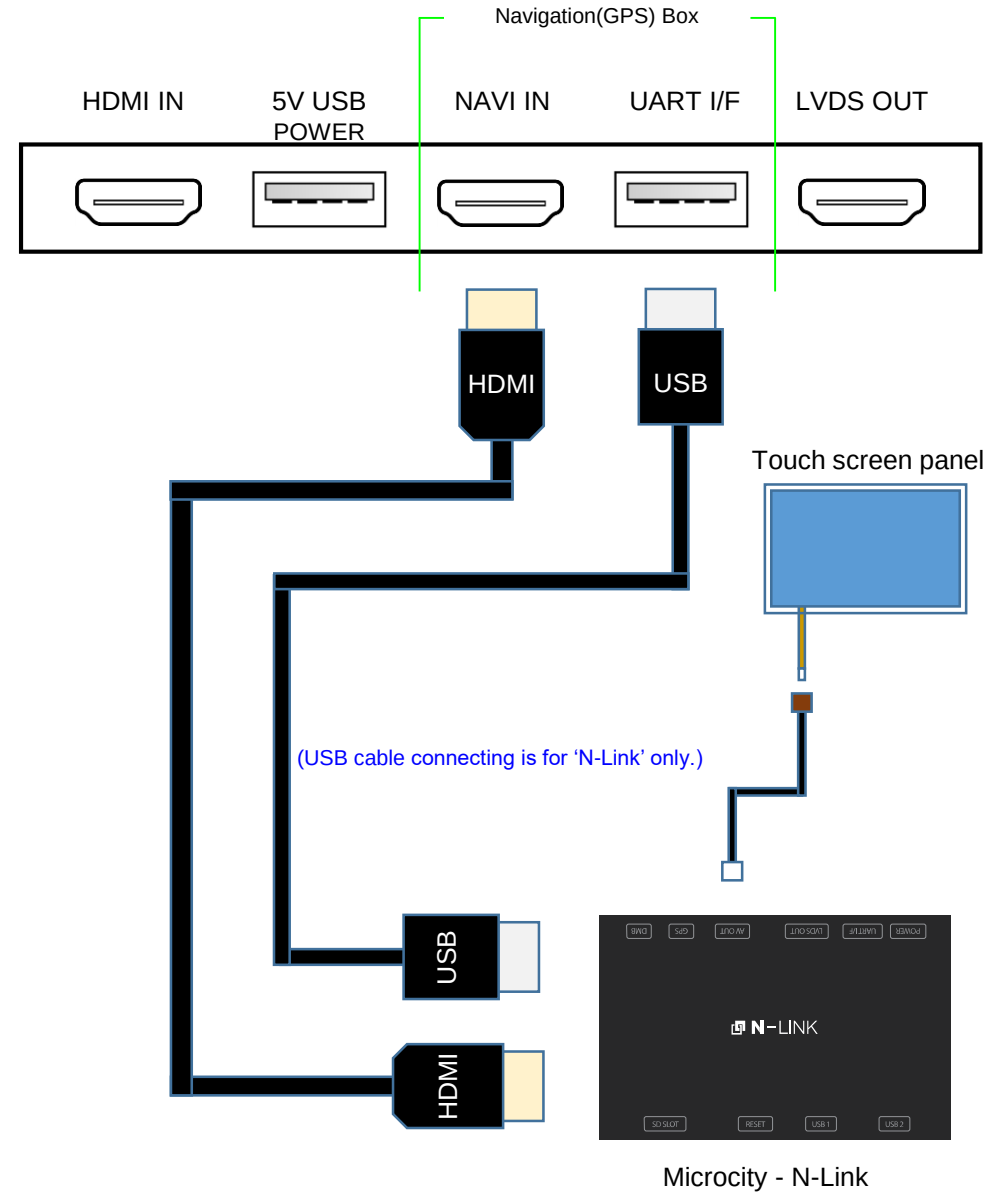
'Dongle & Adapter' Type HDMI Devices



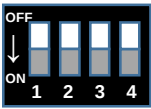
## Navigation Connection Diagram



## Navigation Connection Diagram

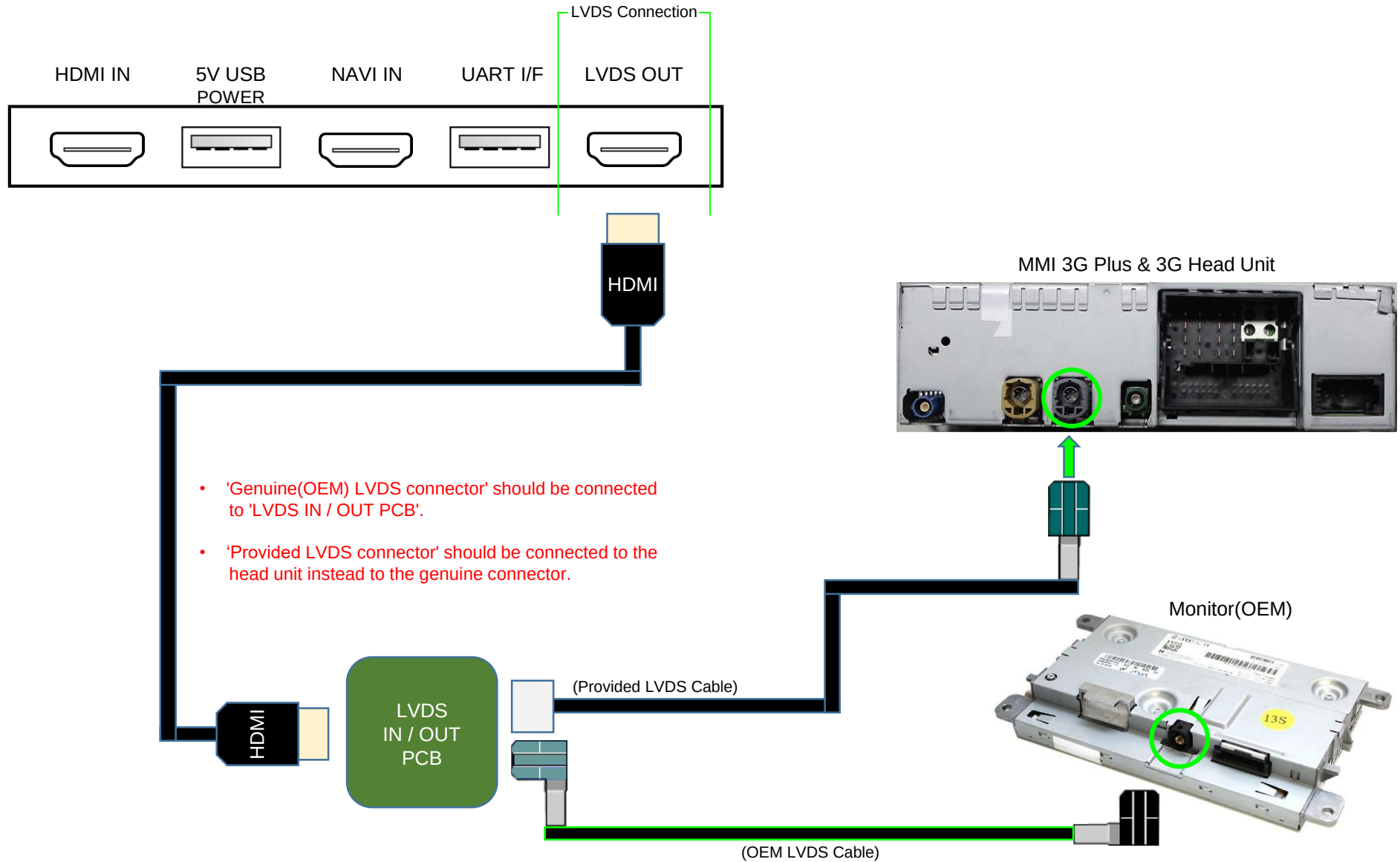


## Compatibility Chart for Navigation(GPS) box models

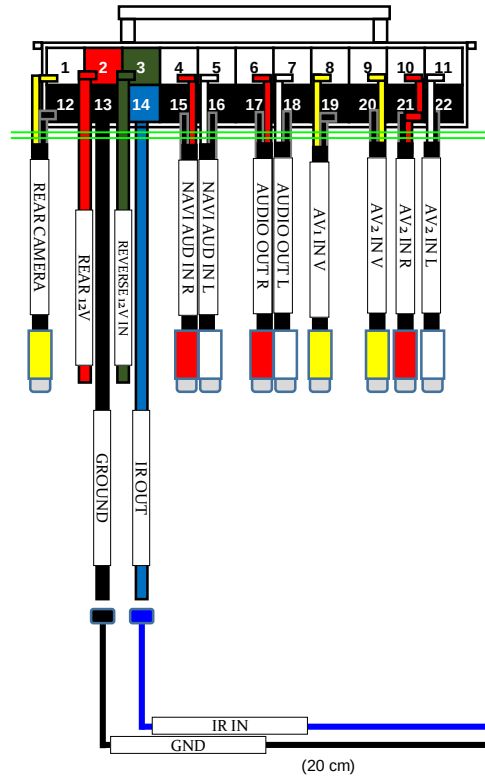
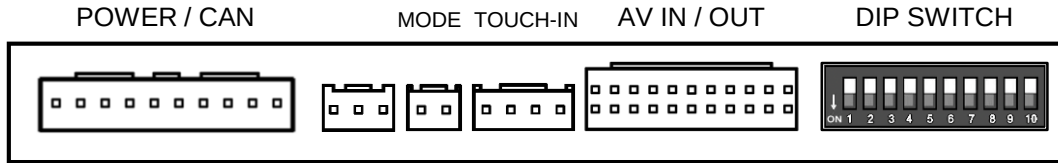
| Model                                                                             | Country     | Dip S/W<br>(Navigation)                                                                                             | Required Parts                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | South Korea | -                                                                                                                   | <br>HDMI Cable<br>(HDMI to HDMI) <br>USB A-A Cable<br>(USB to USB) <br>Hazard Module<br>(Refer to Page.11) |
