

Mercedes W212 interface Installer's manual

[Product type: FV-Benz567 Ver.10.05]

This interface can insert RGB navigation/2AV/Camera signal onto Mercedes W212,W204, and W221 screens. It is suitable for these Mercedes 5-inch,6-inch, 7-inch LVDS screens:



5inch screens with 280X100 resolution.

In W204 C series ,GLK series cars e.g. C200, GLK300 American version, and more.



6inch[5.8 inch] screen with 480X240 resolution

In W212 cars, that is E260, E300 European version, some middle-east versions and more.

7inch screen with 800X480 resolution

in W212,W204,W221 cars, e.g. C-series e.g.C280, Glk300 China version, E-series E300/E260,S-series S350, SLK-class...

1. Features of this interface

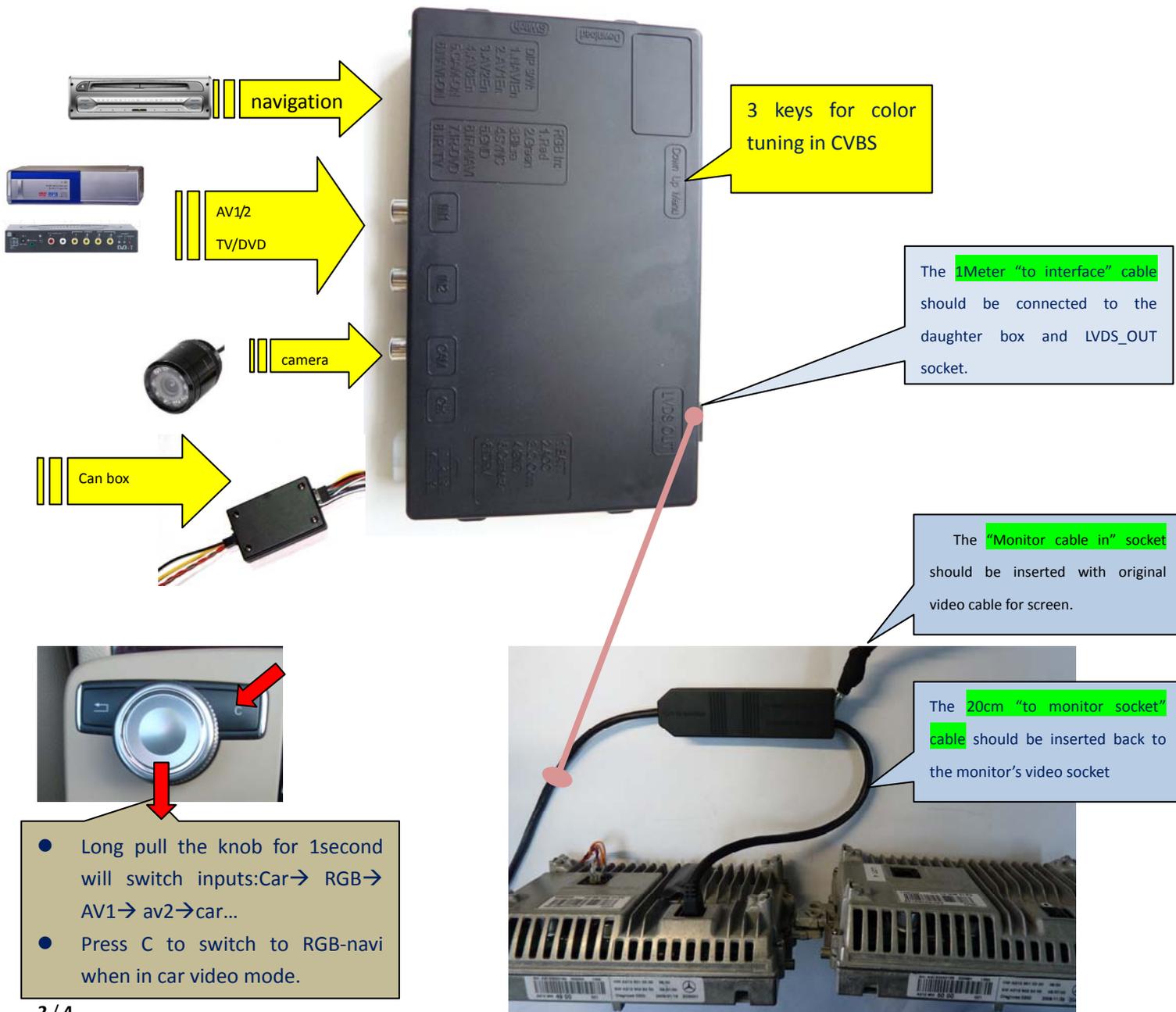
- ✓ It is compatible with all Mercedes 10Pin LVDS screen CD/screen systems which are available in C-class, E-class, S-class and more, based on fosp's several years' experience in interface work for mercedes cars. The installer can change the interface's output to fit the screen by just set the DIP switch.
- ✓ Special video scaling processor with multi-pixel spatial zoom algorithm used inside, so NTSC and PAL can be displayed with the best visual effect and resolution. 64M dynamical memory is used inside for 2-dimensional spatial zoom.
- ✓ Plug and play installation without hurting the original circuit and warranty label, because of dedicated connector and socket which make the installing become wrong-inserting-proof.
- ✓ Special PPS shell makes this interface stable against noise, Low EMI, and very reliable.[the black plastic shell is actually conductive]
- ✓ The embedded CAN bus to IR converter makes the user enjoy controlling the navigation or other devices by original COMAND keys, without the remote controller in car.
- ✓ Ultra-reliable protection circuit is used to protect the car monitor, car navigation computer, and interface against possible hot-plugging noise.[all input pins will not damage any circuit even when connected wrong to 12V or GND including the LVDS pins.]
- ✓ This device is car temperature verified, surge voltage stability testified and E11 certified.

