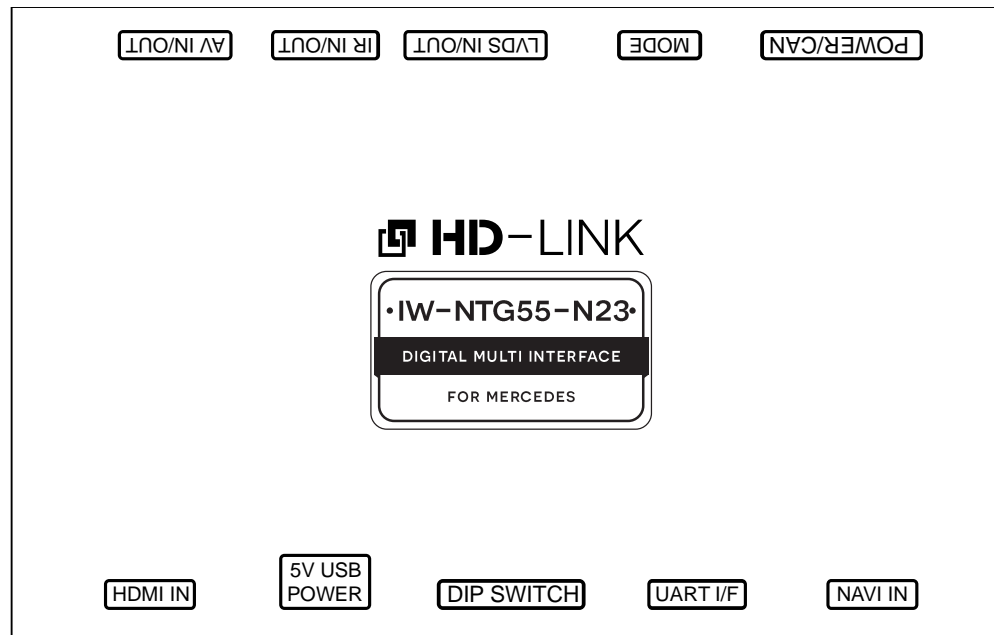


Instruction Manual

High-Definition Link for Mercedes-Benz IW-NTG55-N23



Model Name	IW-NTG55-N23
Latest Firmware Date	2019 - 02 - 07
Manual Version	Rev. 2.4
Language	English

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Cautions

▪ IW-NTG55-N23 - 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.

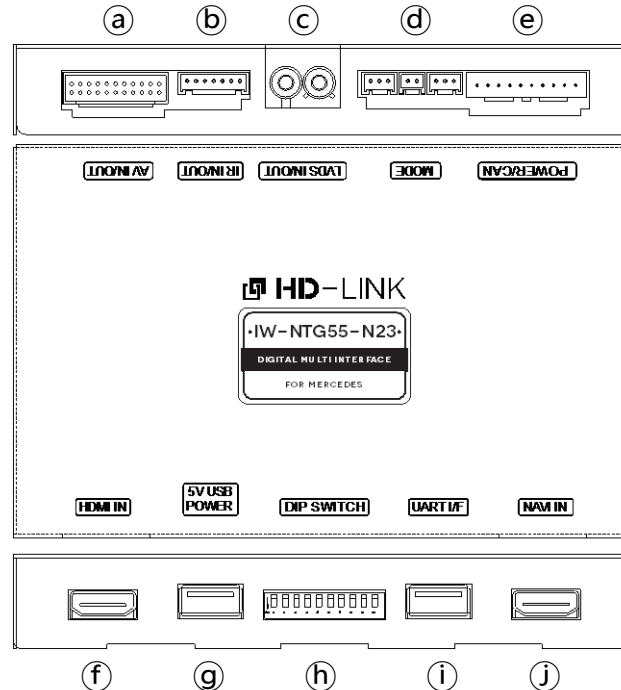
▪ Navigation(GPS) box - related

- When you connect the power wires(B+, ACC) to the navigation(GPS) box,
the 'NAVI 12V OUT' wire supported by IW-NTG55-N23 should be spliced with an ACC wire of navigation box.
- The navigation box should be powered off before unplugging the HDMI cable.

Dimension



Exterior



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

Components



POWER / CAN Cable



LVDS IN/OUT Cable



LVDS Connector



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

AUX-NTG55 (Optional Product)