|  | South Korea | <br>OFF(↓): 1, 2, 3, 4           | <br>HDMI Cable<br>(HDMI to HDMI)                                                                                                                                                                                                                                                 |
|  | South Korea | <br>OFF(↓): 1, 2, 3<br>ON(↑) : 4 | <br>HDMI Cable<br>(HDMI to HDMI)                                                                                                                                                                                                                                                 |

- The 'IW04A-N(HD-Link)' supports navigation(GPS) box models equipped with 'Digital video output'.
- It does not support the 'RGB video signals'.

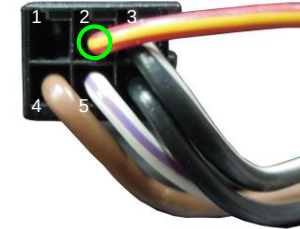
# LVDS Connection Diagram



# Hazard Module Connection Diagram



A4, A5, Q3 / 6-Pin Hazard Connector



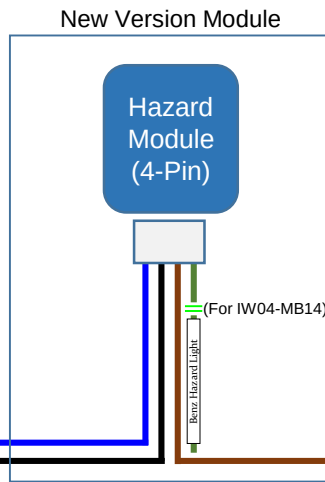
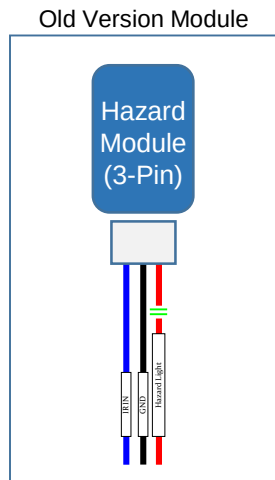
Pin # 2 = Hazard(-) (Red/Yellow)

