

BMW APIX PAS (Rear Camera Interface)



MODEL	BM-PAS-160525
DATE	2016.07.30

Main Spec.

1. Input Spec. (MULTI VIDEO INTERFACE)

- 1 x CVBS(REAR CAMERA) Input. (Rear camera source)
- 1 x CVBS(FRONT CAMERA) Input. (Front camera source)
- 1 x Analog RGB Input (Navigation System output)

2. Output Spec.

- 1 x LVDS Output (LCD Operation)

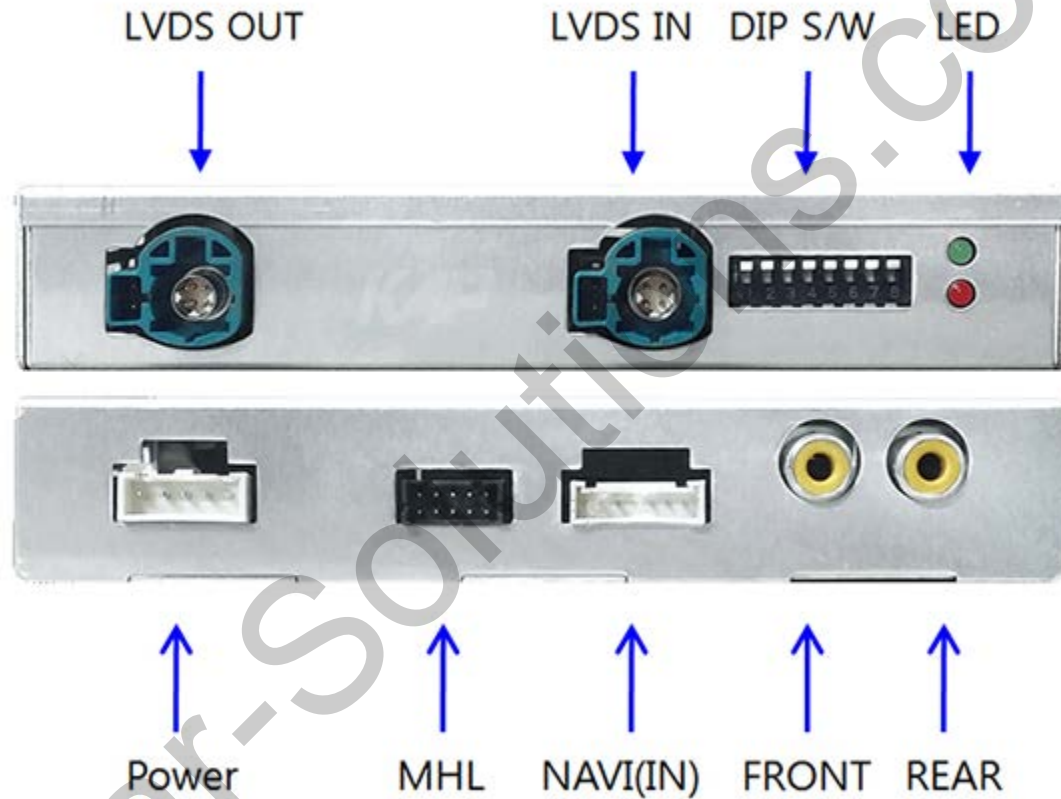
3. Power Spec.

