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Model : QVI-BM12-Main-V2.3 IF / Product code : QVI-BM12-1207-003

BM12 V2.3

Specification

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1.1 Main specification

1. Compatibility

BMW New 1,3,5,7 series 6.5'' & 8.8'' & 10.2''

2. Product composition

Multimedia Interface * 1ea

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 ~ 18VDC

consumption power : 5WATT

6. Switch input mode

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

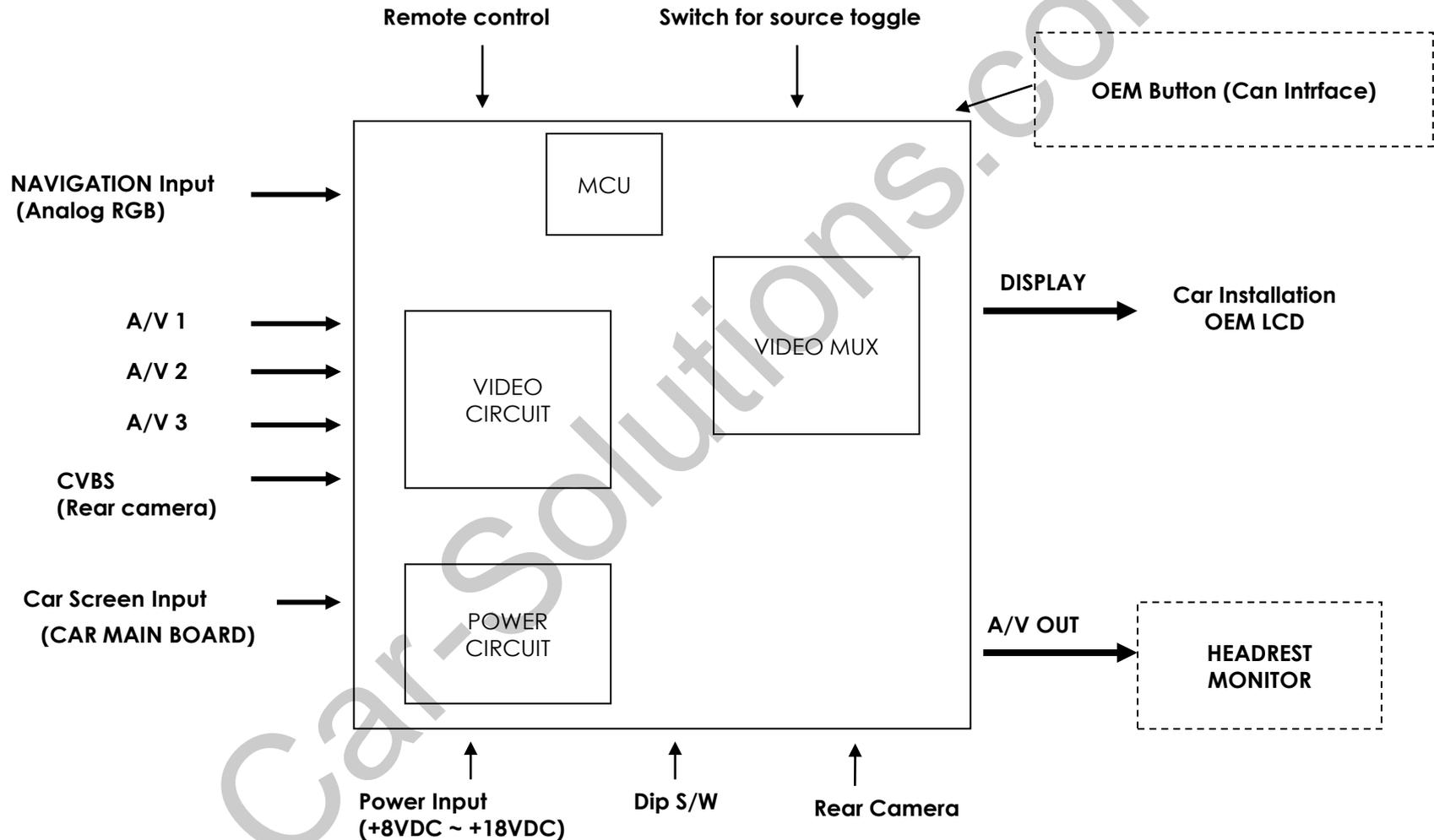
Able to change input modes via remote control.

