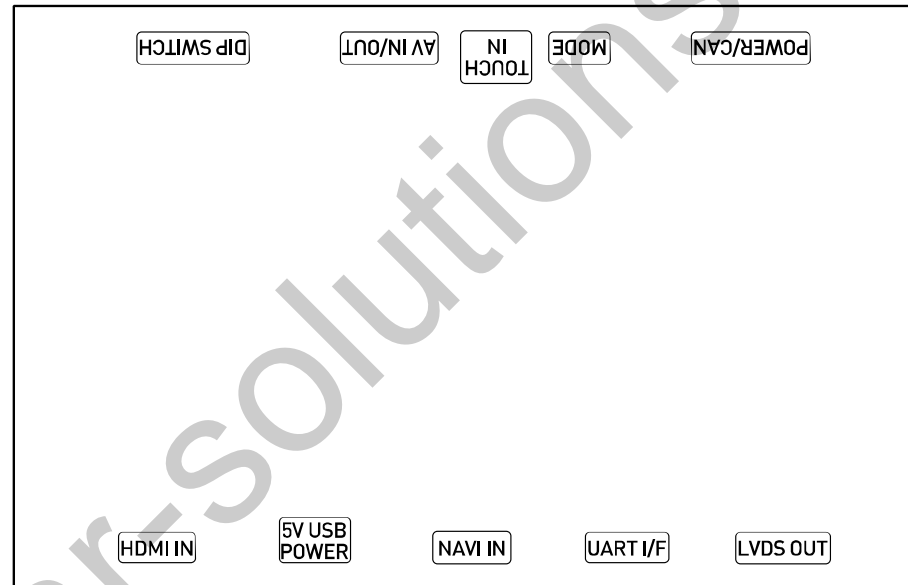


Instruction Manual

High-Definition Link for Audi

Release Date: 2017 - 02 - 01



Latest Firmware Date	2017 - 02 - 02
Manual Version	Rev. 3.8
Language	English

Contents

• Cautions	3
• Dimension & Exterior	4
• Components & Optional parts	5
• Full Installation Diagram	6
• CAN wires information(exceptions)	7
• HDMI Connection Diagram	9
• Navigation Connection Diagram	10
• Compatibility Chart for Navigation(GPS) box models	11
• LVDS Connection Diagram	12
• Hazard Module Connection Diagram	13
• Body Connector specifications	14
• Car Compatibility Chart	15
• Activation by original buttons of Audi	16
• Activation by original buttons of Audi Q3(6.5-inch screen model)	17
• DIP Switch Settings	18
• Settings	
1. Enter into the setting menu	19
2. HDMI mode settings	20
3. NAVI mode settings	20
4. Rear view camera settings	21
5. AV1(Front view camera) settings	21
6. Automatic activation function(AV1)	22
7. AV2 settings	22
8. Keep the rear camera view	23
9. System settings	24
10. System information	24
11. Information of Dip switch settings	25

Cautions

▪ Device 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.

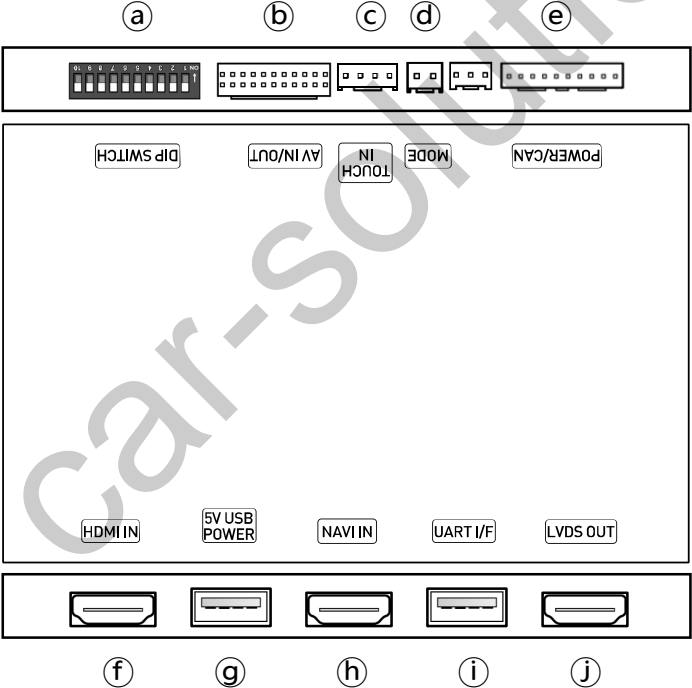
▪ Navigation(GPS) box_related

- When you connect the power wires(B+, ACC) to the navigation(GPS) box,
the 'NAVI 12V OUT' wire supported by the device 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)



HDMI Cable
(Male to Male)



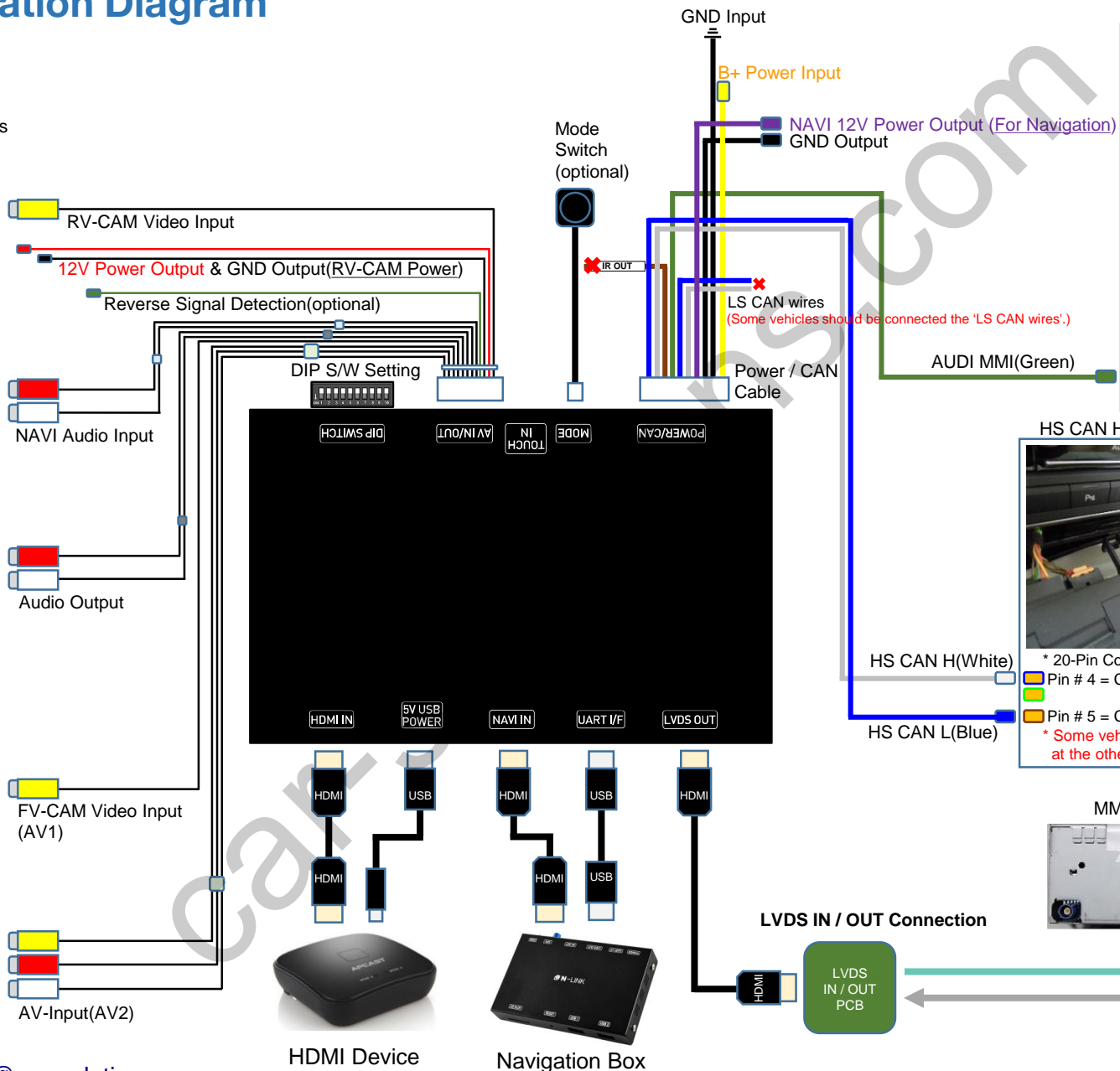
HDMI Extender
(For stick type HDMI device)



