

BMW APIX PAS TDM **MANUAL**

- MODEL : BMW-APIX-PAS-TDM
- DATE : 2018.12.29

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1. Main Spec.

1. Input Spec. (MULTI VIDEO INTERFACE)

- 1 x Digital RGB Input (Navigation System source)
- 1 x Analog RGB Input (Navigation System source)
- 2 x A/V Input (External video source).
- 1 x CVBS(REAR CAMERA) Input. (Rear camera source)
- 1 x CVBS(FRONT CAMERA) Input. (Front camera source)
- 1 x LVDS Input. (Car Command System)
- 1 x Capacitive Touch Screen

2. Output Spec.

- 1 x LVDS Output (LCD Operation)
- 1 x Virtual Analog Touch (Navigation System source)
- 1 x Uart Digital Touch (Navigation System source)

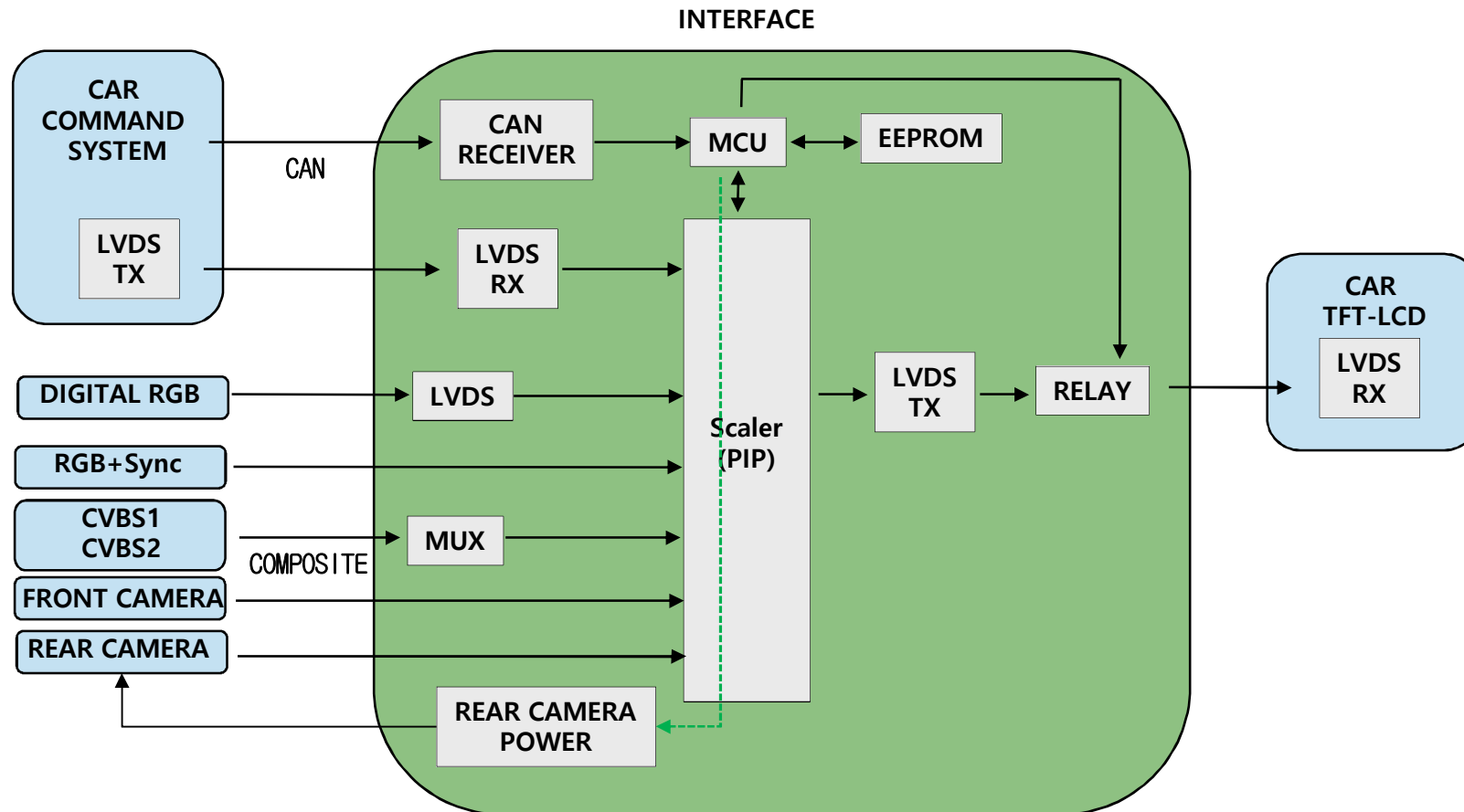
3. Power Spec.

- Input Power : 8VDC ~ 24VDC
- Consumption Power : 12Watt, Max

4. Switch Input mode

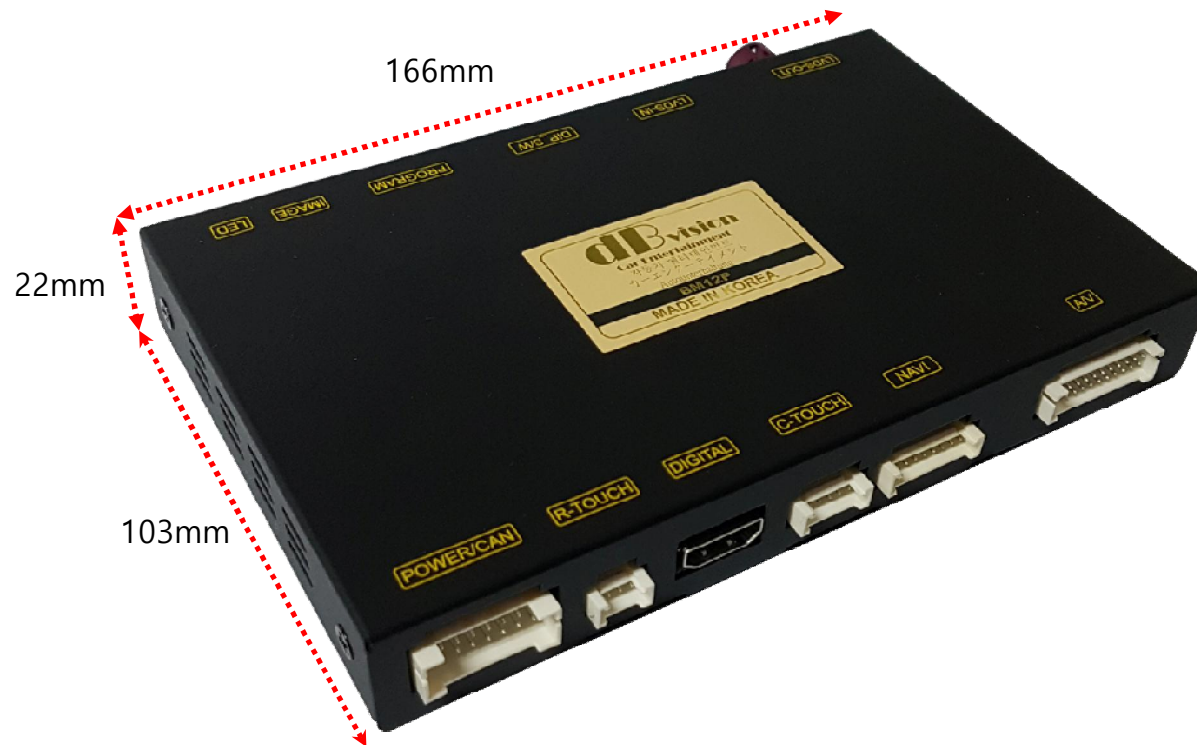
- Possible to select CAR model while switching mode by DIP S/W
- By button on the Commander in the car via CAN