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

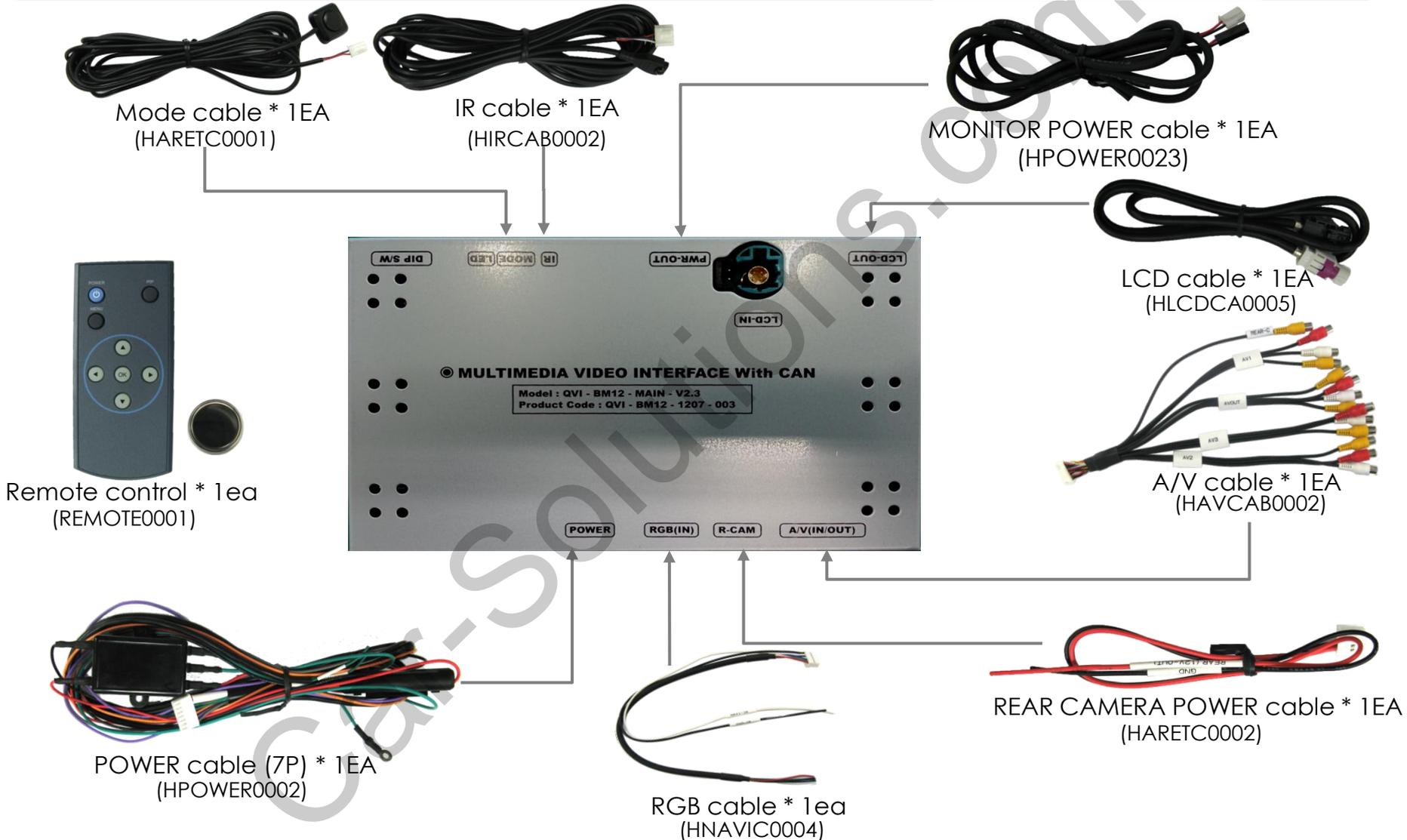
1.2 Features

- Installation from the direction of the command
- NAVI, DVD and DTV control via I-drive controller
- Control position of the DVD, navigation image
- Screen Display improvement (user convenience-intended interface)
- Mode change via original button(Menu button in I-DRIVE)
- Provided Power cable for connecting with rear camera
- Able to support PIP (Picture in Picture), display original Navi and external display at the same time