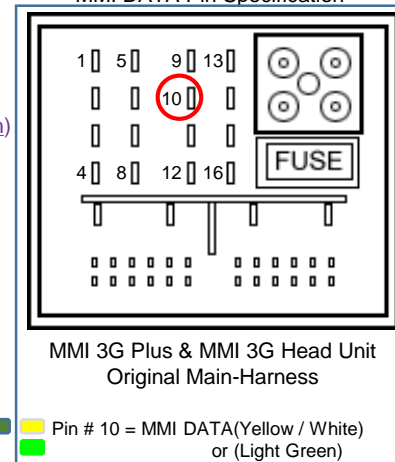
Mode Switch

Full Installation Diagram

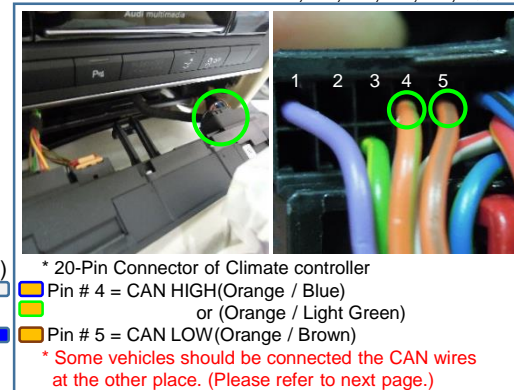
※ Optional External Devices



MMI DATA Pin Specification



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



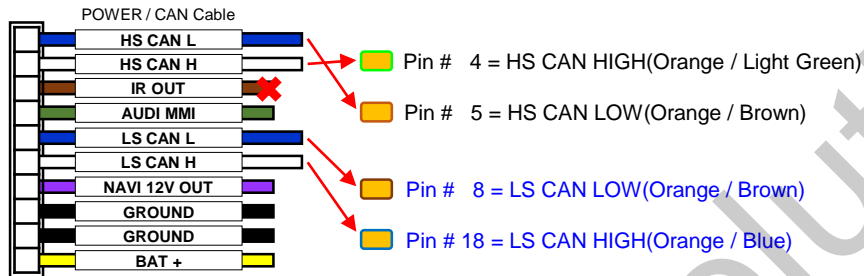
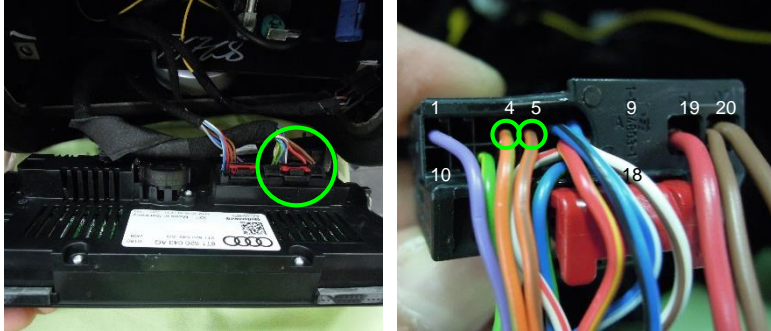
MMI 3G & 3G+ Head Unit(OEM)



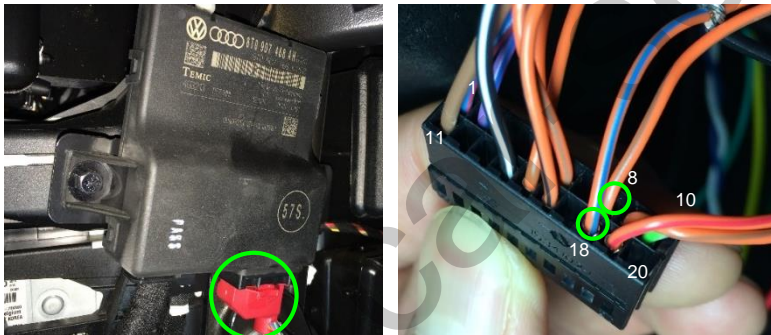
CAN wires information(exception)

< 2010, 2011 Audi A4 >

Climate Controller – 20-Pin Connector

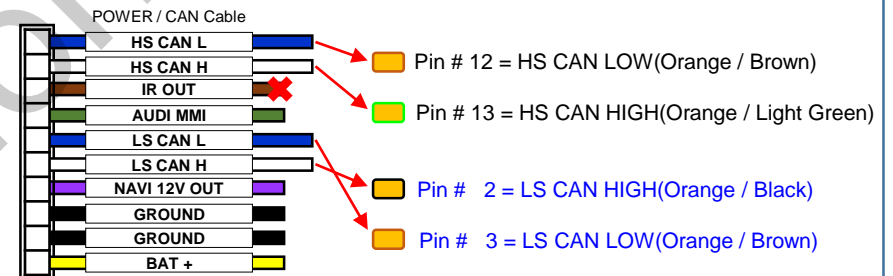
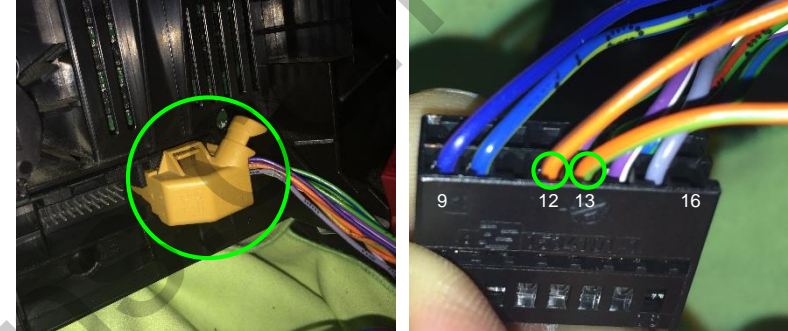


Gateway+BEM Module(on the left of the glovebox) – 20-Pin Connector



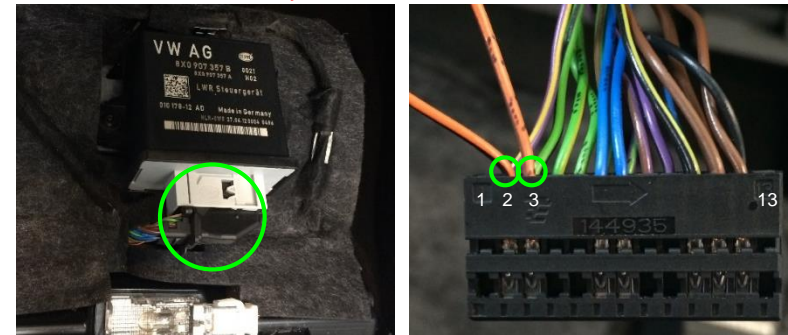
< 2012~ Audi Q3 >

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.)

