

Renault 2014 Interface manual_v20131208

Product type: FV_Renault2014

This interface can insert video into Renault 2014 monitors, including the Tomtom unit and DACIA LG unit. 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.

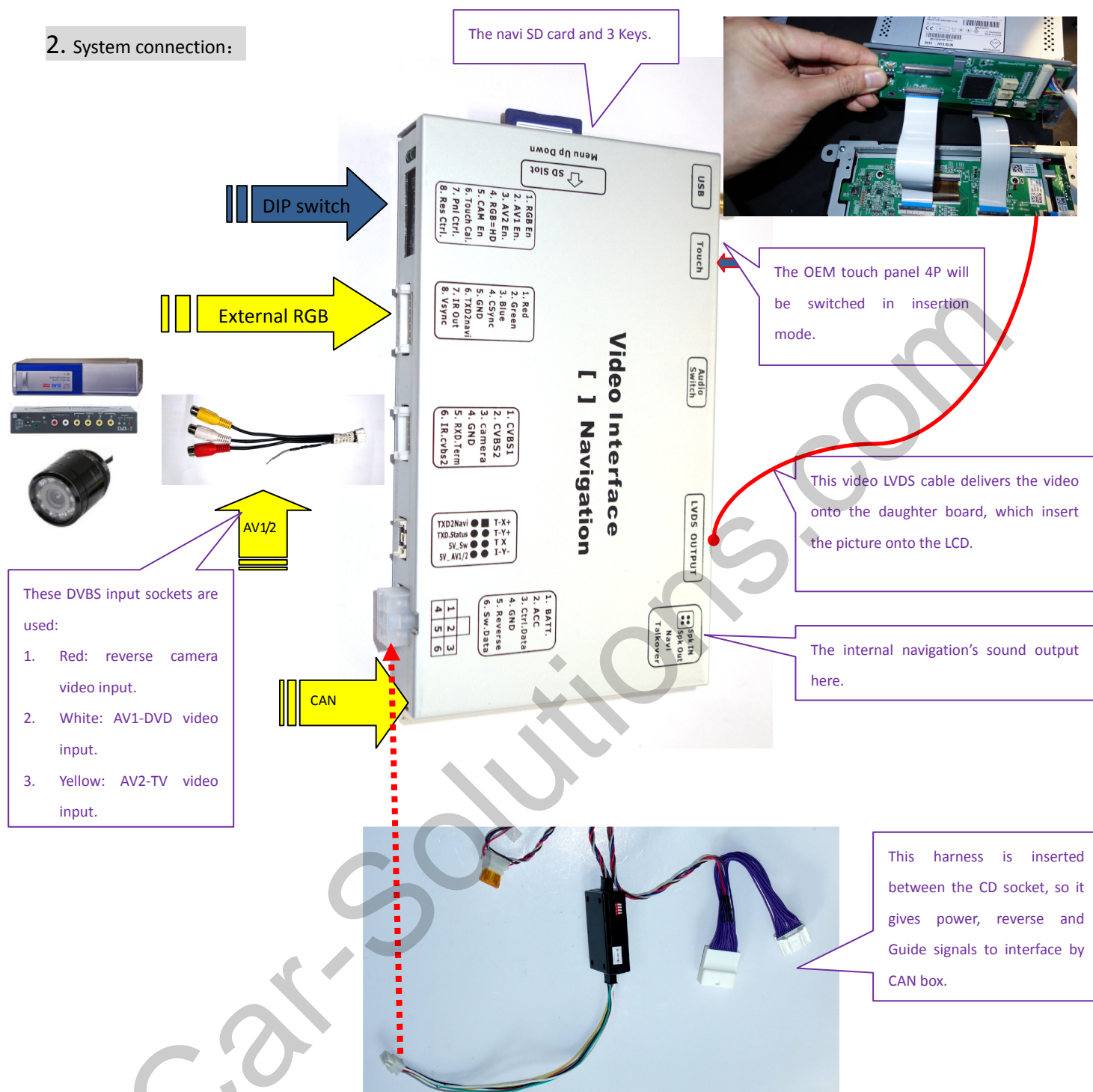
- ✓ One interface fits both Renault 2014 monitors, including the Tomtom unit and DACIA LG unit.
- ✓ optional internal navigation modules uses Digital connection, so High resolution picture is guaranteed. Screws are used to fix the daughter board with the shell which guarantees long time reliability.
- ✓ Adjustable guideline width, so no matter whatever camera used, the guideline shows the safety zone.
- ✓ Plug and play connectors are used, so the installer does not need to cut any wires.



