



AIR CONDITIONER SPLIT TYPE

SERVICE MANUAL

X-COOL

RS-S07A/RU-S07A

RS-S09A/RU-S09A

RS-S12A/RU-S12A

RS-S18A/RU-S18A

RS-S24A/RU-S24A

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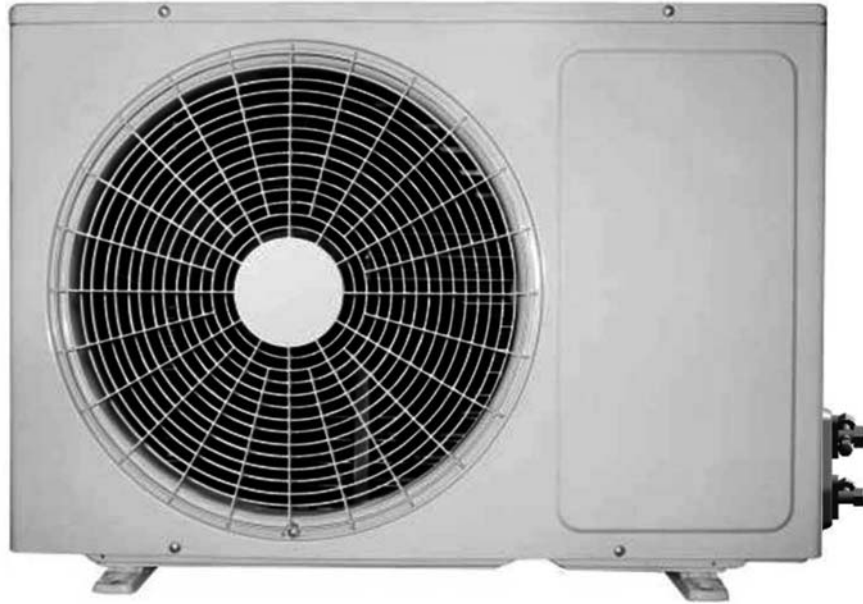
Chapter 1 Product Specification

1.1 Photo of Product

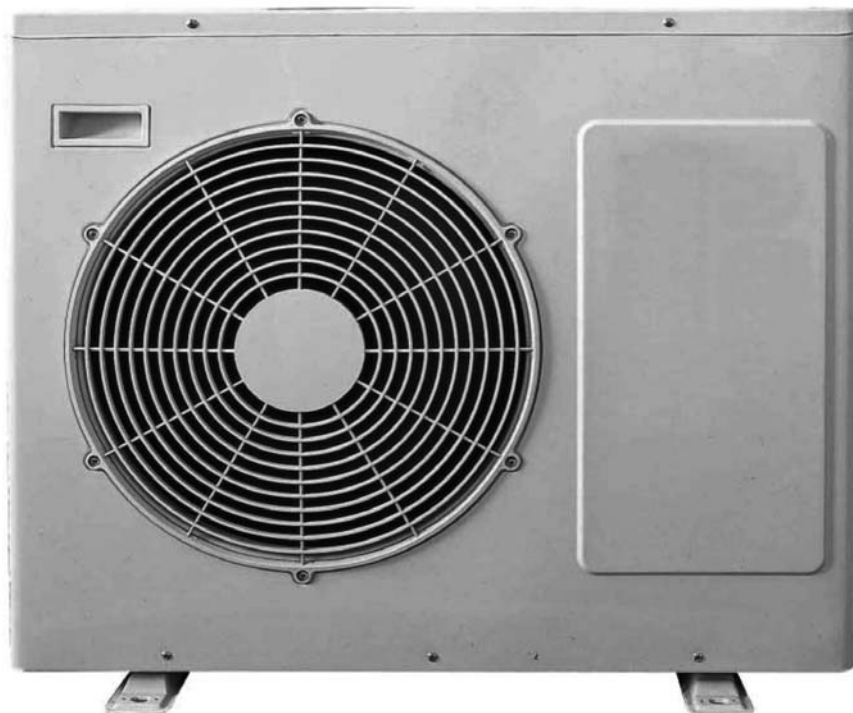
Indoor Unit



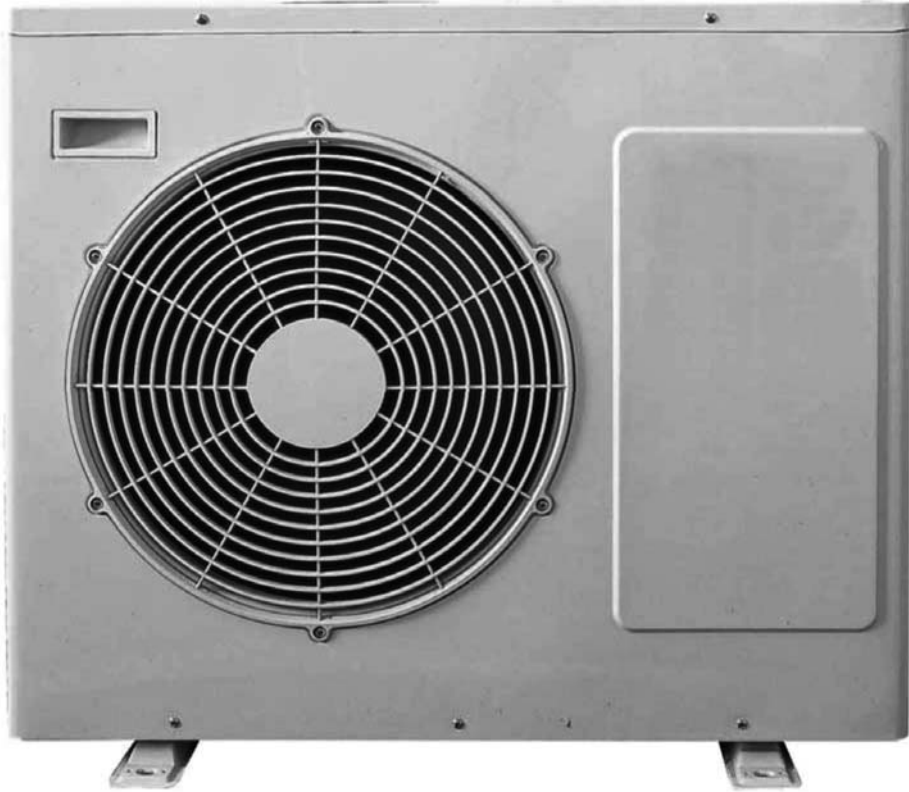
Outdoor Unit For 09/12K



Outdoor Unit For 18K



Outdoor Unit For 24K



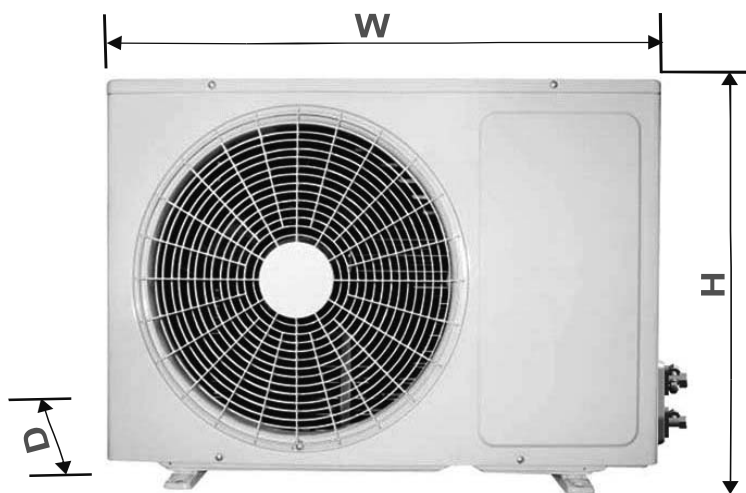
1.2 Outline Dimensions

Indoor Unit



MODEL		RS-S07A	RS-S09A	RS-S12A	RS-S18A	RS-S24A
W	mm	680	745	745	1095	1095
D	mm	250	250	250	312	312
H	mm	180	210	210	205	205

Outdoor Unit

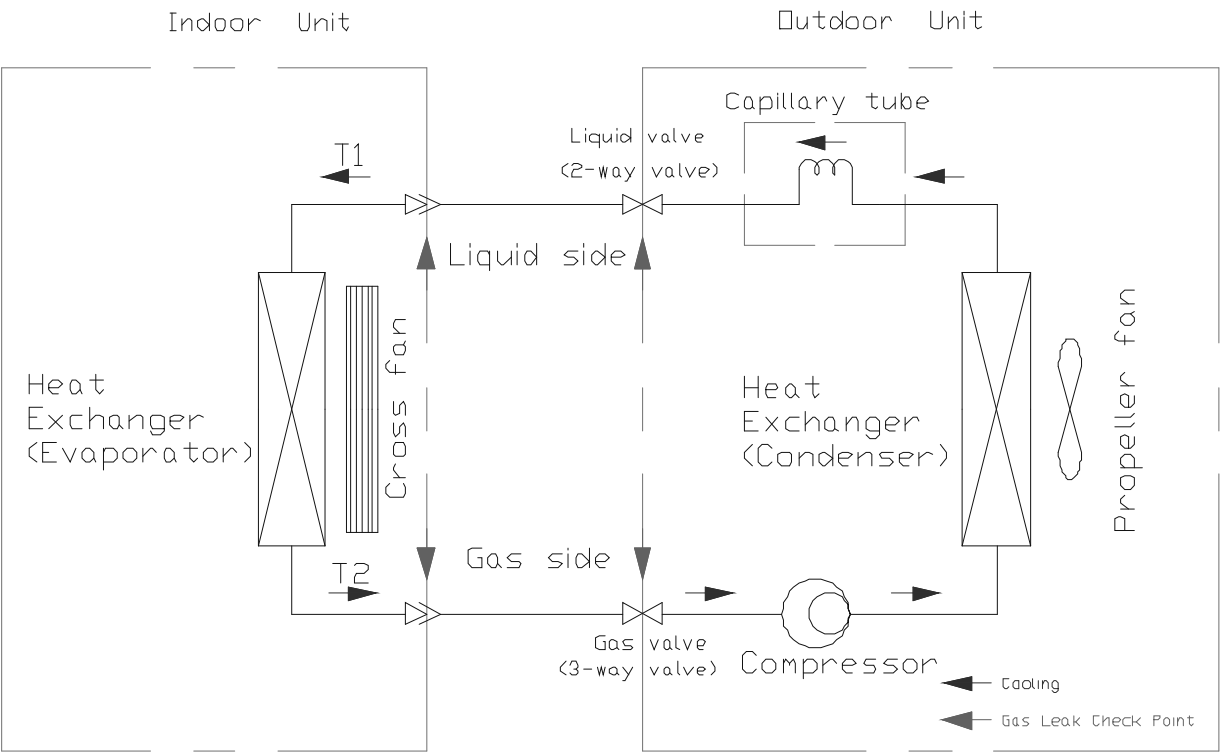


MODEL		RS-S07A	RS-S09A	RS-S12A	RS-S18A	RS-S24A
W	mm	600	760	760	800	800
D	mm	490	540	540	300	300
H	mm	250	260	260	590	690

