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Model : QVI-BM09-MAIN-V5.1 IF / Product code : QVI-BM-1107-004

Video Interface for BMW

3/5/6/7 Series

V5.1

User Manual

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1.1 Main specification

1. Compatibility

Most of brand-new cars coming with CIC Navigation Computer System including BMW 3,5,6,7,Xseries

2. Product composition

Multimedia Interface (made for specific models) * 1ea

Most TV-Free (displaying original DVD and navigation) – optional

3. MULTIMEDIA INTERFACE input spec.

3 * A/V input (external video input)

1 * CVBS input (rear camera source input)

1 * Analog RGB input (navigation system output)

1 * LCD input (car system input)

4. MULTIMEDIA INTERFACE output spec.

1 * LCD output

5. POWER spec.

input power : 8VDC ~ 24VDC

consumption power : 12WATT (in maximum level)

6. Switch input mode

Input video skip function : able to select whether to use the respective input video sources or not via DIP switch.

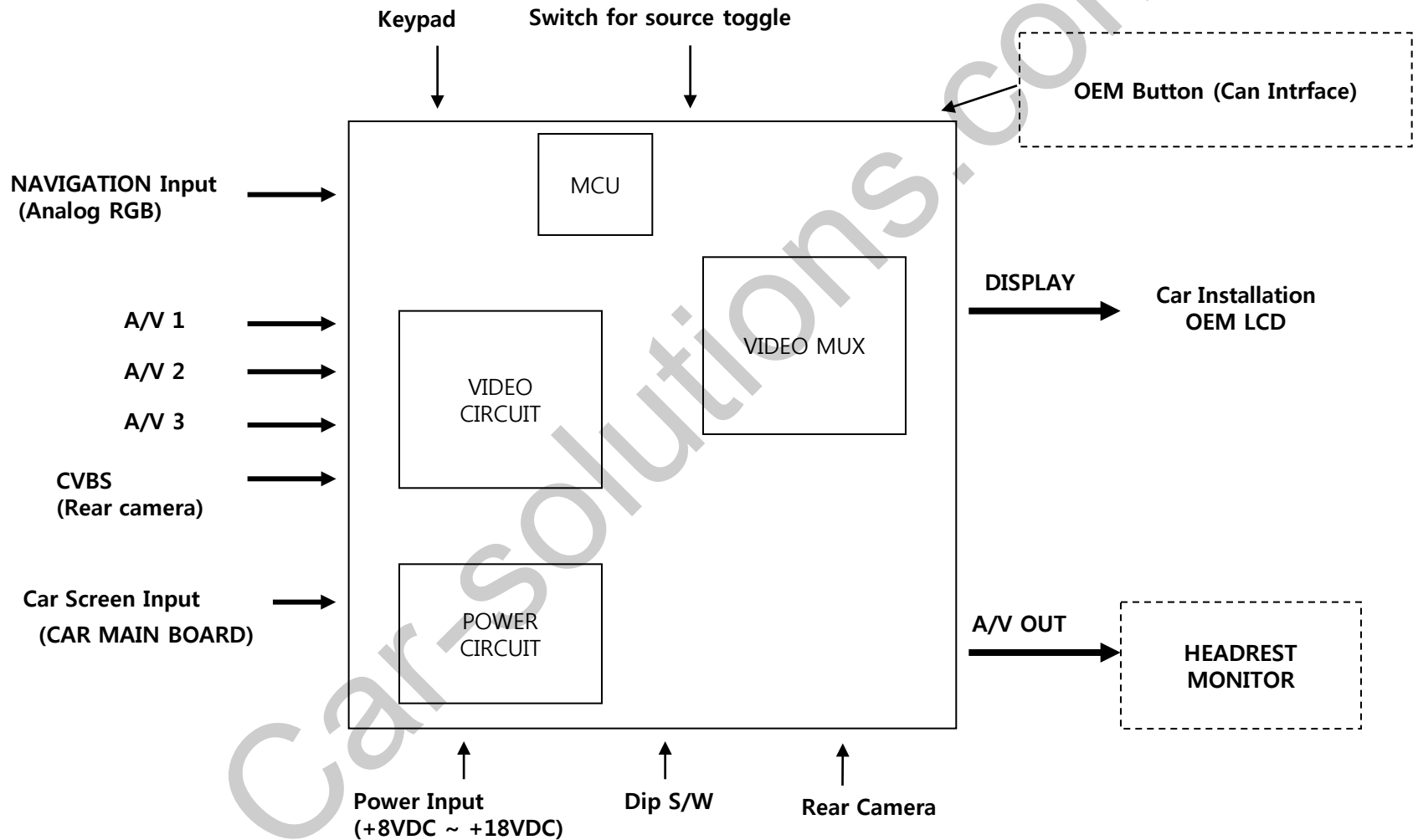
Able to change input modes via the keypad or the remote controller.

Able to detect rear camera via CAN or rear lamp cable.

