

BMW 7 E65 Interface installation Manual_V201012

This interface can insert video into BMW E65 screens(7 series). It can insert 1 RGB High definition video and 2AV and 1 reverse camera video or iPod video onto the screen, the following are the features.:

- ✓ The video insertion is done through the external connector, people do not need to open the monitor, thus it is very convenient and do not have any installation risk.
- ✓ The inserted video will be zoomed to be EXACTLY fitting the E65 screen, including image size and image locations.
- ✓ The interface uses high speed image processor inside with 64Mega SDRAM memory to guarantee image performance.
- ✓ The user can use the STAR key on the steering wheel to switch the video inputs since this interface has a CAN box connected..



The original car navigation video

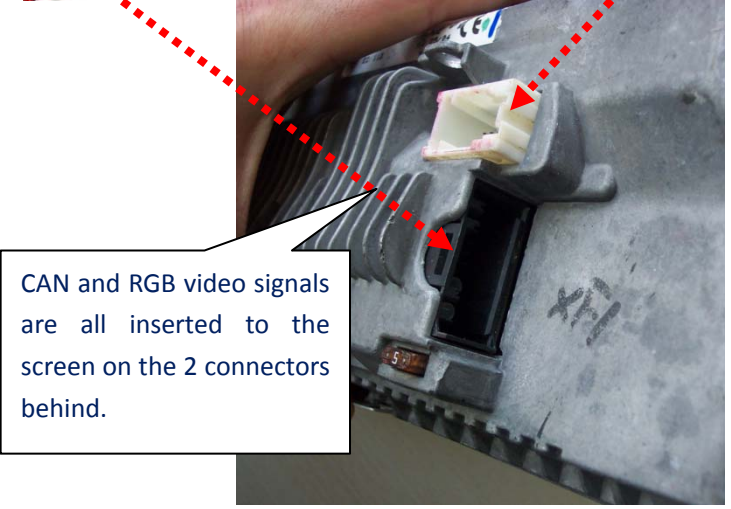
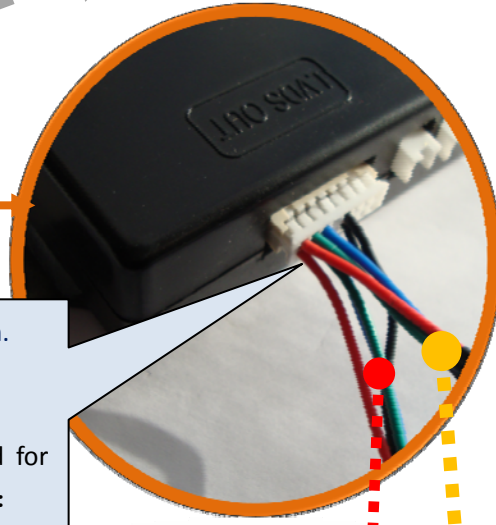
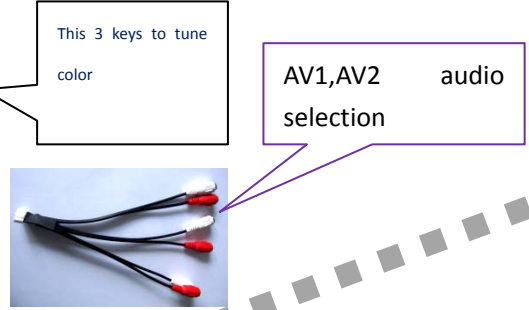
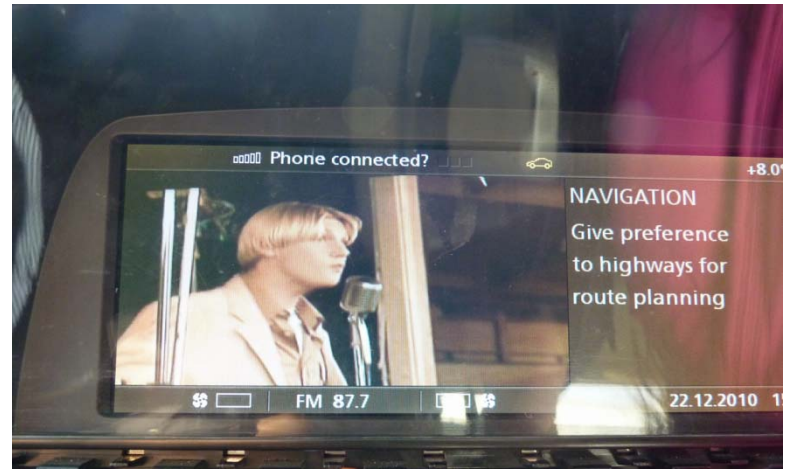
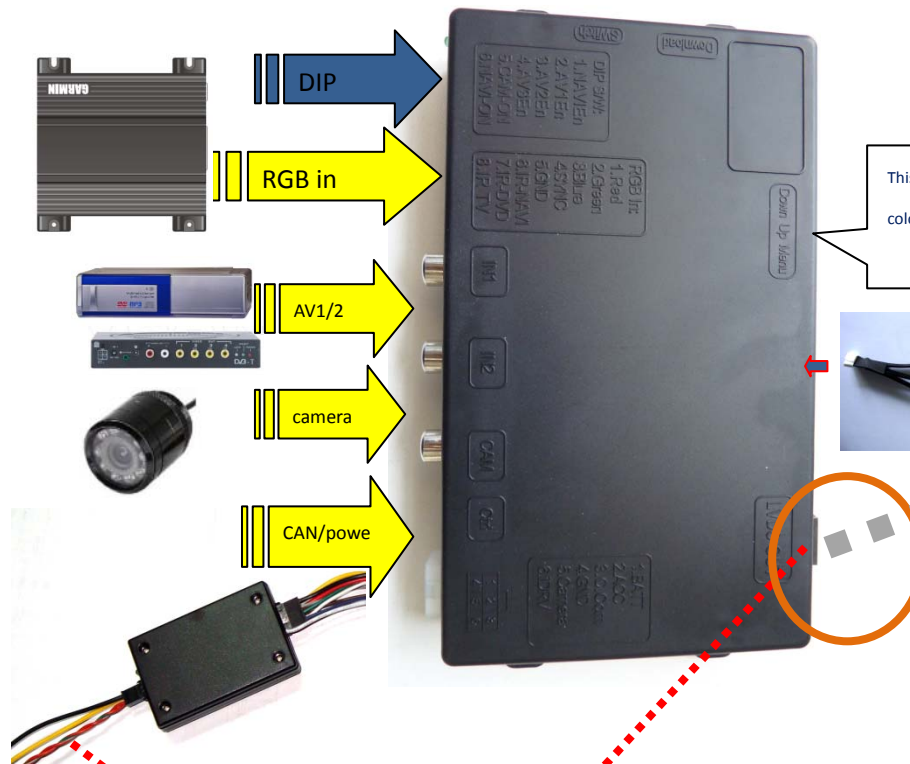


