PCM 5.0 TDC3
PORSCHE ONLY INTERFACE

VIDEO INTERFACE

MODEL.	PCM-50-190313
D A T E .	2019.11.27

Spec

1. Input Spec. (MULTI VIDEO INTERFACE)

- 1 x Digital RGB Input (Navigation System output)

- 1 x Analog RGB Input (Navigation System output)

- 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)

2. Output Spec.

- 1 x LCD 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
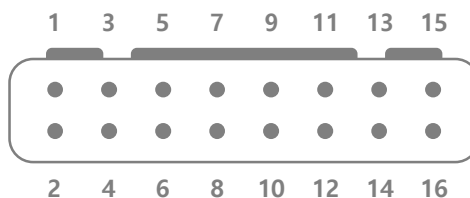
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External Appearance

Interface

LED · PROGRAM · IMAGE · DIP S/W · LVDS IN · LVDS OUT

PCM 5.0 - TDC3

VIDEO INTERFACE with CAN

PCM- 50 - 190219

POWER /CAN · R-Touch · DIGITAL RGB · NAVI · A/V

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Connector Pin Assignment

1 **POWER Connect (16Pin)**

```
1    3    5    7    9    11   13   15
2    4    6    8    10   12   14   16
```

No	1	3	5	7	9	11	13	15
Color	RED	BROEN	WHITE	BLUE	GREEN		RED	BLACK
Connect	ACC	REAR DET	CAN-L	CAN-L	CAN-L	N.C	FRONT VCC	GND
No	2	4	6	8	10	12	14	16
Color		BLUE	PURPLE	RED	ORANGE	RED		
Connect	N.C	FRONT DET	CAN-H	CAN-H	CAN-H	REAR VCC	N.C	N.C

2 **NAVI TOUCH Connect (4Pin)**

```
1    2    3    4
```

No	1	2	3	4
Color	RED	GREEN	BLUE	WHITE
Connect	Y-	X-	Y+	X+

3 **NAVI Connect (7Pin)**

```
1    2    3    4    5    6    7
```

No	1	2	3	4	5	6	7
Color	RED	GREEN	BLUE	WHITE	BLACK	GREEN	ORANGE
Connect	R DATA	G DATA	B DATA	SYNC	GND	DVB-T IR	DVD IR

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Product Composition

Board

Power Cable

LVDS Cable

A/V Cable

RGB NAVI Cable

OSD Board

Dip Switch Setting

OFF : ▲UP
ON : ▼DOWN

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	N.C	
5	N.C	
6	**CAR type SEL**	Bottom Picture
7		
8		

Car Type Select
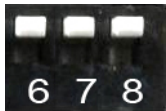
Porsche(2019)
Cayenne 12"
911 11"

Porsche(2018-2019)
Panamera 12"

Porsche(2019)
Macan 11"

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Mode Change

Porsche(2019) Cayenne 12"

• **DIP-SW 1 must off when use (Install) Navigation device**

NO	Button	Function
1	NAV	Mode Change
	HOME	
2	Other Button	Return OEM Dispaly

• You can choose "**HOME**" or "**NAV**" button on OSD menu

KAP

Mode Change

Porsche(2019) Macan 11″

• **DIP-SW 1 must off when use (Install) Navigation device**

NO	Button	Function
1	NAV	Mode Change
2	OPTION	Changing the screen ratio in AV1 and AV2 modes

Mode Change

Porsche(2019) 911 11"

• **DIP-SW 1 must off when use (Install) Navigation device**

NO	Button	Function
1	RETURN	Mode Change

※ To use a Return button, You need to enable the RET in the button selection in the OSD options.

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Touch Control

DVBT, DVD Control

Press Touch (Anywhere)

Press Icon

DVBT

DVD
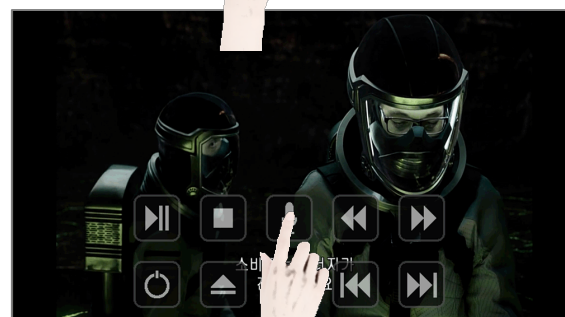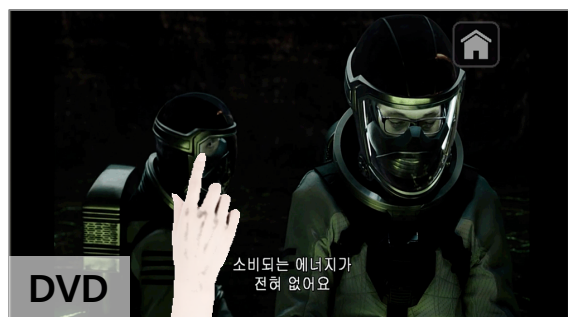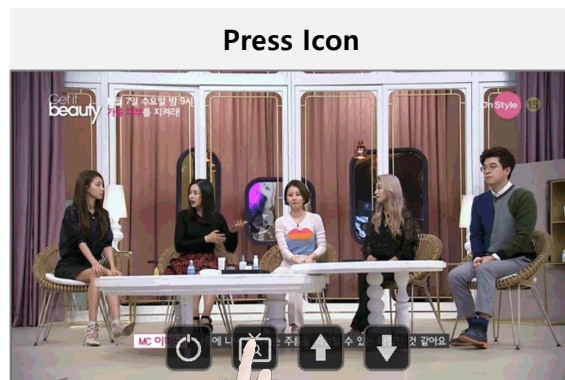
OSD Control

OSD(On Screen Display) Control Board

MENU	SEL	UP	DOWN
●	●	●	●
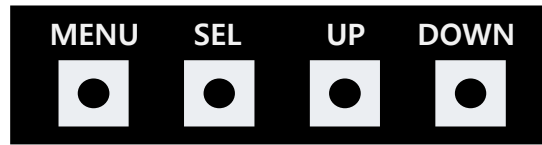
MENU	• The OSD screen can be switched ON/OFF • Return to previous menu
SEL	• Select the currently active item • If the OSD screen is off, mode changes can be made.
UP	• Move up from the menu • Increase the selected item value
DOWN	• Move down from the menu • Decrease the selected item value