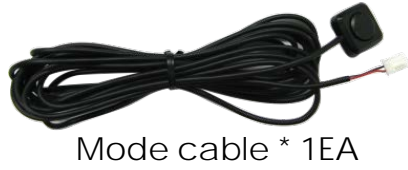
1.2 Features

- 800 x RGB x 480 24bit wide display of high definition
- LED backlight device (600cd) – able to adjust brightness
- Stereo sound support via headphone input
- ZOOM Function (16:9 -> 4:3)
- Able to connect external video/audio device
- Able to display original images at once (Normal -> Zoom1 -> Zoom2 -> Zoom3)

1.3 System diagram



1.4 Components



Mode cable * 1EA



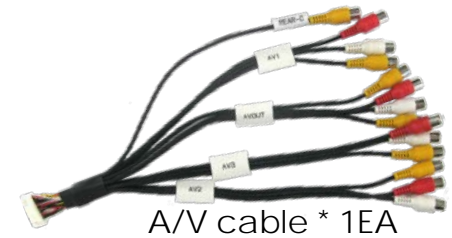
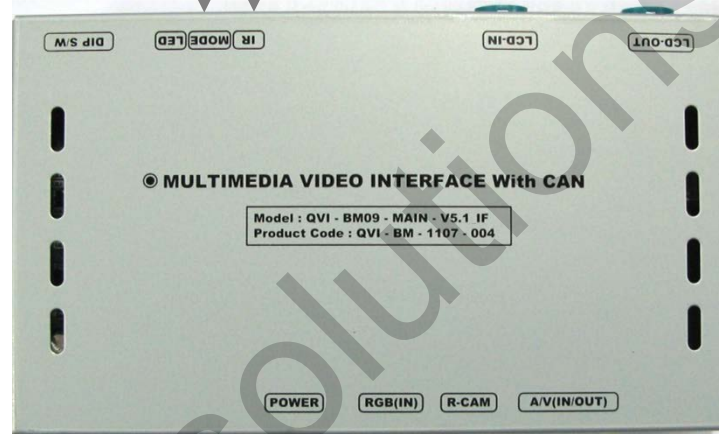
IR cable * 1EA



LCD cable * 1EA



Remote control * 1ea



A/V cable * 1EA



Modified POWER cable (7P) * 1EA



RGB cable * 1ea



REAR CAMERA POWER cable * 1EA

1.5 Exterior

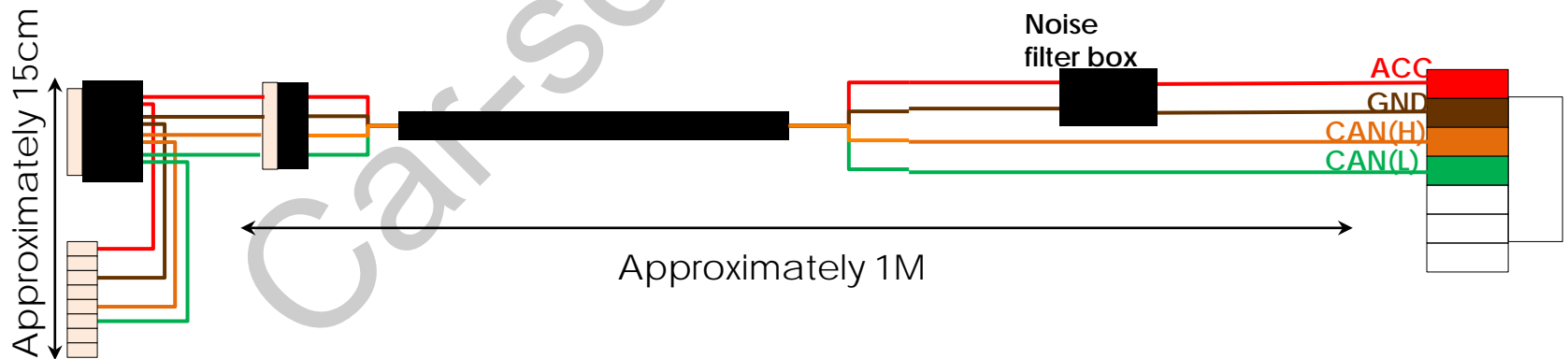
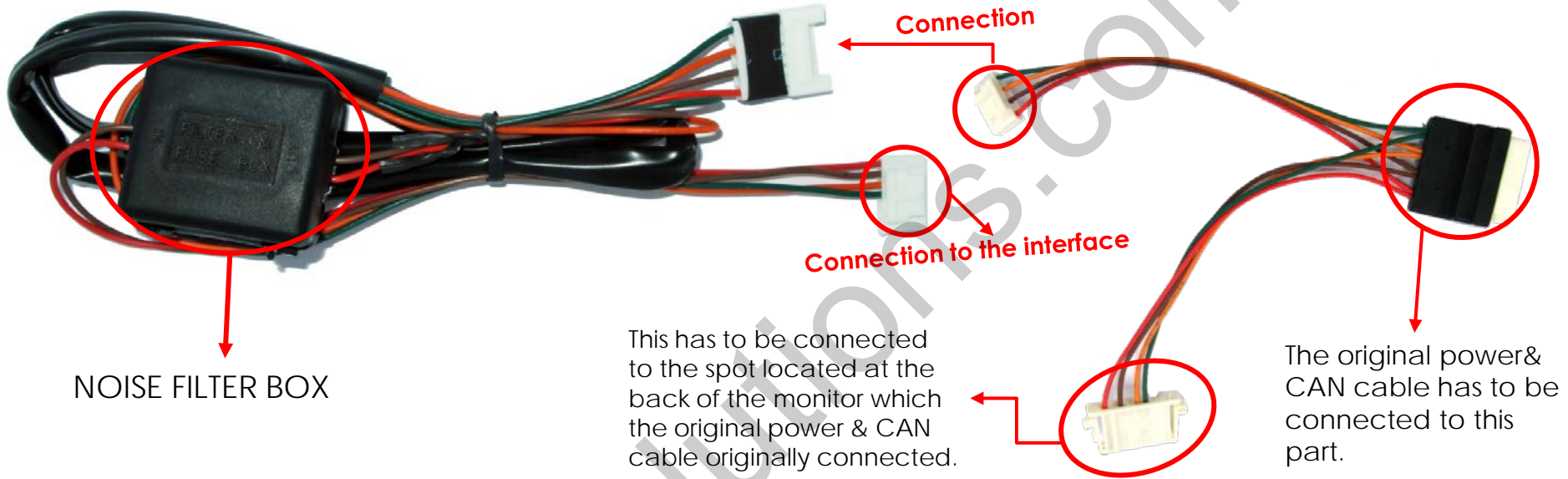