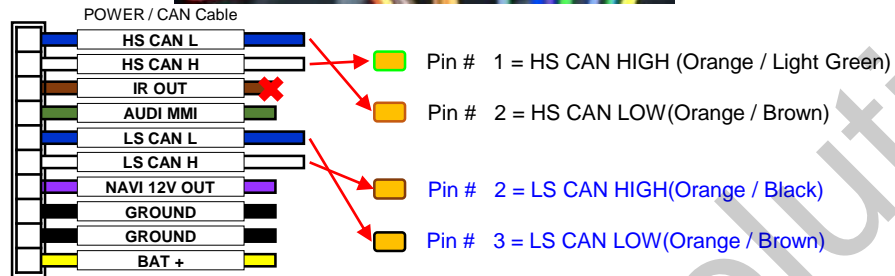


- Normally, general models of Audi should be just connected the 'HS CAN High, Low wires' at the climate controller.
 - But, some models have different CAN-BUS data. Please refer to above pictures and connect the CAN wires.
- support@car-solutions.com

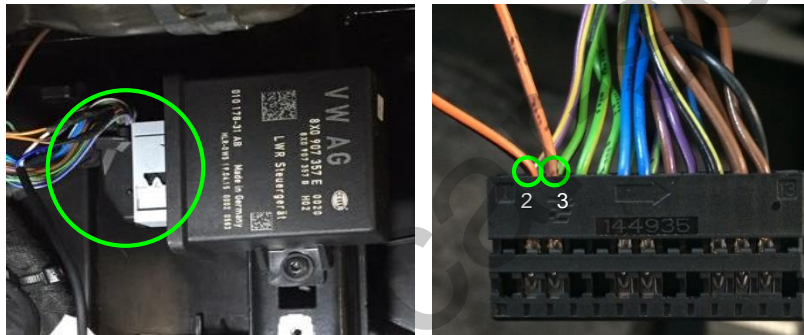
CAN wires information(exceptions)

< 2015 Audi A1>

Climate Controller – 20-Pin Connector



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

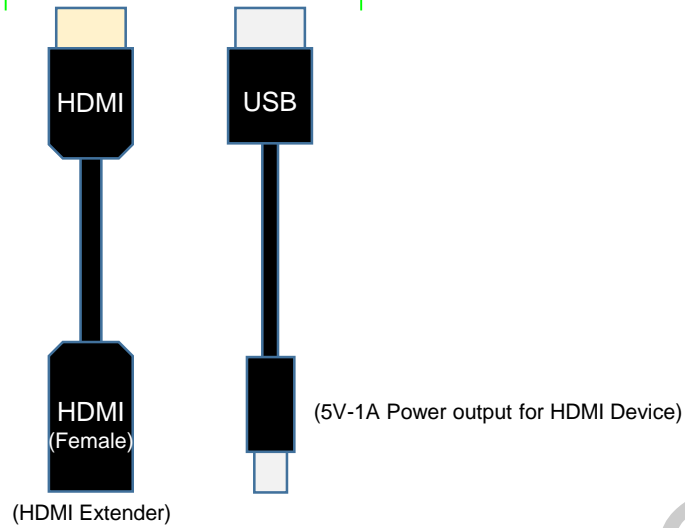
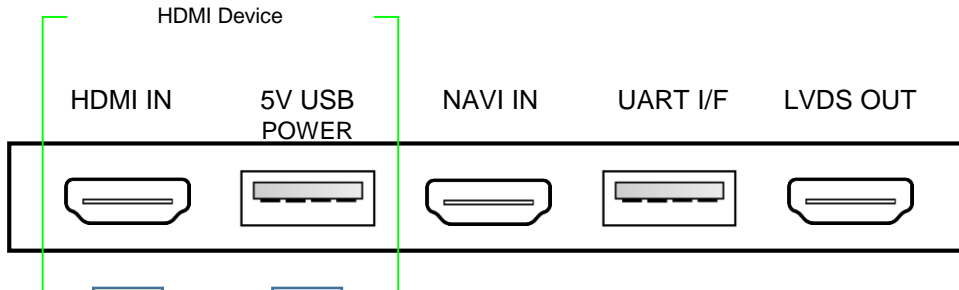


- Normally, general models of Audi should be just connected the 'HS CAN High, Low wires' at the climate controller.
- But, some models have different CAN-BUS data. Please refer to above pictures and connect the CAN wires.

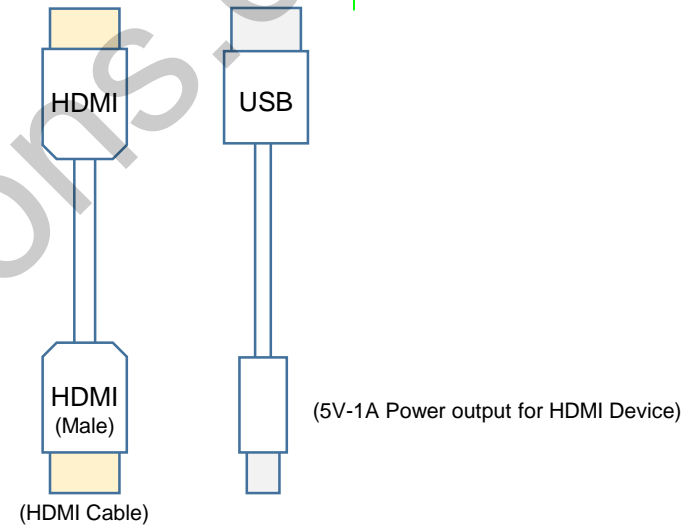
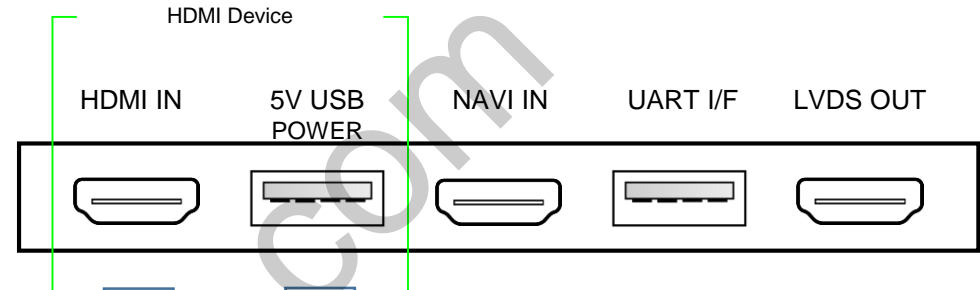
support@car-solutions.com