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**

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OSD Control

Config

First Menu	Second Menu	Third Menu	Description
Config	NAVI-RGB	DIGTAL-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
	Reset	Execute	Reset to default value of Config menu

OSD Control

Option

First Menu	Second Menu	Third Menu	Description
Option	NAVI COM	OFF	Disable feature
		GU NV17 :	Set up manufacturer of woodworking device for UART Touch use
	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	CAN	Detected by CAN
		WIRE	Detected by Rear-Det Wire
		OFF	Disable feature
	AV Mode	On	Video(CVBS) Input (If Rear Cam - Type is OEM)
		Off	Disable feature
	FrontCam-Type	OEM	Original Camera
		ExtDevice	Equipped with external camera
	FrontCam-Det	CAN	Detected by CAN
		WIRE	Detected by Front-Det Wire
	FrontCam-RcvOpt	ON	After RearCam shows FrontCam and returns to previous state
		OFF	Disable feature

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OSD Control

Option

First Menu	Second Menu	Third Menu	Description
Option	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
	BUTTON	NAV	Use the NAV button
		RET	(911 only) Use the RET button
	Reset	Execute	Option Menu all Reset

OSD Control

Option ▶ FrontCam-RcvOpt

Front Camera Auto Mode
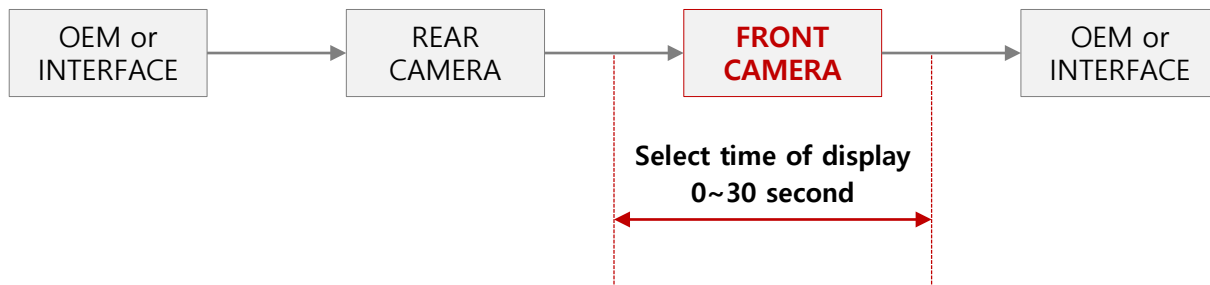
0 second
FrontCam-RcvOpt Menu OFF

1~30 second
FrontCam-RcvOpt Menu ON & time control

OSD Control

Image

NAVI – RGB Menu

First Menu	Second Menu	Third Menu	Description
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	Option Menu all Reset

DVD / DVBT / NAVI-AV,REAR,FRONT Menu

First Menu	Second Menu	Third Menu	Description
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	Option Menu all Reset

Brightness

Contrast

Saturation

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OSD Control

Screen

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

OSD Control

OSD

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

OSD Control

IR learning function

PROGRAM

OSD CABLE

10 - IR

7 - OSD(RED)

6 - OSD(BLACK) / GND

5 - 5V

Example Image

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

OSD

5V   GND   IR
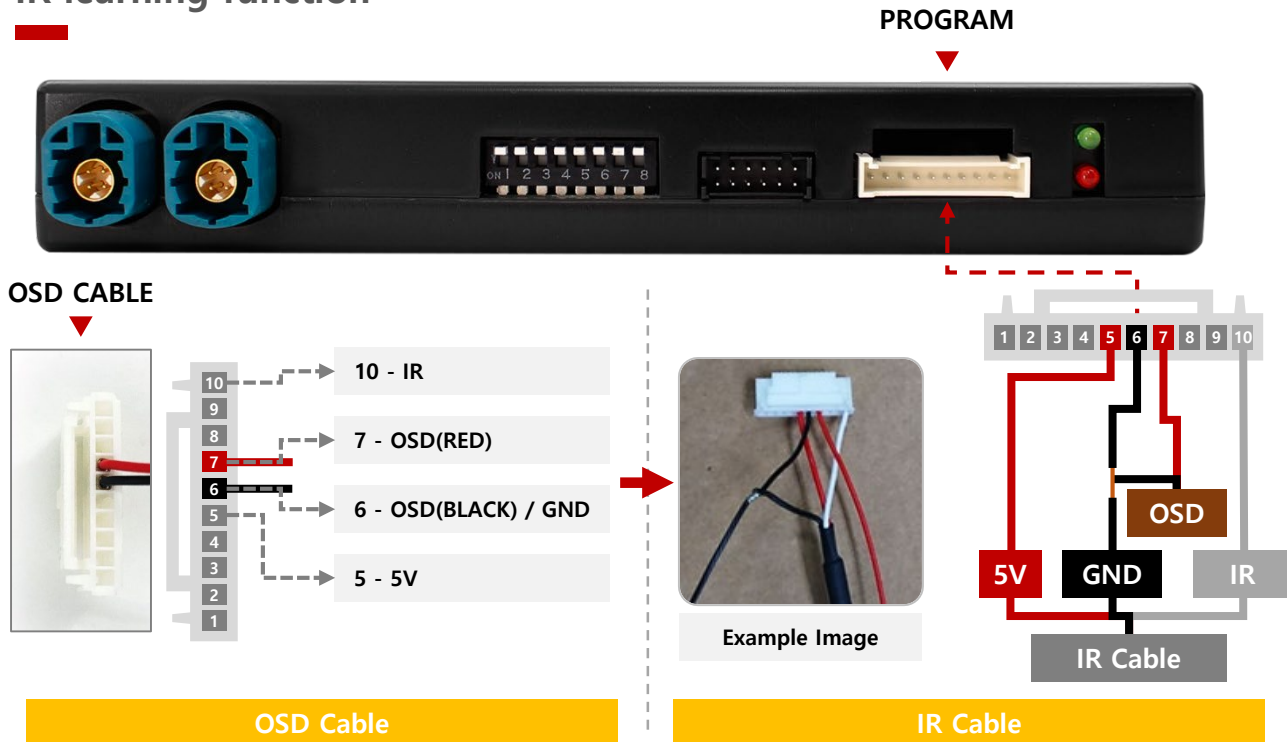
IR Cable

| OSD Cable | IR Cable |

Create an IR cable - Modify the OSD cable as shown above.

