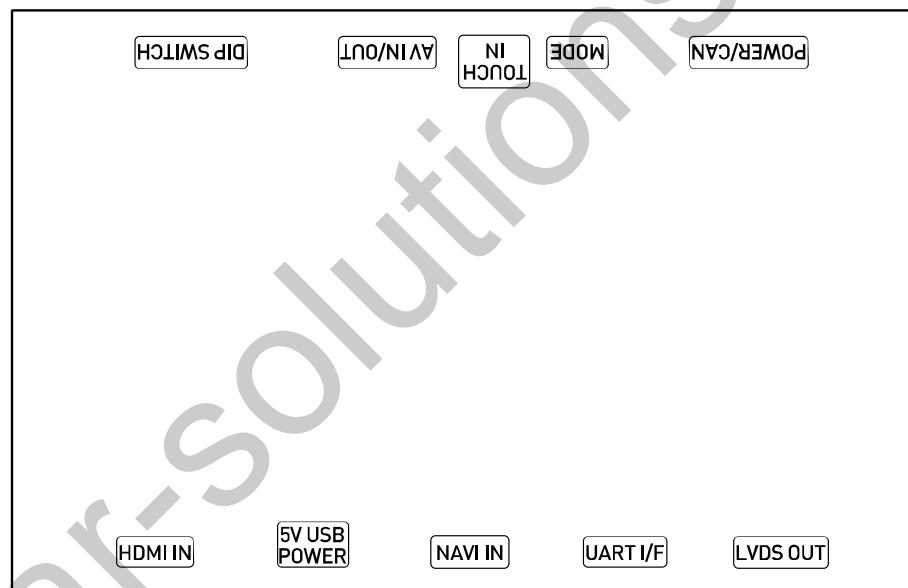


# Instruction Manual

High-Definition Link for Volkswagen Golf(MK7)



Latest Firmware Date	2015 - 11- 21
Manual Version	Rev. 2.7
Language	English

## 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.  
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.

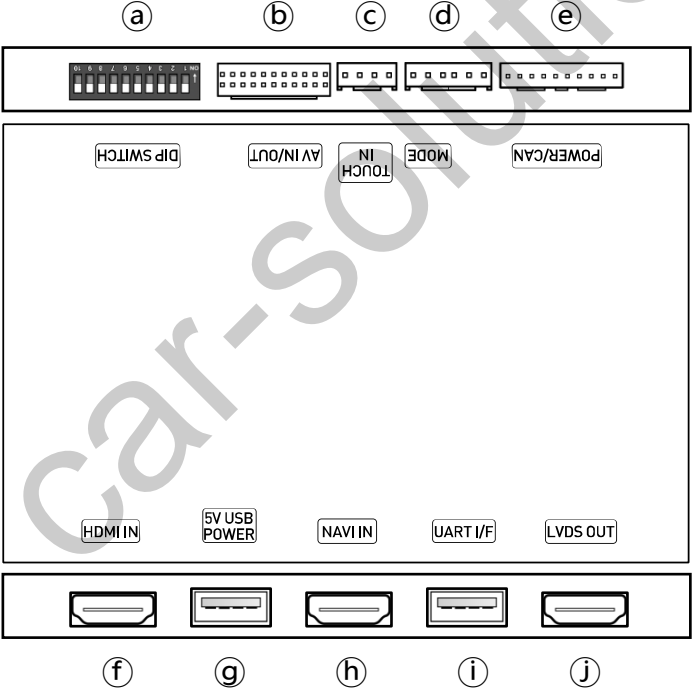
### ▪ Navigation(GPS) box-related

- 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
- (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  
(For LVDS)



AV IN / OUT Cable



5-pin Micro USB Cable

## Optional Parts



HDMI Cable  
(Male to Male)



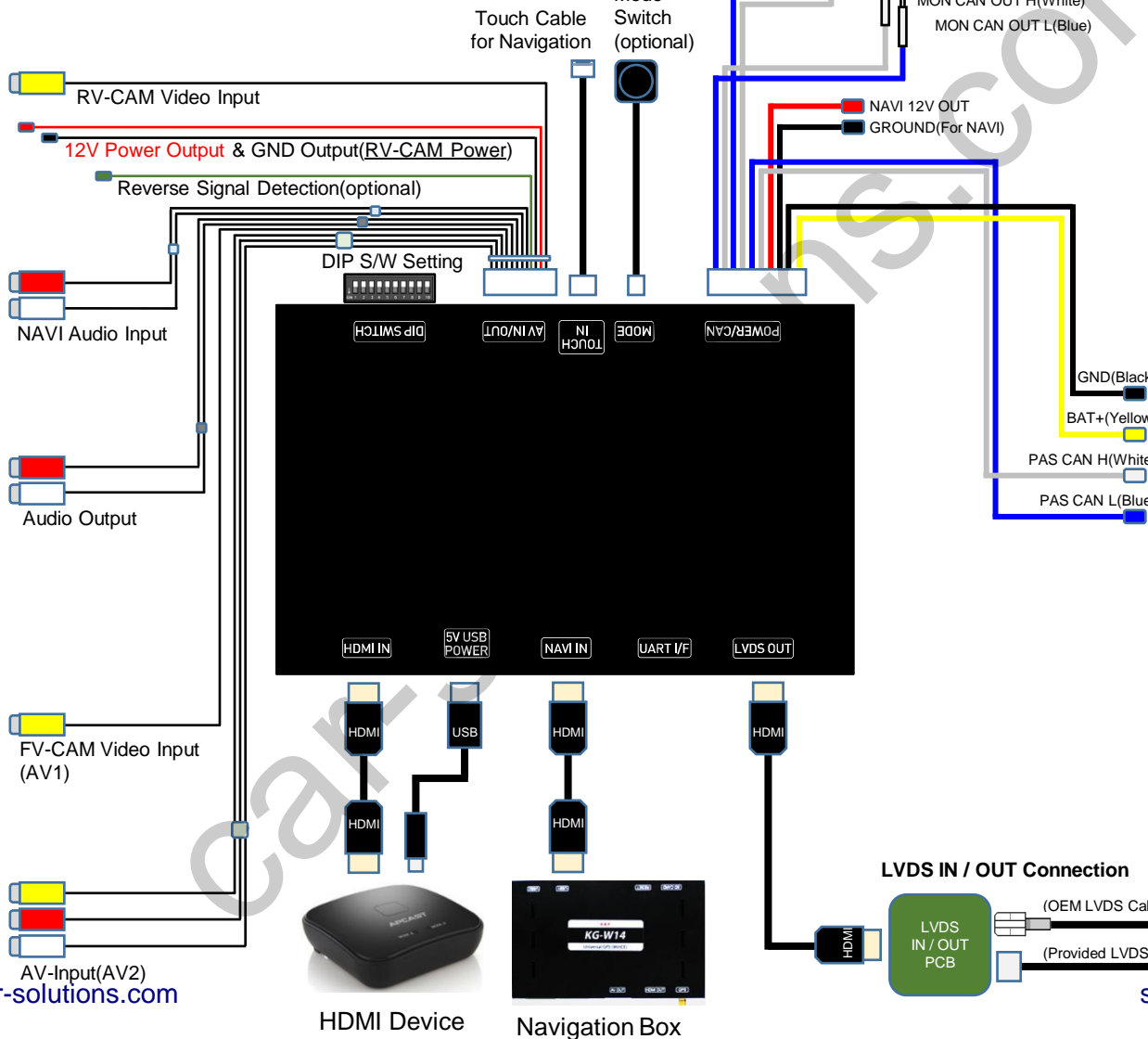
HDMI Extender  
(For stick type HDMI device)