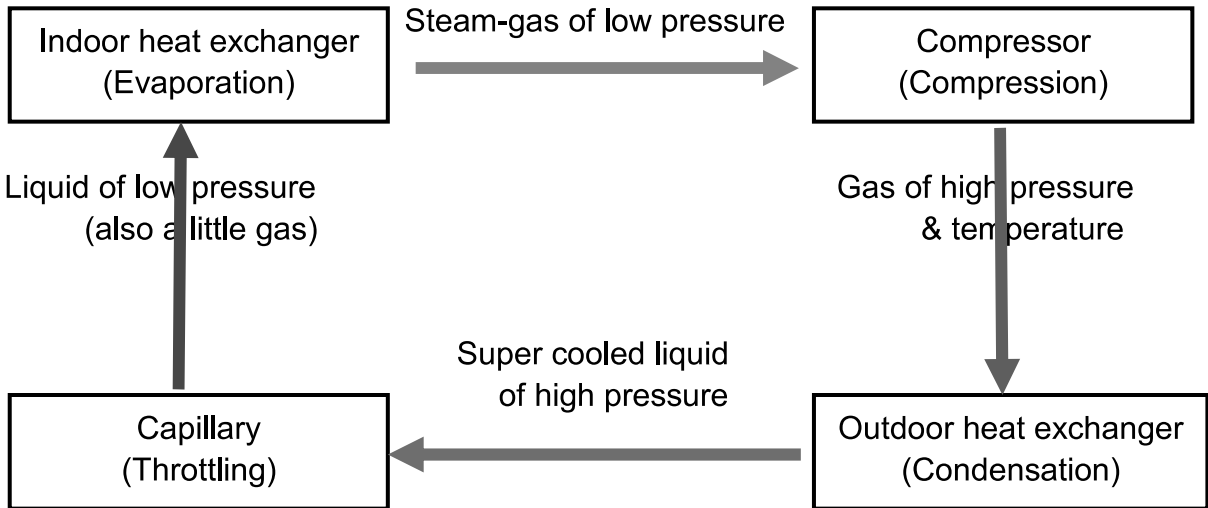
Chapter 2 Refrigeration Diagrams

2.1 Cooling Only

Cooling Mode

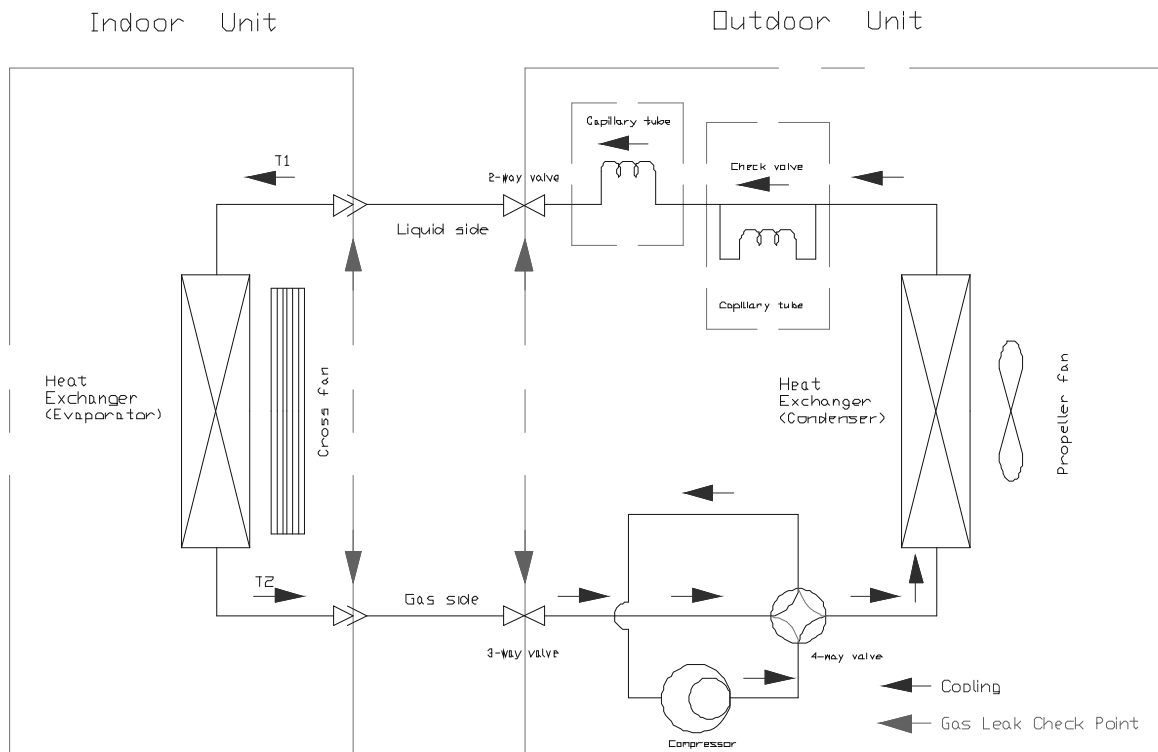


Cooling Cycle

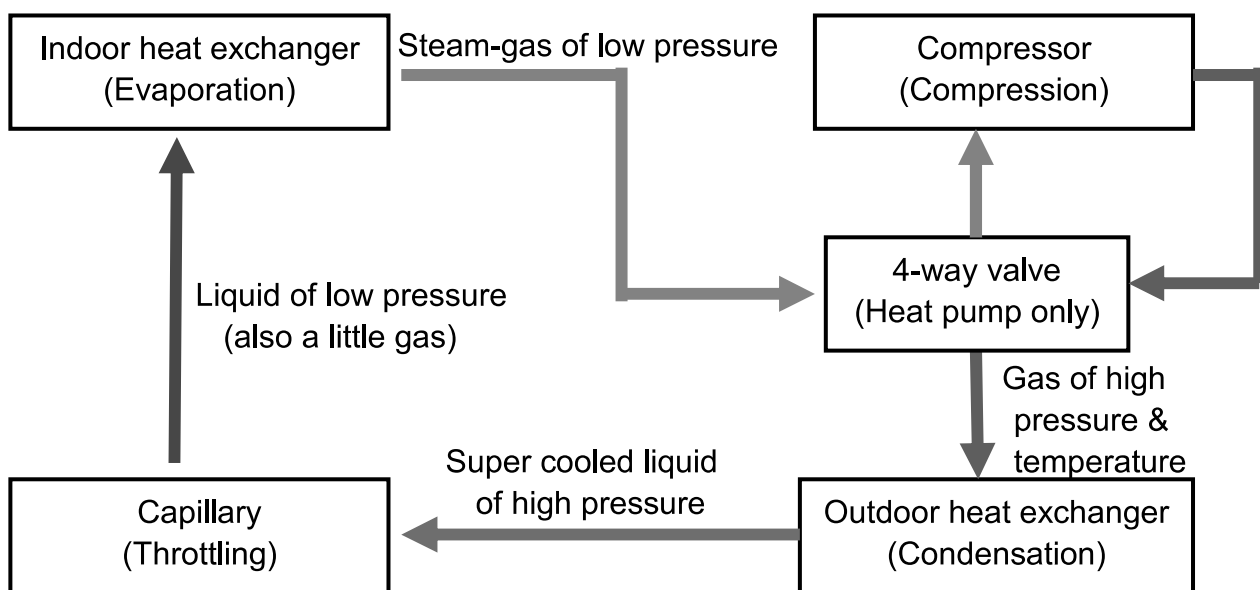


2.2 Cooling & Heating

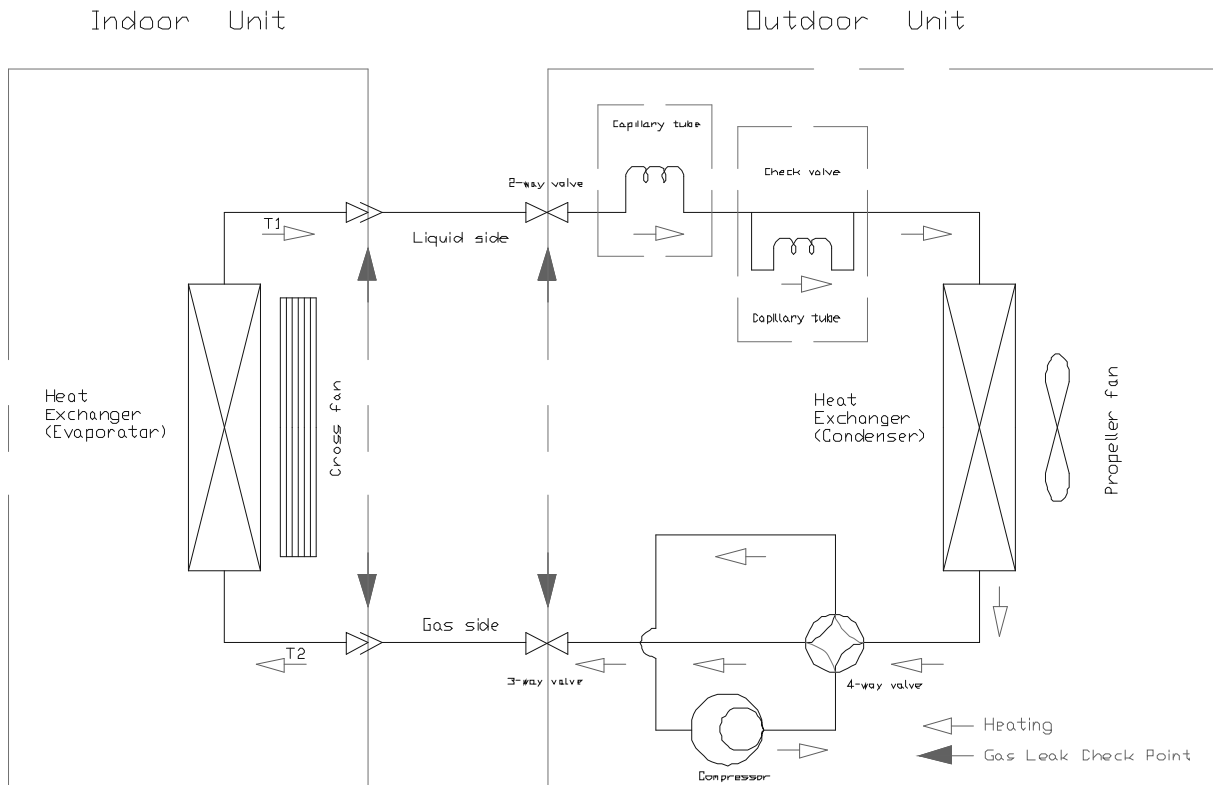
Cooling Mode



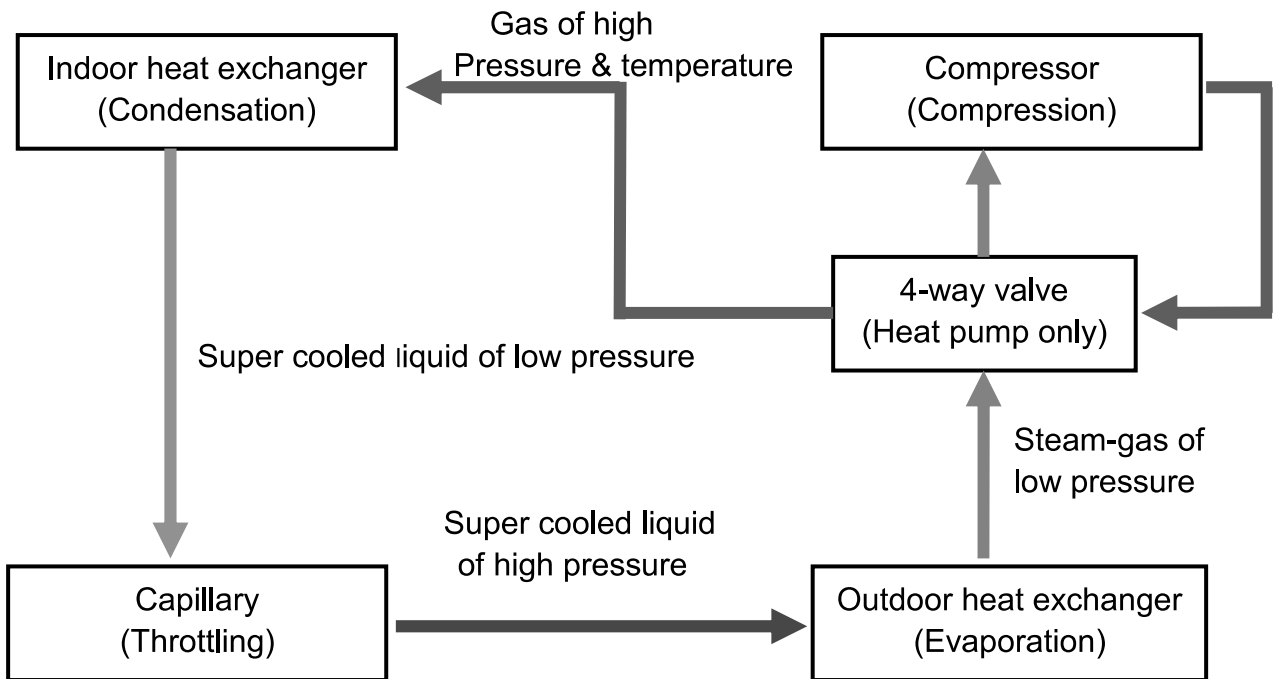
Cooling Cycle



Heating Mode



Heating Cycle



Chapter 3 Instructions of Installation

SPLIT TYPE WALL MOUNTED AIR-CONDITIONER INSTALLATION INSTRUCTIONS

The Installation Instructions is used to Split type wall mounted air-conditioner installation .

- ※ Please read the instructions carefully before installation of the air-conditioner.
- ※ The installation should be carried out by specialists.
- ※ installing the air-conditioner and connecting the pipe and wires must be strict to reference the instructions.
- ※ The machine power connections is Y.If the power wires is destoried,electrical performance should be carried out by electrical specialists .

Warning

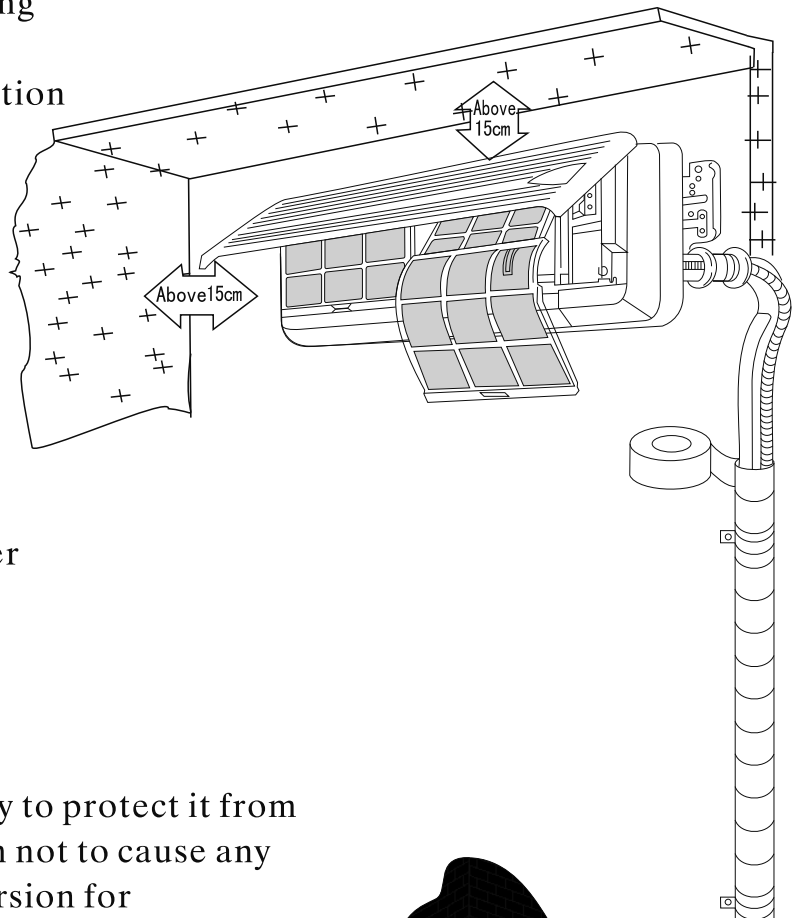
- ※Installation is forbidden in the stairs ,the exists and the corridors in the building.
- ※Make sure that the distance between the support of outdoor unit and the ground is 2.5m.

