

## FV-GVIF-2012 installation manual\_v1200420

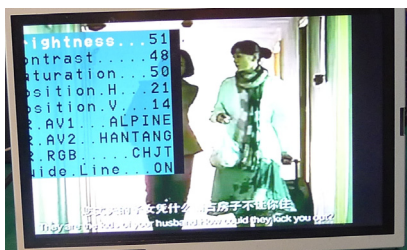
[product type: FV- FV-GVIF-2012]

This interface can insert High definition RGB navigation video, AV and reverse camera video onto GVIF car screens. Including 2012 chevrolet Malibu, 2012 and before Buick regal/Lacrosse, Opel, new Cadillac, Rover discovery3, new Lexus, etc. Plug and Play OEM connectors are used, also this interface is tested to work good till -40 celsius. The features of this interface are:

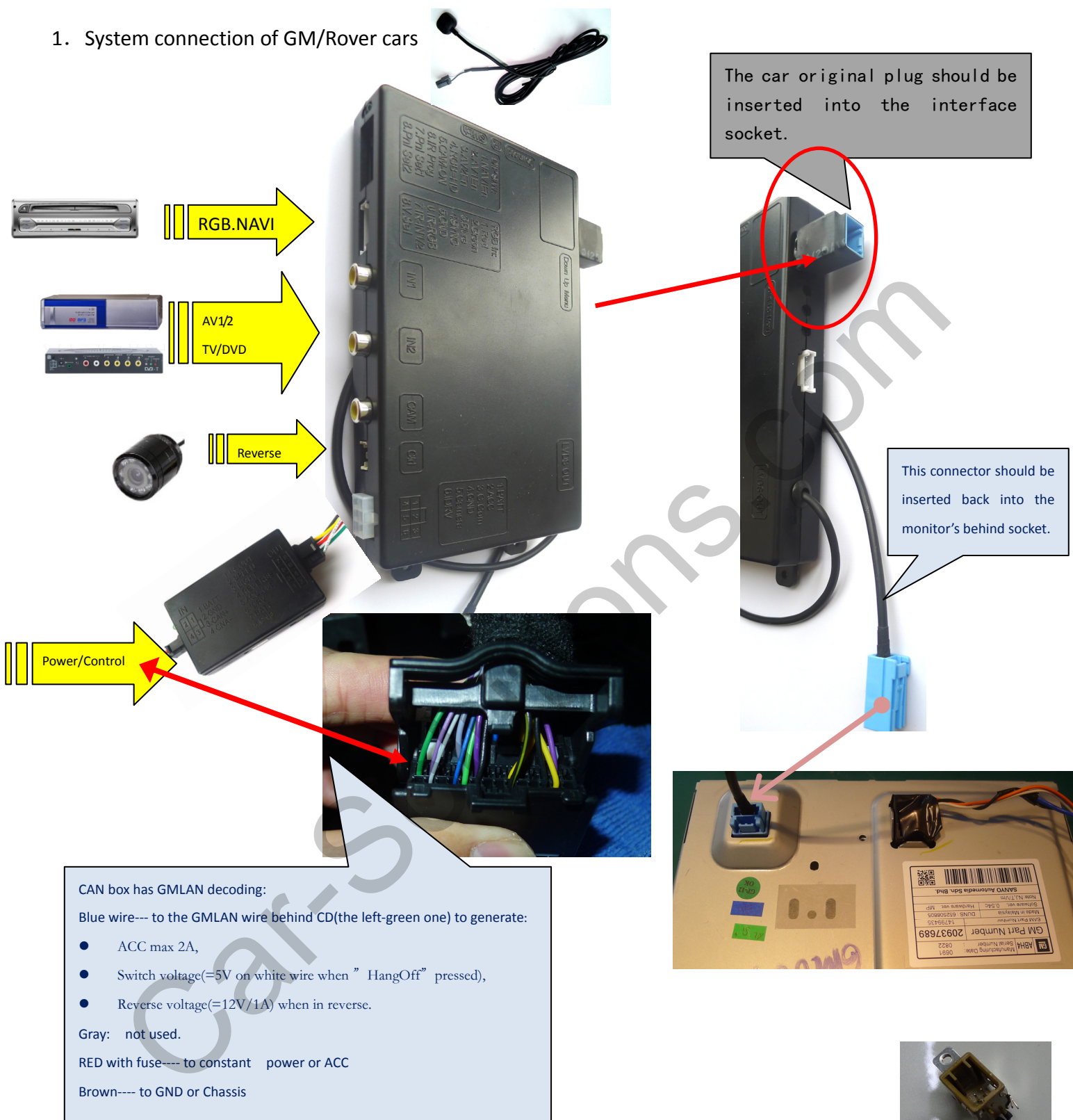
- OEM connectors are used, the Digital processing circuit inside offers many types of GVIF protocol, so this interface can insert video onto almost all GVIF screens, including 2012 chevrolet Malibu, 2012 and before Buick regal/Lacrosse, Opel, new Cadillac, Rover discovery3, new Lexus, infinity etc. 2 DIPs (DIP7 and 8) are used to set the GVIF protocol and resolution.
- This interface can be switched by OEM key on Lexus (the DISP key).
- It can be switched by OEM navi/AV key in Rover/Jaguar, when the installer gets the OEM can box from Fosp.
- By using the GMLAN decoding box, this interface can be switched by OEM key on GM cars [the Hangoff key on steering wheel], also the reverse signal can be generated as well.
- Digital processing circuit inside with huge video RAM makes this interface easy to adjust by just 2 DIPs on GVIF protocol, and it has guaranteed video quality on critical environment conditions.