AUX-NTG55 Main



POWER / CAN Cable

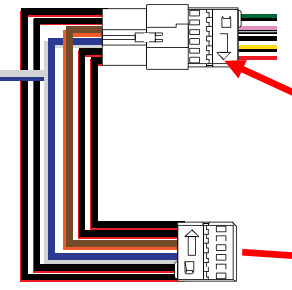
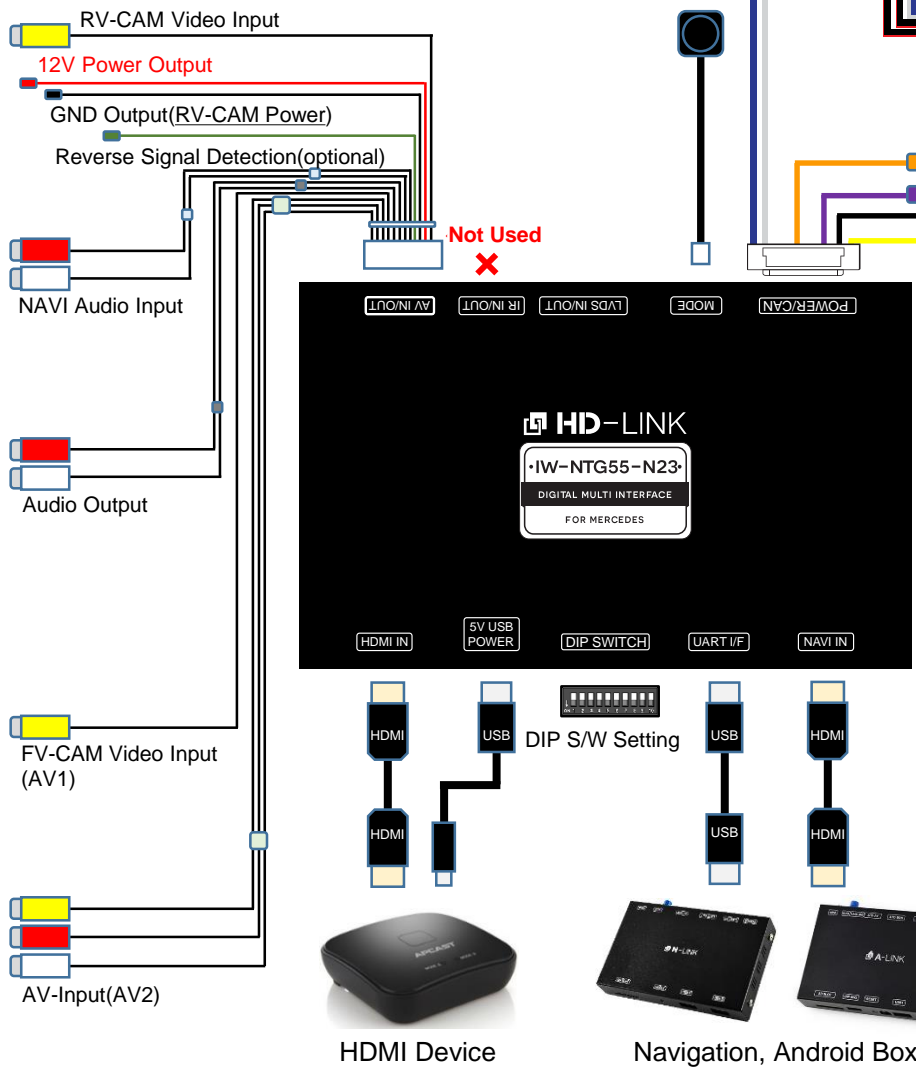


3.5Ø Audio Cable

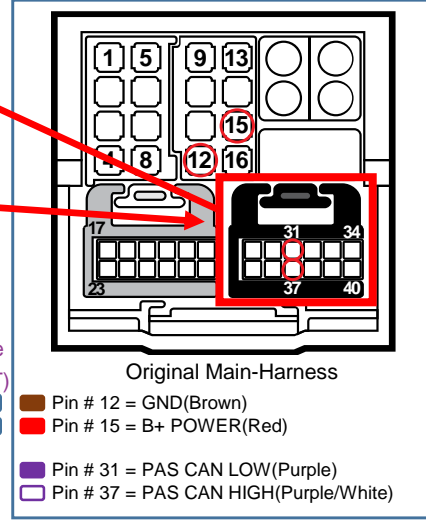
Full Installation Diagram

※ Optional External Devices

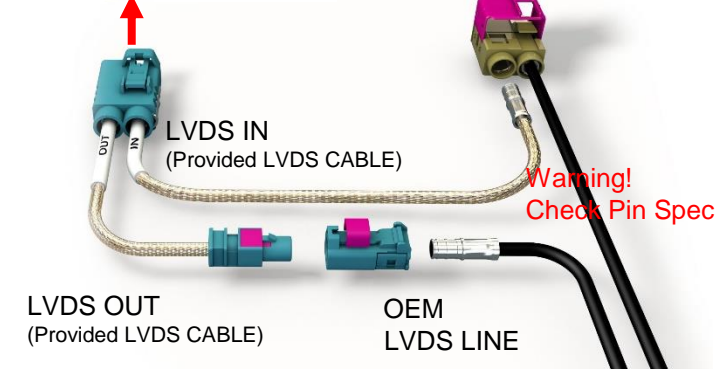
- External Rear View Camera
- Audio(AUX) Output of Navigation Box
- Auxiliary(AUX) Input of the car
- External Front View Camera
- AV device (ex: DTV Box, Divx)



