



Side by Side Refrigerator

Basic Model: **RS554NRUA****

Model: **RS554NRUA1J**
RS554NRUASL
RS552NRUA1J
RS552NRUASL
RS552NRUAWW
RS554NRUAWW
RS552NRUA9M
RS554NRUA9M

Service Manual

Refrigerator

Contents



- Safety
- Features and Specifications
- Disassembly & Reassembly
- Troubleshooting
- PCB Diagram
- Wiring Diagram
- Schematic Diagram
- Reference



WARNING

Important Safety Notice

The service guide is for service men with adequate backgrounds of electrical, electronic, and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or dealer cannot be responsible for the interpretation of this information.

SAMSUNG Electronics

Technical Service Guide

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1. Notice

1-1. Safety Precautions

Only qualified maintenance personnel who grasp full technology of refrigerating circulation system and regulations of safety inspection are allowed for maintenance operation according to this Manual.



This product uses inflammable and explosive refrigerant- R600a. In order to keep safety, the maintenance site must be well-ventilated.

1. Don't share a socket with other appliances.
 - ▶ It may cause abnormal heating and fire.
2. Don't allow users to repair refrigerators by themselves.
 - ▶ Users may be injured due to fire or abnormal action.
3. Check if power cord is pressed or pierced by objects.
 - ▶ Repair at once if plug or socket is poor in contact.
4. Check operation environment of the refrigerator.
 - ▶ Change if the operation environment is damp, waterish or unstable.
5. Grounding if necessary.
 - ▶ DO ground it in case of electric leakage risk according to water and damp.
6. Unplug before replacing or repairing electric parts.
 - ▶ Electric shock hazard.
7. Don't store any bottle in the freezer.
 - ▶ Users may be injured if bottles are broken.
8. Prevent the stored foods from moving.
 - ▶ Users may be injured by falling objects while opening or closing doors.
9. Only foods are allowed to be stored in the refrigerator.
 - ▶ Don't store medicine, academic materials, or any object with strict requirement on temperature.
10. Don't place object on the refrigerator.
 - ▶ Users may be injured by falling objects while opening or closing doors.
11. Only rated components can be used to replace electric parts.
 - ▶ Please confirm model name, rated voltage, rated current, action temperature of electric parts.
12. While repairing, wires, i.e. harness, must be firm.
 - ▶ By pressing, they will not shed and water will not leak.
13. While repairing, remove all dust and foreign matters of housing, wiring part and spot check part etc.
 - ▶ To prevent from tracking, short and fire .
14. After repairing, check assembly state of parts.
 - ▶ They should be the same as before.
15. Check if electric parts leak water.
 - ▶ If any, replace parts or wind by insulating tape etc.
16. Wires may intersect if bare; don't bundle them up when wind insulating tape.
 - ▶ Wind insulating tape, so as to prevent wires from tracking, short and fire in case of crack and leakage.

1-2. Precautions of Maintenance

1. When replacing the relay connected to lead terminal of compressor, plug and unplug directly. Lead terminal and relay may be damaged if shaking the relay while plugging and unplugging.

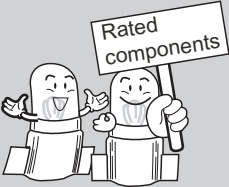
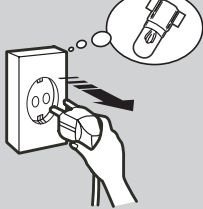
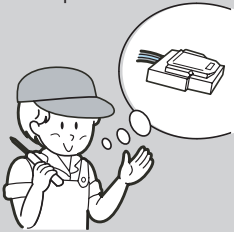
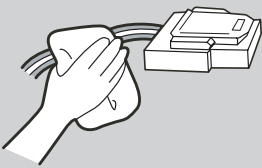
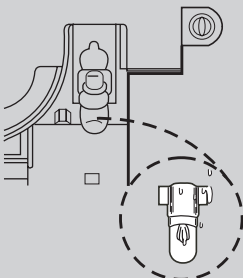
2. The refrigerator can be started again 5 minutes after power off.
Otherwise, it can't work at once.



It refers to safety materials about AC circuit and refrigerator parts.

It refers to materials for refrigerator maintenance.

 WARNING Risk of death or serious injury!	 Do NOT attempt.
 CAUTION Risk of personal injury or property damage!	 Do NOT disassemble.
	 Do NOT touch.
	 Follow directions explicitly.
	 Unplug the power plug from the wall socket.
	 Make sure the machine is grounded to prevent electric shock.

 CAUTION		
Use rated components for replacing. Check if model, rated voltage, rated current and working temperature are correct.  	Unplug from socket before replacing internal lamp of the refrigerator. To avoid risk of electric shock.  	During maintenance, bundle wires tightly. So that they will not loose by force or be damped.  
During maintenance, remove any dust and foreign matter, and check parts. Check risk of fire due to aging, electric leakage or short.  	After maintenance, check assembly condition of parts. Assembly condition must be the same as before.  	Check if it leaks. In case of leakage, replace the related parts or take other necessary measures, i.e. wind by insulating tape.  

2. Product Features and Style

2-1. Product Features

- **Inverter Compressor**

Its imported high effective inverter compressor reduces power consumption of the refrigerator, lowers noise while operation, operates different states at different frequency, and is advantageous in freezing capacity and cooling speed.

- **Home Bar (Optional)**

With soft touch type Home Bar, just push and catch to open or close with latch and damping system. Now you can enjoy fashionable living.

- **Twin Cooling System**

The Refrigerator and Freezer have separate evaporators. Due to this independent cooling system, the Freezer and Refrigerator cool more efficiently.

- **Tempered Glass Door (Optional)**

Show unbeatable luxury.

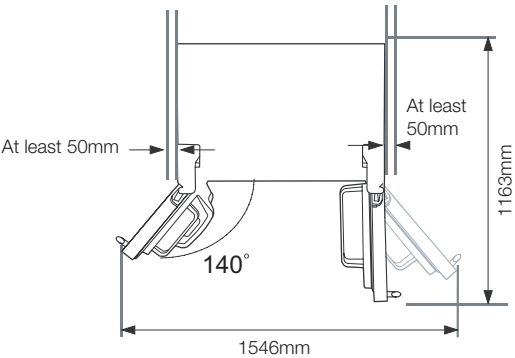
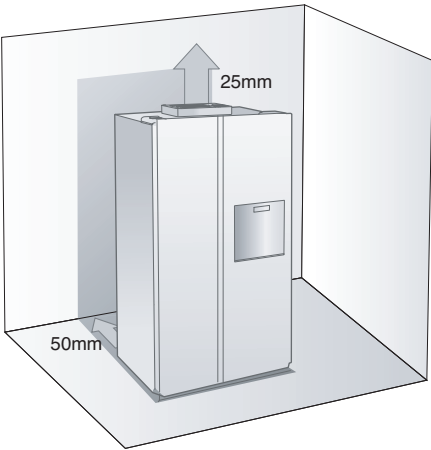
2-2. Product Specification

Model		RS554NRUA**	RS552NRUA**
Photo			
Total effective volume (L)		538	538
Effective volume of Freezer (L)		197	197
Effective volume of Fridge (L)		341	341
Dimension (mm)	Width	912	912
	Depth	700	700
	Height	1789	1789
Refrigerating type		Freeze frost-free chamber	
Control type		Electronic	
Display type		Digital display	
Power Freeze		Available	
Vacation function (R600a) /Power Cool function(R134a)		Available	
Door alarm sound		Available	
Refrigerant		R600a/R134a	
Foaming agent		Cyclopentane	
Rated voltage		220V	
Rated frequency		50Hz	
Rated current		1.3 A	
Input power		160W	
Defrost power of Freezer		183W	
Defrost power of Fridge		128W	
Illumination power of Freezer/Fridge		1.6W/1.6W	

2-3. Specification and Standard of Electric and Refrigerating Parts

Item		Standard	
Part	Model type	RS554NRUA**	RS552NRUA**
	Freezer defrost heater	230V 200W	230V 200W
	Fridge defrost heater	230V 140W	230V 140W
	Home bar heater	230V 14W	-
	Temperature fuse	110°C 250V 10A	110°C 250V 10A
	Freezer bimetallic strip thermal protector	Bimetallic strip temp. mutator (PW-5M1) on: 40°C off, 60°C	Bimetallic strip temp. mutator (PW-5M1) on: 40°C off, 60°C
	Fridge bimetallic strip thermal protector	Bimetallic strip temp. mutator (PW-5M1) on: 40°C off, 60°C	Bimetallic strip temp. mutator (PW-5M1) on: 40°C off, 60°C
	Overheat protector	Model	4TM
		ON temp.	61±9°C
		OFF temp.	135±5°C
	Start relay		No
	Capacitor		No
	Rated voltage		220V-240V/50Hz-60Hz
	Freezer DC brushless motor		DC12V 2.8W
	Fridge DC brushless motor		DC12V 2.8W
	Chill DC brushless motor		DC12V 2.5W
	Freezer lamp		12V 1.6W
	Freezer lamp		12V 1.6W
	Door switch		5V 1mA
	Switch of Home bar door		-

2-4. Product Dimensions



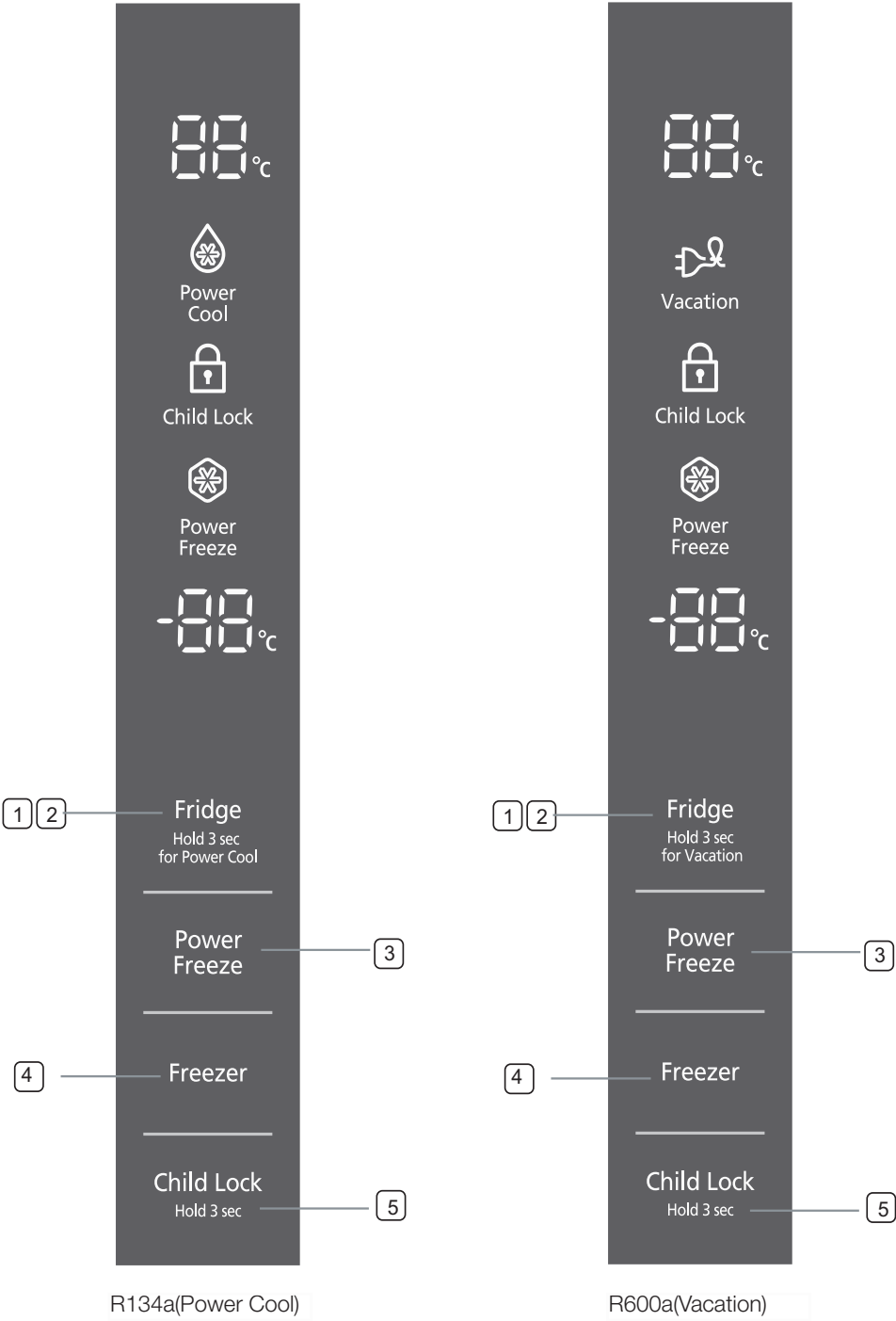
In order to move your refrigerator to certain place, be sure to measure dimensions of door frame (width and height), threshold, roof, ceiling and corridor etc.