1.3 System diagram



1.4 Components



1.5 Exterior



Dimension

Horizontal length 150.4mm
Vertical length 99.4mm
Height 23.2mm

- ① POWER
- ② RGB(IN)
- ③ REAR CAMERA POWER
- ④ A/V(IN/OUT)
- ⑤ LCD-OUT
- ⑥ LCD-IN
- ⑦ POWER OUT
- ⑧ IR
- ⑨ MODE
- ⑩ LED
- ⑪ DIP switch

2.1 DIP switch

PIN	Function	Dip S/W Selection
1	Displaying RGB input	ON : skip RGB mode OFF : display RGB mode
2	Displaying A/V 1	ON : skip A/V 1 OFF : display A/V1
3	Displaying A/V 2	ON : skip A/V 2 OFF : display A/V2
4	Displaying A/V 3	ON : skip A/V 3 OFF : display A/V3
5	Setup of monitor size	ON : 6.5" OFF : 8.8" 10.2"
6	Car model Setup	ON : 3D GUI Model OFF : General GUI Model
7	Setup of rear camera use	ON : CVBS4 OFF : MAIN
8	Unavailable	

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

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

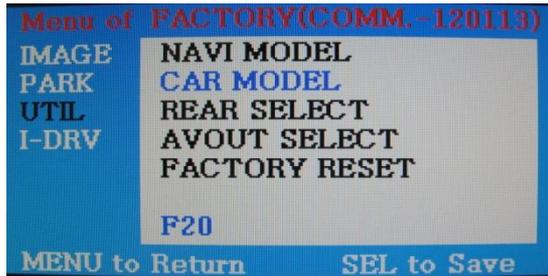
- ▷ DIP S/W : 1,2 → ON (skip INPUT MODE)
- ▷ DIP S/W : 3 → OFF (display A/V2)
- ▷ DIP S/W : 4 → OFF (display A/V3)
- ▷ DIP S/W : 5 → OFF(8.8inch & 10.2inch)
- ▷ DIP S/W : 6 → OFF
- ▷ DIP S/W : 7 → ON (for external rear camera)
- ▷ DIP S/W : 8 → OFF



2.2 Setup for car model & navigation

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

Setup for car model



UTIL - CAR MODEL

Selecting model of the car

F20 : 1,3,5,7 series 6.5", 8.8"

F20-7 : New UI 8.8", 10.2

*** Set pin#5 of DIP switch to the right size of the monitor after selecting model of the car. (Refer to page 8.)**

Setup for navigation



UTIL – NAVI MODEL

Definition of the navigation

DEFAULT : default, 400X234, low definition
KD-900(WVGA) : 800x480 in high definition, for Chinese

MYVI(WVGA) : 800x480 in high definition, for Domestic

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

GI8000(WVGA) : 800x480 in high definition, for Domestic

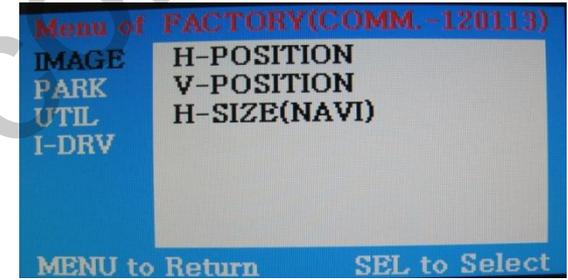
GI5000(WVGA) : 800x480 in high definition, for Domestic

I-ONE(WVGA) : 800x480 in high definition, for Domestic

WP9200(WVGA) : 800x480 in high definition, for Israel

HDMI(When SMI is installed)
: 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