※ CAN HIGH / LOW Pin Specification

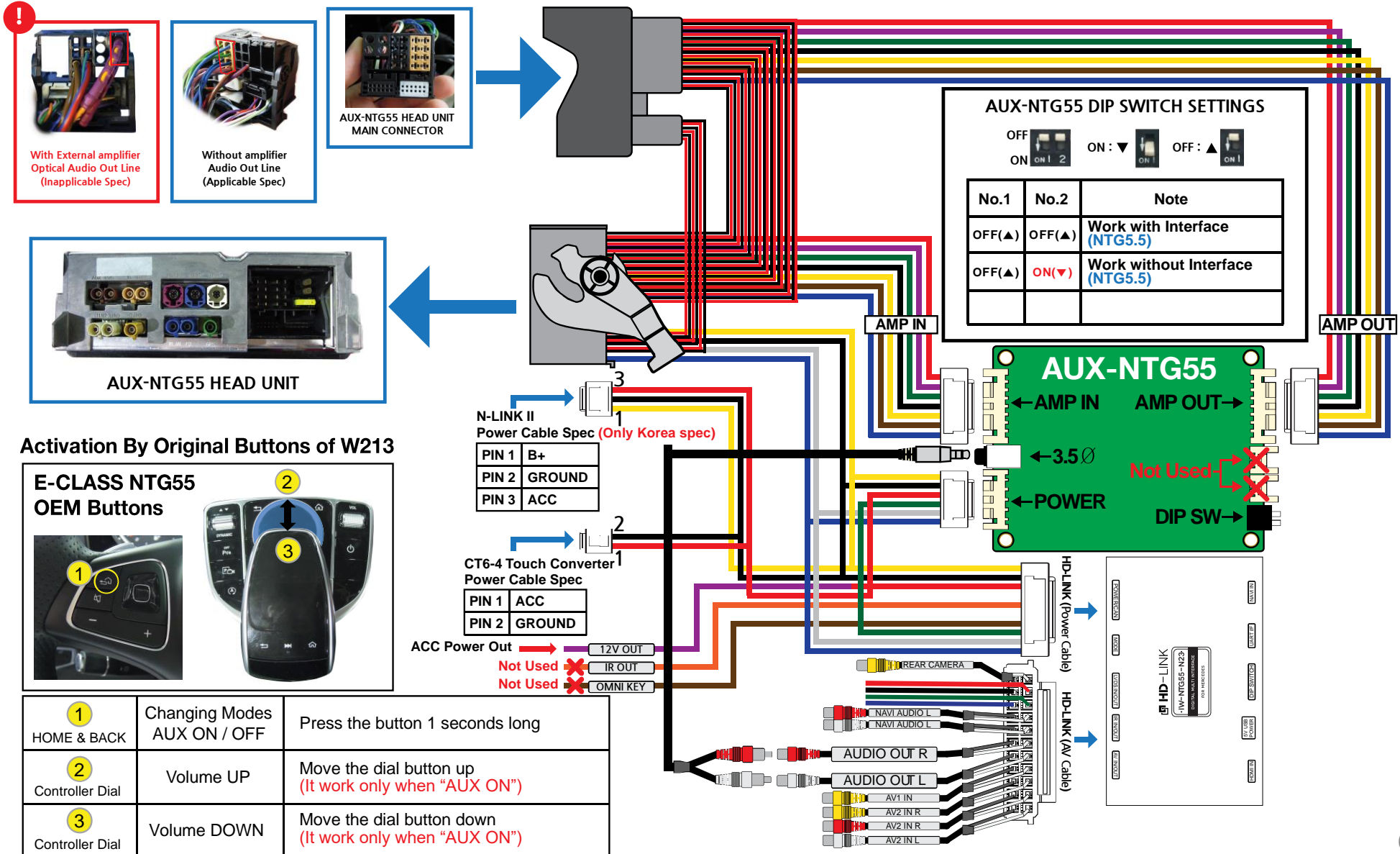


LVDS IN/OUT

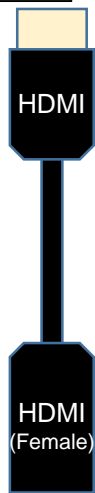
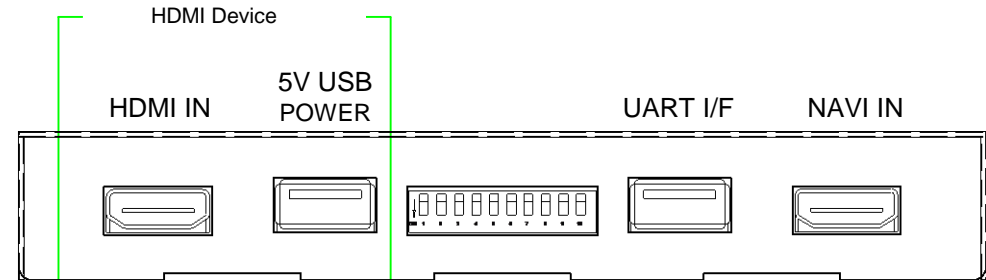
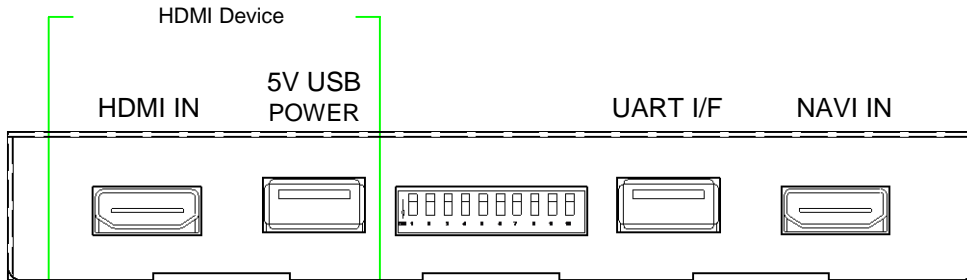


Installation Diagram

✕ Optional Product (With AUX-NTG55)



HDMI Connection Diagram



(5V-1A Power output for HDMI Device)

(HDMI Extender)

'Stick Type' HDMI Devices








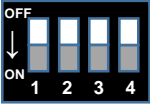




(5V-1A Power output for HDMI Device)

(HDMI Cable)

'Dongle & Adapter' Type HDMI Devices






Compatibility Chart for Navigation(GPS) box models

Model	Country	Dip S/W (Navigation)	Required Parts
 <p>MICROCITY N-Link</p>	South Korea	-	 HDMI Cable (HDMI to HDMI)  USB A-A Cable (USB to USB)  Hazard Module (Refer to Page.11)
 <p>iNAVI X1 CUBE</p>	South Korea	 OFF(↑): 1, 2, 3, 4	 HDMI Cable (HDMI to HDMI)
 <p>MYVI MS1400 Digital</p>	South Korea	 OFF(↓): 1, 2, 3 ON(↑) : 4	 HDMI Cable (HDMI to HDMI)

- The 'IW-NTG55-N23(HD-Link)' supports navigation(GPS) box models equipped with 'Digital video output'.
- It does not support the 'RGB video signals'.