* The following table lists heights and depths of different models of Samsung refrigerators.

Model			RS554NRUA**	RS552NRUA**
Capacity (L)			538	538
Dimension (mm)	Width	Only main body	908	908
		Include doors	912	912
	Depth	Only main body	600	600
		Include doors	700	700
	Height	No doors	1743	1743
		Include doors	1789	1789

3. Product Function

3-1. Display Panel



3-2. Temperature Control Function

1. Fridge button

- When you turn on the refrigerator for the first time, temperature of the fridge will set to 3°C automatically. Press “Fridge” button once, the fridge will show the present temperature; if press it again within 5S, the temperature can be adjusted.
You may adjust the temperature from 1°C to 7°C.

2. Vacation function(R600a)

- If you are going on vacation or business trip or you do not need to use the refrigerator, press the Vacation button. When you select vacation button for fridge compartment off, display LED of Vacation will be on. It is strongly requested to remove foods in the fresh-food compartment and do not leave the door open when you select Vacation function.

2. Power Cool function(R134a)

- Speeds up the time needed to fresh products in the fridge. This can be helpful if need to quickly cool fresh food, or if the temperature in the fridge has warmed dramatically (For example, if the door was opened too long, or put too much warm food in fridge suddenly)

3. Power Freeze button

- In order to freeze food quickly, you can choose this function.
- Set power freeze: press “Power Freeze” button, enter power freeze state when the panel displays “Power Freeze” icon.
- Cancel power freeze: press “Power Freeze” button, “Power Freeze” indicator disappeared, and it exits from power freeze state, Exit from power freeze automatically after reaching power freeze time; its icon extinguishes; freeze temperature returns to the setting value before entering power freeze.

4. Freezer button

- When you turn on the refrigerator for the first time, temperature of the freezer will set to -20°C automatically. Press “Freezer” button once, the freezer will show the present temperature; if press it again within 5S, the temperature can be adjusted.
You may adjust the temperature from -14 to -23°C.

5. Child lock

- Press “Child Lock” for 3S to switch between lock and unlock. At lock state, except “Child Lock”, all other buttons are unavailable.

4. Calibration and Adjustment

4-1. Test Function: Forced Service

In normal operation mode, press both “Fridge” and “Power Freeze” buttons for 6S to enter intermediate mode.

Press “Power Freeze” button within 4S to enter test mode.

Note: at test mode, BEEP alarm sound is given.

At test mode, press any of “Fridge”, “Power Freeze”, “Freezer” and “Child Lock”, it will switch to test function according to the following order.

(Herein after, “*” is used to replace “any button”; F/R represents “Freezer/ Fridge”.)

If pressing * once, enter force start; Seven-segment code of F flashes and displays [FF];

If pressing * twice, enter Fridge OFF force start; Seven-segment code of F flashes and displays [OF];

If pressing * three times, enter Fridge defrosting, Seven-segment code of Freezer flashes and displays [rd];

If pressing * four times, enter F/R defrosting, Seven-segment code of Freezer flashes and displays [Fd];

If pressing * five times, cancel test mode (cancel alarm sound, wait normal display);

Note: if * button is pressed before normal display is recovered, it will switch to test function again and circulate according to the above order.

4-2. Self-checking Function

When the refrigerator is power on for the first time, the system will check error of sensor and load; refer to “Chapter 6: Troubleshooting” for actual errors.

If pressing both “Fridge” and “Power Freeze” buttons for 10S during normal operation, you can check if sensor and partial load during operation of the refrigerator are correct. Error display measures are the same as “Chapter 6: Troubleshooting”.

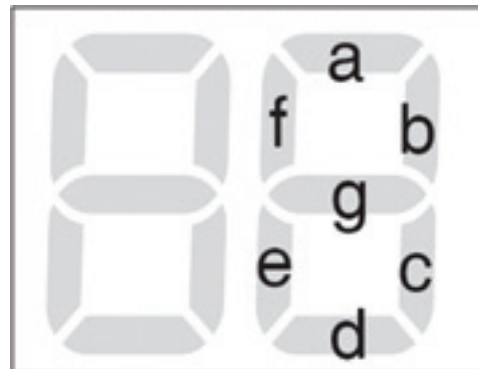
4-3. Overload State Display Function

At normal operation mode, press “Fridge Adjustment” and “Power Freeze” buttons for 6S to enter intermediate mode; press “Freezer” button within 4S to enter load checking mode.

Refrigerator display panel will show the information that if refrigerator load runs.

If LED lights up, load operation or function is chosen; otherwise, load stop or function is not chosen.

The right figure displays naming mode of every part of 7-section code on the display panel.



*** Check List of Load Mode:**

NO	ITEM	DISPLAY LED	CONTENTS
1	High speed of R fan	R: the 1st "a"	High speed of R fan: LED ON
2	Low speed of R fan	R: the 1st "b"	Low speed of R fan: LED ON
3	Def. electric heating of R	R: the 1st "c"	Def. electric heating of R On: : LED ON
4	Start mode	R: the 1st "d"	Run start mode: LED ON
5	Overload mode	R: the 1st "e"	When environment temp. is above 34°C: LED ON
6	Low temperature mode	R: the 1st "f"	When environment temp. is below 21°C: LED ON
7	Exhibition mode	R: the 1st "g"	Run exhibition mode: LED ON
8	Compressor	F: the 1st "a"	Compressor on: LED ON
9	High speed of F fan	F: the 1st "b"	High speed of F fan: LED ON
10	Low speed of F fan	F: the 1st "c"	Low speed of F fan: LED ON
11	Def. electric heating of F	F: the 1st "d"	Def. electric heating of F on: LED ON
12	High speed of compressor fan	F: the 1st "e"	High speed of compressor fan: LED ON
13	Low speed of compressor fan	F: the 1st "f"	Low speed of compressor fan: LED ON
14	Secondary electric heating	F: the 1st "g"	Electric heater of Home bar: LED ON
15	Common condition	R: LED of the 1st "e" and "f" LED extinguishes	Environment temp.: 22°C~33°C

4-4. Exhibition Mode

At normal operation mode, press “Power Freeze” and “Freezer” buttons for 6S to enter intermediate mode;

Press “Fridge” button within 4S to enter exhibition mode.

At exhibition mode, display panel works normally, and the compressor stops working.

At exhibition mode, when either temperatures of the fridge or the freezer reach 65°C, the refrigerator exits from exhibition mode and returns to normal operation mode.

4-5. Option Setting Function

At normal operation mode, press “Fridge” + “Power Freeze” buttons for 6S to enter intermediate mode; press “Fridge” button within 4S to enter Service Option Setting mode.

If pressing “Power Freeze” button, OPTION ITEM rises; if pressing “Fridge” button, OPTION ITEM falls.

If pressing “Child Lock” button, OPTION VALUE rises; if pressing “Freezer” button, OPTION VALUE falls.

7-section code of the freezer display OPTION VALUE.

4-6. Button Functions at OPTION Setting

** Button functions at OPTION setting mode:

BUTTON	FUNCTION
Power freeze	OPTION ITEM rises
Fridge	OPTION ITEM falls
Child lock	OPTION VALUE rises
Freezer	OPTION VALUE falls

NOTE:

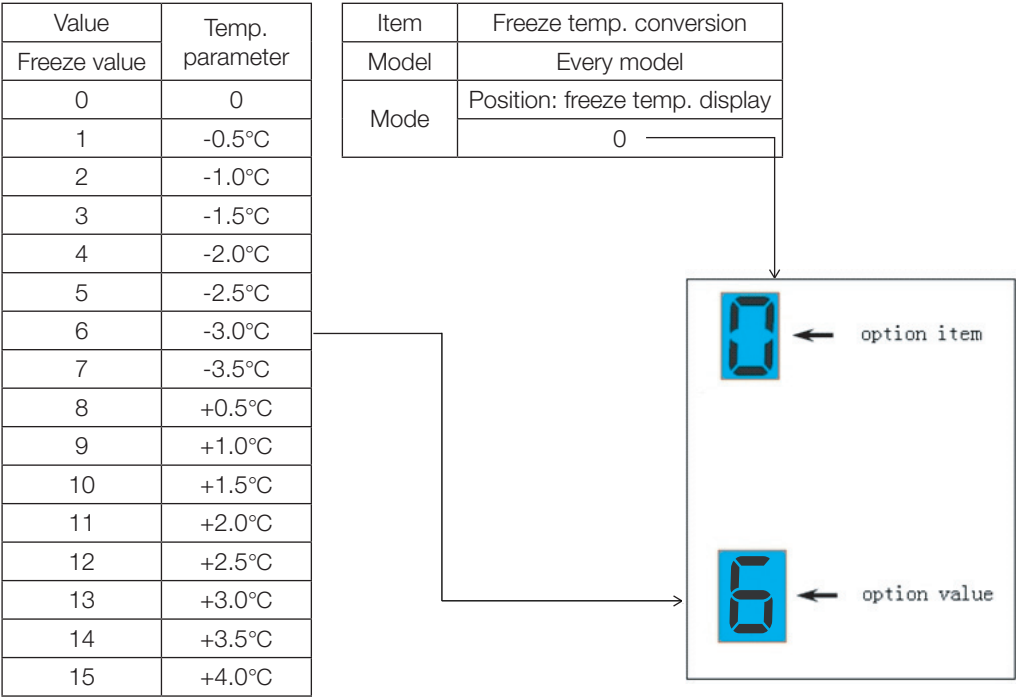
All values of the refrigerator are cleared, namely “0”. However, some data may be changed for improving product quality. In order to check its authenticity, please check according to SVC notice.

Besides the above, many other functions can also be adjusted. Because they are not concerned with fault diagnosis, this Manual doesn't introduce.

(Don't adjust any other adjustment function which isn't introduced.)

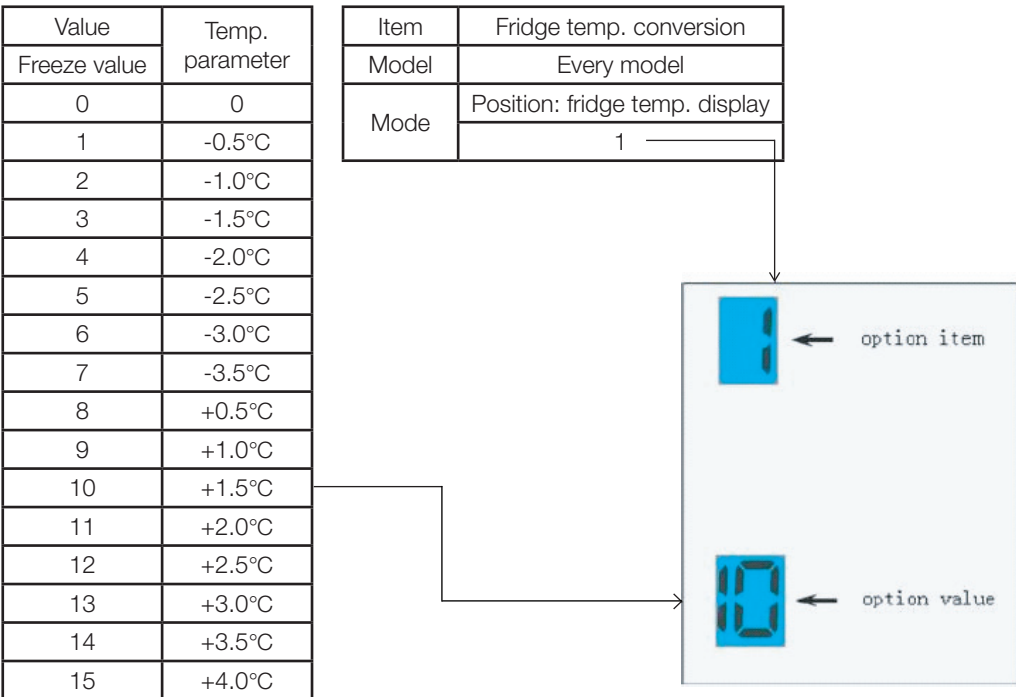
4-7. Option Table

1) Freeze temperature conversion table



E.g. decrease 3°C of the freezer's control temp.

