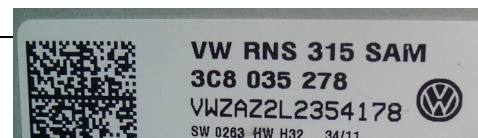


# FV-RNS315 interface installation manual\_v120330

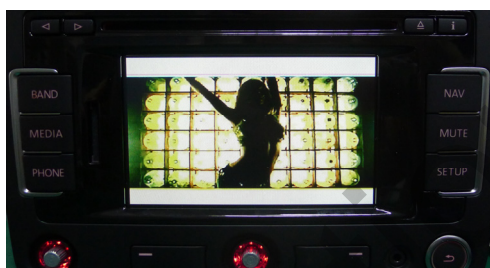


[product type: FV-RNS315]

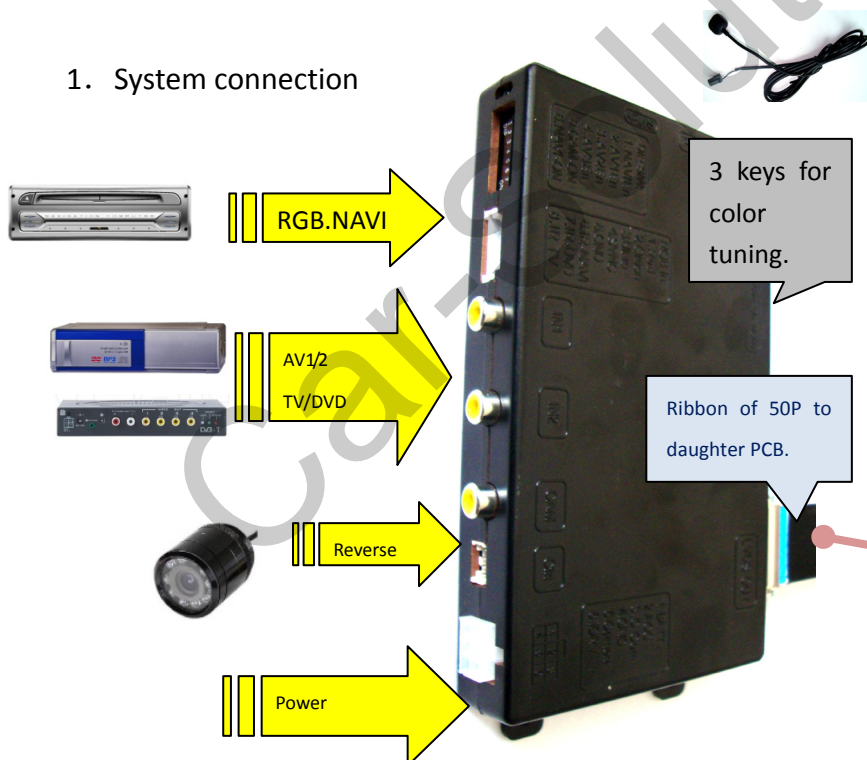
This interface can insert RGB navigation video, AV and reverse camera video onto Volkswagen RNS315 car screens.

The features:

- Both NTSC-RGB[400X240] and HD\_RGB[800X480] navigation picture can be inserted.
- The OEM touch screen can be used for inserted navigation.
- Totally Digital processing circuit is used, which guarantees the video quality and stability.
- All OEM car information are kept the same. The car functions like Air condition control are untouched, and no error code will be produced to the car.

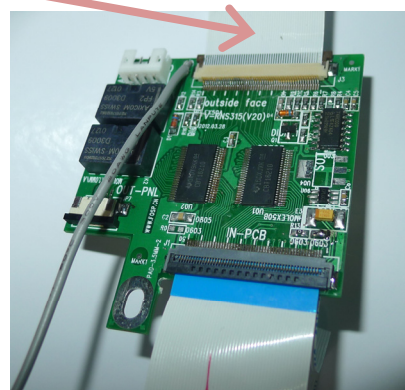


## 1. System connection



### Note1:

- 1) The daughter PCB socket should be wrapped with type after installation,
- 2) the flying wire is for OEM MEDIA key to switch the interface, it can also be wired to GND so people use the extra key pad to switch.
- 3) If the cover of the socket slides out in installation, it may be inserted back.