MENU	IR-Ctrl / DVB-T(DMB)	NAVI
OSD	DVB-T(DMB)	Sel **Learn** Cancel
IR-Ctrl	DVD	Sys
Utility		
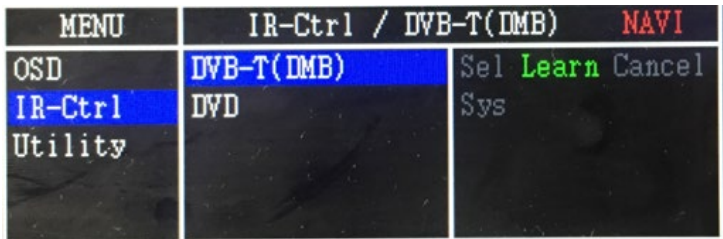
1. In DVB-T / DVD menu, select User in Sys (OSD list) or User (learned contents).
2. Select Learn from the OSD menu.

MENU	IR-Ctrl / DVB-T(DMB)	NAVI
OSD	All-Clear	
IR-Ctrl	POWER	____ ____
Utility	SCAN	____ ____
	CH+	____ ____
	CH-	____ ____
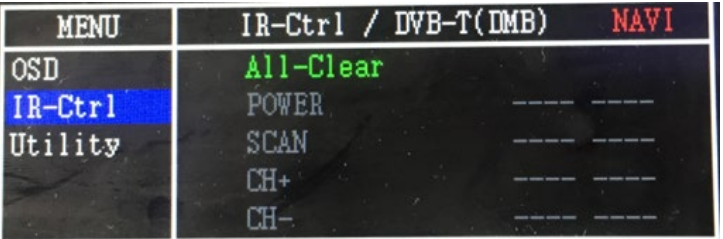
3. Before using IR learning function, select All-Clear to delete existing stored data.

MENU	IR-Ctrl / DVB-T(DMB)	DVB-T
OSD	New Code:	____ ____
IR-Ctrl	Cfm Code:	____ ____
Utility	Save Clr Cancel	
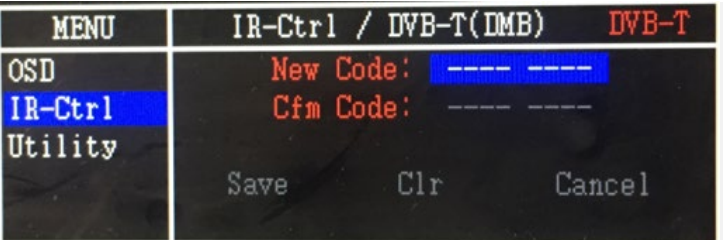
4. Press the remote control button to be used in each ICON once in New Code, press once again in Cfm Code to confirm it is the same and save it.

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OSD Control

Utility

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

- Last Source : **FDS302KRX-171004**

| FD | S3 | 02 | KR | X | - | 17 | 10 | 04 |

Motor Model
FD=FORD
BM=BMW
BE=BENZ
MA=MASERATI
LX=LEXUS

PIP Model
S3=Sync3
PP=PIP
V=LVDS

Hardware Version

National
CN=CHINA
KR=KOREA
JP=JAPAN
US=U.S.A

Special Version

Software Year

Software Month

Software Version

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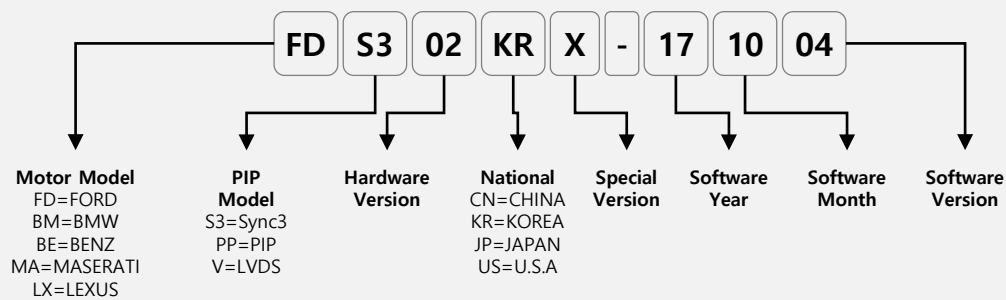
OSD Control

Installation Navigation (Digital) Connection

- **OSD setting must be done before Navigation can be used**

1 **Screen Settings (Digital)**

Config ▶ NAVI RGB ▶ DGT-0000

MENU	NAVI-RGB	NAVI
Config	NAVI-RGB	DGT-0000
Option	DVB-T(DMB)	
Image	DVD	
Screen	RearCam	
Parking	Reset	

- *DGT = DIGITAL*
- *When DGT (DIGITAL) is selected, it is output to the screen.*
- *Select the product name of the connected navigation*
- *If NV-17 is not available, you can select any of DGT menu.*

2 **UART Touch Settings**

Option ▶ NAVI COM ▶ Product Name

MENU	NAVI COM	NAVI
Config	UI DVD	NAVTEK
Option	ScrChg-Btn	NV17
Image	NAVI COM	
Screen	Reset	
Parking		

- *Select the product name of the connected navigation*

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Install Manual

1-1. Installation ROiK Navigation Connection

DIP switch
No.1 is OFF

ON |

Interface Dip Switch

ON | 1 2 3 4 5 6 7 8

No	Button
1	Using Navigation
2,3	AV1, 2 Setting
6,7,8	Select vehicle type

LED	PROGRAM	IMAGE	DIP-S/W	LCD-IN	LCD-OUT

PCM5.0 – TDC3
VIDEO INTERFACE with CAN

POWER/CAN	TOUCH	HD	NAVI	A/V

HDMI Cable

15 16

16. N.C
15. GND (Black)
14. Mode (Green)
13. Front-Power (Red)
12. Rear-Power (Red)
11. N.C
10. N.C
 9. KEY (Pink)
 8. N.C
 7. N.C
 6. N.C
 5. N.C
 4. Front-Camera Detect (Blue)
 3. Rear-Camera Detect (Brown)
 2. N.C
1. ACC (Red)