2) Fridge temperature conversion table



E.g. increase 1.5°C of the fridge's control temp.

5. Disassembly and Reassembly

• Preparation

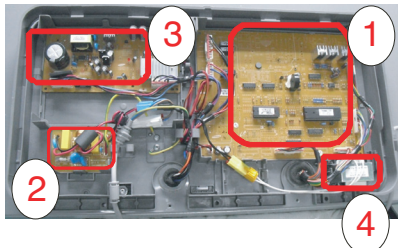
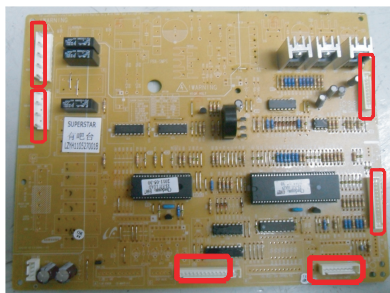
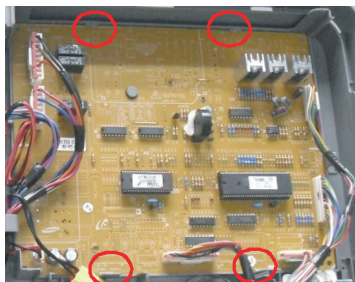
- Turn the refrigerator before clean and maintenance;
- Users are not allowed to adapt or repair refrigerators by themselves.
 - May result in fire, refrigerator failure and personal injury.
- Don't put sundries or accumulate too much dust on power plug.
 - May result in fire.
- The power cord can't be damaged or worn.
- Use good materials to prevent overload of power cord and fire due to overheat of lead.
 - Don't share a socket with other appliances. The refrigerator should be plug on a separate socket which consists with the rated voltage on its nameplate.
- Don't install at damp environment or place which may contact water.
 - Insulation difference of electric appliances may lead to electrical shock or fire.
- The refrigerator must be grounded reliably.
 - To prevent electrical shock or personal injury due to electric leakage.
- Don't store bottles or glass vessels in the freezer.
 - When foods are frozen, vessels will break and cause personal injury.
- Don't store volatile or inflammable substances in the refrigerator.
 - Benzene, thinner and alcohol etc. may cause explosion.

• Maintenance Tools

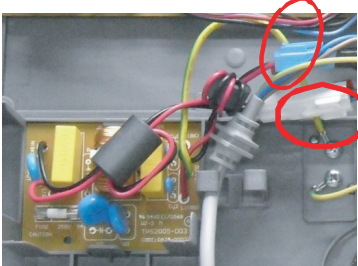
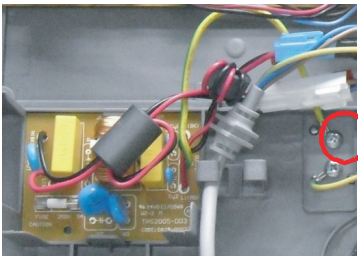
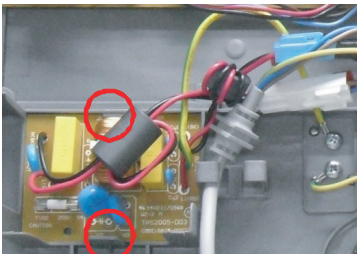
Tools	Usage	Figure
Phillips screwdriver	Install and dismantle screws	
Flat-blade screwdriver	Dismantle Home bar, main PCB and cover plate of temperature shift chamber etc.	
Socket spanner, Hexagon ø10m	Install and dismantle lower hinge	
Inner hexagon spanner	Install and dismantle door hinge	
Magnet	Check fans of freezer and fridge	

5. Disassembly and Reassembly

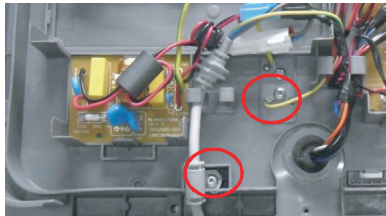
5-1. Replacing Main PCB and Internal Parts

Part Name	Figure	Maintenance essentials
Main PCB		The main PCB is at top of the refrigerator. The cover plate is metal. Remove 3 bolts at rear of the cover plate, as shown in the figure.
		Open the metal cover plate from the side where screws are removed, till rear buckle comes off.
		Main PCB of the frequency compressor is composed of: 1. Mainboard PBA 2. Filter band 3. Inverter PBA 4. Reactor
Replace mainboard PBA		Loose terminal of mainboard PBA, as shown in the figure.
		After moving all terminals, pull the buckle to take out main PCB

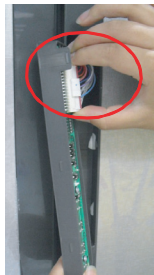
5. Disassembly and Reassembly

Part Name	Figure	Maintenance essentials
Replace filter band		Loose 2 terminals on filter band.
		Loose grounding screws on filter band.
		Pull the buckle to take out filter band.
Replace frequency inverter plate PBA		Loose screws of frequency inverter plate.
		Pull the buckle to take out frequency inverter plate.
Replace suppressor		Pull the buckle to take out suppressor.

5. Disassembly and Reassembly

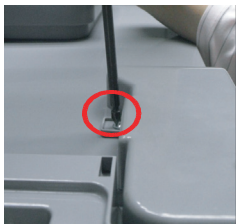
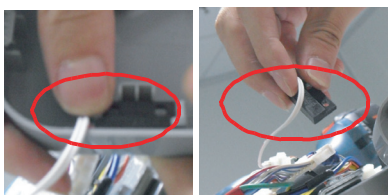
Part Name	Figure	Maintenance essentials
Replace suppressor		Pull the buckle to take out suppressor
Replace power cord		Loose a fixing screw and grounding screw on plug of the power cord
		Loose terminal of power cord and filter band to take out power cord

5-2. Replace display panel

Part Name	Figure	Maintenance essentials
Replace display panel		Use a small flat screw driver to tilt display panel. (Cotton cloth etc. may be put under this place to avoid scratch.)
		Loose terminal to take out display panel.

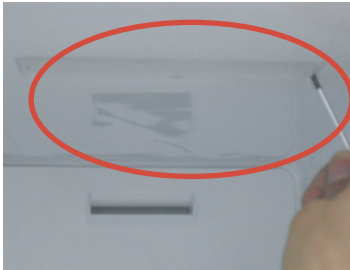
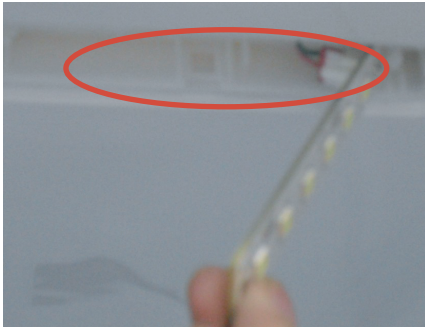
5. Disassembly and Reassembly

5-3. Replace Magnet Sensitive Switch

Part Name	Figure	Maintenance essentials
Magnet sensitive switch		Magnetic sensitive switch is in the hinge cover at top of the refrigerator, as shown in the figure. (Magnetic sensitive switches within top left and right hinge covers are dismantled by the same method.)
		Open hinge cover.
		Loose terminal of magnetic sensitive switch.
		Loose all terminals to pull out magnetic sensitive switch.

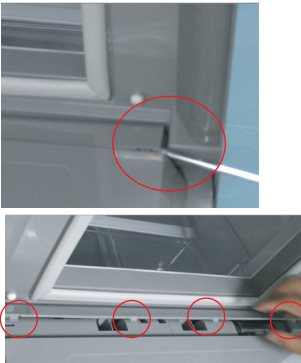
5. Dismantle and Reassemble

5-4. Replace Lamp Panel

Part Name	Figure	Maintenance essentials
Lamp panel		Lamp panels are in the embedded box within chambers of freezer and fridge; their surfaces are covered by lampshades, as shown in the figure.
		Insert a small flat screw driver from the gap at top of lampshade and tilt the lampshade outward.
		Remove lamp panel from the fixed buckle.
		Loose terminal of lamp panel.

5. Disassembly and Reassembly

5-5. Replace Home bar

Part Name	Figure	Maintenance essentials
Home bar		Tilt structural outer cover of Home bar with a flat screw driver, Open the cover; there are 4 buckles. As shown in the figure.
		Press left rotation shaft with a small flat screw driver; pull it parallelly to the right, open door of Home bar outward through pressing right end of rotation shaft, till rotation shaft is out.
		After rotation shaft is out, rotate outward and pull to take out door of Home bar.
		Loose screws, Take out door structure.

6. Troubleshooting

- 1) Before repairing, the refrigerator must be restarted for self-checking;
- 2) In case any defect is found in self-checking, refer to the following table for defective parts:

* Error codes of self-checking:

No.	Failure Item	Code Symbol		Description
		Freezer display	Fridge display	
1	Freezer sensor	1	E	Sensor of freezer is short or open
2	Fridge sensor	2	E	Sensor of fridge is short or open
3	Freezer defrost sensor	4	E	F defrosting sensor is short or open
4	Fridge defrost sensor	5	E	R defrosting sensor is short or open
5	Environment temperature sensor	6	E	Environment temperature sensor is short or open
6	Humidity sensor	13	E	Humidity sensor is short or open
7	Freezer fan	21	E	Rotation blockage
8	Fridge fan	22	E	Rotation blockage
9	Compressor fan	23	E	Rotation blockage
10	F defrost error (high resistance)	24	E	When its electric heating overtimes, force OFF
11	R defrost error (high resistance)	25	E	When its electric heating overtimes, force OFF
12	Load <->Main Error	LC	E	Communication error

- 3) Sensors are installed at the following positions:

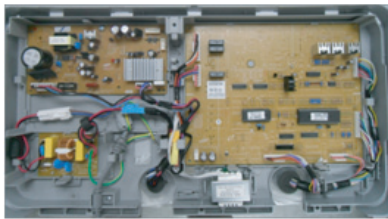
Freezer sensor	-----	in upper air duct panel of Freezer
Fridge sensor	-----	in lower air duct panel of Freezer
Freezer defrost sensor	-----	in upper air duct panel of Fridge
Fridge defrost sensor	-----	in lower air duct panel of Fridge
Environment temperature sensor	-----	in hinge cover at top of Freezer
Humidity sensor	-----	in hinge cover at top of Fridge