Mode Switch

# Full Installation Diagram

※ Optional External Devices



1	-	3	-	8	-
7	-	9	-	11	-

12-pin Connector of OEM Monitor

\*Please refer to next page.

OEM MON CAN HIGH(Orange/Purple) / No.3 / \*2015 Polo(Orange/White)

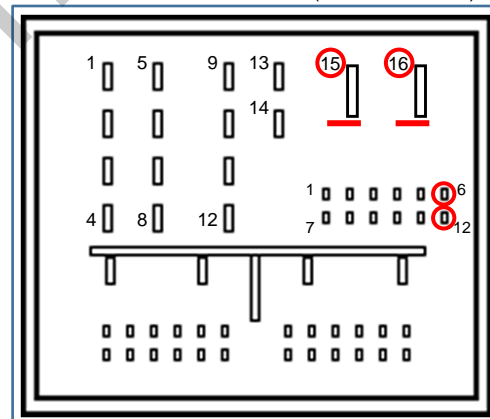
OEM MON CAN LOW(Orange/Brown) / No.9

MON CAN IN H(White)  
MON CAN IN L(Blue)

MON CAN OUT H(White)  
MON CAN OUT L(Blue)

NAVI 12V OUT  
GROUND(For NAVI)

Main Connector of Head Unit(In the Glovebox)



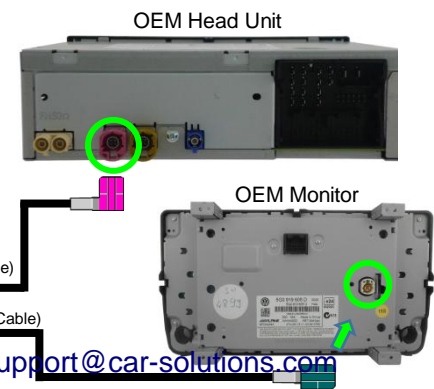
- Pin # 15 = GND(Brown)
- Pin # 16 = B+ POWER(Red)
- Pin # 6 = PAS CAN HIGH(Orange / Purple)
- Pin # 12 = PAS CAN LOW(Orange/Brown)

\*Yellow dotted lines

\*The wires color might be different depends on models. you have to splice the CAN wires with twisted wires each pins exactly.

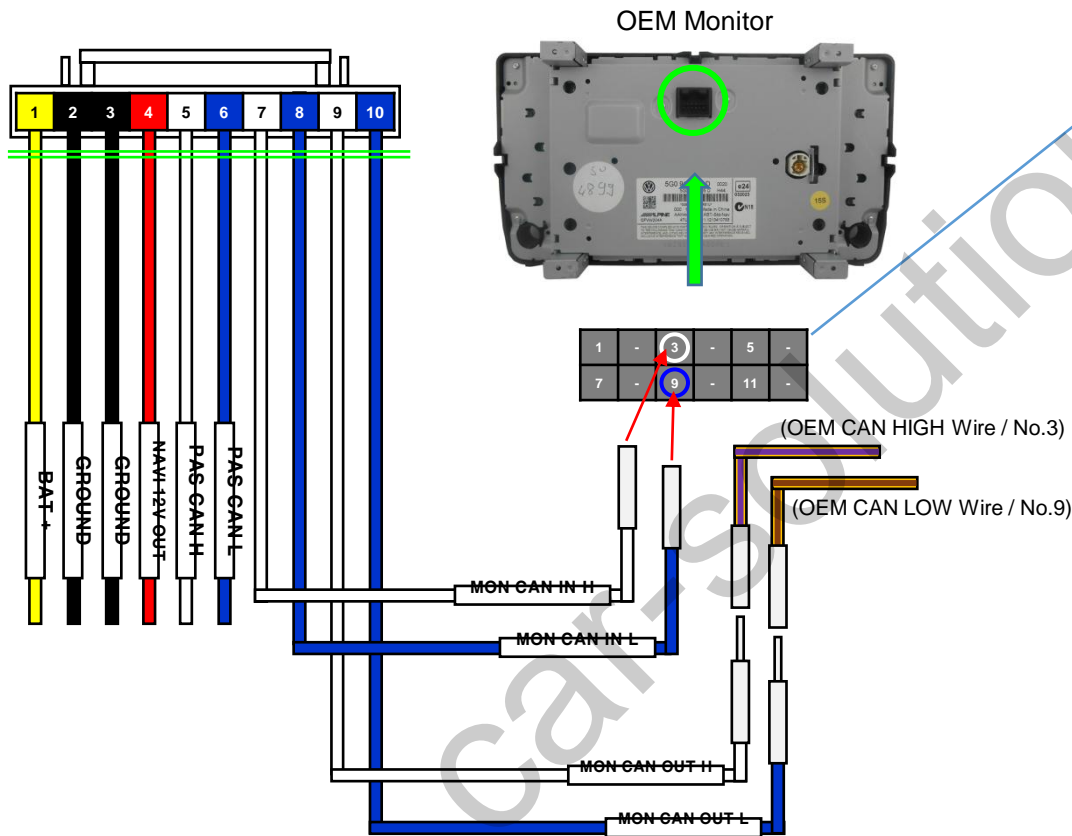
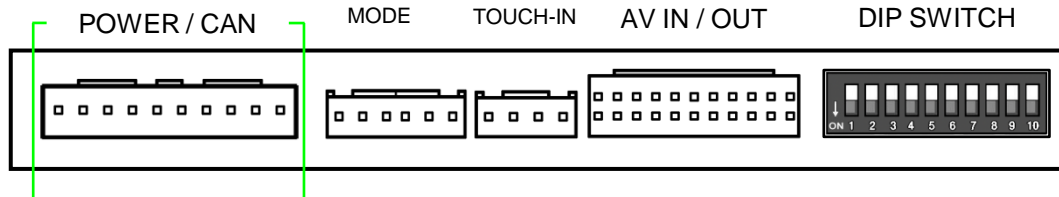
LVDS IN / OUT Connection