1 2

GND (ROIK-10)

Battery (ROIK-10)

ACC 12V (ROIK-10)

CAR

POWER	UART	LVDS OUT	RGB OUT	AV IN/OUT	SW	GPS	WIFI/BT

ANDROID NAVIGATION

DEBUG

ROiK 10

MODE SW	R-KEY	USB3.0	T-KEY	HDMI OUT	USB2	USB1	MicroSD

ROiK-10 Dip Switch

ON 1 2

ON 1 2 3 4

No	Button
1	Use DIGITAL LVDS
2	Use ROiK GPS Antenna

No	Button
1	Use UART Touch
2	-
3	-
4	-

- **After completing the cable connection, OSD and device setting must be completed.**

- **See next page**

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Install Manual

1-2. Installation ROiK Navigation Connection

- After connecting the cables, you need to set the OSD to use the UART touch
- Since it is not touch yet, **Interface controls OSD board / ROiK with Mouse Control**

INTERFACE Settings (Control with OSD board)

1 **Config ▶ NAVI RGB ▶ DIGITAL-ROIK**

MENU	NAVI-RGB	NAVI
Config	NAVI-RGB	DIGITAL-G-NOM-A
Option	DVB-T(DMB)	DIGITAL-INAVI
Image	DVD	DIGITAL-GI7000A
Screen	RearCam	DIGITAL-ROIK
Parking	Reset	DIGITAL-NV100

2 **Option ▶ NAVI COM ▶ GU**

MENU	NAVI COM	NAVI
Config	UI DVD	Off
Option	ScrChg-Btn	GU
Image	NAVI COM	HMS
Screen	Reset	FINE
Parking		KD900

NAVIGATION Settings (Control with Mouse)

3 **Device Setting → Select Interface→ GU**

Device Settings		RESET SETTINGS RESTART DEVICE
External Speaker	☑	Analog RGB Settings
Softkey Enable	☑	Touch Calibration
Softkey Position(Side/Bottom)	☑	Set User Boot Logo
Softkey Auto Hiding	OFF	
Startup App	OFF	
Select Interface	GU	
Cooling Fan	☑	
HDMI Out	☐	

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Install Manual

Installation Navigation Connection

LCD-OUT	LCD-IN	DIP-S/W	IMAGE	PROGRAM	LED

PCM5.0 – TDC3
VIDEO INTERFACE with CAN

POWER/CAN	TOUCH	HD	NAVI	A/V

HDMI Cable

X+
Y+
X-
Y-

Resistive Touch

DVD-IR
DVBT-IR
GND
SYNC
BLUE
GREEN
RED

Analog RGB

Digital Navigation

or

Analog Navigation

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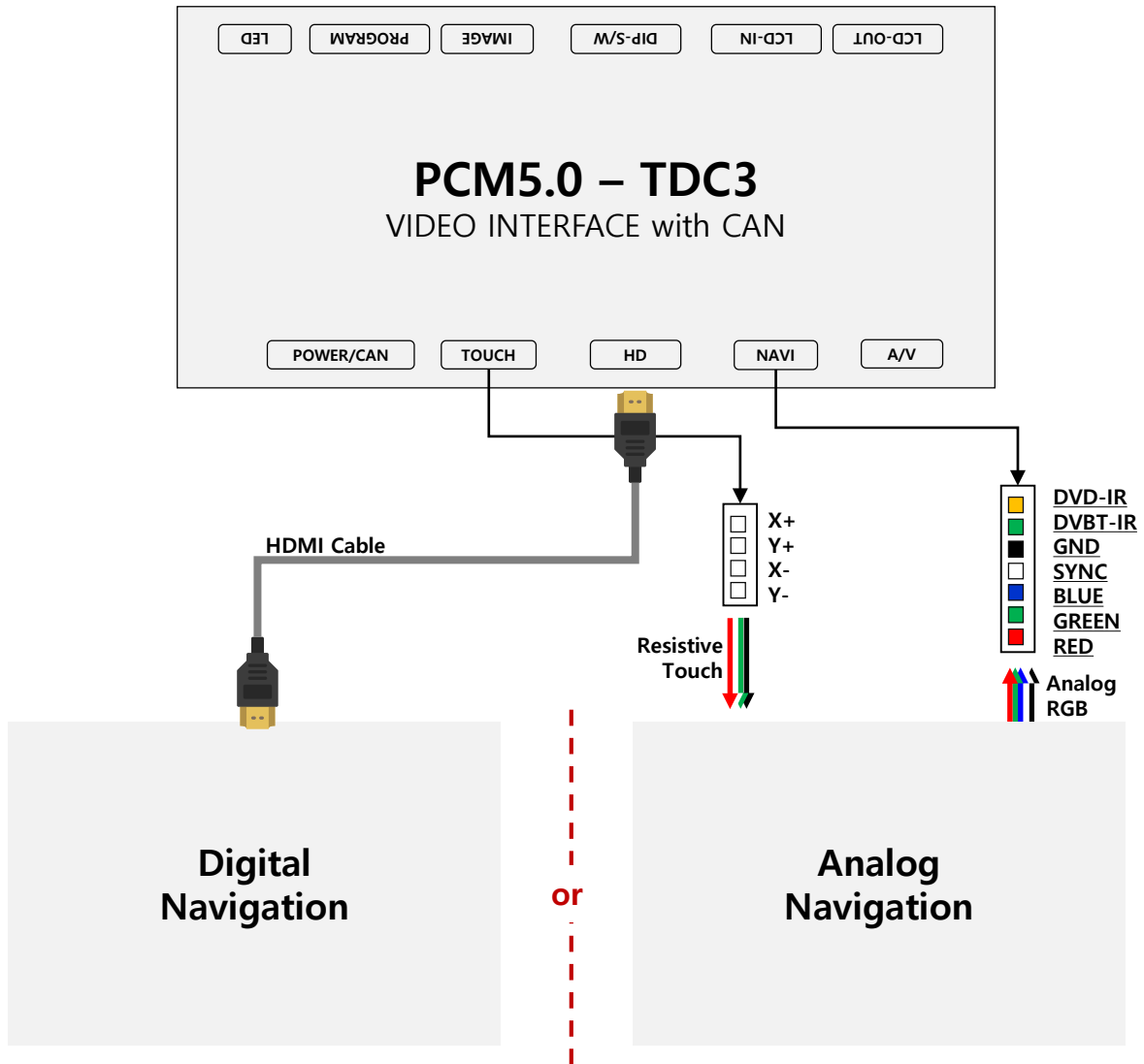
Install Manual