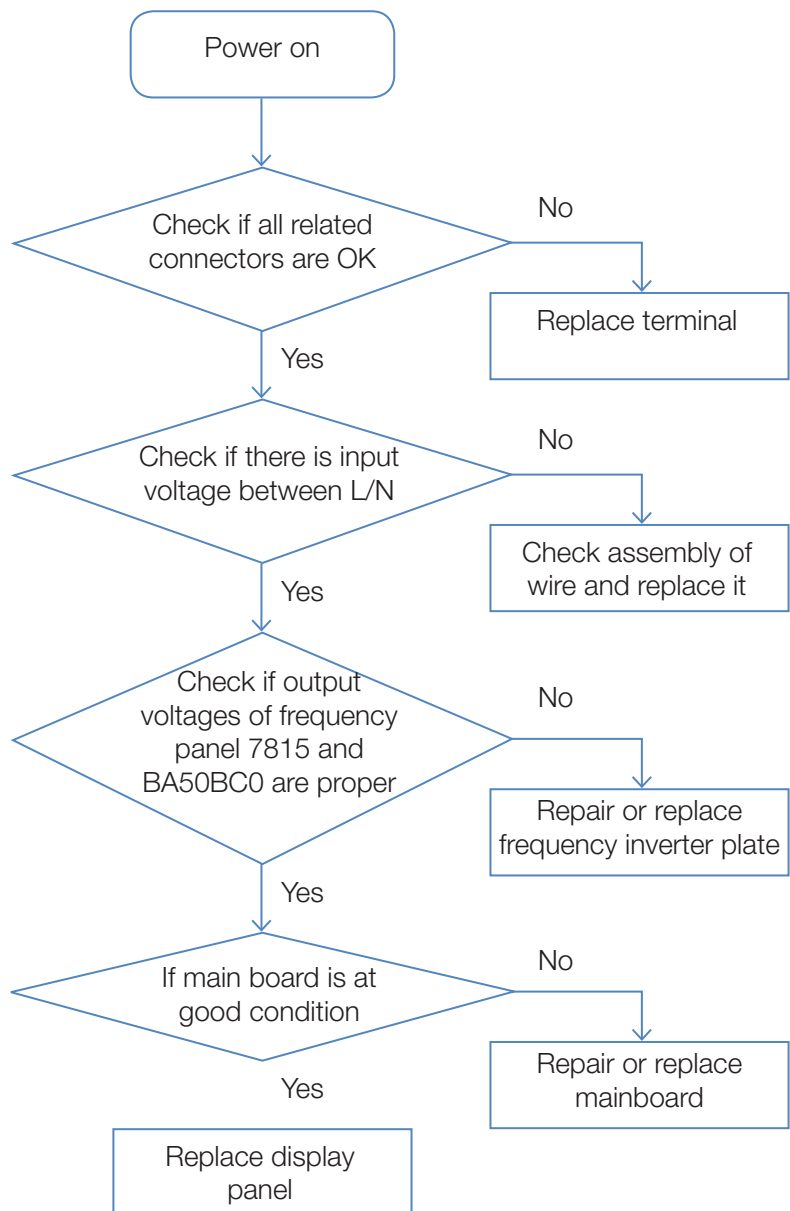
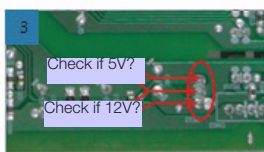
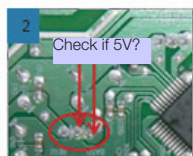
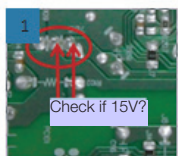
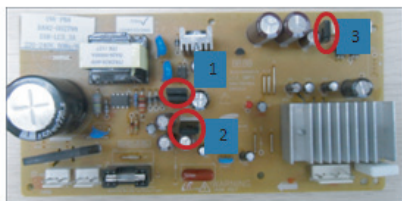
6-1. Self-diagnosis

No Response after Power On

Check if all pins are connected properly



Check if output voltage of frequency panel 7815 and BA50BC0 are proper

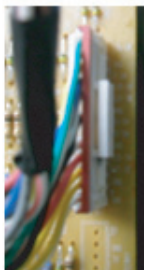


6-2. Self-diagnosis Find the Error

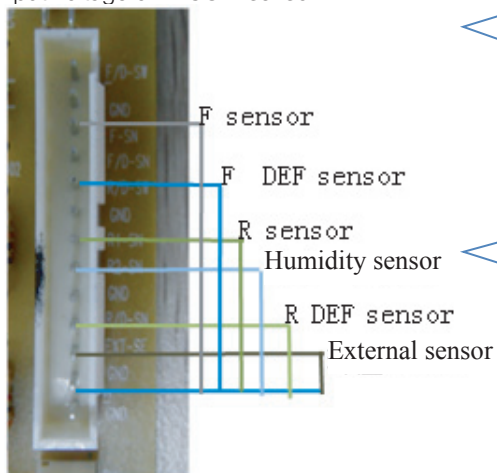
Display E1/E2/E4/E5/E6/E13

No.	Error	Display
1	F sensor	E1
2	R sensor	E2
3	F Def-sensor	E4
4	R Def-sensor	E5
5	External sensor	E6
6	Humidity sensor	E13

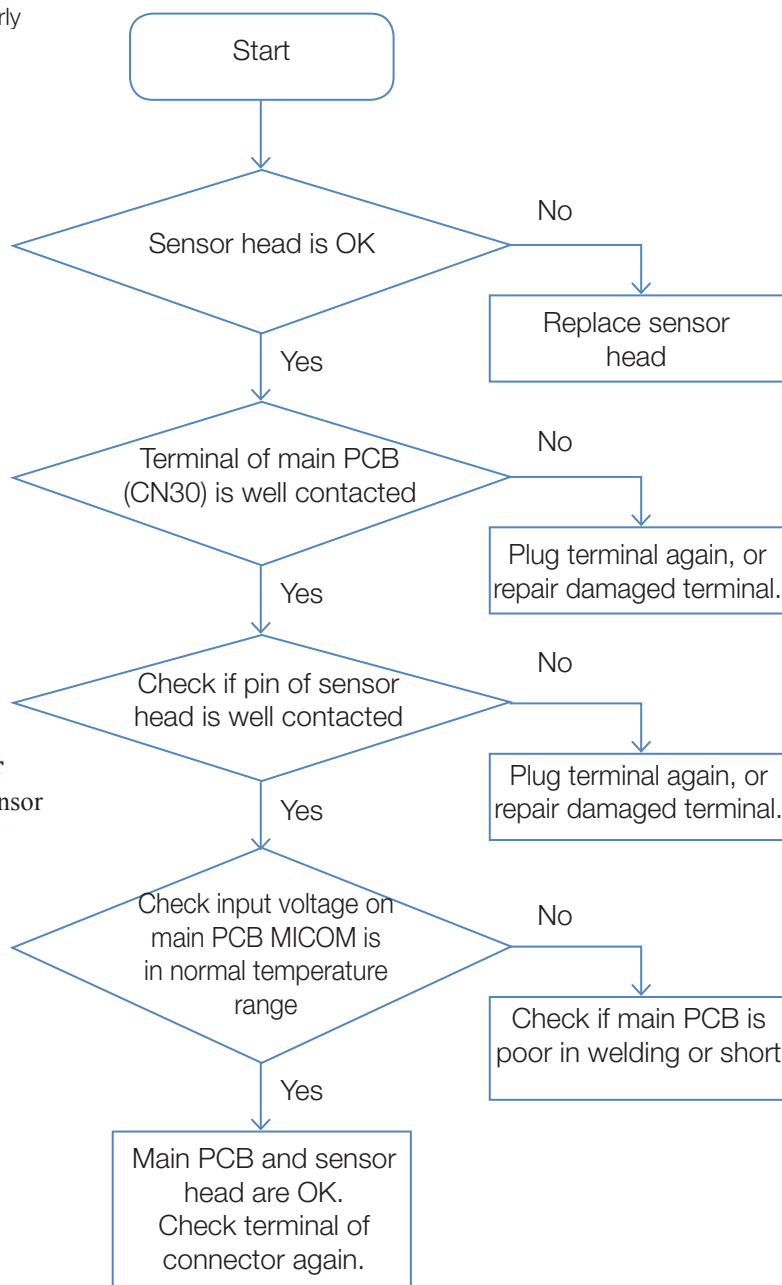
Check if pin of mainboard sensor is connected properly



Measure input voltage of MICOM sensor



Measured voltage: 1V~4V
 F sensor: V of CN30 pin3 and pin9;
 R sensor: V of CN30 pin7 and pin9;
 F DEF-sensor: V of CN30 pin4 and pin9;
 R DEF-sensor: V of CN30 pin10 and pin9;
 External sensor: CN30 pin11 and pin12;
 Voltage humidity sensor: V of CN30 pin8 and pin9;

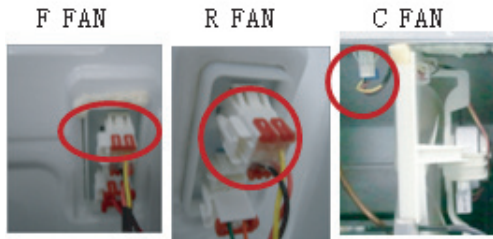


6-2. Self-diagnosis Find the Error

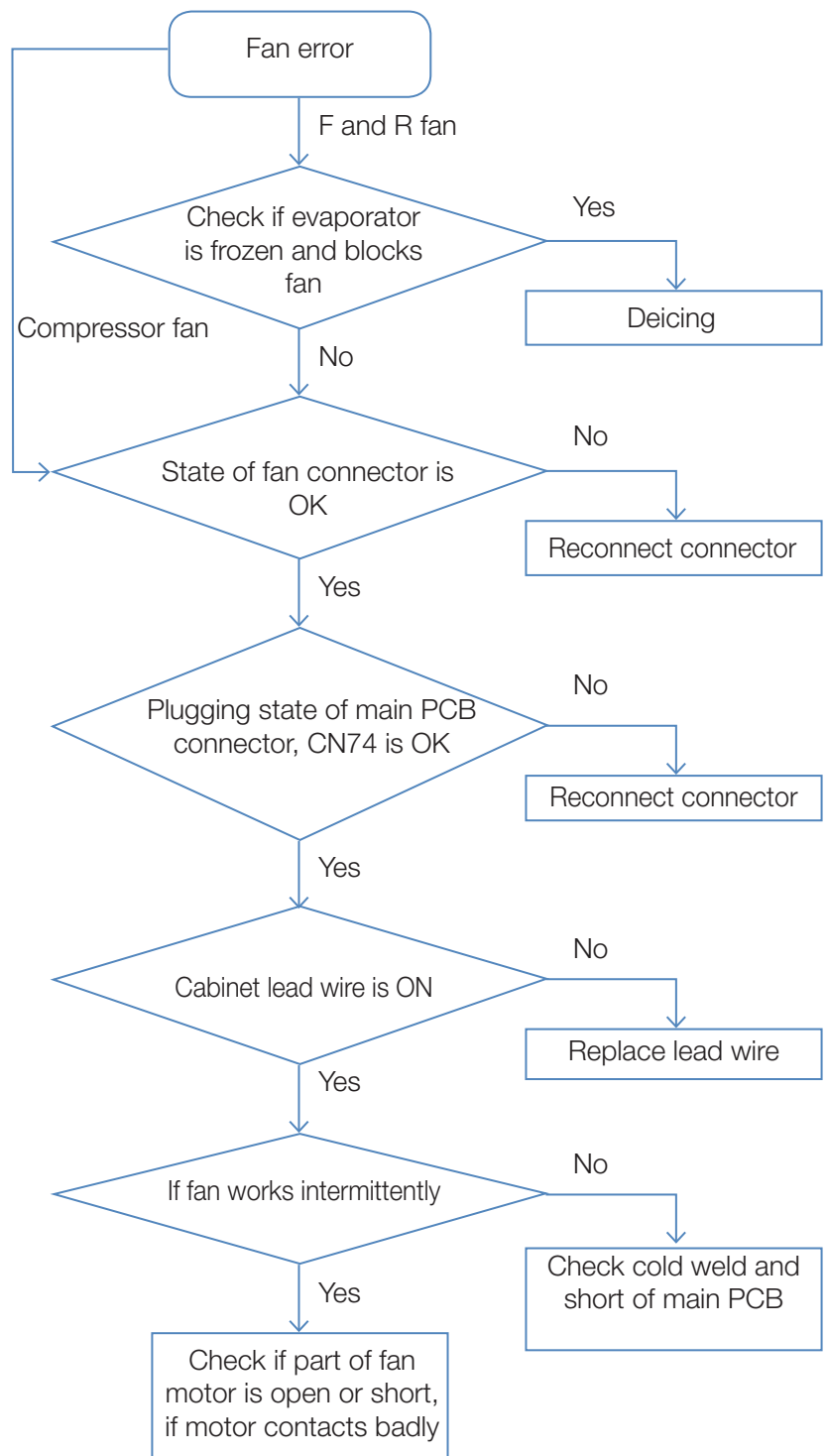
Display E21/E22/E23

No.	Error	Display
1	F-FAN Error	E21
2	R-FAN Error	E22
3	C-FAN Error	E23

Check if fan pin is OK



Check if fan pin of mainboard, CN74 pin, is OK?