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

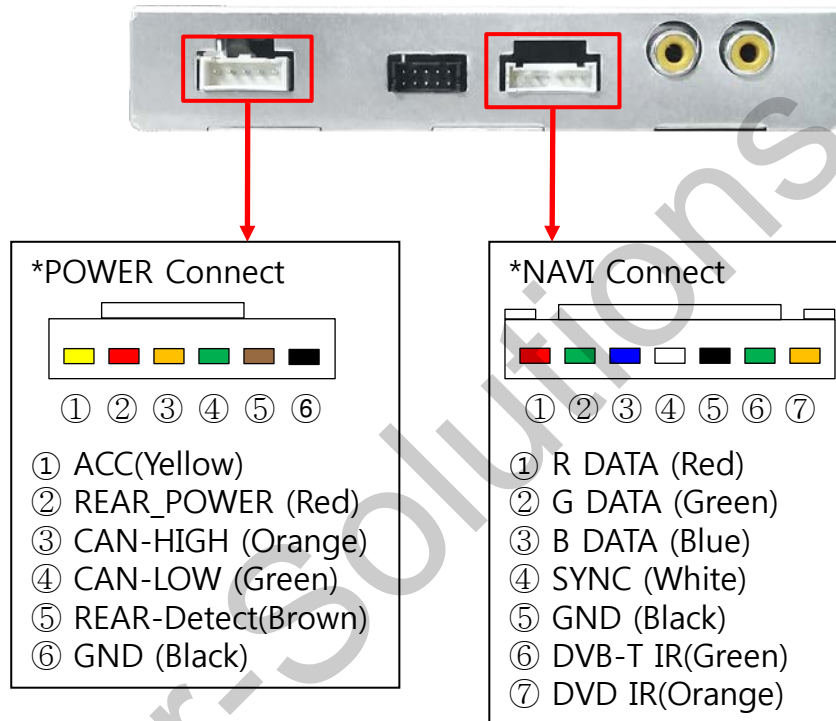
4. Switch Input mode

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

External Appearance



Connector Pin Assignment



Product Composition



Interface 1 EA



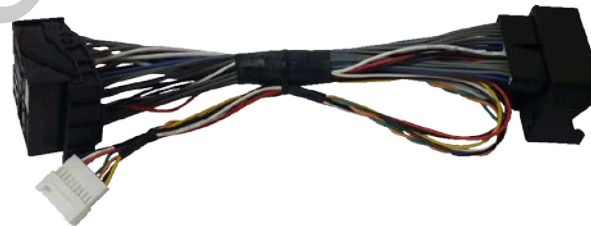
Power Cable(5P) 1 EA



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



RGB NAVI(7P)Cable 1 EA



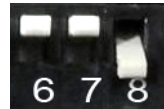
Option : Plug & Play Power Cable

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	MHL	ON : Not Used OFF : Used
5	N.C	
6	CAR type SEL	Right Picture
7		
8		

* DIP S/W Example



F30 6.5"



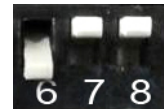
F20 8.8"



F30 8.8"



X3, X4 8.8"



F15 10.2"



MINI 6.5"



MINI 8.8"

I-DRIVE CONTROL

BMW I-Drive Control : Mode Change



8.8"



6.5"



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

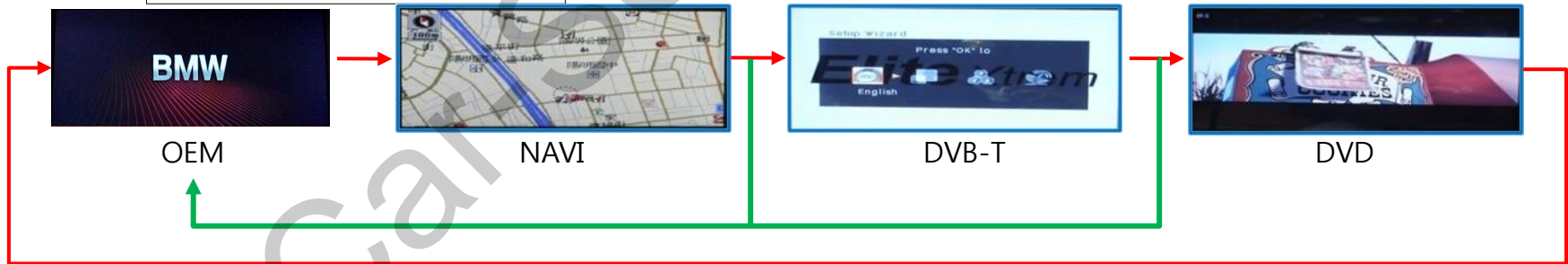


"8" button -> on/off selection to OSD MENU

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

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

Push Long : Mode Change
Push Short : Back to OEM Menu



I-DRIVE CONTROL

BMW I-Drive Control : Screen Size Change (PIP)

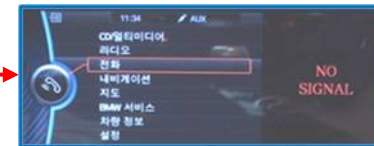


8.8"



6.5"

Push Long : SIZE Change (PIP)



RearCamera Full size



RearCamera middle size



RearCamera None

I-DRIVE CONTROL

BMW I-Drive Control : DVB-T(DTV) Control



8.8"



6.5"

- DVB-T UI off

- ④ Push Short : channel Up
- ⑤ Push Short : channel Down
- ⑤ Push Long : SCAN



- DVB-T UI on

- ④ Push Short : channel Up
- ⑤ Push Short : channel Down
- ⑤ Push Long : SCAN
- ① Push Short : Selection
- ① Push Long : DVB-T UI on
- ② UI move to left
- ③ UI move to right

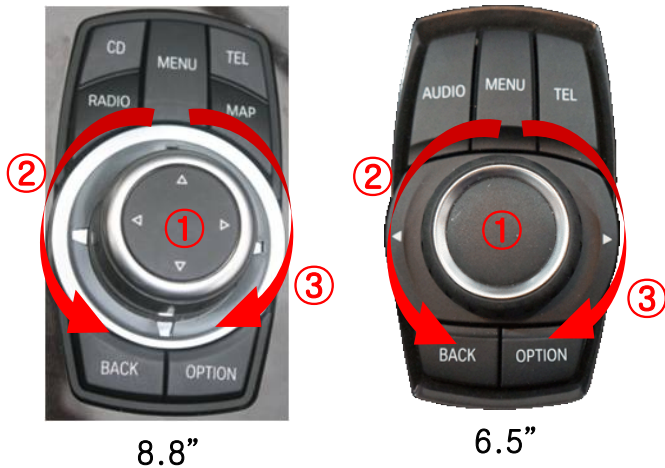


MENU	UI DVB-T(DMB)	OEM
Config	SteeringWheelBtn	Off
Option	BookMarkBtn	Off
Image	UI DVB-T(DMB)	On Off
Screen	UI DVD	On
Parking	Reset	Execute Cancel