2. Block Diagram



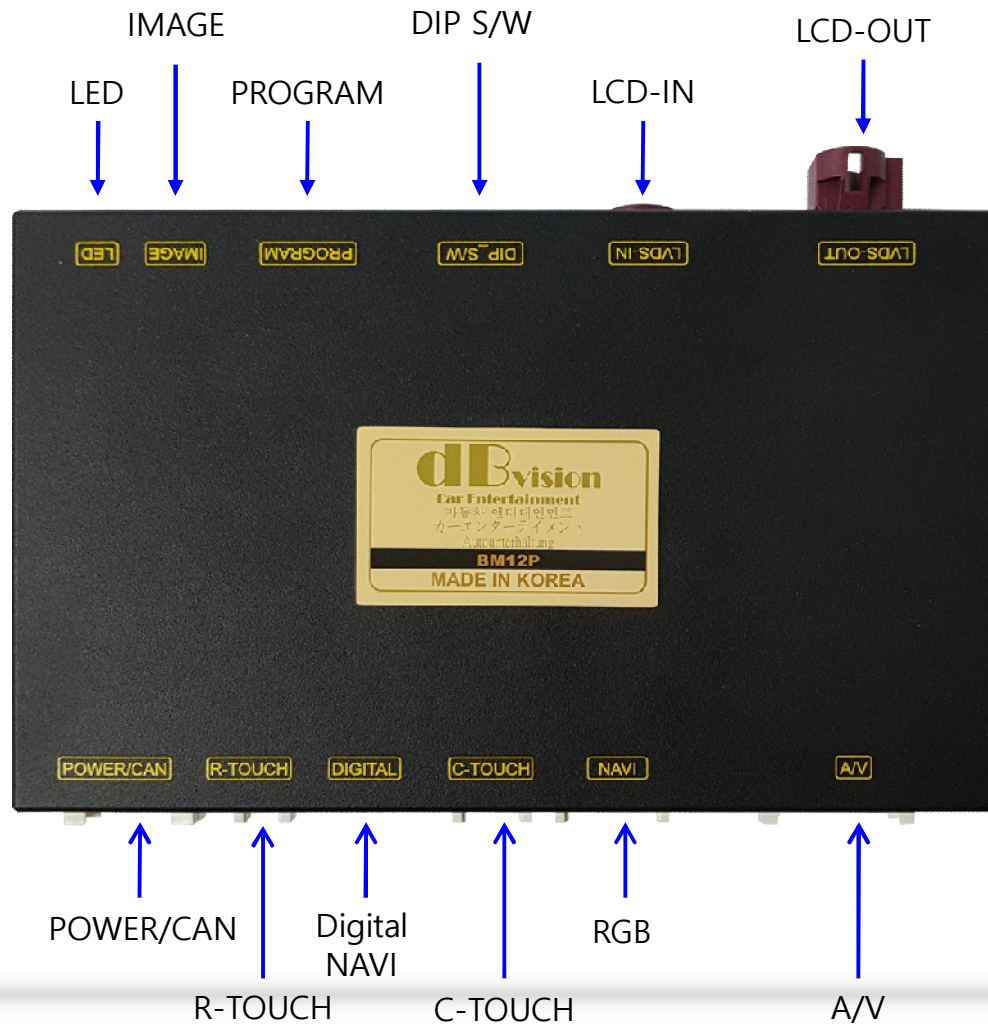
3. Dimension

166mm * 103mm * 22mm

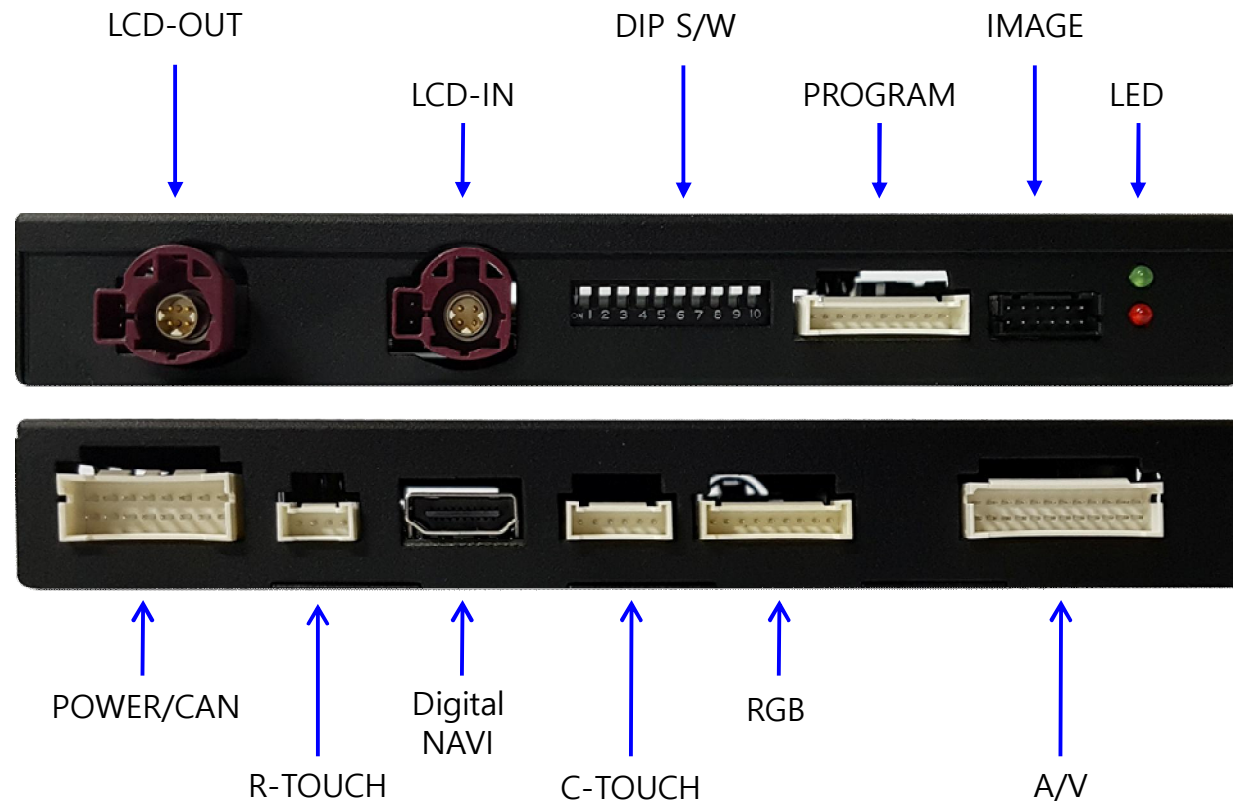


* 상기 제품의 외형은 제품 사양에 따라서 변경될 수 있습니다.

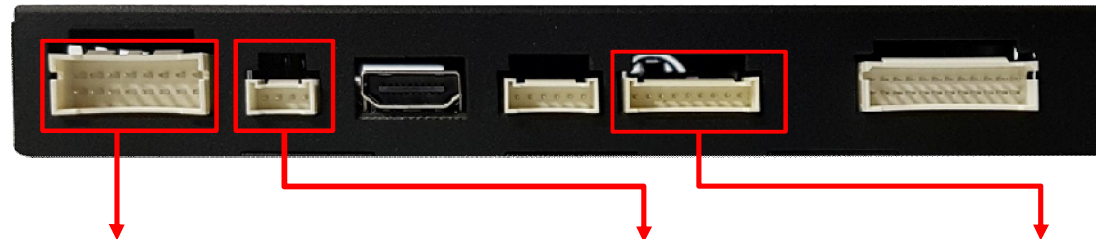
4. External Appearance



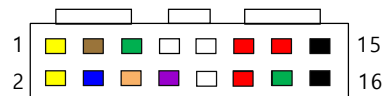
4. External Appearance



5. Connector Pin Assignment

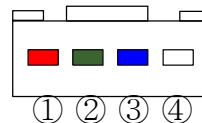


*POWER Connect



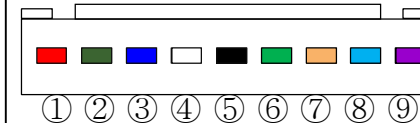
- | | |
|---------------------|---------------------|
| 1. Battery (Yellow) | 9. N.C |
| 2. Battery (Yellow) | 10. N.C |
| 3. Rear-DET (Brown) | 11. ACC (Red) |
| 4. Front-DET (Blue) | 12. Rear-VCC (Red) |
| 5. CAN1-L (Green) | 13. Front-VCC (Red) |
| 6. CAN1-H (Orange) | 14. Mode (Green) |
| 7. CAN2-L (White) | 15. GND (Black) |
| 8. CAN2-H (Purple) | 16. GND (Black) |

*Touch Connect



- | |
|------|
| ① Y- |
| ② X- |
| ③ Y+ |
| ④ X+ |

*NAVI Connect

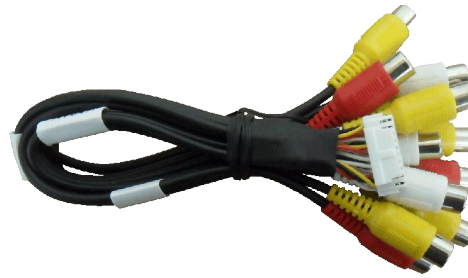


- | |
|--------------------|
| ① R DATA (Red) |
| ② G DATA (Green) |
| ③ B DATA (Blue) |
| ④ SYNC (White) |
| ⑤ GND (Black) |
| ⑥ DVB-T-IR (Green) |
| ⑦ DVD-IR (Orange) |
| ⑧ DVR-IR (Blue) |
| ⑨ NAVI-IR (Purple) |

6. Product Composition



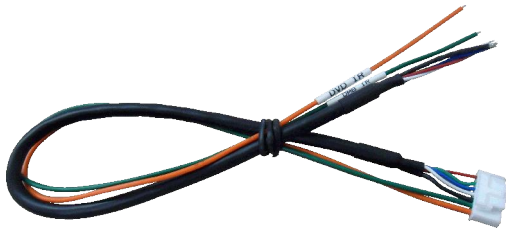
Interface 1 EA



A/V Cable(TDM-24pin) 1 EA



LVDS Cable 1 EA
(Z(6P)-Z(6P) Type R/A)



RGB NAVI(9P) Cable 1 EA



Power Cable 1 EA

7. DIP S/W Setting

* ON : DOWN , OFF : UP

PIN	FUNCTION	DIP S/W Selection
1	NAVI	ON : Not Used OFF : Used
2	DVB-T(AV1)	ON : Not Used OFF : Used
3	DVD(AV2)	ON : Not Used OFF : Used
4	DVR(AV3)	ON : Not Used OFF : Used
5	N.C	
6	CAR type SEL	Right Picture
7		
8		
9	N.C	
10	CAN IN/OUT	ON : Used OFF : Not Used

* DIP S/W Example



F15 10.2" , F30 8.8"



F20 6.5"

* To use CarPlay, be sure to turn down Dip-sw 10.