Dimension

Horizontal length 164.4mm
Vertical length 94.4mm
Height 28.2mm

- ① POWER
- ② RGB(IN)
- ③ REAR CAMERA POWER
- ④ A/V(IN/OUT)
- ⑤ LCD-OUT
- ⑥ LCD-IN
- ⑦ IR
- ⑧ MODE
- ⑨ LED
- ⑩ DIP switch

1.6 POWER cable



2.1 DIP switch

<i>PIN</i>	<i>Function</i>	<i>Dip S/W Selection</i>
1	Displaying RGB input	ON : displaying RGB mode OFF : hiding RGB mode
2	Displaying A/V 1	ON : displaying A/V 1 OFF : hiding A/V1
3	Displaying A/V 2	ON : displaying A/V 2 OFF : hiding A/V2
4	Displaying A/V 3	ON : displaying A/V 3 OFF : hiding A/V3
5	Setup of monitor size	ON : 7.2" OFF : 10.2"
6	Unavailable	
7	Setup of rear camera use	ON : CVBS4 OFF : MAIN
8	Setup of original screen display	ON : By MUX OFF : By Relay (ON : DEFAULT)

※ ON : DOWN / OFF : UP
default : ON (DIP #8)

※ DIP S/W usage example
- Input Mode : A/V2, A/V3
- Original Navigation
- External rear camera

- ▷ DIP S/W : 1,2 → ON (hiding INPUT MODE)
- ▷ DIP S/W : 3 → OFF (displaying A/V2)
- ▷ DIP S/W : 4 → OFF (displaying A/V3)
- ▷ DIP S/W : 5,6 → OFF
- ▷ DIP S/W : 7 → ON (for external rear camera)
- ▷ DIP S/W : 8 → OFF



2.2 Setup for car model & navigation

FACTORY mode – Press ◀ button 2 seconds long on the remote controller.

Setup for car model



UTIL - CAR MODEL

Selecting model of the car

MINI : mini cooper, cars coming after the year 2011

F10 : series 5, cars coming after the year 2010

F01 : series 7, cars coming with round connector

E90 : series 3, X series, cars coming after the year 2010

* Set pin#5 of DIP switch to the right size of the monitor after selecting model of the car. (Refer to page9.)

Setup for navigation



UTIL – NAVI MODEL

Definition of the navigation

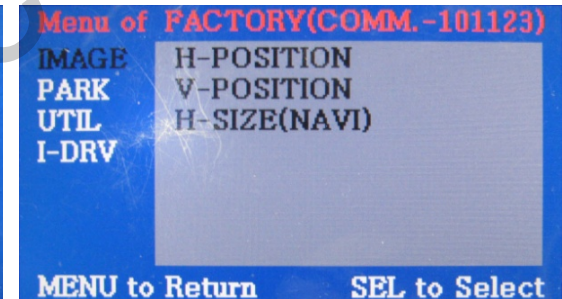
DEFAULT : default, 400X234, low definition

KD-900(WVGA) : 800x480 in high definition, for Chinese

MD7000(WVGA) : 800x480 in high definition, for domestic use

MYVI(WVGA) : 800x480 in high definition

* Go into FACTORY/ IMAGE (as shown right) and adjust the position and the size of the navigation after setting the definition of the navigation.