Installation order: Selection of the installing position→Installation the air -conditioner→connecting the pipes and wires→Expelling the air in the pipes and the indoor unit→Testing

Selection of the installing position

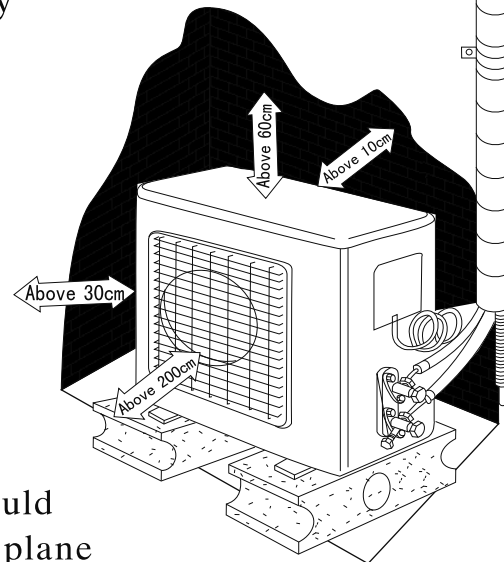
Indoor Unit

- There is no heating and steaming source nearby.
- No obstacles for installing position nearby.
- Keep good air circulation.
- Convenient to adopt measures to reduce noises.
- Don't install them near the doorway.
- Make sure to have the distance specified in the picture between the ceiling, wall, furniture and other obstacles.
- 2 meters high above the floor.



Outdoor Unit

- In case that you put up a canopy to protect it from rains and sunrays, pay attention not to cause any obstacles for the heating dispersion for the condenser.
- Don't grow animals or plants near the installation location for the cold and hot air out will affect them.
- Make sure to have the distance specified in the picture between ceiling, wall, furniture and other obstacles.
- Stay away from heating source and inflammable air.
- The installation base and supporting frame should be strong and secure. The machine should be at plane surface.



The distance between indoor and outdoor unit should be 5 meters and pipe length can go up to maximum 15 meters with additional refrigerant charge.