Compatibility Chart for Android box models

Model		Country	Dip S/W (Navigation)	Required Parts		
	MICROCITY Android	-	-	 HDMI Cable (HDMI to HDMI)	 USB A-A Cable (USB to USB)	

- The 'IW-NTG55-N23(HD-Link)' supports navigation(GPS) box models equipped with 'Digital video output'.
- It does not support the 'RGB video signals'.

LVDS Connection Diagram



OEM AUDIO UNIT



Warning!
Check Pin spec

Disassembly OEM Connector



LVDS IN
(Provided LVDS Cable)



Warning!
Check Pin spec

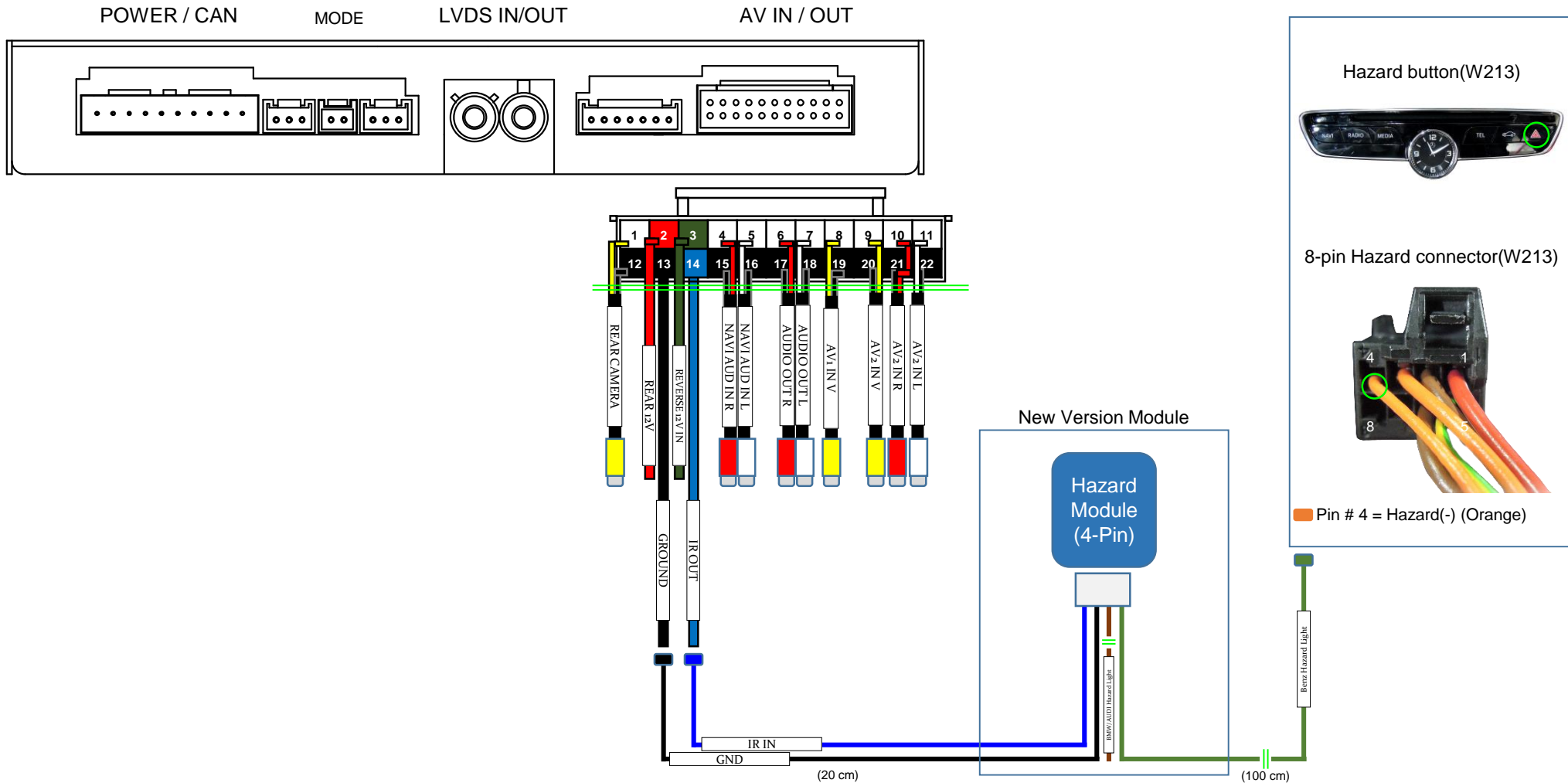
LVDS OUT
(Provided LVDS Cable)