(OEM LVDS Cable)  
(Provided LVDS Cable)



support@car-solutions.com

# MON CAN Wires IN / OUT Connection Diagram

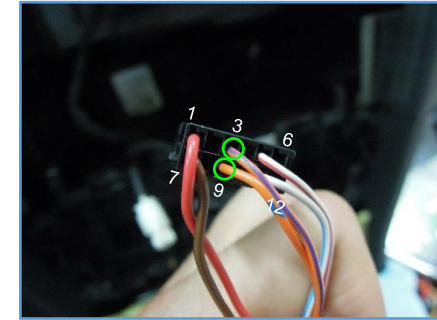


- Each 'OEM CAN Terminals' should be connected to each 'MON CAN OUT Terminals'.

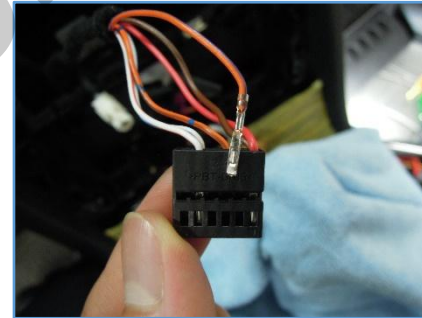
- 'MON CAN IN Terminals' should be connected to each pin positions instead to the OEM CAN terminals.



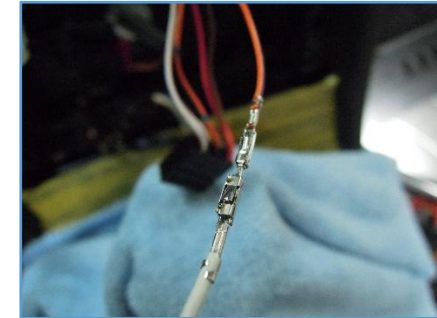
① Remove a harness from 12-pin connector.



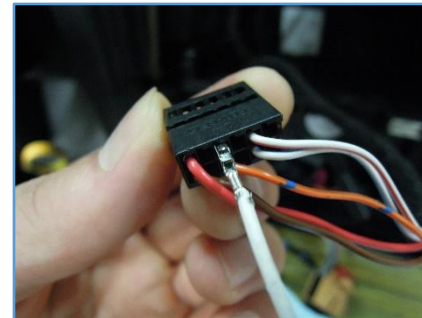
② No.3 Pin: OEM CAN H / No.9 Pin: OEM CAN L



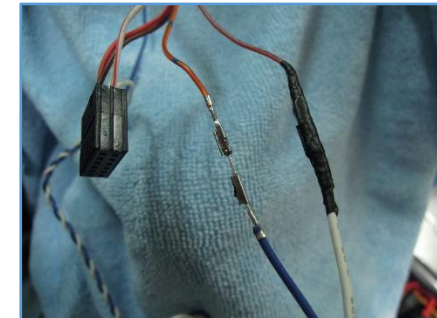
③ Pick the No.3 terminal out from connector.



④ Connect No.3 terminal with 'MON CAN OUT H'

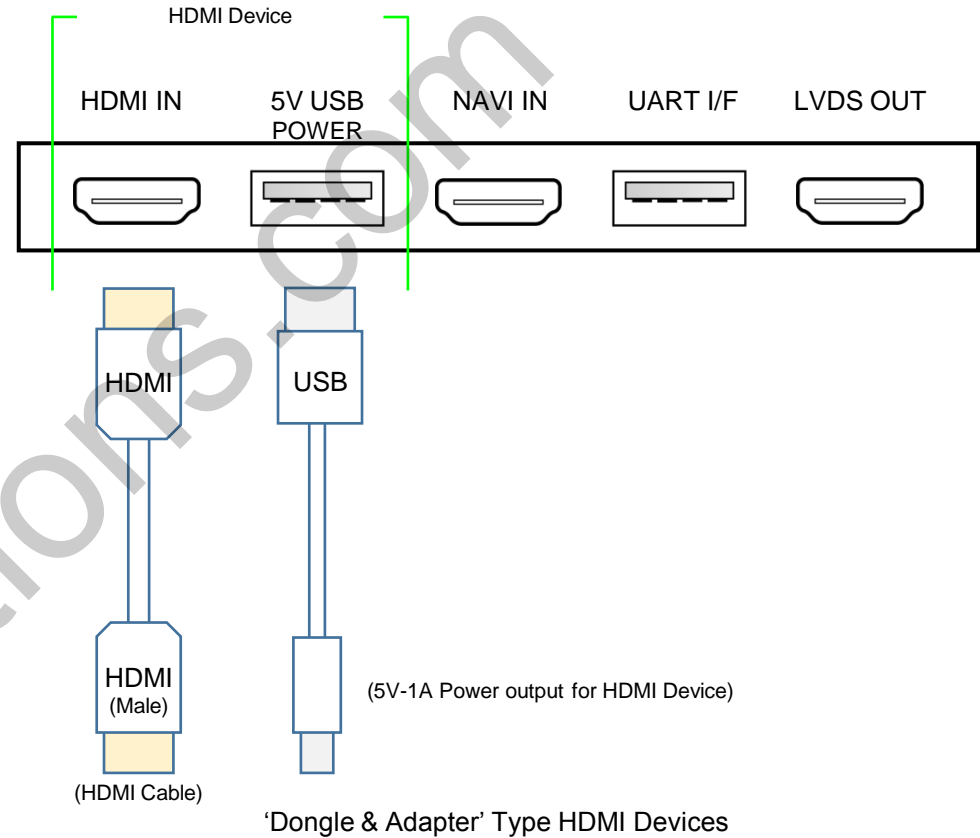
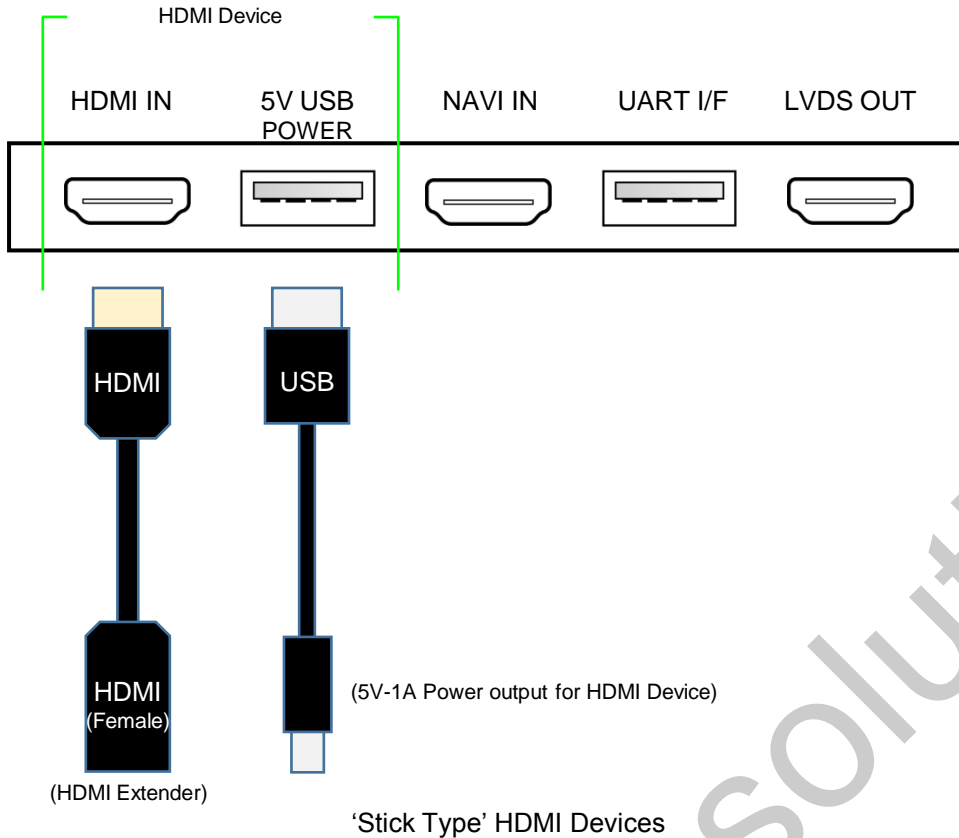


