RCD550 interface installation manual_v120303

[product type: FV-RCD550]

This interface can insert High definition RGB navigation video, AV and reverse camera video onto RCD550 car screens. The features are:

- A daughter board is used to insert High definition RGB navigation and other video onto the OEM screen.
- Oem NAVI key is used to switch the video input. Reverse camera trigger signal is automatically generated.
- Guaranteed digital video quality on screen. Which also offer very nice reliability.

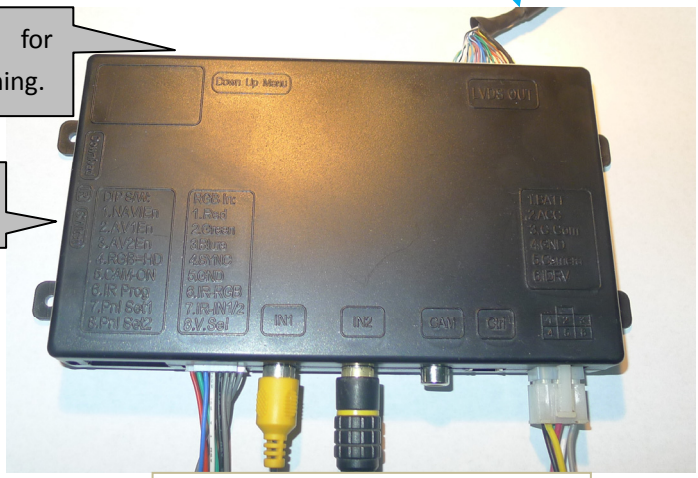
1. System connection

The daughter board with isolation tube is used to switch the video from board to LCD.

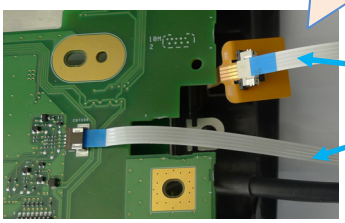
Insert the red ribbon of LCD onto the daughter board, while insert the white ribbon back to OEM PCB socket.

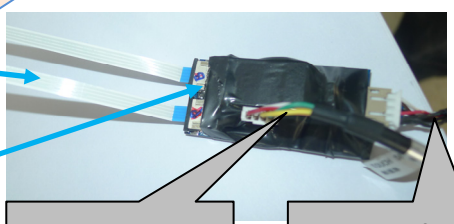
3 keys for color tuning.

Extra keypad



The 4P touch panel should go through the daughter board thus the touch can be used to installed navigation computer.



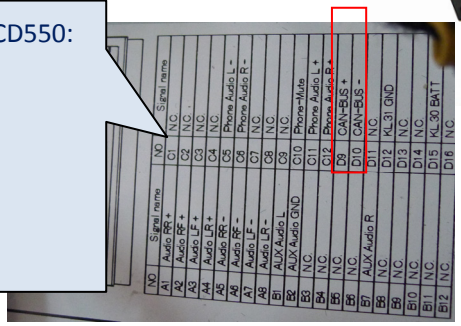


Touch to external navi

To Interface's CTRL port

NAVI AV1,AV2 Rearview

The CAN box's 4 input wires should be wired to the rear of the RCD550:
Red with fuse----to---constant BATT or ACC
Brown ----to--- car chassis for Ground.
Blue ----to--- CAN bus+ [printed on the top of head unit.]
Gray ----to--- CAN bus-
Correct connection will make the can box's LED when working.



The signal definition of 6P on interface from CAN box：

Yellow：constant power of 12V。 **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 reverse signal to interface box，also giving power to camera[max.1A]
- When giving power to camera, a 100u capacitor is necessary on this wire to filter the noise on camera long wires.
- When only give reverse signal to interface, and camera is powered elsewhere, do not add capacitor。

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. See note2 on the end of this wire.

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 RGB [800X480 or VGA 640X480] Suggested input.	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	**DIP8=DOWN: for RCD550 (important)** DIP8=OFF(UP side) means factory test mode of this interface, the screen may show noise or black screen[not damage anything], if the installer can not see the inserted video, probably this dip goes wrong.	

2. Interface Settings

- The 3 side keys are : menu, +,- respectively. When menu is pressed, 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.

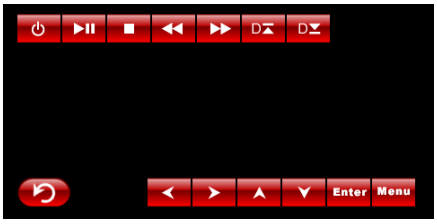
When the menu is pressed twice, any menu will pop up to show the horizontal/vertical video location adjustment, the 55/06 is the best value. (default value.)

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.

4. Video switch among different inputs

- The user may press the LEFT key to switch the inputs of interface.
- The RIGHT arrow key can be used to pop up the multimedia control icons, the user pressed the down arrow key to execute the icon.
- The user may also use extra keypad to switch the inputs, in this case, the white wire of the 6P wire between CAN box and interface should be cut off.[suggested.]



3. CTRL port

There is a 8-pin extra CTRL port on the interface, the RCD550 is already using it to switch the touch panel 4P signals.

The installer does not need to use the other functions of this 4P in normal situation. For experienced users, this port may be used to get extra functions.

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 3rd 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. Suggested: 800X480 RGB HD.
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