1. DIP settings

| DIP | Down side (=ON) | Up side (=OFF) |
|-----------------|--|--|
| 1 | RGB input enabled | External RGB input disabled |
| 2,3 | AV1/2 input enabled | AV1/2 input disabled |
| 4 | RGB input= VGA resolution 800X480 This is the suggested resolution, no matter the panel resolution. | RGB input= NTSC resolution 400[or 480]X240. |
| 5 | AV4 video is selected when green wire goes to 12V.[this is for the case aftermarket camera is installed] | Car oem picture is selected when green wire = 12V. |
| 6 | Set to ON once for IR programming, and to ON 5 times for touch panel calibration. | Set to OFF for normal use. Note: this Calibration is for touch to control DVD/TV in AV1/2 mode, the navi mode is done by powering this unit up without SD card in slot. |
| DIP 7, 8 | 7=UP,8=UP: this is the default state suggested, these 2 DIPs are not used inside. | |

2. System connection:



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

YELLOW: power supply of 12V BATT.

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

BLACK: Ground to Chassis.

GREEN: Can box generated reverse trigger signal [when =12V the reverse video is enabled]

WHITE: Can box generated switch signal wire, when=12V, this interface switches. [max.25V]

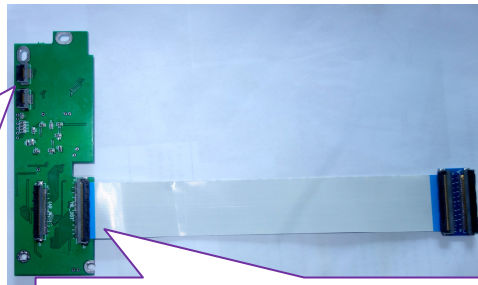
GRAY: CAN box's communication with interface on sharing control signal to DVD/TV on this wire.[if we do not need to idrv to control DVD/TV/iPOD, this wire may be cut off.]

3. Daughter board installation:

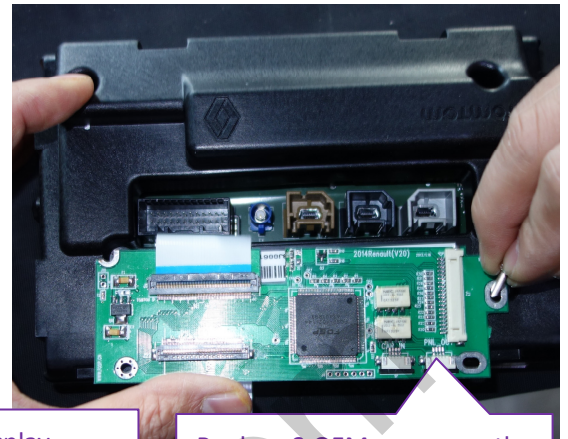
the daughter board receives video from interface, and insert the video onto the display. It has 2 sets of connectors, 60P for Tomtom display, and 50P for DACIA display. The daughter board automatically detects which one is connected, and automatically chooses the timing for it.

When In TomTom display: the 60P connectors/ribbons are used.

If external navi is installed, this 2 socket should be connected to OEM touch panel and socket.



These 2 60P connectors are for Tomtom display. Rear side 60P: connect to LCD with converter sockets, Top side 60P: connect to PCB with ribbon cable.



Replace 2 OEM screws on the rear shell, and put 2 longer ones so daughter is fixed on rear shell.

When in DACIA LG display:



Fix the daughter board here with the extra screw. 2PCs of 50P ribbon should be used to replace the OEM ribbon to insert picture.

This cable to daughter board.

If external navigation module is installed, these 4P sockets should be connected to OEM 4P touch panel connector/Panel. So people can use OEM touch to control navi.

4. Operation from CAN bus:

- The user can press VOL- twice quickly to switch input.
- Extra key pad can be used to switch input also, in this case, the installer just put one side of the switch to ACC, the other to white wire. [each time switched, this interface will not switch within 3 seconds.]
- Reverse and guideline will be automatically generated when reverse.
- The installer can also connect 12V to the green wire for reverse.



3. the 3 side key buttons

The input box has 3 side keys, the installer may use it to tune the picture display, and touch function for the connected DVD or other devices. The 3 keys are : **menu, +, -**. The first 5 options has separate state memory. The modification of one input is different not affecting others.



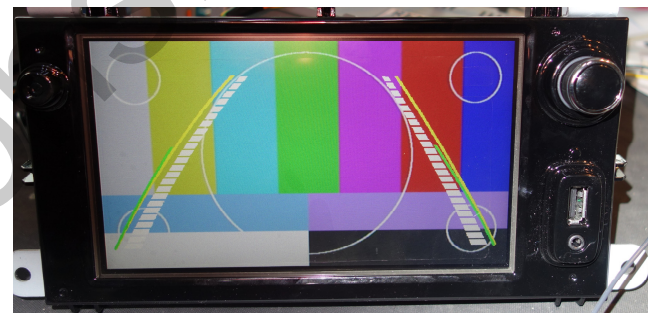
- The 3 side keys are : menu, +, - respectively. When menu is press, OSD strings will pop up on screen, and the installer may adjust the best video effect. The +/- will change the value.
- The brightness/contrast/saturation tunes the color of the current video input.
- The position H, position V set the image position on screen.
- The DVD/TUNER/NAVI is to set the IR code output to the installed device, so people use original knob or touch screen to control the installed device in AV1/2 mode. Left/right push will pop up the MMI icons, and push will execute the selected icon.
- 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 **"Guide CTRL.....ON"**: the installer can set ON/OFF to enable the parking guide line, which shows the safe zone when parking.