6-2. Self-diagnosis Find the Error

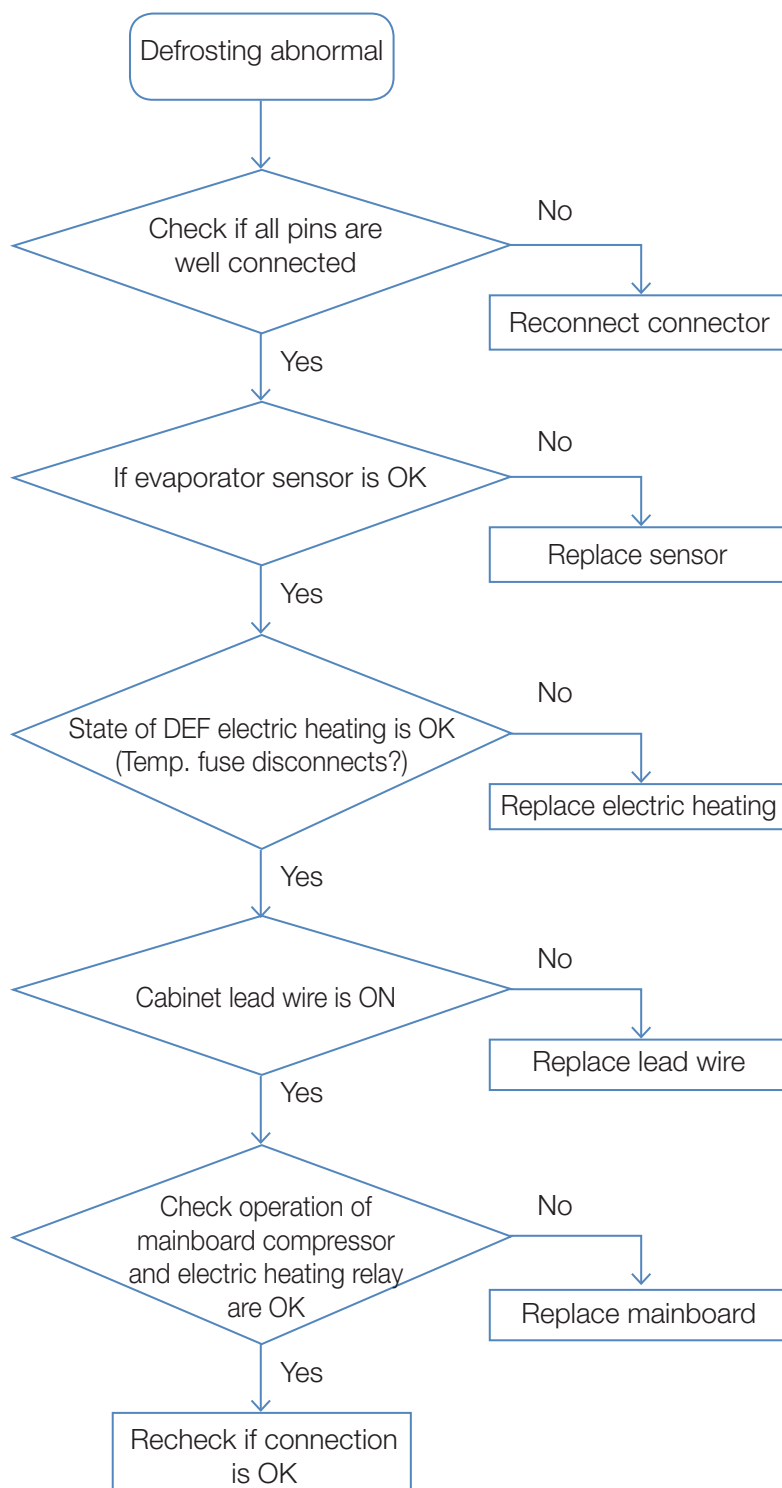
Display E24/E25

No.	Error	Display
1	F-DEF Error (high resistance)	E24
2	R-DEF Error (high resistance)	E25

Check pins CN70 and CN72 of electric heater's mainboard is OK



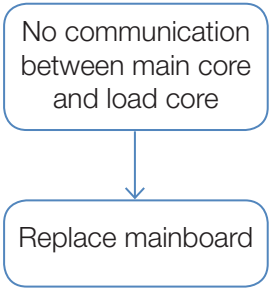
Check pins of electric heater's mainboard are OK



6-2. Self-diagnosis Find the Error

Display E42

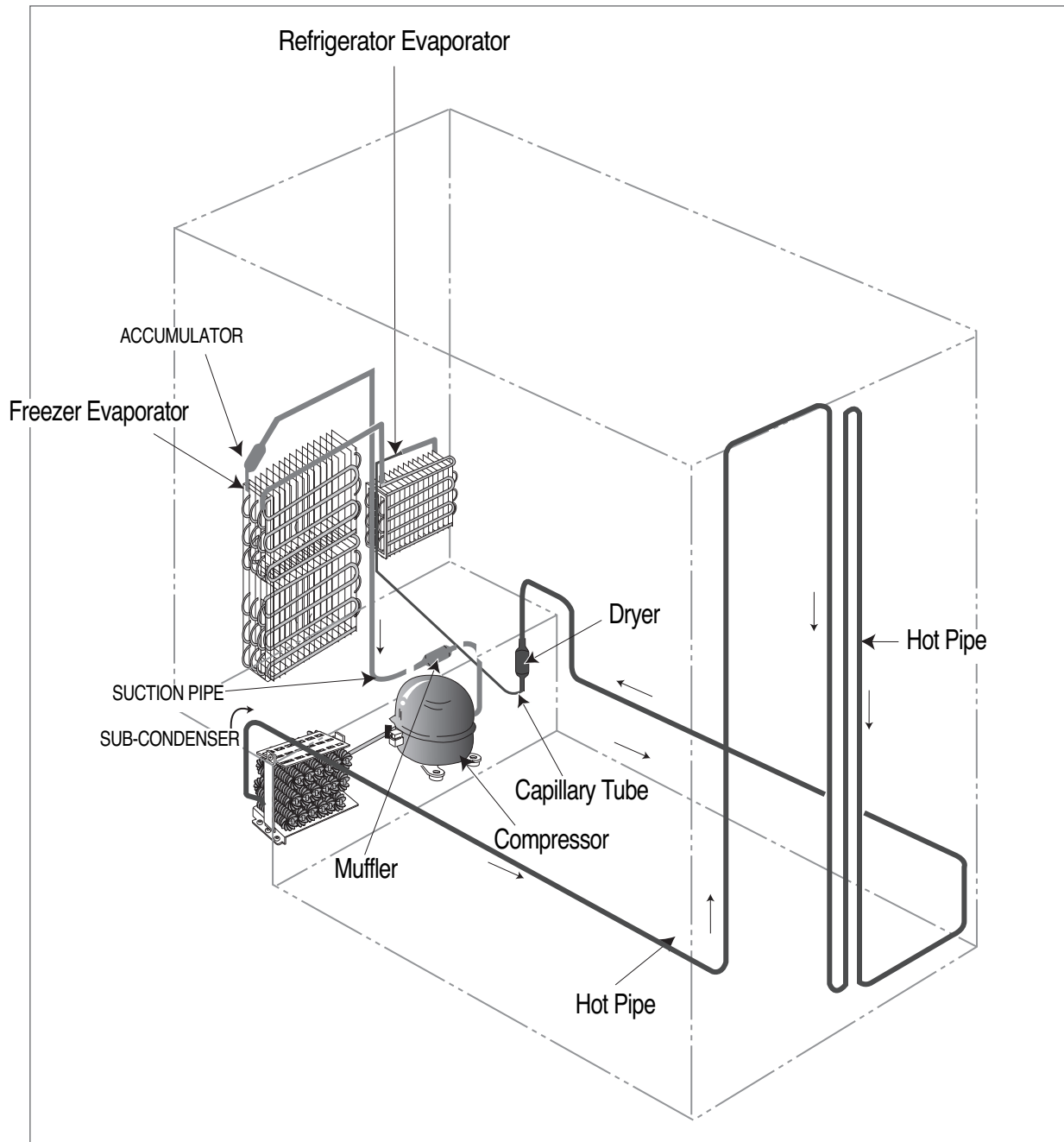
No.	Error	Display
1	No communication	E42



7. Block Diagram

7-1. Circulation Diagram of Refrigerating System

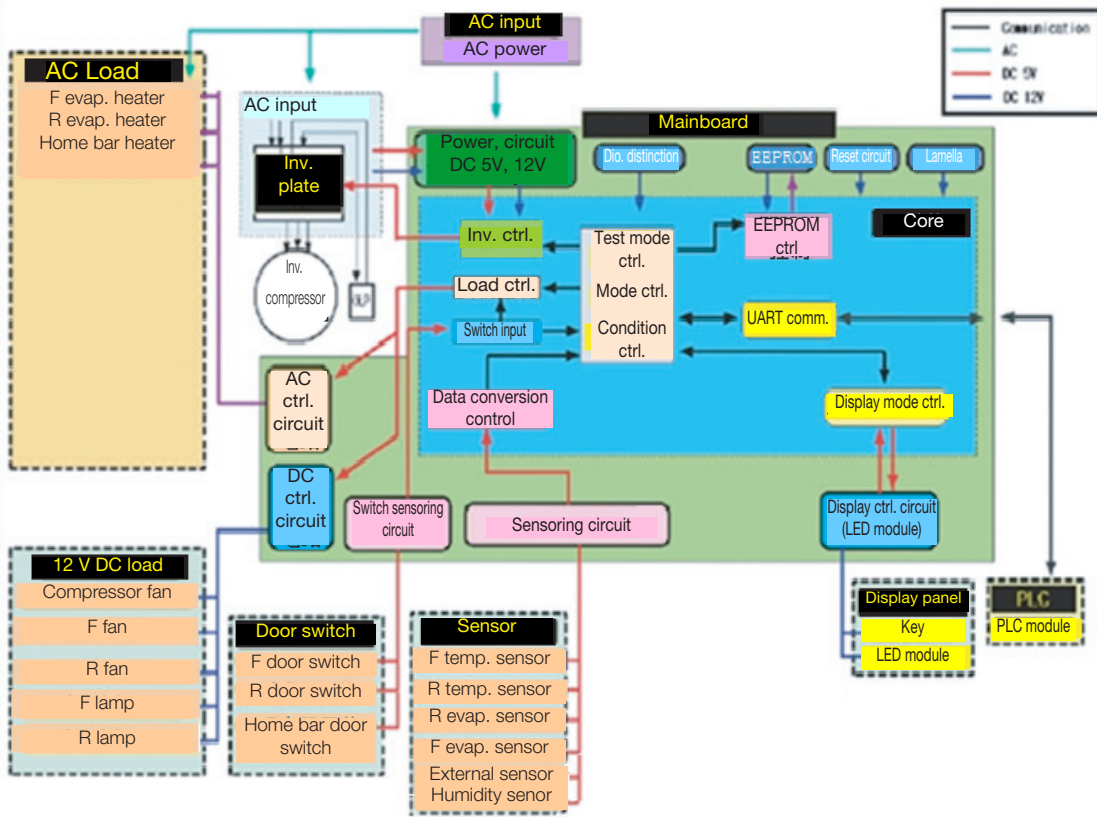
Compressor-> Sub-condenser-> Hot pipe-> Dryer-> Capillary tube -> Refrigerator evaporator-> Freezer evaporator-> Suction pipe -> Compressor



