

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:

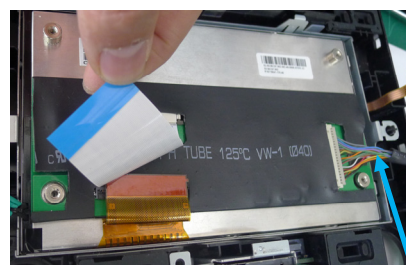
- A daughter board is used to insert High definition RGB navigation and other video onto the OEM screen.
- Oem NAVI key is used to switch the video input. Reverse camera trigger signal is automatically generated.
- Guaranteed digital video quality on screen. Which also offer very nice reliability.



1. System connection

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

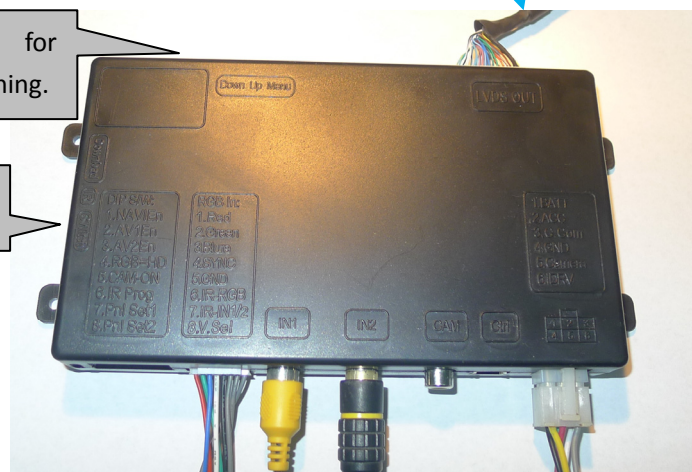
Insert the red ribbon of LCD onto the daughter board, while insert the white ribbon back to OEM PCB socket.



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

3 keys for color tuning.

Extra keypad



NAVI AV1,AV2 Rearview

Touch to external navi

To Interface's CTRL port

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.

NO	Signal Name	NO	Signal Name	NO	Signal Name
A1	Audio RF +	C1	NC	G1	NC
A2	Audio RF -	C2	NC	G2	NC
A3	Audio LF +	C3	NC	G3	NC
A4	Audio LF -	C4	NC	G4	NC
A5	Audio RF +	C5	NC	G5	NC
A6	Audio RF -	C6	NC	G6	NC
A7	Audio LF +	C7	NC	G7	NC
A8	Audio LF -	C8	NC	G8	NC
A9	Audio LF +	C9	NC	G9	NC
A10	Audio LF -	C10	NC	G10	NC
A11	Audio LF +	C11	NC	G11	NC
A12	Audio LF -	C12	NC	G12	NC
A13	Audio LF +	C13	NC	G13	NC
A14	Audio LF -	C14	NC	G14	NC
A15	Audio LF +	C15	NC	G15	NC
A16	Audio LF -	C16	NC	G16	NC
A17	Audio LF +	C17	NC	G17	NC
A18	Audio LF -	C18	NC	G18	NC
A19	Audio LF +	C19	NC	G19	NC
A20	Audio LF -	C20	NC	G20	NC
A21	Audio LF +	C21	NC	G21	NC
A22	Audio LF -	C22	NC	G22	NC
A23	Audio LF +	C23	NC	G23	NC
A24	Audio LF -	C24	NC	G24	NC
A25	Audio LF +	C25	NC	G25	NC
A26	Audio LF -	C26	NC	G26	NC
A27	Audio LF +	C27	NC	G27	NC
A28	Audio LF -	C28	NC	G28	NC
A29	Audio LF +	C29	NC	G29	NC
A30	Audio LF -	C30	NC	G30	NC
A31	Audio LF +	C31	NC	G31	NC
A32	Audio LF -	C32	NC	G32	NC
A33	Audio LF +	C33	NC	G33	NC
A34	Audio LF -	C34	NC	G34	NC
A35	Audio LF +	C35	NC	G35	NC
A36	Audio LF -	C36	NC	G36	NC
A37	Audio LF +	C37	NC	G37	NC
A38	Audio LF -	C38	NC	G38	NC
A39	Audio LF +	C39	NC	G39	NC
A40	Audio LF -	C40	NC	G40	NC
A41	Audio LF +	C41	NC	G41	NC
A42	Audio LF -	C42	NC	G42	NC
A43	Audio LF +	C43	NC	G43	NC
A44	Audio LF -	C44	NC	G44	NC
A45	Audio LF +	C45	NC	G45	NC
A46	Audio LF -	C46	NC	G46	NC
A47	Audio LF +	C47	NC	G47	NC
A48	Audio LF -	C48	NC	G48	NC
A49	Audio LF +	C49	NC	G49	NC
A50	Audio LF -	C50	NC	G50	NC
A51	Audio LF +	C51	NC	G51	NC
A52	Audio LF -	C52	NC	G52	NC
A53	Audio LF +	C53	NC	G53	NC
A54	Audio LF -	C54	NC	G54	NC
A55	Audio LF +	C55	NC	G55	NC
A56	Audio LF -	C56	NC	G56	NC
A57	Audio LF +	C57	NC	G57	NC
A58	Audio LF -	C58	NC	G58	NC
A59	Audio LF +	C59	NC	G59	NC
A60	Audio LF -	C60	NC	G60	NC
A61	Audio LF +	C61	NC	G61	NC
A62	Audio LF -	C62	NC	G62	NC
A63	Audio LF +	C63	NC	G63	NC
A64	Audio LF -	C64	NC	G64	NC
A65	Audio LF +	C65	NC	G65	NC
A66	Audio LF -	C66	NC	G66	NC
A67	Audio LF +	C67	NC	G67	NC
A68	Audio LF -	C68	NC	G68	NC
A69	Audio LF +	C69	NC	G69	NC
A70	Audio LF -	C70	NC	G70	NC
A71	Audio LF +	C71	NC	G71	NC
A72	Audio LF -	C72	NC	G72	NC
A73	Audio LF +	C73	NC	G73	NC
A74	Audio LF -	C74	NC	G74	NC
A75	Audio LF +	C75	NC	G75	NC
A76	Audio LF -	C76	NC	G76	NC
A77	Audio LF +	C77	NC	G77	NC
A78	Audio LF -	C78	NC	G78	NC
A79	Audio LF +	C79	NC	G79	NC
A80	Audio LF -	C80	NC	G80	NC
A81	Audio LF +	C81	NC	G81	NC
A82	Audio LF -	C82	NC	G82	NC
A83	Audio LF +	C83	NC	G83	NC
A84	Audio LF -	C84	NC	G84	NC
A85	Audio LF +	C85	NC	G85	NC
A86	Audio LF -	C86	NC	G86	NC
A87	Audio LF +	C87	NC	G87	NC
A88	Audio LF -	C88	NC	G88	NC
A89	Audio LF +	C89	NC	G89	NC
A90	Audio LF -	C90	NC	G90	NC
A91	Audio LF +	C91	NC	G91	NC
A92	Audio LF -	C92	NC	G92	NC
A93	Audio LF +	C93	NC	G93	NC
A94	Audio LF -	C94	NC	G94	NC
A95	Audio LF +	C95	NC	G95	NC
A96	Audio LF -	C96	NC	G96	NC
A97	Audio LF +	C97	NC	G97	NC
A98	Audio LF -	C98	NC	G98	NC
A99	Audio LF +	C99	NC	G99	NC
A100	Audio LF -	C100	NC	G100	NC

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