Pin # 2 = Hazard(-) (Brown/Red) \*Q3

A6, A7 / 5-Pin Hazard Connector

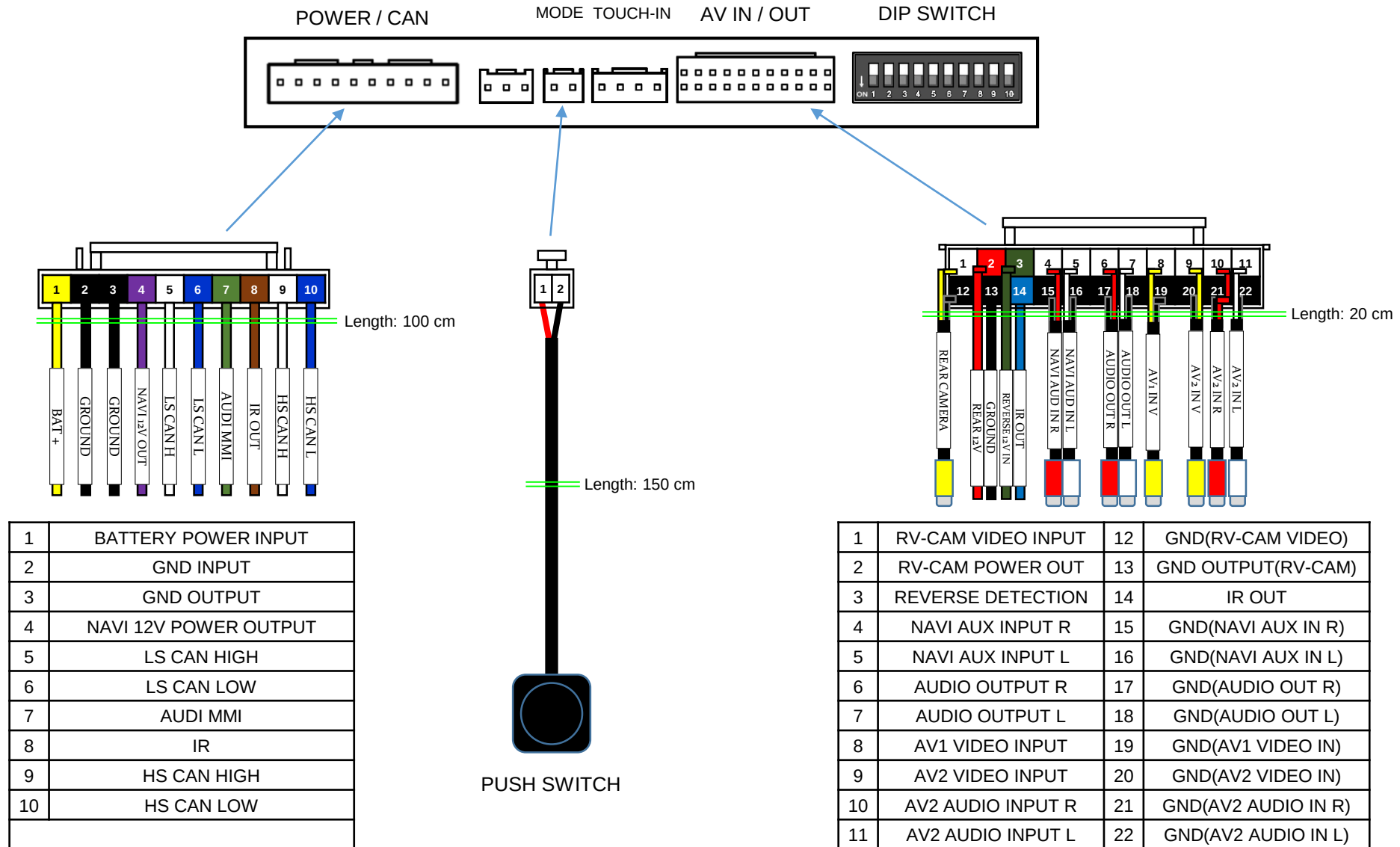


Pin # 1 = Hazard(-) (Blue/White)



**\*Hazard Module is just available with 'Smart Drive function of N-Link' navigation in South Korea.**

# Body Connector specifications



- The colors of each wires can be changed under manufacturer's circumstance.



## Car Compatibility Chart

| Car Models | Production Year | Specific Models |
|------------|-----------------|-----------------|
| A1         | 2015 -          |                 |
| A4         | 2010 -          | B8              |
| A5         | 2011 -          | 8T              |
| A6         | 2010 - 2011     | C6 (MMI 3G)     |
| A6         | 2011 - 2014     | C7              |
| A7         | 2010 - 2014     | 4G              |
| A8         | 2010 -          | D4              |
| Q3         | 2012 -          | 8U              |
| Q5         | 2009 -          | 8R              |
| Q7         | 2010 -          | 4L              |
|            |                 |                 |
|            |                 |                 |



IW04A-N is used in combination with Audi MMI(Multi Media Interface) system.

- MMI navigation (3G)
- MMI navigation plus (3G)
- MMI navigation plus (3G Plus)



The IW04A-N supports the Audi Original screen equipped with '4 pin LVDS round connector' only.

Please check the specification of original LVDS connector on the sidelines of a production year.

## Activation by original buttons of Audi



MMI 3G Plus Controller

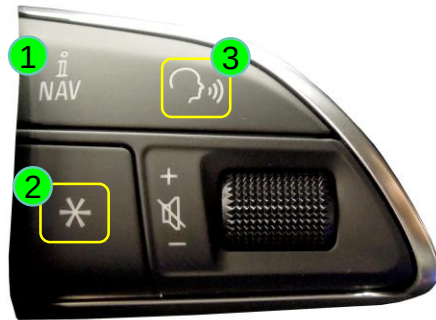


MMI 3G Controller

### For MMI 3G Plus & MMI 3G

| Button             | Function                                    | Operation                               | Remarks                                                                                                                                      |
|--------------------|---------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 1<br>NAV           | Changing Modes                              | Press the button 2 seconds.             | Order:<br>HDMI → NAVI → AV1 → AV2 → OEM                                                                                                      |
| 1<br>NAV           | Shortcut to each modes                      | Press the button 2 times consecutively. | < OEM → NAVI >                                                                                                                               |
|                    |                                             | Press the button 3 times consecutively. | < OEM → AV1 ><br><i>*It could also use 'iNAV(New) or MODE(Old) button' on the steering wheel.</i>                                            |
|                    |                                             | Press the button 4 times consecutively. | < OEM → AV2 >                                                                                                                                |
| 1<br>NAV           | System Locking / Unlocking                  | Press the button 10 seconds long.       | If you visit car service center, you can lock the all functions of IW04A-N. It is only possible to use the OEM functions under it is locked. |
| Other Buttons      | Back to OEM                                 | Press the button short.                 | Return to the OEM mode in any modes.                                                                                                         |
| 2<br>BACK (RETURN) | Reset to factory default setting and power. | Press the button 10 seconds long.       | You can use this function when you get in trouble to see the screen while setting the screen.                                                |
| 3<br>MENU (SETUP)  | Enter into the setting menu                 | Press the button 5 seconds long.        | Adjust settings of all functions like adjustment screen size, brightness, and etc.                                                           |