www.car-solutions.com

HDMI Connection Diagram



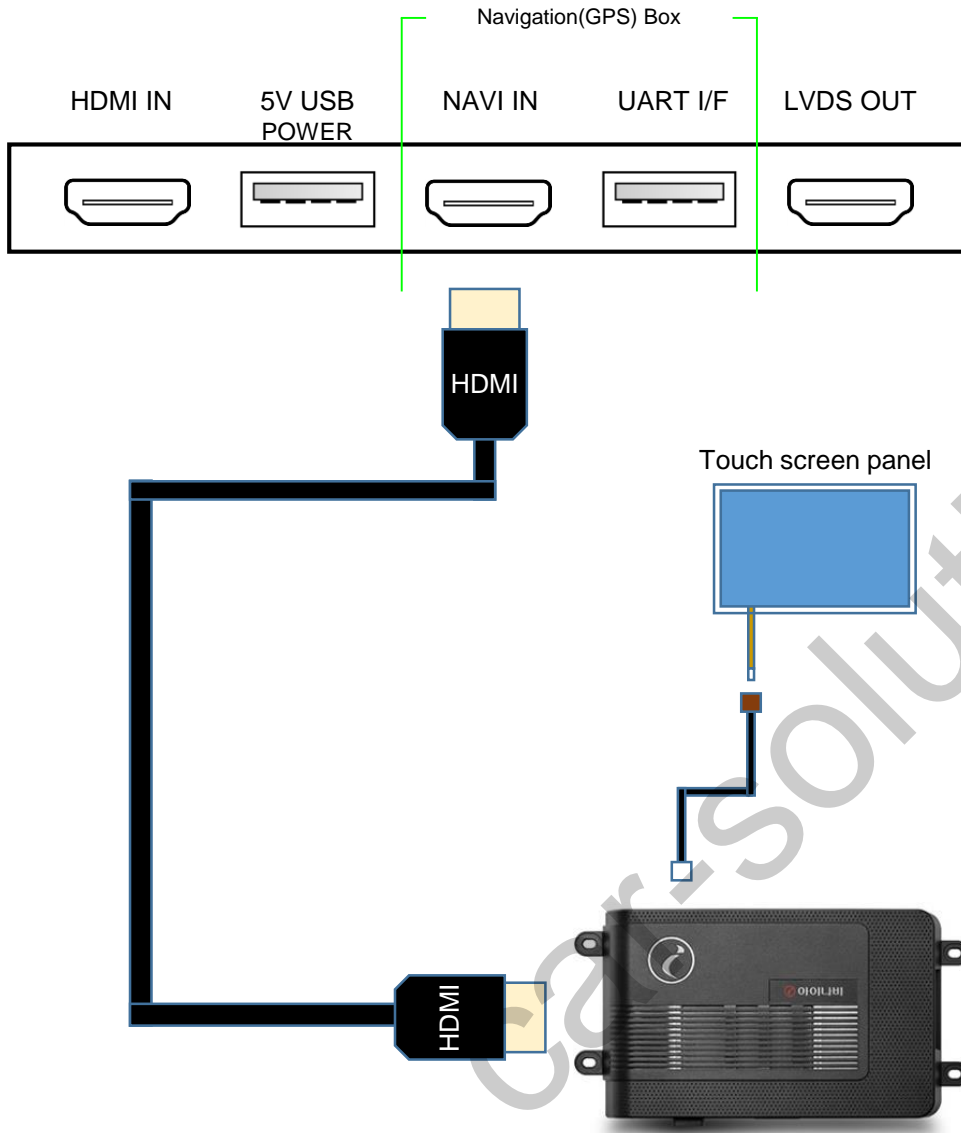
'Stick Type' HDMI Devices



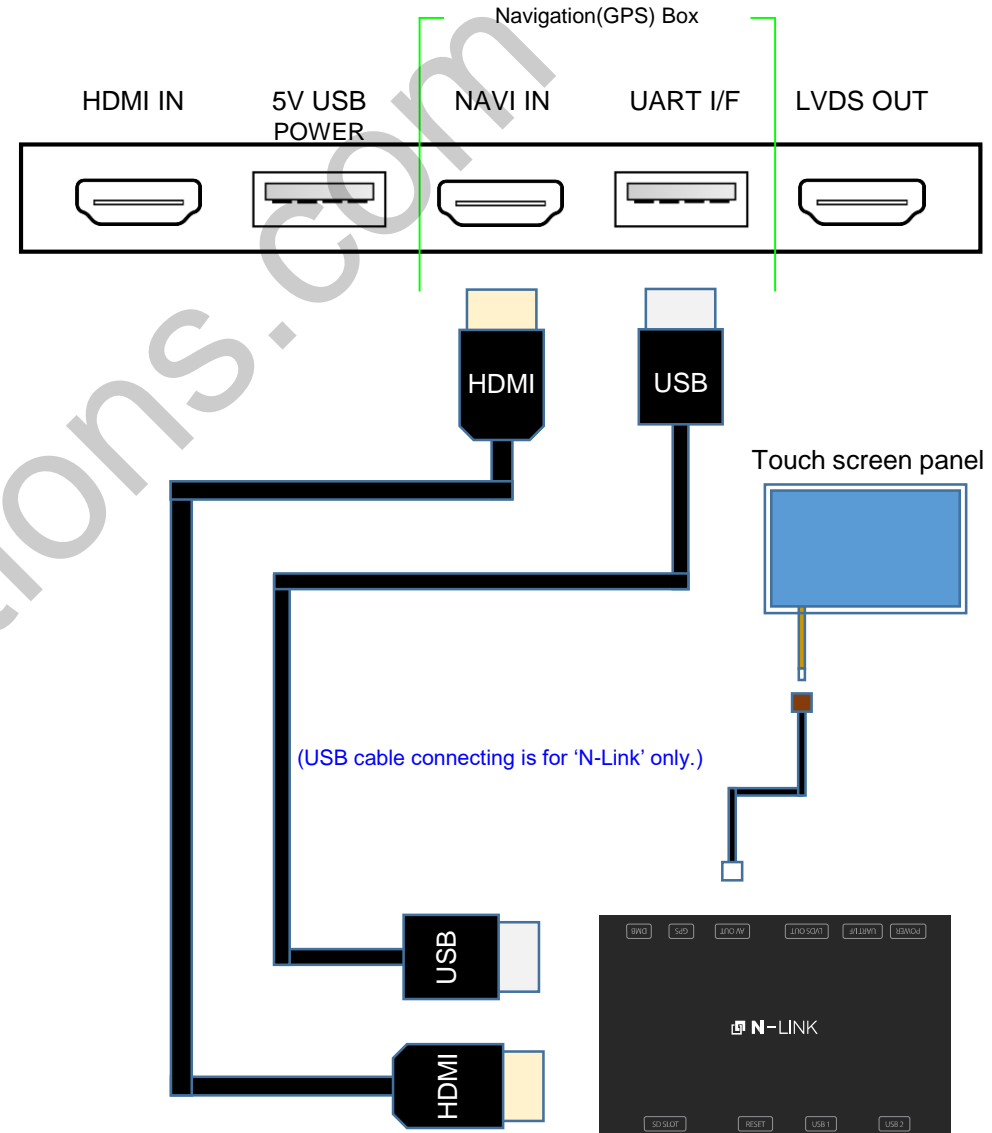
'Dongle & Adapter' Type HDMI Devices








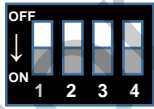




Navigation Connection Diagram



Navigation Connection Diagram

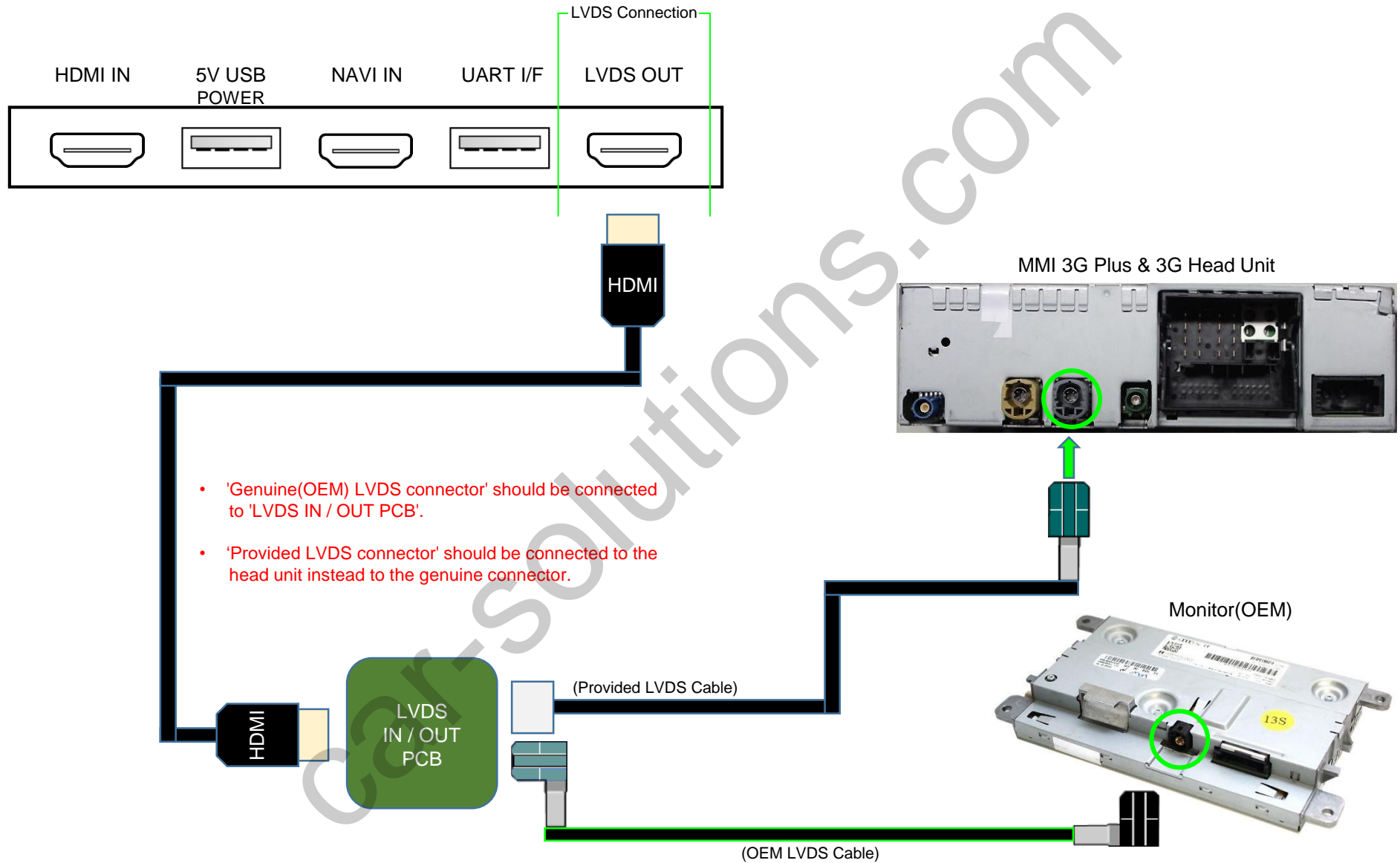


Compatibility Chart for Navigation(GPS) box models

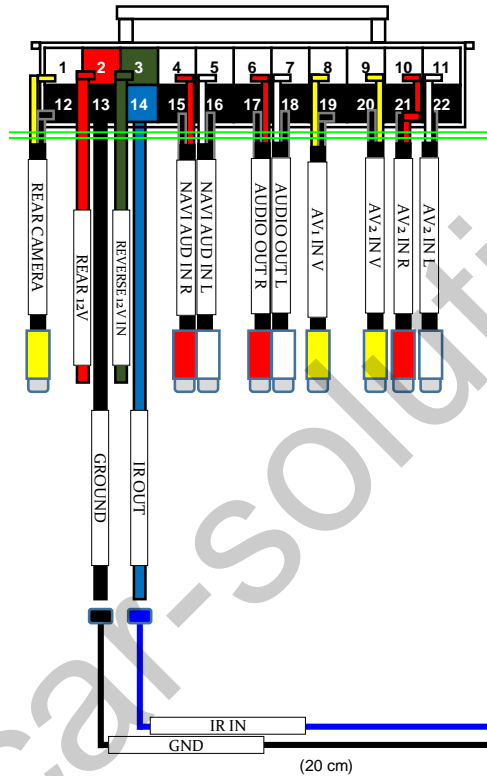
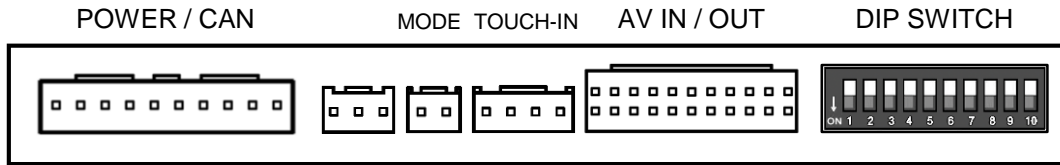
Model	Country	Dip S/W (Navigation)	Required Parts
