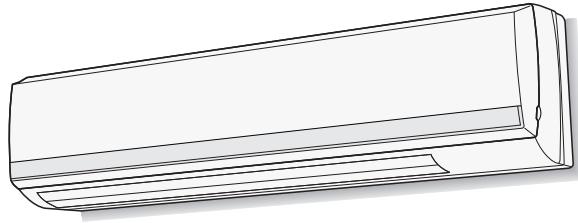


SHARP SERVICE MANUAL

S0402AYX6RCU/c



SPLIT TYPE AIR CONDITIONERS

INDOOR UNIT

MODELS **AY-X36RU**

OUTDOOR UNIT

AE-X36RU

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used

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PRODUCT SPECIFICATION

[1] SPECIFICATION

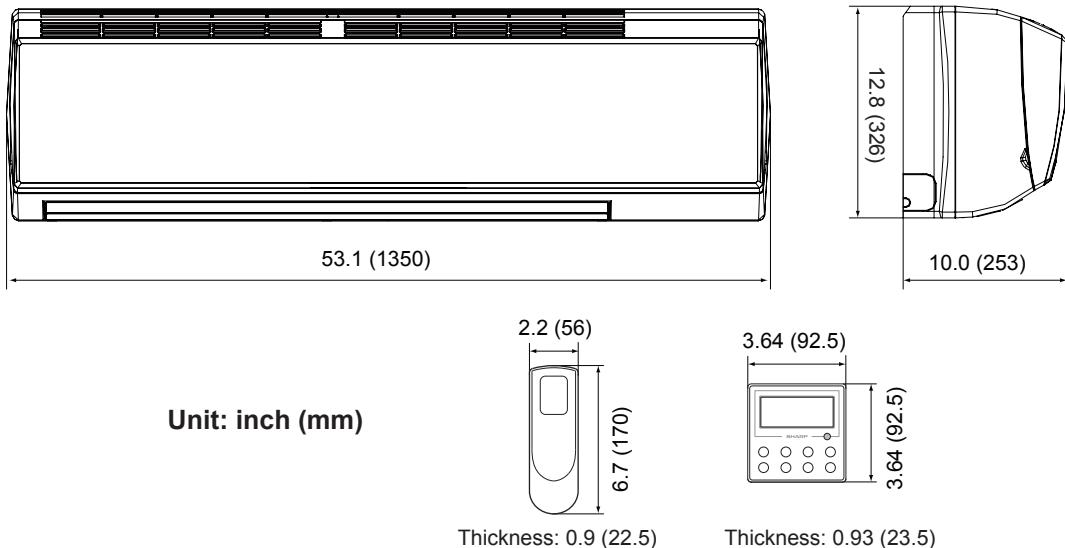
ITEMS		MODEL	INDOOR UNIT	OUTDOOR UNIT	
			AY-X36RU	AE-X36RU	
Rated cooling capacity (Min. - Max.)		Btu/h	33600 (7400 – 36000)		
Rated heating capacity (Min. - Max.)		Btu/h	34600 (15000 – 36000)		
Moisture removal (at cooling)		pints/h	7.4		
Electrical data					
Phase			Single		
Rated frequency		Hz	60		
Rated voltage		V	208/230		
Rated current	Cool	A	17		
(Min.-Max.)	Heat	A	16.5		
Rated input	Cool	W	4100 (450 – 4300)		
(Min.-Max.)	Heat	W	3800 (560 – 4300)		
Compressor	Type		Rotary		
	Model		TNB306FPGMC		
Refrigerant system	Evaporator		Aluminum Fin-copper tube type		
	Condenser		Aluminum Fin-copper tube type		
	Control		Expansion valve		
	Refrigerant	type oz. (g)	R410A 91.7 (2600)		
Noise level (at cooling)	Turbo	dB(A)	54	65	
	High		50		
	Low		44		
	Soft		38		
Noise level (at heating)	Turbo	dB(A)	54	65	
	High		50		
	Low		44		
	Soft		38		
Fan system					
Drive			Direct drive		
Air flow quantity (at cooling)	Turbo	CFM(m ³ /min)	736 (20.8)	2589(73.3)	
	High		647 (18.3)		
	Low		530 (15)		
	Soft		412 (11.7)		
Air flow quantity (at heating)	Turbo	CFM(m ³ /min)	736 (20.8)	2589(73.3)	
	High		647 (18.3)		
	Low		530 (15)		
	Soft		412 (11.7)		
Fan			Cross flow fan	Propeller fan	
Connections					
Refrigerant coupling			Flare type		
Refrigerant tube size (Gas line)		inch (mm)	5/8 (16)		
Refrigerant tube size (Liquid line)		inch (mm)	1/4 (6.35)		
Maximum length		ft (m)	98.4 (30)		
Maximum charge-less length		ft (m)	24.6 (7.5)		
Maximum height difference		ft (m)	32.8 (10)		
Additional charge		oz./ft (g/m)	0.5 (50)		
Drain pipe O.D.		inch (mm)	5/8 (16)		
Others					
Safety device			Compressor: Thermal protector		
			Pressure switch		
			Fuse, Micro computer control		
Air filters			Polypropylene net (Washable)		
Net dimensions	Width / Height / Depth	inch (mm)	53-1/7 / 12-5/6 / 10 (1350 / 326 / 253)	38-4/7 / 31-1/9 / 16-4/5 (980 / 790 / 427)	
Net weight		lb. (kg)	41.9 (19)	161 (73)	

NOTE: Test conditions are based on AHRI 210/240. (Refrigerant piping length : 25ft [7.6m])

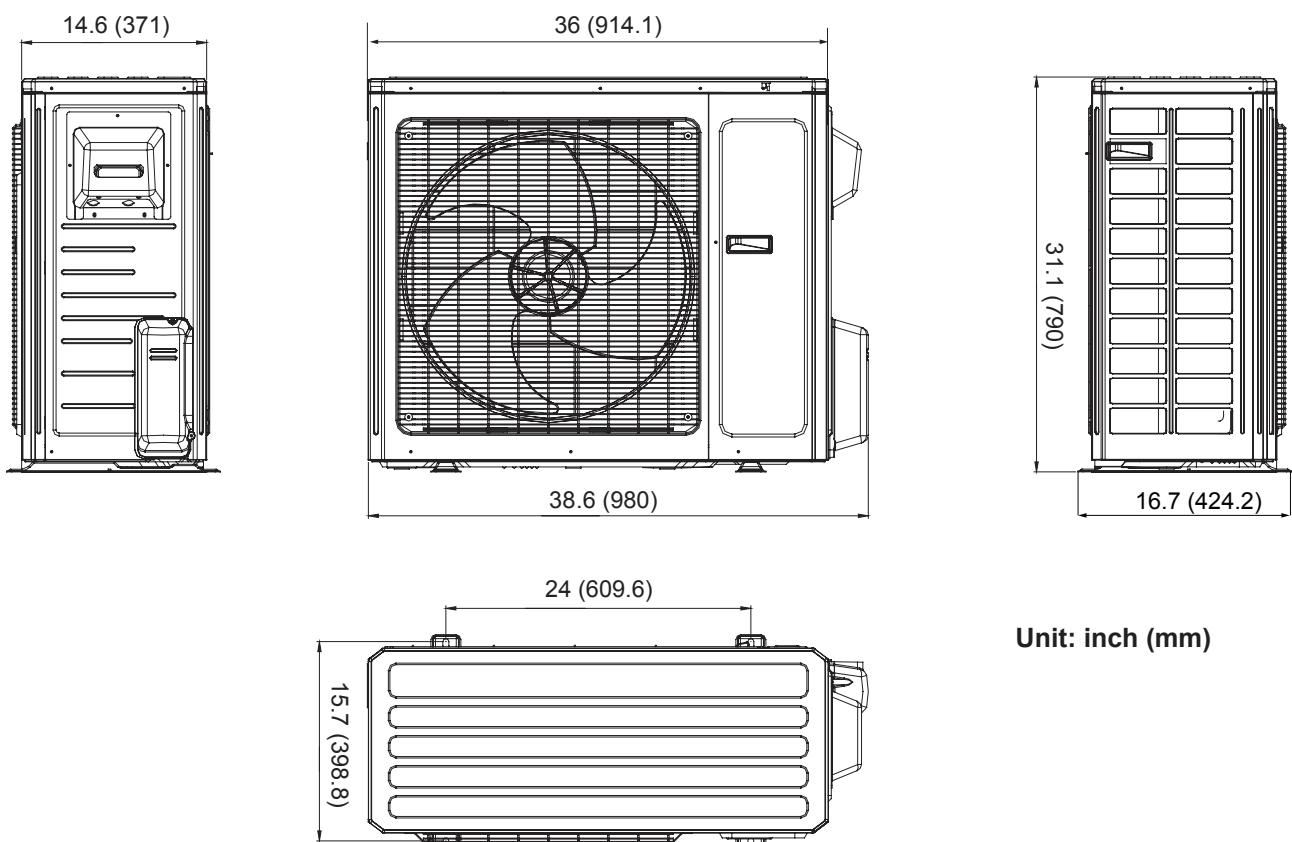
* : Voltage is 230V

[2] EXTERNAL DIMENSION

Indoor Unit



Outdoor Unit



ELECTRIC CIRCUIT

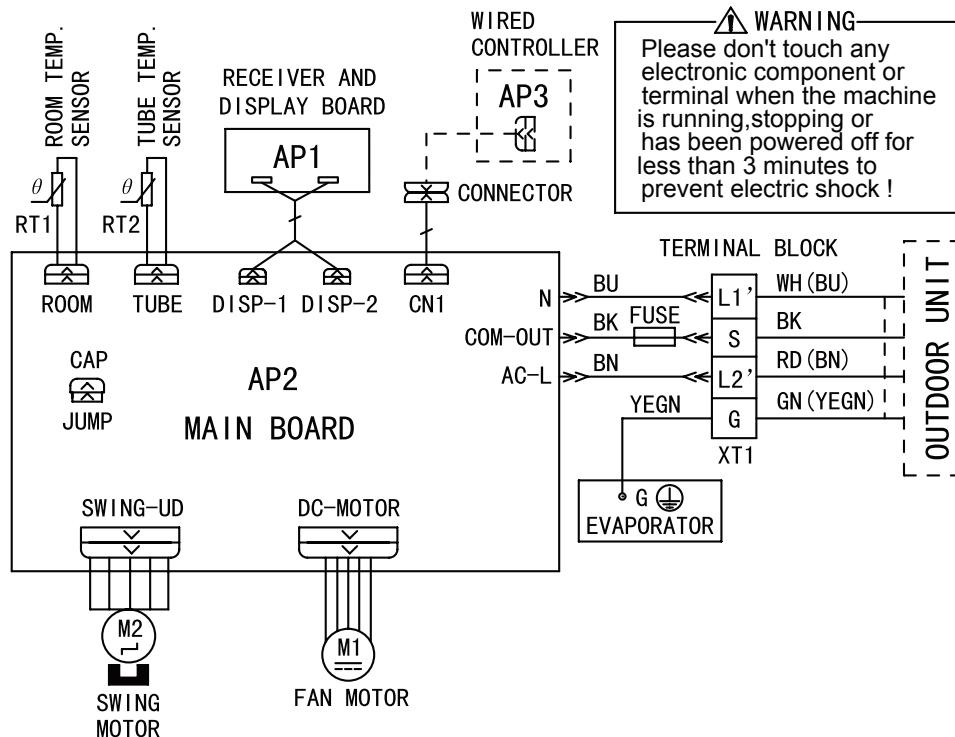
[1] WIRING DIAGRAM

Instruction

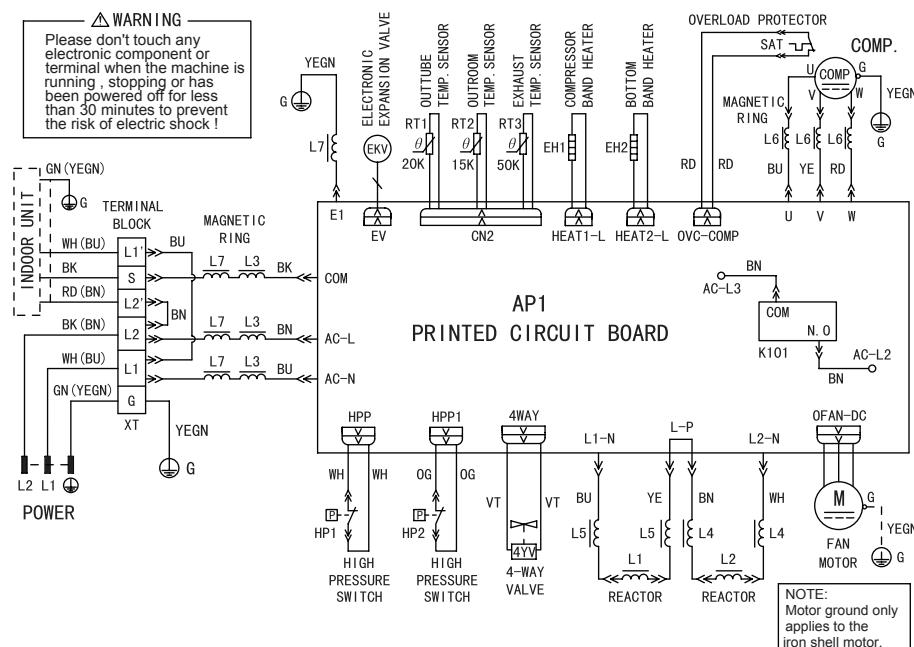
Symbol	Symbol Color or Name	Symbol	Symbol Color or Name
WH	White	BN	Brown
YE	Yellow	BU	Blue
RD	Red	BK	Black
YEGN	Yellow/Green	OG	Orange
VT	Violet	CAP	Jumper cap
GN	Green	COMP	Compressor

NOTE: Jumper cap is used to determine fan speed and the swing angle of horizontal lever for this model.

Indoor Unit

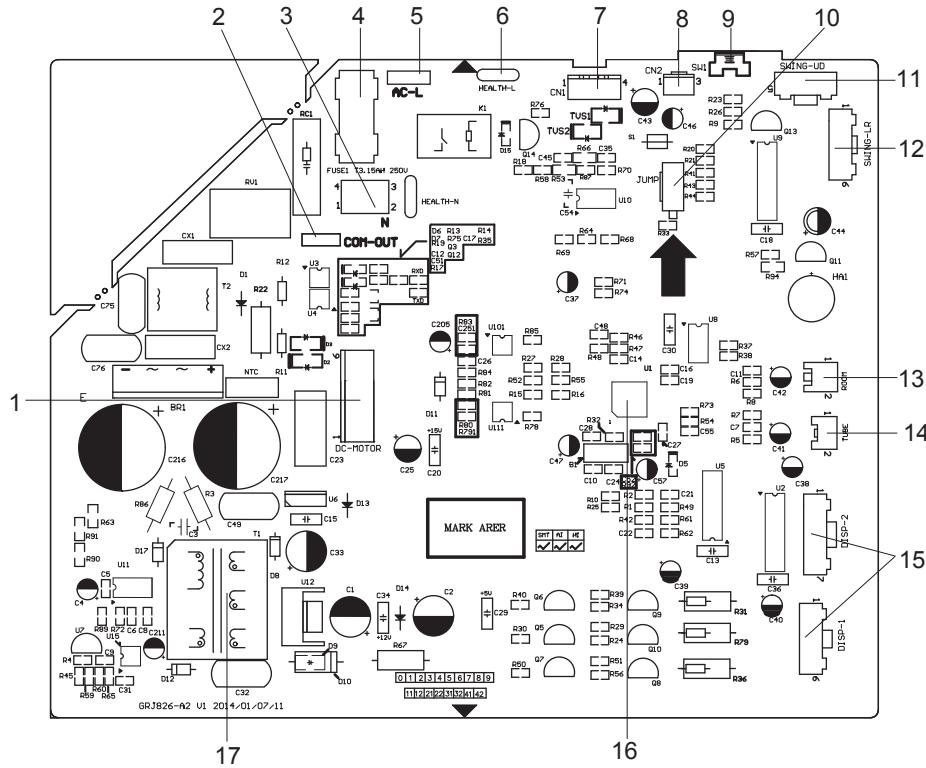


Outdoor Unit



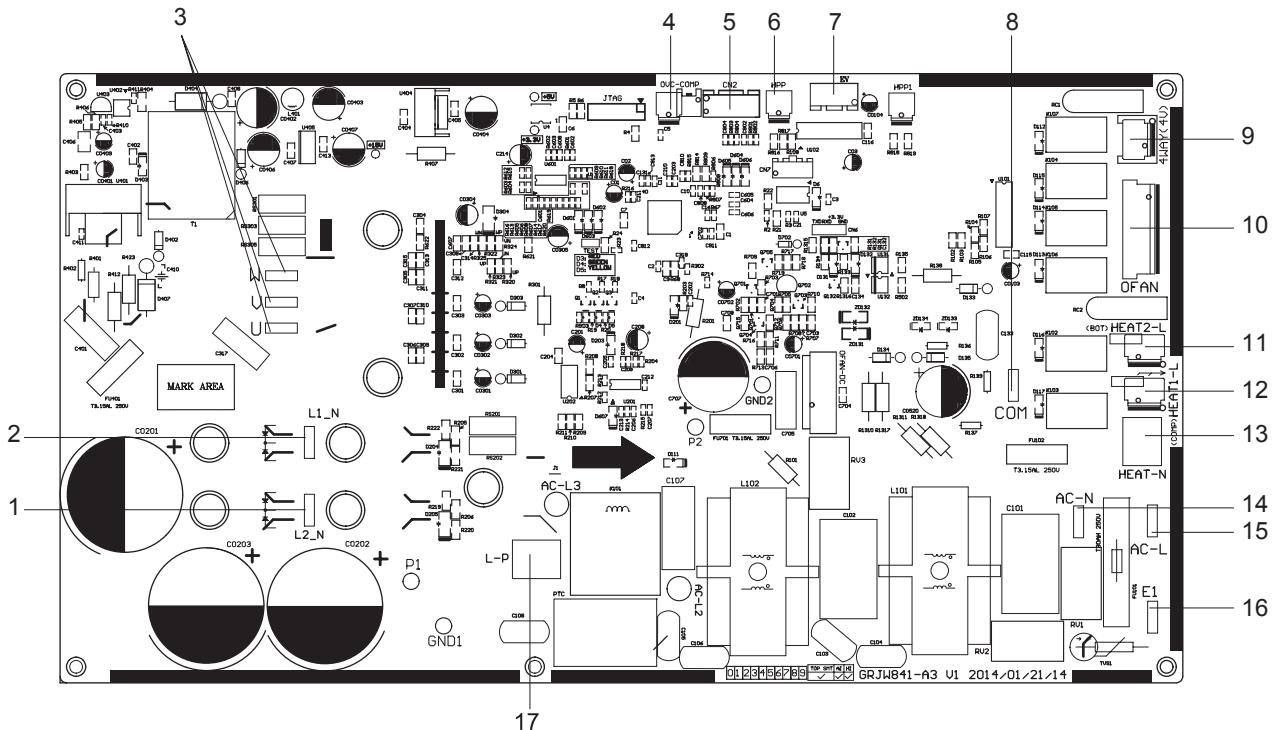
[2] CONTROL UNIT PWB WRING

INDOOR



1	Interface of fan motor
2	Interface of communication
3	Power supply neutral wire
4	Fuse
5	Power supply live wire
6	Interface of live wire for health function
7	Interface of wired controller
8	Interface of BMS
9	Auto button
10	Jumper cap
11	Interface of up and down swing terminal
12	Interface of left and right swing terminal
13	Ambient temperature sensor interface
14	Indoor tube temperature sensor interface
15	Interface of display
16	Fuse
17	High-frequency terminal