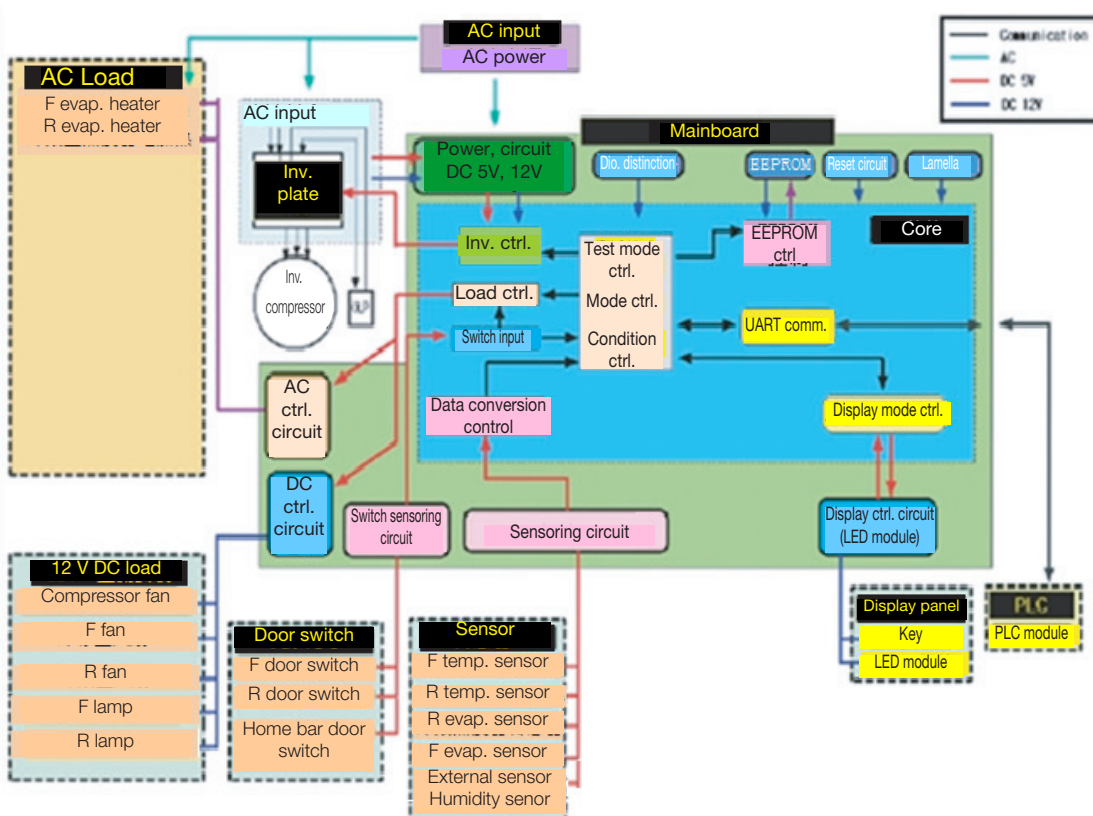
7. Block Diagram

7-2. Block Diagram

RS554NRUA** (Inverter with Home bar)

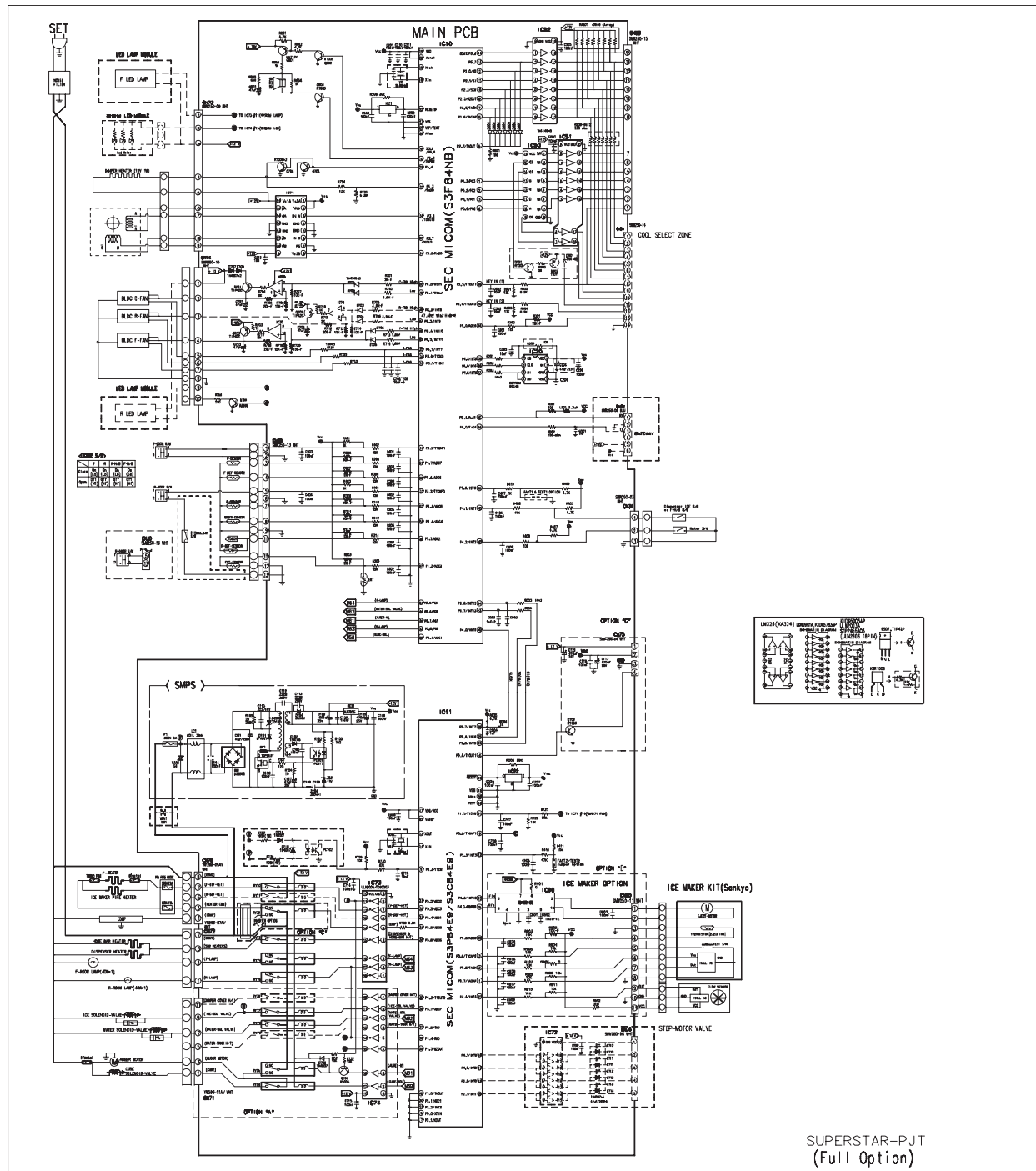


RS552NRUA** (Inverter)



8. Wiring Diagram

Main PCB

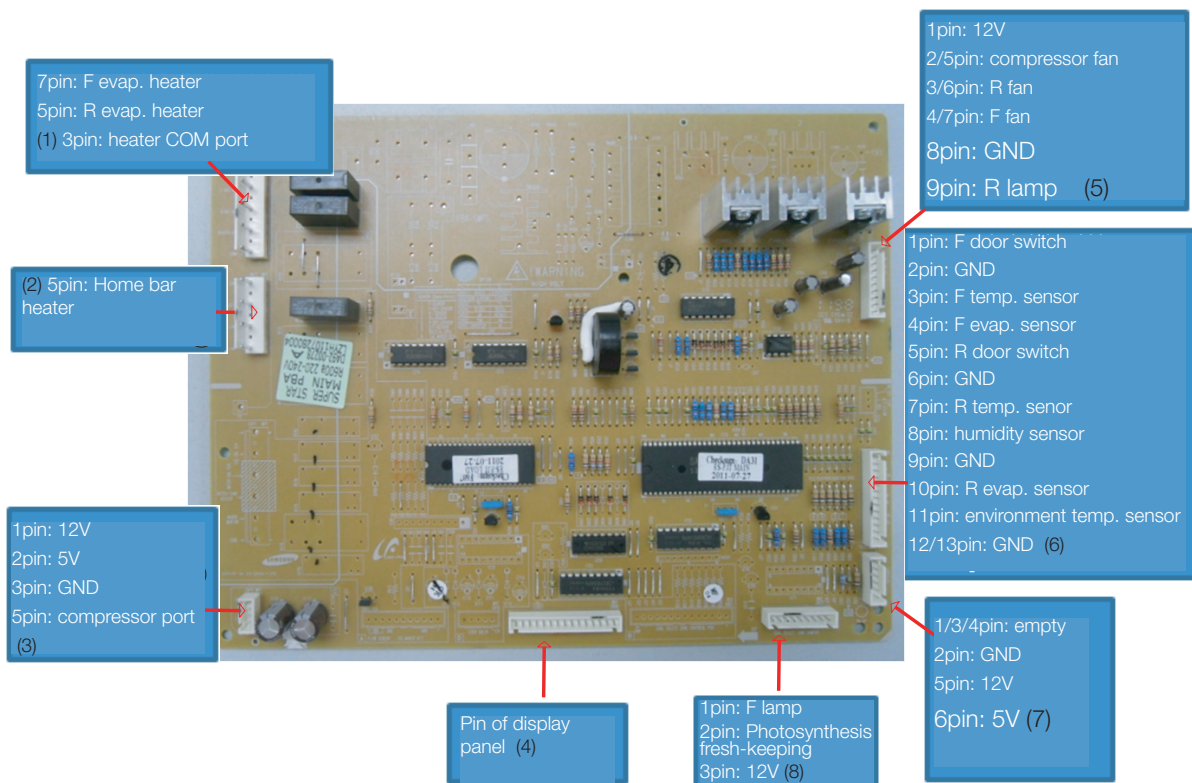


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9. PCB Diagram

9-1. Parts Layout

9-1-1. Main PCB

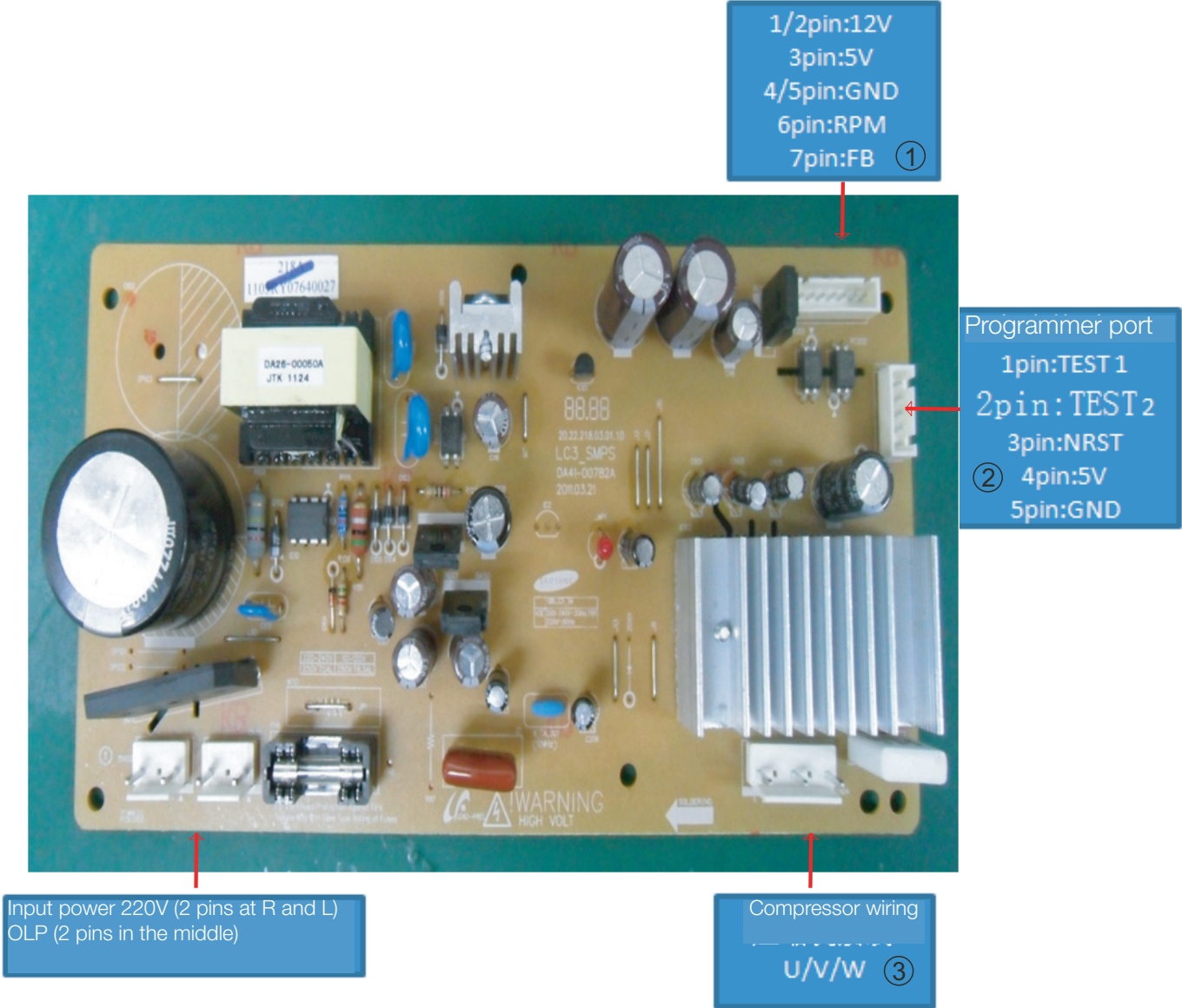


(1)	7pin: F evap. heater; 5pin: R evap. heater; 3pin: heater COM port
(2)	5 pin: Home bar heater
(3)	1pin: 12V; 2pin: 5V; 3pin: GND; 5pin: compressor port
(4)	Pin of display panel
(5)	1pin: 12V; 2/5pin: compressor fan; 3/6pin: R fan; 4/7pin: F fan; 8pin: GND; 9pin: R lamp
(6)	1pin: F door switch; 2pin: GND; 3pin: F temp. sensor; 4pin: F evap. sensor; 5pin: R door switch; 6pin: GND; 7pin: R temp. sensor; 8pin: humidity sensor; 9pin: GND; 10pin: R evap. sensor; 11pin: environment temp. sensor; 12/13pin: GND
(7)	1/3/4pin: empty; 2pin: GND; 5pin: 12V; 6pin: 5V
(8)	1pin: F lamp; 2pin: Photosynthesis fresh-keeping; 3pin: 12V