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

I-DRIVE CONTROL

BMW I-Drive Control : DVD Control



- DVD UI on
- ① Push Short : Selection
- ① Push Long : DVB-T UI on
- ② UI Move to left
- ③ UI Move to right



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

DVD UI -> on/off selection to OSD MENU

OSD(On Screen Display) Control

I-Drive Control : OSD Mode



8.8"



6.5"

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OPTION	Push 6sec : OSD ON Push 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

Mode State

MENU	Config	
		NAVI
Config	NAVI-RGB	KD900(WVGA)
Option	NAVI-AV	Default
Image	DVD	ELT-980XU Slim
Screen	DVB-T(IMB)	ELT-DVBT20
Parking	BlackBox	Default

First Menu

Second Menu

Third Menu

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OSD(On Screen Display) Control

First Menu	Second Menu	Third Menu	Action
Config	NAVI-RGB	GI4000	Selection Korea 480*234
		GI8000	Selection Korea 800*480
		GI80003G	Selection Korea 800*480
		PANASONIC	Selection Taiwan 480*234
		PT-GPS800A	Selection China 480*234
		KD900(WVGA)	Selection China 800*480
		KD900(WQVGA)	Selection China 480*234
		PURENAV18	Selection Taiwan 480*234
		SINGAPURA	Selection Singapore 480*234
	NAVI-AV		
	DVD	ELT-980XU Slim	Selection Europe
		LCKT	Selection China
		SANYO	Selection China
		NECBOX DVA-3206	Selection China
		AMPIRE DVX-101	Selection Singapore
		Pioneer	Selection Japan
	DVB-T(DMB)	ELT-DVBT20	Selection Europe
		NET-770	Selection Korea
		MediaLife	Selection Korea
		Panasonic	Selection Japan
		Pioneer	Selection Japan
		GEX-DTV	Selection Japan
		TUE-T440	Selection Japan
		Portugal	Selection Europe
		DVB-T20010HD	Selection Europe
		DVBT55-HD	Selection Europe
		CMMB-ZWa	Selection China
	Reset	Execute	Config Menu all Reset

ELT-980XU SLIM LCKT SANYO NECVOX AMPIRE DVX101 PIONEER



ELT-DVBT20 Pioneer Portugal GEX-DTV



DVB-T2010HD DVBT55HD CMMB-ZW TUE-T440



OSD(On Screen Display) Control

OSD Control : DVB-T Model Selection



8.8"



6.5"

1. Press **OPTION** Button 6sec, OSD menu on.

MENU	Config	FRONT
Config	NAVI-RGB	WP9200_WVGA
Option	NAVI-AV	Default
Image	DVD	GB-DAB
Screen	DVB-T(DMB)	GB-DVBET
Parking	BlackBox	Default

2. Push **5** or **3** Move to right side menu

MENU	Config / NAVI-RGB	NAVI
Config	NAVI-RGB	WP9200_WVGA
Option	NAVI-AV	Default
Image	DVD	ELT-980XU Slim
Screen	DVB-T(DMB)	CMMB-DTV_201
Parking	BlackBox	Default

3. Push **2** or **2** move to DVB-T(DMB) menu.

MENU	Config / DVB-T(DMB)	NAVI
Config	NAVI-RGB	CMMB-DTV_201
Option	NAVI-AV	BGU-6US-PL
Image	DVD	TUE-T440
Screen	DVB-T(DMB)	Philips-DTV
Parking	BlackBox	Freeway-DTV

4. Push **5** or **3** move to right side menu

MENU	Config / DVB-T(DMB)	NAVI
Config	NAVI-RGB	CMMB-DTV_201
Option	NAVI-AV	BGU-6US-PL
Image	DVD	TUE-T440
Screen	DVB-T(DMB)	Philips-DTV
Parking	BlackBox	Freeway-DTV

5. Push **2** or **2** find device, Push **5** or **3** to select.

MENU	Config / DVB-T(DMB)	NAVI
Config	NAVI-RGB	CMMB-DTV_201
Option	NAVI-AV	BGU-6US-PL
Image	DVD	TUE-T440
Screen	DVB-T(DMB)	Philips-DTV
Parking	BlackBox	Freeway-DTV

OSD(On Screen Display) Control

REAR Detect control



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	Os

Rear detect selection to OSD MENU

GEAR : 'R' on, Enter reverse mode
'R' off, Release reverse mode

PDC : Work as OEM (same as OEM)
Button LED on, Enter reverse mode
Button LED off, Release reverse mode

WIRE : Not use CAN
Connect rear detect wire to REAR LIGHT (+12V)