8. I-DRIVE Control

BMW I-Drive control : Mode Change



8.8"



6.5"

Long Press to switch modes,
Short press to switch to OEM menu screen.



OEM



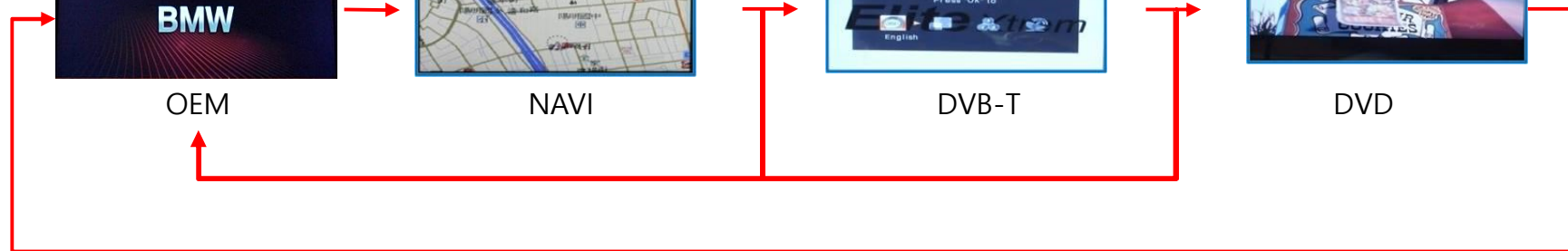
NAVI



DVB-T



DVD



8. I-DRIVE Control

BMW I-Drive control : Screen Size Change



8.8"



6.5"

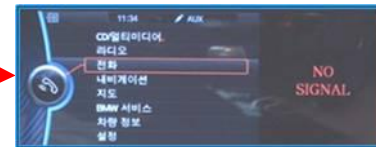
Long Press to Screen Size Change



AV Full size



AV middle size



AV small size



RearCamera Full size



RearCamera middle size



RearCamera None

8. I-DRIVE Control

BMW I-Drive control : DVB-T(DMB) Control



8.8"



6.5"

- When not using DVB-T UI.
- ④ Short press to channel Up
- ⑤ Short press to channel Down
- ⑤ Long press to SCAN

- When using DVB-T UI.
- ① Short press to Selection
- ① Long press to DVB-T UI on
- ② Move UI Left
- ③ Move UI Right

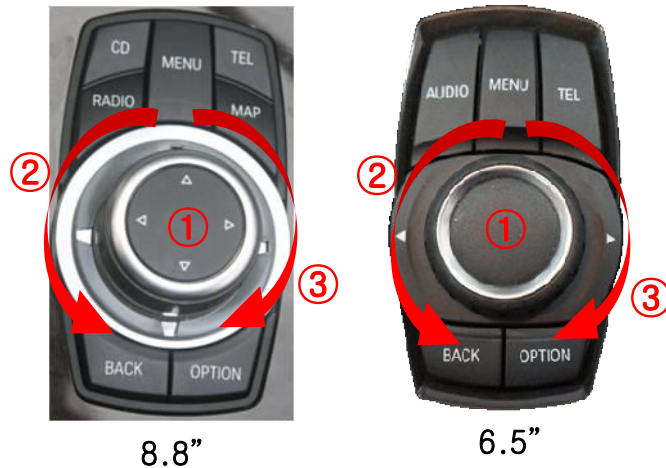


DVB-T UI -> on/off selection to OSD MENU

MENU	UI DVB-T(DMB)	OEM
Config	SteeringWheelBtn	Off
Option	BookMarkBtn	Off
Image	UI DVB-T(DMB)	On Off
Screen	UI DVD	On
Parking	Reset	Execute Cancel

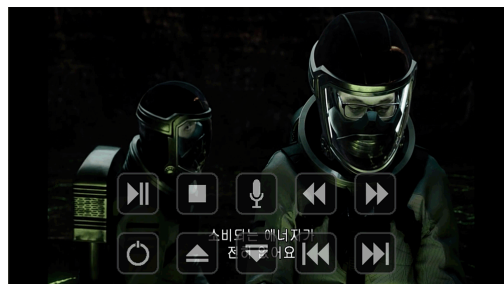
8. I-DRIVE Control

BMW I-Drive control : DVD Control



- When using DVD UI.

- ① Short press to Selection
- ① Long press to DVD UI on
- ② Move UI Left
- ③ Move UI Right



DVD UI -> on/off selection to OSD MENU

MENU	UI DVD	OEM
Config	SteeringWheelBtn	Off
Option	BookMarkBtn	Off
Image	UI DVB-T(DMB)	On
Screen	UI DVD	On Off
Parking	Reset	Execute Cancel

9. OSD(On Screen Display) Control

I-Drive control : OSD Mode



8.8"



6.5"

Mode State

MENU	Option		NAVI
Config	RearCam-Type	ExtDevice	
Option	RearCam-Power	Auto	
Image	RearCam-Det	GEAR	
Screen	AV Mode	Off	
Parking	FrontCam-Type	ExtDevice	

First Menu

Second Menu

Third Menu

OPTION	OSD Screen ON for Presss 6 seconds
BACK	When OSD screen is displayed, Press short MENU EXIT
ENTER	Item Selection, Value Selection
UP	Item up Increase selected value
RIGHT	First->Second->Third Menu move Third Menu에서 Item down Increase selected value
DOWN	Item down Decrease selected value
LEFT	Third->Second->First Menu move Third Menu에서 Item up Decrease selected value

9. OSD(On Screen Display) Control

OSD Config

First Menu	Second Menu	Third Menu	Description
Config	NAVI-RGB	DIGITAL-INAVI :	Setting the Connected NAVI Model
	DVB-T(DMB)	ELT_DVBT20 :	Setting the Connected DVB-T Model
	DVD	ELT_980XU Slim :	Setting the Connected DVD Model
	DVR	DVR-400TA :	Setting the Connected DVR Model
	Reset	Execute	Reset to default value of Config menu

MENU	Config NAVI	
Config	NAVI-RGB	DIGITAL-INAVI
Option	DVB-T(DMB)	ELT_DVBT20
Image	DVD	ELT-980XU Slim
Screen	Reset	Execute Cancel
Parking		

9. OSD(On Screen Display) Control

OSD Option

First Menu	Second Menu	Third Menu	Description
Option	RearCam-Type	OEM	Original Camera
		ExtDevice	Equipped with external camera
	RearCam-Power	ON	+ 12V continuous supply
		AUTO	+ 12V supply only in Rear camera mode
		OFF	+ 12V off
	RearCam-Det	PDC	Detected by P>>>
		GEAR	Detected by CAN
		WIRE	Detected by Rear-Det Wire
	FrontCam-Type	OEM	Original Camera
		ExtDevice	Equipped with external camera
	FrontCam-Power	ON	+ 12V continuous supply
		AUTO	+ 12V supply only in Front camera mode
		OFF	+ 12V off
	FrontCam-Det	CAN	Detected by CAN
		WIRE	Detected by Front-Det Wire

MENU	RearCam-Type		NAVI
Config	RearCam-Type	OEM	
Option	RearCam-Power	Auto	
Image	RearCam-Det	GEAR	
Screen	AV Mode	Off	
Parking	FrontCam-Type	ExtDevice	