The inserted video

Notes,

- BMW 7 (E65) uses a 8.8 inch LCD with 24: 9 display ratio, the LCD screen has a computer inside to generate and display car information like the data on above pictures. Thus only a 16:9 area is given to the navigation video. The interface will generate a RGB video to replace the original navigation video with exactly the same window size, and window location.
- E65 uses RGB connection between the navigation computer and screen, and Sync is not delivered by a separate wire, it is mixed inside Green, the interface uses exactly the same video delivery.

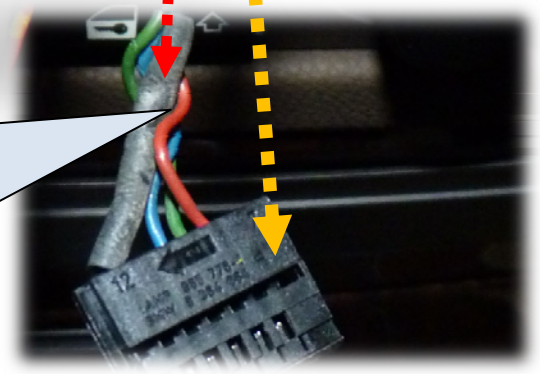
1. Connections:



Top Row: RGB video output to screen.
 Below row: Car RGB signals input.
 Only 4 wires of either row are used for video insertion, they are: [left pin =1] : 1[RED], 2[GREEN], 3[BLUE], 5GND.

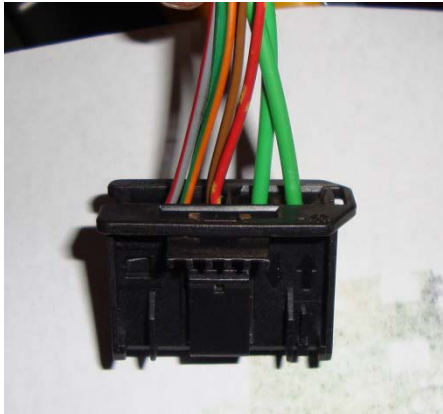
The white connector behind monitor has RGB delivery as this picture shows, the wires are colored the same way as the signals. We cut the 4 wires, so interface's RGB-GND wires can be inserted, in this Way:

- PLUG side → wired to interface's top row
- Cable side → wired to interface's below row



2. CAN wires connection:

[Behind the BMW E65 screen, there is a black connector, BATT,GND, and CAN wires are there. The 4 input wire of the CAN box should be connected there, like the table shown below. Note: the 2 big green wire are optical fiber, they do not need to be modified.]



NAME	BMW CAR color	CAN box colors
CAN -	Pure Green twisted	GRAY twisted
CAN +	Orange/Green twisted	BLUE twisted
GND	BROWN	BROWN
BATT[13.8V]	RED/GRAY	RED with fuse
✧ [CAN wires when wrongly connected will not damage anything, but only when connected correctly, the data LED will blink and the interface switch correctly.]		
✧ CAN box generates ACC according to the CAN data action. it will sends ACC out and show the Power LED whenever the can bus is active with data running.		



The 6PIN power connector signal definition between the Can box and interface box:

YELLOW: power supply of 12V, it can be ACC or BATT.

RED: ACC (=12V when key in ignition state): when=12V, the interface works.

BLACK: Ground to Chassis.

GREEN: reverse video trigger signal [when =12V the reverse video is enabled], this signal is generated inside the CAN bus with max output of 1A current, this can be used directly to power a camera.

WHITE: switch signal wire, when=12V, this interface switches. [max.25V] when the user press "STAR", this wire goes to 5V.

3. DIP Settings

DIP	Down side (=ON)	Up side (=OFF)
1, 2,3	RGB AV1/2 input enabled	RGB, AV1/2 input disabled
4,5,6	Not used.	
7,8	7DOWN , 8UP : the output is NTSC format for BMW	

4. Operations:

- when the screen is turned on, the user may select the navigation mode on the car screen. [usually push the knob to the right side on the mode as the picture is shown.]
- Then the user can press the “Star” key on the steering wheel, then he can select Car video → inserted navigation → inserted DVD → ... → CAR video .
- All connectors should be fixed firmly with type to guarantee that no connectors will go loosen after long time use.