	South Korea	-	  
	South Korea	 OFF(↓): 1, 2, 3, 4	
	South Korea	 OFF(↓): 1, 2, 3 ON(↑) : 4	

- The device supports navigation(GPS) box models equipped with 'Digital video output'.
 - It does not support the 'RGB video signals'.
- support@car-solutions.com

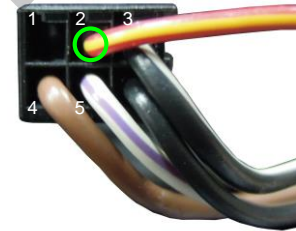
LVDS Connection Diagram



Hazard Module Connection Diagram



A4, A5, Q3 / 6-Pin Hazard Connector



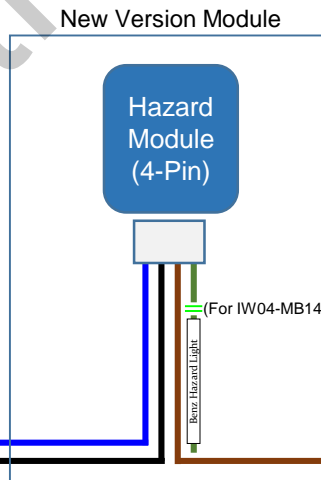
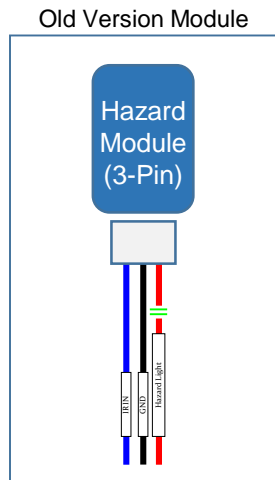
Pin # 2 = Hazard(-) (Red/Yellow)