OUTDOOR

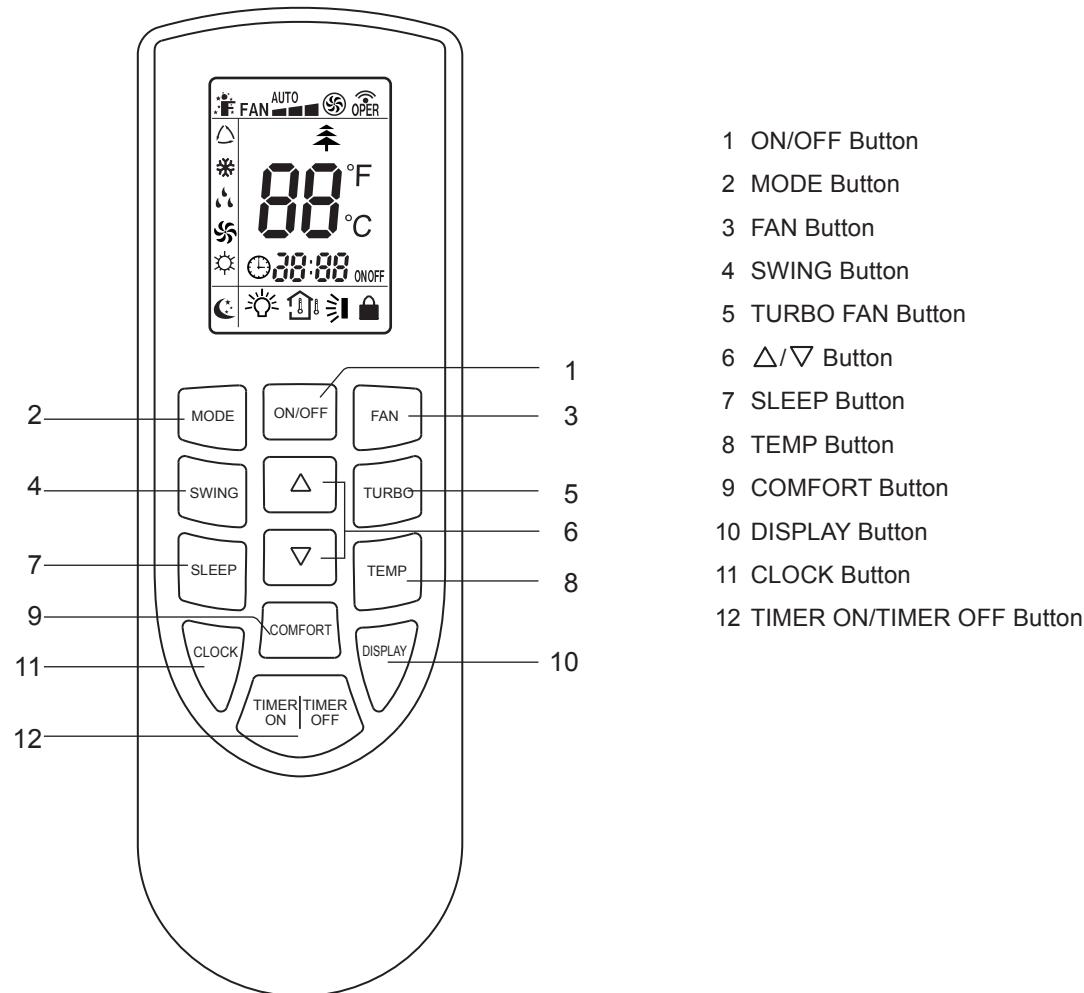


1	Interface of reactor 1
2	Interface of reactor 2
3	U, V, W three-phase interface of compressor
4	Overload protection terminal of compressor OVC-COMP
5	Terminal of temperature sensor CN2
6	High pressure protection terminal HPP
7	Electric expansion valve terminal EV
8	Interface of indoor unit and outdoor unit communication
9	Interface of 4-way valve
10	Interface of outdoor fan
11	Electric heater band of chassis HEAT2-L
12	Electric heater band of compressor HEAT1-L
13	Interface of neutral wire for compressor electric heating and chassis electric heating
14	Interface of live wire
15	Interface of neutral wire
16	Interface of ground wire
17	Interface of reactor1 and reactor2

FUNCTION AND CONTROL

[1] Remote Control Introduction

Buttons on the Remote Control



Note:

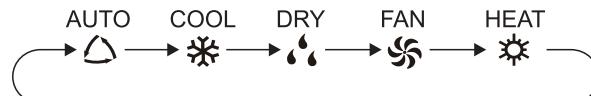
- Once power is connected, the air conditioner will give out a sound. Operation indicator "U" is ON (red indicator). After that, the air conditioner can be operated by using the remote controller.
- Under ON status, pressing the button on the remote controller, the signal icon "Wi-Fi" on the display of remote controller will blink once and the air conditioner will give out a "de" sound, which means the signal has been sent to the air conditioner.
- Under OFF status, set temperature and clock icon will be displayed on the display of remote controller (If timer on, timer off and light functions are set, the corresponding icons will be displayed on the display of remote controller at the same time); Under ON status, the display will show the corresponding set function icons.

1. ON/OFF button

Press this button can turn on or turn off the air conditioner. After turning on the air conditioner, operation indicator "U" on indoor unit's display is ON (green indicator), and indoor unit will give out a sound.

2. MODE button

Press this button to select your required operation mode.



- When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Set temperature can't be adjusted and will not be displayed as well. Press "FAN" button can adjust fan speed. Press "SWING" button can adjust fan blowing angle.
- After selecting cool mode, air conditioner will operate under cool mode. Cool indicator "※" on indoor unit is ON. Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle.
- When selecting dry mode, the air conditioner operates at low speed under dry mode. Dry indicator "◆" on indoor unit is ON. Under dry mode, fan speed can't be adjusted. Press "SWING" button to adjust fan blowing angle.
- When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. All indicators are OFF. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle.

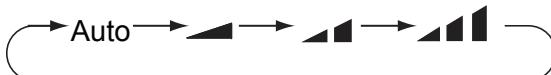
- When selecting heating mode, the air conditioner operates under heat mode. Heat indicator "★" on indoor unit is ON. Press "▲" or "▼" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press "SWING" button to adjust fan blowing angle. (Cooling only unit won't receive heating mode signal. If setting heat mode with remote controller, pressing ON/OFF button can't start up the unit).

Note:

- To prevent cold air after starting up in heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).
- Set temperature range from remote controller: 16~30°C(61°F~86°F); Fan speed: auto, low speed, medium speed, high speed.

3. FAN button

Pressing this button can set fan speed circularly as: auto (AUTO), low (▲), medium (▲▲), high (▲▲▲).

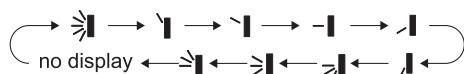


Note:

- Under AUTO speed, air conditioner will select proper fan speed automatically.
- Fan speed under dry mode is low speed.

4. SWING button

Press this button can select up&down swing angle. Fan blow angle can be selected circularly as below:



(horizontal louvers stops at current position)

- When selecting "↔", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.
- When selecting "↖, ↗, ↙, ↘", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.
- When selecting "⤒, ⤓, ⤔, ⤕", air conditioner is blowing fan automatically.
- Hold "⤒" button above 2seconds to set your required swing angle. When reaching your required angle, release the button.

5. TURBO FAN button

Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. "🌀" icon is displayed on remote controller. Press this button again to exit TURBO FAN function and "🌀" icon will disappear.

6. ▲/▼ button

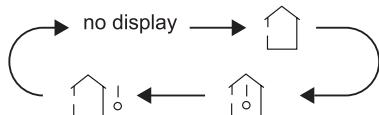
- Press "▲" or "▼" button once increase or decrease set temperature 1°C(1~2°F). Holding "▲" or "▼" button, 2seconds later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly. (Temperature can't be adjusted under auto mode)
- When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▼" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons) When setting TIMER ON, TIMER OFF or CLOCK, press "▲" or "▼" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

7. SLEEP button

Under COOL or HEAT mode, press this button to start up SLEEP function. "🌙" icon is displayed on remote controller. Press this button again to cancel SLEEP function and "🌙" icon will disappear.

8. TEMP button

By pressing this button, the indoor set temperature, indoor ambient temperature or outdoor ambient temperature is shown on the indoor unit's display. The setting on remote controller is selected circularly as below:



- When selecting "HOUSE" or no display with remote controller, temperature indicator on indoor unit displays set temperature.
- When selecting "HOUSE with circle" with remote controller, temperature indicator on indoor unit displays indoor ambient temperature.
- When selecting "HOUSE with cross" with remote controller, temperature indicator on indoor unit displays outdoor ambient temperature. Outdoor temperature display is not applicable for this unit. The temperature indicator displays indoor set temperature.

Note:

- It's defaulted to display set temperature when turning on the unit. There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When the selecting display of indoor or outdoor ambient temperature, indoor temperature indicator displays corresponding temperature and automatically turn to display set temperature after three or five seconds.

9. COMFORT button

Press this button to start COMFORT function and ".F" will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to cancel COMFORT function and ".F" will disappear.

- Please put the remote controller near user when this function is set. Do not put the remote controller near the object of high temperature or low temperature in order to avoid detecting inaccurate ambient temperature.

10. DISPLAY Button

Press this button to turn off the display light on the indoor unit. "LCD" icon on the remote controller disappears. Press this button again to turn on the display light. "LCD" icon is displayed.

11. CLOCK Button

Press this button to set the clock time. "O" icon on the remote controller will blink. Press "▲" or "▼" button within 5seconds to set the clock time. Each pressing of "▲" or "▼" button, clock time will increase or decrease 1 minute. If hold "▲" or "▼" button, 2seconds later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. "O" icon stops blinking.

Note:

- Clock time adopts 24-hour mode.
- The interval between two operation can't exceeds 5seconds. Otherwise, remote controller will quit setting status. Operation for TIMER ON/TIMER OFF is the same.

12. TIMER ON / TIMER OFF button

• TIMER ON button

"TIMER ON" button can set the time for timer on. After pressing this button, "O" icon disappears and the word "ON" on remote controller blinks. Press "▲" or "▼" button to adjust TIMER ON setting. After each pressing "▲" or "▼" button, TIMER ON setting will increase or decrease 1min. Hold "▲" or "▼" button, 2seconds later, the time will change quickly until reaching your required time. Press "TIMER ON" to confirm it. The word "ON" will stop blinking. "O" icon resumes displaying. Cancel TIMER ON: Under the condition that TIMER ON is started up, press "TIMER ON" button to cancel it.

• TIMER OFF button

"TIMER OFF" button can set the time for timer off. After pressing this button, "O" icon disappears and the word "OFF" on remote controller blinks. Press "▲" or "▼" button to adjust TIMER OFF setting. After each pressing "▲" or "▼" button, TIMER OFF setting will increase or decrease 1min. Hold "▲" or "▼" button, 2seconds later, the time will change quickly until reaching your required time. Press "TIMER OFF" word "OFF" will stop blinking. "O" icon resumes displaying. Cancel TIMER OFF. Under the condition that TIMER OFF is started up, press "TIMER OFF" button to cancel it.

Note:

- Under on and off status, you can set TIMER OFF or TIMER ON simultaneously.
- Before setting TIMER ON or TIMER OFF, please adjust the clock time.
- After starting up TIMER ON or TIMER OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. ON/OFF button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

Function Buttons on the Remote Control

1. Energy-saving function (This function is not explained on the operation manual nor the catalogue)

Under cooling mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off the energy-saving function. When the energy-saving function is started up, "SE" will be shown on remote controller, and air conditioner will adjust the set temperature automatically according to ex-factory setting to reach to the best energy-saving effect. Press "TEMP" and "CLOCK" buttons simultaneously again to exit energy-saving function.

Note:

- Under the energy-saving function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under the energy-saving function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- Sleep function and energy-saving function can't operate at the same time. If energy-saving function has been set under cooling mode, press sleep button will cancel energy-saving function. If sleep function has been set under cooling mode, start up the energy-saving function will cancel sleep function.

2. 8°C (46°F) heating function (This function is not explained on the operation manual nor the catalogue)

Under heating mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off the 8°C heating function. When this function is started up, "S" and "8°C" will be shown on the remote controller, and the air conditioner keep the heating status at 8°C. Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8°C heating function.

Note:

- Under the 8°C heating function, fan speed is defaulted at auto speed and it can't be adjusted.
- Under the 8°C heating function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.
- The sleep function and the 8°C heating function can't operate at the same time. If 8°C heating function has been set under cooling mode, press sleep button will cancel 8°C heating function. If sleep function has been set under cooling mode, start up the 8°C heating function will cancel sleep function.

- Under °F temperature display, the remote controller will display 46°F heating.

3. Lock function

Press "▲" and "▼" simultaneously to turn on or turn off lock function. When lock function is on, "█" icon is displayed on remote controller. If you operate the remote controller, the "█" icon will blink three times without sending signal to the unit.

4. Temperature display switch over function

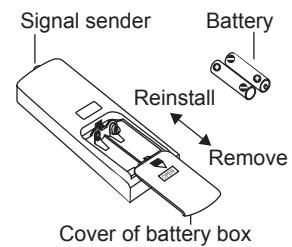
Under OFF status, press "▲" and "MODE" buttons simultaneously to switch temperature display between °C and °F.

Operation guide

1. Once power is connected, press "ON/OFF" button on remote controller to turn on the air conditioner.
2. Press "MODE" button to select your required mode: AUTO, COOL, DRY, FAN, HEAT.
3. Press "▲" or "▼" button to set your required temperature. (Temperature can't be adjusted under auto mode).
4. Press "FAN" button to set your required fan speed: auto, low, medium and high speed.
5. Press "SWING" button to select fan blowing angle.

Replacement of batteries in remote controller

1. Press the back side of remote controller marked with "OPEN", as shown in the fig, and then push out the cover of battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.
3. Reinstall the cover of the battery box.



Note:

- During operation, point the remote control signal sender at the receiving window of the indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.

TROUBLESHOOTING**[1] Error Code List**

NO.	Malfunction Name	Display Method of Indoor Unit			Display Method of Outdoor Unit			A/C status	Possible Causes			
		Dual 8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)		Operation Indicator	Cool Indicator	Heating Indicator	Yellow Indicator	Red Indicator	Green Indicator		
1	High pressure protection of system	E1	OFF 3s and blink once								During cooling and drying operation, except indoor fan operates, all loads stop operation. During heating operation, the complete unit stops.	Possible reasons: 1. Refrigerant was superabundant; 2. Poor heat exchange (including fifth blockage of heat exchanger and bad radiating environment); Ambient temperature is too high.
2	Antifreezing protection	E2	OFF 3S and blink twice			OFF 1S and blink 3 times					During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates.	1. Poor air-return in indoor unit; 2. Fan speed is abnormal; 3. Evaporator is dirty.
3	In defect of refrigerant	F0					OFF 1S and blink 9 times				The Dual 8 Code Display will show F0 and the complete unit stops.	1. In defect of refrigerant; 2. Indoor evaporator temperature sensor works abnormally; 3. The unit has been plugged up somewhere.
4	High discharge temperature protection of compressor	E4	OFF 3S and blink 4 times			OFF 1S and blink 7 times					During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	Please refer to the malfunction analysis (discharge protection, overload).
5	Over current protection	E5	OFF 3S and blink 5 times			OFF 1S and blink 5 times					During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	1. Supply voltage is unstable; 2. Supply voltage is too low and load is too high; 3. Evaporator is dirty.
6	Communication Malfunction	E6	OFF 3S and blink 6 times			Always ON					During cooling operation, compressor stops while indoor fan motor operates. During heating operation, the complete unit stops.	Refer to the corresponding malfunction analysis.
7	High temperature resistant protection	E8	OFF 3S and blink 8 times			OFF 1S and blink 6 times					During cooling operation: compressor will stop while indoor fan will operate. During heating operation, the complete unit stops.	Refer to the malfunction analysis (overload, high temperature resistant).
8	EEPROM malfunction	EE			OFF 3S and blink 15 times	OFF 1S and blink 11 times					During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	Replace outdoor control panel AP1
9	Limit/decrease frequency due to high temperature of module	EU	OFF 3S and blink 6 times	OFF 3S and blink 6 times							All loads operate normally, while operation frequency for compressor is decreased	Discharging after the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1.
10	Malfunction protection of jumper cap	C5	OFF 3S and blink 15 times								Wireless remote receiver and button are effective, but can not dispose the related command	1. No jumper cap insert on main board. 2. Incorrect insert of jumper cap. 3. Jumper cap damaged. 4. Abnormal detecting circuit of main board.
11	Gathering refrigerant	F0	OFF 3S and blink 1 times	OFF 3S and blink 1 times		OFF 1S and blink 17 times					When the outdoor unit receive signal of Gathering refrigerant ,the system will be forced to run under cooling mode for gathering refrigerant	Nominal cooling mode
12	Indoor ambient temperature sensor is open/ short circuited	F1		OFF 3S and blink once							During cooling and drying operation, indoor unit operates while other loads will stop; during heating operation, the complete unit will stop operation.	1. Loosening or bad contact of indoor ambient temp. sensor and main board terminal. 2. Components in main board fell down leads short circuit. 3. Indoor ambient temp. sensor damaged.(check with sensor resistance value chart) 4. Main board damaged.
13	Indoor evaporator temperature sensor is open/short circuited	F2		OFF 3S and blink twice							AC stops operation once reaches the setting temperature. Cooling, drying: internal fan motor stops operation while other loads stop operation; heating: AC stop operation	1. Loosening or bad contact of Indoor evaporator temp. sensor and main board terminal. 2. Components on the main board fall down leads short circuit. 3. Indoor evaporator temp. sensor damaged.(Check temp. sensor value chart for testing) 4. Main board damaged.

NO.	Malfunction Name	Display Method of Indoor Unit			Display Method of Outdoor Unit			A/C status	Possible Causes	
		Dual 8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)		Indicator has 3 kinds of display status and during blinking, ON 0.5s and OFF 0.5s					
			Operation Indicator	Cool Indicator	Heating Indicator	Yellow Indicator	Red Indicator	Green Indicator		
14	Outdoor ambient temperature sensor is open/short circuited	F3		OFF 3S and blink 3 times			OFF 1S and blink 6 times		During cooling and drying operation, compressor stops while indoor fan operates; During heating operation, the complete unit will stop operation	Outdoor temperature sensor hasn't been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
15	Outdoor condenser temperature sensor is open/short circuited	F4		OFF 3S and blink 4 times			OFF 1S and blink 5 times		During cooling and drying operation, compressor stops while indoor fan will operate; During heating operation, the complete unit will stop operation.	Outdoor temperature sensor has not been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor)
16	Outdoor discharge temperature sensor is open/short circuited	F5		OFF 3S and blink 5 times			OFF 1S and blink 7 times		During cooling and drying operation, compressor will stop after operating for about 3 mins, while indoor fan will operate; During heating operation, the complete unit will stop after operating for about 3 mins.	1. Outdoor temperature sensor has not been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) 2. The head of temperature sensor has not been inserted into the copper tube
17	Limit/ decrease frequency due to overload	F6		OFF 3S and blink for 6 times			OFF 1S and blink 3 times		All loads operate normally, while operation frequency for compressor is decreased	Refer to the malfunction analysis (overload, high temperature resistant)
18	Decrease frequency due to overcurrent	F8		OFF 3S and blink 8 times			OFF 1S and blink once		All loads operate normally, while operation frequency for compressor is decreased	The input supply voltage is too low; System pressure is too high and overload
19	Decrease frequency due to high air discharge	F9		OFF 3S and blink 9 times			OFF 1S and blink twice		All loads operate normally, while operation frequency for compressor is decreased	Overload or temperature is too high; Malfunction of electric expansion valve (EKV)
20	Limit/ decrease frequency due to antifreezing	FH		OFF 3S and blink 2 times	OFF 3S and blink 2 times		OFF 1S and blink 4 times		All loads operate normally, while operation frequency for compressor is decreased	Poor air-return in indoor unit or fan speed is too low
21	Voltage for DC bus-bar is too high	PH		OFF 3S and blink 11 times		OFF 1S and blink 13 times			During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 265VAC, turn on the unit after the supply voltage is increased to the normal range. 2. If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if its normal, there is malfunction for the circuit, please replace the control panel (AP1)
22	Voltage of DC bus-bar is too low	PL			OFF 3S and blink 21 times	OFF 1S and blink 12 times			During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop	1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 150VAC, turn on the unit after the supply voltage is increased to the normal range. 2. If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if its normal, there's malfunction for the circuit, please replace the control panel (AP1)
23	Compressor Min frequency in test state	P0		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)					Showing during min. cooling or min. heating test
24	Compressor rated frequency in test state	P1		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)					Showing during nominal cooling or nominal heating test
25	Compressor maximum frequency in test state	P2		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)					Showing during max. cooling or max. heating test
26	Compressor intermediate frequency in test state	P3		(during blinking, ON 0.25s and OFF 0.25s)	(during blinking, ON 0.25s and OFF 0.25s)					Showing during middle cooling or middle heating test
27	Overcurrent protection of phase current for compressor	P5		OFF 3S and blink 15 times					During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation.	Refer to the malfunction analysis (IPM protection, loss of synchronism protection and over current protection of phase current for compressor).