## Activation by original buttons of Audi Q3 6.5-inch screen model



Steering Wheel buttons  
6.5-inch screen(Entry model)

### For Q3 6.5-inch screen model

| Button                                                                                             | Function       | Operation                      | Remarks                              |
|----------------------------------------------------------------------------------------------------|----------------|--------------------------------|--------------------------------------|
| <b>1</b><br>iNAV                                                                                   | Changing Modes | Press the 'iNAV' button short. | Order: HDMI → NAVI → AV1 → AV2 → OEM |
| <br>Other Buttons | Back to OEM    | Press the button short.        | Return to the OEM mode in any modes. |

### Setting Menu

| Button            | Function                             | Operation                            |
|-------------------|--------------------------------------|--------------------------------------|
| <b>2</b><br>*     | Enter into the setting menu          | Press the '*' button 5 seconds long. |
| <b>1</b><br>iNAV  | Back to previous menu                | Press the button short.              |
| <b>3</b><br>VOICE | Selection                            | Press the button short.              |
| <b>4 5</b><br>◀ ▶ | Move the menu and adjust the values. | Press the button short.              |

## DIP Switch Settings

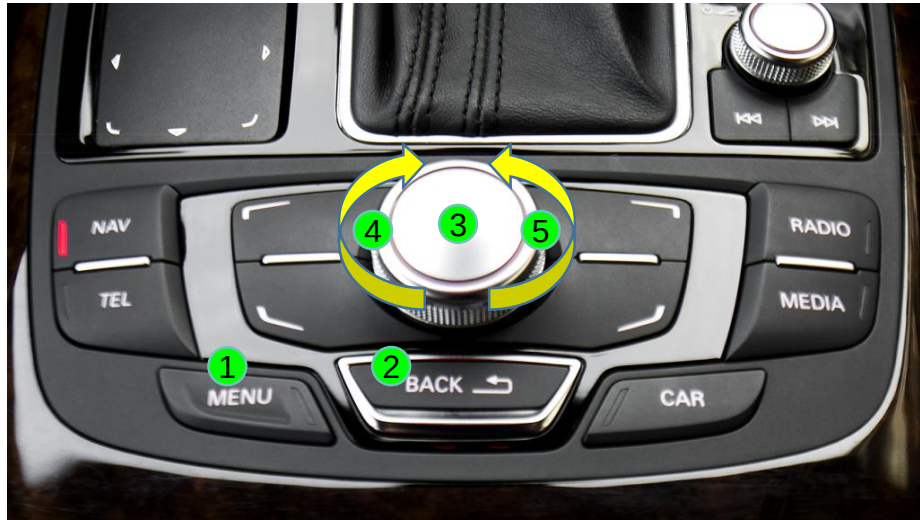


| Pin No. | ON(▼)                                | OFF(▲)                                    |
|---------|--------------------------------------|-------------------------------------------|
| 1       | HDMI Mode                            | Skip HDMI Mode                            |
| 2       | Navigation Mode                      | Skip Navigation Mode                      |
| 3       | External Rear View Camera            | Original Rear View Camera                 |
| 4       | External Front View Camera(AV1 Mode) | Skip External Front View Camera(AV1 Mode) |
| 5       | AV2 Mode                             | Skip AV2 Mode                             |
| 6       | Selection of car model               |                                           |
| 7       |                                      |                                           |
| 8       |                                      |                                           |
| 9       |                                      |                                           |
| 10      |                                      |                                           |