IMAGE

Adjusting the position and the size of navigation

H-POSITION : moving in horizontal direction (applicable in 7" models)

V-POSITION : moving in vertical direction (applicable in 7" models)

H-SIZE : adjusting the horizontal size of the navigation

2.3.1 FACTORY mode

FACTORY mode – Press ◀ button 2 seconds long on the remote controller.



UTIL- DMB SKIP

For domestic use only

ON : deactivating DMB

OFF : activating DMB

UTIL - A/V SELECT

Selecting background sound while navigation is displayed on the screen

DEFAULT : default, the sound of previous image before displaying navigation

DMB : sound of DMB

A/V : sound of A/V source

UTIL - FACTORY RESET

Resetting factory mode

YES : resetting factory mode

NO : undoing reset of the factory mode

2.3.2 FACTORY mode

FACTORY mode – Press ◀ button 2 seconds long on the remote controller.



I_DRV - I_DRV REMOTE

Selecting model of navigation and DMB respectively to control I_DRV function

ML 740T
ARION
PANASONIC
HSD100
COMTEC
NET770
PIONEER
ML100

- Selecting NAVIGATION model : in RGB mode
- Selecting DVD model : in A/V mode

I_DRV/ I_DRV CONTROL

Selecting whether to use I_DRV function or not

ON / OFF

2.4 Original buttons usage

I-Drive buttons (whole model)

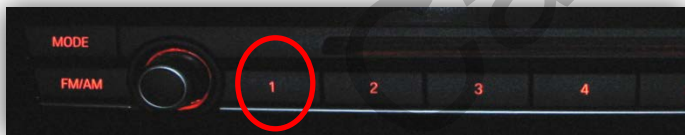


Mode	Key	Operation	Function
Whole mode	MENU	Press this button 2 seconds long	Changing modes
		Press this button short	Getting back to Original image
DMB	△	Press this button 2 seconds long in the direction of 12 O'clock	Scanning channel
		Press this button short in the direction of 12 O'clock	Changing channel upward
	▽	Press this button short in the direction of 6 O'clock	Changing channel downward
AV1~3	▽	Press this button 2 seconds long in the direction of 6 O'clock	Activating PIP function
Rear camera	▽	Press this button 2 seconds long in the direction of 6 O'clock	Activating PIP function
		Press this button short in the direction of 6 O'clock	Adjusting the position of the transparent PDC image



Steering wheel buttons (5series)

Mode	Key	Operation	Function
Whole mode	Circulation button	Press 2 seconds long	Activating PIP function
Whole mode	Downward arrow button	Press 2 seconds long	Changing modes



Hot Key Function

Mode	Key	Operation	Function
Whole mode	"1" button next to the radio button	Press short	Changing modes

2.5 Remote controller usage

Key	Function
POWER & PIP	Unavailable
MENU	Activating OSD menu
OK	Making a selection, changing image display
▲	Moving upward (If you press this button 2 seconds long, "Hot key" function will activate/ deactivate.)
▼	Moving downward
◀	Moving leftward (If you press this button 2 seconds long, you can get access to the factory mode.)
▶	Moving rightward (If you press this button 2 seconds long, you can reset all the data about user environment.)



▪ What is Hot Key function ?

You can use this function via pressing number "1" button next to the radio button. You can change audio source to the external AUX with this function. (original function of BMW) Our device let it change to an external video source for driver to use this function via this button. So, you can change sources (audio<->video) by pressing this button without any other install process.

2.6 Keypad usage

Select one between the remote controller and the keypad

FACTORY MODE (Interface setting) :

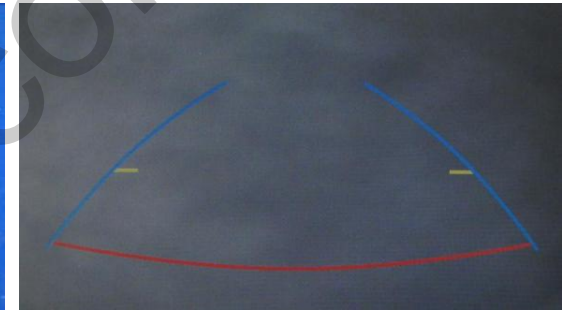
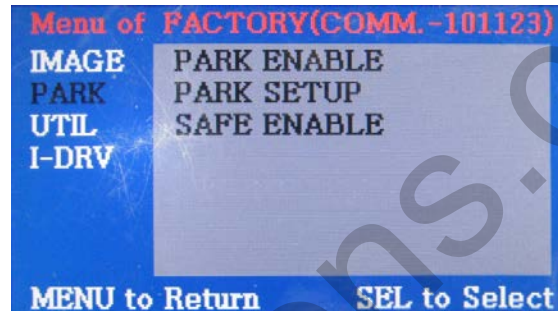
Press these buttons on OSD keypad in the following sequence; UP→DOWN→UP →MENU



<i>Key</i>	<i>Function</i>
MENU/EXIT	Activating OSD menu and Getting back to the previous state after setting mode
SEL/INPUT	Making a selection and hanging modes
UP	Moving leftward or upward (If you press this button 2 seconds long, you can get access to HOT KEY function.)
DOWN	Moving rightward or downward (IF you press this button 2 seconds long, you can reset all data.)