The **Guide L** option set the left guide line's offset on screen, when the value changes, the left guide moves its location.

The **Guide R** option set the Right guide line's offset on screen, when the value changes, the Right guide moves its location. With this combination, the guide line can always fits the car and show the safety area no matter whatever camera the installer uses.

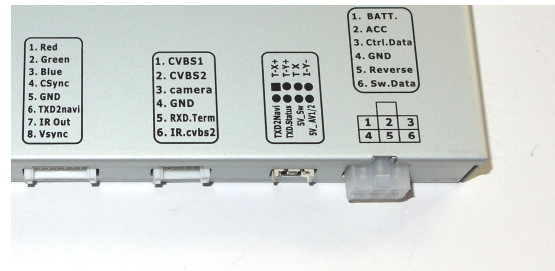
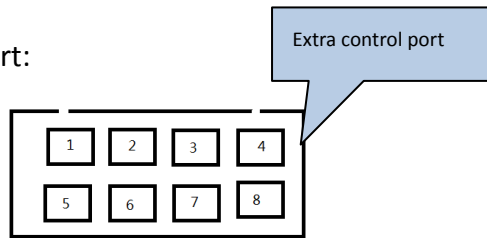


Reverse: when the driver goes to R, the can box's output [Green wire=12V], then the reverse image will be shown. And guideline can be shown if enabled by OSD.

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, which means the suitable IR code is wanted. The installer should now connect the hardware: connect the IR signal wire of the DVD to the gray-wire in the power cable of the interface[the IR input wire.], and press once the related IR key.
- Then the 2nd icon will be blinking, which means one IR code is read and another code is wanted, the installer just repeat the pressing till all code are read.
- When the last icons stops blinking. The installer should change the hardware: connect the **IR output wire[RGB port's 7 pin wire]** of interface to the DVD's IR signal wire. Then when the user rotates the knob or use the touch foil to generate the IR code, DVD will be controlled.
- The programming of AV2 is the same as above.

4. Extra control port:



This interface has released a lot of hidden functions, so the 3rd party can use it for various usages.

The Extra control port close to the power connector:

- (1) the 4-pin in the up row: touch screen 4Pin input, when in DVD or TV, the touch foil can be switched and connected to these 4Pin, so the controller inside can read the touch operation and location and generate the IR code for DVD etc.
- (2) the 5th Pin(TXD2Navi): the input pin to take external control data for internal navi, to replace the touch control.
- (3) the 6th Pin (TXD.Status): the interface tells the outside its internal status.
- (4) the 7th Pin (5V_SW) : this pin can output 5V with 1A max, which is enough for a relay pull, when in inserted video this pin=5V, when in OEM video, this pin=0V.
- (5) the 8th Pin (5V_AV1/2) : this pin can output 5V with 1A max, which is enough for a relay pull, when in AV1/2 video this pin=5V, otherwise this pin=0V. it can be used to switch the 4Pin touch so one touch foil is shared by navi, and DVD/TV.



The 5th pin in the Video input port (RXD.Term):

This interface can work in terminal mode, a 3rd developer or installer can send commands into this pin. E.g. when he sends "switchInput 1\r", the interface will switch into RGB navi, "switchInput 2\r", the interface will switch into AV1, when he sends "Help\n", the interface will tell a list of available commands. This Pin works in 11.5K baud rate and it loses all sent commands when drops power.

5. Parameters

| No. | name | parameter |
|-----|---------------------------|---|
| 1 | RGB map resolution | 800X480 HD suggested. |
| 2 | Av1, , cam video | 0.7Vpp with 75 ohm impedance NTSC/PAL/SECAM automatic switch |
| 3 | GPS antenna | 5V active antenna from the golden finger connector. |
| 4 | Reverse Control wire | >5V will force into camera mode. All these wires can tolerate 12V for <10 seconds. |
| 5 | Normal Power consumption | 4.8W |
| 6 | Standby current | < 10uA |
| 7 | Reverse trigger threshold | >5V trigger |
| 8 | Work temperature | -40 ~ +85C |
| 9 | Size | 15.2 * 9 * 2.1CM |
| 11 | USB | OTG function, 1A output with surge of 3A. |
| 12 | Compatible with maps | Navione, navitel, Igo, Primo.syvic, etc. |