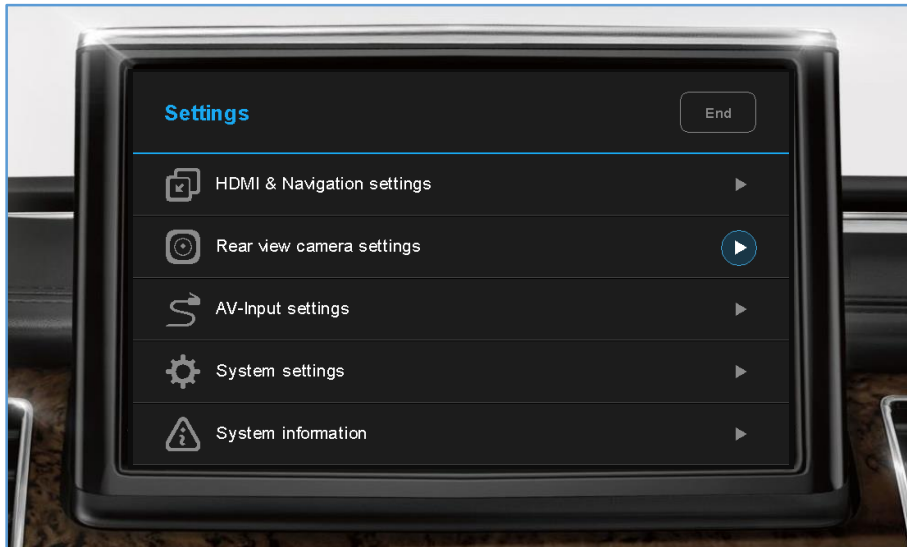
| No.6   | No.7   | No.8   | No.9   | No.10  | Car Models                                     | CAN wires Information                                   |
|--------|--------|--------|--------|--------|------------------------------------------------|---------------------------------------------------------|
| OFF(▲) | OFF(▲) | OFF(▲) | OFF(▲) | OFF(▲) | A6, A7, A8 / 2012~<br>(8-inch / 800*480)       | HS CAN = Climate controller                             |
| OFF(▲) | OFF(▲) | ON(▼)  | OFF(▲) | OFF(▲) | A4 / 2010<br>(7-inch / 800*480)                | HS CAN = Climate controller<br>LS CAN = Gateway+BEM     |
| OFF(▲) | ON(▼)  | ON(▼)  | OFF(▲) | ON(▼)  | A4 / 2010<br>(7-inch / 800*480)                | HS CAN = Climate controller<br>LS CAN = Gateway+BEM     |
| OFF(▲) | OFF(▲) | OFF(▲) | OFF(▲) | ON(▼)  | A4 / 2011 , Q5 /<br>2012<br>(7-inch / 800*480) | HS CAN = Climate controller<br>LS CAN = Gateway+BEM     |
| OFF(▲) | OFF(▲) | OFF(▲) | ON(▼)  | OFF(▲) | A4, A5 / 2012~<br>(7-inch / 800*480)           | HS CAN = Climate controller                             |
| OFF(▲) | OFF(▲) | OFF(▲) | ON(▼)  | ON(▼)  | Q3 / 2012~2013<br>(7-inch / 800*480)           | HS CAN = Climate controller<br>LS CAN = LWR Steuergerät |
| OFF(▲) | OFF(▲) | ON(▼)  | ON(▼)  | ON(▼)  | Q3 / 2014~<br>(7-inch / 800*480)               | HS CAN = Climate controller<br>LS CAN = LWR Steuergerät |
| OFF(▲) | ON(▼)  | ON(▼)  | OFF(▲) | OFF(▲) | Q3 / 2014~<br>(6.5-inch / 400*240)             | HS CAN = Climate controller                             |
| OFF(▲) | ON(▼)  | OFF(▲) | OFF(▲) | OFF(▲) | Q5 / 2009~2012<br>Q7 / 2010                    | HS CAN = Climate controller<br>(7-inch / 800*480)       |
| OFF(▲) | ON(▼)  | OFF(▲) | ON(▼)  | OFF(▲) | A6 / 2012~<br>(6.5-inch / 400*240)             | HS CAN = Climate controller                             |
| OFF(▲) | ON(▼)  | OFF(▲) | OFF(▲) | ON(▼)  | Q5 / 2013<br>(7-inch / 800*480)                | HS CAN = Climate controller                             |
| OFF(▲) | ON(▼)  | OFF(▲) | ON(▼)  | ON(▼)  | A1 / 2015~<br>(6.5-inch / 800*480)             | HS CAN = Climate controller<br>LS CAN = LWR Steuergerät |
| OFF(▲) | OFF(▲) | ON(▼)  | OFF(▲) | ON(▼)  | Q7 / 2013~<br>(7-inch / 800*480)               | HS CAN = Climate controller                             |
| OFF(▲) | OFF(▲) | ON(▼)  | ON(▼)  | OFF(▲) | A6 / 2010~2011<br>(7-inch / 800*480)           | HS CAN = Climate controller                             |

# Settings

For MMI 3G Plus & MMI 3G



| Button |                                | Function                                             | Operation                                                   |
|--------|--------------------------------|------------------------------------------------------|-------------------------------------------------------------|
| 1      | MENU(SETUP)                    | Enter into the setting menu                          | Press the button 5 seconds long.                            |
| 2      | BACK(RETURN)                   | Back to previous menu                                | Press the button short.                                     |
| 3      | Selection                      | Select the menu and setting values.                  | Press the button short.                                     |
| 4      | Turn the dial clockwise        | Move the menu-pointer and adjust the setting values. | Move the pointer and setting values to up(↑) and right(→).  |
| 5      | Turn the dial counterclockwise | Move the menu-pointer and adjust the setting values. | Move the pointer and setting values to down(↓) and left(←). |

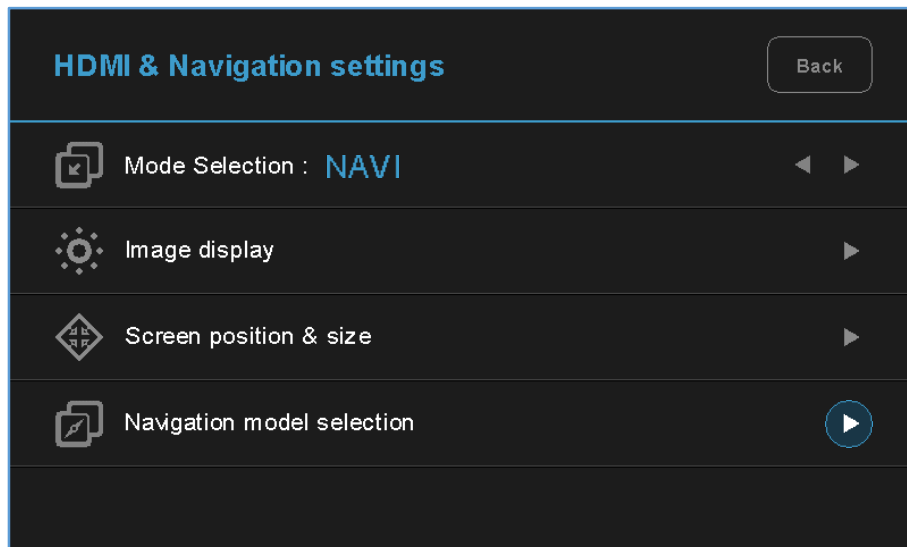
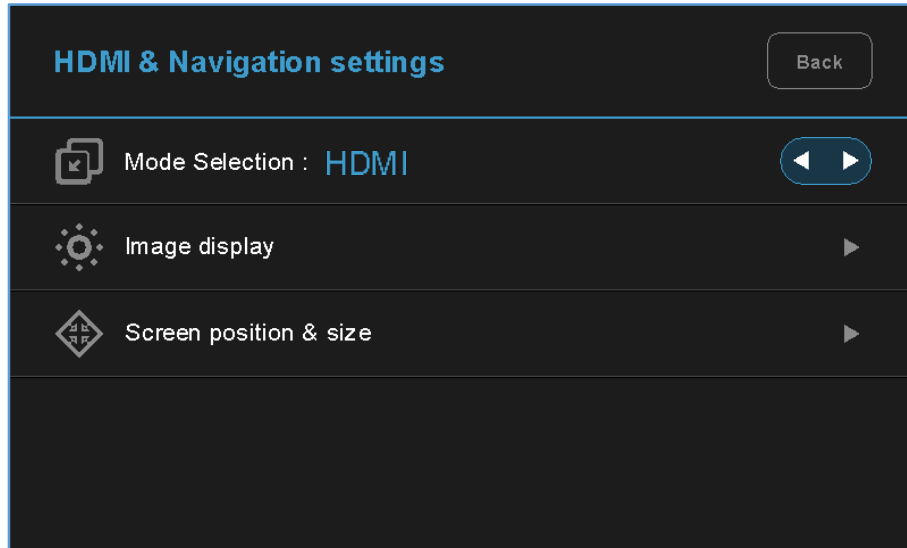