Installation AV1/DVB-T/DMB Remote Control Connection

LED	PROGRAM	IMAGE	DIP-S/W	LCD-IN	LCD-OUT

PCM5.0 – TDC3
VIDEO INTERFACE with CAN

POWER/CAN	TOUCH	HD	NAVI	A/V

DVD-IR
DVBT-IR
GND
SYNC
BLUE
GREEN
RED

AV1

DVB-T-IR

GEX-909DTV   OR   TUE-T440

KAP
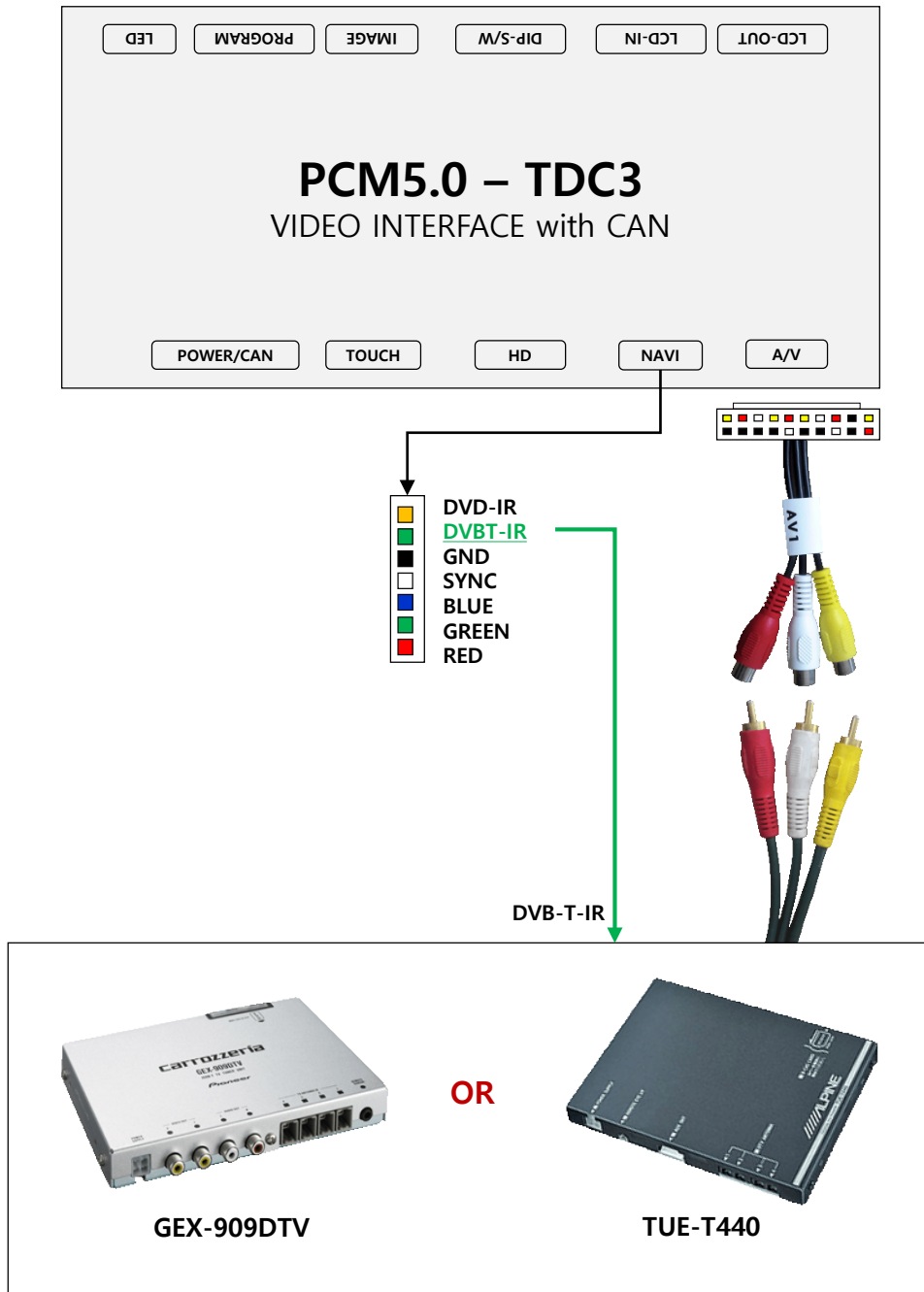
Install Manual

Installation AV2/DVD Remote Control Connection

LCD-OUT	LCD-IN	DIP-S/W	IMAGE	PROGRAM	LED

PCM5.0 – TDC3
VIDEO INTERFACE with CAN

POWER/CAN	TOUCH	HD	NAVI	A/V

DVD-IR
DVBT-IR
GND
SYNC
BLUE
GREEN
RED

AV1

DVD-IR

DHA-S690
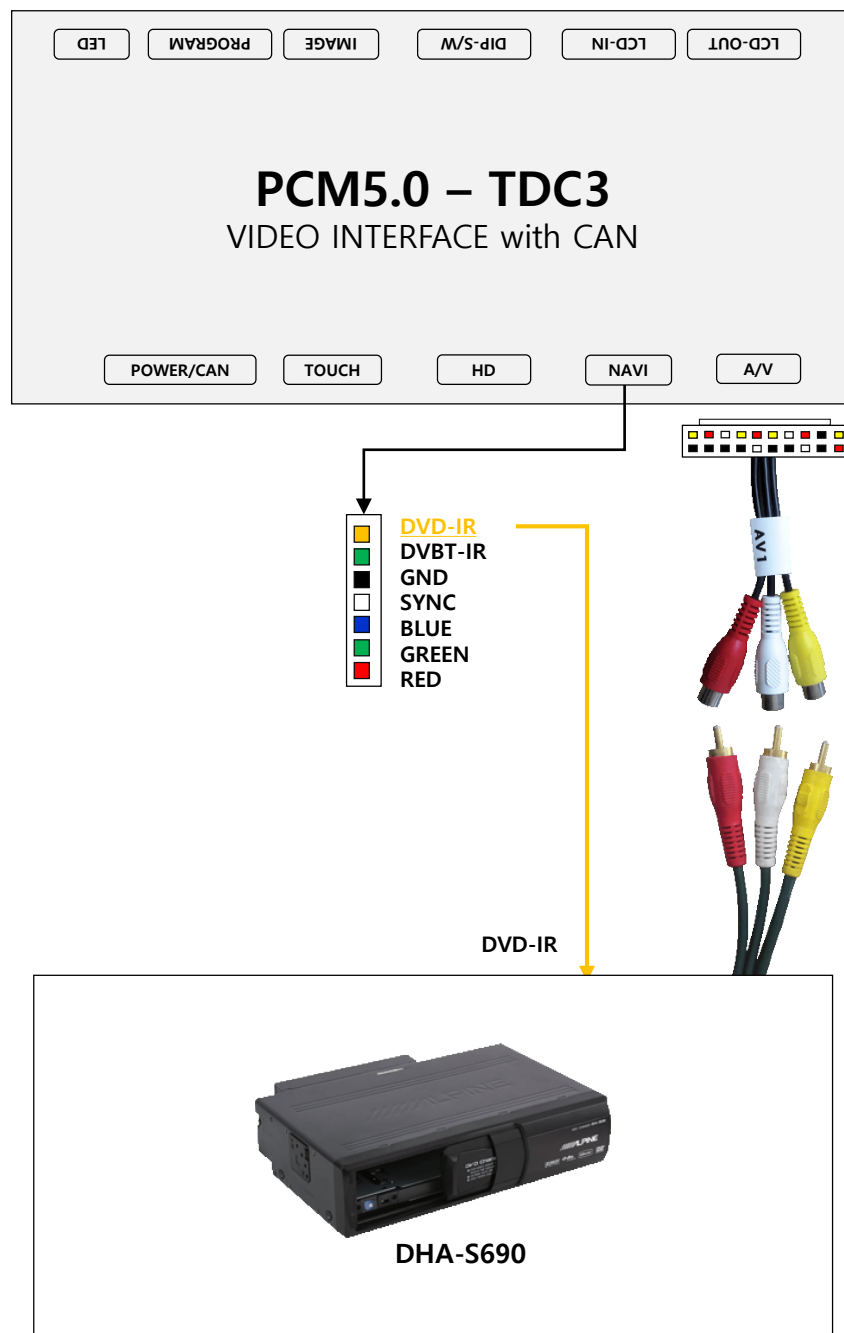
Install Manual