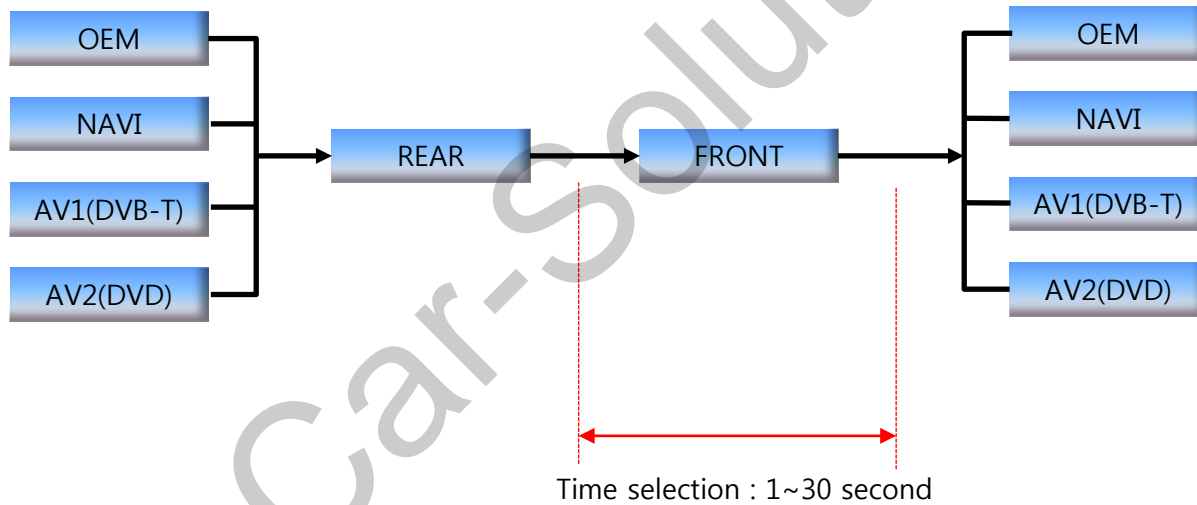
OSD(On Screen Display) Control

OSD setting – Front Camera Auto Mode

– Option → RearCam-RcvOpt → On setting

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

Off mode : 0 second
On mode : 1~30 second



OSD(On Screen Display) Control

First Menu	Second Menu	Third Menu	Action
Option	RearCam-Type	OEM	Original Camera
		ExtDevice	Use aftermarket Rear camera
	RearCam-Power	ON	Rear camera get +12V consistently
		AUTO	Rear camera get +12V when reverse gear on
		OFF	Shut out the power supply.
	FrontCam-Type	OEM	Original Camera
		ExtDevice	Use aftermarket Front camera
	FrontCam-Power	ON	Front camera get +12V consistently
		AUTO	Front camera get +12V when reverse gear on
		OFF	Shut out the power supply.
	RearCam-RcvOpt	ON	Show Frontcam 25sec after rear mode.
		OFF	Default
	Reset	Excute	Option Menu all Reset

OSD(On Screen Display) Control

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	Excute	Option Menu all Reset

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	Excute	Option Menu all Reset