## 1. DIP switch setting:

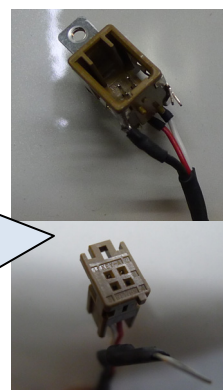
DIP	=ON [DIP=Down side.]	=OFF
1	RGB enabled	RGB disabled.
2,	AV1 for DVD enabled	AV1 disabled
3	AV2 for Tuner or extra video enabled	AV2 disabled
4	RGB=HD RGB [800X480 or VGA 640X480]	RGB=Normal NTSC [480X240]
5	This is reverse camera trigger wire go to CAM when Green wire= 12V]	go to car video when Green wire= 12V
6	IR programme when once to ON Touch calibration when get to ON >5 times.	OFF for normal work.
7,8	<p>7=UP (=OFF) , for lexus GVIF, also the new Infinity.  7=Down/ON: old GVIF protocol, [buick, chevrolet, Discovery3].  8=UP: display resolution=800X480  8=DOWN: 480X240 display resolution [lacrosse, 2012-before Insignia]</p> <p>Possible wrong settings:</p> <p>DIP7 set wrong may lead to right side black margin, DIP8 Set wrong may lead to multiple pictures or jumping.</p>	



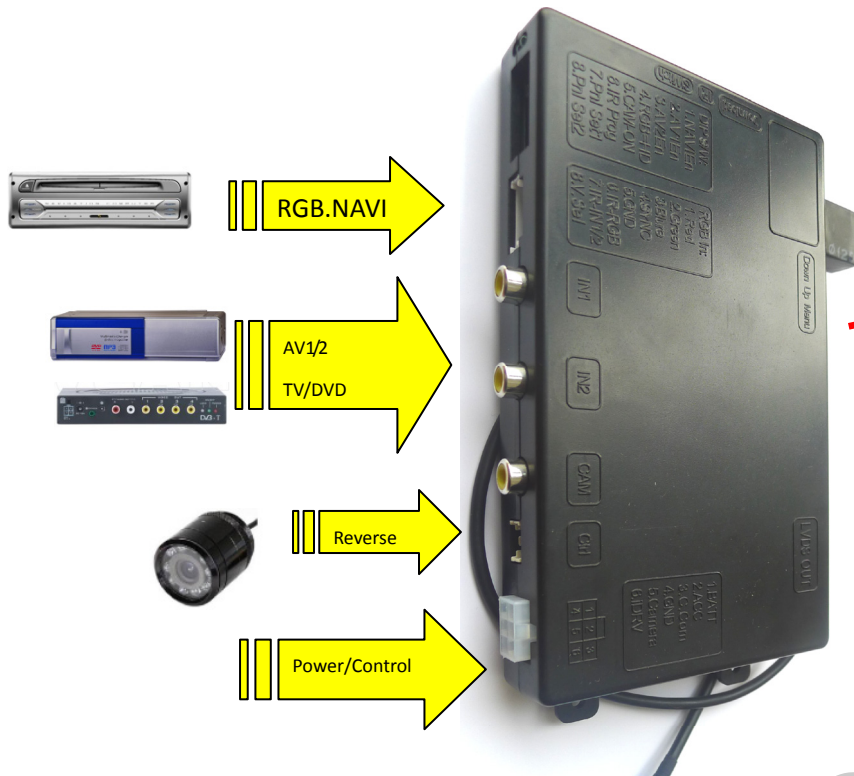
## 1. System connection of GM/Rover cars



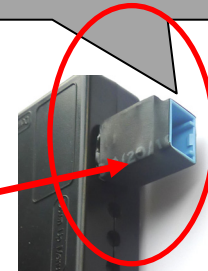
The 2011 infinity uses this kind of connector, this interface's wire should be cut to get inserted.



### 3. System connection of Lexus



The car original plug should be inserted into the interface socket.



This connector should be inserted back into the monitor's behind socket.