9. OSD(On Screen Display) Control

OSD Option

First Menu	Second Menu	Third Menu	Description
Option	FrontCam-RcvOpt	ON	After RearCam shows FrontCam and returns to previous state
		OFF	Disable feature
	SteeringWheelBtn	ON	Use the StreeingWheelButton..
		OFF	Disable feature
	BookMarkBtn	ON	Set button 8 to the mode button.
		OFF	Disable feature
	UI DVB-T (DMB)	ON	DVB-T device control UI output function
		OFF	Disable feature
	UI DVD	ON	DVD device control UI output function
		OFF	Disable feature
	UI DVR	ON	DVR device control UI output function
		OFF	Disable feature

MENU	FrontCam-Power	NAVI
Config	FrontCam-Power	Auto
Option	FrontCam-Det	ExtWire
Image	FrontCam-RcvOpt	☐ On
Screen	SteeringWheelBtn	Left
Parking	UI DVB-T(DMB)	On

9. OSD(On Screen Display) Control

OSD Option

First Menu	Second Menu	Third Menu	Description
Option	NAVI COM	HMS FINE :	Set up manufacturer of woodworking device for UART Touch use
		OFF	Disable feature
	Reset	Execute	Option Menu all Reset

MENU	UI DVD	NAVI
Config	UI DVD	On
Option	ScrChg-Call	Off
Image	ScrChg-Climate	Off
Screen	ScrChg-Audio-Vol	Off
Parking	NAVI COM	Off

MENU	Reset	NAVI
Config	Reset	Execute Cancel
Option		
Image		
Screen		
Parking		

9. OSD(On Screen Display) Control

OSD Option -> RearCam-Det



MENU	RearCam-Det REAR	
Config	RearCam-Type	ExtDevice
Option	RearCam-Power	Auto
Image	RearCam-Det	PDC GEAR WIRE
Screen	FrontCam-Type	ExtDevice
Parking	FrontCam-RcvOpt	0s

→ GEAR : 'R' When turned on, enters rear mode
'R' Rear mode off when off

→ PDC : Acts like genuine OEM.
When the button's green LED is lit,
it enters rear mode
When the green LED on the button is off

WIRE : Without using CAN
Operate by connecting to + 12V of REAR LIGHT

9. OSD(On Screen Display) Control

OSD Option -> FrontCam-RcvOpt

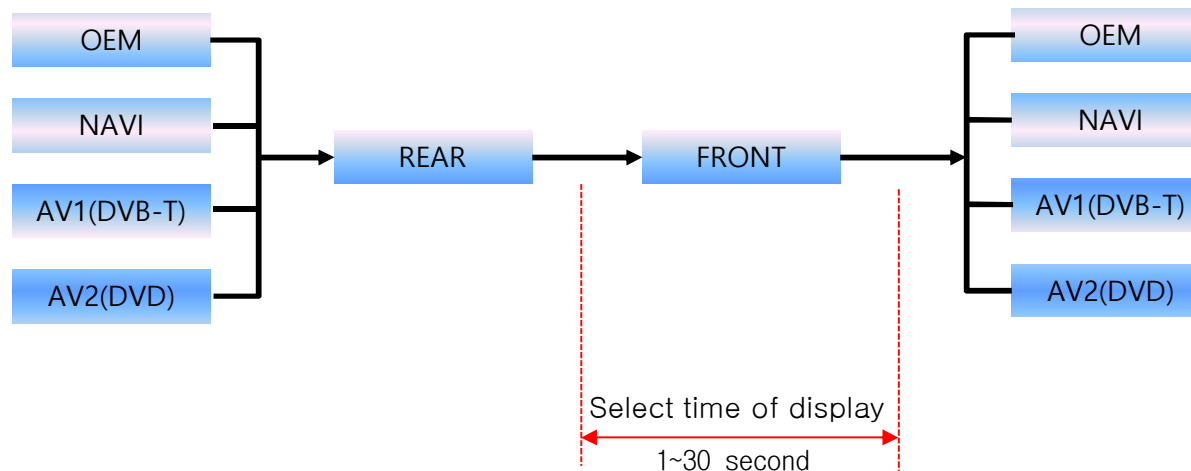
Front Camera Auto Mode

0 second = FrontCam-RcvOpt menu OFF

1~30 second = FrontCam-RcvOpt menu ON & time control

MENU	FrontCam-RcvOpt	NAVI
Config	FrontCam-RcvOpt	0s
Option	SteeringWheelBtn	On
Image	UI DVB-T(DMB)	On
Screen	UI DVD	On
Parking	ScrChg-Climate	On

MENU	FrontCam-RcvOpt	NAVI
Config	FrontCam-RcvOpt	30s
Option	SteeringWheelBtn	On
Image	UI DVB-T(DMB)	On
Screen	UI DVD	On
Parking	ScrChg-Climate	On



9. OSD(On Screen Display) Control

OSD Option -> SteeringWheelBtn

Long Press to switch modes,
Short press to switch to OEM menu screen.



MENU	SteeringWheelBtn	OEM	
Config	SteeringWheelBtn	On	Off
Option	BookMarkBtn	Off	Off
Image	UI DVB-T(DMB)	On	
Screen	UI DVD	On	
Parking	Reset	Execute	Cancel

Steering wheel button -> on/off selection to OSD MENU

OSD Option -> BookMarkBtn

Long Press to switch modes,
Short press to switch to OEM menu screen.



MENU	BookMarkBtn	OEM	
Config	SteeringWheelBtn	Off	
Option	BookMarkBtn	On	Off
Image	UI DVB-T(DMB)	On	
Screen	UI DVD	On	
Parking	Reset	Execute	Cancel

"8" button -> on/off selection to OSD MENU

9. OSD(On Screen Display) Control

OSD Image

NAVI-RGB menu

First Menu	Second Menu	Third Menu	Action
Image	Brightness		Adjust the value of brightness
	Contrast		Adjust the value of contrast
	Color-RED		Adjust the value of RED
	Color-GREEN		Adjust the value of GREEN
	Color-BLUE		Adjust the value of BLUE
	Reset	Execute	Image Menu all Reset



<< Brightness >>



<< Contrast >>

DVD,DVB-T(DMB),NAVI-AV,REAR,FRONT menu

First Menu	Second Menu	Third Menu	Action
Image	Brightness		Adjust the value of brightness
	Contrast		Adjust the value of contrast
	Saturation		Adjust the value of Saturation
	Hue		Adjust the value of Hue
	Sharpness		Adjust the value of Sharpness
	Reset	Execute	Image Menu all Reset



<< Saturation >>

9. OSD(On Screen Display) Control

OSD – Screen Menu

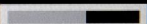
First Menu	Second Menu	Third Menu	Description
Screen	Horizontal		Output screen horizontal movement
	Vertical		Output screen vertical movement
	Scale X Up		Reduce / increase output screen width
	Scale X Down		
	Scale Y Up		Reduce / Increase Output Screen Height
	Scale Y Down		
	Reset		Screen menu all reset

MENU	Horizontal	NAVI
Config	Horizontal	50
Option	Vertical	50
Image	Scale X Up	50
Screen	Scale X Down	50
Parking	Scale Y Up	50

9. OSD(On Screen Display) Control

OSD – Parking Menu

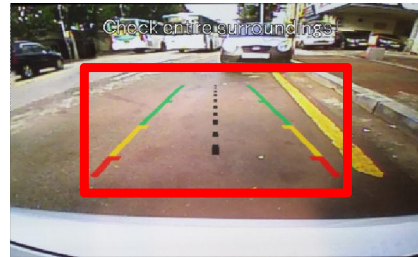
First Menu	Second Menu	Third Menu	Description
Parking	Line Display	ON	Show parking line
		OFF	Do not show parking lines
	Warnings Lang		Set warning text language
	Horizontal		Moving a parking line horizontally
	Vertical		Moving a parking line vertically
	Transparency		Parking line transparency
	Reset		Parking menu all reset

MENU	OPS Display		REAR
Config	OPS Display	Off	
Option	Line Display	Off	
Image	Warnings Lang	English	
Screen	Horizontal		50
Parking	Vertical		60

9. OSD(On Screen Display) Control

OSD Parking – Line Display On / Off

MENU	Parking / Line Display REAR	
Config	OPS Display	On
Option	Line Display	On Off
Image	Warnings Lang	Россия
Screen	Horizontal	50
Parking	Vertical	50



Parking Line ON Screen

MENU	Parking / Line Display REAR	
Config	OPS Display	On
Option	Line Display	On Off
Image	Warnings Lang	Россия
Screen	Horizontal	50
Parking	Vertical	50



Parking Line OFF Screen

9. OSD(On Screen Display) Control

OSD Parking – Change warning language

MENU	Parking / Warnings Lang	DEAR
Config	OPS Display	English
Option	Line Display	中文
Image	Warnings Lang	한국어
Screen	Horizontal	台灣
Parking	Vertical	Россия

English

Check entire surroundings!

中文

请注意车辆周围环境!

한국어

차량 주변을 전부 확인

台灣

請注意車輛周圍環境!