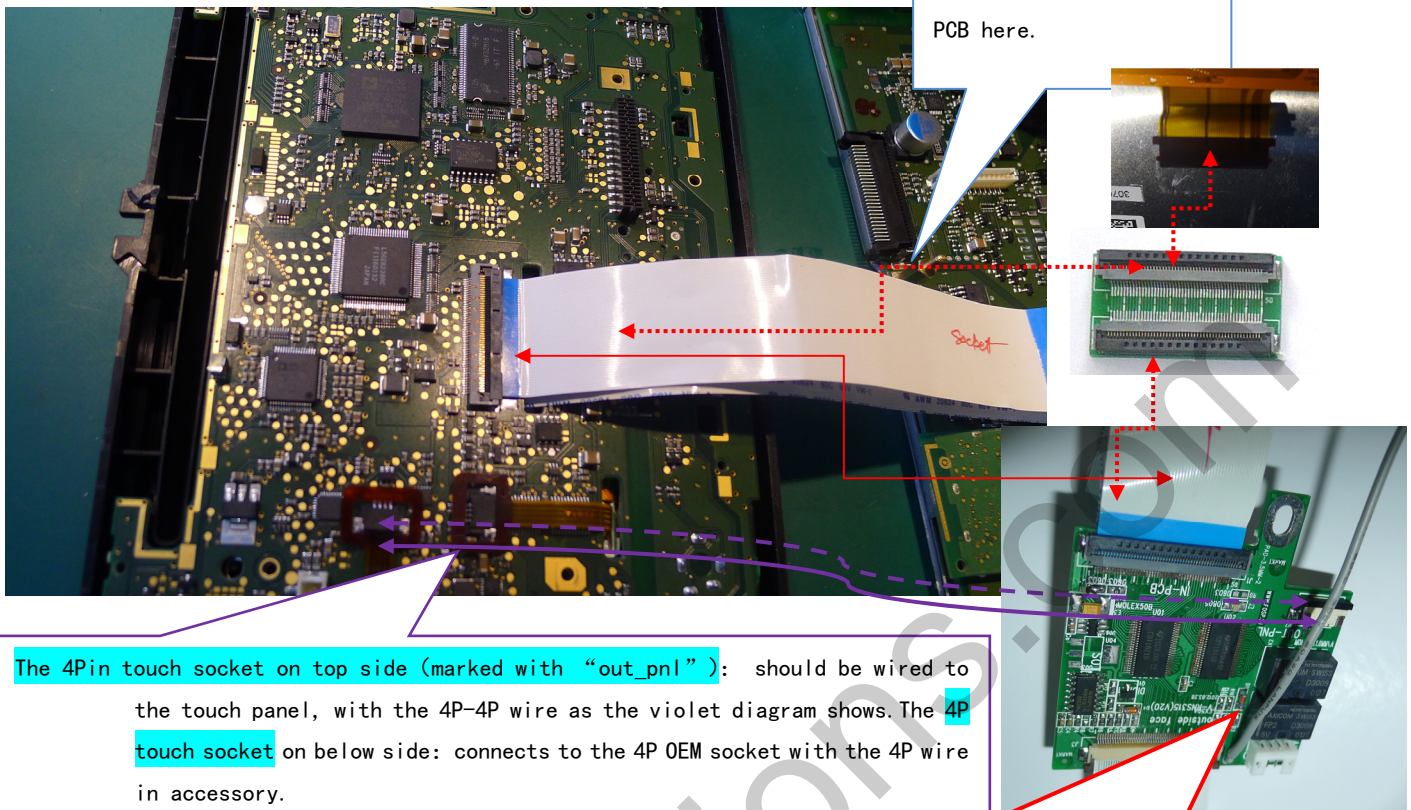




## The touch panel, Internal daughter board installation method:

The screw location:

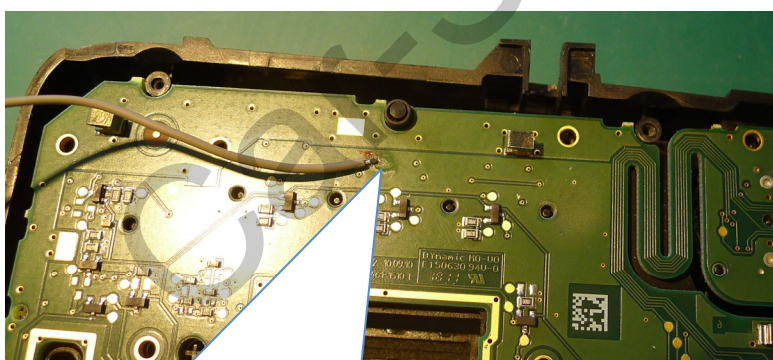
The screw should be inserted here to fix the PCB here.



The 4Pin touch socket on top side (marked with "out\_pnl"): should be wired to the touch panel, with the 4P-4P wire as the violet diagram shows. The 4P touch socket on below side: connects to the 4P OEM socket with the 4P wire in accessory.

Then the 4P DIP socket can be used to the installed navi.

The 50P socket on top of PCB (marked: IN-PCB): should be connected to the PCB-SOCKET on the driving PCB as the red arrow says. The 50P socket on the bottom side: should be wired to the LCD panel with the 50P ribbon and 50-50 converting PCB. Be sure the 50P ribbon should go through the PCB as the picture shows, otherwise the screws may hurt it.



This solder point:

The flying wire from the daughter board should be soldered here so people can use the Media button to switch.

The installer can also ignore this point, if he uses the extra keypad to switch, then the flying wire should be connected to Ground to avoid automatic input switching.



The screw hole here: should be inserted with a screw-pole so the daughter board can be fixed here.

#### 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	AV2disabled
4	RGB=HD This car LCD only suggests this format.	RGB=Normal NTSC
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	7=UP,8=UP: no function, leave both UP as default.	

## 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 .



#### The programming of IR code:

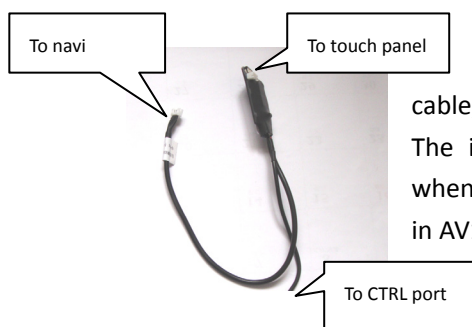
- There are >10 types of DVD, NAVI, and Tuners' IR code are stored inside the interface. The installer just adjusts the options to select to wanted one, then it works. If the wanted type is not there, he may set the option to be "Prog" in the menu.
- When programming, switch the input to AV1, and set 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 uses for touch panel switch, so installed navi uses the oem touch panel for control.

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], and HD resolution[800X480] of navigation are 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