NO.	Malfunction Name	Display Method of Indoor Unit			Display Method of Outdoor Unit			A/C status	Possible Causes		
		Dual 8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)		Indicator has 3 kinds of display status and during blinking, ON 0.5s and OFF 0.5s						
			Operation Indicator	Cool Indicator	Heating Indicator	Yellow Indicator	Red Indicator				
28	Charging malfunction of capacitor	PU			OFF 3S and blink 17 times				During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop		
29	Malfunction of module temperature sensor circuit	P7			OFF 3S and blink 18 times				Refer to the part three—charging malfunction analysis of capacitor		
30	Module high temperature protection	P8			OFF 3S and blink 19 times				Replace outdoor control panel AP1		
31	Decrease frequency due to high temperature resistant during heating operation	H0			OFF 3S and blink 10 times				After the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel radiator is inserted tightly. If its no use, please replace control panel AP1.		
32	Static dedusting protection	H2			OFF 3S and blink twice						
33	Overload protection for compressor	H3			OFF 3S and blink 3 times	OFF 1S and blink 8 times			1. Wiring terminal OVC-COMP is loosened. In normal state, the resistance for this terminal should be less than 1ohm. 2. Refer to the malfunction analysis (discharge protection, overload)		
34	System is abnormal	H4			OFF 3S and blink 4 times	OFF 1S and blink 6 times			Refer to the malfunction analysis (overload, high temperature resistant)		
35	IPM protection	H5			OFF 3S and blink 5 times	OFF 1S and blink 4 times			Refer to the malfunction analysis (IPM protection, loss of synchronism protection and over current protection of phase current for compressor).		
36	Module temperature is too high	H5			OFF 3S and blink 5 times	OFF 1S and blink 10 times					
37	Internal motor (fan motor) do not operate	H6	OFF 3S and blink 11 times						1. Bad contact of DC motor feedback terminal. 2. Bad contact of DC motor control end. 3. Fan motor is stalling. 4. Motor malfunction. 5. Malfunction of main board rev detecting circuit.		
38	Desynchronizing of compressor	H7			OFF 3S and blink 7 times				Refer to the malfunction analysis (IPM protection, loss of synchronism protection and over current protection of phase current for compressor).		
39	PFC protection	HC			OFF 3S and blink 6 times	OFF 1S and blink 14 times			Refer to the malfunction analysis		
40	Outdoor DC fan motor malfunction	L3	OFF 3S and blink 23 times			OFF 1S and blink 14 times		Outdoor DC fan motor malfunction lead to compressor stop operation,	DC fan motor malfunction or system blocked or the connector loosed		
41	power protection	L9	OFF 3S and blink 20 times			OFF 1S and blink 9 times		Compressor stop operation and Outdoor fan motor will stop 30s latter , 3 minutes latter fan motor and compressor will restart	To protect the electrical components when detect high power		
42	Indoor unit and outdoor unit doesn't match	LP	OFF 3S and blink 19 times			OFF 1S and blink 16 times		Compressor and Outdoor fan motor can't work	Indoor unit and outdoor unit doesn't match		

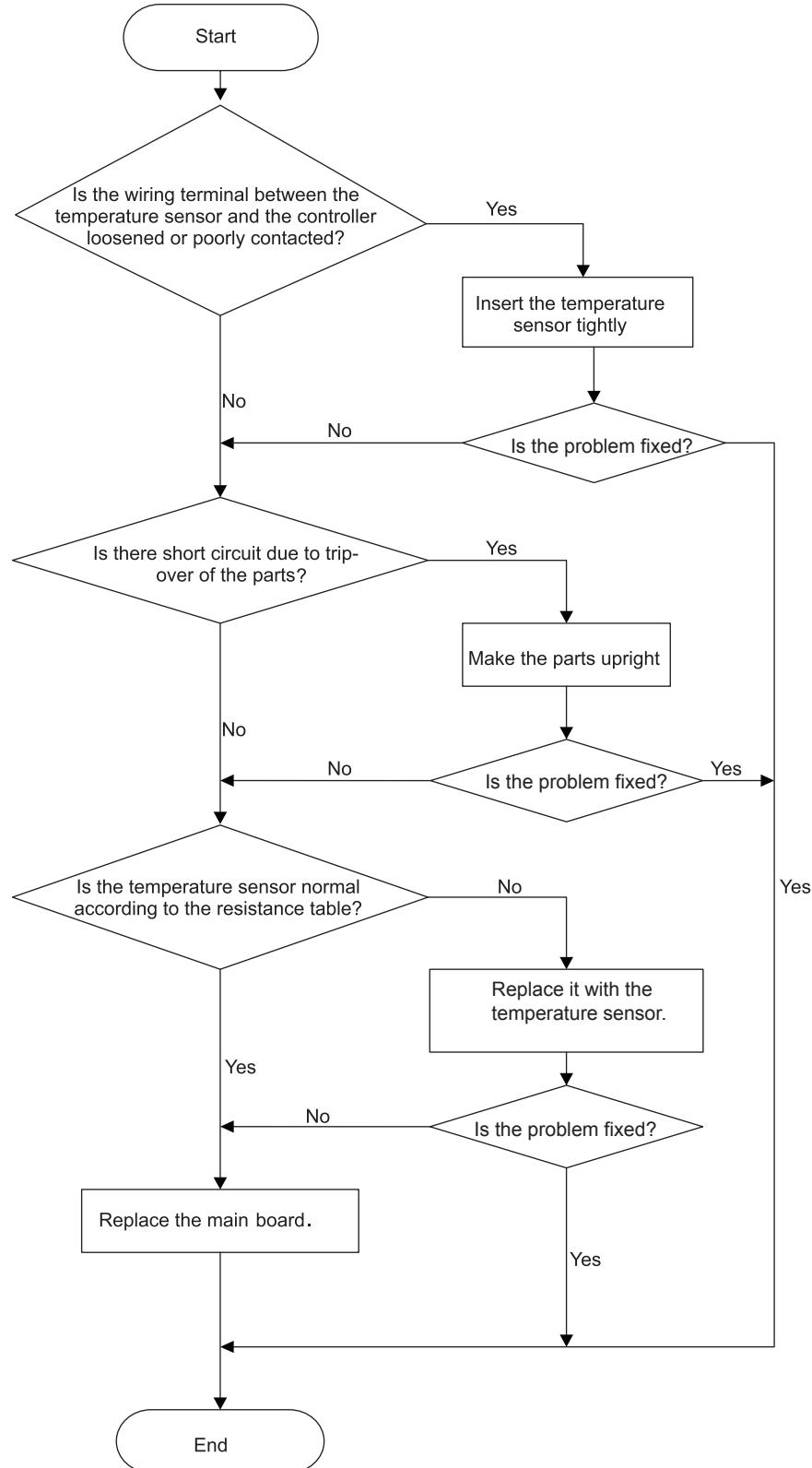
NO.	Malfunction Name	Display Method of Indoor Unit			Display Method of Outdoor Unit			A/C status	Possible Causes		
		Dual 8 Code Display	Indicator Display (during blinking, ON 0.5s and OFF 0.5s)		Indicator has 3 kinds of display status and during blinking, ON 0.5s and OFF 0.5s						
			Operation Indicator	Cool Indicator	Heating Indicator	Yellow Indicator	Red Indicator				
43	Failure start-up	LC			OFF 3S and blink 11 times				During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation. Refer to the malfunction analysis		
45	Malfunction of voltage dropping for DC bus-bar	U3			OFF 3S and blink 20 times				During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop Supply voltage is unstable		
46	Malfunction of complete units current detection	U5		OFF 3S and blink 13 times					During cooling and drying operation, the compressor will stop while indoor fan will operate; During heating operating, the complete unit will stop operation. There's circuit malfunction on outdoor units control panel AP1, please replace the outdoor units control panel AP1.		
47	The four-way valve is abnormal	U7		OFF 3S and blink 20 times					If this malfunction occurs during heating operation, the complete unit will stop operation. 1. Supply voltage is lower than AC175V; 2. Wiring terminal 4V is loosened or broken; 3.4V is damaged, please replace 4V.		
48	Zero-crossing malfunction of outdoor unit	U9	OFF 3S and blink 18 times						During cooling operation, compressor will stop while indoor fan will operate; during heating, the complete unit will stop operation. Replace outdoor control panel AP1		
49	Frequency limiting (power)					OFF 1S and blink 13 times					
50	Compressor running				OFF 1S and blink once						
51	The temperature for turning on the unit is reached					OFF 1S and blink 8 times					
52	Frequency limiting (module temperature)					OFF 1S and blink 11 times					
53	Normal communication						OFF 0.5S and blink once				
54	Defrosting			OFF 3S and blink once (during blinking, ON 10s and OFF 0.5s)	OFF 1S and blink twice			Defrosting will occur in heating mode. Compressor will operate while indoor fan will stop operation. It's the normal state			

[2] Troubleshooting for Main Malfunction

1. Malfunction of Temperature Sensor F1, F2

Main detection points:

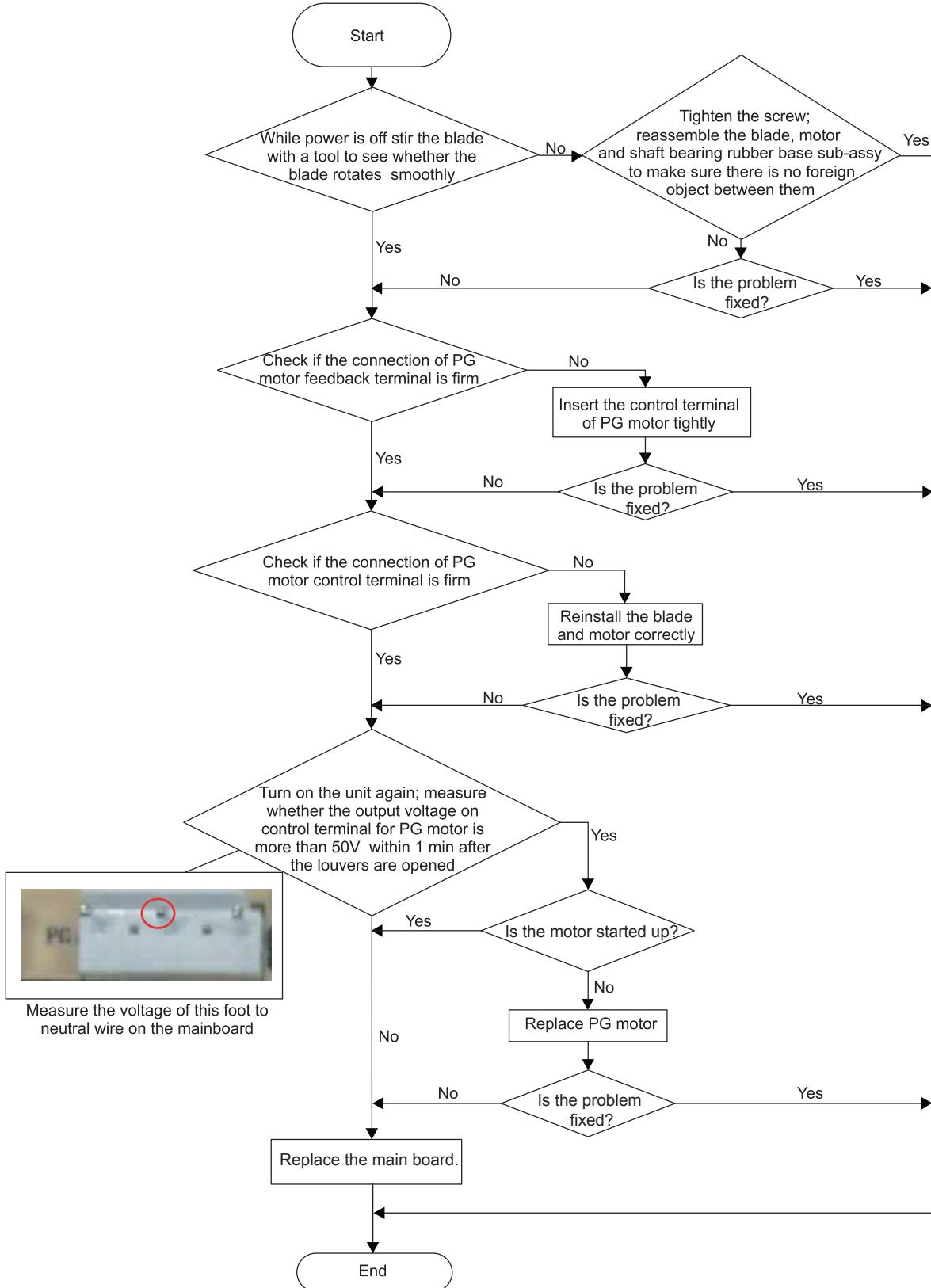
- Is the wiring terminal between the temperature sensor and the controller loosened or poorly contacted?
- Is there short circuit due to trip-over of the parts?
- Is the temperature sensor broken?
- Is main board broken?



2. Malfunction of Blocked Protection of IDU Fan Motor H6

Main detection points:

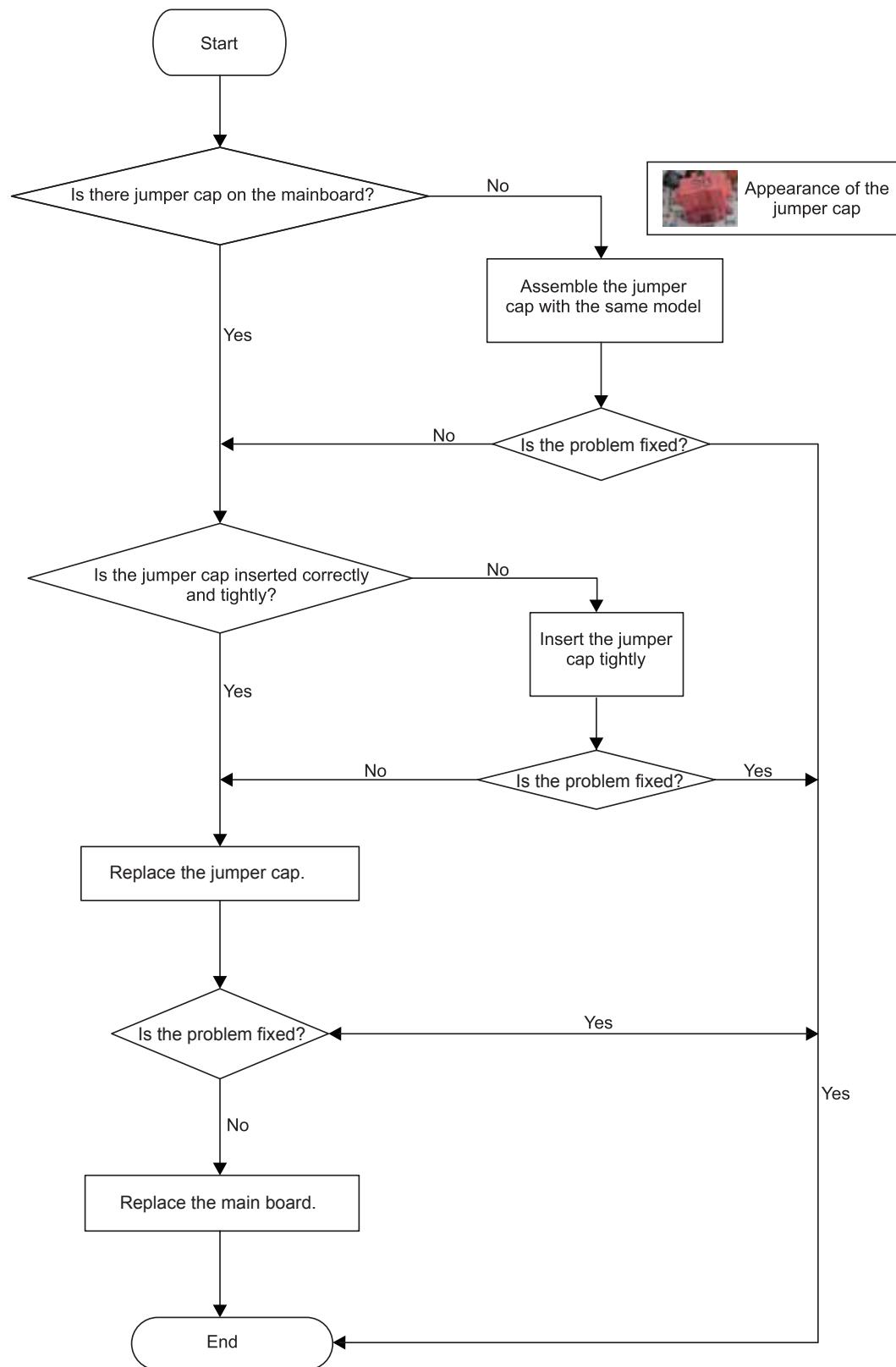
- Smoothlyls the control terminal of PG motor connected tightly?
- Smoothlyls the feedback interface of PG motor connected tightly?
- The fan motor can't operate
- The motor is broken?
- Detectioncircuit of the main board is defined abnormal?



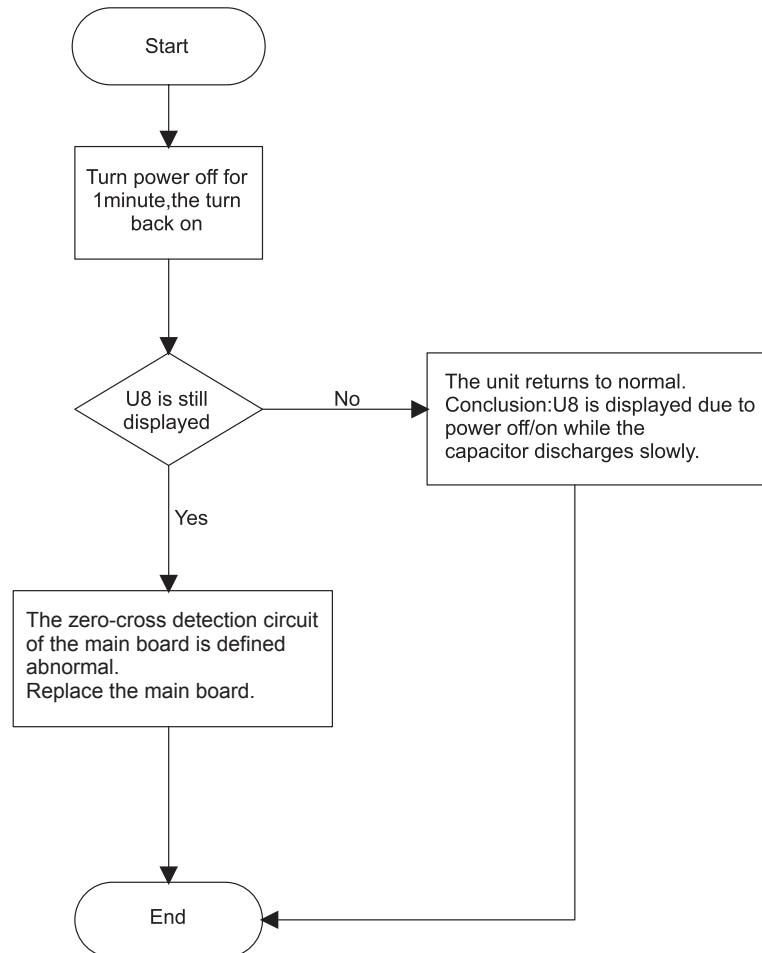
3. Malfunction of Protection of Jumper Cap C5

Main detection points:

- Malfunction Is there jumper cap on the mainboard?
- Is the jumper cap inserted correctly and tightly?
- The jumper is broken?
- Detection circuit of the mainboard is defined abnormal?