Fakra
Connector

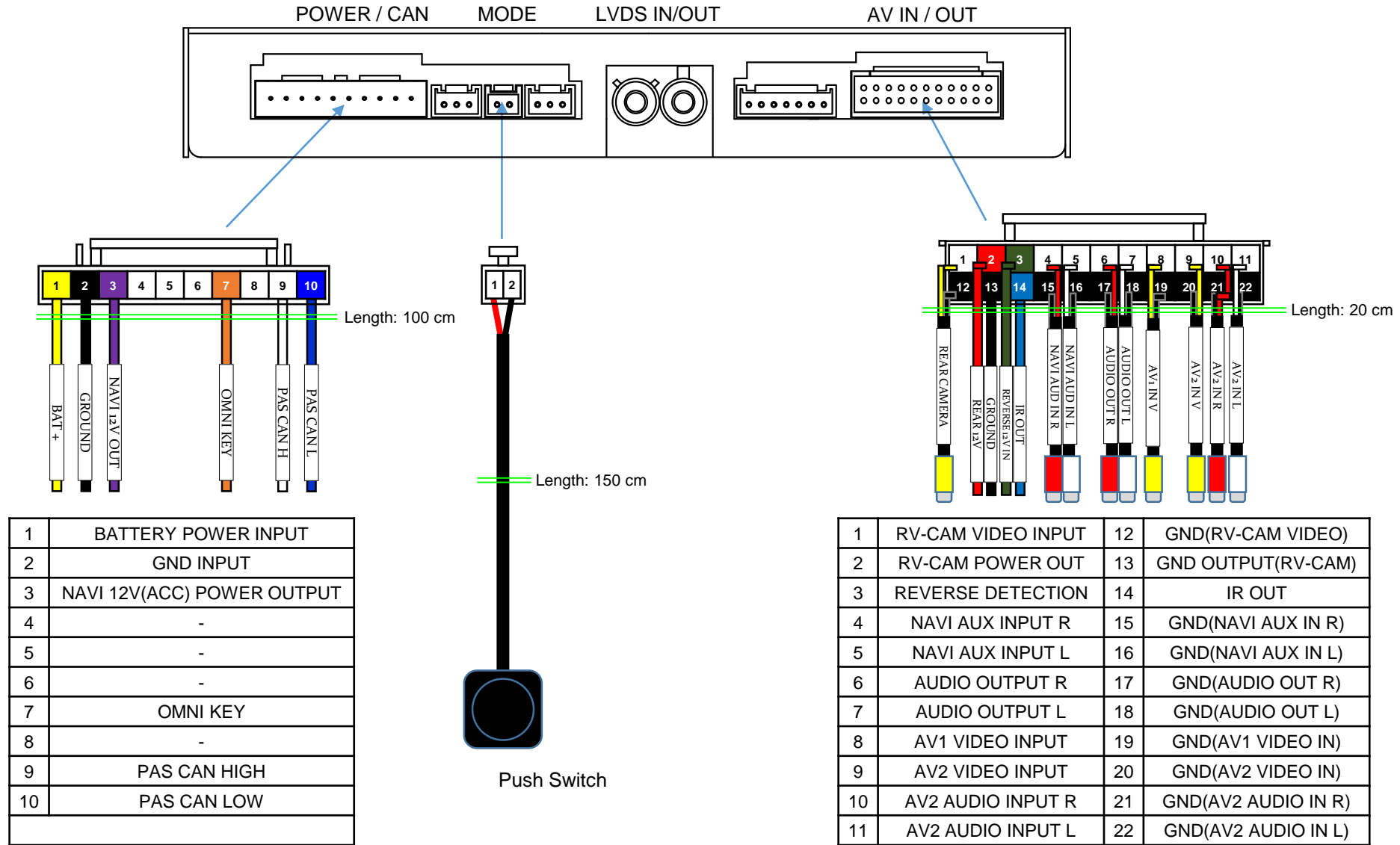
OEM LVDS LINE

Hazard Module Connection ('Smart Drive' function of 'N-Link' Navigation)



***Hazard Module is just available with Smart Drive function of N-Link and A-LINK**

Body Connector specifications



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

Activation by original buttons of E(W213) Class

Basic function



Audio Button



LEFT steering wheel Button RIGHT steering wheel Button



COMAND Controller

Button	Function	Operation	Remarks
1 NAVI	Changing Modes	Press the button 2 seconds long.	Order: HDMI → NAVI → AV1 → AV2 → OEM
1 NAVI	Shortcut to each modes	Press the button 2 times. < OEM → NAVI >	
		Press the button 3 times. < OEM → AV1 >	
		Press the button 4 times. < OEM → AV2 >	
2 PHONE	Changing mode to Front View CAM mode(AV1) <Only 6:4>	Press the button 2 seconds long.	It changes the screen from any modes to AV1 mode directly.
3 BACK	Changing screen ratio <16:9 ↔ 5:5>	Press the button 2 seconds long.	You can use this function only for 2 modes. (HDMI, NAVI)
4 HOME	Enter into the setting menu	Press the button 5 seconds long.	All functions of setting menu is controlled by COMAND controller.
1 NAVI	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.

Option function (※ It's need other(Add Aux Module for NTG55, OMNI View(around view camera) device to use this function)

Button	Function	Operation	Remarks
5 HOME (LEFT Steering wheel)	AUX ON/ OFF	Press the button 2 seconds long.	Order: HDMI → NAVI → AV1 → AV2 → OEM
↑ ↓ COMAND Controller	Volume UP / DOWN	Move the menu-pointer	Volume UP/ DOWN
6 HOME (RIGHT Steering wheel)	OMNI VIEW (AROUND VIEW CAMERA)	Press the button	Change the Omni View Mode

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	Enable Climate interlocking	Disable Climate interlocking
7	Selection of car model	
8		
9		
10		

No.7	No.8	No.9	No.10	Car Models
OFF(▲)	OFF(▲)	OFF(▲)	OFF(▲)	E-Class(W213) E300, E220 (12.3-inch screen) 2018 S-Class (W222) *Facelift
OFF(▲)	OFF(▲)	ON(▼)	ON(▼)	E-Class(W213) (8.4-inch screen)