2.7.1 Setup for rear view camera

FACTORY mode – Press ◀ button 2 seconds long on the remote controller.



UTIL - REAR SELECT

Selecting how to detect the rear view camera

LAMP : Detecting the rear view camera via rear lamp (Installer must connect "Rear-C" cable of the power cable to the rear lamp of the car.)

CAN : Detecting the rear view camera via CAN signal (Installer must connect "CAN" cable of the power cable to the "CAN" cable of the car.)

• On installing rear view camera : Pull down DIP switch pin#7 to set it as "ON". (Refer to page9.)

PARK

PARK ENABLE : Selecting whether to display the parking guide line or not on rear gear (default : ON)

PARK SETUP : Adjusting the position of the parking guide line (available in PARK SETUP -> V-POSITION, H-POSITION)


SAFE ENABLE : If your car is connected with CAN cable and it is in "ON" state, you can NOT watch DVD or A/V except original image or navigation while driving. At that time the screen get back to the main (default : OFF)


- If you want to get to the FACTORY mode, set the gear as rear state and press "LEFT" button 2 seconds long on the remote controller or the keypad. (as shown left top)
- If you set 'PARK ENABLE' as "ON" state, there will be the rear view parking guide line. (as shown right top)

2.7.2 Setup for rear view camera



Setup for displaying rear view

series5 : Press  button on the steering wheel and select one from 4 options as shown below.

series7 : Press  button about 2 seconds long on I-Drive and select one among 4 options.



< whole PDC screen : F10, E90, F01 >



< full view on screen : F10, E90, F01 >




< DUAL screen : E90, F01 >



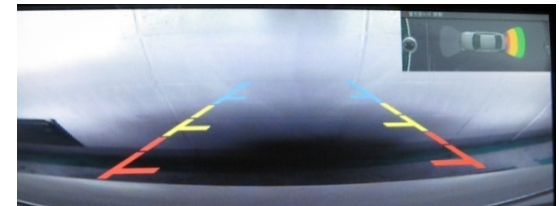
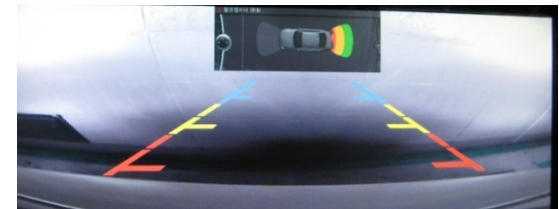
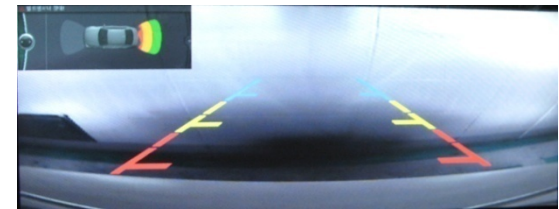
< DUAL screen2 : F10, E90, F01 >

Positioning transparent PDC image

Press  button on the steering wheel and select a position of PDC image among 3 options as shown below.

- The types of PIP function in rear view mode can differ from along car models. And the 7" screen is provided by full screen of camera and original PDC image.