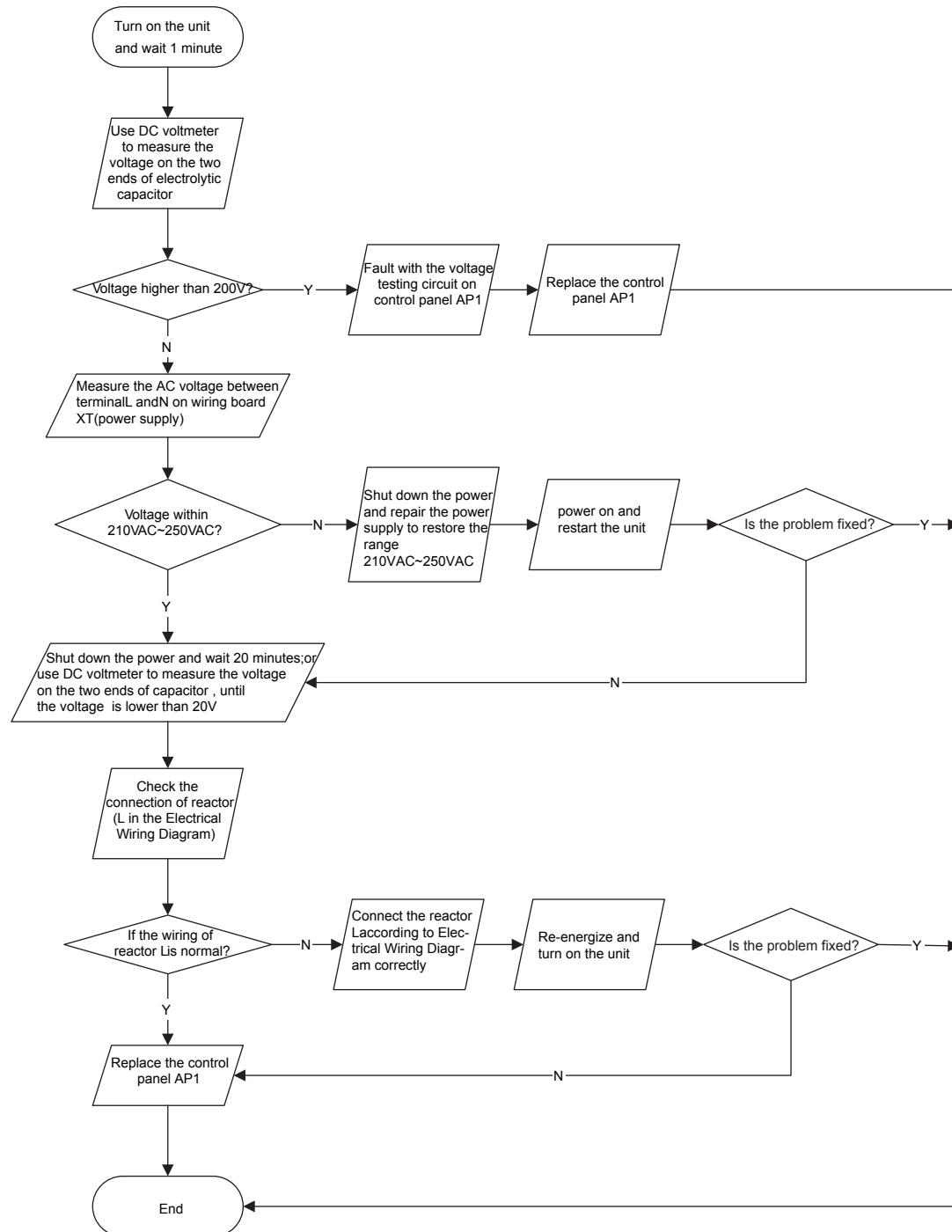
4. Malfunction of Zero-crossing Inspection Circuit Malfunction of the IDU Fan Motor U8



5. Capacitor charge fault (Fault with outdoor unit) (AP1 the control panel of the outdoor unit)

Main Check Points:

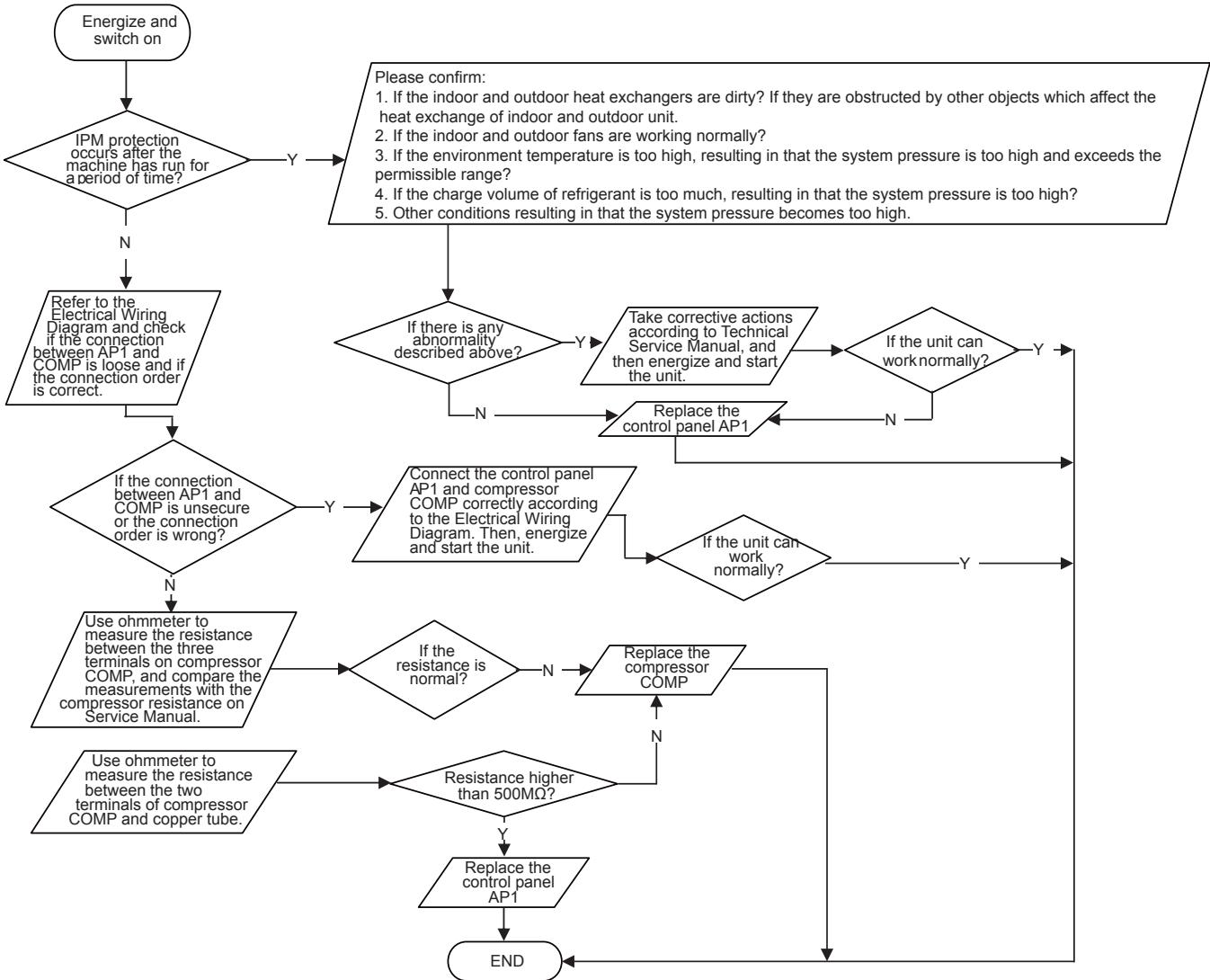
- Use AC voltmeter to check if the voltage between terminal L and N on the wiring board is within 210VAC~250VAC.
- If the reactor (L) is correctly connected? If the connection is loose or fallen? If the reactor (L) is damaged?



6. IPM Protection, Out-of-step Fault, Compressor Phase Overcurrent (AP1: the control panel of the outdoor unit)

Main Check Points:

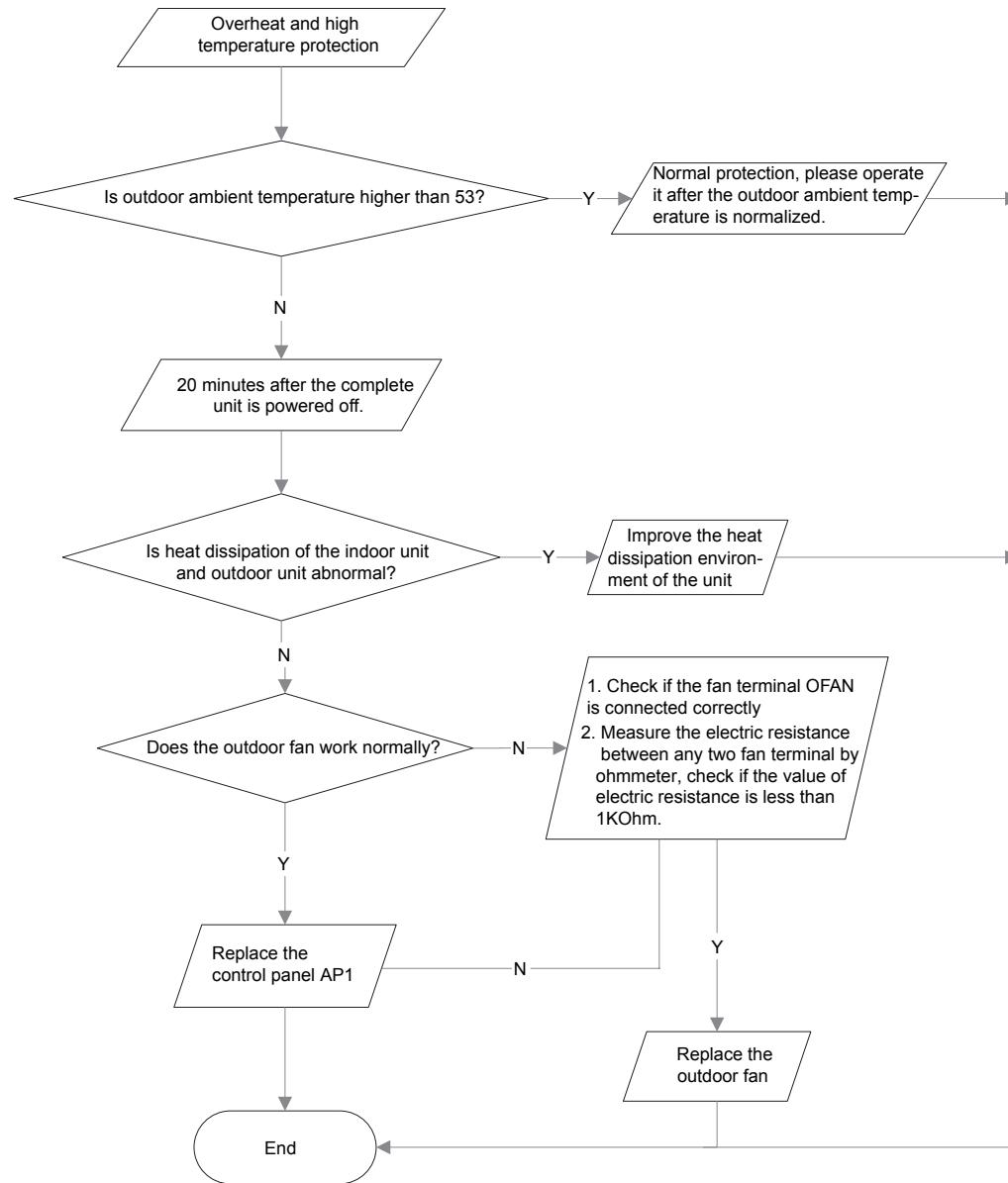
- If the connection between control panel AP1 and compressor COMP is secure? If loose? If the connection is in correct order?
- If the voltage input of the machine is within normal range? (Use AC voltmeter to measure the voltage between terminal L and N on the wiring board XT)
- If the compressor coil resistance is normal? If the insulation of compressor coil against the copper tube is in good condition?
- If the working load of the machine are too high? If the radiation is good?
- If the charge volume of refrigerant is correct?



7. High temperature and overload protection diagnosis (AP1: the control board of the outdoor unit)

Mainly detect:

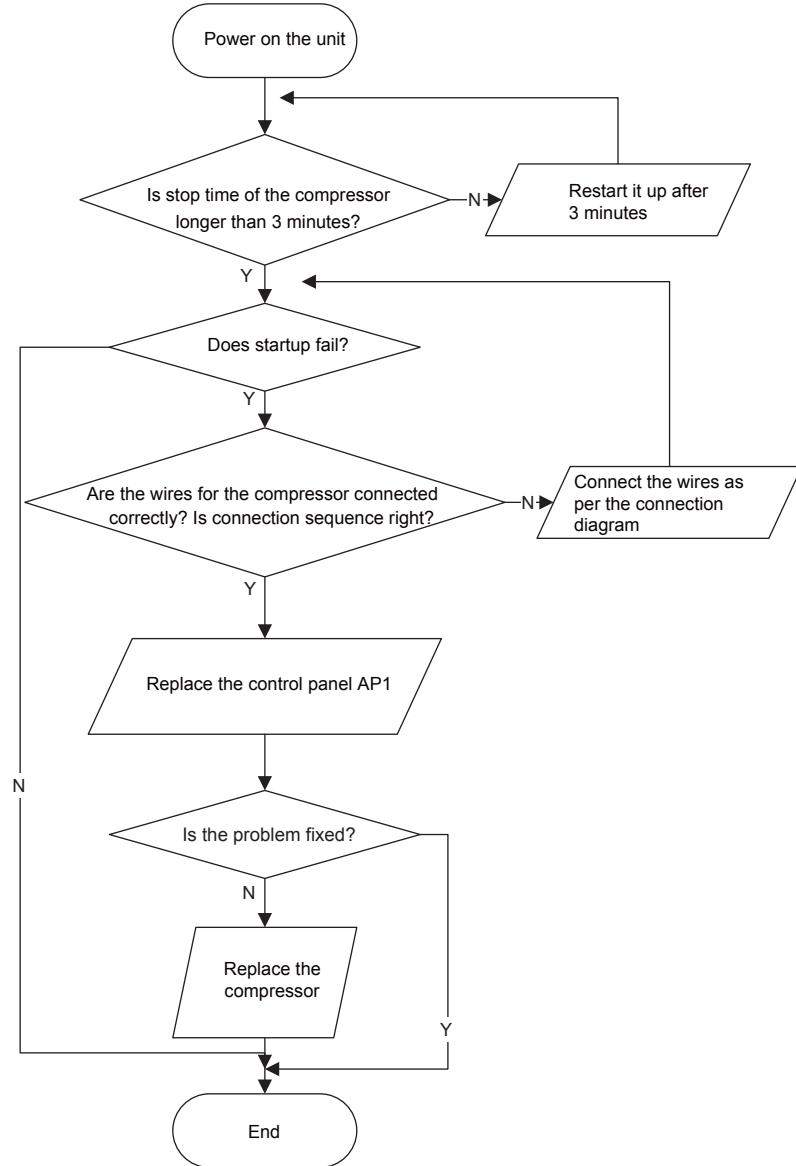
- Is outdoor ambient temperature in normal range?
- Are the outdoor and indoor fans operating normally?
- Is the heat dissipation environment inside and outside the unit is good?



8. Start-up failure (AP1: the control board of the outdoor unit)

Mainly detect:

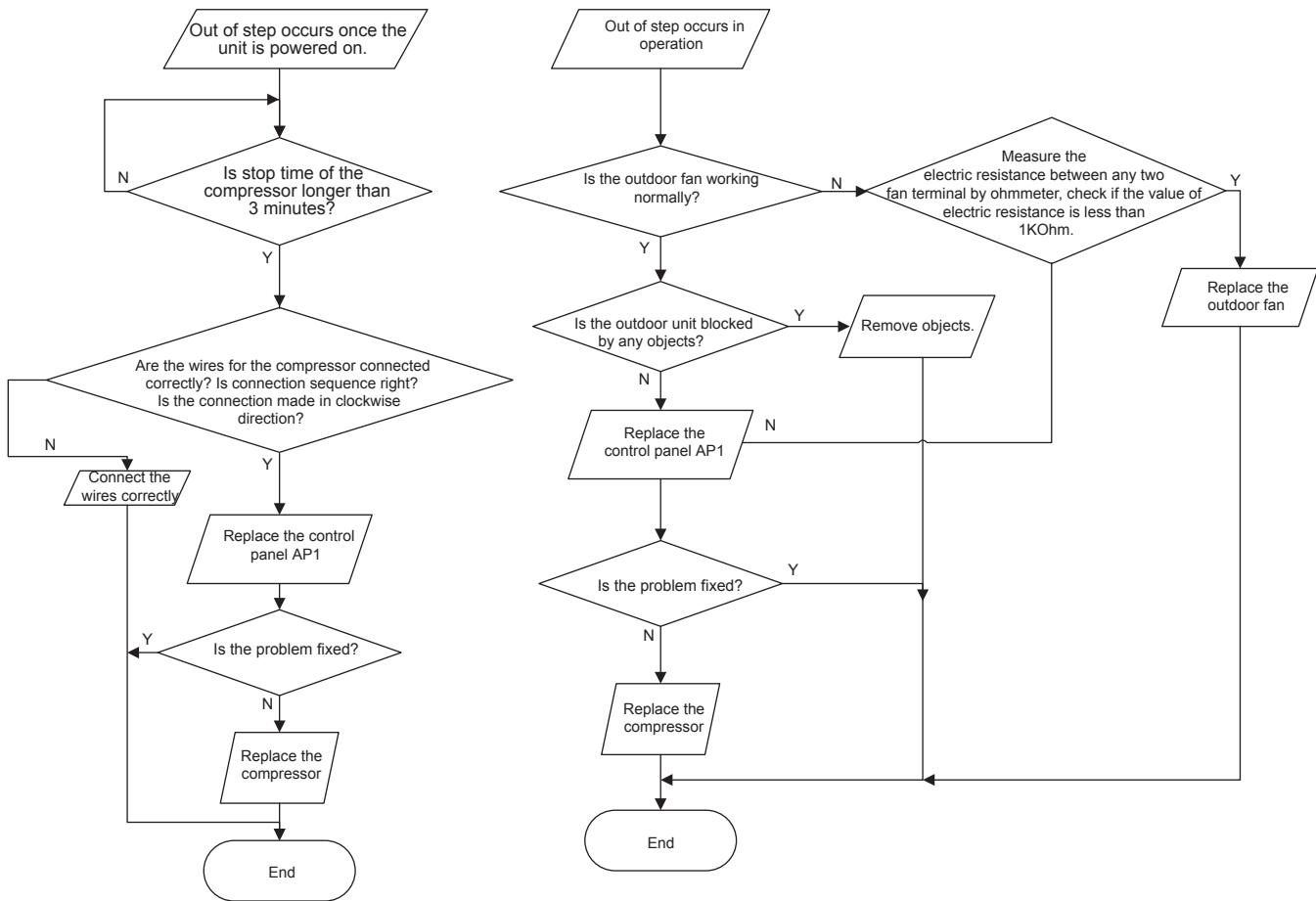
- Whether the compressor wiring is connected correct?
- Is compressor broken?
- Is time for compressor stopping enough?