2. System connection

DIP switch setting:



DIP	=ON [DIP=Down side.]	=OFF
1	RGB enabled	RGB disabled.
2,	AV1 for DVD enabled	AV1 disabled
3	AV2 for Tuner/MP5 or extra video enabled	AV2disabled
5	This is reverse camera trigger wire go to CAM when Green wire= 12V]	go to car video when Green wire= 12V
6	NAVIGATION= VGA	NAVIGATION=RGB NTSC
7,8	7=UP,8=UP: 7inch screen with 800X480 resolution 7=UP,8=DOWN: 6inch screen with 480X240 resolution 7=DOWN,8=DOWN: 5inch screen with 280X100 resolution	



Note:

- ✧ The DIP switches can be changed anytime, the installer do not need to switch the unit off to change the DIP.

The DIP7,8 is related to the output picture resolution, when Set Wrong, nothing will be damaged, just reset to correct state.

[see here → if the DIP is set 400X240 while the car screen is actually 800X480.]



- ✧ The 3 side key switches:

The 3 side keys are : menu, +,- respectively. When menu is press, this OSD strings will pop up on screen, and the installer may adjust the Brightness/ Contrast/ Saturation/Sharpness to set the best video effect. The +/- will change the value.

[this menu will not pop out in RGB input state because it is tuned to be the best resolution and displayed effect already.]



- ✧ The DVD/TUNER/NAVI selection in the OSD menu gives the option for the installer to select various brands of DVD, TV-tuner, and navigation computer. These devices can be controlled by the interface's internal CAN bus to IR converter. So remote controllers are not needed for the viewer.

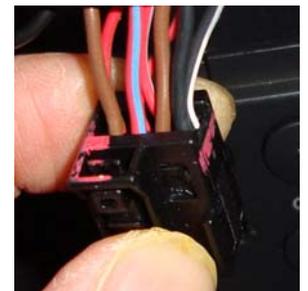
The installer can use the original command knob to select the command, or add the extra touch screen to control the DVD.