⑤ Put the terminal of 'MON CAN IN H' to No.3 Pin position.




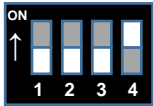

⑥ No.9 pin(CAN L) needs same work with CAN H above.

# HDMI Connection Diagram



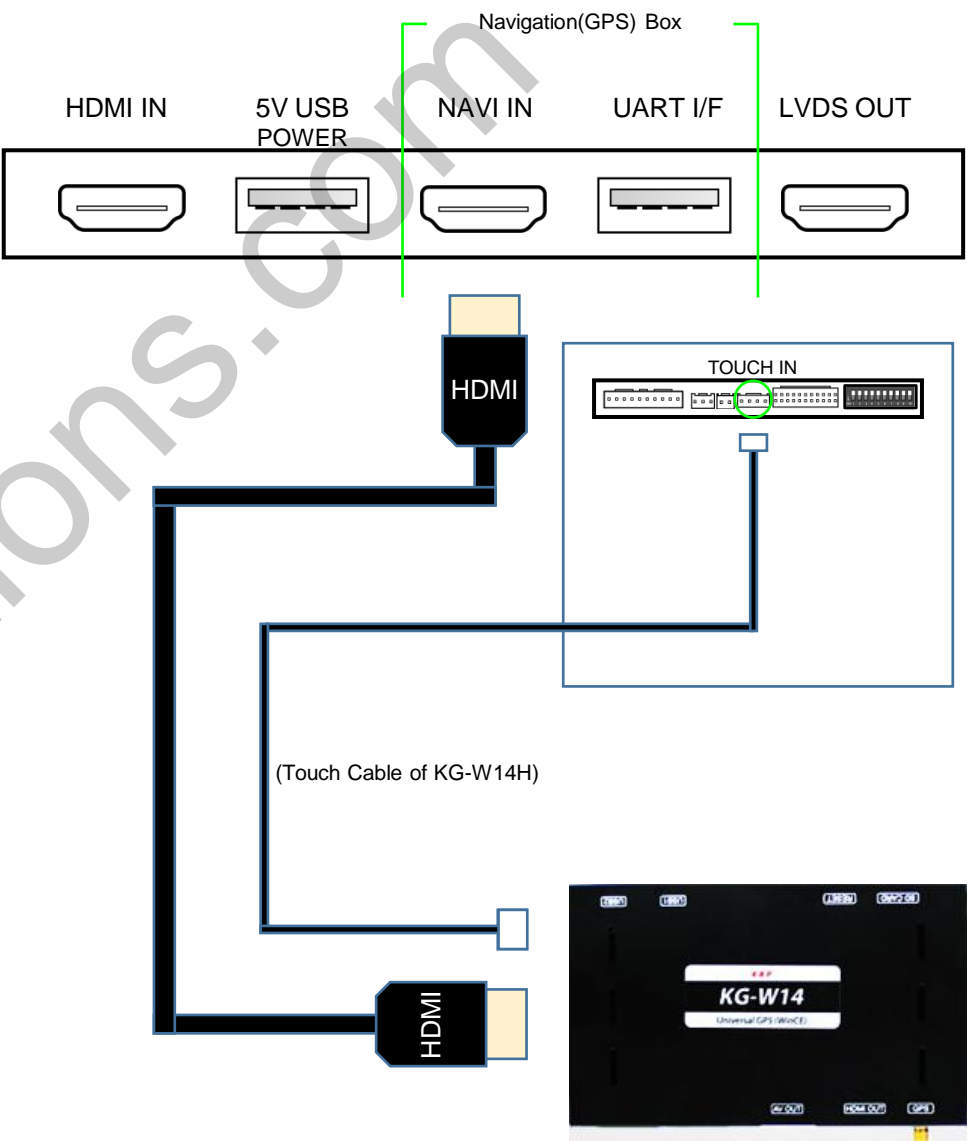


# Compatibility Navigation(GPS) box

Model	Country	Dip S/W (Navigation)	Required Parts
 KAP KG-W14H	South Korea	 OFF(↓): 1, 2, 3 ON(↑) : 4	 HDMI Cable (Male to Male)