9. Out of step diagnosis for the compressor (AP1: the control board of the outdoor unit)

Mainly detect:

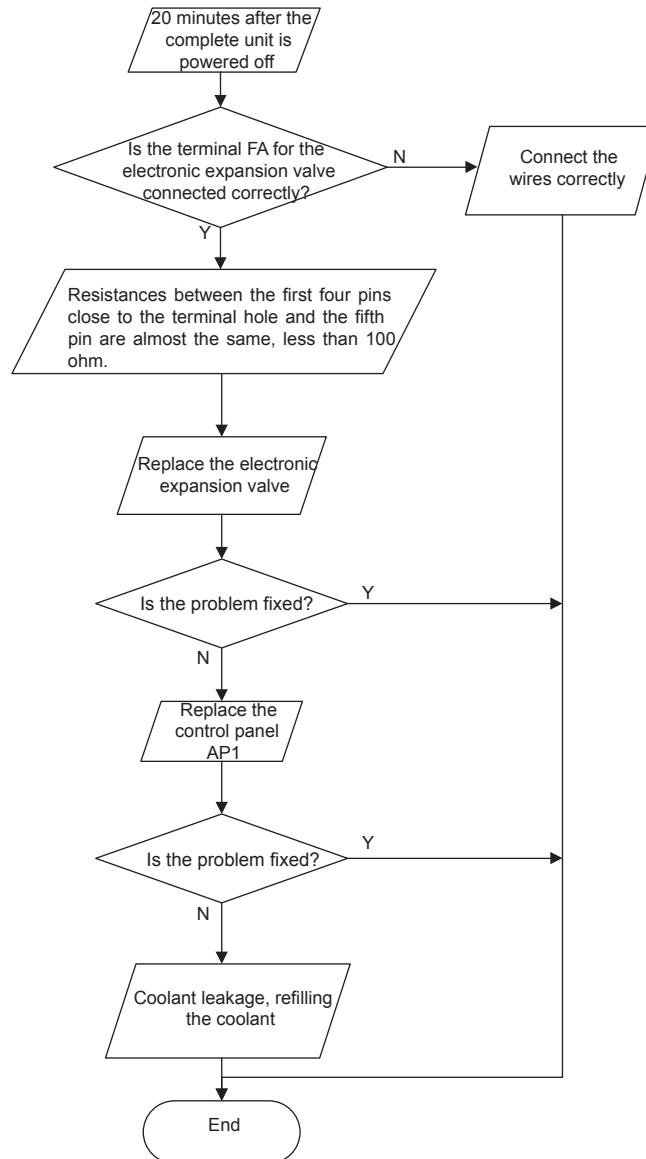
- Whether the system pressure is too high?
- Whether the input voltage is too low?



10. Overload and air exhaust malfunction diagnosis (AP1: the control board of the outdoor unit)

Mainly detect:

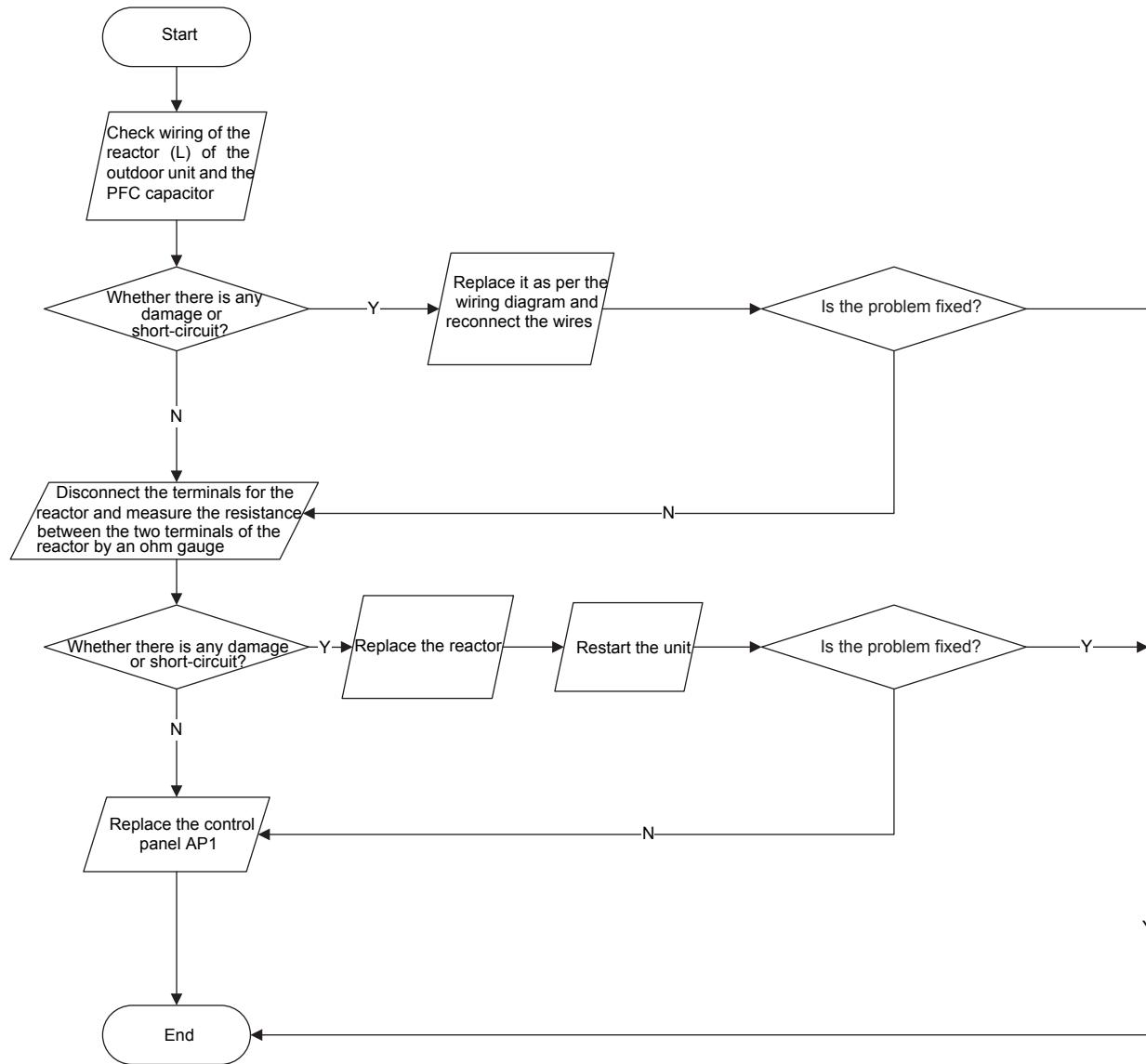
- Whether the PMV is connected well or not? Is PMV damaged?
- Is refrigerant leaked?



11. Power factor correct or (PFC) fault (a fault of outdoor unit) (AP1: the control board of the outdoor unit)

Mainly detect:

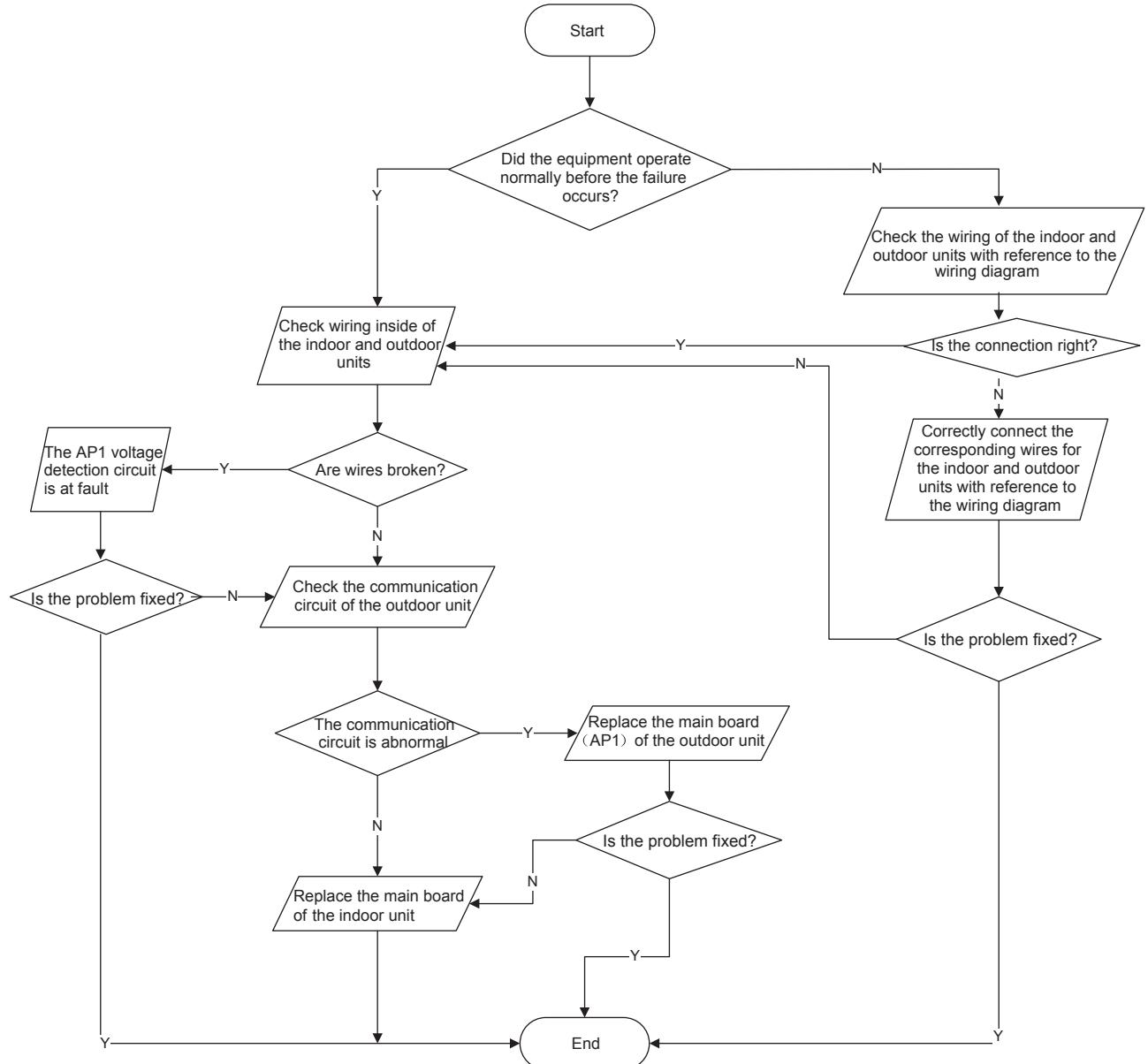
- Check if the reactor (L) of the outdoor unit and the PFC capacitor are broken



12. Communication malfunction: (AP1: the control board of the outdoor unit)

Mainly detect:

- Is there any damage for the indoor unit mainboard communication circuit? Is communication circuit damaged?
- Detect the indoor and outdoor units connection wire and indoor and outdoor units inside wiring is connect well or not, if is there any damage?



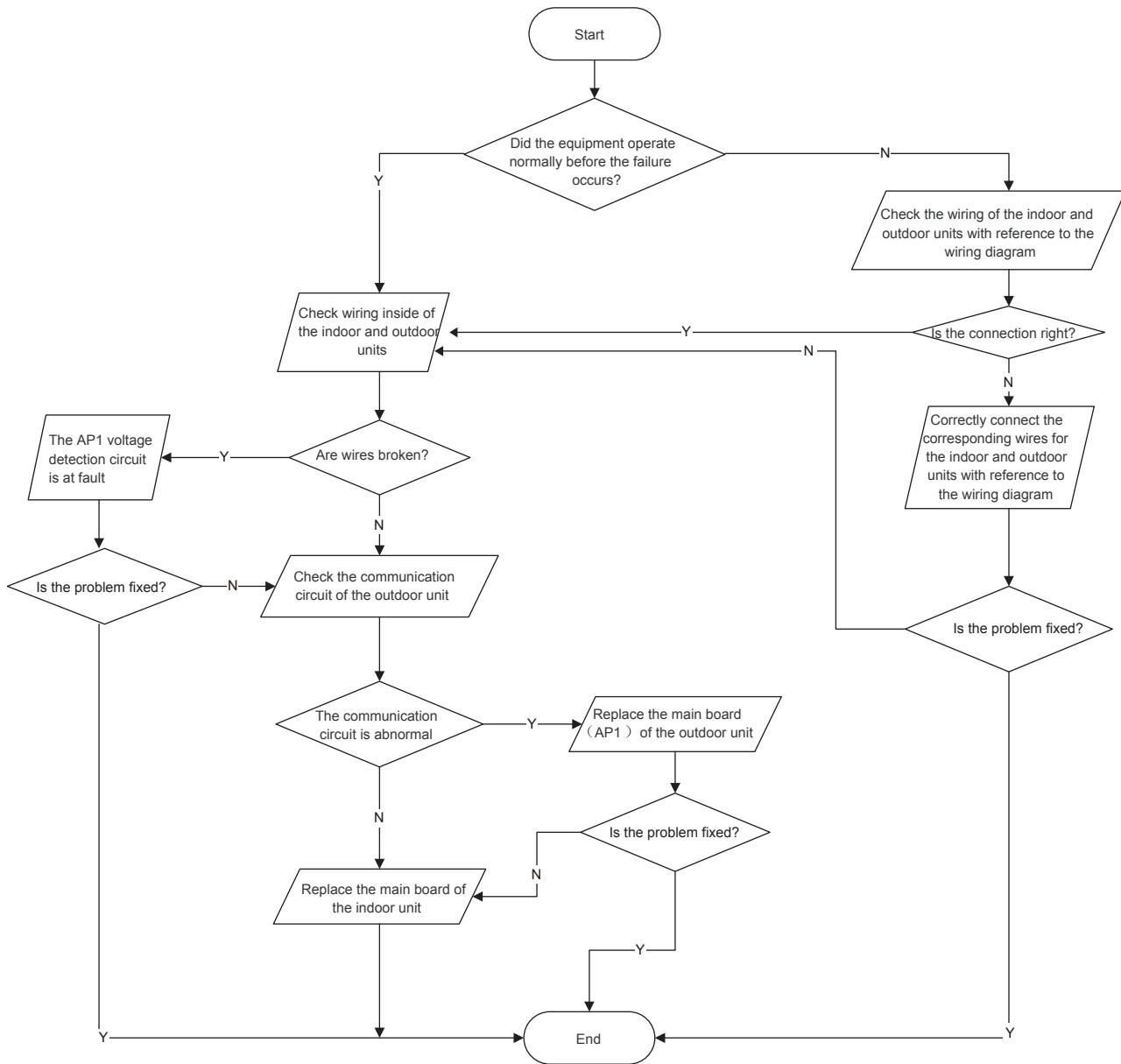
13. Communication malfunction:(AP1: the control board of the outdoor unit)

Mainly detect:

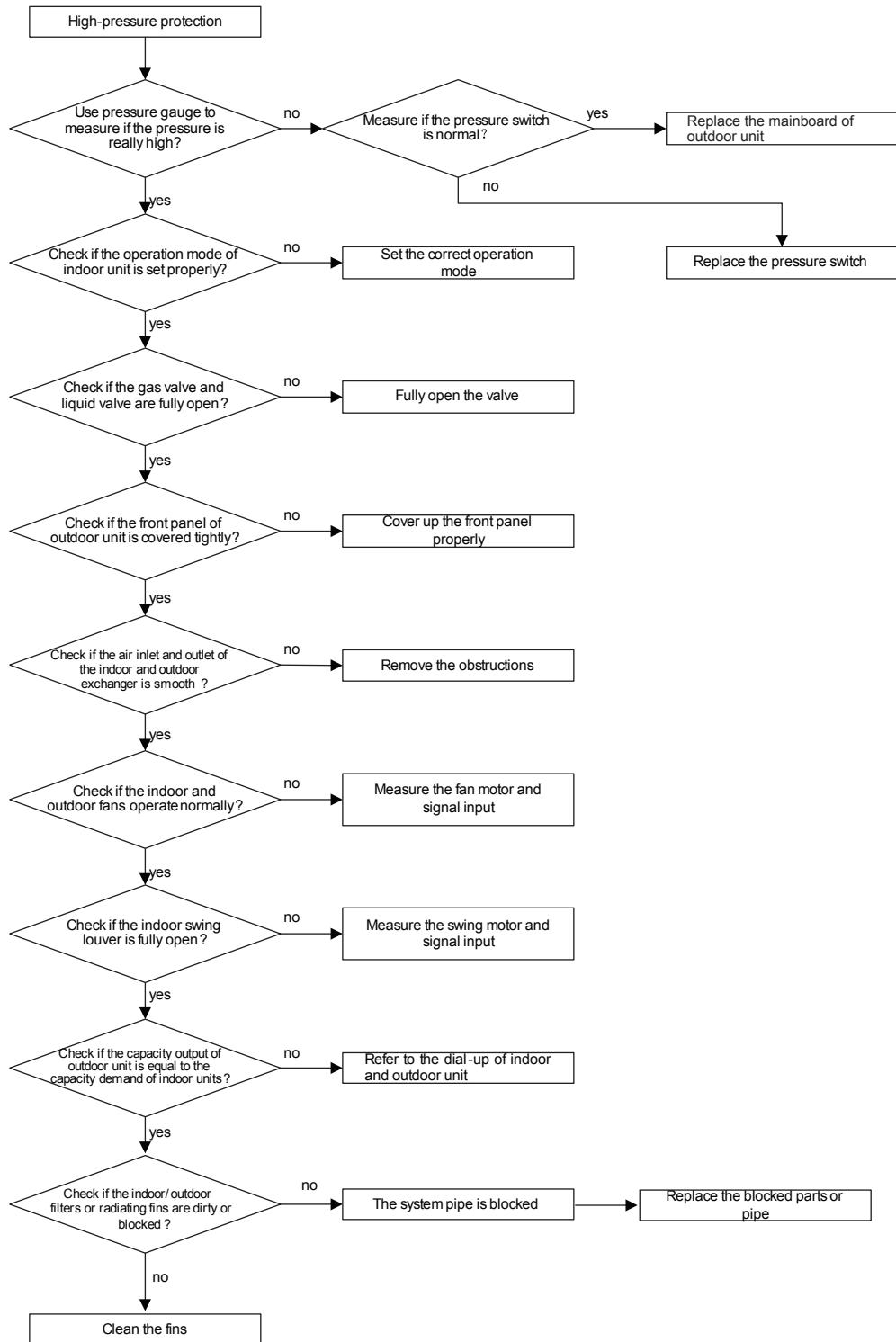
Detect the indoor and outdoor units connection wire and indoor and outdoor units inside wiring is connect well or not, If is there any damage?

Is there any damage for the indoor unit mainboard communication circuit? Is communication circuit damaged?

The flow chart fir malfunction detect:



14. High-pressure Protection



15. Malfunction of Over current Protection E5

Main detection points:

- Eliminatedls the supply voltage unstable with big fluctuation?
- Is the supply voltage too low with overload?
- Hardware trouble?



[3] Troubleshooting for Normal Malfunction

1. Air conditioner can't be started up

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
No power supply, or poor connection for power plug	After energization, operation indicator isn't bright and the buzzer can't give out sound.	Confirm whether it's due to power failure. If yes, wait for power recovery. If not, check power supply circuit and make sure the power plug is connected well.
Wrong wire connection between indoor unit and outdoor unit, or poor connection for wiring terminals.	Under normal power supply circumstances, operation indicator isn't bright after energization.	Check the circuit according to circuit diagram and connect wires correctly. Make sure all wiring terminals are connected firmly.
Electric leakage for air conditioner.	After energization, room circuit breaker trips off at once.	Make sure the air conditioner is grounded reliably. Make sure wires of air conditioner is connected correctly. Check the wiring inside air conditioner. Check whether the insulation layer of power cord is damaged; if yes, place the power cord..
Model selection for air switch is improper.	After energization, air switch trips off	Select proper air switch.
Malfunction of remote controller.	After energization, operation indicator is bright, while no display on remote controller or buttons have no action.	Replace batteries for remote controller. Repair or replace remote controller.

2. Poor Cooling (Heating) for Air Conditioner

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Set temperature is improper.	Observe the set temperature on remote controller.	Adjust the set temperature.
Rotation speed of the IDU fan motor is set too low.	Small wind blow.	Set the fan speed at high or medium.
Filter of indoor unit is blocked.	Check the filter to see it's blocked.	Clean the filter.
Installation position for indoor unit and outdoor unit is improper.	Check whether the installation position is proper according to installation requirement for air conditioner.	Adjust the installation position, and install the rainproof and sun-proof for outdoor unit.
Refrigerant is leaking.	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unit's pressure is much lower than regulated range.	Find out the leakage causes and deal with it. Add refrigerant.
Malfunction of 4-way valve.	Blow cold wind during heating.	Replace the 4-way valve.
Malfunction of capillary.	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unit's pressure is much lower than regulated range. If refrigerant isn't leaking, part of capillary is blocked.	Replace the capillary.
Flow volume of valve is insufficient.	The pressure of valves is much lower than that stated in the specification.	Open the valve completely.
Malfunction of horizontal louver.	Horizontal louver can't swing.	Refer to point 3 of maintenance method for details.
Malfunction of the IDU fan motor	The IDU fan motor can't operate.	Refer to troubleshooting for H6 for maintenance method in details
Malfunction of the ODU fan motor	The ODU fan motor can't operate.	Refer to point 4 of maintenance method for details.
Malfunction of compressor	Compressor can't operate.	Refer to point 5 of maintenance method for details.