<< Brightness >>



<< Saturation >>



<< Contrast >>

OSD(On Screen Display) Control

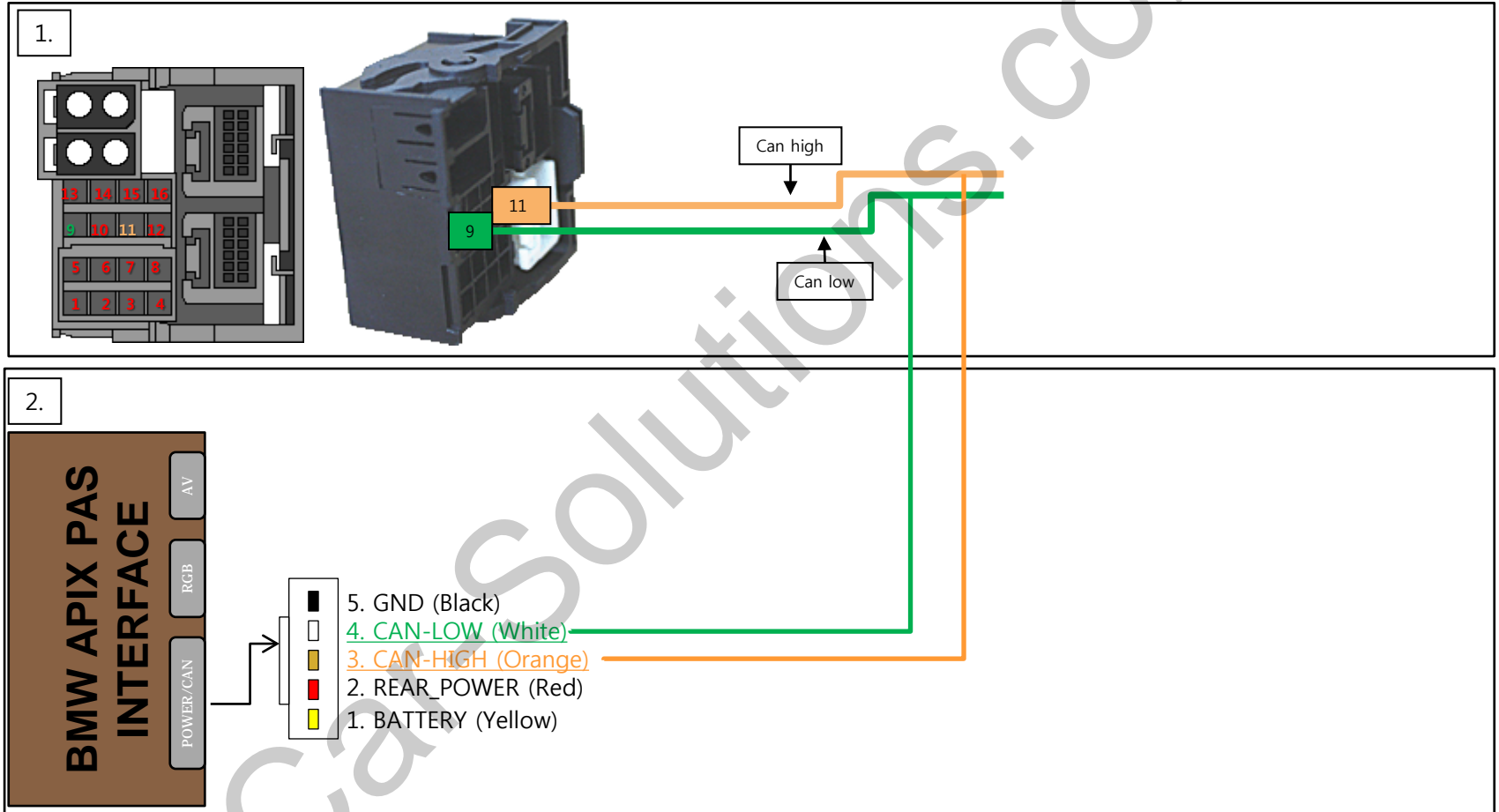
OSD Setting- Screen Mode

- Horizontal
- Vertical
- Scaler X Up
- Scaler X Down
- Scaler Y Up
- Scaler Y Down