*** Available in F01 and E09 after the year 2009**



2.8.1 OSD (on screen display)

Analog RGB Mode

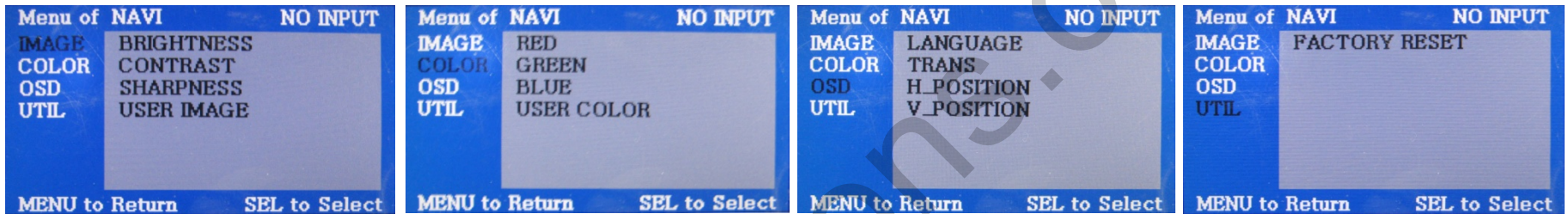
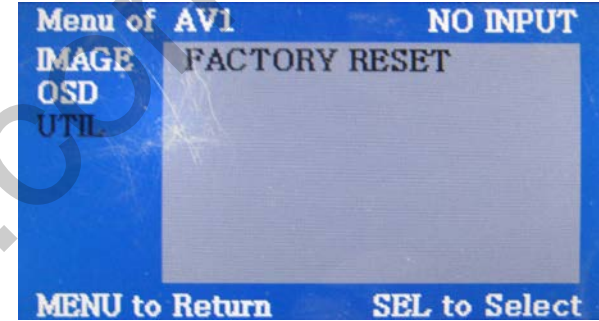
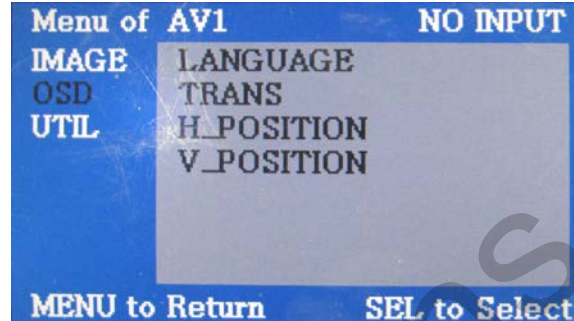
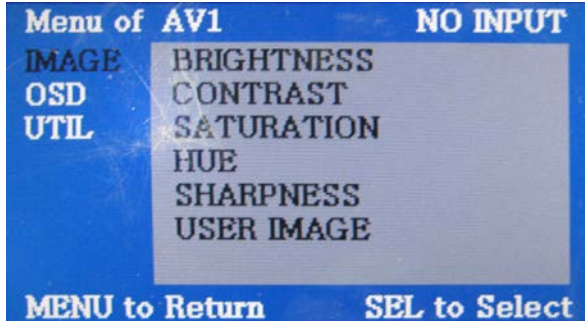


IMAGE	COLOR	OSD	UTIL
BRIGHTNESS	RED : Adjusting red	LANGUAGE : Choosing interface language while changing mode between A/V and DVD	FACTORY RESET : Resetting all the data about the relevant mode (applicable to navigation, A/V, DMB, rear mode respectively)
CONTRAST	GREEN : Adjusting green	TRANS : Adjusting transparency of OSD	
SHARPNESS	BLUE : Adjusting blue	H_POSITION, V_POSITION : Positioning OSD menu	
USER IMAGE : Selecting one among 4 color options.	USER COLOR : Selecting a color option among set color options		

2.8.2 OSD (on screen display)

Video mode



DMB mode (only for domestic use)