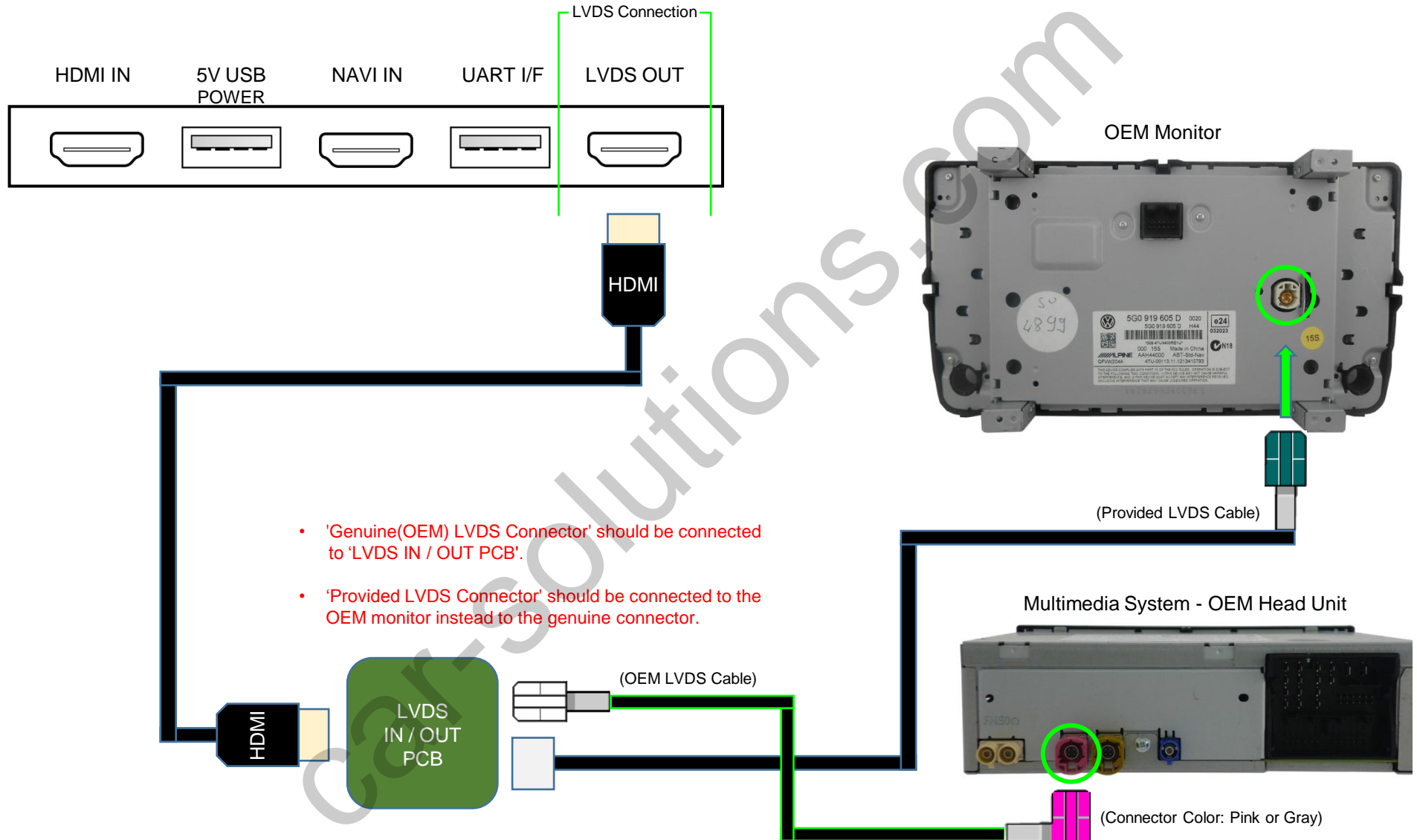
- The 'IW04VW(HD-Link)' supports navigation(GPS) box models equipped with 'Digital video output'.
- It does not support the 'RGB video'.