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

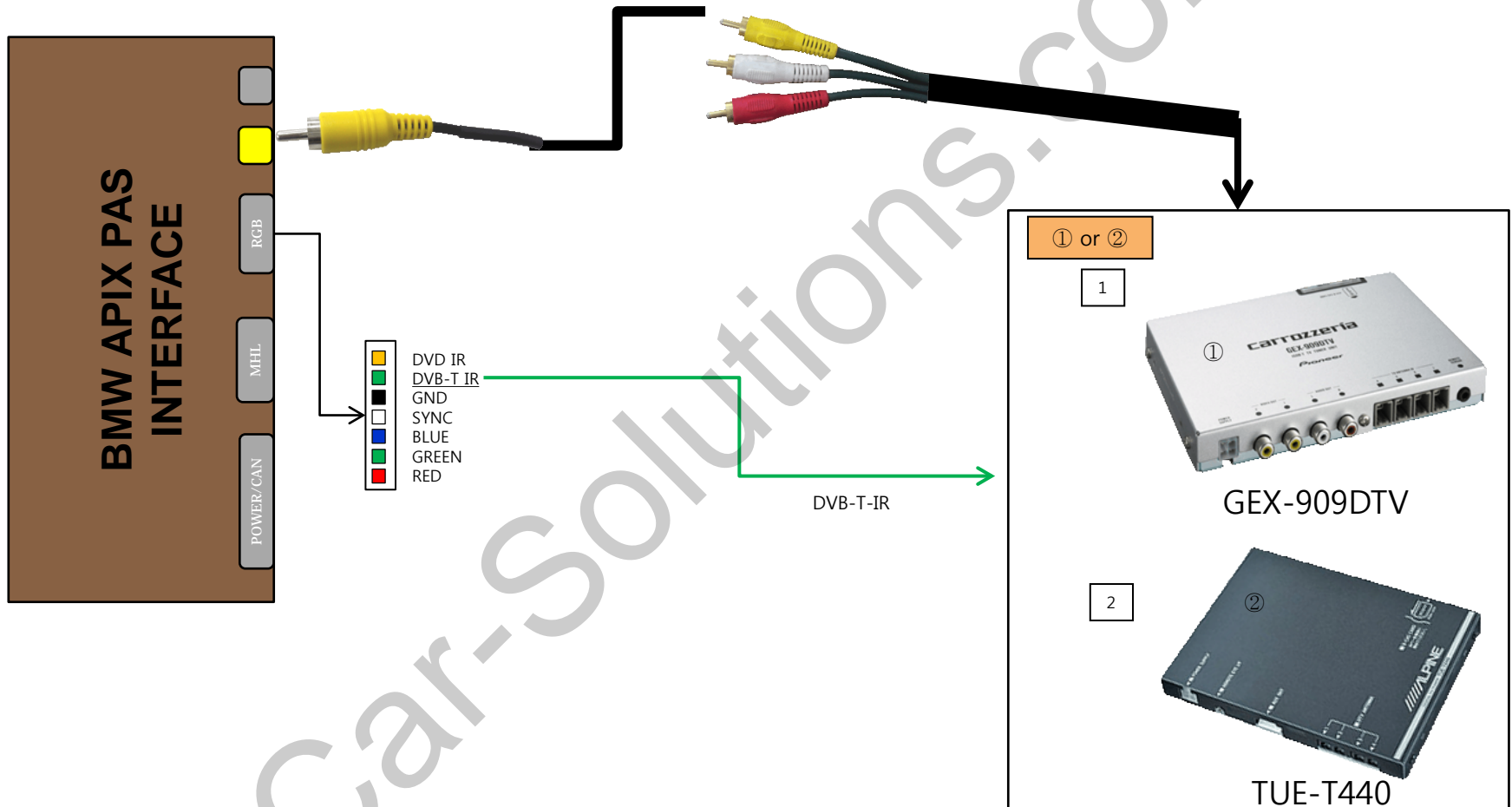
Install Manual

1. Installation Power, CAN Connection



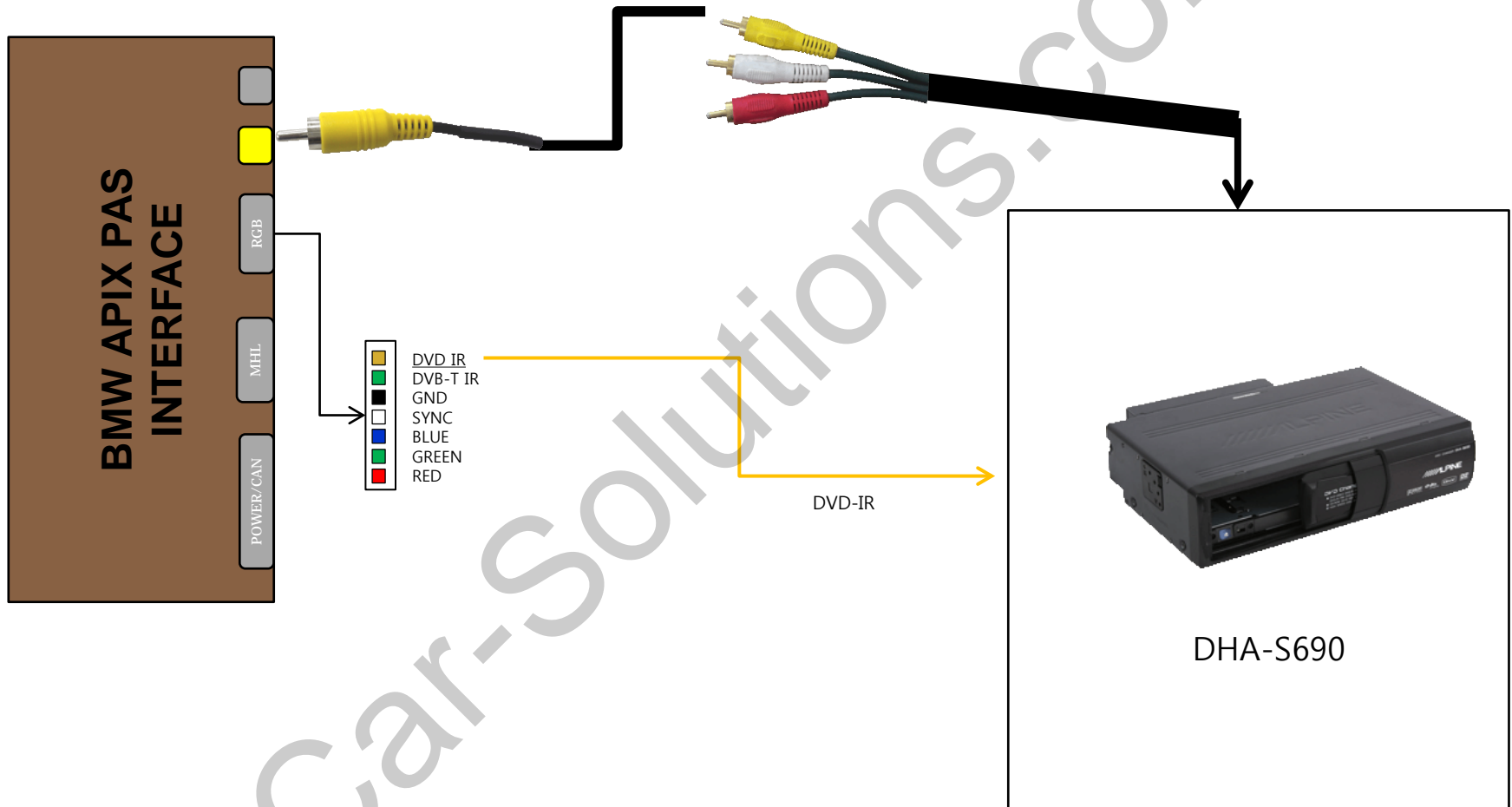
Install Manual

2. Installation DVB-T Remote Control Connection



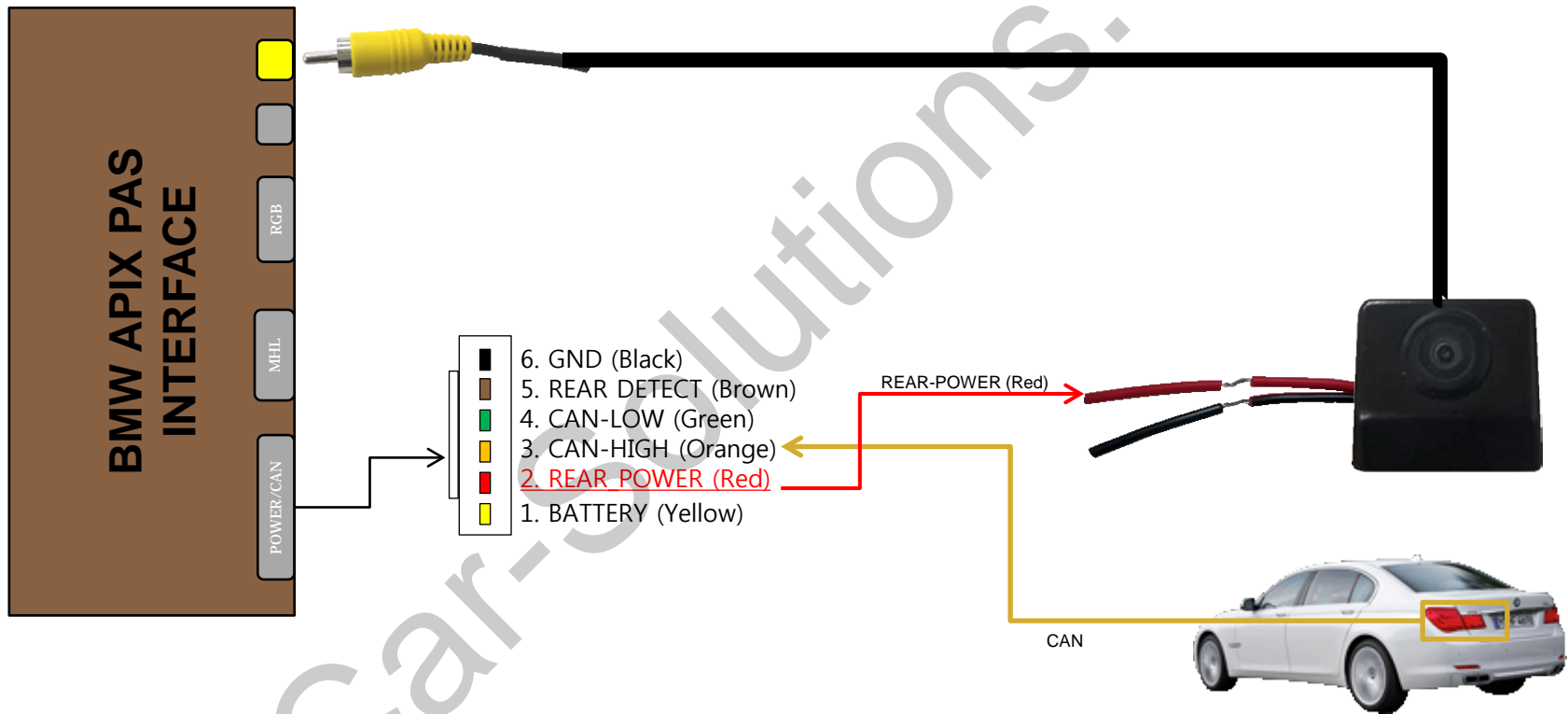
Install Manual

3. Installation DVD Remote Control Connection



Install Manual

4. Installation External Reverse(Rear) Camera Connection : OSD Screen selection CAN



Install Manual – 8.8"



Install Manual – 8.8"

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⑥



Take out OEM Power Cable

⑦



⑧

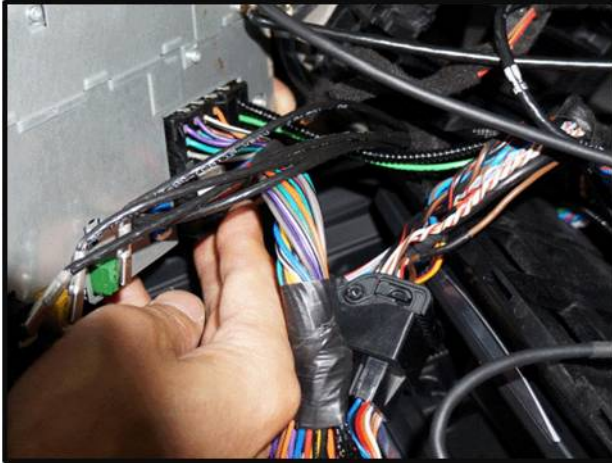


Move MOST Cable to Our connector
support@car-solutions.com

www.car-solutions.com

Install Manual – 8.8"