Installation External Reverse(Rear) Camera Connection

OSD Screen selection CAN

PCM5.0 – TDC3
VIDEO INTERFACE with CAN

LCD-OUT | LCD-IN | DIP-S/W | IMAGE | PROGRAM | LED

POWER/CAN | TOUCH | HD | NAVI | A/V

16. GND (Black)
15. GND (Black)
14. Mode (Green)
13. Front-Power (Red)
12. Rear-Power (Red)
11. N.C
10. N.C
9. KEY (Pink)
8. N.C
7. N.C
6. N.C
5. N.C
4. Front-Camera Detect (Blue)
3. Rear-Camera Detect (Brown)
2. N.C
1. ACC (Red)

REAR-POWER (Red)

CAN

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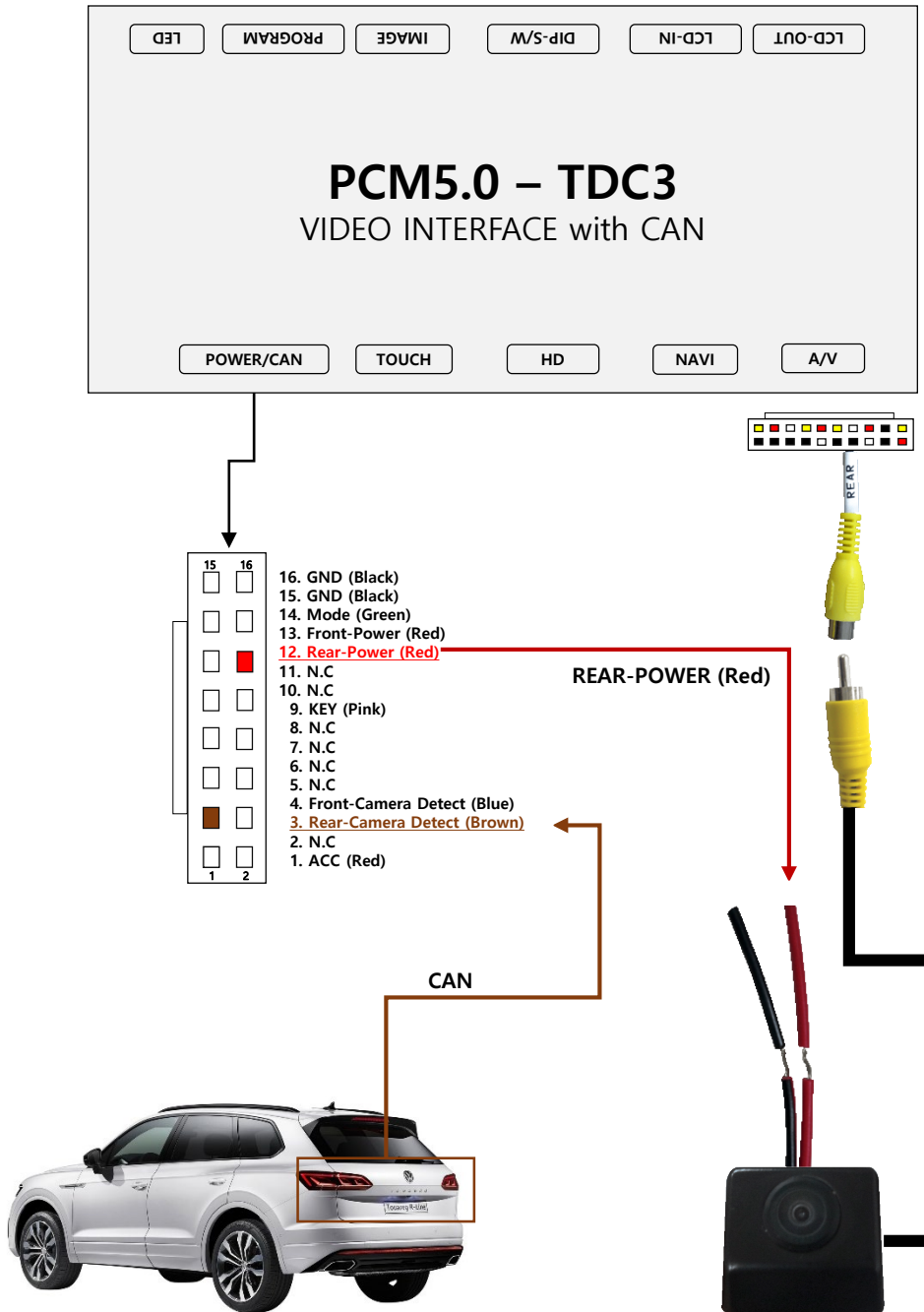
Install Manual