# Navigation Connection Diagram(Type B)

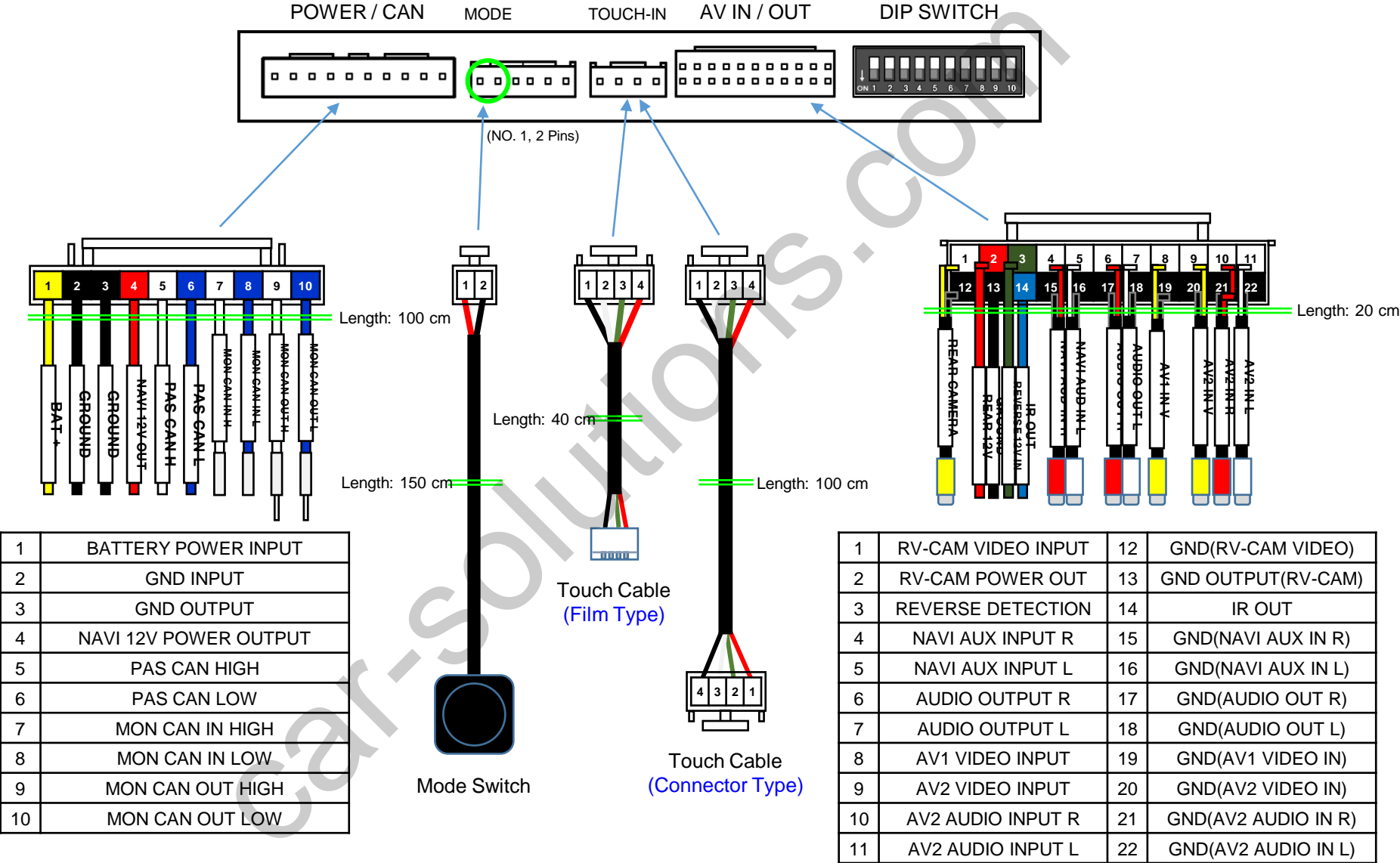




# LVDS Connection Diagram

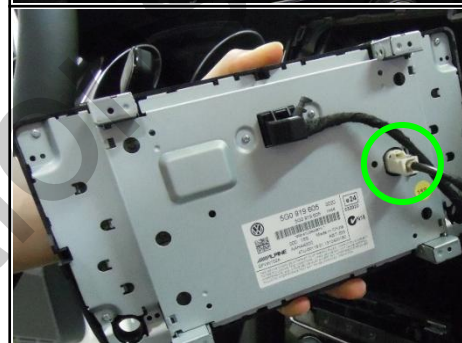


# Body Connector specifications



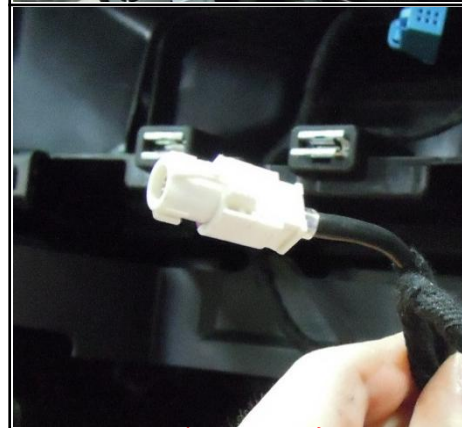
• The colors of each wires can be changed under manufacturer's circumstance.

# Car Compatibility Chart

[illegible]

The device is used in combination with Volkswagen INFOTAINMENT System.

- VW Golf Discover Pro(8-inch)
- VW Golf Discover Media(5.8-inch)
- VW Golf Composition Media(5.8-inch)
- VW Polo Composition Media(6.5-inch)



The device supports the VW Golf(MK7) 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



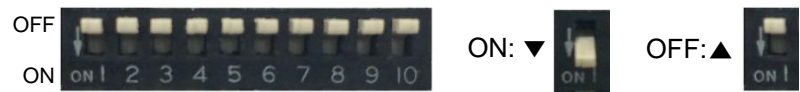
Head Unit Controllers



Steering wheel buttons

Button	Function	Operation	Remarks
<b>1</b> MENU	Changing Modes	Press the button 2 seconds long.	Order: HDMI → NAVI → AV2 → OEM
<b>1</b> MENU	Shortcut to Each modes	Press the button 2 times quickly. < OEM → NAVI > Press the button 3 times quickly. < OEM → AV2 >	
<b>1</b> MENU	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.
 Buttons marked with yellow	Back to OEM	Press the buttons short.	Return to the OEM mode in any modes.
<b>2</b> ▽(Down)	Changing mode to Front View CAM mode(AV1)	Press the button 2 seconds long.	It changes the screen from any modes to AV1 mode directly.
<b>3</b> ENTER	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.
<b>4</b> CAR	Enter into the setting menu	Press the button 5 seconds long.	All functions of setting menu is controlled by a touch screen of the OEM monitor.

# 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
OFF(▲)	OFF(▲)	OFF(▲)	OFF(▲)	OFF(▲)	Golf - 5.8-inch Screen (Composition Media / 400*240)
ON(▼)	OFF(▲)	OFF(▲)	OFF(▲)	OFF(▲)	Golf / 8-inch Screen (Discover Pro / 800*480)
ON(▼)	OFF(▲)	OFF(▲)	ON(▼)	OFF(▲)	Golf, Polo / 6.5-inch Screen (Composition Media / 800*480)

# Settings



Button	Function	Operation
<b>CAR</b> (Head Unit Controller)	Enter into the setting menu	Press the 'CAR' button 5 seconds long.
<b>Touch Screen</b> (OEM Monitor)	All functions of setting menu of IW04VW is controlled by a touch screen of the OEM monitor.	