Settings



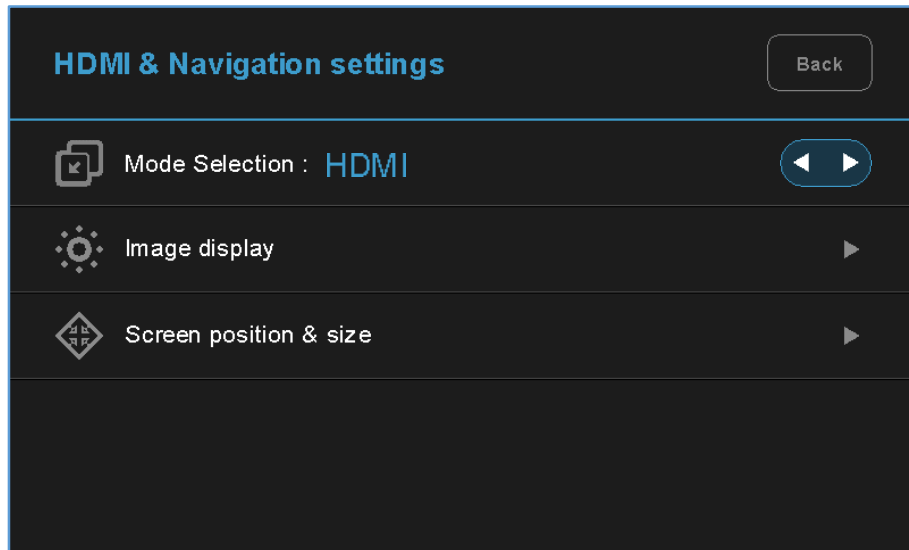
Button	Function
Back(←)	Back to previous menu when press the button short.
HOME BUTTON	Enter into the setting menu when you press the button 5 seconds long.
Up, Down, Left, Right (▲, ▼, ◀, ▶)	Move the menu-pointer and adjust the setting values.
Selection(●)	Select the setting menu and setting values.

1. Enter into the setting menu.

< Press the 'Bookmark(★)' button 5 seconds long >

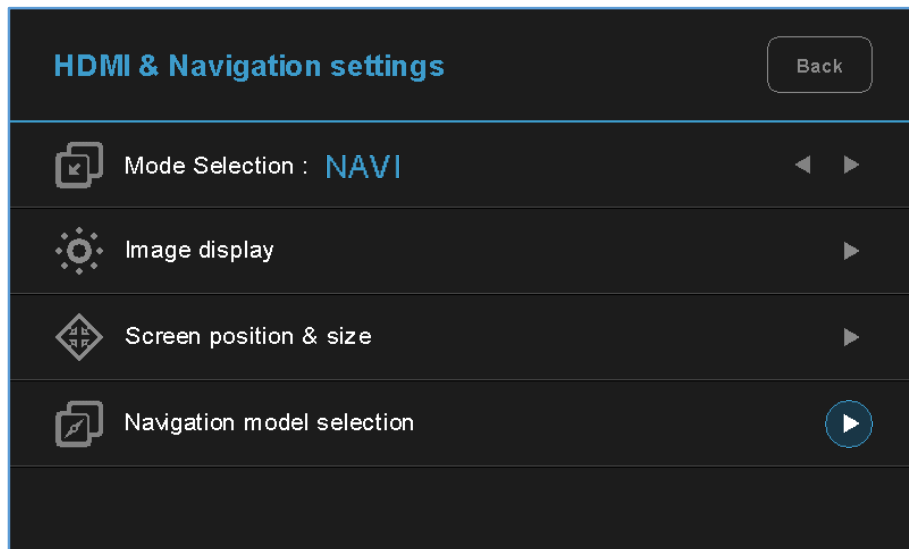
- HDMI & Navigation settings
- Rear view camera settings
- AV-input settings
- System settings
- System information

Settings



2. HDMI mode settings

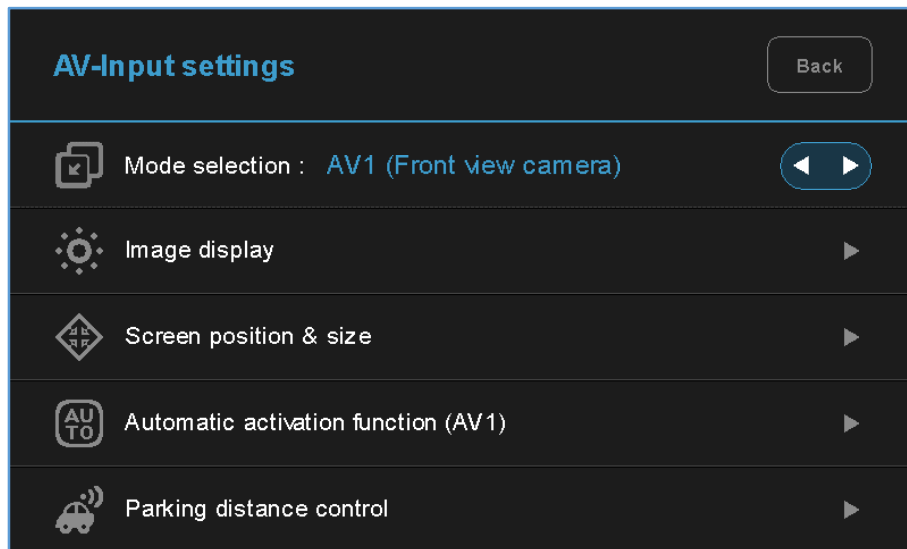
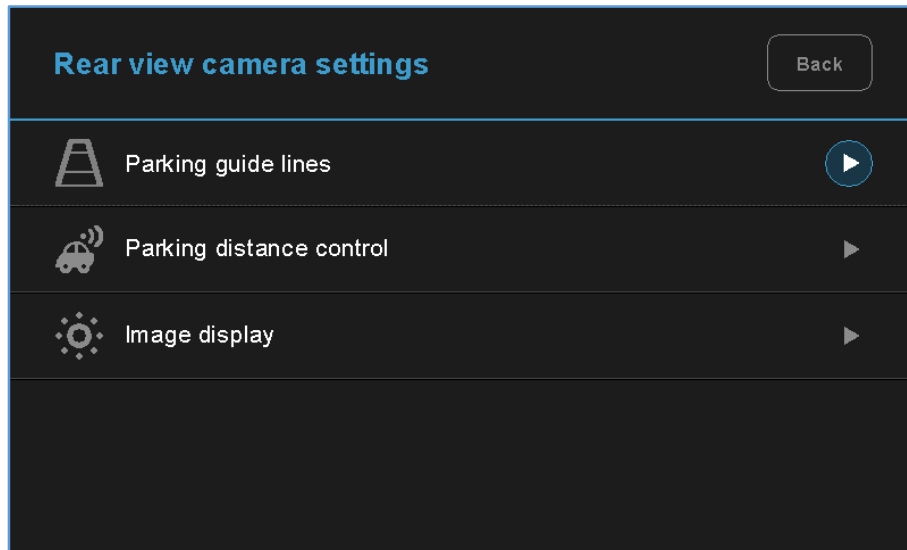
- Mode selection: HDMI ↔ NAVI
- Image display
= Adjust the values of brightness and contrast Red-Green-Blue colors of HDMI display.
- Screen position & size
= Entry Disabled / Not applicable.