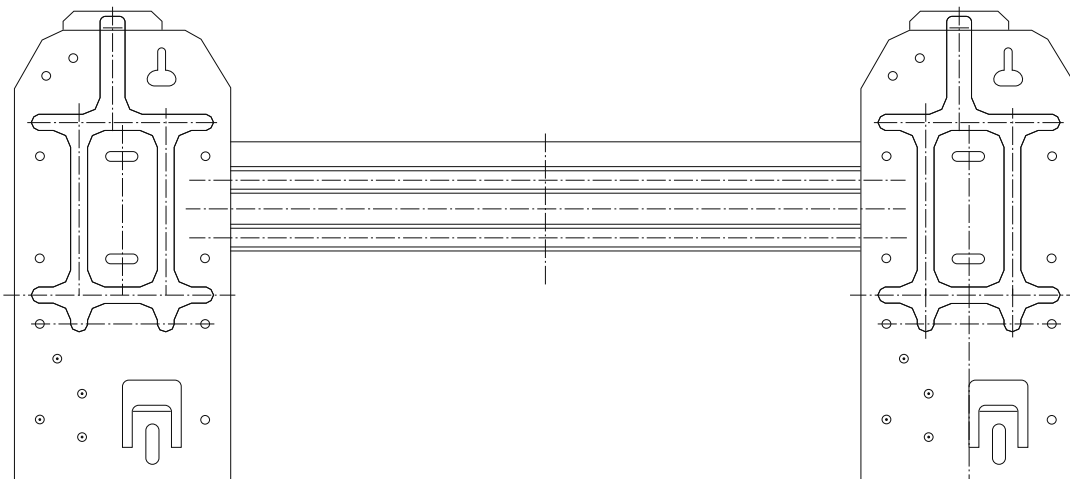
Max. Allowable Tubing Length at Shipment(m)	Limit of Tubing Length(m)	Limit of Elevation Difference H(m)	Requires Amount of Additional Refrigerant (g/m)	
			CC≤12000Btu	CC≥18000Btu
5	15	5	20	30

Installation of the Outdoor Unit

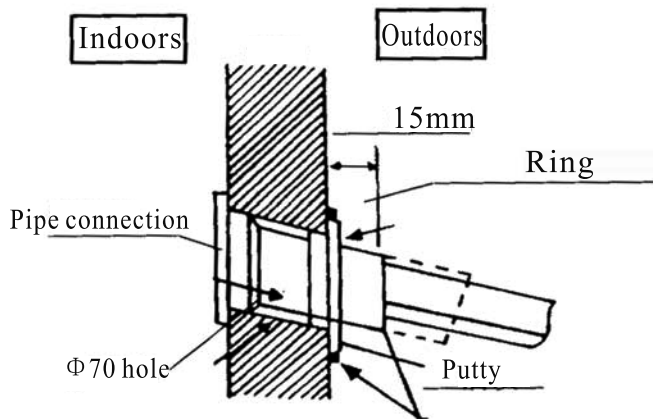
- The outdoor unit must be firmly fixed to avoid falling in the strong wind.
- Install on the cement base the drawing below.
- If it will be installed at seaside or at a place high above the ground and with strong wind, the AC should be installed against the wall to ensure the normal operation of the fan and the blocking plate should be used.
- If it will be installed in lift type, the structure of the mounting surface should be made of solid stick, cement or materials with equivalent strength, and be of enough bearing capacity. Otherwise, measures such as reinforcement, support or vibration damping should be adopted.

Outdoor Unit Size of Shape (mm)	A (mm)	B (mm)
600X250X490	390	290
760X260X540	539	287
800X300X690(590)	540	326
900X330X860	606	354

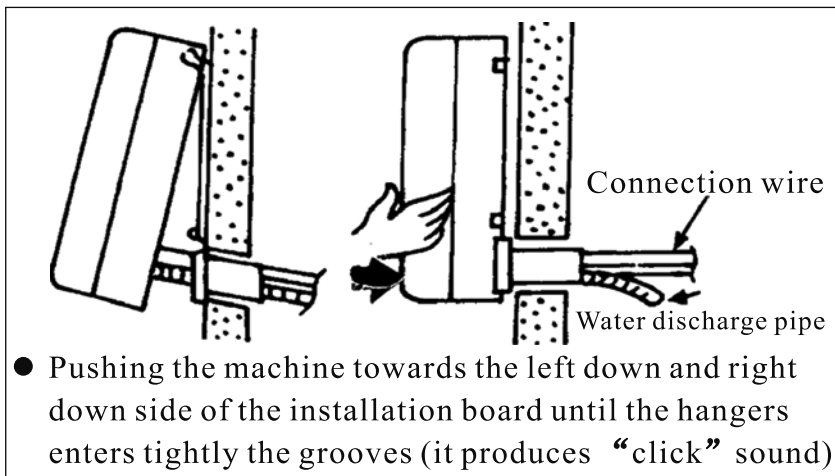
Installation of the Indoor Unit



- First make changes to wall and make sure that is hard and secure. Using four “+” type screws to fasten the installation board onto the wall. Keep it water lever horizontal direction and perpendicular in vertical direction. Otherwise it might cause water drops when air-conditioner is running cooling operation.



- Drilling 70mm diameter pipe hole at the left down or right down side of the installation board. The hole shall slant outward slightly.



- Hang the indoor unit to the board and make sure the machine is in the middle of the board.

Check the water discharge

1. Take off the frame the unit cover.

Take off the front frame for maintenance according to the following steps:

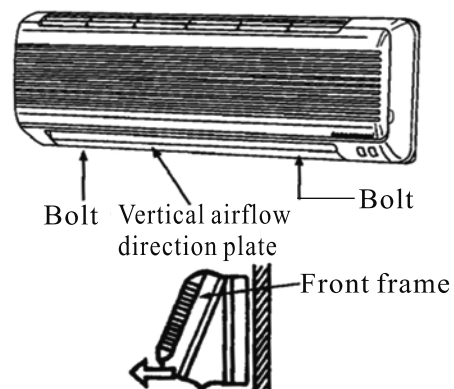
- Turn perpendicular airflow direction handle from "I" to horizontal direction.
- As shown in the picture on the right, take off two covers from the front frame and then unfasten two fixture screws..
- Pull the front frame towards yourself and take it off.

In case that put the front frame back, turn the perpendicular airflow direction handle from "I" to horizontal, then proceed according to the third and the second steps.

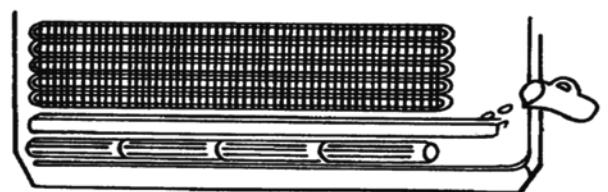
You should check whether the front frame is firmly inside the fixture groove on the top.

2. Check the water discharge

- Put a cup of water into groove.
- Check whether the water flow through the water discharge hole.



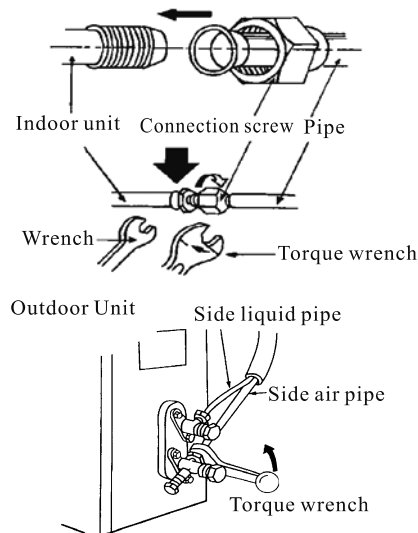
Pull down the front frame towards your and take off the front frame.



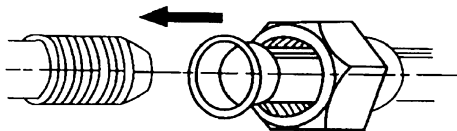
Pipe Connection

- Connect the pipe to the unit: point to the center of pipe and fasten the connection screw at first by hand and then by wrench until it is tightly fastened, The fastening direction is in the following picture.

The size of pipe	Torque
Liquid pipe $\Phi 6.35\text{mm}$	18N. m
Air pipe $\Phi 9.52\text{mm}$	42N. m
Air pipe $\Phi 12.7\text{mm}$	55N. m
Air pipe $\Phi 15.88\text{mm}$	75N. m

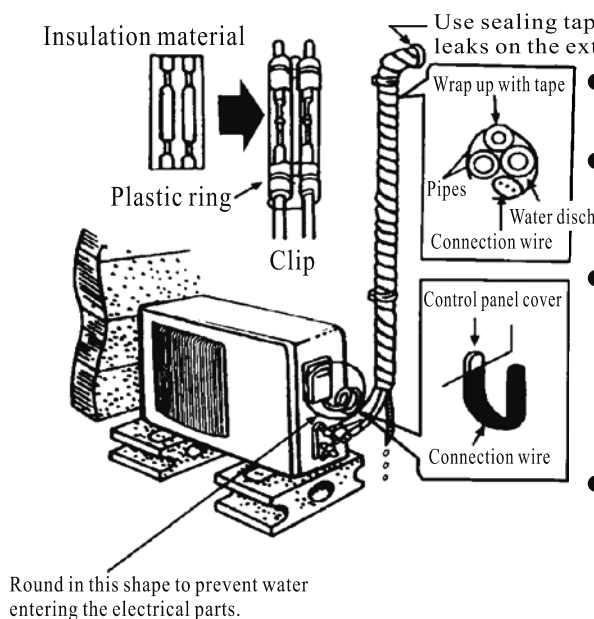


- Pointing towards the center of pipe, fasten the screw with strength.
- Wrench the screw in the end until you hear the “Click” sound.

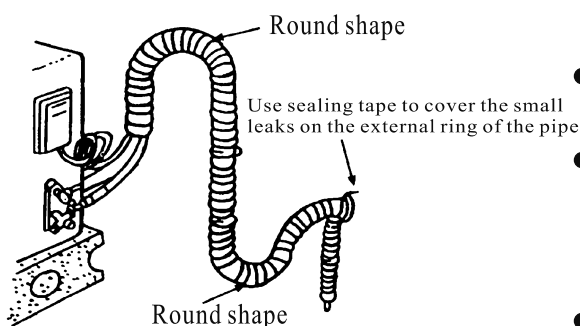


(Refer the direction to the picture)

The form of pipe



Round in this shape to prevent water entering the electrical parts.