## 1. Enter into the setting menu.

<Press the 'MENU(SETUP)' button 5 seconds long.>

- HDMI & Navigation settings
- Rear view camera settings
- AV-input settings
- System settings
- System information

# Settings



## 2. HDMI mode settings

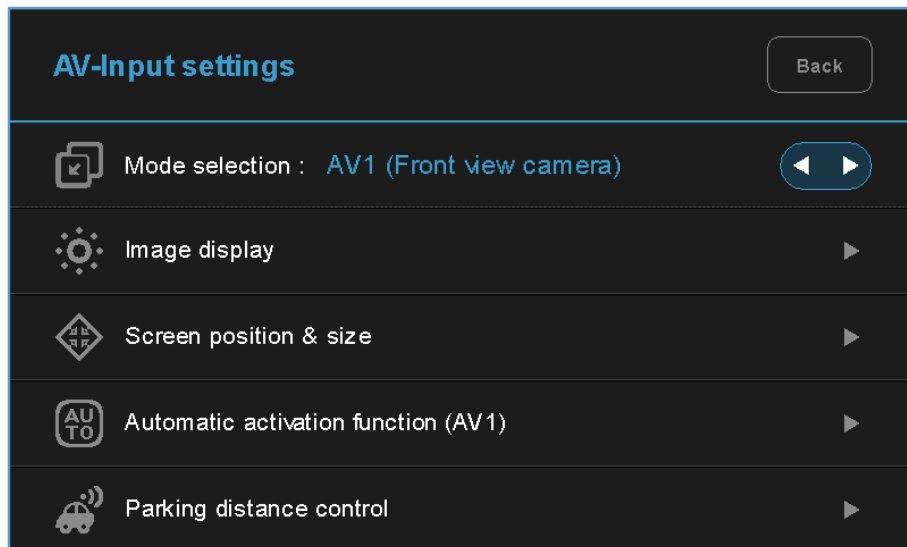
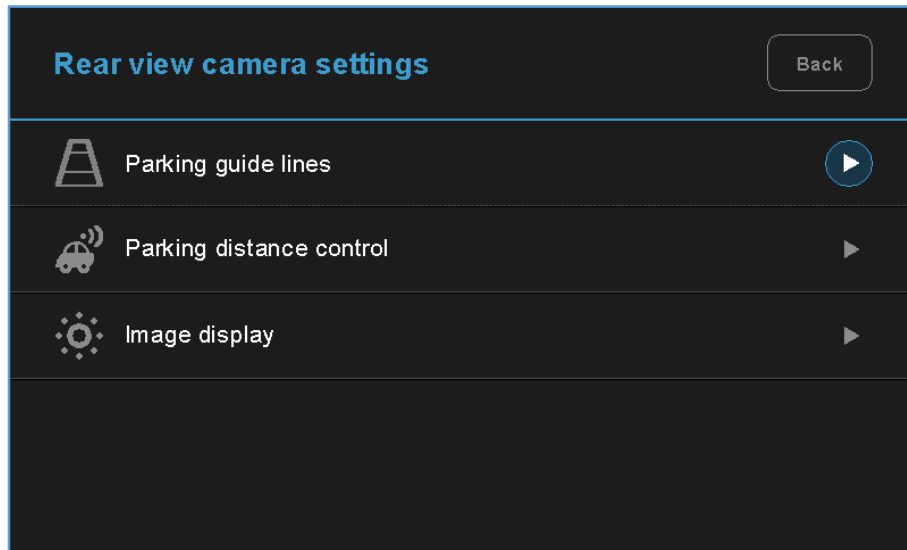
- Mode selection: HDMI ↔ NAVI
- Image display  
= Adjust the values of brightness and contrast  
Red-Green-Blue colors of HDMI display.
- Screen position & size  
= Adjust position and size of HDMI display.

## 3. NAVI mode settings

- Mode selection: NAVI ↔ HDMI
- Image display  
= Adjust the values of brightness and contrast  
Red-Green-Blue colors of NAVI display.
- Screen position & size  
= Adjust position and size of NAVI display.
- Navigation model selection
  - ① N-Link                      ② iNAVI – CUBE                      ③ imercury – Class setup
  - ④ MYVI                      ⑤ Mode A                      ⑥ Mode B