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

A6, A7 / 5-Pin Hazard Connector



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

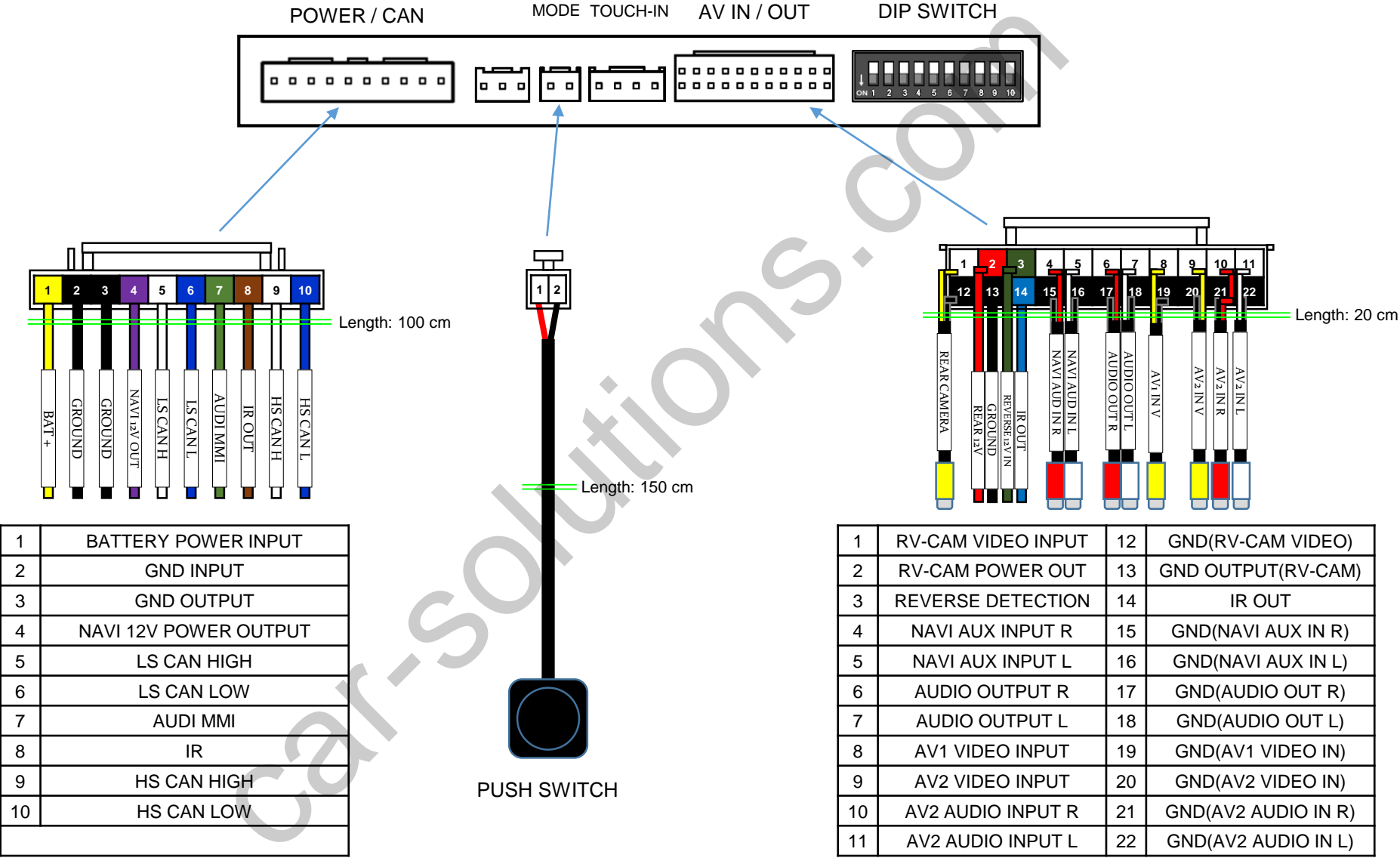


***Hazard Module is just available with 'Smart Drive function of N-Link' navigation in South Korea.**

support@car-solutions.com

www.car-solutions.com

Body Connector specifications



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



This device is used in combination with Audi MMI(Multi Media Interface) system.

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



This device 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 NAV	Changing Modes	Press the button 2 seconds.	Order: HDMI → NAVI → AV1 → AV2 → OEM
1 NAV	Shortcut to each modes	Press the button 2 times consecutively. < OEM → NAVI >	
		Press the button 3 times consecutively. < OEM → AV1 > <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 NAV	System Locking / Unlocking	Press the button 10 seconds long.	If you visit car service center, you can lock the all functions of this device. 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 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 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)

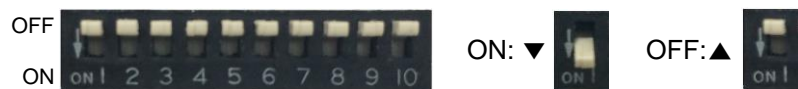
For Q3 6.5-inch screen model

Button	Function	Operation	Remarks
 iNAV	Changing Modes	Press the 'iNAV' button short.	Order: HDMI → NAVI → AV1 → AV2 → OEM
 Other Buttons	Back to OEM	Press the button short.	Return to the OEM mode in any modes.

Setting Menu

Button	Function	Operation
 *	Enter into the setting menu	Press the '*' button 5 seconds long.
 iNAV	Back to previous menu	Press the button short.
 VOICE	Selection	Press the button short.
  ◀ ▶	Move the menu and adjust the values.	Press the button short.

DIP Switch Settings

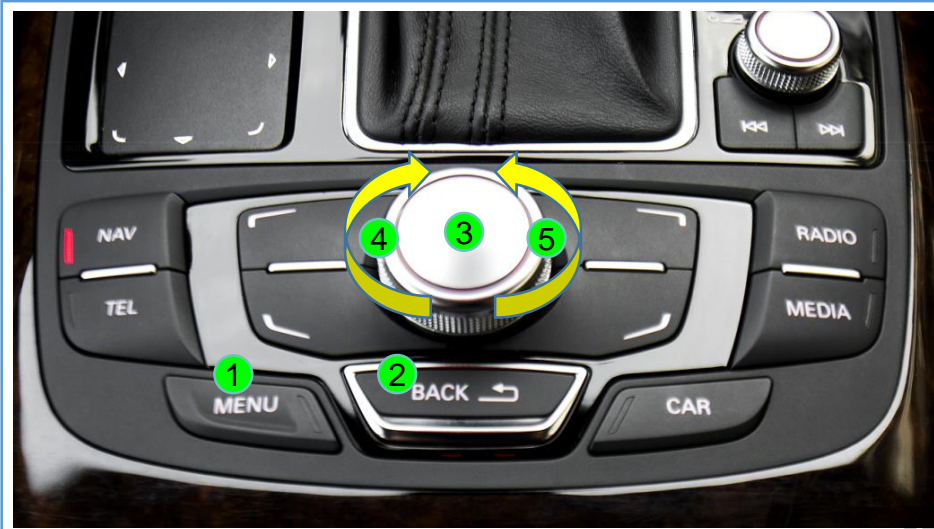


Pin No.	ON(▼)	OFF(▲)
1	HDMI Mode	Skip HDMI Mode
2	Navigation Mode	Skip Navigation Mode
3	External Rear View Camera	Original Rear View Camera
4	External Front View Camera(AV1 Mode)	Skip External Front View Camera(AV1 Mode)
5	AV2 Mode	Skip AV2 Mode
6	Selection of car model	
7		
8		
9		
10		

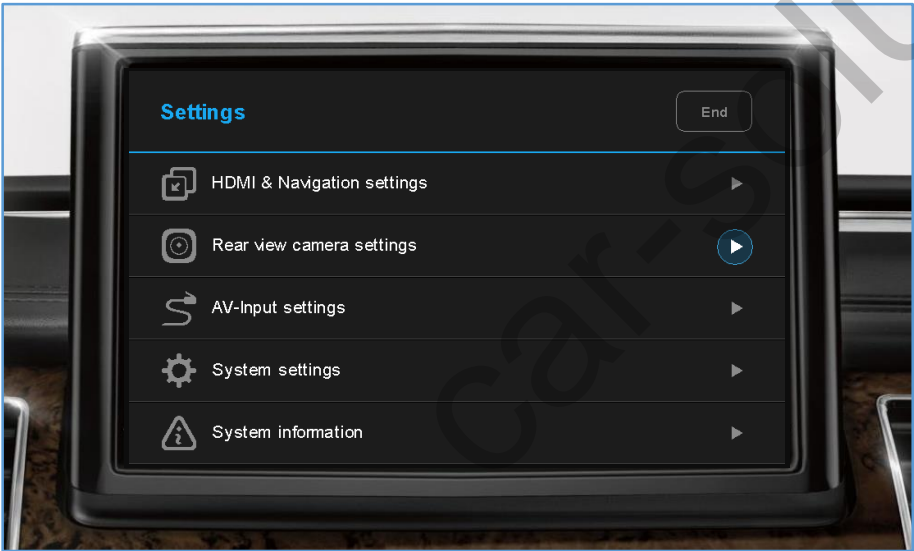
No.6	No.7	No.8	No.9	No.10	Car Models	CAN wires Information
OFF(▲)	OFF(▲)	OFF(▲)	OFF(▲)	OFF(▲)	A6, A7, A8 / 2012~ (8-inch / 800*480)	HS CAN = Climate controller
OFF(▲)	OFF(▲)	ON(▼)	OFF(▲)	OFF(▲)	A4 / 2010 (7-inch / 800*480)	HS CAN = Climate controller LS CAN = Gateway+BEM
OFF(▲)	ON(▼)	ON(▼)	OFF(▲)	ON(▼)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