Installation External Front Camera Connection

PCM5.0 – TDC3
VIDEO INTERFACE with CAN

LCD-OUT　LCD-IN　DIP-S/W　IMAGE　PROGRAM　LED

POWER/CAN　TOUCH　HD　NAVI　A/V

REAR

16. GND (Black)
15. GND (Black)
14. Mode (Green)
13. Front-Power (Red)
12. Rear-Power (Red)
11. N.C
10. N.C
9. KEY (Pink)
8. N.C
7. N.C
6. N.C
5. N.C
4. Front-Camera Detect (Blue)
3. Rear-Camera Detect (Brown)
2. N.C
1. ACC (Red)

FRONT-POWER (Red)

ON / OFF

+12V

KAP
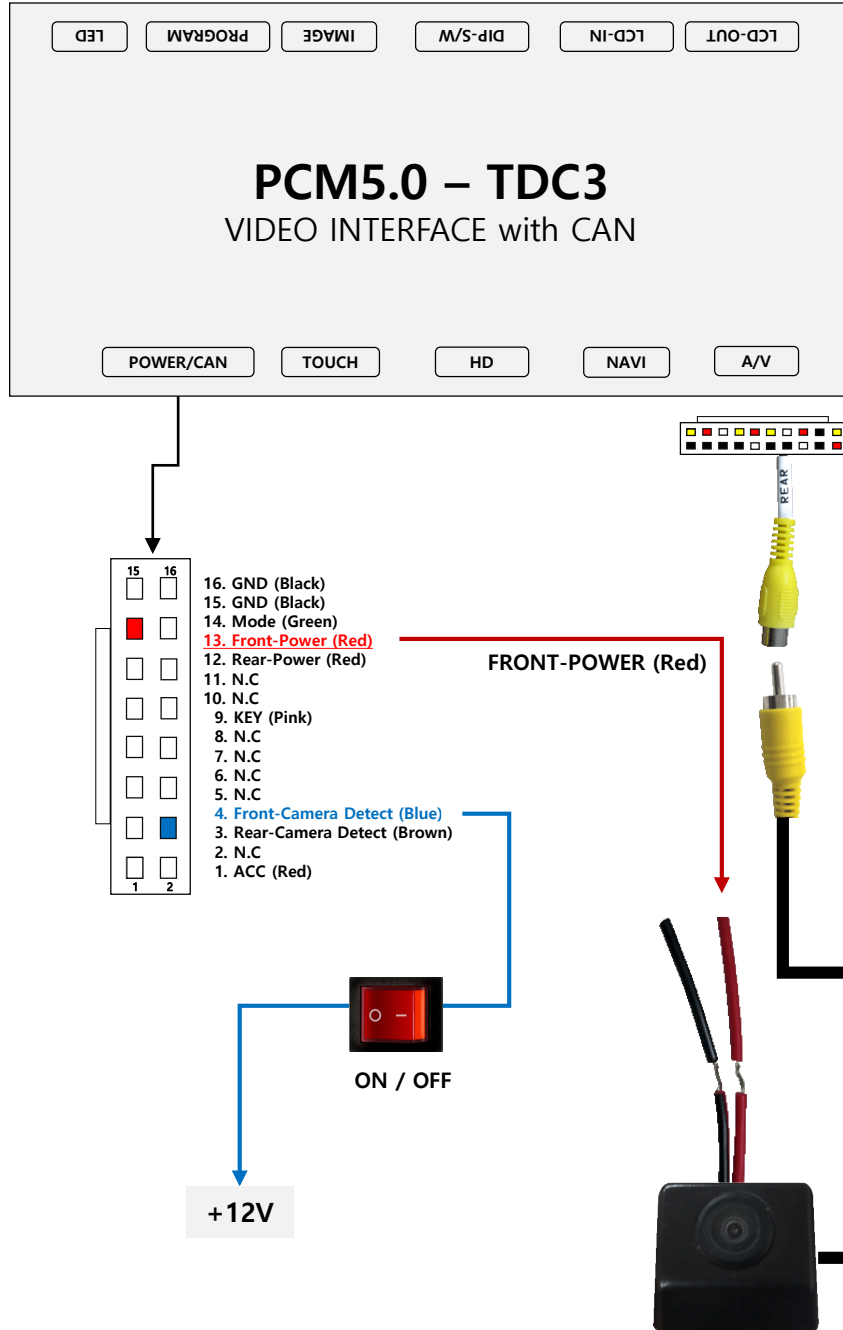
Install Manual

Installation LVDS connection

PCM5.0 – TDC3
VIDEO INTERFACE with CAN

LED | PROGRAM | IMAGE | DIP-S/W | LCD-IN | LCD-OUT