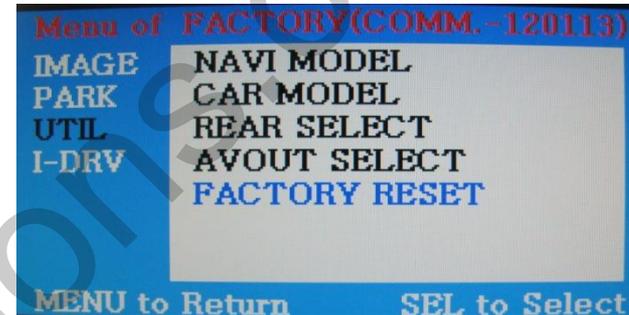
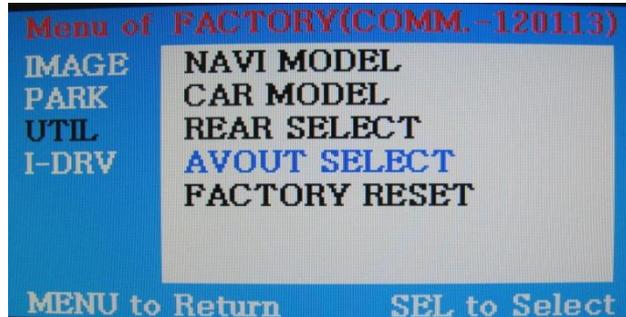
H-POSITION : moving in horizontal Direction

V-POSITION : moving in vertical direction

H-SIZE : adjusting the horizontal size of the navigation

2.3.1 FACTORY mode

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



UTIL - AVOUT SELECT

Selecting background sound After returning navigation or original mode

DEFAULT : Selecting AV sound just before changing navigation or original mode from the AV mode

AV 1~3 : Sound of the selected AV source 1~3

UTIL - FACTORY RESET

FACTORY MODE RESET

2.3.2 FACTORY mode

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



I_DRV - I_DRV REMOTE

Selecting model of navigation and DTV respectively to control I_DRV function

ML 740T
ARION
PANASONIC
HSD100
COMTEC
NET770
PIONEER
ML100
USER(When use IR Memory value)

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

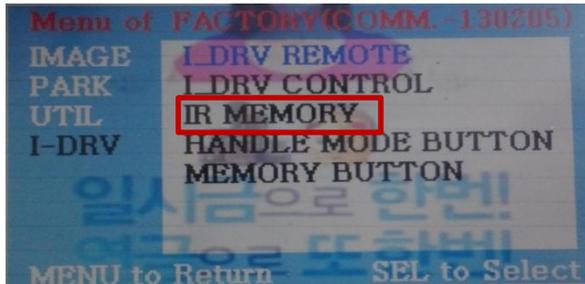
I_DRV/ I_DRV CONTROL

Selecting whether to use I_DRV function or not

ON / OFF

2.3.3 FACTORY mode

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



I_DRV – IR MEMORY

Set DVD, DTV remote control value to control with I-Drive
- To use this function, select User Mode on I_DRV-I_DRV REMOTE.

DVD / DTV



I_DRV – HANDLE MODE BUTTON

Select Handle Voice Button (Switch Mode)

ON / OFF



I_DRV – MEMORY BUTTON

Set up car audio number 8 (Switch Mode + Aux Switch)

ON / OFF

2.4.1 Input DVD, DTV I-DRIVE

What is IR-MEMORY Mode?

Is to allow I-Drive to control other DVD or DTV (besides the existing,; for example : SANYO, NECVOX) by register remote control value.



① Press ◀ button 2 seconds long on the remote control or press UP→DOWN→UP→MENU button in order for Factory Mode, select I-DRV → IR MEMORY.

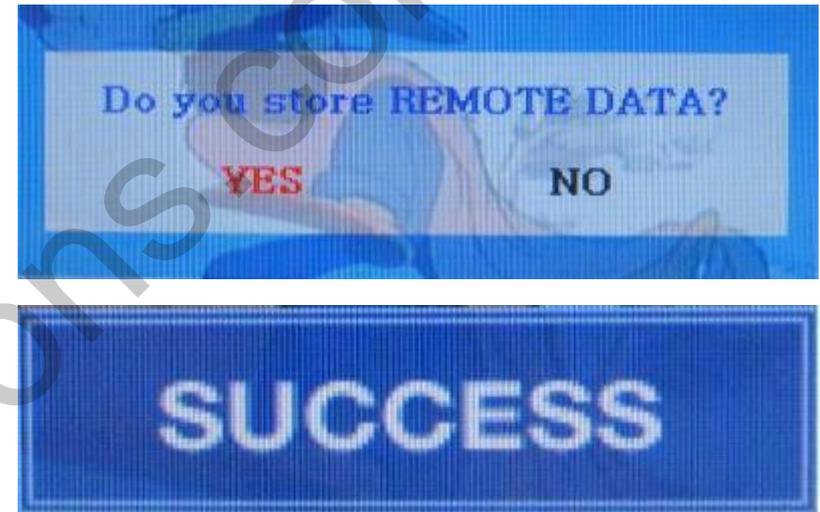
You can set AS Source for DTV and DVD in IR MEMORY.