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

Settings



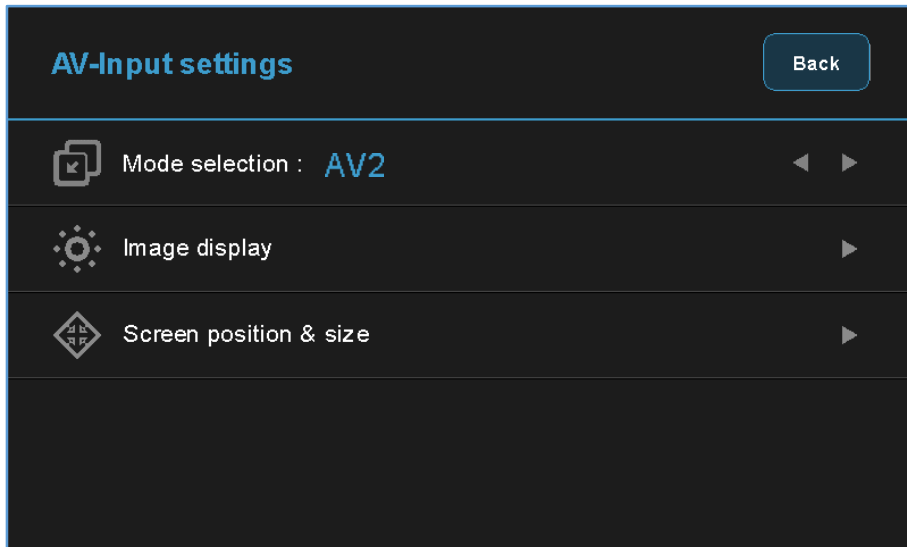
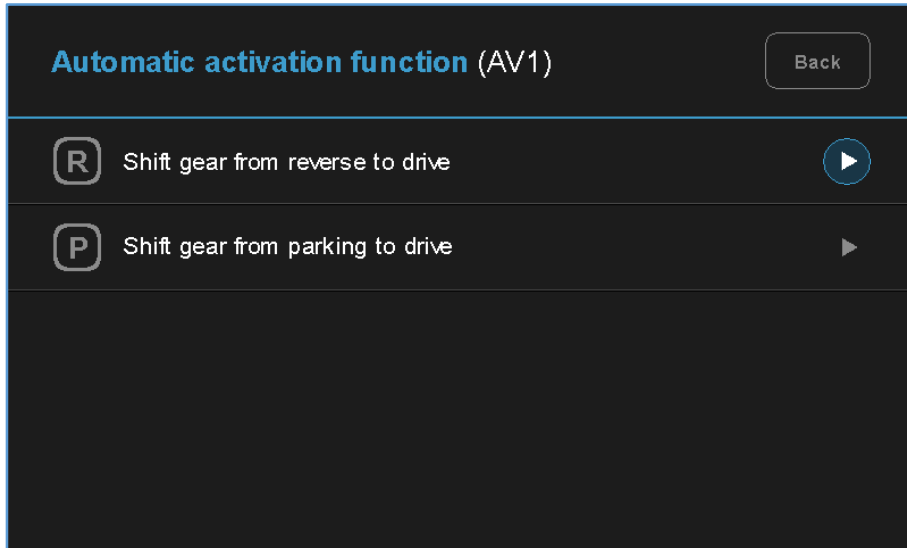
4. Rear view camera settings

- 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
= **Entry Disabled / Not applicable.**
- 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'.

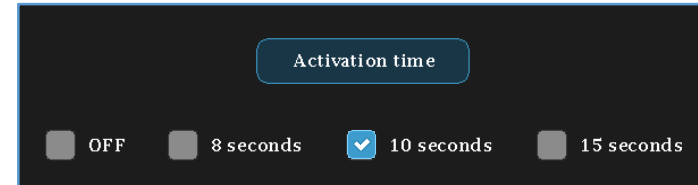
Settings



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
= Entry Disabled / Not applicable.