POWER/CAN | TOUCH | HD | NAVI | A/V

Screen

ACC

GND

HeadUnit (Commander)
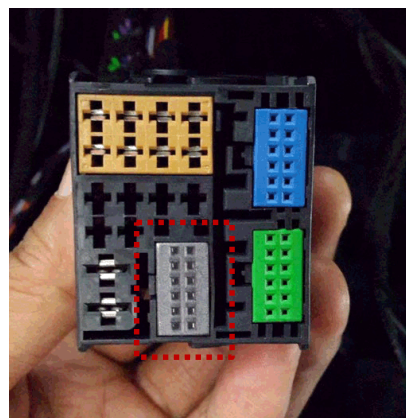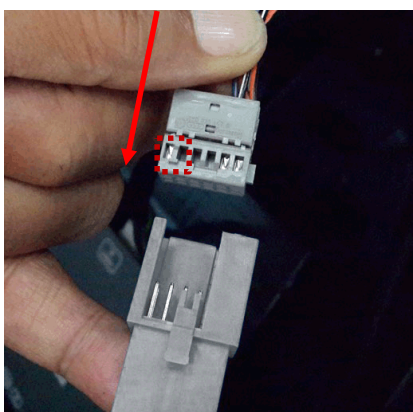
KAP
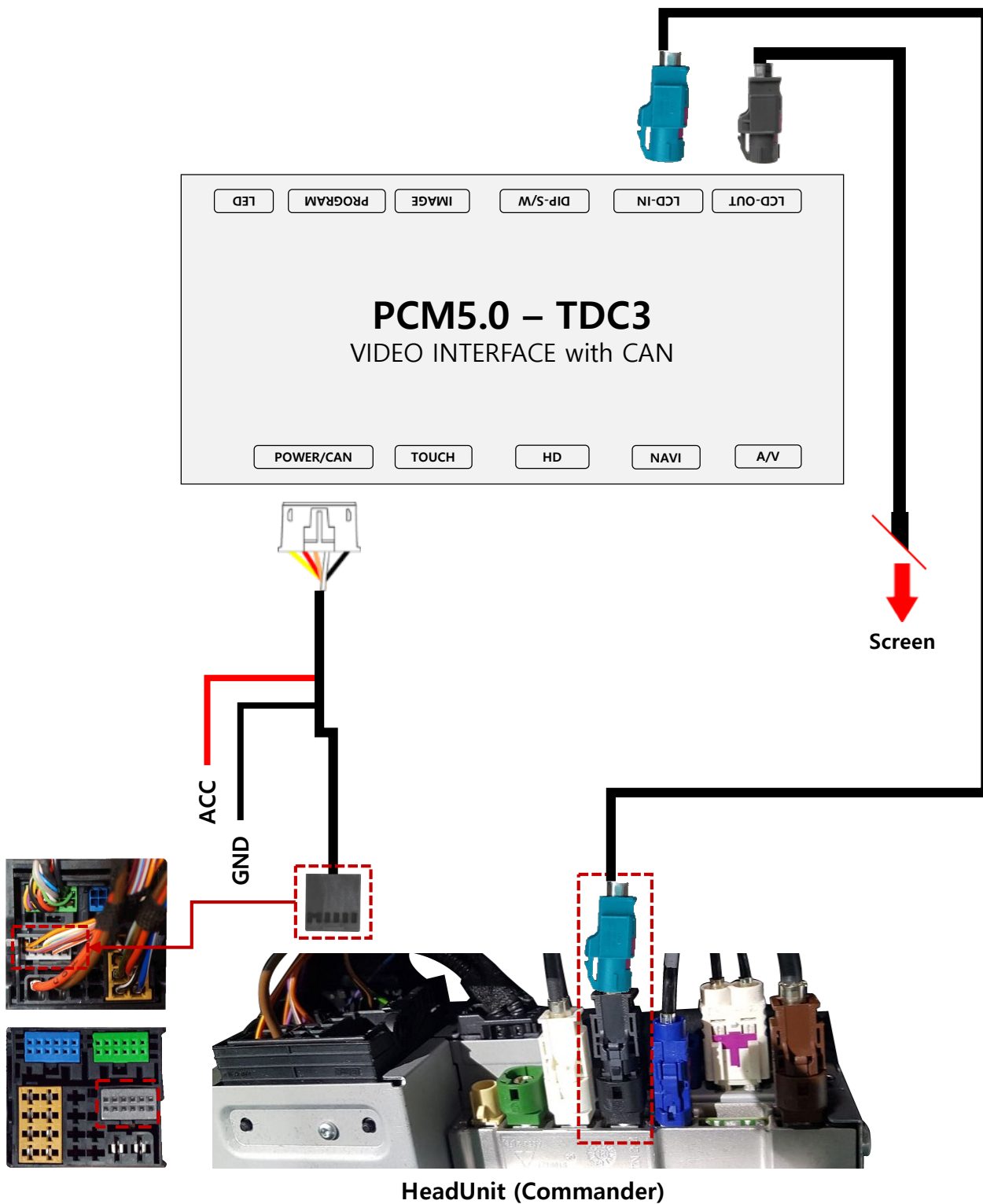
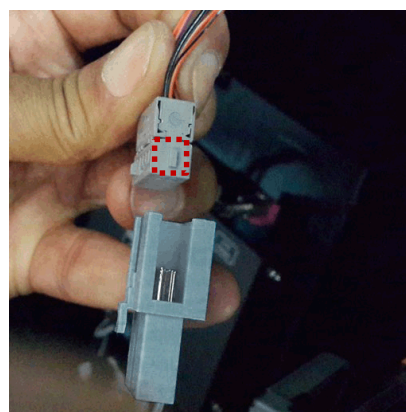# Install Manual

Installation CAN connection
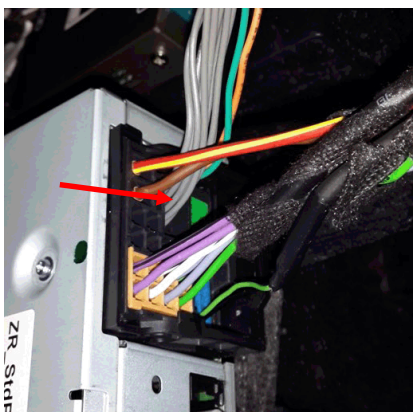
Remove the original gray connector.

Check the gray area

Be careful of the protruding part, connect the connector

Be careful of the protruding part, connect the connector

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KOREA AUTO PARTS

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