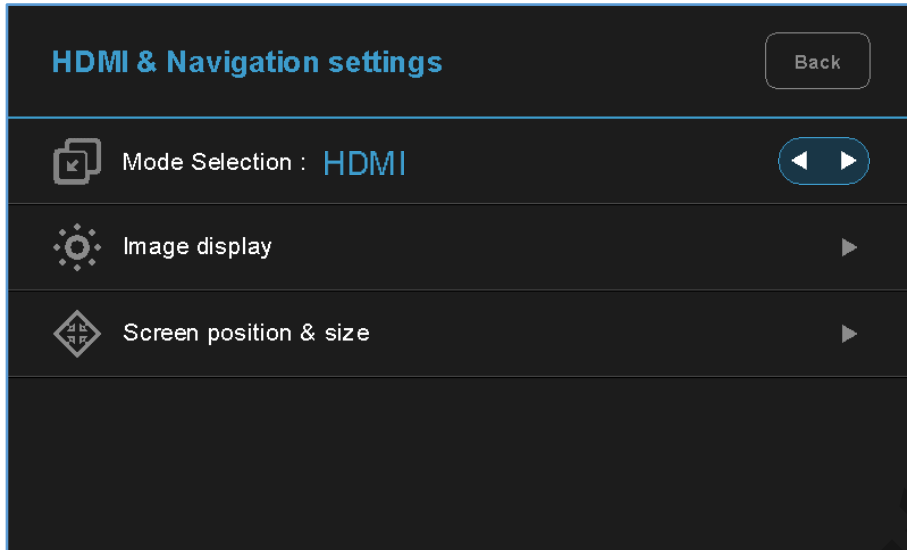


## 1. Enter into the setting menu.

<Press the 'CAR' button 5 seconds long.>

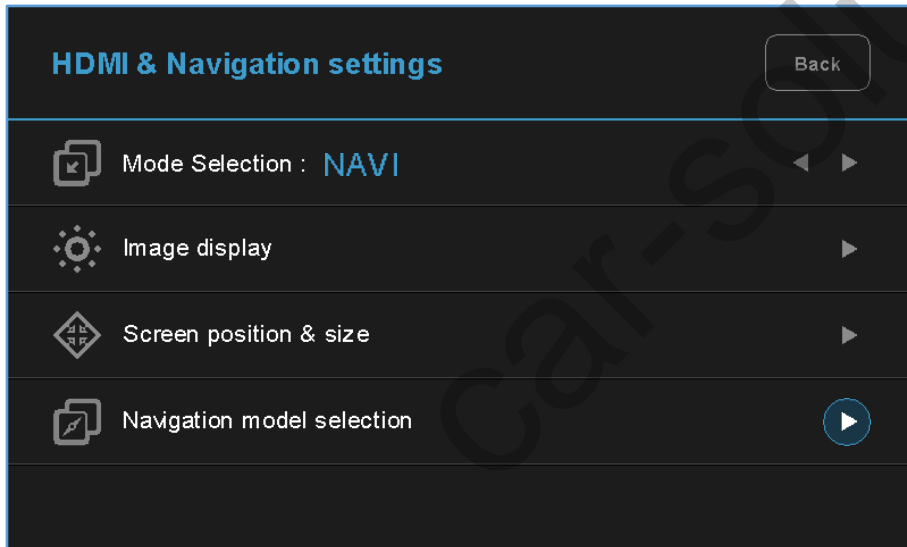
- HDMI & Navigation settings
- Rear view camera settings
- AV-input settings
- System settings
- System information

# 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  
= Entry Disabled / Not applicable

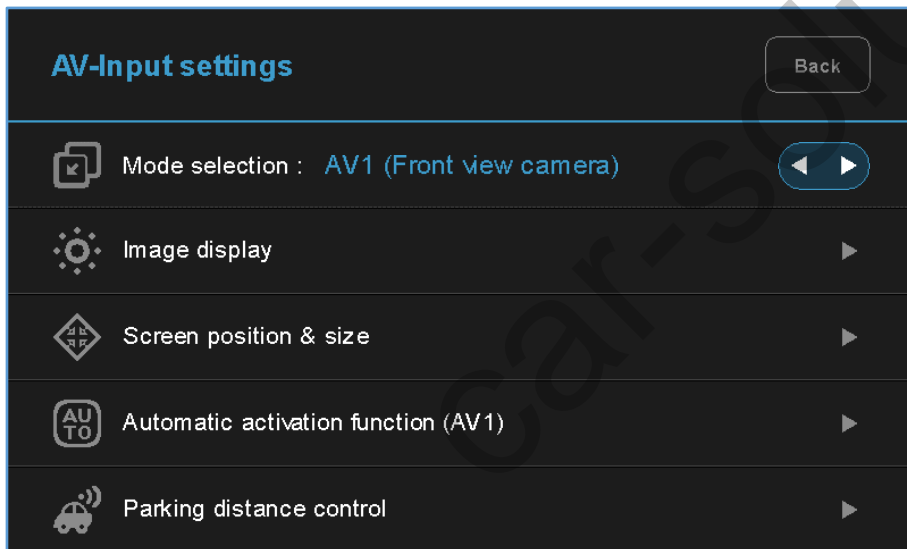
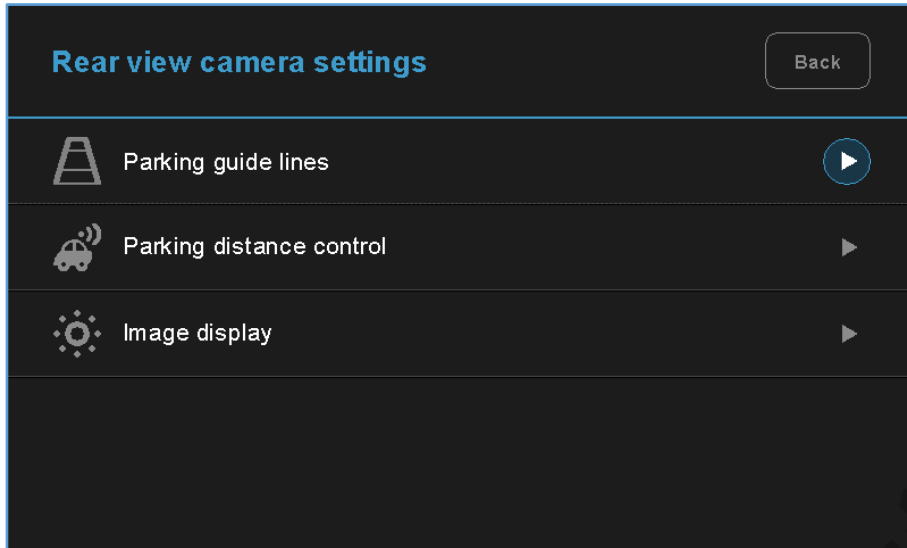


## 3. NAVI mode settings

- Mode selection: NAVI ↔ HDMI
- Image display  
= Adjust the values of brightness and contrast  
Red-Green-Blue colors of NAVI display.
- Screen position & size  
= Entry Disabled / Not applicable.
- Navigation model selection  
④ MS1400 = KG-W14H