3. Horizontal Louver Can't Swing

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram.	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Stepping motor is damaged	Stepping motor can't operate	Repair or replace stepping motor
Main board is damaged	Others are all normal, while horizontal louver can't operate	Replace the main board with the same model

4. ODU Fan Motor Can't Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection.	Check the wiring status according to circuit diagram.	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly.
Capacity of the ODU fan motor is damaged.	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the capacity of fan.
Power voltage is a little low or high.	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator.
Motor of outdoor unit is damaged.	When unit is on, cooling/heating performance is bad and ODU compressor generates a lot of noise and heat.	Change compressor oil and refrigerant. If no better, replace the compressor with a new one.

5. Compressor Can't Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection.	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly.
Capacity of compressor is damaged.	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the compressor capacitor.
Power voltage is a little low or high.	Use universal meter to measure the power supply voltage. The voltage is a little high or low.	Suggest to equip with voltage regulator.
Coil of compressor is burnt out.	Use universal meter to measure the resistance between compressor terminals and it's 0.	Repair or replace compressor.
Cylinder of compressor is blocked.	Compressor can't operate.	Repair or replace compressor.

6. Air Conditioner is Leaking

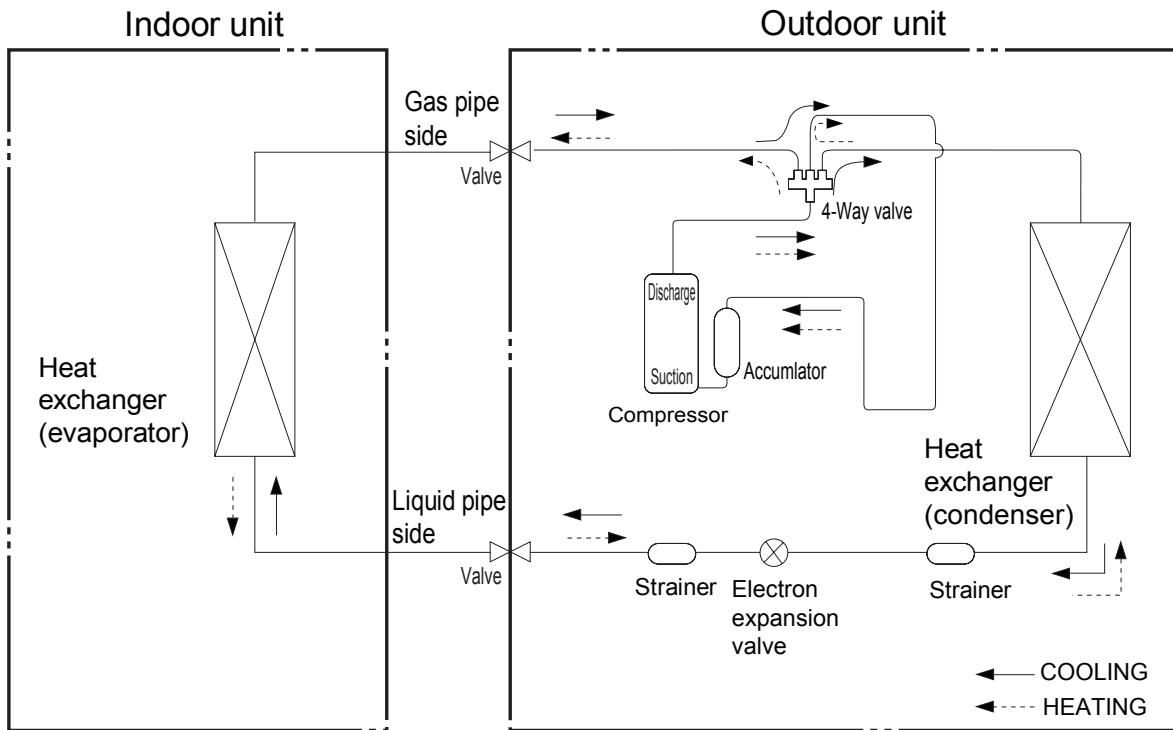
Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Drain pipe is blocked.	Water leaking from indoor unit.	Eliminate the foreign objects inside the drain pipe.
Drain pipe is broken.	Water leaking from drain pipe.	Replace drain pipe
Wrapping is not tight.	Water leaking from the pipe connection place of indoor unit.	Wrap it again and bundle it tightly.

7. Abnormal Sound and Vibration

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
When turn on or turn off the unit, the panel and other parts will expand and there's abnormal sound.	There's the sound of "PAPA".	Normal phenomenon. Abnormal sound will disappear after a few minutes.
When turn on or turn off the unit, there's abnormal sound due to flow of refrigerant inside air conditioner.	Water-running sound can be heard.	Normal phenomenon. Abnormal sound will disappear after a few minutes.
Foreign objects inside the indoor unit or there are parts touching together inside the indoor unit.	There's abnormal sound fro indoor unit.	Remove foreign objects. Adjust all parts' position of indoor unit, tighten screws and stick damping plaster between connected parts.
Foreign objects inside the outdoor unit or there are parts touching together inside the outdoor unit.	There's abnormal sound fro outdoor unit.	Remove foreign objects. Adjust all parts' position of outdoor unit, tighten screws and stick damping plaster between connected parts.
Short circuit inside the magnetic coil.	During heating, the way valve has abnormal electromagnetic sound.	Replace magnetic coil.
Abnormal shake of compressor.	Outdoor unit gives out abnormal sound.	Adjust the support foot mat of compressor, tighten the bolts.
Abnormal sound inside the compressor.	Abnormal sound inside the compressor	If add too much refrigerant during maintenance, please reduce refrigerant properly. Replace compressor for other circumstances.

REFRIGERATION CYCLE

[1] Refrigerant System Diagram



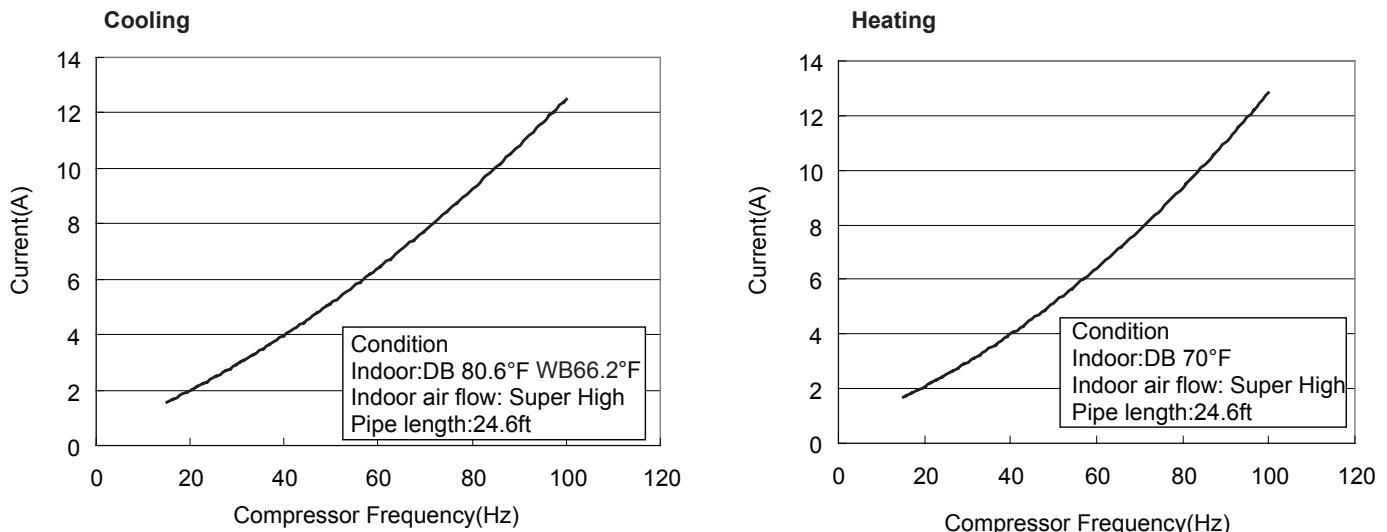
Connection pipe specification:

Liquid pipe: 1/4 inch (6.35mm)

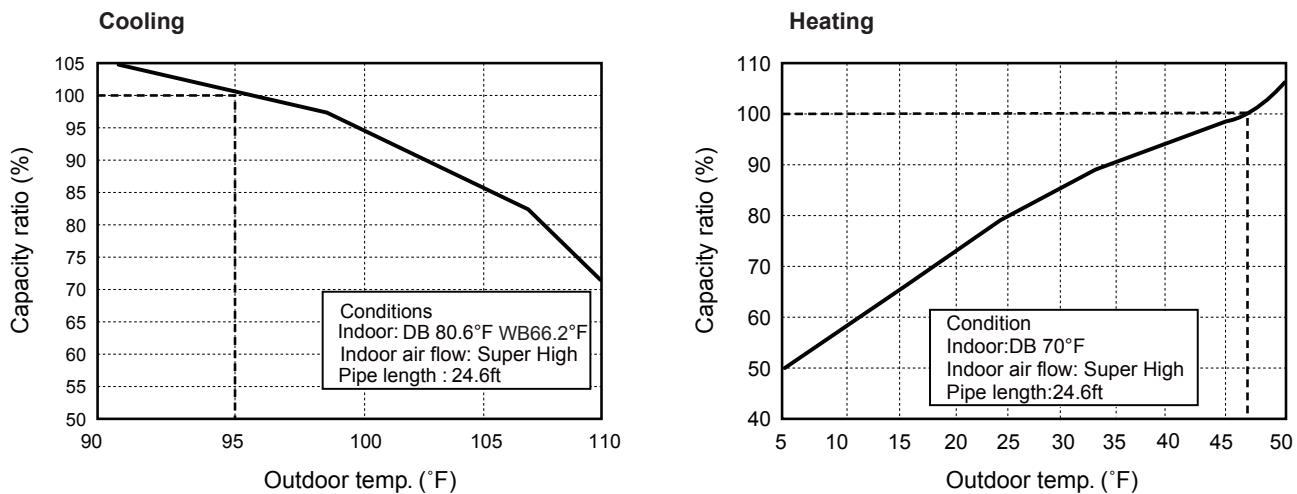
Gas pipe: 5/8 inch (16mm)

[2] PERFORMANCE CURVES

1. Operation Characteristic Curve



2. Capacity Variation Ratio According to Temperature



3. Cooling and Heating Data Sheet in Rated Frequency

Cooling:

Rated cooling condition (°F) (DB/WB)		Pressure of gas pipe connecting indoor and outdoor unit P (MPa)	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit	Compressor revolution (rps)
Indoor	Outdoor		T1 (°F)	T2 (°F)			
80/66.9	95/-	0.9 ~1.0	46.8 to 52.8	127 to 96.8	Supper High	High	67

Heating:

Rated cooling condition (°F) (DB/WB)		Pressure of gas pipe connecting indoor and outdoor unit P (MPa)	Inlet and outlet pipe temperature of heat exchanger		Fan speed of indoor unit	Fan speed of outdoor unit	Compressor revolution (rps)
Indoor	Outdoor		T1 (°F)	T2 (°F)			
70/-	19.94/19.04	3.5 ~3.8	134.4 to 102	36 to 39	Supper High	High	61

Instruction:

T1: Inlet and outlet pipe temperature of evaporator

T2: Inlet and outlet pipe temperature of condenser

P: Pressure at the side of big valve

Connection pipe length: 24.6ft.

DISASSEMBLY PROCEDURE

Be sure to turn off the circuit breaker before disassembly procedure. When reassembling the unit after repairing, be sure to install screws to their original positions.

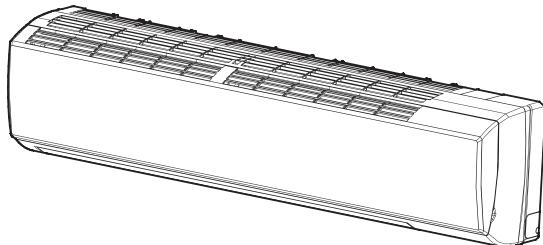
The screws used are not the same in specifications such as corrosion-resistant treatment, tip shape and length.

After the air conditioner is repaired or parts are replaced, measure insulation resistance of the equipment using an insulation resistance meter. If the measured resistance is lower than 1 MW, inspect parts and repair or replace defective parts.

[1] INDOOR UNIT

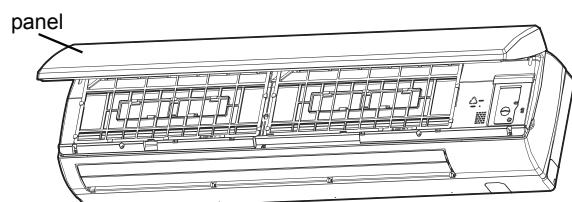
1. Before disassembly of the unit.

Axonometric drawing for the complete unit.

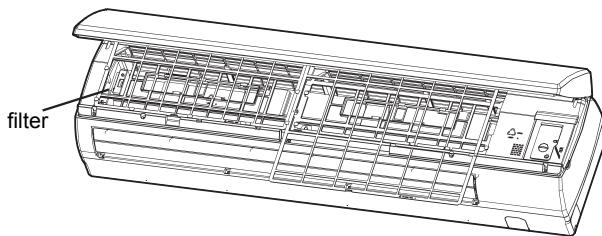


2. Remove the filters.

- 1) Open the panel.

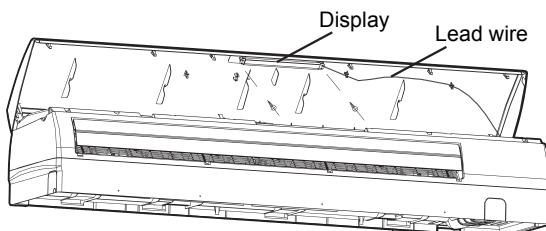


- 2) Remove the two (2) filters.



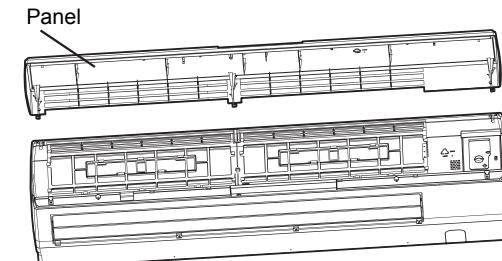
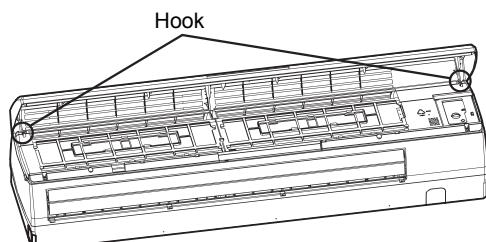
3. Remove the display.

Remove the two (2) screws fixing display, and then remove the display with lead wire.



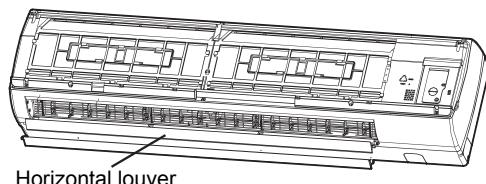
4. Remove the panel.

Pull the hooks at both sides slightly, and then remove the panel.



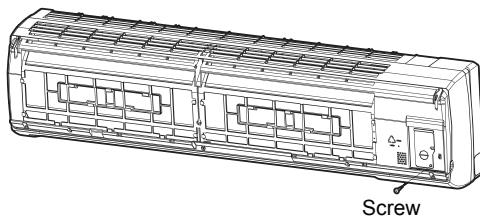
5. Remove the horizontal louver.

Remove the axial bush on the horizontal louver, and then remove the horizontal louver.

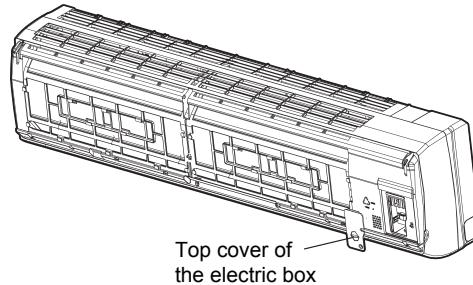


6. Remove the top cover of the electric box.

- 1) Remove the screw fixing the top cover of the electric box.

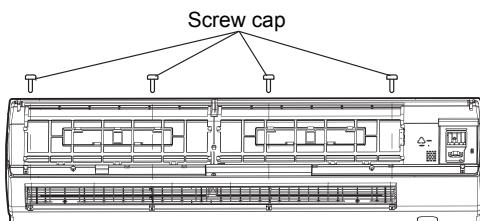


- 2) Remove the top cover of the electric box.

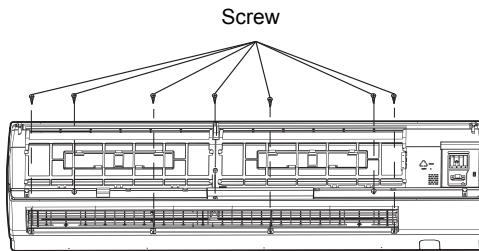


7. Remove the front case.

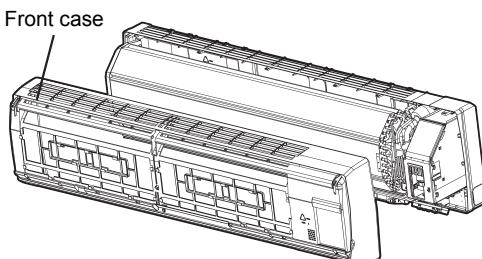
- 1) Remove the four (4) screw caps on the front case.



- 2) Remove the seven (7) screws connecting the front case.



- 3) Remove the front case.



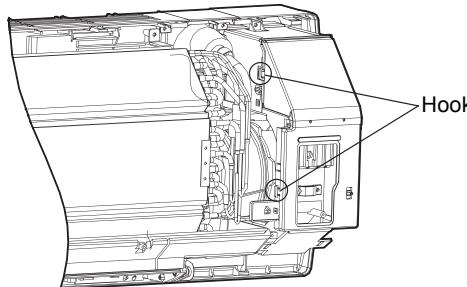
8. Remove the earthing wire .

Remove the earth screw and cut the fixing band, and then remove the earth wire.

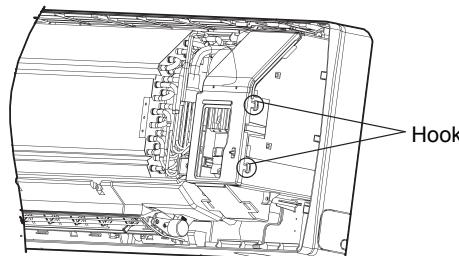


9. Remove electric box cover.

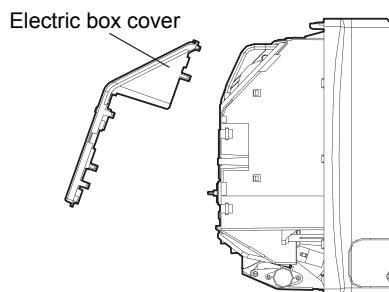
- 1) Loosen hooks at the left side of the electric box.



- 2) Loosen the hooks on the right side of the electric box.

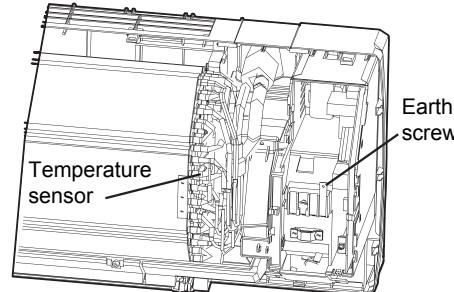


- 3) Remove the electric box cover.



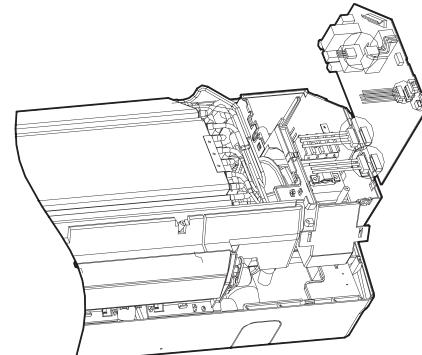
10. Remove the temperature sensor and the earth wire.

- 1) Pull out the indoor temperature sensor.
- 2) Remove the earth screw, and then remove the earth wire.