② As shown above, select menu that you want to use and input DVD remote control button value. (If you want to register DTV remote control button value, after selecting IR MEMORY – DTV, you can register button value with these following steps.)

Example)

- Select POWER button on OSD menu and press I-Drive button you want to use
- If the marked part above is blinking, press POWER button in DVD remote control (continue)

2.4.2 Input DVD, DTV I-DRIVE



Example) continue from slide 13

c. While pressing button, remote control's value will appear (picture above) in green color and automatically saved.

d. Repeat this step for input other button value on OSD menu.

③ After value input, select INPUT on OSD menu ,press YES button (picture above) for saving input value and press NO for cancel all input value. (if saved, DVD TYPE and DTV TYPE will be changed automatically to USER)

If SUCCESS word appears, input values are successfully saved, user can control input DVD with touch screen.

But, at this time, Factory-I_DRV-I_DRV REMOT must be changed into USER.

2.5 Original Button Usage



I-Drive button (6.5inches)

<i>Mode</i>	<i>Key</i>	<i>Operation</i>	<i>Function</i>
Whole Mode	MENU	Press long	Changing modes
		Press short	Getting back to Original image
		Press short	Changing modes
	Audio Button no.8	Press short	Changing modes + Changing car AUX
Rear Camera	 (Steering wheel)	Press short	Activating PIP function

2.5 Original Button Usage



I-Drive button (8.8inches)

<i>Mode</i>	<i>Key</i>	<i>Operation</i>	<i>Function</i>
Whole Mode	MENU	Press long	Changing modes
		Press short	Getting back to Original
		Press short	Changing modes
	Audio button no.8	Press short	Changing modes + Changing car AUX
AV1 AV2 AV3	▽	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

2.6 Remote control 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.)

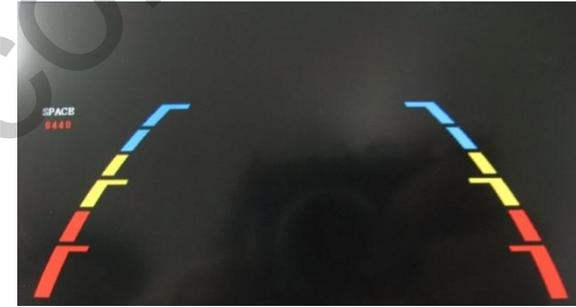
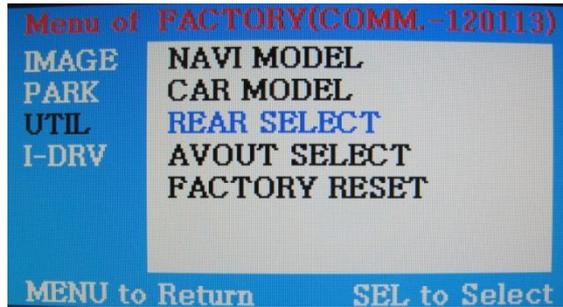


▪What is Hot Key function ?

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.

2.7.1 Setup for rear view camera

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



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.)