# Settings



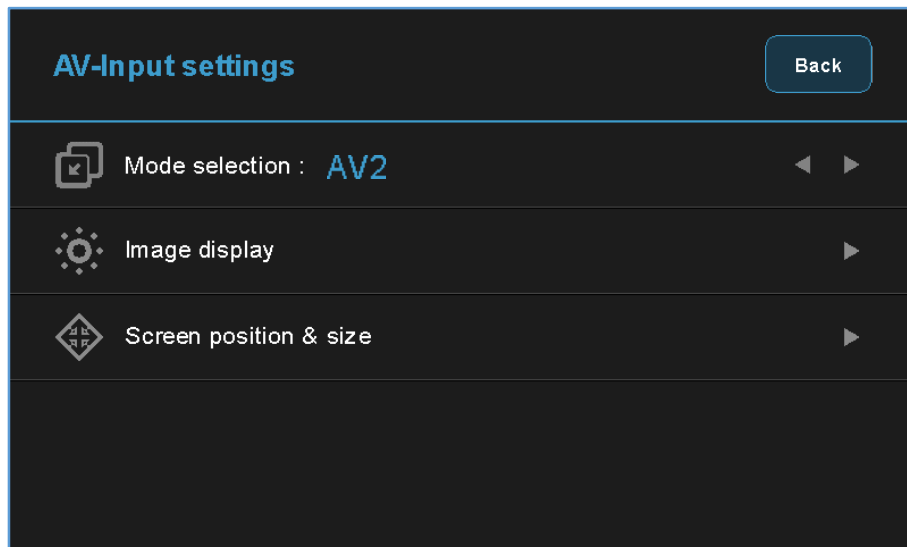
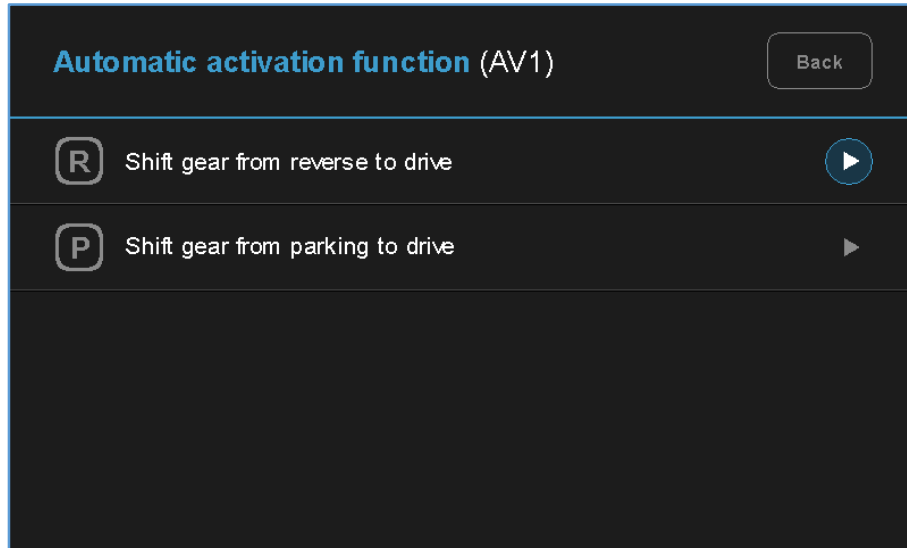
## 4. Rear view camera settings

- Parking guide lines  
= Adjust position of parking guide lines and select the lines 'ON or OFF'.
- Parking distance control  
= Adjust position of parking distance control sensors to 'LEFT or RIGHT' and select the PDC 'ON or OFF'.
- Image display  
= Adjust the values of brightness and contrast Red-Green-Blue colors of Rear view camera display.

## 5. AV1(Front view camera) settings

- Mode selection: AV1(Front view camera) ↔ AV2
- Image display  
= Adjust the values of brightness and contrast Red-Green-Blue colors of AV1(Front view camera) display.
- Screen position & size  
= Adjust the position and size of AV1 display.
- Automatic activation function(AV1)  
= \* Please refer to next page.
- Parking distance control  
= Adjust the position of parking distance control sensors to 'LEFT or RIGHT' and select the PDC 'ON or OFF'.

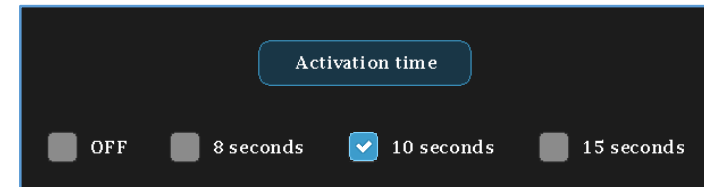
## Settings



## 6. Automatic activation function(AV1)

- Shift gear from reverse to drive
- Shift gear from parking to drive

\* When you shift gear 'from reverse to drive' or 'from parking to drive', it just works automatically during the activation time you selected.



## 7. AV2 settings

- Mode selection: AV2 ↔ AV1(Front view camera)
- Image display  
= Adjust the values of brightness and contrast  
Red-Green-Blue colors of AV2 display.
- Screen position & size  
= Adjust the position and size of AV2 display.



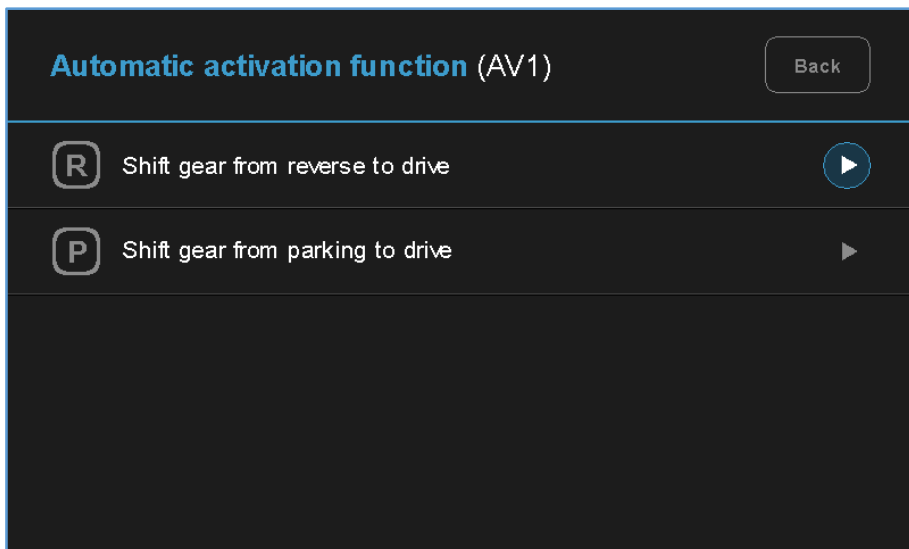
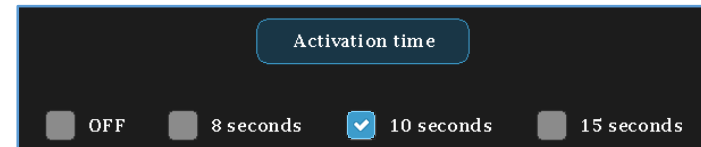
## Settings (SURROUND VIEW OPTION)