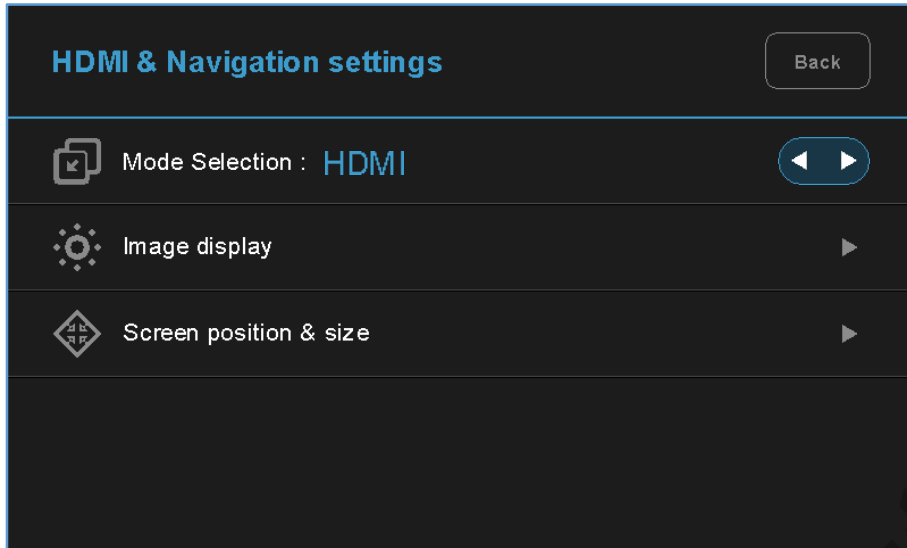


1. Enter into the setting menu.

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

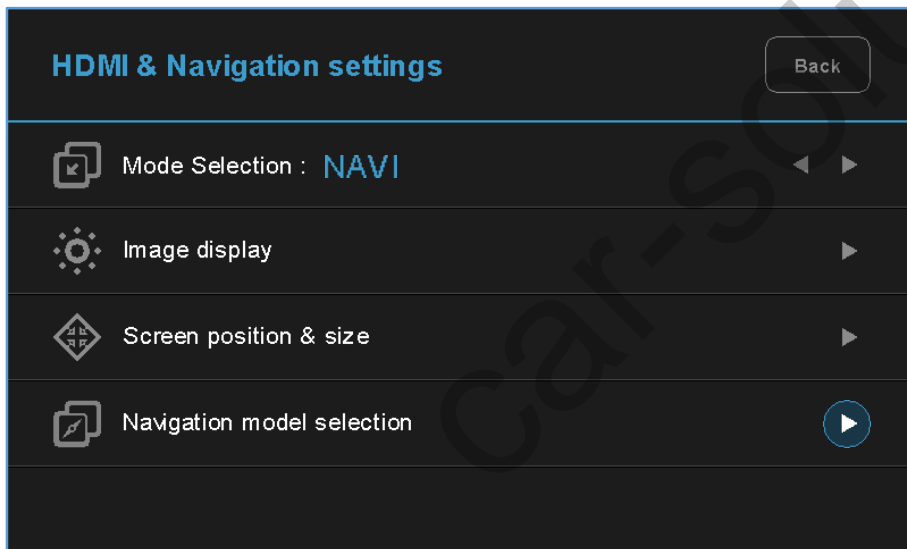
- HDMI & Navigation settings
- Rear view camera settings
- AV-input settings
- System settings
- System information

Settings



2. HDMI mode settings

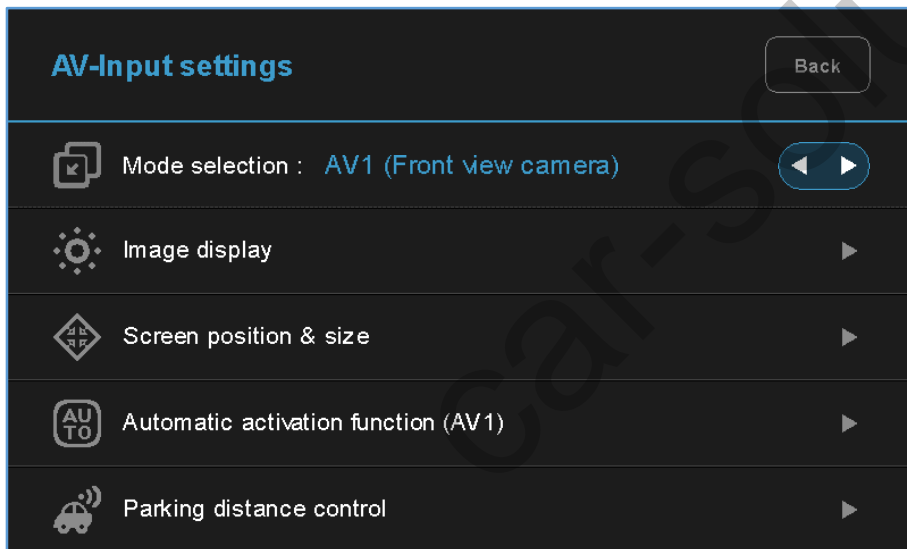
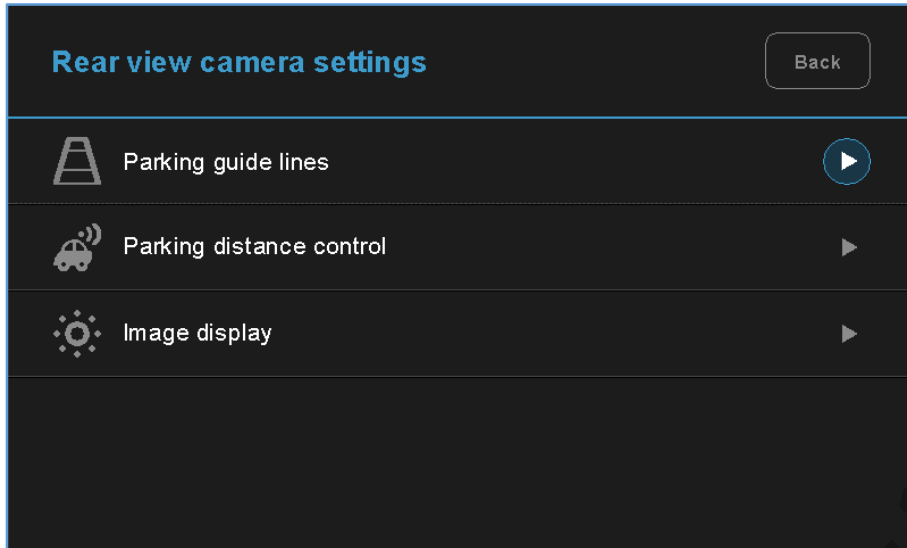
- Mode selection: HDMI ↔ NAVI
- Image display
= Adjust the values of brightness and contrast
Red-Green-Blue colors of HDMI display.
- Screen position & size
= Adjust position and size of HDMI display.



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 settop
 - ④ MYVI ⑤ Mode A ⑥ Mode B
- www.car-solutions.com

Settings



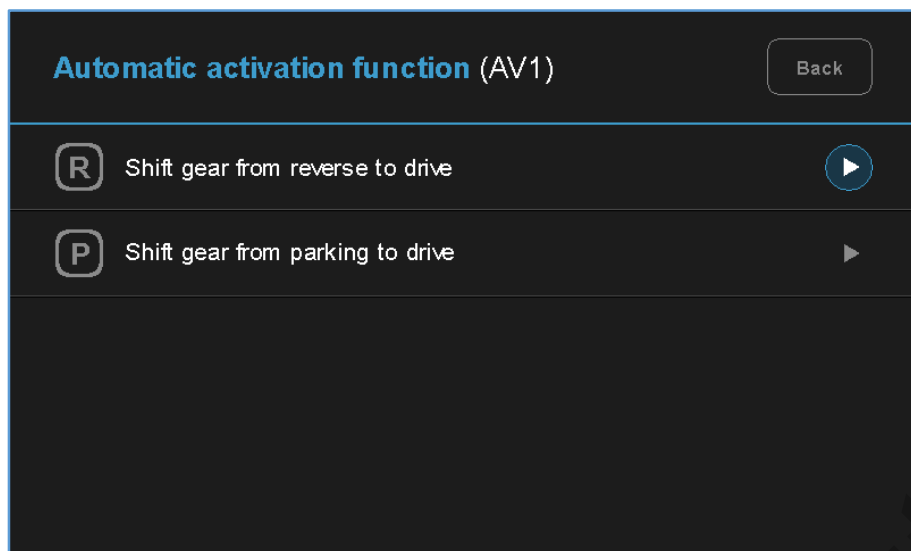
4. Rear view camera settings

- **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'.
www.car-solutions.com