If the viewer do not care using a remote control for DVD and extra video device, the last 3 options may be not cared about.



3. 4Pin CAN box input wires connection:

Name	Color in Car connector[8PIN]	Color in CAN-BOX[4Pin]
CAN -	Twitsted BLACK	twisted orange
CAN +	Twitsted BLACK/WHITE	twisted BLUE
GND	BROWN	BROWN
BATT [13.8V]	RED/Blue	RED with 2A FUSE



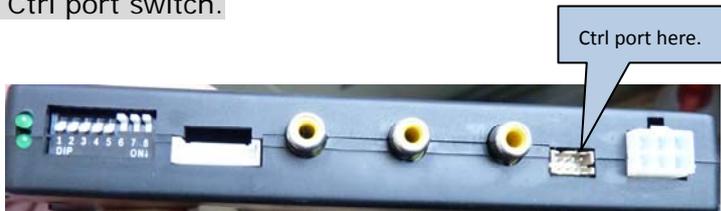
[note:

1. CAN wrong connection is not hurting device, the LED will be blinking when connected correctly.
2. The CAN wire location may be different from C-class to E-class and GLK, but the color in the above table is always correct.]

The 6P wire conn. between CAN-Interface box :

- YELLOW:** 12V battery power
- RED=ACC:** when screen is On this wire goes to 12V.
- BLACK:** Ground for chassis.
- GREEN:** reverse wire[=12V].
- white:** switch signal when =12V.[max 25V]
- GRAY:** specific control signal from the CAN box.

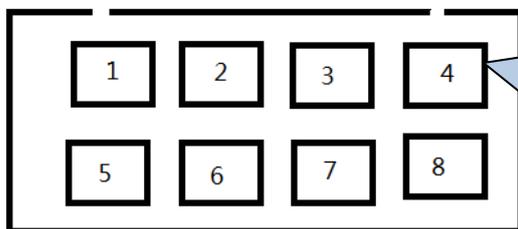
3. The Ctrl port switch.



The **Ctrl port** has 8 pins, it is not necessary for the installers to use it in most cases, however it can be used for in case it is needed.

All Mercedes cars have an AUX input, which can be connected to the external audio input. This aux input locates inside the front trunk as shown in this picture.

If the installer needs to send 2 or more extra audio into the car speaker, one mechanical relay can be used to switch the sound. The Ctrl.port on the interface has a 5V switch voltage. [max output=2A, while most mechanical relay only needs 0.1~0.3A.]



- Pin 1: +5V output voltage for sound-switch-relay when AV1 is selected, 0V when AV2 selected.
- Pin 4: GND
- Pin 8: GND
- Pin 5: data bus for touch screen
- Pin 6: clock bus for touch screen.
- Pin1,5,6 has high voltage protection inside in case wrongly connected to 12V by installer.[max 25V].
- Pin5,6 should NOT be connected to GND.

4. Parameters

No.	name	parameter
1	RGB video amplitude	0.7Vpp with 75 ohm impedance
2	sync amplitude in RGB-navi port	3~5Vpp with 5K ohm impedance Sync should be NTSC composite with negative polarity.
3	Av1,Av2, cam video amplitude	0.7Vpp with 75 ohm impedance
4	Av1,Av2, cam standard	NTSC/PAL/SECAM automatic switch
5	VGA	Suggested to be 800X600@60Hz when VGA: Pin 1,2,3,4,8 carry R,G,B, Hsync, Vsync respectively. VGA mode is only available for 800X480 screen, for 6 and 5-inch low resolution screen, it shows screen.
6	Normal work Power consumption	2.4W [0.2A @12V]
7	Standby current	< 5mA
8	Standby start	10 seconds after the users switch off the CD unit.
9	Reverse trigger threshold	>5V trigger
10	Work temperature	-40 ~ +85C