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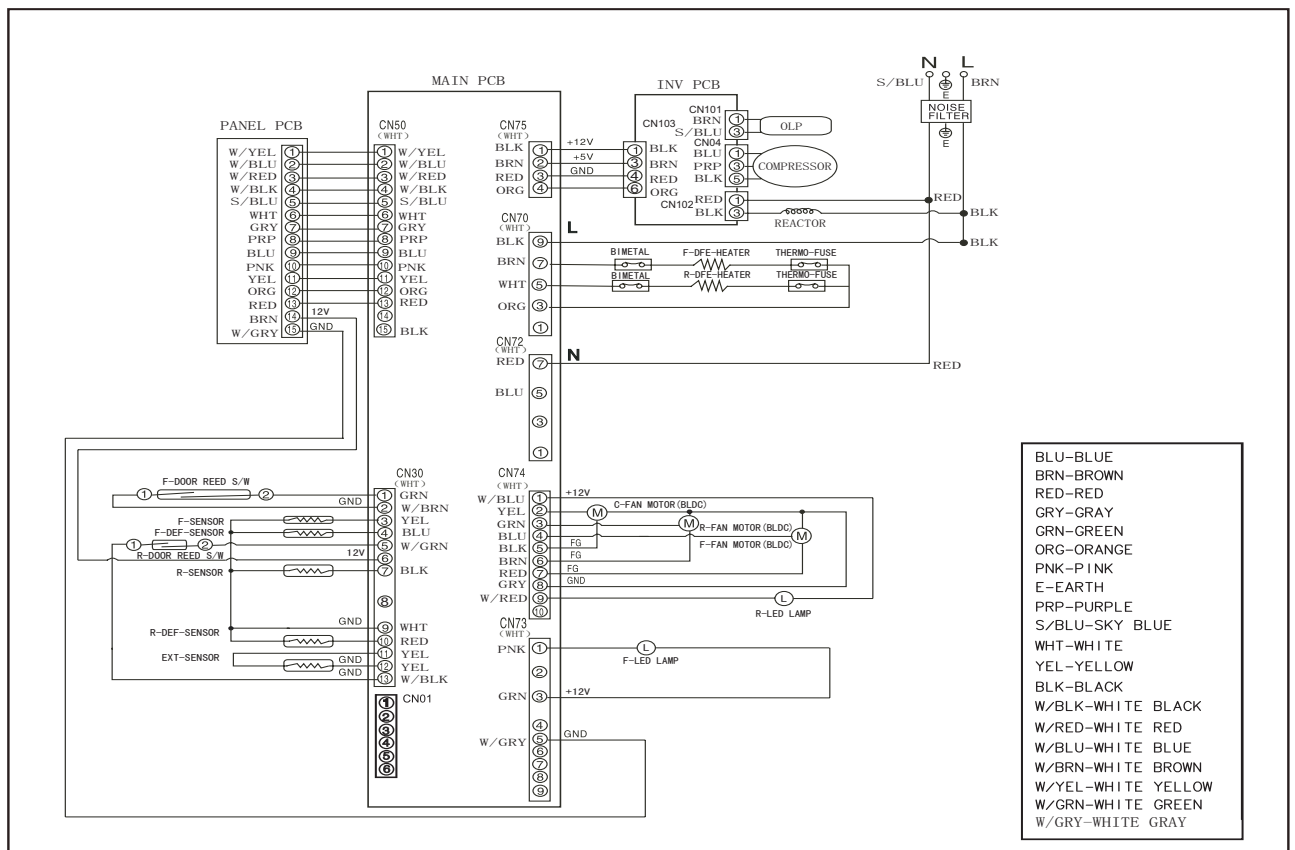
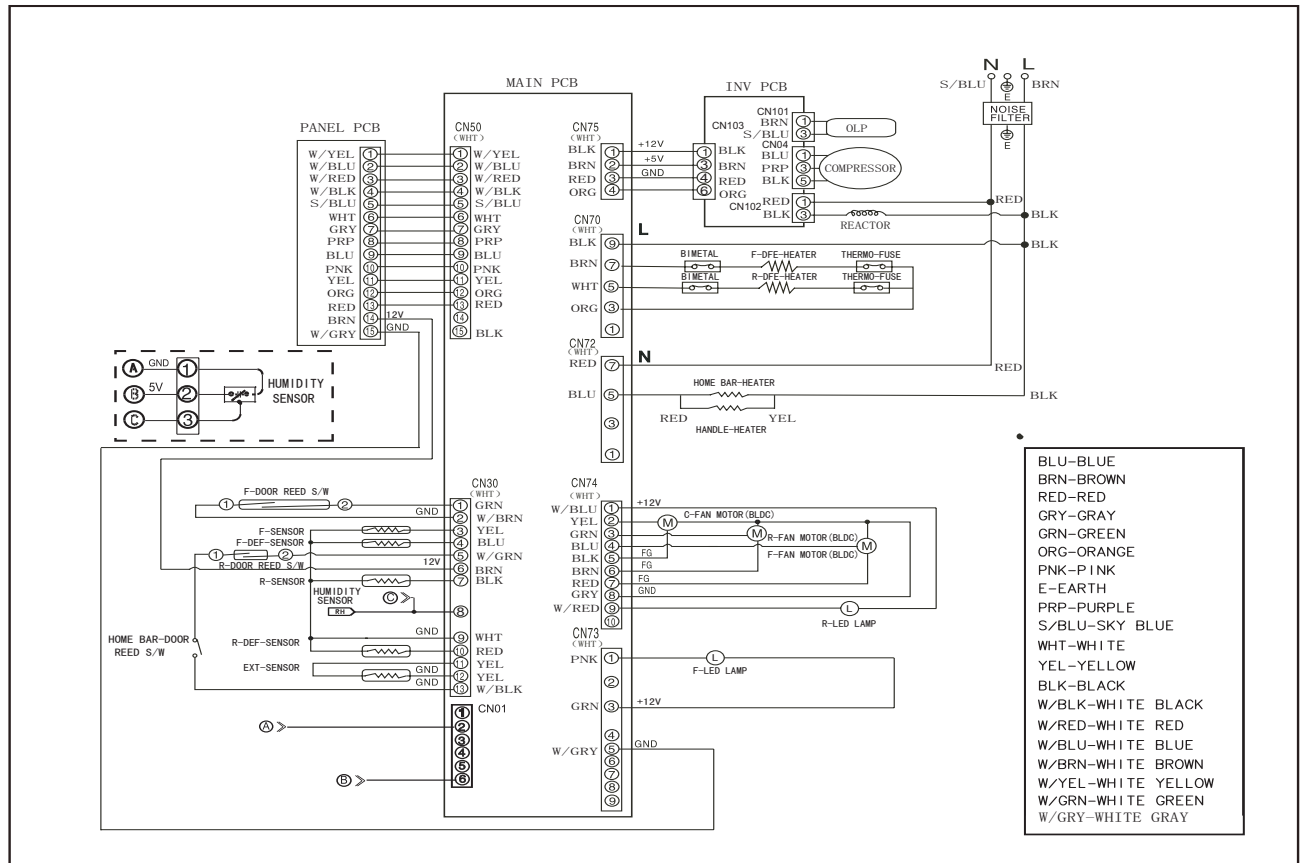
9-1. Parts Layout

9-1-2. Frequency inverter control plate



(1)	1/2pin: 12V; 3pin: 5V; 4/5pin: GND; 6pin: RPM; 7pin: FB
(2)	Programmer port; 1pin: TEST 1; 2pin: TEST 2; 3pin: NRST; 4pin: 5V; 5pin: GND
(3)	Compressor wiring U/V/W
(4)	Input power 220V (2 pins at R and L) OLP (2 pins in the middle)

10. Circuit Diagram

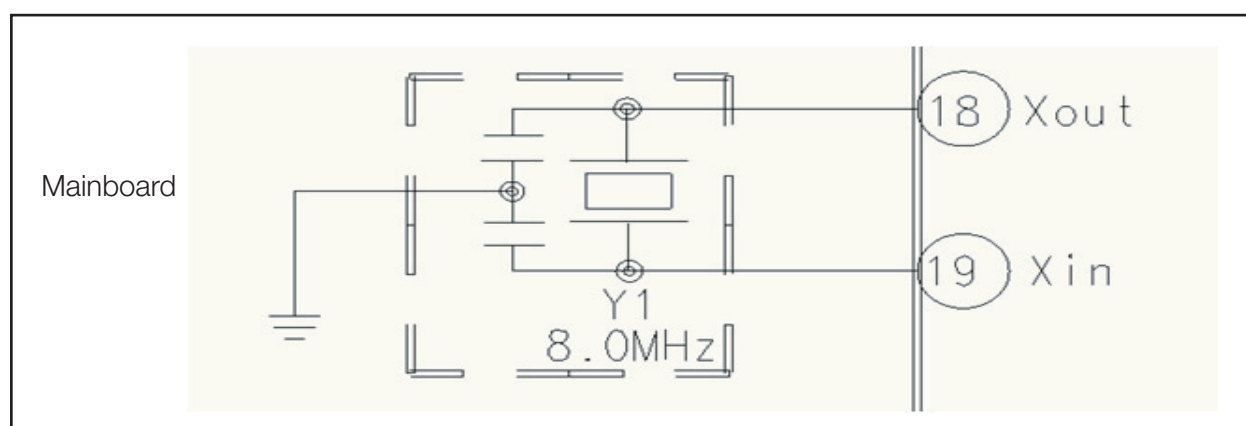
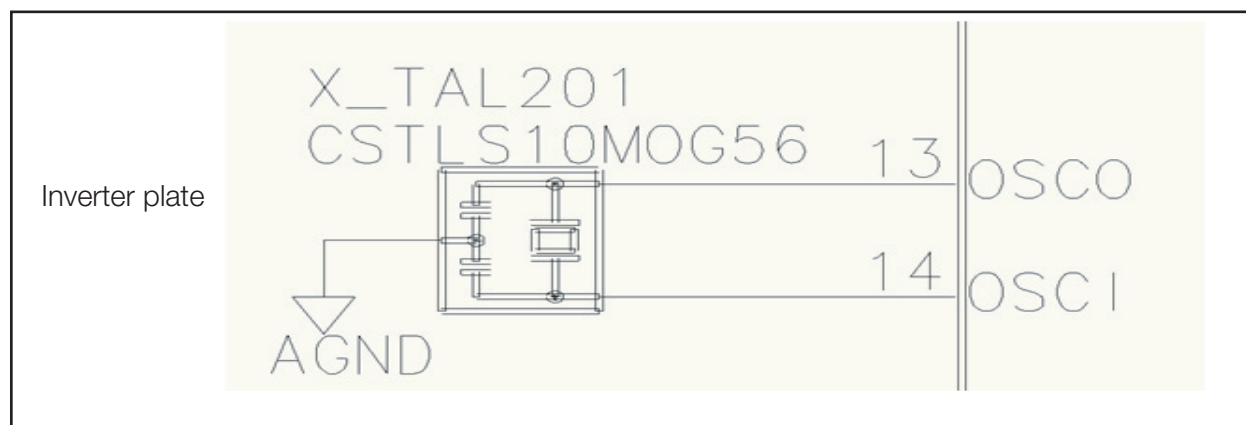