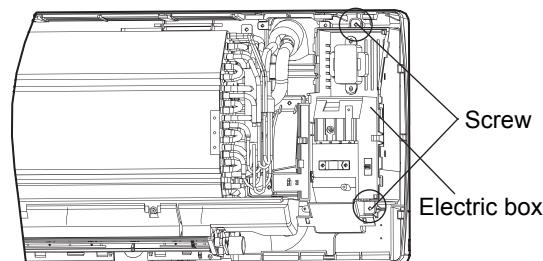


11. Remove the electric box.

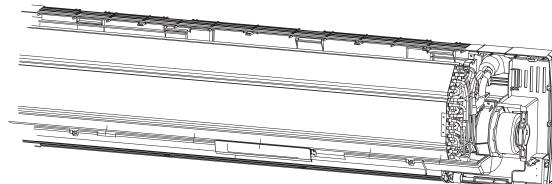
- 1) Pull out the six (6) connectors on PCB board.



- 2) Remove the two (2) screws on the electric box.

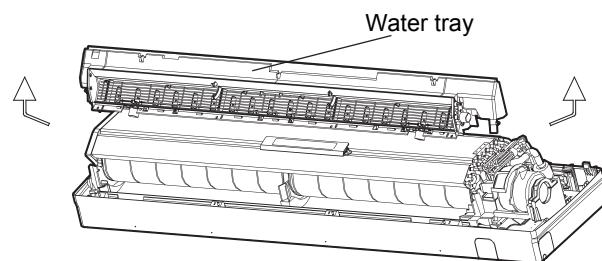


- 3) Remove the electric box.



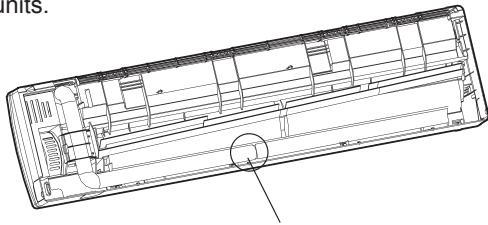
12. Remove the water tray.

Pull the water tray upwards, and then remove the water tray.



13. Remove the connection pipe between indoor and outdoor units.

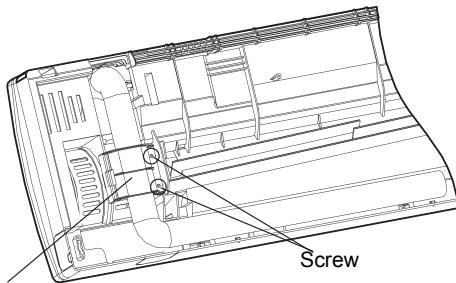
Separate the connection pipe between indoor and outdoor units.



Connection position for indoor and outdoor units' connection pipe

14. Remove the pipe-stopping plate.

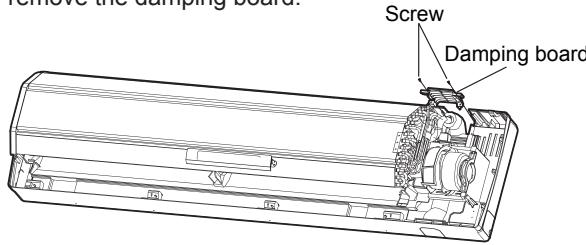
Remove the two (2) screws on the pipe-stopping plate for the indoor unit, and then remove the pipe-stopping plate.



Pipe-stopping plate

15. Remove the damping board.

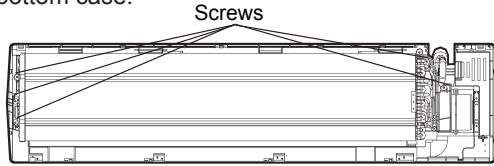
Remove the two (2) screws on the damping board, and then remove the damping board.



Screw
Damping board

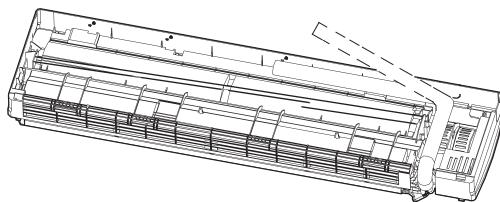
16. Remove the evaporator.

1) Remove the six (6) screws between evaporator and bottom case.

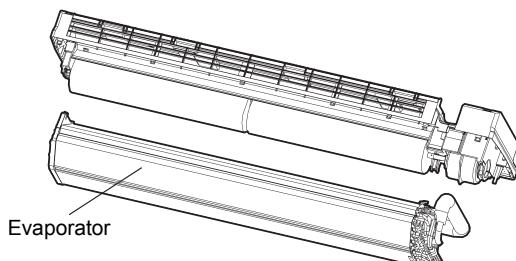


Screws

2) Turn over the indoor unit and adjust the pipe line to the position as shown by the broken line.



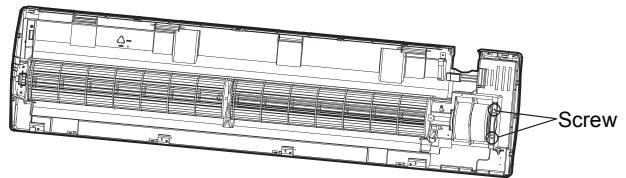
3) Lift up the evaporator, and then remove the evaporator.



Evaporator

17. Remove the fixing plate of motor.

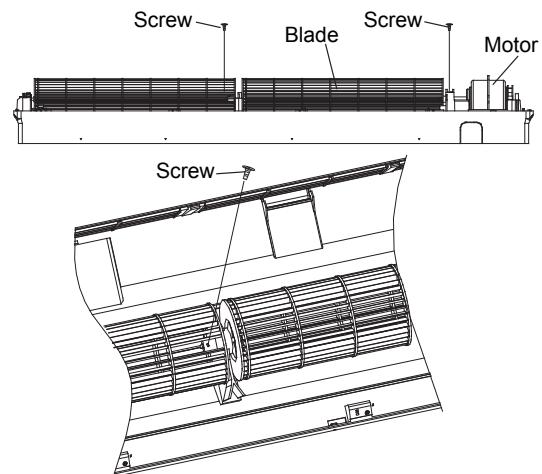
Remove the two (2) screws on the fixing plate of motor, and then remove the fixing plate of motor.



Screw

18. Remove the cross flow fan and motor.

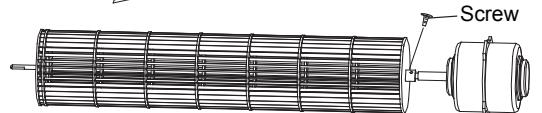
1) Remove the two (2) screws fixing cross flow fan and motor.



Screw

Blade

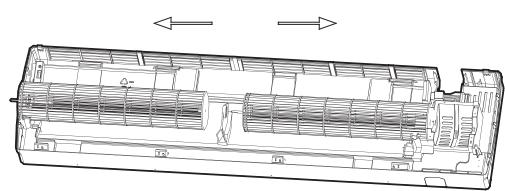
Motor



2) Remove the motor sub-assy.

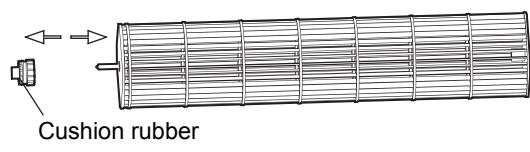


3) Separate the two (2) cross flow fans.



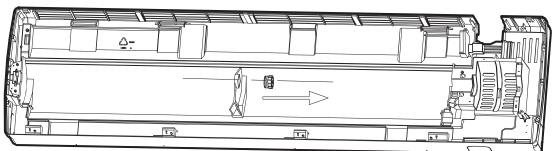
19. Remove the cushion rubber.

1) Remove the cushion rubber on the cross flow fan.



Cushion rubber

2) Remove the cushion rubber from the base.



[2] OUTDOOR UNIT

PROCEDURE

1. Remove the six (6) screws fixing the terminal cover.



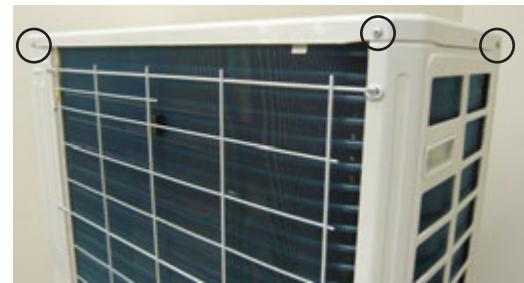
2. Remove the two (2) screws fixing the pipe cover.



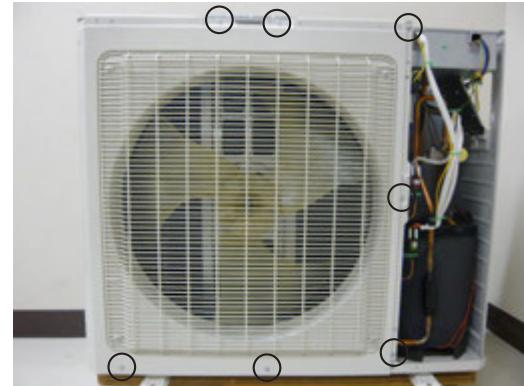
3. Remove the three (3) screws fixing the Front Side Plate



4. Remove the eight (8) screws fixing the top plate.



5. Remove the seven (7) screws fixing the front panel.



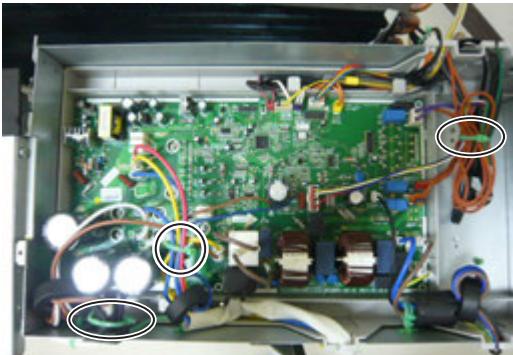
6. Remove the eleven (11) screws fixing the right side panel.



7. Remove the three (3) screws fixing the control box cover.



8. Cut the three (3) fixing bands.

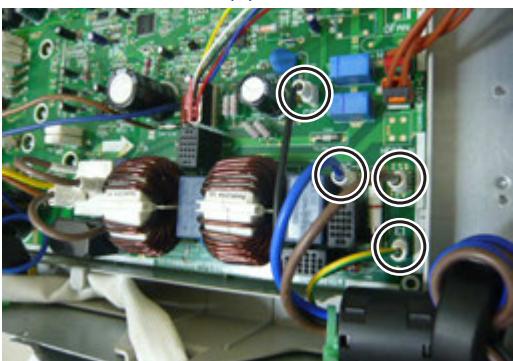


9. Disconnect the connectors.

9-1. Disconnect the seven (7) connectors.



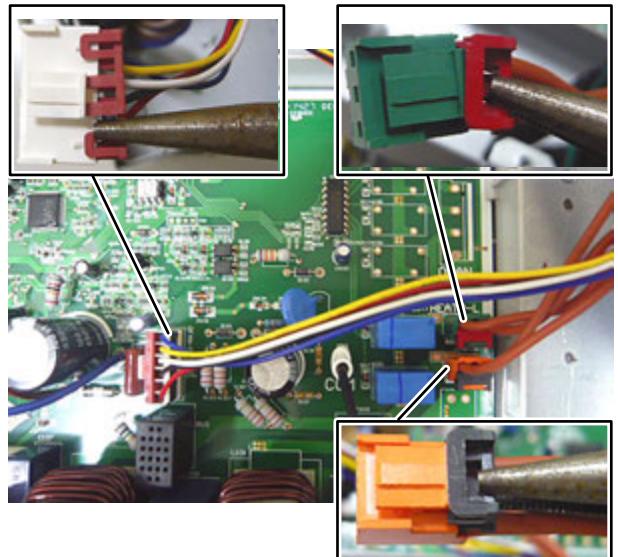
9-2. Disconnect the four (4) connectors.



9-3. Disconnect the six (6) connectors.



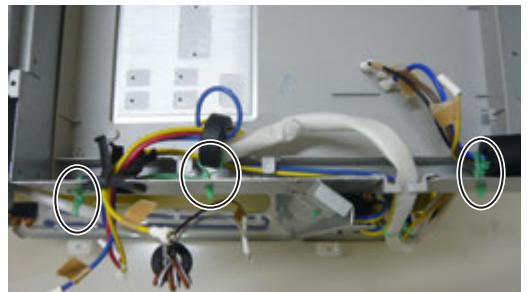
9-4. Disconnect the three (3) connectors after removing the lock part.



10. Remove the nine (9) screws fixing the PWB.



11. Loosen the three (3) fixing bands fixing the lead wire.



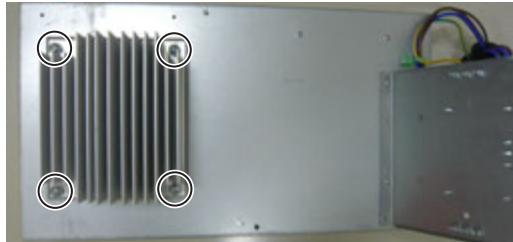
12. Cut the fixing band and unscrew the two (2) screws



13. Remove the three (3) screws fixing the control box assembly.



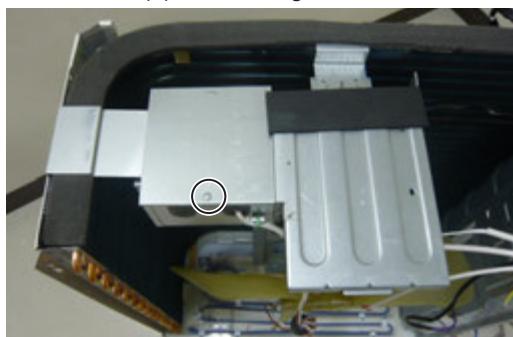
14. Remove the four (4) screws fixing the heat sink.



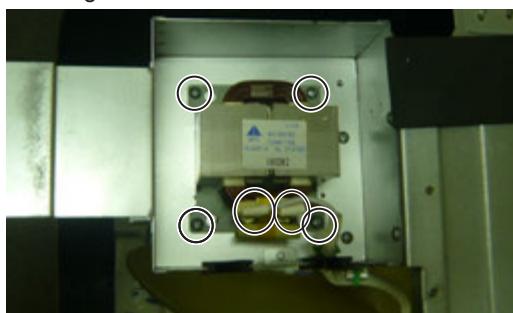
15. Disconnect the two (2) connectors and remove the three (3) screws fixing the reactor.



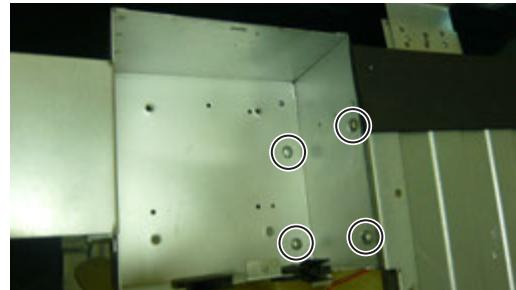
16. Remove the one (1) screw fixing the reactor box cover.



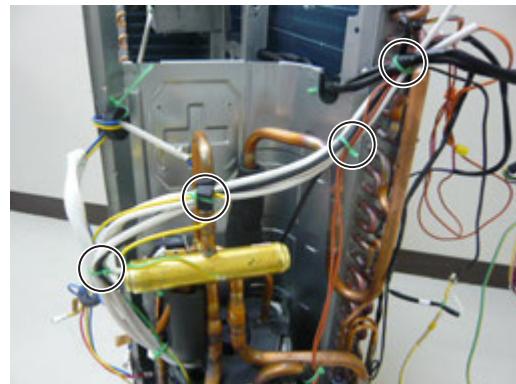
17. Disconnect the two (2) connectors and remove the four (4) screws fixing the reactor.



18. Remove the four (4) screws fixing the reactor box.



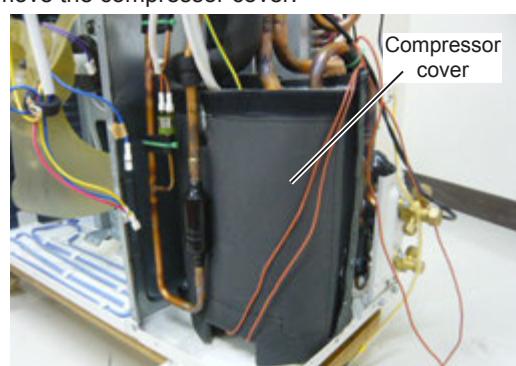
19. Cut the four (4) fixing bands.



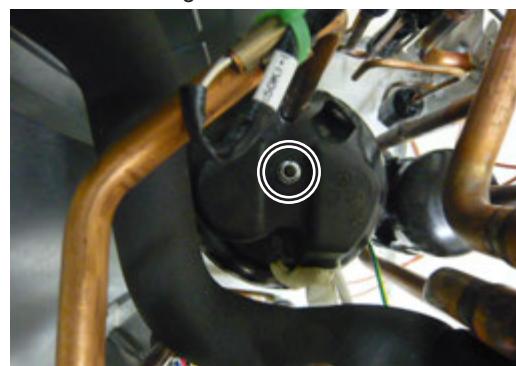
20. Remove the topside compressor cover.



21. Remove the compressor cover.



22. Remove the nut fixing the terminal cover.



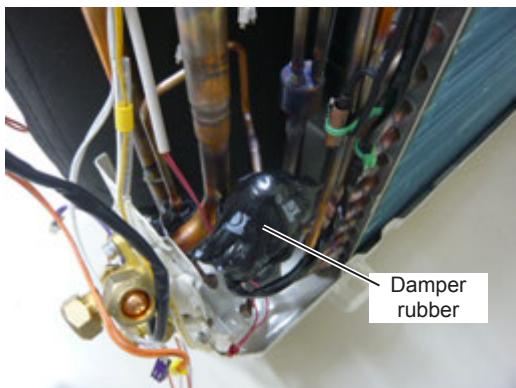
23. Disconnect the three (3) terminals (compressor lead wire) and the two (2) terminals (thermistor lead wire).



24. Unhook the hook of the spring fixing the compressor heater assembly.



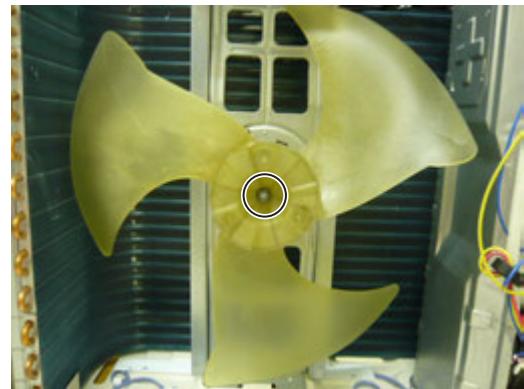
25. Remove the damper rubber.



26. Turn the coil and remove it.



27. Remove the nut fixing the propeller fan.



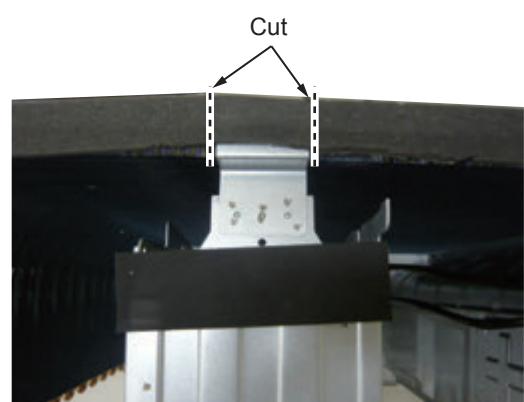
28. Loosen the fixing band fixing the lead wire.



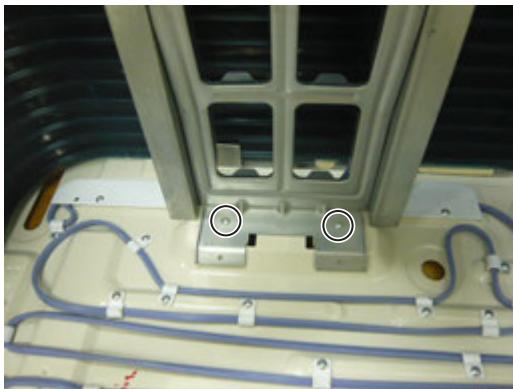
29. Cut the three (3) fixing bands.