IMAGE

BRIGHTNESS
CONTRAST
SHARPNESS
USER IMAGE : Selecting one among 4 color options

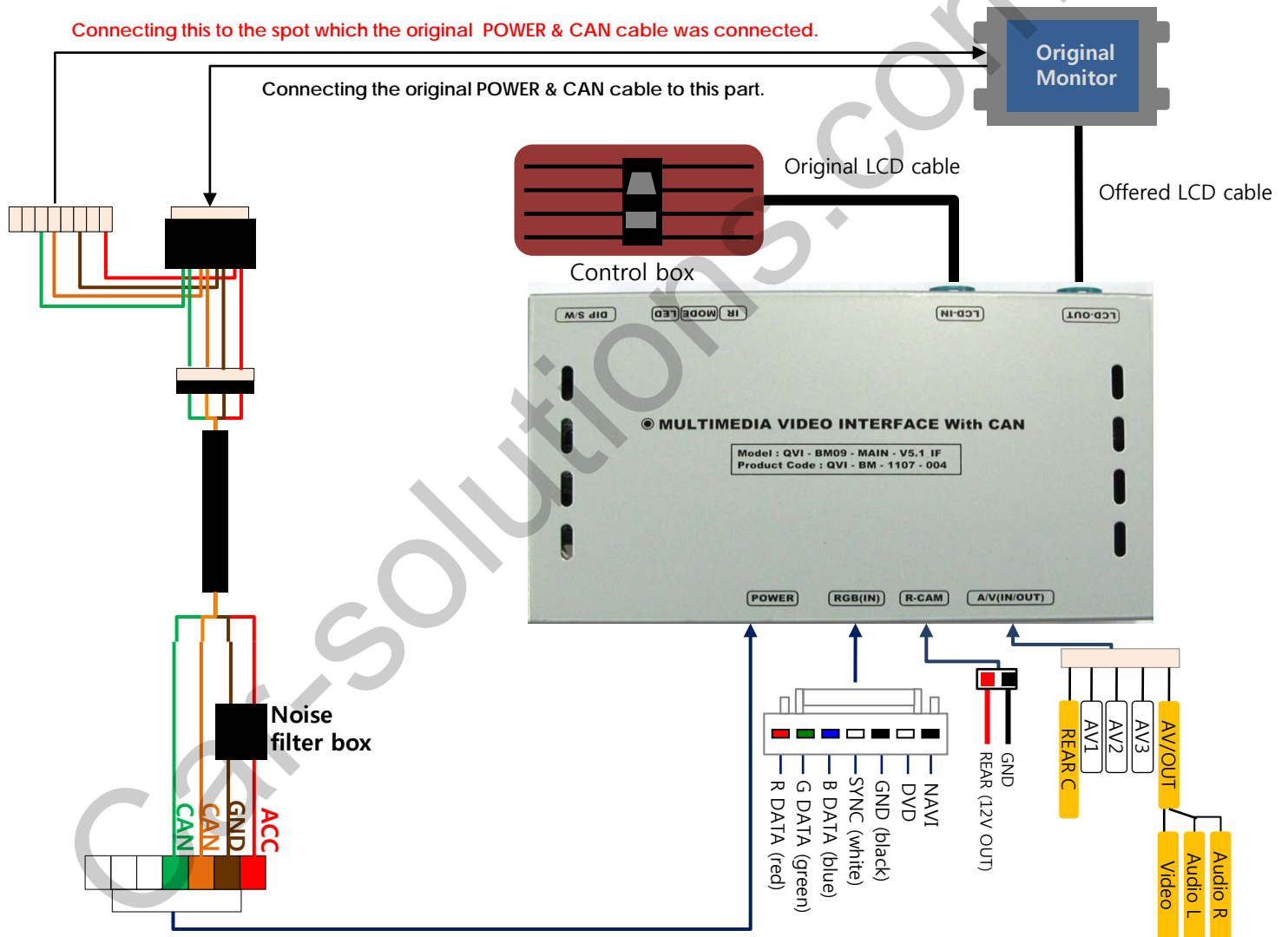
OSD

LANGUAGE : Choosing interface language while changing mode between A/V and DVD
TRANS : Adjusting transparency of OSD
H_POSITION, V_POSITION : Positioning OSD menu

UTIL

FACTORY RESET : Resetting all the data about the relevant mode (applicable to navigation, A/V, DMB, rear mode respectively)

3.1 Installation diagram

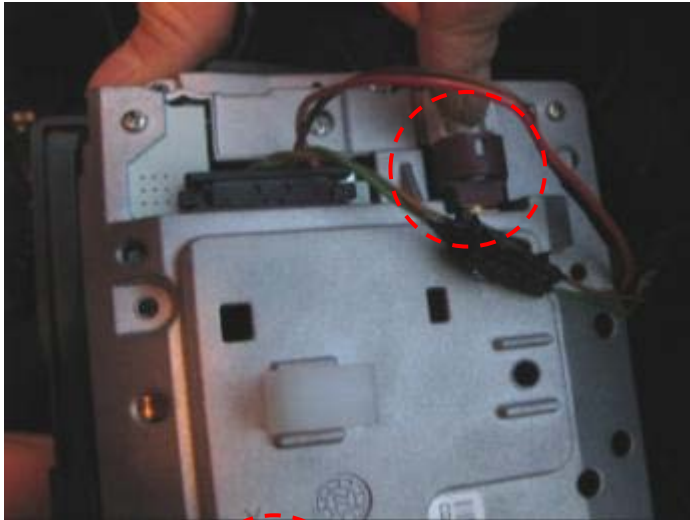


3.2 Cautions on installation

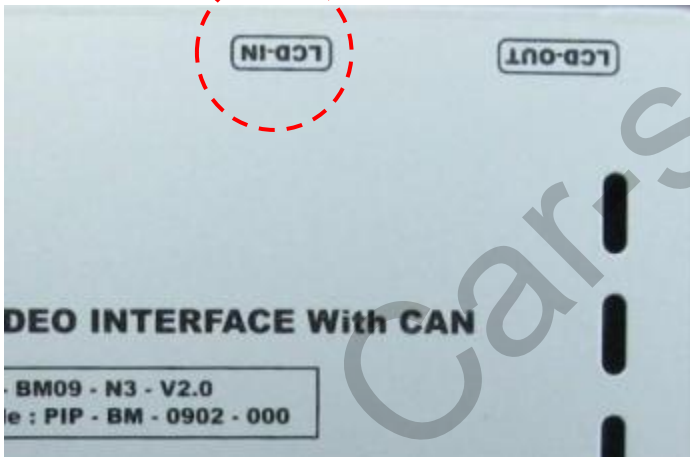
- Ignition key should be taken off before starting installation, interface power connection must be the last step in installation.
- Power cable should be separated when connecting interface.
- Should be no any electronic devices or magnetic pole around installation place.
- All steps of installation should be done by well-trained specialist.
- Dismantling without manufacturer's permission can not be guaranteed, (No permission to break attached label on the board.)
- Kindly check all parts are in the box, when receiving the product, if anything missing, inform to the supplier or manufacturer.
- According to our sales policy, any problems caused by user's mistake, careless can not be guaranteed.