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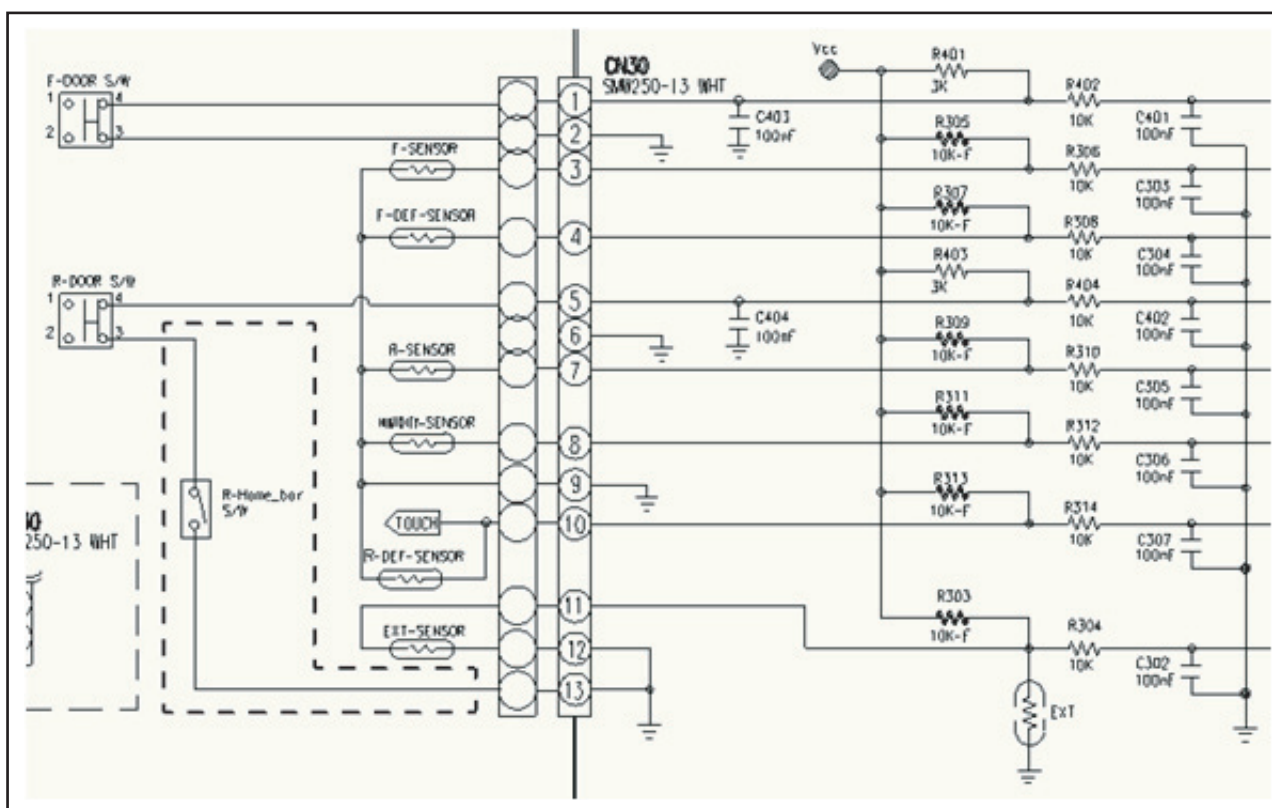
11-1. Power Supply



11-2. Crystal Oscillator

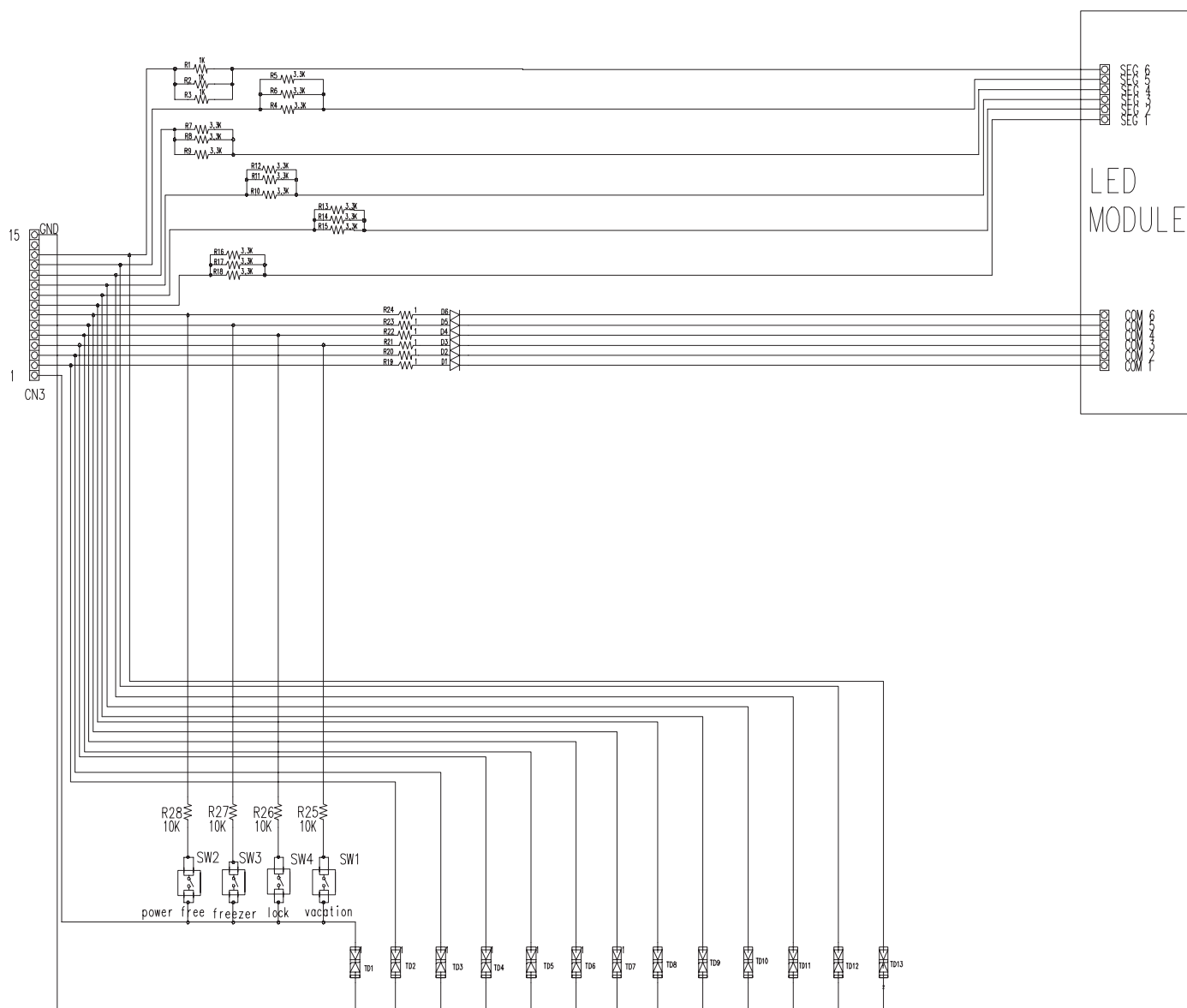


11-3 Sensor



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11.4 Operation

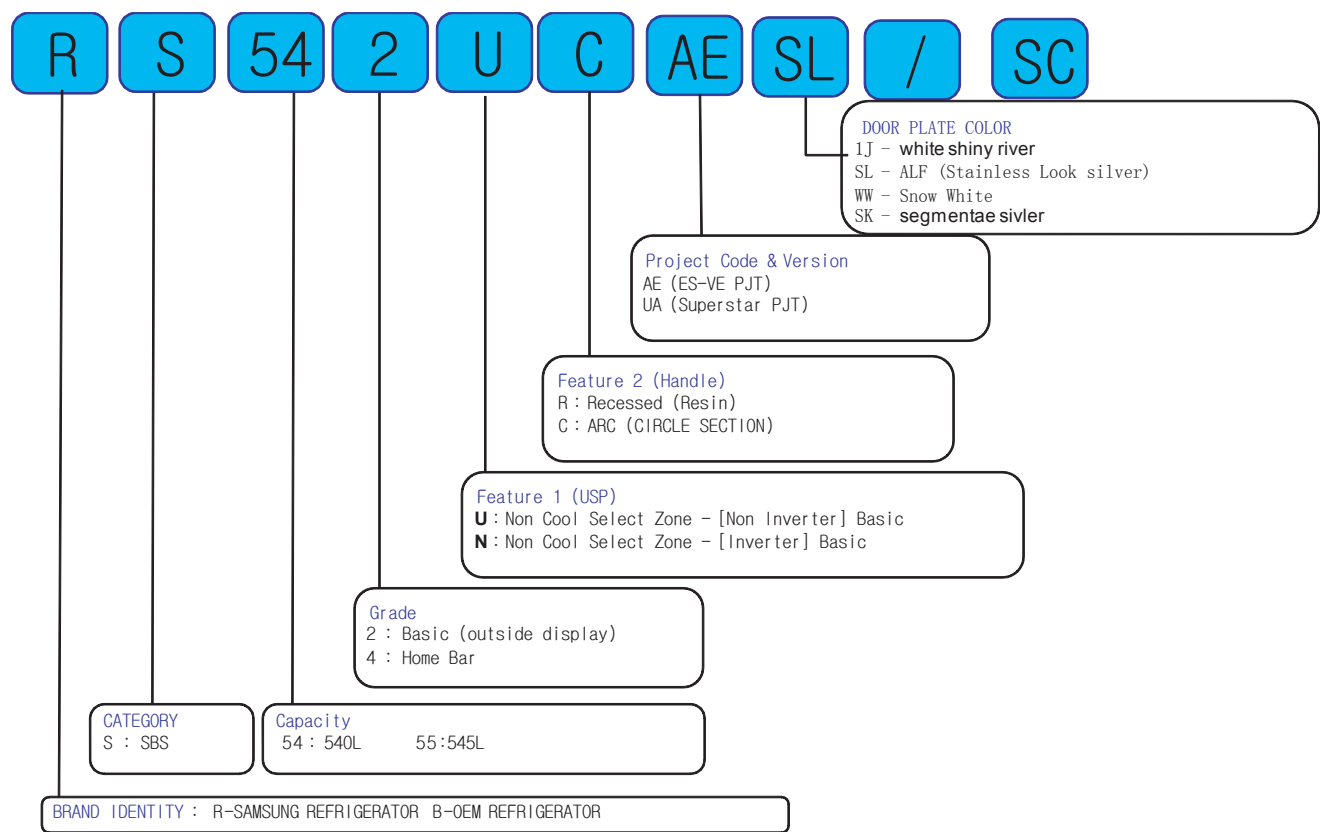


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12. Reference

12-1. Model Name

This Service Manual includes two series of refrigerators, RS554NRUA** and RS552NRUA**.



12-2. Troubleshooting

Problem	Possible cause	Solution
Refrigerator can't work partially or fully	* Plug is loose	* Check and plug again.
	* If temp. setting on display plate is correct?	* Try to reduce temperature of the cabinet.
	* Refrigerator is under direct sunlight or close to hot source?	* Move it to a proper place.
	* Back of refrigerator is too close to wall?	* Move it to a proper place.
Foods of the fridge freeze	* If temp. setting on display plate is correct?	* Try to increase temperature of the cabinet.
	* Environment temperature around refrigerator is too low?	* Try to increase temperature of the cabinet.
	* Foods containing much water are stored at very low temperature place?	* Try to increase temperature of the cabinet.
Abnormal noise	* Check if refrigerator is level.	
	* Back of refrigerator is too close to wall?	* Keep proper distance.
	* Some substances fall down to back or lower part of refrigerator?	* Remove.
	* Clicking sound in refrigerator, because accessories of refrigerator deform or expand due to temperature difference	
Corners, door frames and sides of refrigerator become heat	* In order to prevent refrigerator from forming dew at surface of refrigerator, hot pipe is at those places.	* It's normal
	* Doors keep open for a long time; condensing temperature is higher?	* It's normal
Bubble sound in refrigerator	* Refrigerant of refrigerating system gives such sound while flowing. Generally, it's normal	
Odor in refrigerator	* Foods with strong smell should be wrapped up before storing; remove spoiled foods.	
Freezer chamber frosts	* Air duct is blocked?	* Don't place foods too tight
	* Door is open?	* Check the door
Light in freezer	* Defrosting heating pipe is defrosting	* It's normal



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