Россия

Следите за всем окружением автомобиля!

日本

周辺の安全を確認

9. OSD(On Screen Display) Control

OSD Parking – Adjust position of parking guide line

MENU	Parking	REAR
Config	OPS Display	Off
Option	Line Display	On
Image	Warnings Lang	English
Screen	Horizontal	50
Parking	Vertical	50

Possible to adjust the position of parking guide line by Keypad in Horizontal / Vertical menu

※ Pressing this Horizontal / Vertical menu, The OSD screen automatically disappears. Please adjust from the parking line Screen.



Press "UP" button

Press "MENU" button



Press "SEL" button

Press "DOWN" button

9. OSD(On Screen Display) Control

OSD – OSD Menu

First Menu	Second Menu	Third Menu	Description
OSD	Horizontal	<i>value</i>	OSD Menu Horizontal Shift
	Vertical	<i>value</i>	OSD menu vertical Shift
	Display Time	<i>value</i>	OSD Menu Display Time (in seconds)
	Transparency	<i>value</i>	OSD menu transparency
	Language		OSD menu display language
	Reset	Execute	Initialize OSD settings

MENU	Horizontal	DVB-T
OSD	Horizontal	50
IR-Ctrl	Vertical	50
Utility	Display Time	10s
	Transparency	30
	Language	English
MENU	Reset	DVB-T
OSD	Reset	Execute Cancel
IR-Ctrl		
Utility		

9. OSD(On Screen Display) Control

* IR learning function



* In order to work with the IR learning function, a separate IR cable is required.

MENU	IR-Ctrl / DVB-T(DMB)	NAVI
OSD	DVB-T(DMB)	Sel Learn Cancel
IR-Ctrl	DVD	Sys
Utility		

1. In DVB-T / DVD menu, select User in Sys (OSD list) or User (learned contents).
2. Select Learn from the OSD menu.



MENU	IR-Ctrl / DVB-T(DMB)	NAVI
OSD	All-Clear	
IR-Ctrl	POWER	----
Utility	SCAN	----
	CH+	----
	CH-	----

3. Before using IR learning function, select All-Clear to delete existing stored data.



MENU	IR-Ctrl / DVB-T(DMB)	DVB-T
OSD	New Code: ----	
IR-Ctrl	Cfm Code: ----	
Utility		
	Save	Clr Cancel

4. Press the remote control button to be used in each ICON once in New Code, press once again in Cfm Code to confirm it is the same and save it.

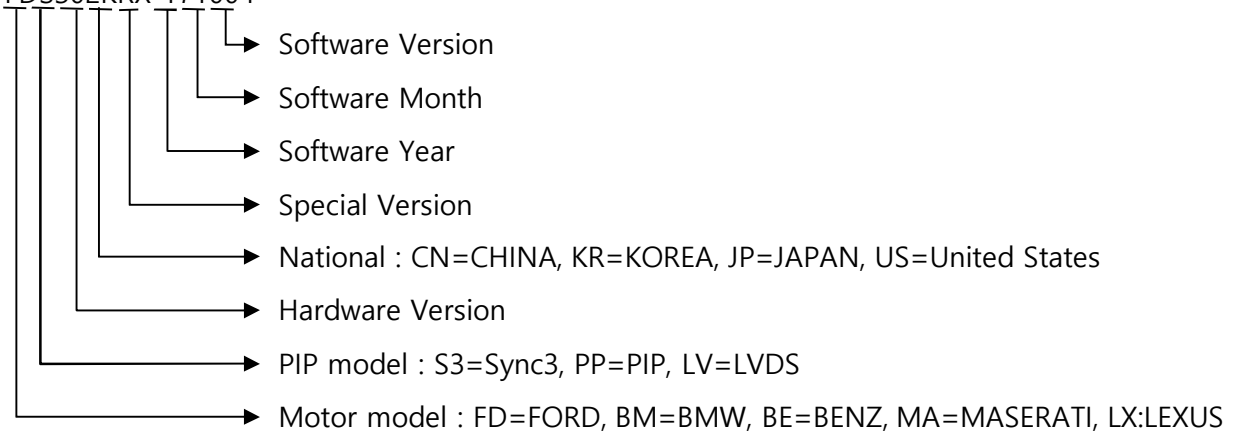
9. OSD(On Screen Display) Control

OSD Utility

First Menu	Second Menu	Third Menu	Description
Utility	Factory Reset	Execute	Initialize all settings
	Calibration	Execute	Run Calibration mode
	Version		FDS302KRX-171004 (Check for future upgrades)

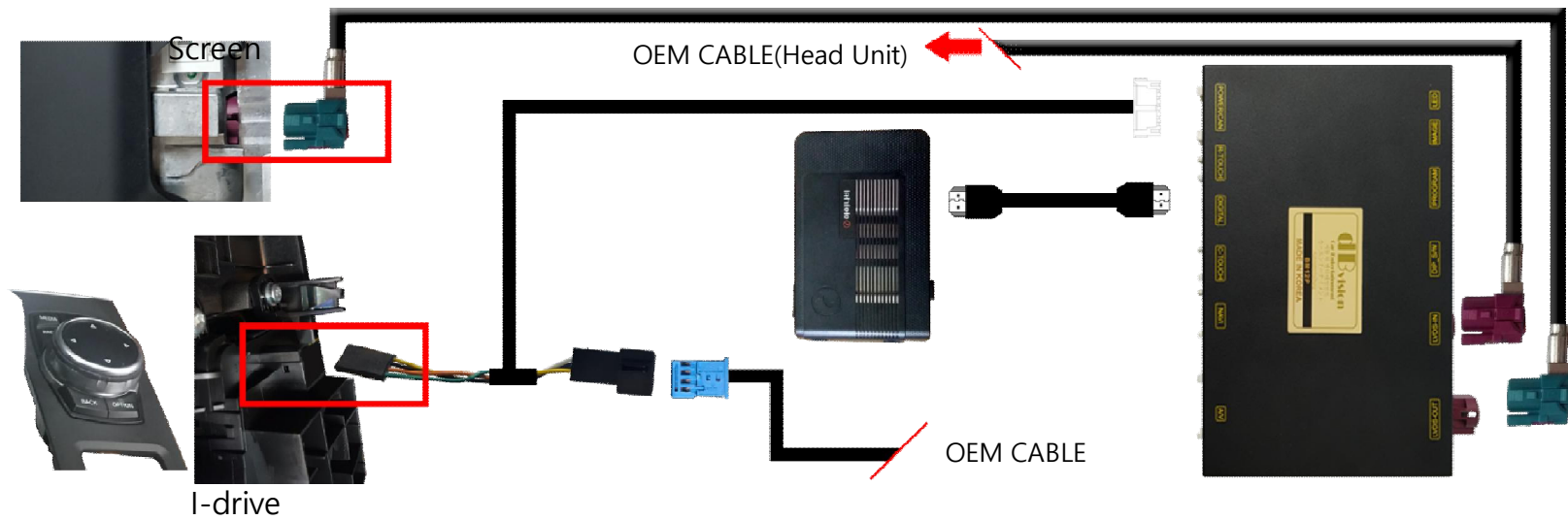
MENU	Utility	NAVI
OSD	Factory Reset	Execute Cancel
IR-Ctrl	Calibration	Execute Cancel
Utility	Version	FDS302KRX-171004