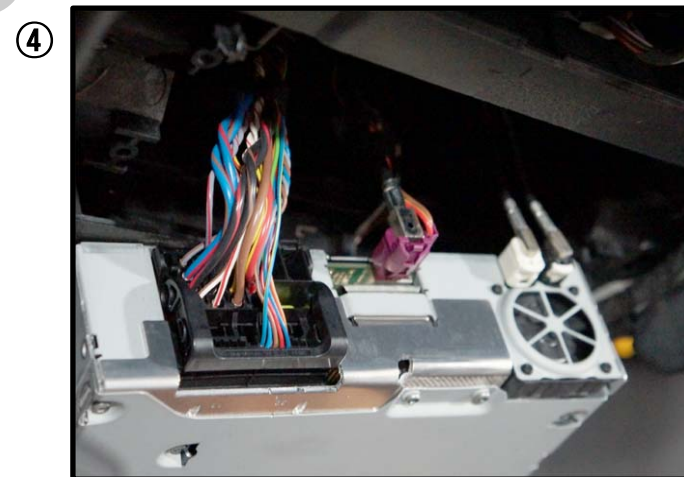
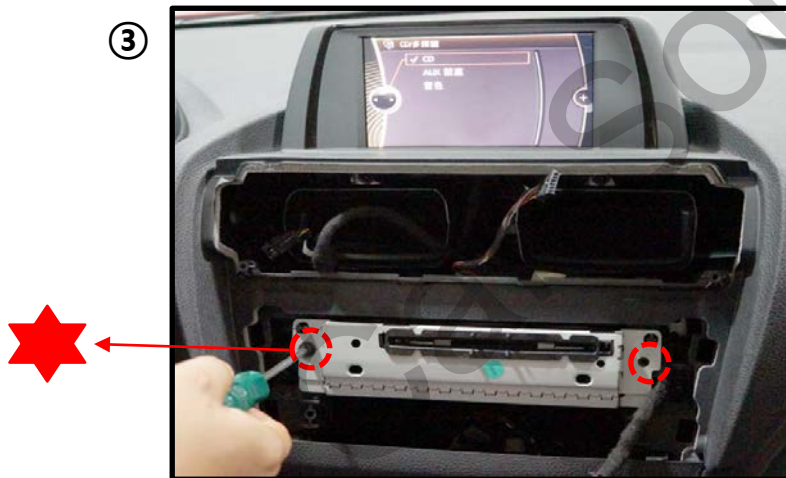
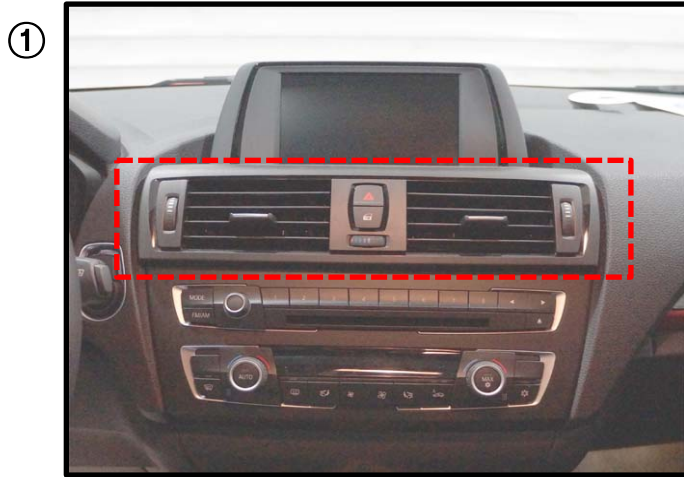
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Install Manual – 6.5"

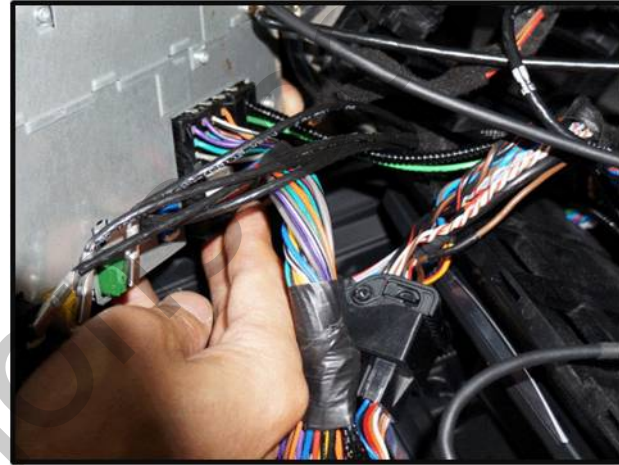


Install Manual – 6.5

⑤



⑥



⑦



Q & A

1. If Interface has a problem, Please check LED.



- ACC on (12v), If Interface does not have a problem; GREEN LED is blinking every 1 sec..
- RED LED is turn on (not blinking), Interface has a problem.
- RED LED is turn off every 1 sec, there is no input.
- RED LED and GREEN LED both are not turn on, check the CAN or ACC connection.

2. Q : LCD screen black

A : LVDS Cable problem or, connection problem.

3. When DTV or DVD mode, cannot control with I-Drive

- Check IR cable, and DTV or DVD device' s ground cable and Interface ground cable join together with using extra cable.
- Check device in OSD menu

Q & A (HDMI TO RGB)

4. HDMI to RGB Audio connection