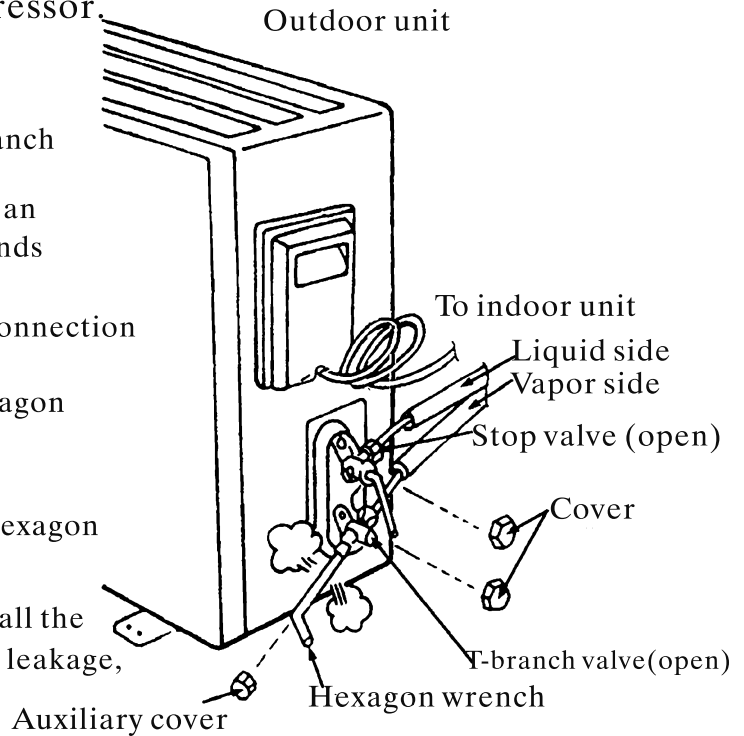
See the picture on the left

- Wrap up all pipe, water discharge and connection wire from top to below.
- Cover the connection parts with insulation material and fix them with two plastic rings.
- Wrap up the pipes with tape alongside the wall and fix them to the wall with clips. These steps are usually adopted when outdoor unit is installed below the indoor unit.
- In case that you want to have additional water discharge pipe, the end of pipe should be within certain distance towards to surface (don't let it under the water. Fix it onto the wall so it won't be swayed by the wind)
- Wrap the pipes and connection wire well from below to top.
- Wrap up the pipes that are rounded up by the wall corners in the way shown in the picture so it can prevent water entering the room.
- Use clips or other fixture to fasten the pipes to the walls.

Expelling the air in the pipes and the indoor unit

Expelling the air: humid air in the refrigerating system might cause trouble of compressor.

- Take off the cover from the stop valve and T-branch valve.
- Take off the auxiliary cover from the T-branch valve.
- Turn the stop valve rod anti-clock wise to an angle of 90 degree, keep it open for 8 seconds and close the valve.
- Check whether there is air leakage at all connection parts of pipes.
- Push the top rod of T-branch valve by hexagon wrench to expel air.
- Repeat the third and fifth steps.
- Open the stop and T-branch valve with a hexagon wrench to make the unit operate.
- There is no leakage allowed, please check all the piping connection parts. You must test the leakage, generally, it can be tested by soap water.

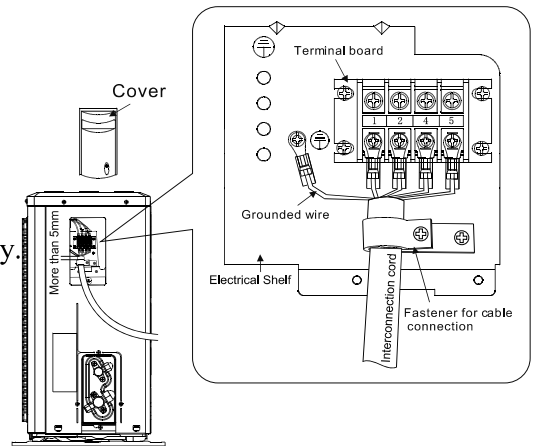


Electrical connection

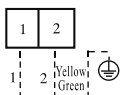
- Unscrew the screw, take off the control panel cover from the unit.
- Connect the cable to their terminals according to their number.
- The grounded wire connection:
 1. loosen the grounded screw of electrical shelf.
 2. Connect the grounded wire with the grounded screw then setscrew in the “⊕” mark formerly.
- Fix the cable to the terminal board with fastening piece.
- Reinstall the cover with the screw.

NOTE:

- ※ Don't reverse the power polarity.
- ※ The wrong connection lead to the malfunction of some electrical parts.
- ※ Must fix the screw of the firmly wire, then drag the wire lightly, confirmation whether it's firmly.
- ※ Must changed if the wire slide, the self-drive screw can't used to the electric connection.
- ※ If there is a connector, connect it directly.



Cold wind Type
Terminal board for outdoor unit

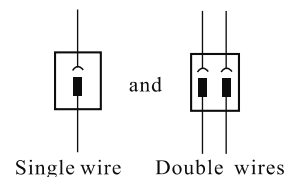
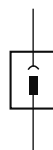
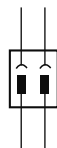
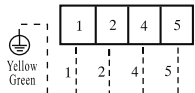


Temperature control wire connector
(only for heat pump type)

Compressor signal wire connector
(only for cooling pump type
6000W/7000W)

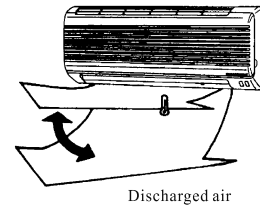
Compressor signal wire connector and
temperature control wire connector
(only for heat pump type 6000W/7000W)

Heat-pump type
Terminal board for outdoor unit



Test running

- Make sure that the pipes and wires are connected.
- Make sure that the liquid side valve and air side valve both are completely open.



1.The connection of power source

- Connect the wire to independent power source socket
- Preparation of remote controller.
- Run the air-conditioner in cooling operation mode for 30 minutes or longer.

2.Performance evaluation

- Test the out and in air temperature.
- Make sure whether the outlet air temperature subtract from inlet's gives more than 10°C 。

Packing List

Please check if all the following parts are included in the carton.

Please well preserved the parts that are not in use for the time being.

Standard Accessory Part List of the Indoor Unit

N0.	Name	Size/Model	Unit	Quantity	Remark
1	Indoor Unit		Set	1	
2	Remote Controller		PC	1	
3	Instructions		PC	1	
4	Batteries	7#	PC	2	
5	Drain pipe		PC	1	
6	Certificate		PC	1	

Standard Accessory Part List of the Outdoor Unit

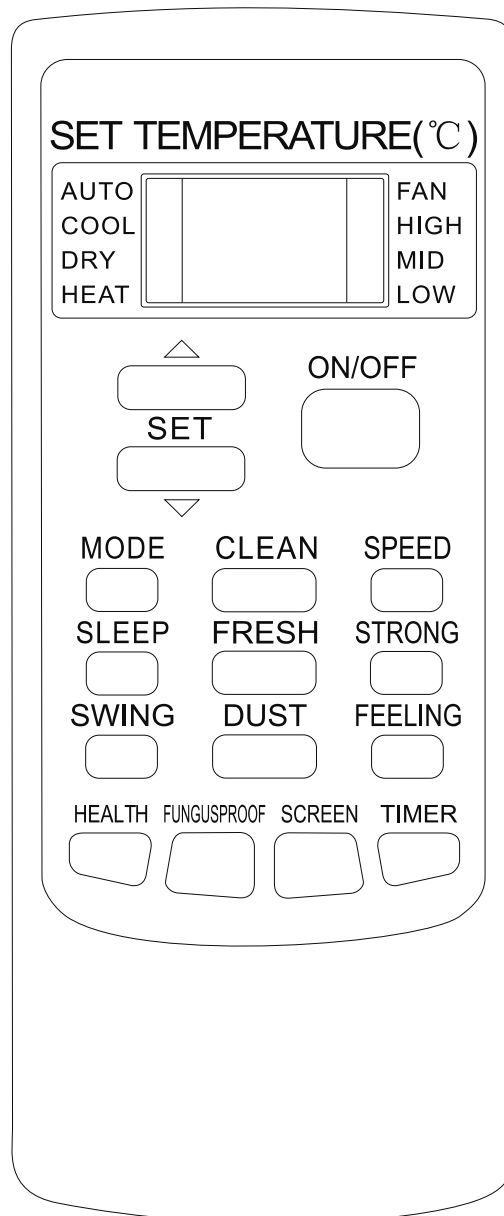
N0.	Name	Size/Model	Unit	Quantity	Remark
1	Outdoor Unit		Set	1	
2	Plastic Strap		ROLL	1	
3	Isolation Strap		ROLL	1	
4	Pipe Protection Ring		PC	1	
5	Luting (putty)	160g	PACKET	1	
6	Certificate		PC	1	

Optional Accessory Part List of the Outdoor Unit

N0.	Name	Size/Model	Unit	Quantity	Remark
1	Low pressure connection pipe		PC	1	
2	High pressure connection pipe		PC	1	

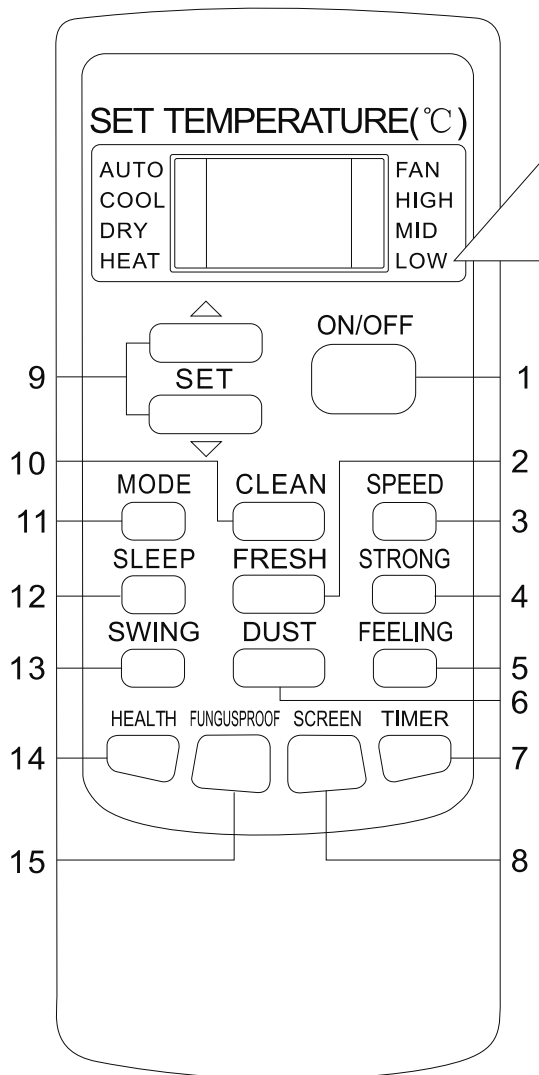
Chapter 4 Remote Controller Introductions

AIR-CONDITIONER REMOTE CONTROLLER INSTRUCTIONS

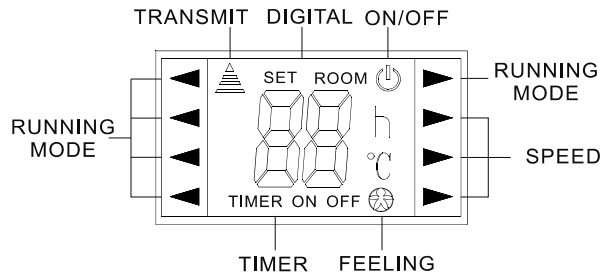


- Read this “instructions” carefully so that you can use the air-conditioner safely and correctly.
- Take good care of the “instructions” so that it can be referred to at any time.