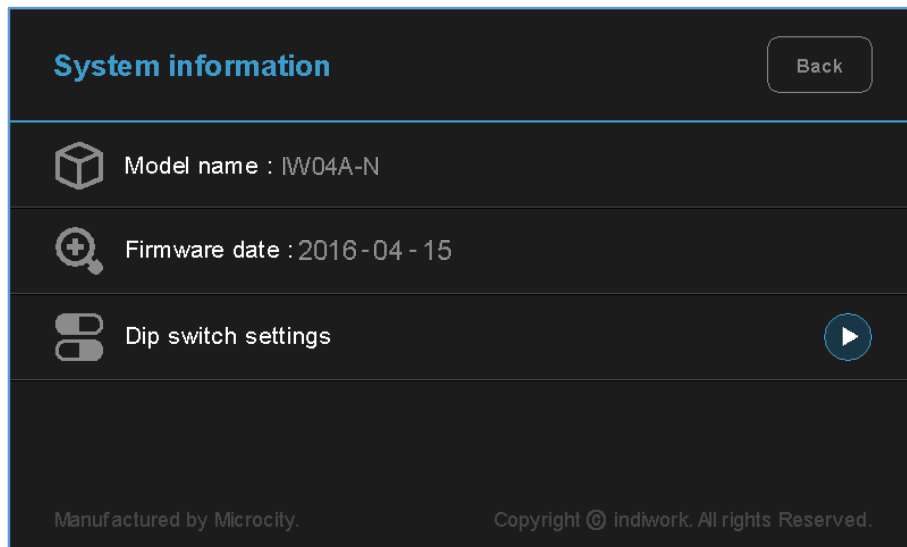
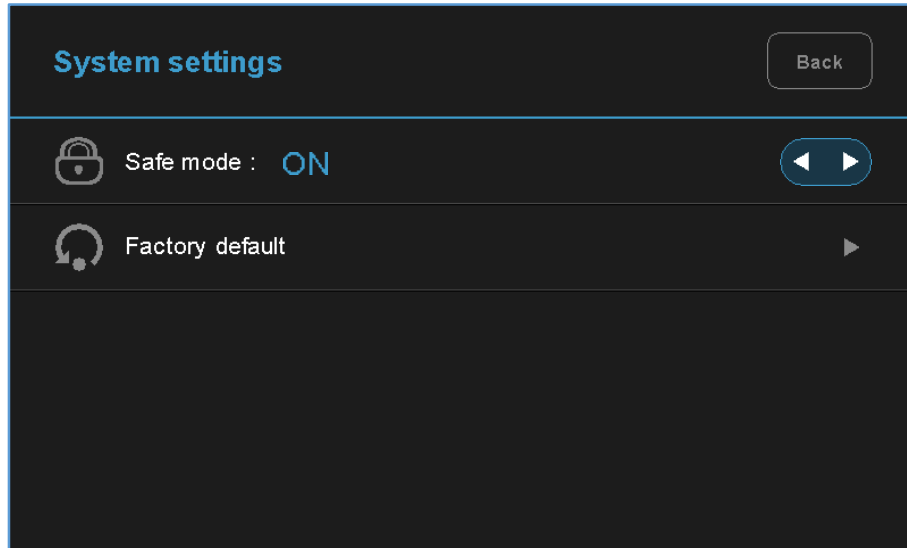
### Keep the rear camera view

- Shift gear from reverse to drive
- Shift gear from parking to drive

\* When you shift gear 'from reverse to drive' or 'from parking to drive', it just works during the activation time you selected.



# Settings



## 8. System settings

- Safe mode  
= Select the one of two between 'ON and OFF'.

\* If you select 'ON', 3 modes(HDMI, NAVI and AV2) will be faded out when the car is driven.

- Factory default  
= Reset all setting values to factory default setting.

## 9. System information

- Mode name: IW04A-N
- Firmware date: 2016 - 04 - 15(Latest firmware date)  
= You can check the current firmware version date.
- Dip switch settings  
= You can check the current positions of dip switch settings.

# Settings

**System information** - Dip switch settings

Back

|    | ON                       | OFF                      |        |                           |     |
|----|--------------------------|--------------------------|--------|---------------------------|-----|
| 1  | <input type="checkbox"/> | <input type="checkbox"/> | No. 1  | HDMI                      | ON  |
| 2  | <input type="checkbox"/> | <input type="checkbox"/> | No. 2  | Navigation                | ON  |
| 3  | <input type="checkbox"/> | <input type="checkbox"/> | No. 3  | External rear view camera | ON  |
| 4  | <input type="checkbox"/> | <input type="checkbox"/> | No. 4  | AV1                       | ON  |
| 5  | <input type="checkbox"/> | <input type="checkbox"/> | No. 5  | AV2                       | OFF |
| 6  | <input type="checkbox"/> | <input type="checkbox"/> | No. 6  | Selection of car model    | ON  |
| 7  | <input type="checkbox"/> | <input type="checkbox"/> | No. 7  |                           | OFF |
| 8  | <input type="checkbox"/> | <input type="checkbox"/> | No. 8  |                           | OFF |
| 9  | <input type="checkbox"/> | <input type="checkbox"/> | No. 9  |                           | OFF |
| 10 | <input type="checkbox"/> | <input type="checkbox"/> | No. 10 |                           | ON  |

ex 1)  
Actual DIP switch values. (→)



Appears on the setting menu. (↓)

|        |                           |     |
|--------|---------------------------|-----|
| No. 1  | HDMI                      | ON  |
| No. 2  | Navigation                | OFF |
| No. 3  | External rear view camera | ON  |
| No. 4  | AV1                       | ON  |
| No. 5  | AV2                       | OFF |
| No. 6  | Selection of car model    | OFF |
| No. 7  |                           | ON  |
| No. 8  |                           | OFF |
| No. 9  |                           | ON  |
| No. 10 |                           | OFF |

## 10. Information of Dip switch settings

\* You can check the current positions of dip switch settings.

ex 2)  
Actual DIP switch values. (→)



Appears on the setting menu. (↓)

|        |                           |     |
|--------|---------------------------|-----|
| No. 1  | HDMI                      | ON  |
| No. 2  | Navigation                | ON  |
| No. 3  | External rear view camera | OFF |
| No. 4  | AV1                       | ON  |
| No. 5  | AV2                       | OFF |
| No. 6  | Selection of car model    | ON  |
| No. 7  |                           | OFF |
| No. 8  |                           | OFF |
| No. 9  |                           | OFF |
| No. 10 |                           | OFF |

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