Last Source : FDS302KRX-171004



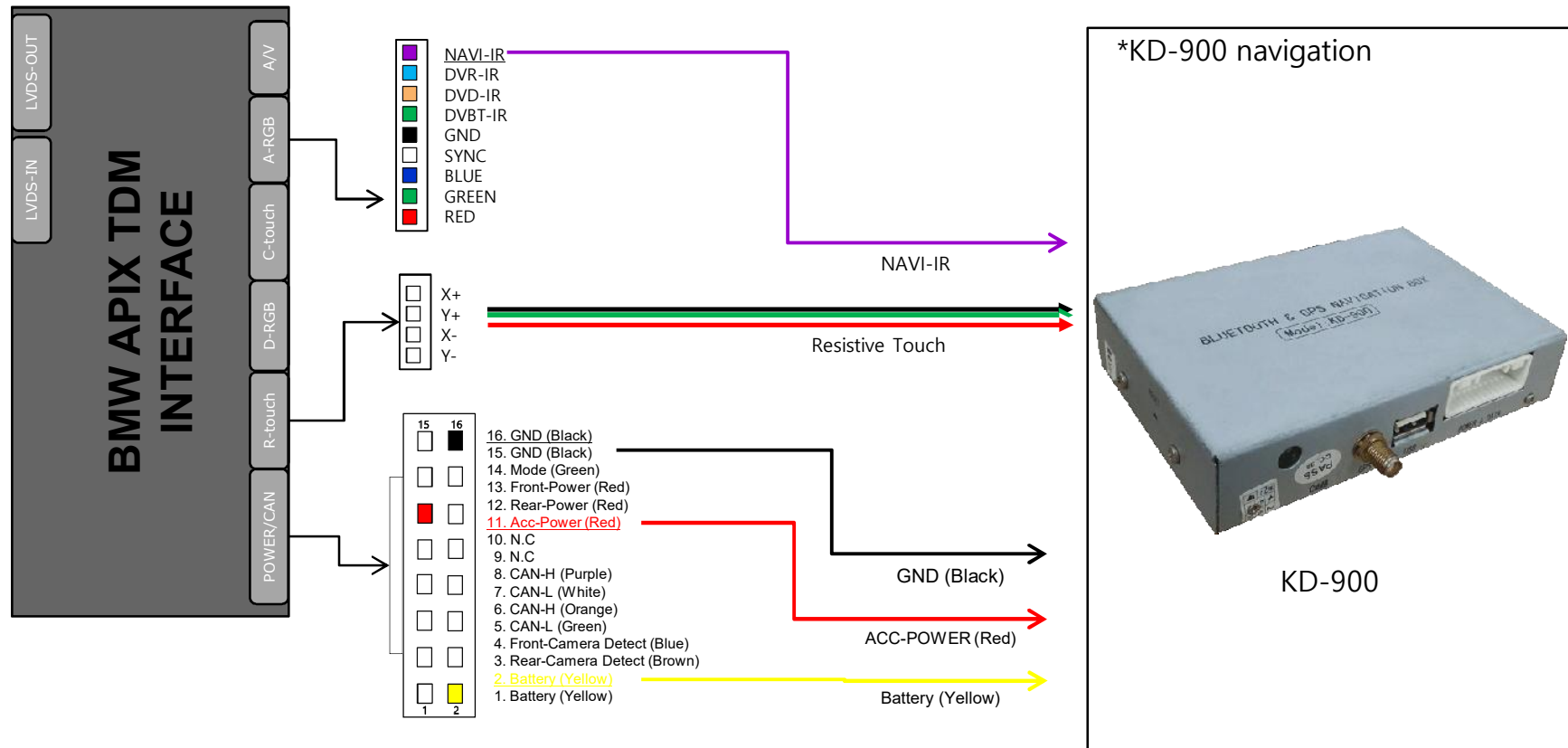
10. Install Manual

1. Installation LVDS/POWER/CAN Connection



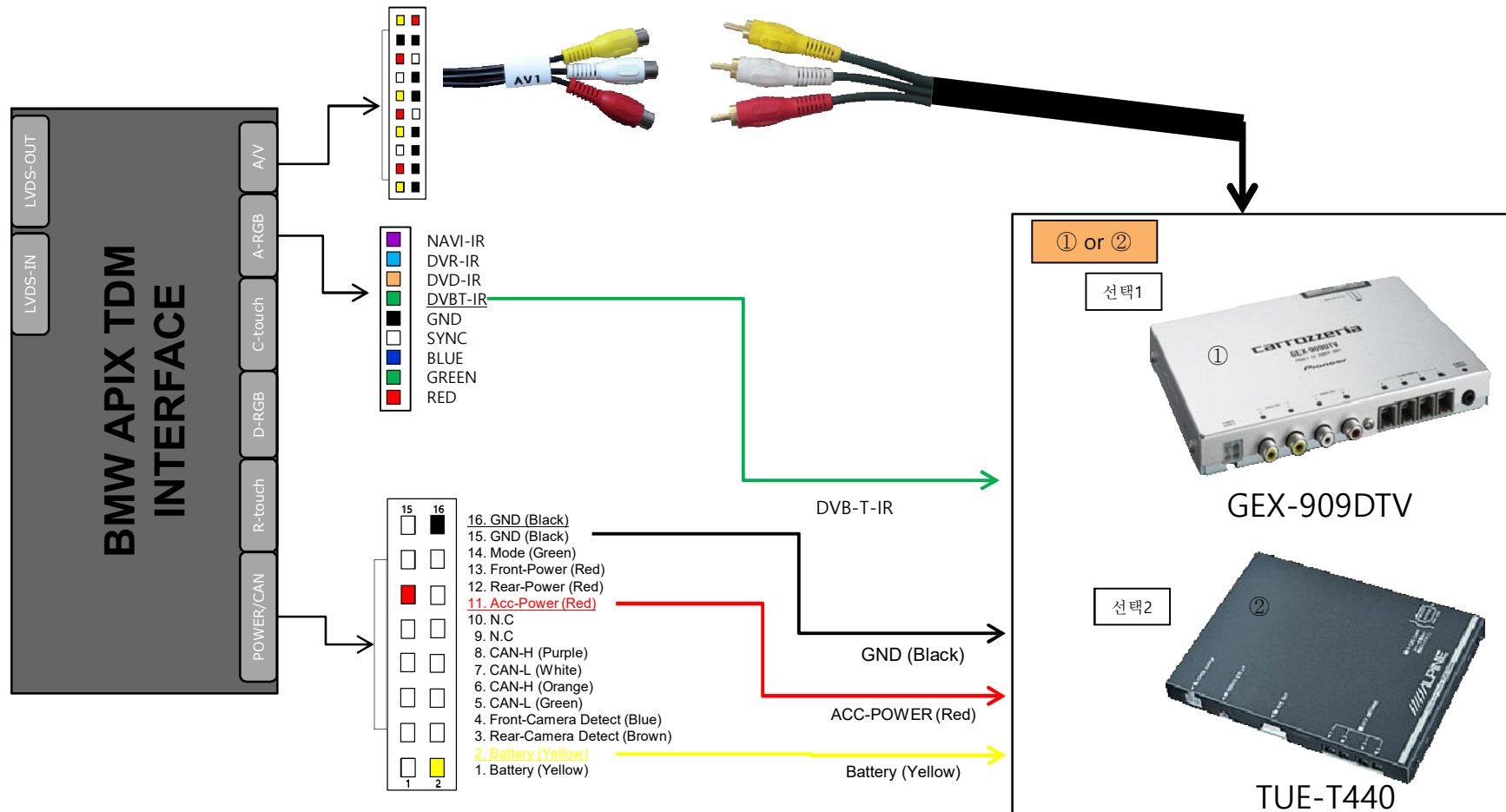
10. Install Manual

2. Installation Navigation Connection



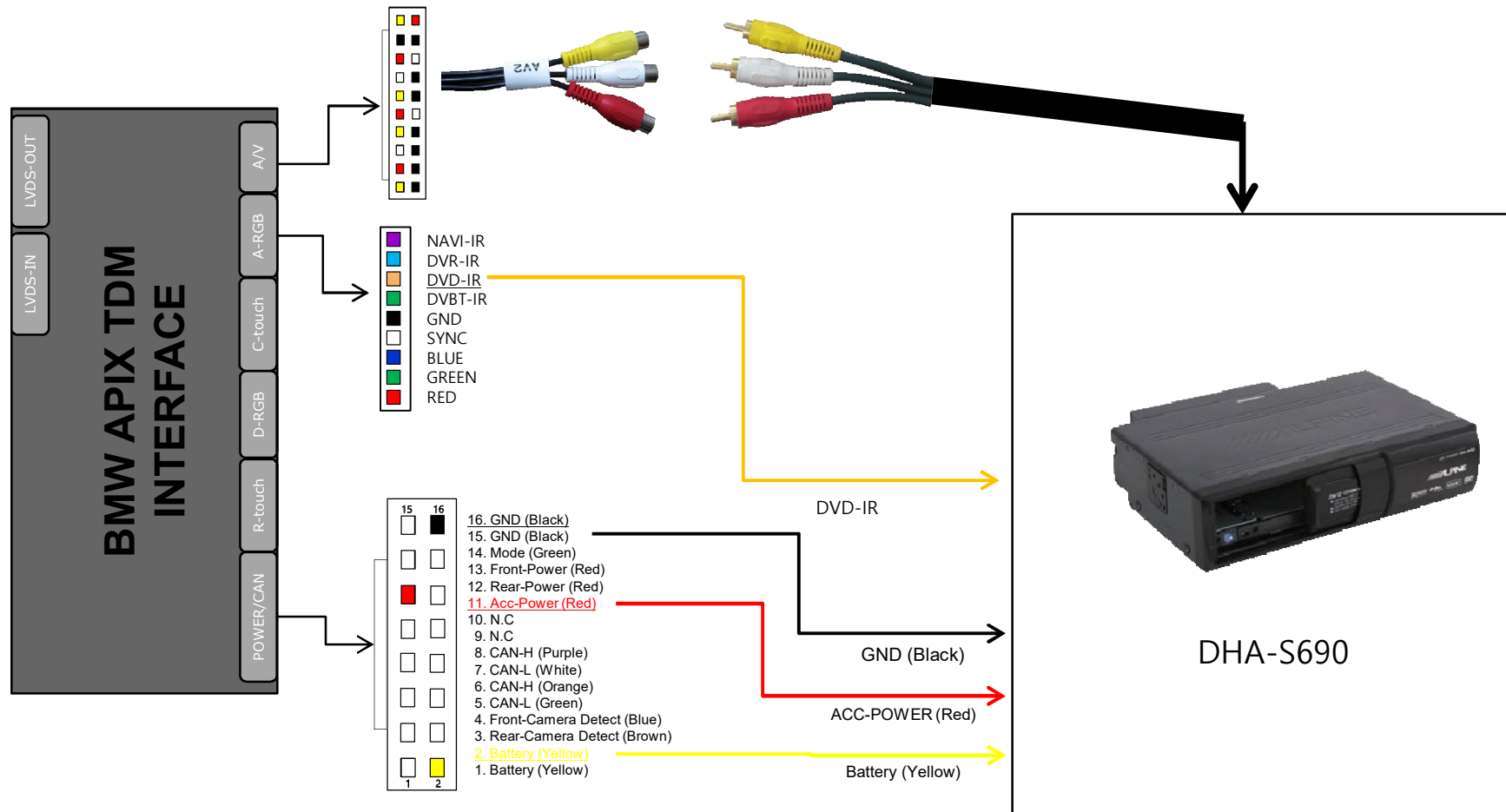
10. Install Manual

3. Installation DVB-T(DMB) Remote Control Connection



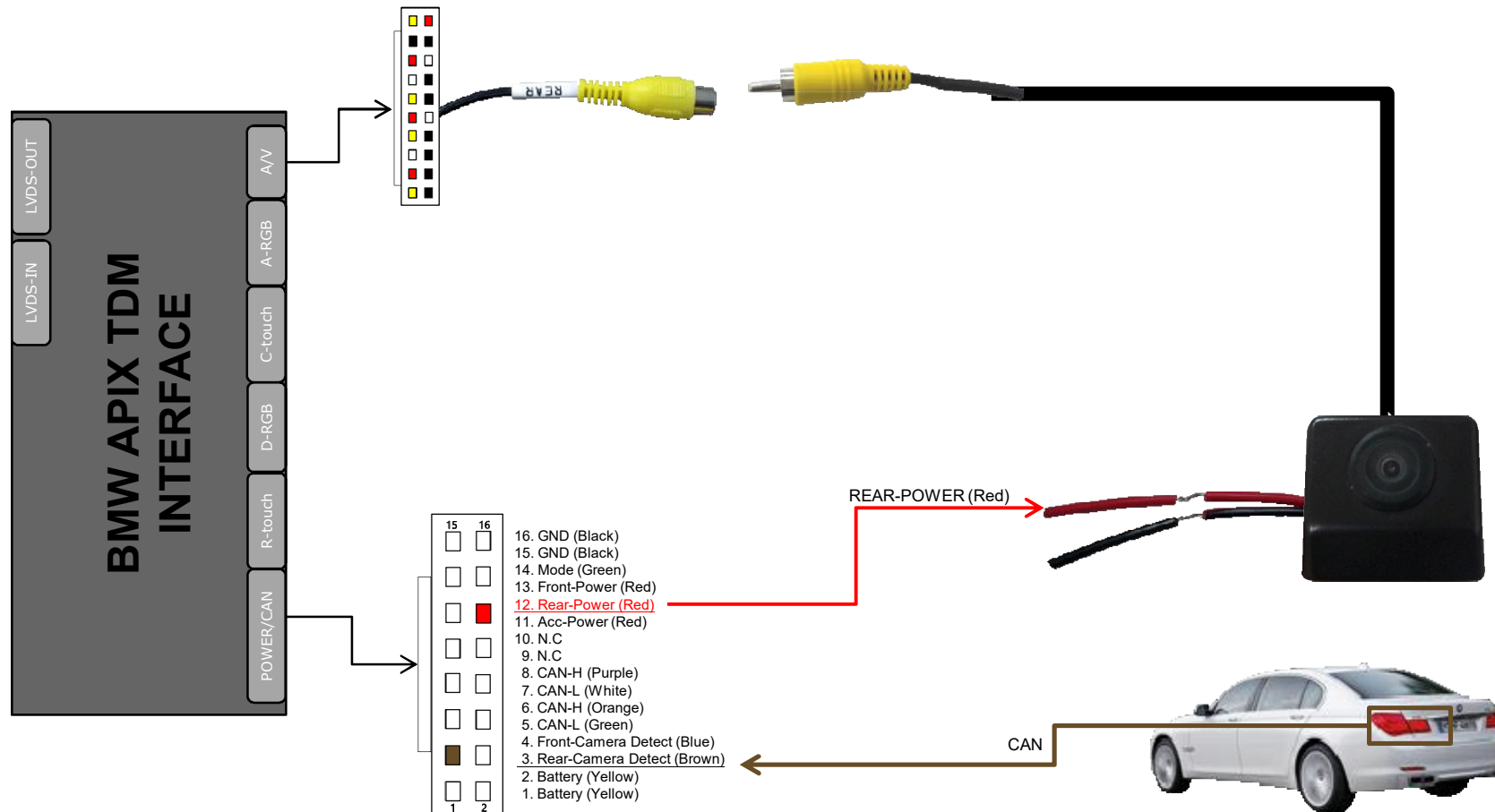
10. Install Manual

4. Installation DVD Remote Control Connection



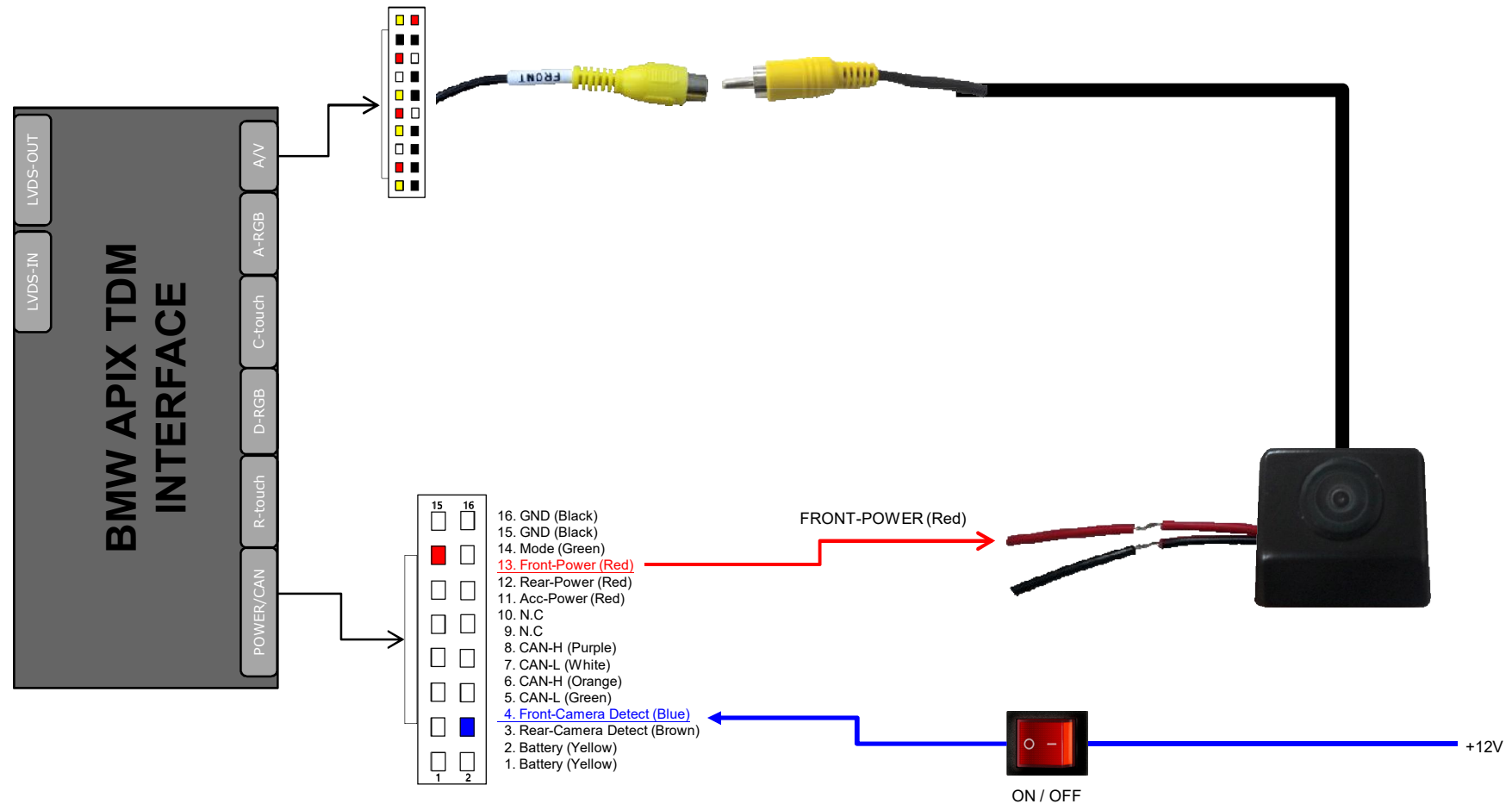
10. Install Manual

5. Installation External Reverse(Rear) Camera Connection : OSD Screen selection WIRE



10. Install Manual

6. Installation External Front Camera Connection : OSD Screen selection WIRE



10. Install Manual – 8.8”