#### The signal definition of 6P to interface:

**Yellow:** constant power of 12V, it can also be connected to ACC.

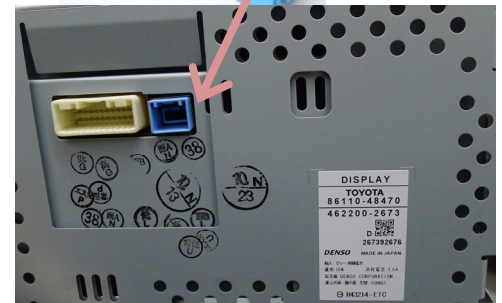
**black:** GND of chassis.

**RED[ACC]:** when the monitor works, this wire=12V, otherwise=0V.

**Green:** reverse signal wire[=12V when in reverse], it can be used to give power to camery.(10u capacitor may be needed to filter the noise on the long camera wire)

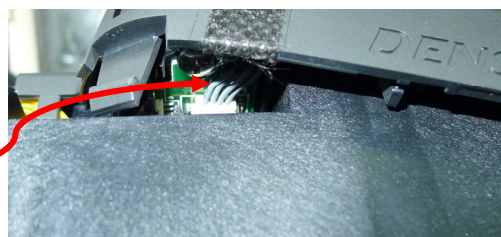
**White wire:** switch signal wire, when =12V or 5V, this interface switches.

**Gray wire:** CAN bus control data to interface, it is used to pop up the control icons. It can be left alone.



#### OEM key to switch on lexus

- The user can use OEM disp key to switch, it shows the Brightness/Contrast adjustment on the background like the picture below shows, thus the user will not feel background operations.
- The installer can also use the extra keypad to switch.





## 2. Interface Settings

- The 3 side keys are : menu, +, - respectively. When menu is press, OSD strings will pop up on screen, and the installer may adjust the best video effect. The +/- will change the value.
- The DVD/TUNER/NAVI is to set the IR code output to the installed device, so people use original knob to control
- When set to "none", the control icons will not pop out
- When set to "Prog", the installer can use DIP6=Down to program the IR code into the interface, so extra new devices can be controlled.
- the installer can adjust the Position H, Position V values to make the image fit into the center of the screen.
- The Guide Line option is for reverse camera guide display, please set to OFF for lexus, because CAN box is not used.



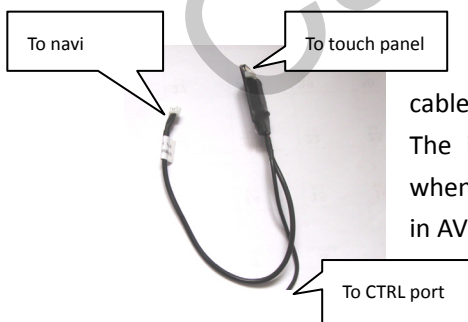
### The programming of IR code:

- There are >10 types of DVD, NAVI, and Tuners' IR code are stored inside the interface. The installer just adjusts the options to select to wanted one, then it works. If the wanted type is not there, he may set the option to be "Prog" in the menu.
- When programming, switch the input to AV1, and set DIP6 down once, then the control icons will be shown, and one of the them will be blinking. Point the IR remote controller to the IR port of interface, the blinking icon will be moved to the next one. Which means one code is programmed. Repeat this step until all icons are programmed.
- The programming of AV2 is the same as above.

## 3. CTRL port

There is a 8-pin extra CTRL port on the interface, which the installer does not need to use in normal situation. For experienced users, this port may be used to get extra functions.

One dedicated daughter board can be used, so people just touch the screen, the installed devices can be controlled by the icons, because the interface can generate IR code based on touch screen operations.



the CTRL port can be connected to the left touch cable, so DVD and other devices can be touch controlled. The internal switch makes the navi use touch panel when in RGB-input, and DVD uses the touch panel when in AV1 input.



Ctrl port signal definitions:

Pin 1,2	+5V output voltage for sound-switch-relay, when AV1 is selected=5V, 0V when AV2 selected. Max 3A.	
3:	Constant +5V	Max .2A
4, 8	Ground	
5:	Dedicated control bus for camera。	Should not be connected to GND, otherwise CPU will halt.
6:		
7	+5V output when in interface mode, 0V when in Car mode.	

**Note2:**

There is a **gray** wire between the can box and interface box, which is used to deliver control data, so that multimedia icons will pop out and be executed. This wire can also deliver terminal-mode control data. So a 3<sup>rd</sup> party computer can control this interface.[ terminal mode like: to directly go to RGB input, to AV1 input, AV2 input,reverse camera input], to get the full implementation of fosp interface terminal mode operations, please contact fosp sales people.

#### 4. Parameters

No.	name	parameter
1	RGB video amplitude	0.7Vpp with 75 ohm impedance NTSC resolution [400X240,480X240] of navigation is allowed.
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		
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
11	dimensions	15.6 X 9.2 X 2.2 Cm