Buttons description



LCD displays instruction



ON/OFF display:

when the remote controller is the on state, the LCD will be displays otherwise will not be display.

Digital display:

Under the state of normal working. It displays set temperature, while the feeling function is start. It will displays room temperature, and under the state of timer mode. It will displays set timer.

1. “ON/OFF” button

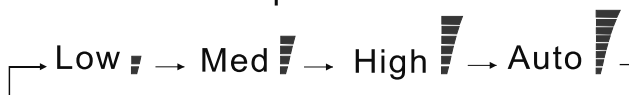
You can start the air-conditioner by pressing this button and stop its operation by pressing it again.

2. “FRESH” button

This button is invalidation.

3. “SPEED” button

You can select fan speed show as the follow:



4. “STRONG” button

Only under the state of cooling or heating mode, press this button, the fan speed is adjusted to strong auto-matically and the LCD displays “high fan”, the “strong” function is started to reach the highest cooling or heating.

5. “**FEELING**” button

When it displays “**FEELING**” button:

Press this button can be used to set the feeling function. The LCD shows the actual room temperature when the function set and it shows the setting temperature when the function cancelled. This function is invalid when the appliance at the Fan mode.

6. “**DUST**” button

This button is invalidation.

7. “**TIMER**” button

Setting the “**ON**” timer time:

- When remote controller is at off state, press “**TIMER**” button, the LCD displays “**TIMER ON**” and the timer time, the range of setting time is 0.5h to 24h.
- You can press the “ Δ ” or “ ∇ ” button to adjust the timer time, each touch will be set time to increase or reduce 0.5h before 10 hours ago, after ten hours will be set time to increase or reduce 1h per pressing, to enables your required timer.
- Press “**TIMER**” button again, to set the timer on function.
- You can set another function to insure the suitable state after air conditioner turn on (including mode, temperature, swing, fan speed and etc). The LCD will displays all your setting and keep it, when the timer reach to the set time, the air conditioner will be working according to your set automatically.

Setting the “**OFF**” timer time:

- When remote controller is at on state, press “**TIMER**” button, the LCD displays “**TIMER OFF**” and the timer time, the range of setting time is 0.5h to 24h.
- You can press the “ Δ ” or “ ∇ ” button to adjust the timer time, each touch will be set time to increase or reduce 0.5h before 10 hours ago, after ten hours will be set time to increase or reduce 1h per pressing, to enables your required timer.
- Press “**TIMER**” button again, to set the timer off function.

8. “**SCREEN**” button

You can let the LCD displays working or not by pressing this button.

9. “ Δ ” or “ ∇ ” button

Press the “+” or “-” button, you can set the temperature range from 16°C to 32°C, Display will change as you touch the button.

10. “**CLEAN**” button

- When remote controller is at the off state, press “clean” button, the wind guiding bars turn to initial postions for cooling, the A/C runs “clean” function with max duration 35mins. The purpose of its function is to clean dust on evapo rator and dry the inside water of evaporator and to prevent the evaporator going moldy due to water deposition and boasting strange smell.
- After setting “clean” function, press “clean” button again to cancel “clean” function or press “**ON/OFF**” button to cancel “clean” function and start A/C.
- The clean function will be no working after 35 minutes running working without any operation.

Note: “clean” function can be set in parallel with “time start” function; in this case , “time start” function will be executed after “clean” function.

11. “MODE” button

Which enables you to select different operation mode, after each pressing, the operation mode will be changed. It shows in the following display.

AUTO→COOL→DRY→HEAT→FAN→AUTO

Remark: cold wind type has no heating function.

12. “SLEEP” button

1. press the SLEEP button, the sleeping indicator light of indoor unit flashes on.
2. after the setting of sleeping mode, the cooling operation enables the set temperature to increase 1°C after 1 hour and another 1°C automatically after 1 hour.
3. after the setting of sleeping mode, the heating operation enables the set temperature to drop 2°C after 1 hour and another 2°C automatically after 1 hour.
4. the air-conditioner runs in sleeping mode for 7 hours and stops automatically.

Remark: press the MODE or ON/OFF button, the remote controller clears sleeping mode away.

13. “SWING” button

Press this button, the horizontal wind direction vanes can rotate automatically, when you have the desired vertical wind direction, press it again, the horizontal wind direction vanes will be stopped at the situation of your choice.

14. “HEALTH” button

Press this button, you can turn on or off the health function.

15. “FUNGUSPROOF” button

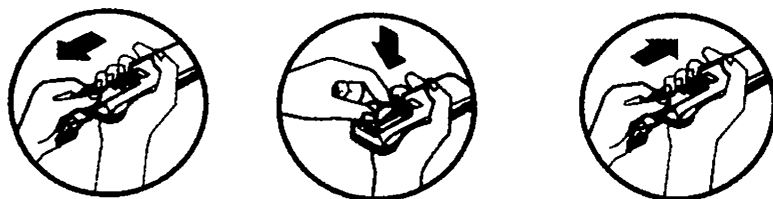
This A/C has special dry and anti-mold function which has “yes” or “no” two selections. This function is controlled by the remote controller under cooling, dry and auto (cooling and dry) modes, the horizontal wind guiding bars are at the initial position for cooling. The A/C runs under heating mode (the cooling only A/C only runs under fan mode), the internal fan runs for three minutes with weak wind before stop. The purpose of this function is to dry the inside of the evaporator and to prevent the evaporator from going mouldy due to water deposition and thus dispersing strange smell.

Note:

1. This function has not been set in the factory. You may freely set and cancel this function. The setting method is: under “off” status of the A/C and the remote controller, point the remote controller toward the A/C and continuously press “FUNGUSPROOF” pushbutton for one time, the buzzer keep beeps five times again after five times beeps, indicating that this function is ready. In case this function has been set, unless the whole A/C is powered off or the function is manually cancelled, the A/C then has this function as a default;
2. To cancel the function: 1. Power off the whole A/C; 2. Under “off” status of the A/C and the remote controller, point the remote controller toward the A/C and continuously press “FUNGUSPROOF” pushbutton for one time, the buzzer keep beeps three times again after five times beeps, indicating that this function has been cancelled;
3. When this function is on, it is suggested not to restart the A/C before it is completely stop;
4. This function will not run in case of time stop or sleep stop.

Usage

★ Fix batteries



1. Slide open the cover according the direction indicated by arrowhead.
2. Put into two brand new batteries (7#), position the batteries to right electric poles (+&-).
3. Put back the cover.

★ Automatic operation mode

1. Press the MODE button, select the automatic operation mode.
2. Press the SPEED button, you can select fan speed. You can select fan speed from LOW, MID, HIGH, AUTO.
3. Press the ON/OFF button, the operation indicator is on, the air-conditioner starts to operate the automatic mode. Press the button again, the air-conditioner stops.

★ Cooling/Heating operation mode (cold wind type has no heating function)

1. Press the MODE button, select the Cooling or Heating operation mode.
2. Press the “ Δ ” or “ ∇ ” button, set the temperature, temperature can be set at 1°C difference range from 16-32°C.
3. Press the SPEED button, you can select fan speed. You can select fan speed from LOW, MID, HIGH, AUTO.
4. Press the ON/OFF button, the operation indicator is on, the air-conditioner starts to operate the automatic mode. Press the button again, the air-conditioner stops.

★ Fan operation mode

1. Press the MODE button, select the Cooling or Heating operation mode.
2. Press the SPEED button, you can select fan speed. You can select fan speed from LOW, MID, HIGH.
3. Press the ON/OFF button, the operation indicator is on, the air-conditioner starts to operate the automatic mode. Press the button again, the air-conditioner stops.

Remark: In the circulation operation mode, to set the temperature is noneffective.

★ Drying operation mode

1. Press the MODE button, select the Dry operation mode.
2. Press the “ Δ ” or “ ∇ ” button, set the temperature, temperature can be set at 1°C difference range from 16-32°C.
3. Press the SPEED button, you can select fan speed. You can select fan speed from LOW, MID, HIGH, AUTO.
4. Press the ON/OFF button, the operation indicator is on, the air-conditioner starts to operate the automatic mode. Press the button again, the air-conditioner stops.

★ Night Luminous Function of Remote Controller(Only the remote controller with this function can be used)

For your convenient use of the remote controller in the darkness without any lighting, this remote controller has blue background light and luminous pushbuttons. Function at you press on any of the pushbutton, the background light will immediately release soft light so that you are easy to operate the remote controller. If you do not operate the controller within 10 seconds, the background light will automatically disappear.