• While 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 -> H-POSITION, V-POSITION)

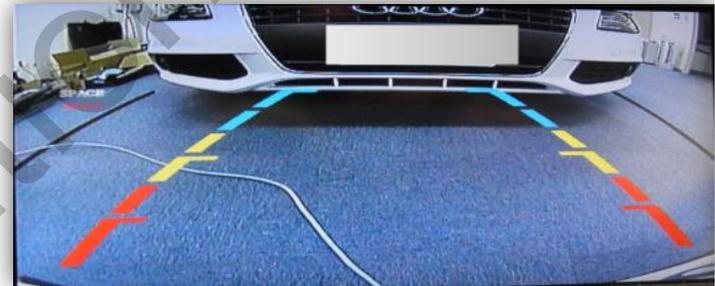
SAFE ENABLE : If your car is connected with CAN cable and it is in "ON" state, you can NOT watch DVD or A/V except original image or navigation while driving. At that time the screen get back to the main (default : OFF)

- 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 control(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)

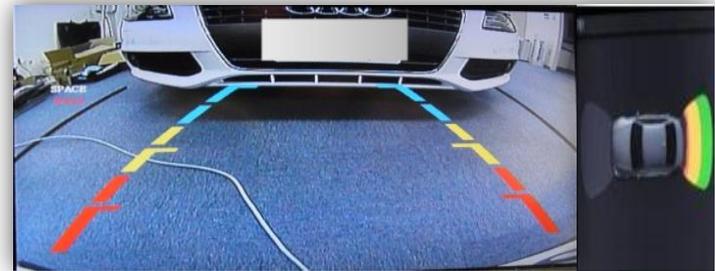
2.7.2 Setup for rear view camera(6.5")

Setup for displaying rear view

1 Series (F20) : Press  button short on steering wheel, you can choose full screen or PIP screen as shown below.



< Full real view on screen >



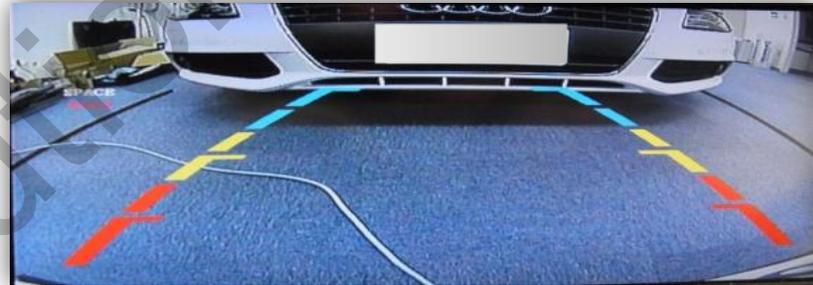
< PIP screen >

2.7.2 Setup for rear view camera(8.8")

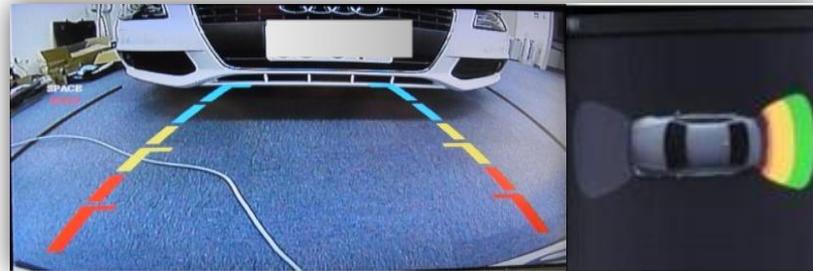
Setup for displaying rear view



1 Series (F20) : Press  button about 2 seconds long on I-Drive, you can choose full screen or pip screen as shown below.



< Full real view on screen >



< PIP screen >

2.7.2 Setup for rear view camera(8.8")

In case of 3D GUI(PDC)

1. After setting Dip Switch NO.6 to "ON", Select Car model "F20"
(FACTORY MENU→CAR MODEL→F20)
※ If PIP Screen is unstable in "F20" car model, select "F20-7"



<Rear Camera Full screen>



<3D PDC Full Screen>



<PIP Screen>

2. After setting Dip Switch NO.6 to "ON", Select Car model "F20-7"
(FACTORY MENU→CAR MODEL→F20-7)



<Rear Camera Full screen>



<3D PDC Full Screen>



<PIP Screen>

2.8 Parking guide line

Factory Default : DISPLAY - DISABLE

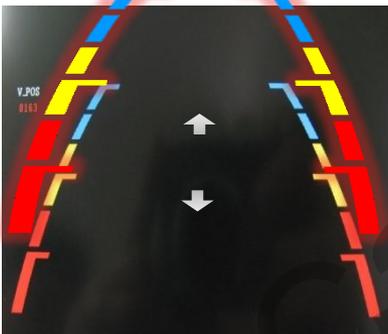
You can enter "Park setup" in Factory Menu and move "H-POS → V-POS" in sequence by pressing "OK" button on the remote control.