①



Disassemble the bottom cover

②

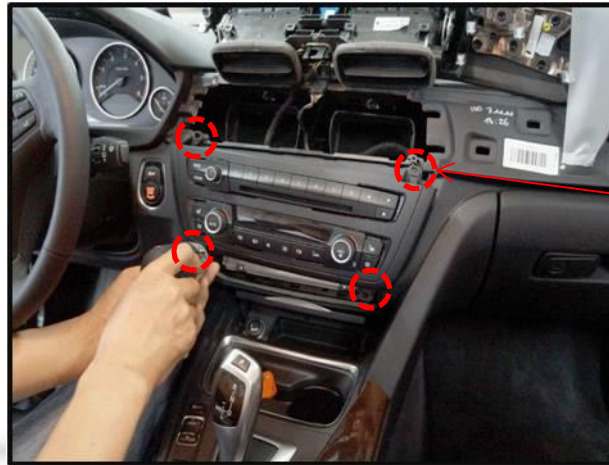


Disassemble the bottom cover

③



④



10. Install Manual – 8.8"

⑤

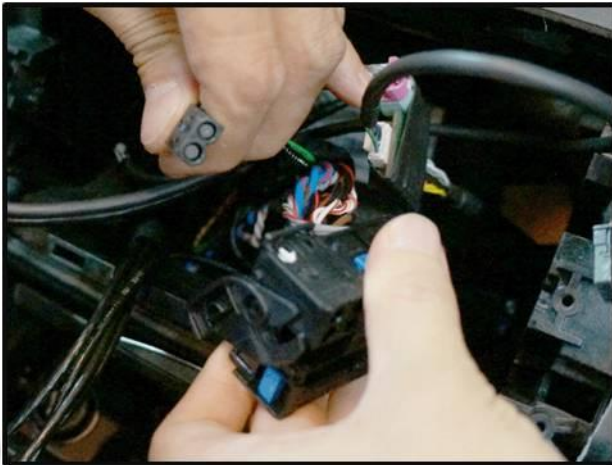


⑥



Disassemble OEM Power Cable

⑦



Moving MOST Cable

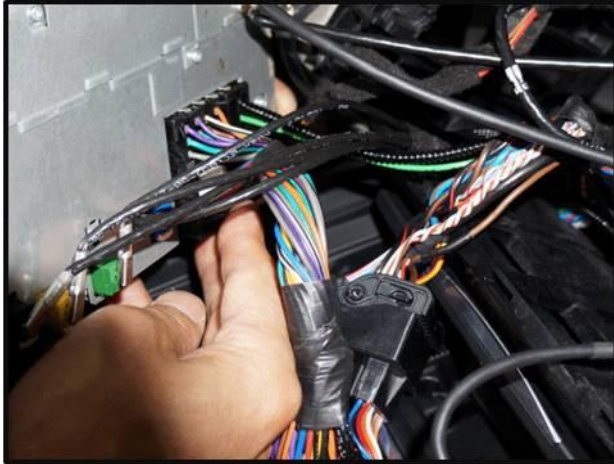
⑧



Connect OEM Power Cable and Supplied Power Cable

10. Install Manual – 8.8"

⑨



Connect Power Cable to Command

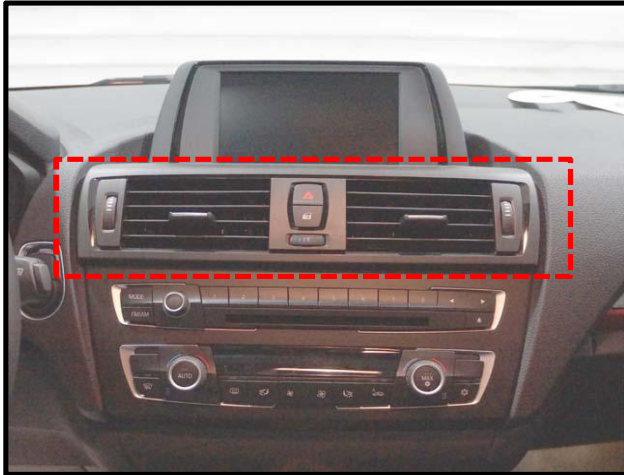
⑩



Connect the supplied LVDS cable to the monitor

10. Install Manual – 6.5"

①

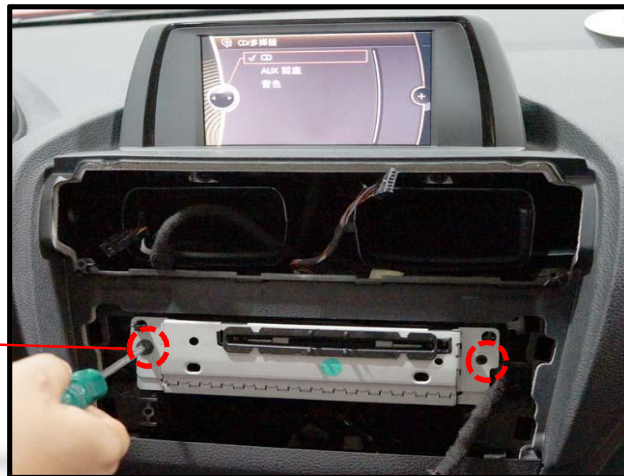


Disassemble the bottom cover

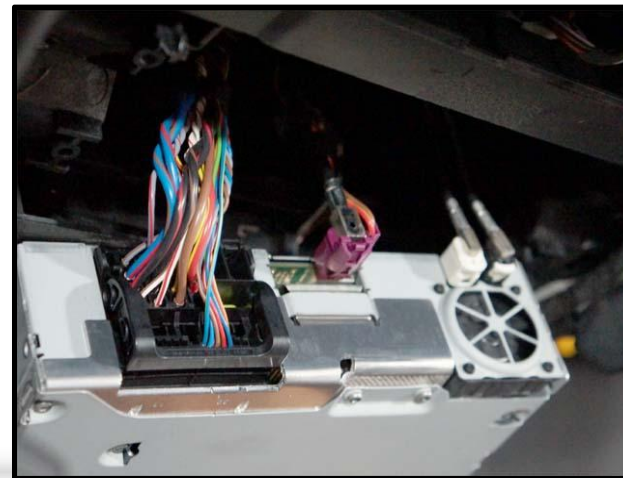
②



③



④



Disassemble OEM Power Cable

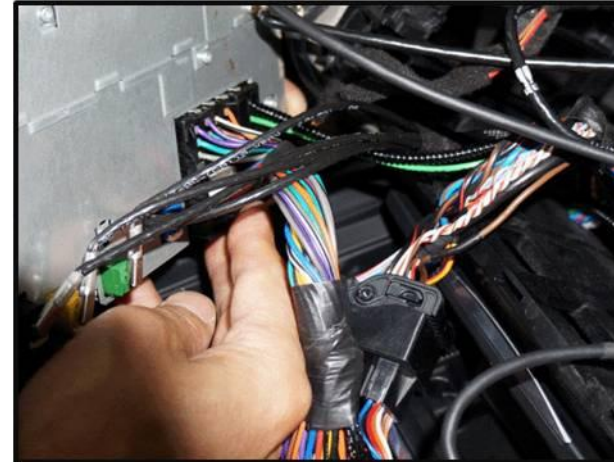
10. Install Manual – 6.5"

⑤



Connect OEM Power Cable and Supplied Power Cable

⑥



Connect Power Cable to Command

⑦



Connect the supplied LVDS cable to the monitor

11. Q & A

1. Check the LED status first when interface failure..
 - If there is no abnormality after the power is applied, the green LED flashes in units of 1 second.
 - If the red LED flashes for 1 second, there is no.
 - If the red LED is on continuously, the interface itself is bad.
 - If nothing turns on, check that the power and CAN signals are properly connected
2. Q : When the screen turns black
A : LVDS cable itself is bad or bad contact.
3. If you find any symptoms with these symptoms, please contact your distributor

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