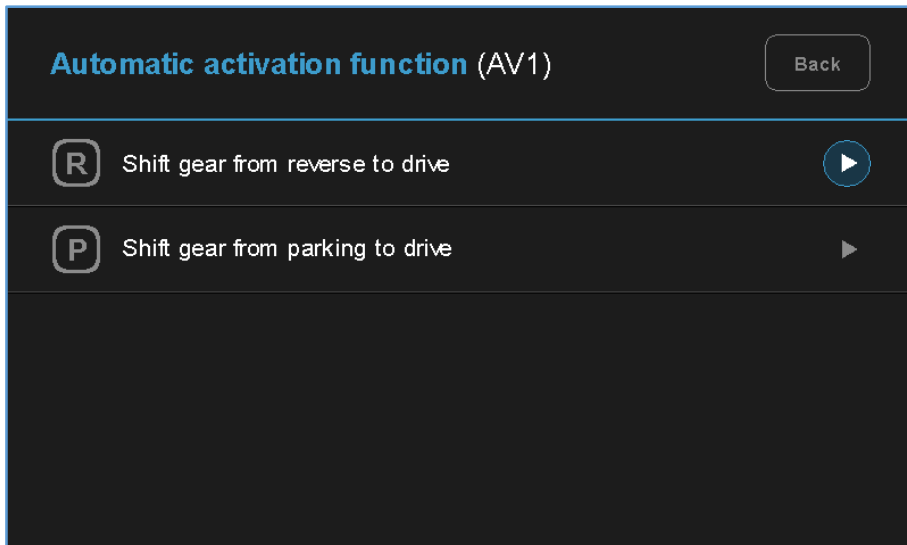
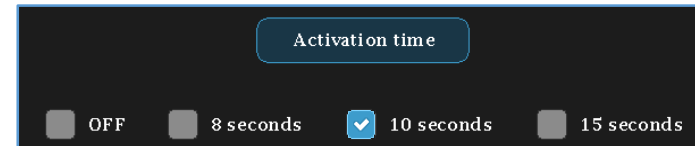
Settings (SURROUND VIEW OPTION)



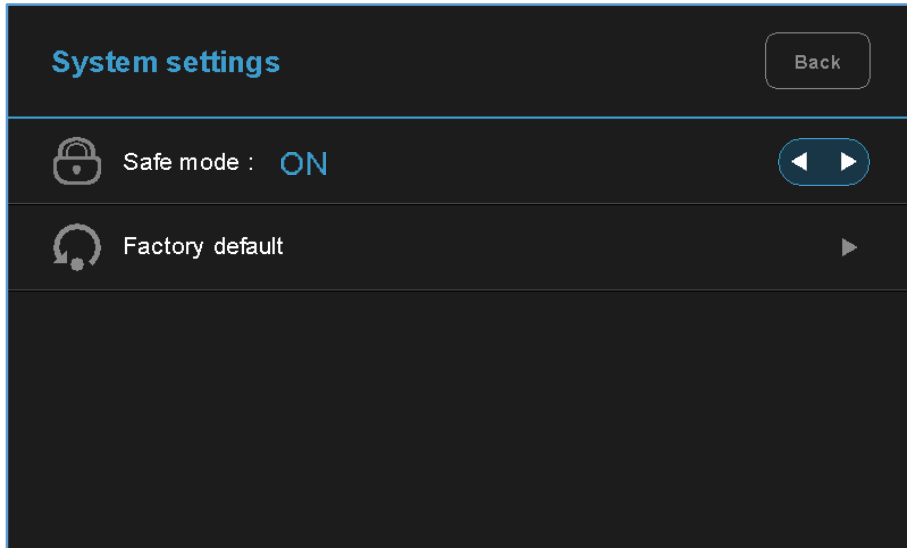
Keep the rear camera view

- 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

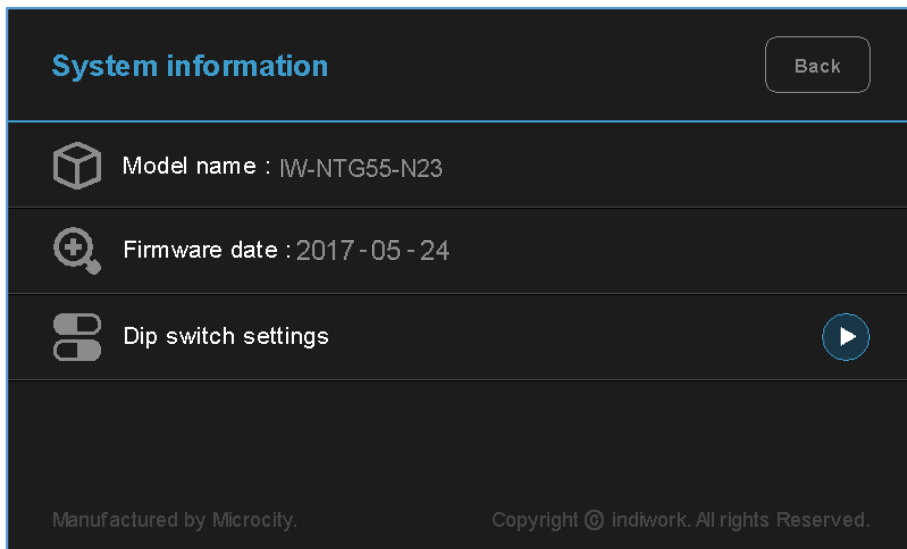


8. System settings

- 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: IW-NTG55-N23
- Firmware date: 2017 - 05 - 24(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	800*480(On) / 400*240(OFF)	ON
7	<input type="checkbox"/>	<input type="checkbox"/>	No. 7	Selection of car model	OFF
8	<input type="checkbox"/>	<input type="checkbox"/>	No. 8		ON
9	<input type="checkbox"/>	<input type="checkbox"/>	No. 9		ON
10	<input type="checkbox"/>	<input type="checkbox"/>	No. 10		OFF

10. Information of Dip switch settings

* You can check the 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	800*480(On) / 400*240(OFF)	OFF
No. 7	Selection of car model	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	800*480(On) / 400*240(OFF)	ON
No. 7	Selection of car model	OFF
No. 8		OFF
No. 9		OFF
No. 10		OFF

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