Note:

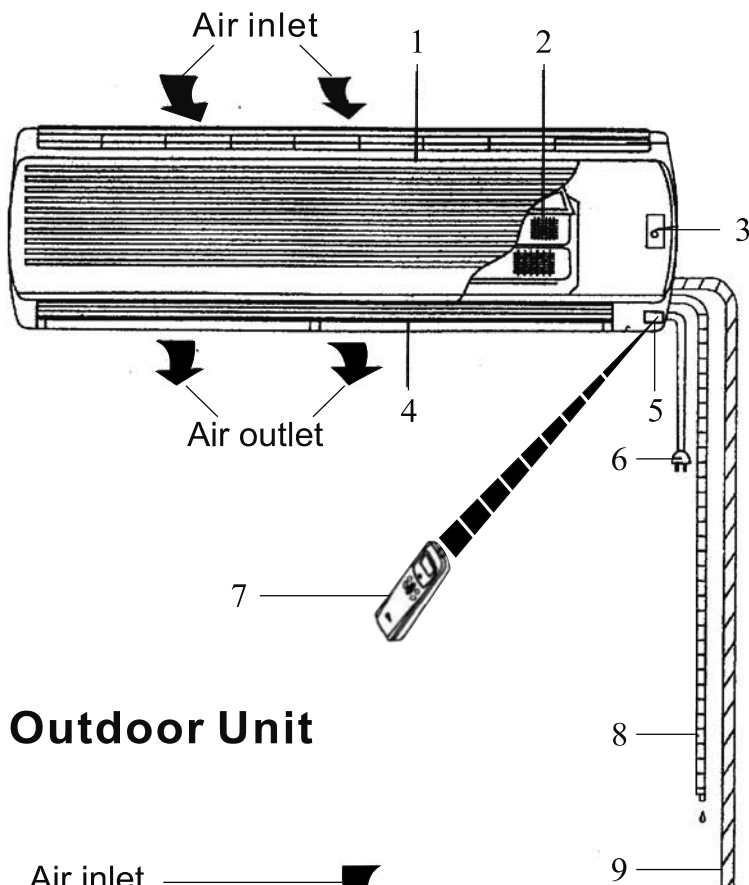
All the figures above are the displays after being initially electrified or re-electrified after power off. In actual operations, the remote controller screen displays related items only.

Attention

1. Aim the remote controller towards the receiver on the air-conditioner.
2. The remote controller should be within 8 meters away from the receiver.
3. No obstacles between the remote controller and receiver.
4. Do not drop or throw the remote controller.
5. Do not put the remote controller under the forceful sunrays or heating facilities and other heating sources.
6. Use two 7# batteries, do not use the electric batteries.
7. Take the batteries out of remote controller before stop its using for long.
8. When the noise of transmitting signal can't be heard indoor unit or the transmission symbol on the display screen doesn't flare, batteries need be replaced.
9. If reset phenomenon occurs on pressing the button of the remote controller, the electric quantity is deficient and new batteries need to be substituted.
10. The waste battery should be disposed properly.

Name of Each Part

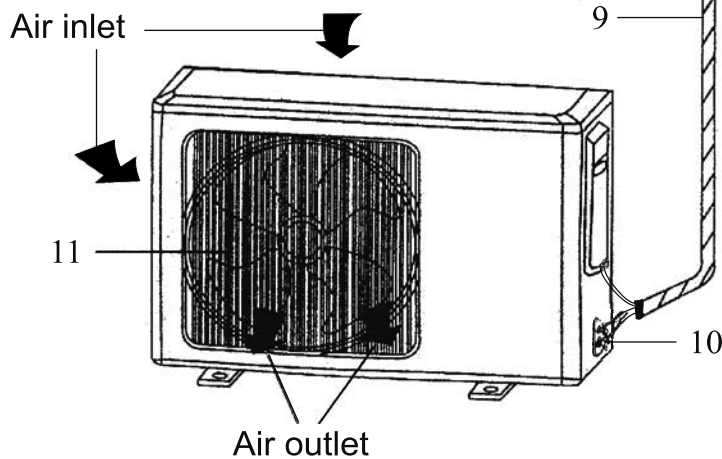
Indoor Unit



Indoor Unit

- 1、 Front panel
- 2、 Air filter
- 3、 Handling switch
- 4、 Louver
- 5、 Signal receptor
- 6、 Power plug
- 7、 Remote controller
- 8、 Drain hose
- 9、 Refrigerant gas/
liquid piping

Outdoor Unit



Outdoor Unit

- 10、 Cut-off valve
- 11、 Air outlet cover

Note:

All picture in this manual are for explanation purpose only. They may be slightly different from their conditioneryou purchased(depend on model)

Operation

★ Remote controller operation

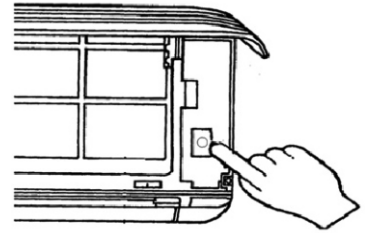
See “*air conditioner remote controller instruction*”

★ Manual operation

☆ Manual operation

When the remote controller does not work or can not be found, please follow these steps:

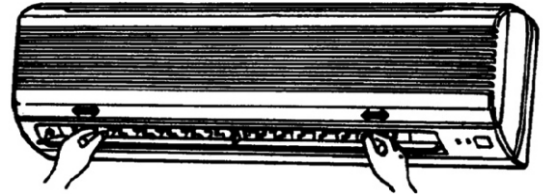
- ① As the unit is operating, you can press the “Auto button” to stop operating.
- ② As the unit is stopping, you can press the “Auto button” to start operating.



☆ Adjusting air flow direction

1. Adjusting horizontal air flow manually.

Use your hands to move the vertical airflow vane and change the horizontal wind direction.



⚠ Note:

Adjust the horizontal air flow direction before the air-conditioner starts. Do not insert your finger into air intake or outlet vents when the air-conditioner is operating.

2. Adjusting vertical air flow direction (up-down)

Refer to “*air conditioner remote controller instruction*” for how to adjust vertical airflow direction through adjusting the horizontal airflow vane by remote controller.

⚠ Note:

- Adjust the vertical air flow direction by remote controller. When you adjust the horizontal airflow vane by hand, the machine may cause problem.
- Manual operation can be used temporarily in case you can not use remote controller or its batteries are exhausted.
- When the air-conditioner stops, the horizontal wind vane will close the wind outlet of air conditioner.

Chapter 5 Brief Introduction for Usage

Safety Precautions

Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications

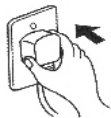
WARNING This symbol indicates the possibility of death or serious injury.

CAUTION This symbol indicates the possibility of injury or damage to properties only.

WARNING

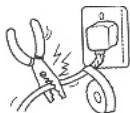
- The power plug must be inserted tightly.

Otherwise, it can cause electric shock or overheating, even fire.



- Don't destroy the power cord or use an unspecified one.

It can cause overheating or fire.



⚠ The power cord must be replaced and changed by specialists.

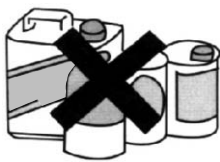
- Don't pull the power plug to pull out the power cord.

The damage of power cord will cause serious electric shock.



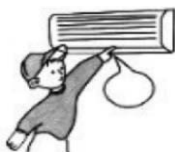
- Don't install air conditioner in a place where there is flammable gas or liquid.

It may cause fire.

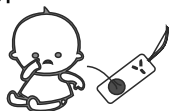


- Don't touch the swinging wind vanes.

It may clamp your finger and damage the driving parts of the wind vanes.

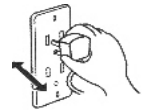


- The main power switch should be placed where is unavailable for child to prevent the child from the danger of electric shock.

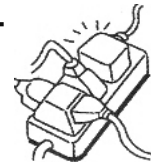


- Don't pull out the power plug during operating.

It can cause electric shock or fire.



- Don't use longer power lines and don't share the socket with other appliance.



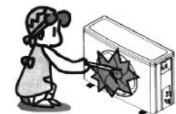
- Don't operate the air conditioner with wet hands.

It will cause electric shock.



- Don't put a finger, a rod or other object into the air outlet or inlet.

As a fan is rotating at a high speed, it will cause injury.

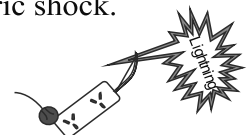


- Don't attempt to repair the air conditioner by yourself.

You may be hurt or cause further malfunctions.



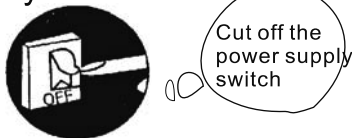
- Stop operation and close the windows in storm or hurricane. Operation with windows opened may cause electric shock.



- Take care not let the remote control and the indoor unit watered or being too wet, or may short circuit even caused fire



- Cut off the main power switch when not using the unit for a long time. Otherwise, it may cause product failure or fire.



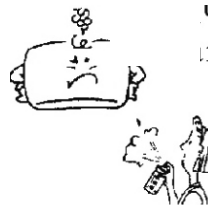
- An earth leakage breaker with rated capacity must be installed to avoid possible electric shocks.



- Children should be supervised to ensure that they do not play with the appliance. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety .



- Don't use liquid or corrosive detergent clean the appliance and don't splash water or other liquid onto it , otherwise, it may damage the plastic components, even cause electric shock.



CAUTION

- Don't install the indoor unit under sunshine directly.



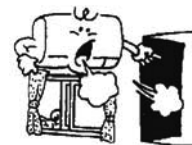
- Don't block air inlet or air outlet, otherwise, the cooling or heating capacity will be weakened , even cause system stop operating.



- Don't apply the cold air to the body for a long time. It will deteriorate your physical conditions and cause health problems.



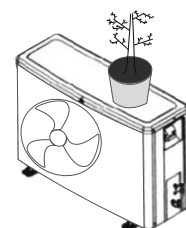
- Close the windows and doors, otherwise, the cooling or heating capacity will be weakened.



- If the air filter is very dirty, the cooling or heating capacity will be weakened. Please clean their filter regularly .