# Settings



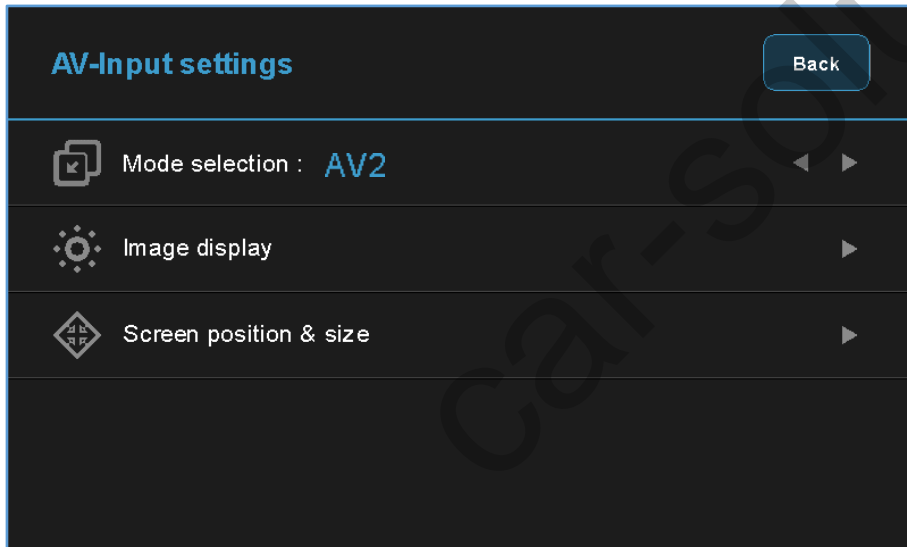
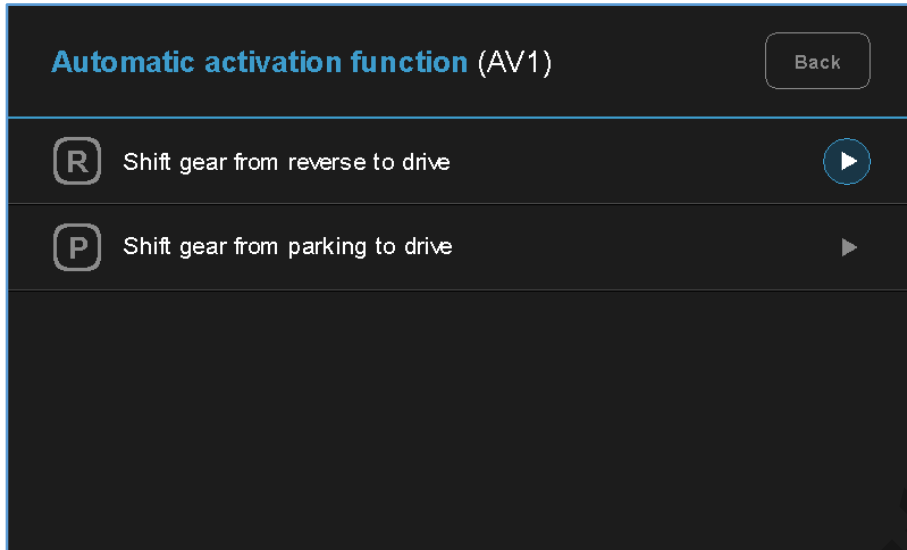
## 4. Rear view camera settings

- **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 PDC function '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**  
= **Entry Disabled / Not applicable.**
- **Automatic activation function(AV1)**  
= **\*Please refer to next page.**
- **Parking distance control**  
= Adjust position of Parking Distance Control sensors to 'LEFT or RIGHT' and select PDC function 'ON or OFF'.  
[support@car-solutions.com](mailto:support@car-solutions.com)

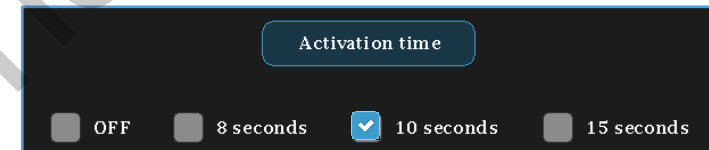
# Settings



## 6. Automatic activation function(AV1)

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

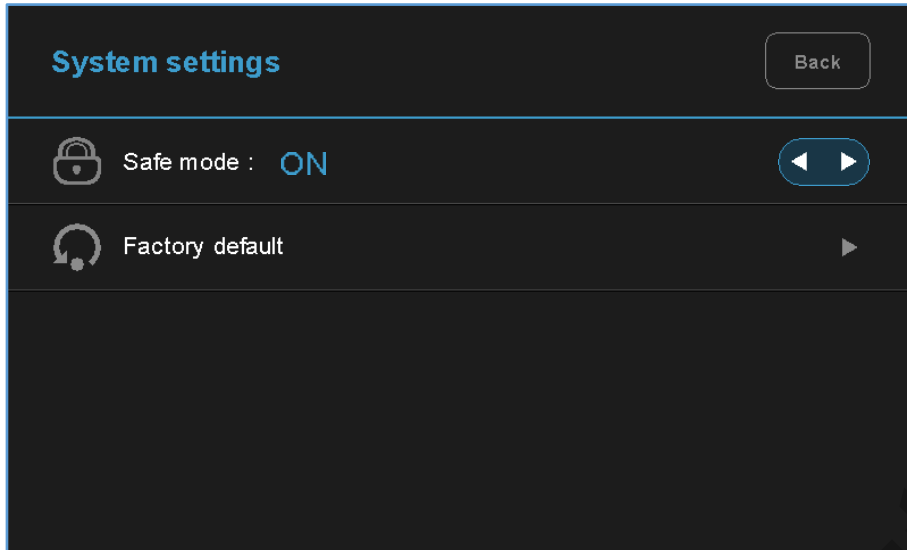
\* When you shift gear 'from reverse to drive' or 'from parking to drive', it just works automatically during the activation time you selected.



## 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  
= Entry Disabled / Not applicable..

# Settings

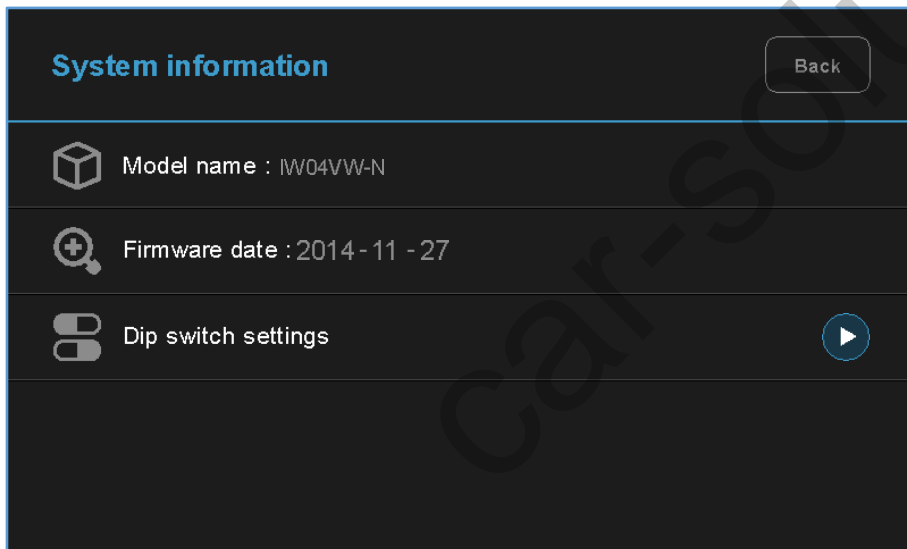


## 8. System settings

- 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: IW04VW
- Firmware date: 2015 - 06 - 22 (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


## 10. Information of Dip switch settings

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

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

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