H-POS



If you need to move the horizontal position, press Δ , ∇ buttons on the remote control.

V-POS



If you need to move the vertical position, press Δ , ∇ buttons on the remote control.

2.8.1 OSD (on screen display)

Analog RGB Mode

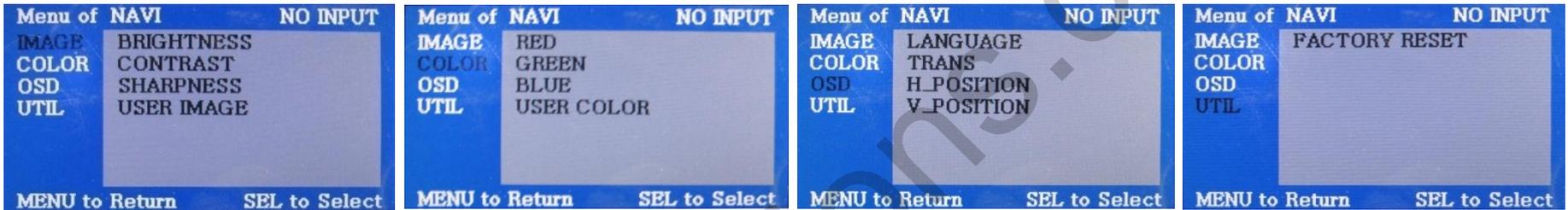
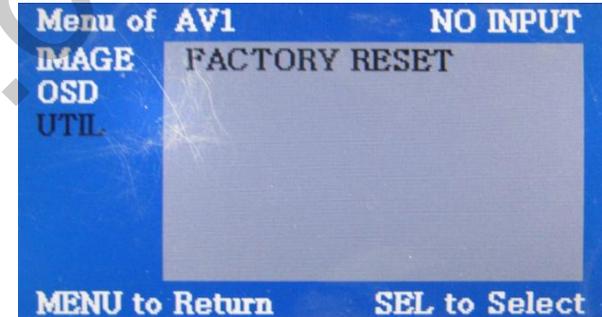
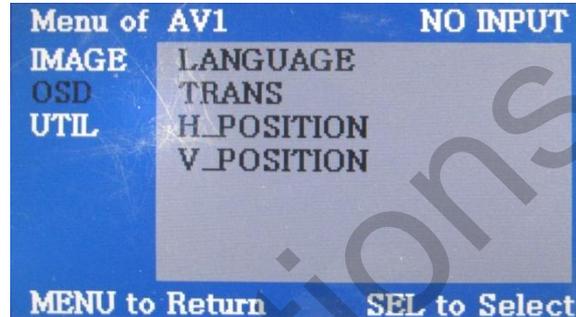
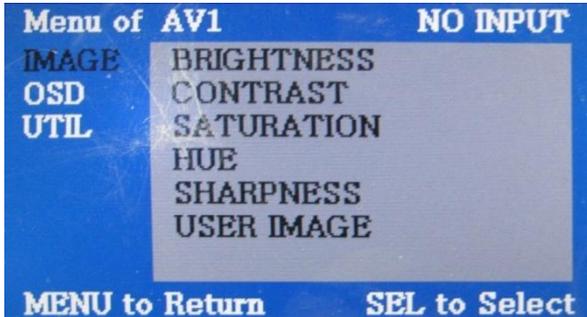


IMAGE	COLOR	OSD	UTIL
BRIGHTNESS	RED : Adjusting red	LANGUAGE : Choosing OSD language while using Touch OSD (English, Chinese only)	FACTORY RESET : Resetting all the data about the relevant mode (applicable to navigation, A/V, DTV, rear mode respectively)
CONTRAST	GREEN : Adjusting green	TRANS : Adjusting 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



IMAGE

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

OSD

LANGUAGE : Choosing OSD
language while using Touch OSD
(English, Chinese only)
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, DTV,
rear mode respectively)

3. 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 dark or unsuitable color)

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

Q. I want to 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" , 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)