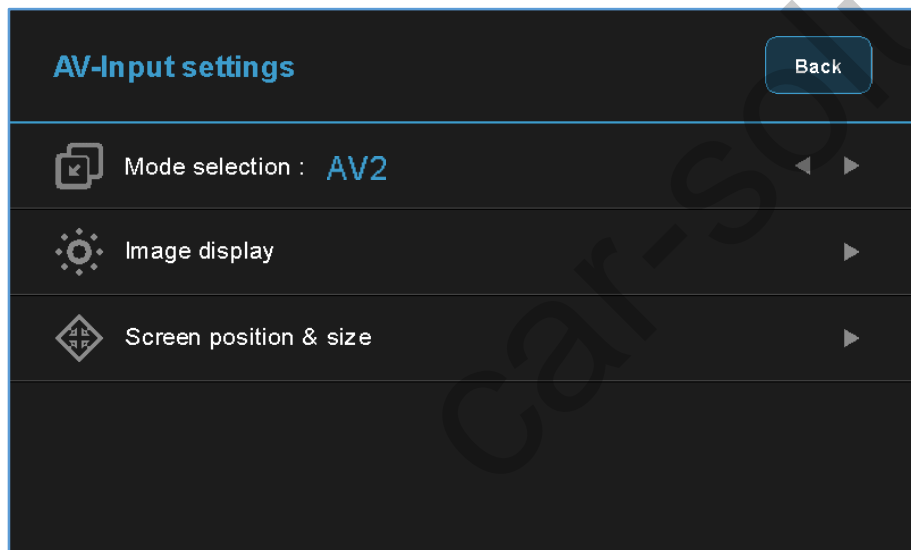
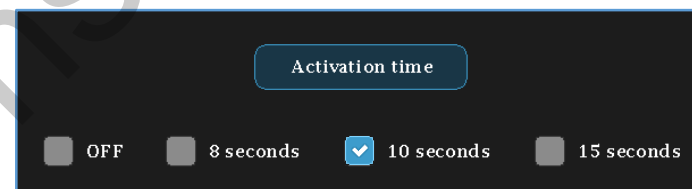
Settings



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.

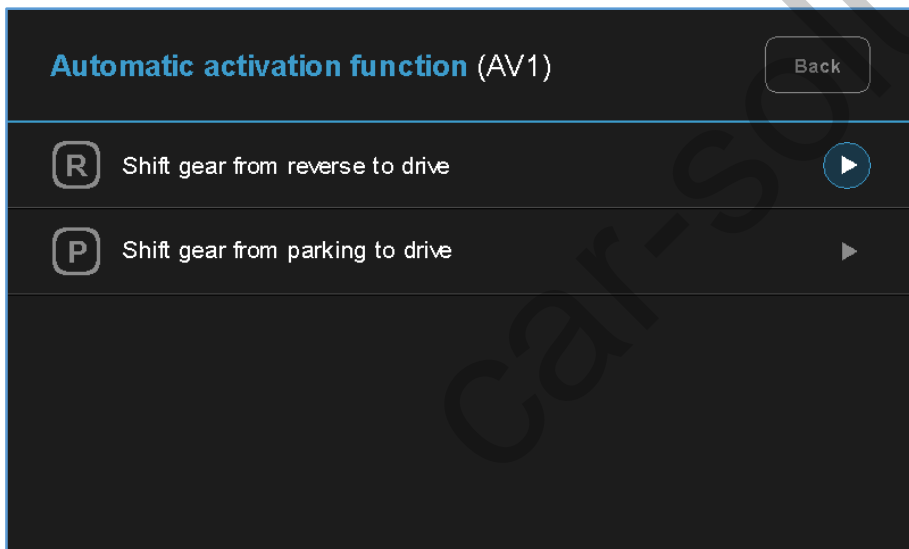
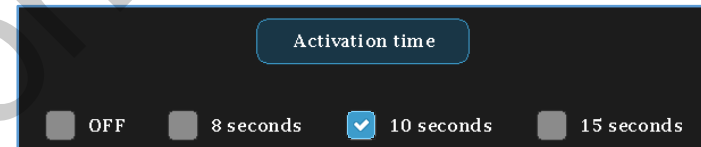
Settings (SURROUND VIEW OPTION)



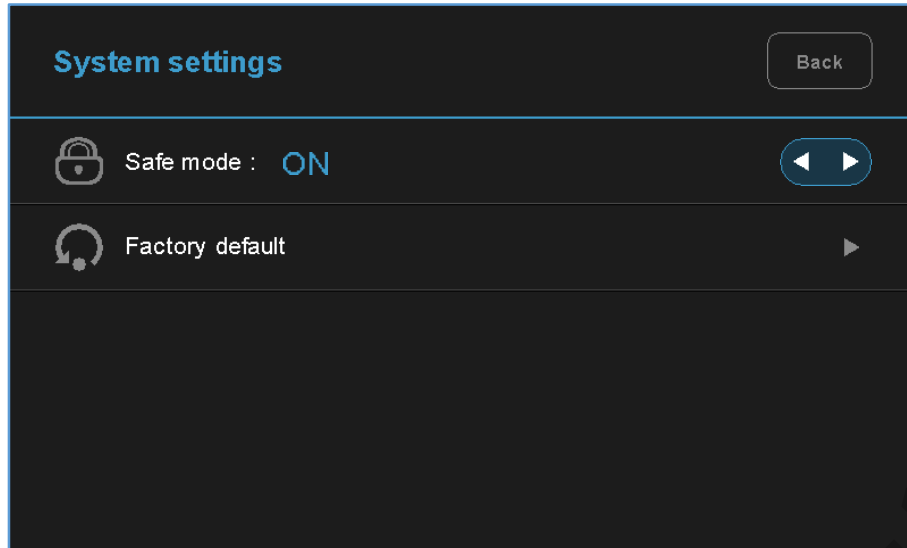
Keep the rear camera view

- 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

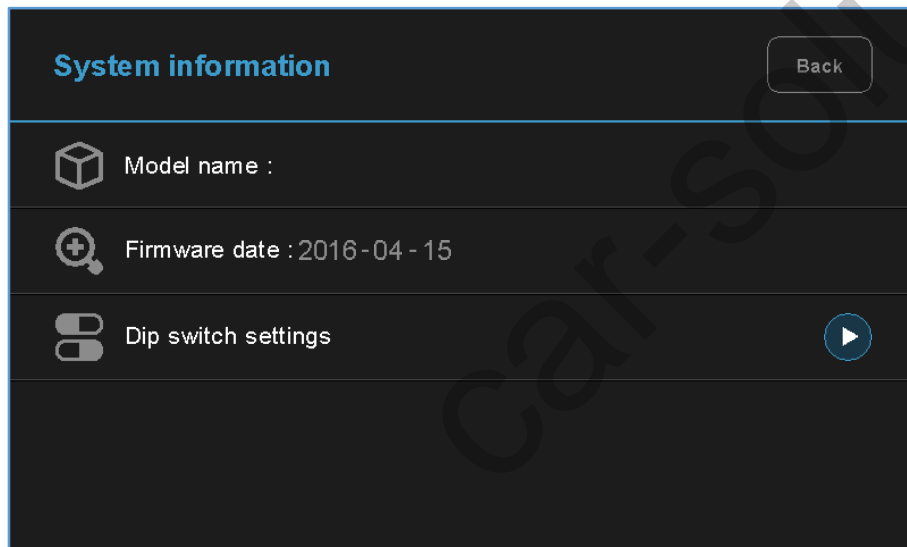


8. System settings

- 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:
- 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

2

3

4

5

6

7

8

8

9

10

No. 1

HDMI

ON

No. 2

Navigation

ON

No. 3

External rear view camera

ON

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

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