3.3 Installation

3.3.1 Connecting the monitor with the interface



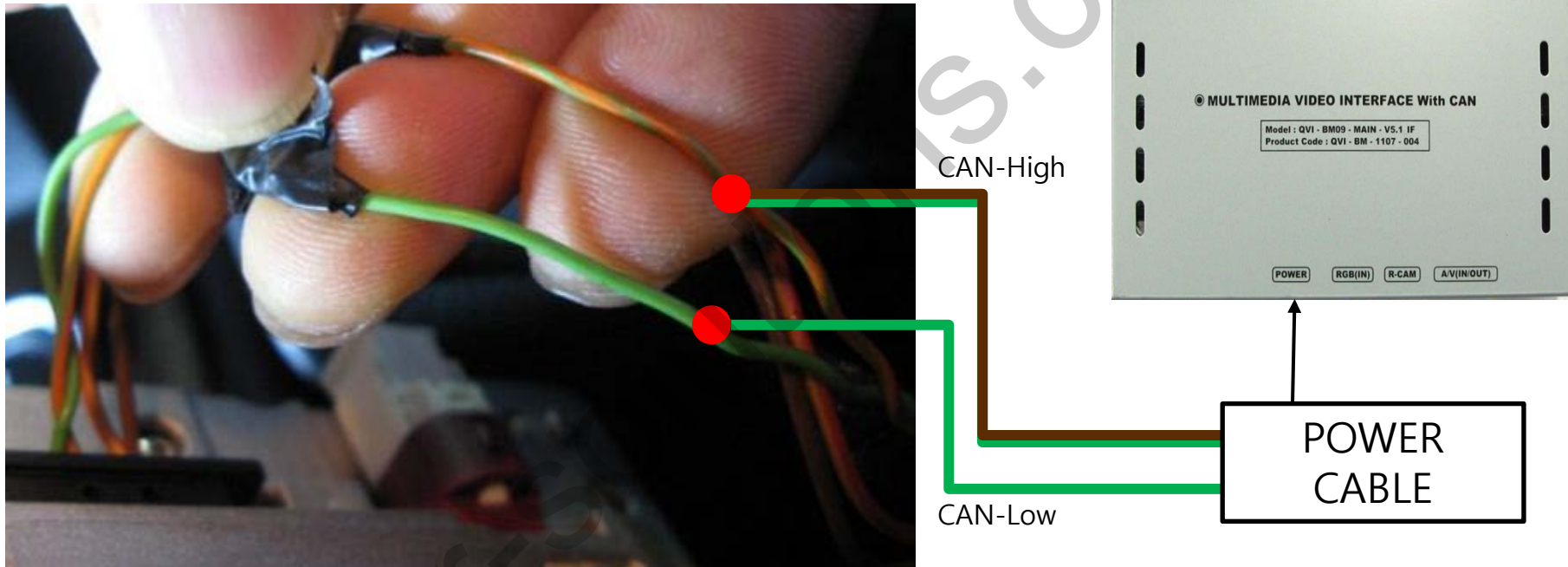
① Connect LCD cable enclosed in our package to the spot that the original one is connected after disconnecting the original LCD cable from the monitor as shown left.



② Connect the original LCD cable to "LCD-IN" socket of the interface.

3.3 Installation

3.3.3 Connecting CAN cable respectively



Connect CAN-H cable (green+brown) enclosed in our package with the original CAN-H cable (green+orange). And connect CAN-L cable (green) enclosed in our package with the original CAN-L cable (green).

4. Troubleshooting

Q. I can not switch A/V sources

A. Check IR or Ground cable connection. Check LED lamps in the interface, if it is not on, check power cable.

Q. All I got on the screen is black.

A. Check second LED lamp of the interface is on, if not, check A/V sources connected are working well. (Second lamp indicates AV sources connected works well.) Check interface connection has been done well.

Q. Displayed image color is not proper (too dim or not suitable color)

A. Try to select "INITIAL" in OSD menu, if it does not work, inform to manufacturer.)

Q. I can watch the rear camera on the screen

A. Set the DIP switch #7 as state "ON".

Q. Unwanted A/V mode is displayed. (A/V source switching order : OEM->RGB->AV1->AV2->AV3)

A. Check DIP Switch Setting.

Q. OEM image is not displayed.

A. Check interface's LCD In/Out cable connection. If the status keeps on, inform to manufacturer.

Q. Screen only displays white color.

A. Check LCD out cable is connected well, if this status keeps, inform to manufacturer.

Q. After setting PIP function, I got only half OEM image at the right in the screen.

A. This is not an error, just caused by user's setting mistake, user should set to "Split Screen" in the OEM menu.

Q. Rear CAM does not appear, when car is in reverse after CAN wiring.

A. Operate "FACTORY MODE" like left picture, then select "UTIL → Rear Select" If it is set as "LAMP", change it to "CAN" by remote or keypad.

※ LAMP : In case of connecting "Rear-C" wire of Power Cable to Rear Lamp in vehicle.

CAN : In case of detecting Rear Cam thru CAN signal. (CAN must be wired)

Q. After moving gear to "P" or "D" from "Reverse", I can't get navigation, but half PDC Image in the screen.

A. Once, you starts driving, the screen displays navigation right away, this is not an system error.