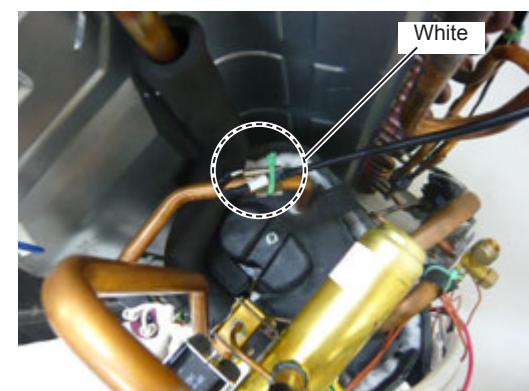
30. Cut the insulator.



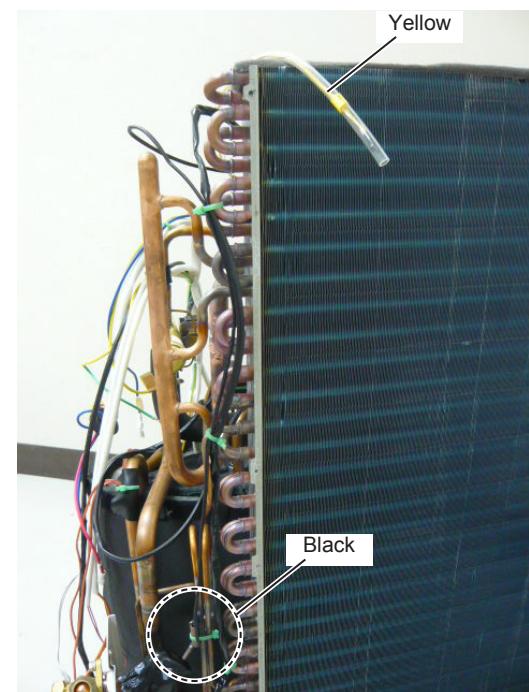
31. Remove the two (2) screws fixing the motor angle.



Position of the thermistors.



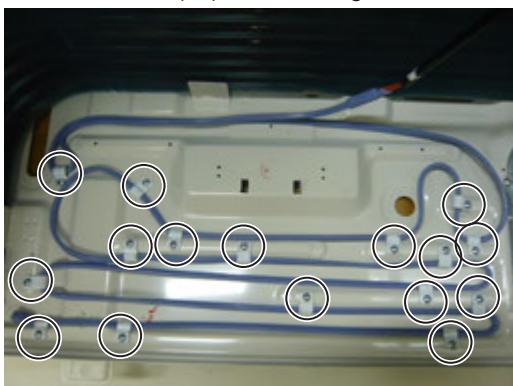
32. Remove the four (4) screws fixing the fan motor.



33. Remove the three (3) screws fixing the heater cover.



34. Remove the sixteen (16) screws fixing the heater assembly.



SHARP PARTS LIST

SPLIT TYPE ROOM AIR CONDITIONER

MODELS	INDOOR UNIT	OUTDOOR UNIT
	AY-X36RU	AE-X36RU

CONTENTS

- [1] INDOOR UNIT
- [2] OUTDOOR UNIT

- INDEX

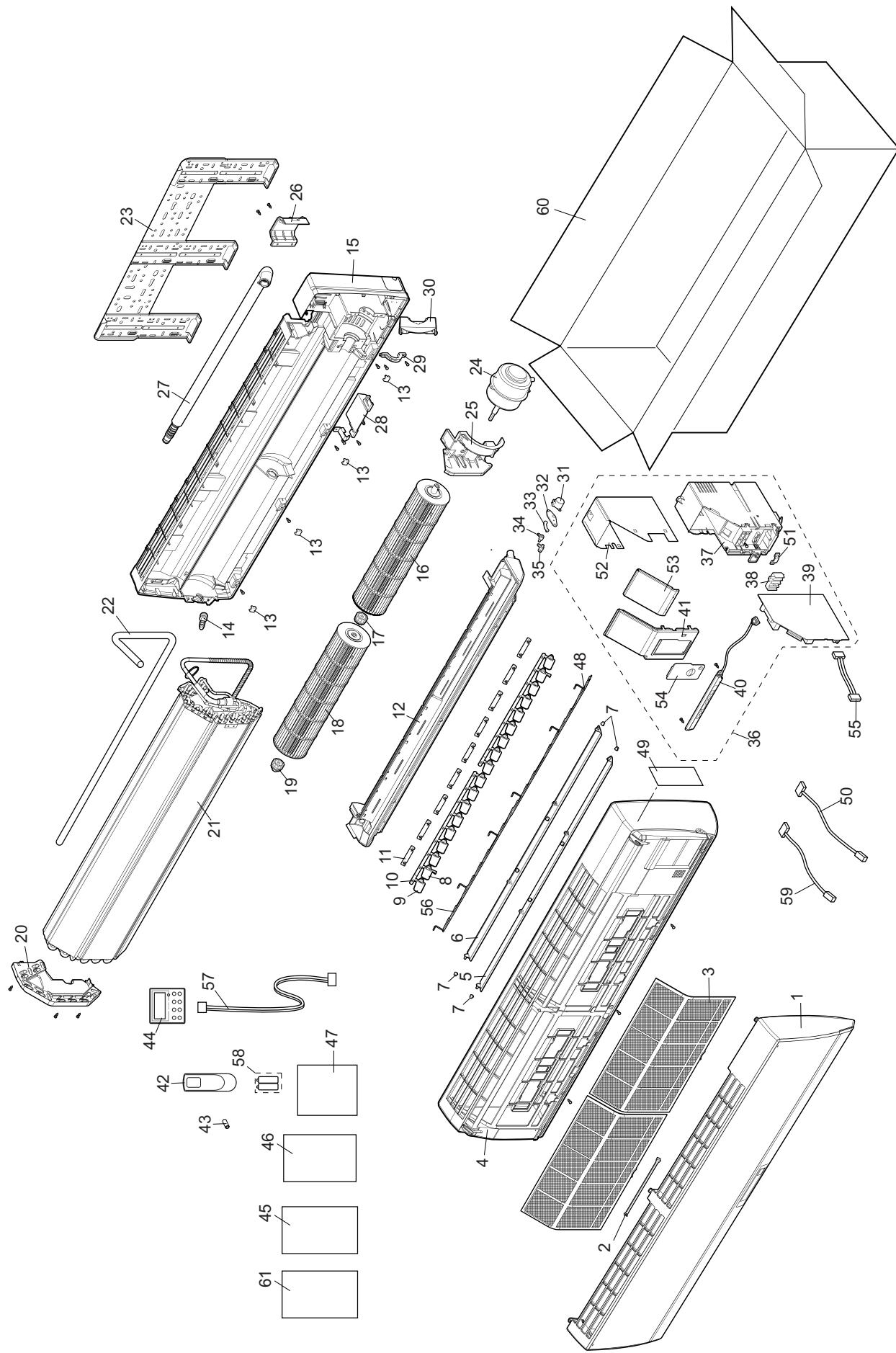
HOW TO ORDER REPLACEMENT PARTS

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

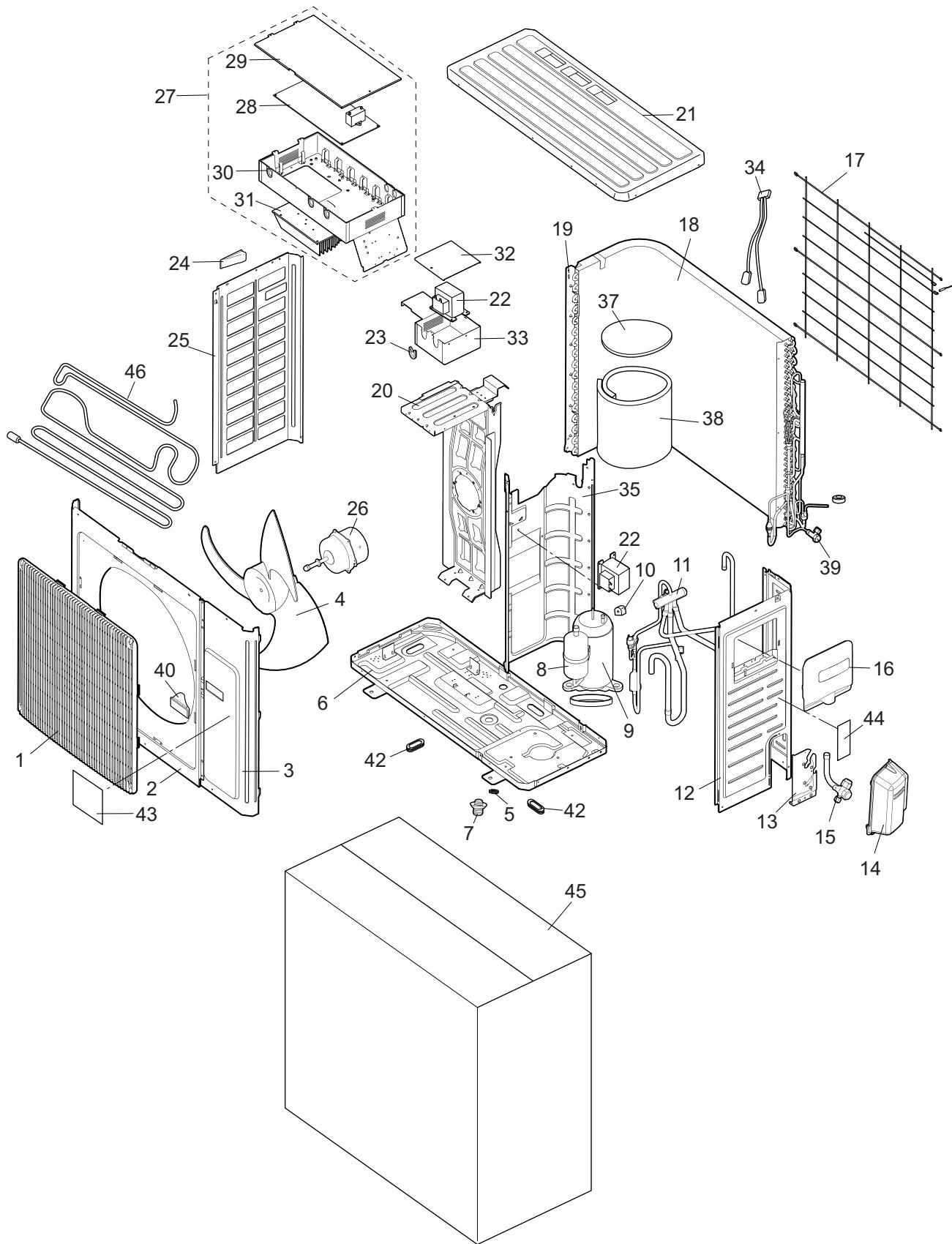
Parts marked with "▲" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

[1] INDOOR UNIT



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[1] INDOOR UNIT					
1	9JX20012712-L2	BE			Front Panel Assy
2	9JX24212120	AC			Stand Bar
3	9JX11122106	AM			Filter Sub-Assy
4	9JX20022159	BD			Front Case Sub-assy
5	9JX10512166	AL			Upper Guide Louver
6	9JX10512167	AL			Lower Guide Louver
7	9JX10542704	AC			Axile Bush
8	9JX10512169	AC			Air Louver 2
9	9JX10512168	AC			Air Louver 1
10	9JX10582086	AC			Connecting Rod
11	9JX26112158	AC			Louver Clamp
12	9JX20182138	AY			Water Tray
13	9JX242520053	AC			Screw Cover
14	9JX76712012	AC			Rubber Plug (Water Tray)
15	9JX22202928	BR			Rear Case Assy
16	9JX10352039	AZ			Cross Flow Fan 1
17	9JX26152028	AG			Bearing Holder Sub-Assy
18	9JX10352040	AZ			Cross Flow Fan 2
19	9JX76512203	AF			O-Gasket of Cross Fan Bearing
20	9JX24212041	AH			Left Evaporator Support
21	9JX01100100191	CF			Evaporator Assy
22	9JX7508003810	AF			(PE)Heat Insulating Hose
23	9JX01252398	AV			Wall Mounting Frame
24	9JX1501213401	BX			Fan Motor
25	9JX2421204201	AG			Right Support of Evaporator
26	9JX26112071	AF			Pipe Clamp
27	9JX0523001404	AL			Drainage Hose
28	9JX20122124	AF			Cover Plate
29	9JX26112325	AC			Motor Fixed Clip 2
30	9JX26112324	AF			Motor Fixed Clip 1
31	9JX1521210701	AR			SteppingMotor
32	9JX26112070	AC			Press Plate(Crank)
33	9JX10582041	AC			Crank-Guide
34	9JX10562004	AC			Upper Crank
35	9JX10562005	AC			Lower Crank
36	9JX10000201845	BR			Electric Box Assy
37	9JX201022502	AV			Electric Box
38	9JX4201026902	AR			Terminal Board
39	9JX30138000192	BM			Main Board
40	9JX30565124	AX			Display Board
41	9JX2011204404S	AL			Electric Box Cover
42	9JX30510475-L2	BC			Remote Controller
43	9JX05212423	AC			Temp Sensor Sleeving
44	9JXMC207059-L2	BP			Wired Controller
45	9JX66129916746	AK			Operation Manual
46	9JX66129916747	AN			Installation Manual
47	9JX66129916748	AH			Operation Manual (Wired Controller)
48	9JX01472023	AN			Grill 2
49	9JX63229956735	AD			Name Label
50	9JX390000592	AL			Temp Sensor (for Heat Exchanger Temperature)
51	9JX71010103	AB			Wire Clamp
52	9JX01592034	AL			Lower Shield Cover of Electric Box
53	9JX01592033	AF			Upper Shield Cover of Electric Box
54	9JX201022523	AF			Electric Box Cover
55	9JX4001024503	AL			Short Signal Wire
56	9JX01472022	AN			Grill 1
57	9JX4003800101	AY			Signal Wire
58	9JX49010055	AG			Battery
59	9JX390000453	AH			Temp Sensor (for Room Temperature)
60	9JX51029945432	AX			Carton Box
61	9JX66129916749	AD			Installation Manual (Wired Controller)

[2] OUTDOOR UNIT



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[2] OUTDOOR UNIT					
1	9JX01473050	BB			Front Grill
2	9JX0143500401P	BD			Cabinet
3	9JX01305086P	AX			Front Side Plate
4	9JX10335014	AX			Axial Flow Fan
5	9JX06813401	AC			Drainage hole Cap
6	9JX02803026P	BK			Chassis Sub-assy
7	9JX06123401	AB			Drainage Connecter
8	9JX00205275	DE			Compressor
9	9JX7651873209	AV			Electrical Heater(Compressor)
10	9JX4300040029	AW			Magnet Coil
11	9JX03123890	BZ			4-Way Valve Assy
12	9JX0130504402P	BA			Right Side Plate
13	9JX0171501201P	AP			Valve Support Sub-Assy
14	9JX22245003	AL			Valve Cover
15	9JX07133157	BB			Cut off Valve
16	9JX02113109	AX			Handle Assy
17	9JX01475013	AS			Rear Grill
18	9JX01163491	CT			Condenser Assy
19	9JX01175037	AL			Condenser Support Plate
20	9JX01802876	BG			Motor Support Sub-Assy
21	9JX01255007	BC			Top Cover Sub-Assy
22	9JX43130192	BE			Reactor
23	9JX76614102	AD			Pass Wire Ring Sub-assy
24	9JX26235401	AD			Left Handle
25	9JX01305043P	AY			Left Side Plate
26	9JX1570280205	CF			Fan Motor
27	9JX10000100338	CK			Electric Box Assy
28	9JX30148360	CH			Main Board
29	9JX01425281	AQ			Electric Box Cover
30	9JX01413174	AV			Electric Box 1
31	9JX49013046	BD			Radiator
32	9JX01425279	AG			Electric Box Cover
33	9JX01413177	AV			Electric Inductance Box
34	9JX3900031001	AU			Temp Sensor
35	9JX01233134	AY			Clapboard
37	9JX75015020	AK			Soundproof 3
38	9JX7501580202	AR			Soundproofing Cotton
39	9JX07133157	BB			Cut Off Valve
40	9JX26235401	AD			Left Handle
42	9JX7671301802	AF			Drainage Hole Cap
43	9JX62229937233	AH			Energy Label
44	9JX63229956736	AF			Name Label
45	9JX51029945433	AY			Carton Box
46	9JX7651000413	BA			Electrical Heater (Chassis)

■INDEX

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
9				
9JX00205275	2-8	DE		
9JX01100100191	1-21	CF		
9JX01163491	2-18	CT		
9JX01175037	2-19	AL		
9JX01233134	2-35	AY		
9JX01252398	1-23	AV		
9JX01255007	2-21	BC		
9JX01305043P	2-25	AY		
9JX013054402P	2-12	BA		
9JX01305086P	2-3	AX		
9JX01413174	2-30	AV		
9JX01413177	2-33	AV		
9JX01425279	2-32	AG		
9JX01425281	2-29	AQ		
9JX0143500401P	2-2	BD		
9JX01472022	1-56	AN		
9JX01472023	1-48	AN		
9JX01473050	2-1	BB		
9JX01475013	2-17	AS		
9JX01592033	1-53	AF		
9JX01592034	1-52	AL		
9JX0171501201P	2-13	AP		
9JX01802876	2-20	BG		
9JX02113109	2-16	AX		
9JX0280326P	2-6	BK		
9JX03123890	2-11	BZ		
9JX05212423	1-43	AC		
9JX0523001404	1-27	AL		
9JX06123401	2-7	AB		
9JX06813401	2-5	AC		
9JX07133157	2-15	BB		
"	2-39	BB		
9JX10000100338	2-27	CK		
9JX10000201845	1-36	BR		
9JX10335014	2-4	AX		
9JX10352039	1-16	AZ		
9JX10352040	1-18	AZ		
9JX10512166	1-5	AL		
9JX10512167	1-6	AL		
9JX10512168	1-9	AC		
9JX10512169	1-8	AC		
9JX10542704	1-7	AC		
9JX10562004	1-34	AC		
9JX10562005	1-35	AC		
9JX10582041	1-33	AC		
9JX10582086	1-10	AC		
9JX11122106	1-3	AM		
9JX1501213401	1-24	BX		
9JX1521210701	1-31	AR		
9JX1570280205	2-26	CF		
9JX20012712-L2	1-1	BE		
9JX20022159	1-4	BD		
9JX201022502	1-37	AV		
9JX201022523	1-54	AF		
9JX2011204404S	1-41	AL		
9JX20122124	1-28	AF		
9JX20182138	1-12	AY		
9JX22202928	1-15	BR		
9JX22245003	2-14	AL		
9JX24212041	1-20	AH		
9JX2421204201	1-25	AG		
9JX24212120	1-2	AC		
9JX242520053	1-13	AC		
9JX26112070	1-32	AC		
9JX26112071	1-26	AF		
9JX26112158	1-11	AC		
9JX26112324	1-30	AF		
9JX26112325	1-29	AC		
9JX26152028	1-17	AG		
9JX26235401	2-24	AD		
"	2-40	AD		
9JX30138000192	1-39	BM		
9JX30148360	2-28	CH		
9JX30510475-L2	1-42	BC		
9JX30565124	1-40	AX		
9JX390000453	1-59	AH		
9JX390000592	1-50	AL		
9JX3900031001	2-34	AU		
9JX4001024503	1-55	AL		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
9JX4003800101	1-57	AY		
9JX4201026902	1-38	AR		
9JX4300040029	2-10	AW		
9JX43130192	2-22	BE		
9JX49010055	1-58	AG		
9JX49013046	2-31	BD		
9JX51029945432	1-60	AX		
9JX51029945433	2-45	AY		
9JX62229937233	2-43	AH		
9JX63229956735	1-49	AD		
9JX63229956736	2-44	AF		
9JX66129916746	1-45	AK		
9JX66129916747	1-46	AN		
9JX66129916748	1-47	AH		
9JX66129916749	1-61	AD		
9JX71010103	1-51	AB		
9JX75015020	2-37	AK		
9JX7501580202	2-38	AR		
9JX7508003810	1-22	AF		
9JX7651000413	2-46	BA		
9JX76512203	1-19	AF		
9JX7651873209	2-9	AV		
9JX76614102	2-23	AD		
9JX76712012	1-14	AC		
9JX7671301802	2-42	AF		
9JXMC207059-L2	1-44	BP		