- It was prohibited to stand or put things onto the top of the outdoor, to avoid drop or damage



Care and Maintenance

★ Cleaning

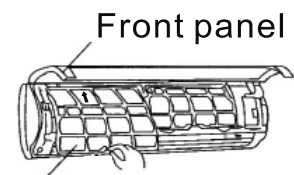
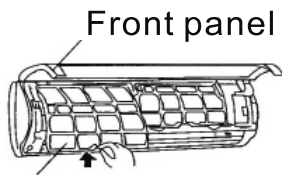
☆ Cleaning the indoor unit

1. Turn off the air-conditioner and remove the electrical plug from the outlet.
2. Wipe the indoor unit with dry cloth or wet cloth which is dipped by cold water.

⚠ Note :

- Don't use water above 45°C to wash the panel, or it could cause deformation or depigment.
- Don't use thinner, polishing powder, benzene and other volatile chemicals.

☆ Cleaning air filter



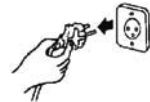
1. Raise up the front panel of indoor unit until it suddenly stop, then raise up the protruded part of air filter, and then take it out.
2. Use a vacuum cleaner or wash them with water, then dry it in the shade.
3. Reinsert the air filter into the indoor unit until being entirely fixed, then close the front panel.

★ Maintenance

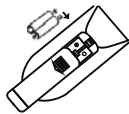
1. Select "FAN" operation mode, make the air conditioner run a long time to dry.



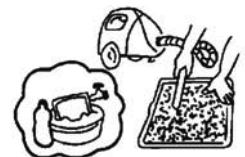
2. Turn off the air conditioner and cut off the power supply .



3. Take out the batteries from the remote controller.



4. Clean air filters and other parts.



Troubleshooting

Check the following before requesting on service centre if the malfunction occurs.

Phenomenon	Trouble shooting
Air conditioner dose not operate atall	<ul style="list-style-type: none"> ● Has the power been shut down? ● Is the wiring loose? ● Is the voltage higher than 264V or lower than 198V? ● Is the fuse burnt? ● Does it reach the set time for start up?

Notices

To prevent injury and property damage, Please pay attention to these following before operating the air conditioner.

★ Checking before operation

1. Make sure that the earth wire is connected safely and reliably.
2. Make sure the filter net is properly fixed.
3. Make sure that air outlet and inlet are not blocked.
4. Please clean the filter before starting the air-conditioner referring to page to 6 “Cleaning” for how to operate.
5. Check to see whether the outdoor install bracket is damage. if yes, please contact our Service center locally.

★ Safety tips

1. Installation should always be carried out by specialist. The customers should not install the air-conditioner by themselves. Otherwise, it may cause damage or injury.
2. In order to use the air conditioner properly, please refer to its working temperature range. Otherwise, indoor unit automatic protection function may be activated, cooling or heating efficiency will be weakened.

Working temperature range

Cooling	Indoor	Maximum:	DB/WB	32°C/23°C
		Minimum:	DB/WB	21°C/15°C
	Outdoor	Maximum:	DB/WB	43°C/26°C
		Minimum:	DB/WB	21°C/15°C
Heating	Indoor	Maximum:	DB/WB	27°C-
		Minimum:	DB/WB	20°C-
	Outdoor	Maximum:	DB/WB	24°C/18°C
		Minimum:	DB/WB	-5°C/-6°C

1. Set the suitable temperature, especially there are old people, children and patients in the room. Generally, keep the temperature difference for 5°C between the inside and outside.
2. In case that the unit occurs closing down due to the severe interference from outer environments such as mobile phone, please cut off the plug and plug in to restart the air conditioner after several seconds.
3. Never expose animals or plants to direct air flow, and adjust the air flow to avoid air blowing directly at people.
4. It is forbidden to let the air conditioner blow wind to the cookers, or it may effect the normal cooking and even cause danger!

Phenomenon	Troubleshooting
Remote controller is not available	<ul style="list-style-type: none"> ● Is the remote controller out of effective distance to the indoor unit? ● Is the battery exhausted? ● Are there any obstructions between the controller and the signal receptor?
Cooling (Heating)efficiency is not good	<ul style="list-style-type: none"> ● Is the setting temperature suitable? ● Is the air inlet or outlet obstructed? ● Are air filter dirty? ● Is indoor fan speed set at low speed? ● Is there any heat source in your room?
Indoor unit does not operate immediately when the air conditioner is restarted	Once the air conditioner is stopped, it will not operate in approximately 3 minutes to protect itself.
There is unusual smell blowing from the outlet after operation is started.	This is caused by the odour in the room permeated from building material, furniture, or smoke.
Sound of water flow can be heard during cooling operation	This is caused by the refrigerant flowing inside the unit.
Mist is emitted during cooling operation.	Because the air of the room is cooled down rapidly by the cold wind and it looks like the fog.
Mist is emitted during heating operation.	This generate due to moisture in defrosting process.
Low noise can be heard during operation	<ul style="list-style-type: none"> ● A low hissing sound is caused by the refrigerant flowing. ● A low squeak sound is caused by the deformation of plastic due to temperature.

In case the following situation, please immediately stop all operations and cut off the power supply, then contact with service centre

- The fuse and switch often breaks.
- Carelessly splash water or something into air conditioner.
- Unusual noise can be heard during operation.
- Electrical wiring and power plug are very hot.
- Wind blowing from the outlet smells terrible during operation.
- The Run light or other display flashes rapidly and keeps flashing after replugging.

Installation Guide

★ Guide for customer

- The installation must be done by professional referring to the “*Installation instructions*” .
- The wiring must be done by qualified electrician according to the electrical safety requirements.
- The customer should have a qualified power supply which coincides with the tag of air conditioner, the normal voltage should be in the range of 90-10% of its rated voltage.
- The air conditioner must be well grounded, the switch of the main power of air-conditioner must be reliably grounded.
- If your air conditioner is not fitted with a supply cord and a plug, an all-pole switch must be installed in the fixed wiring and the distance between contacts should be no less than 3.0 mm.
- If your air conditioner is permanently connected to the fixed wiring and have a leakage current that may exceed 10 mA, leakage protector must be installed in the fixed wiring, operating current of which shall not exceed 30 mA.

★ Notices

- The air conditioner must be installed on well strong supporter.
- The appliance shall be installed in accordance with national wiring regulations.
- Fix the machine firmly, otherwise it will produce abnormal noise and vibration.
- Install the outdoor unit in the place where it wouldn't disturb your neighbour.
- The method of connection of the appliance to the electrical supply and interconnection of separate components, please see the electric connection elements sheet which stick on the machine.

WEEE Warning

Meaning of crossed out wheeled dustbin:

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

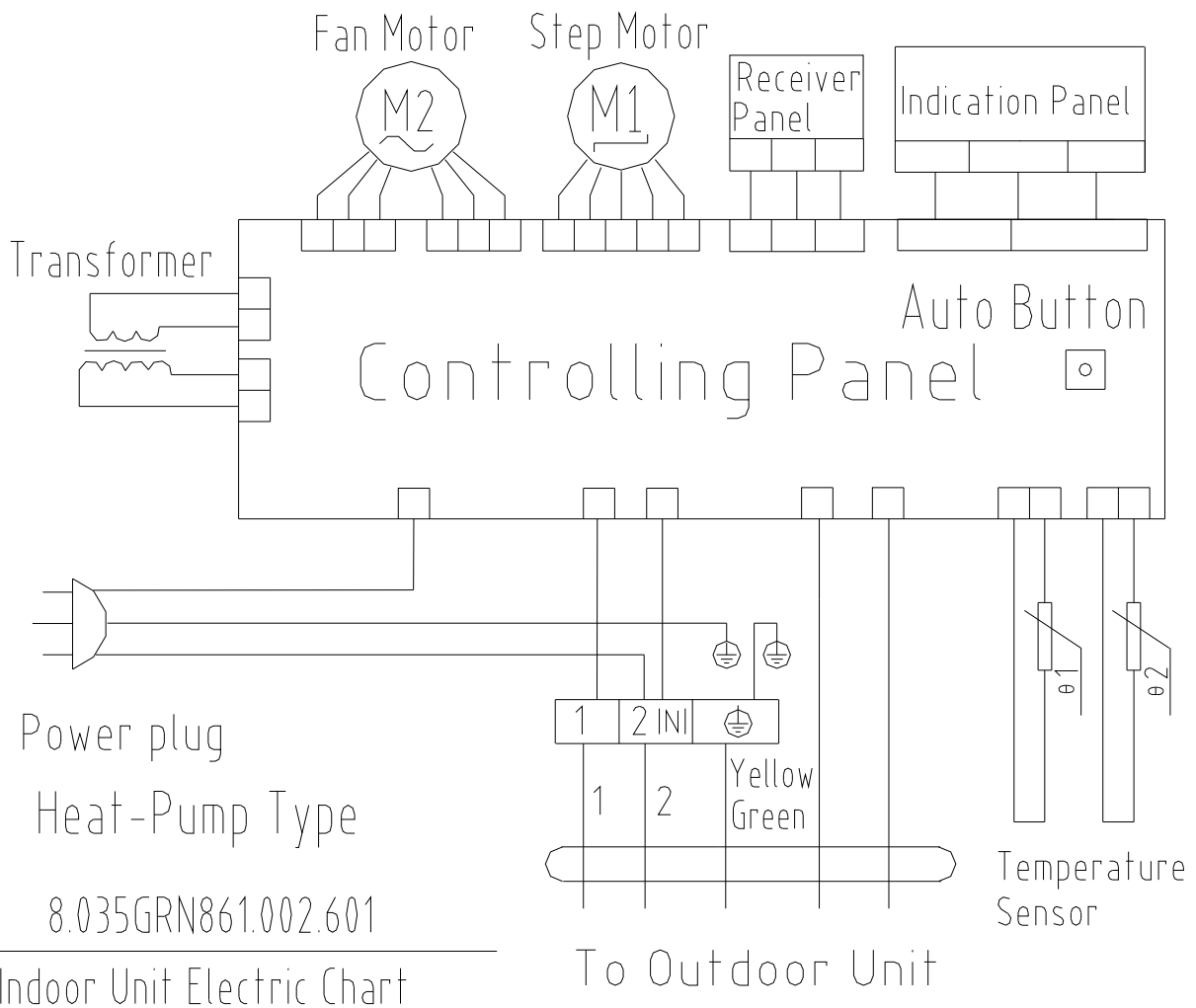
When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposals at least free of charge.



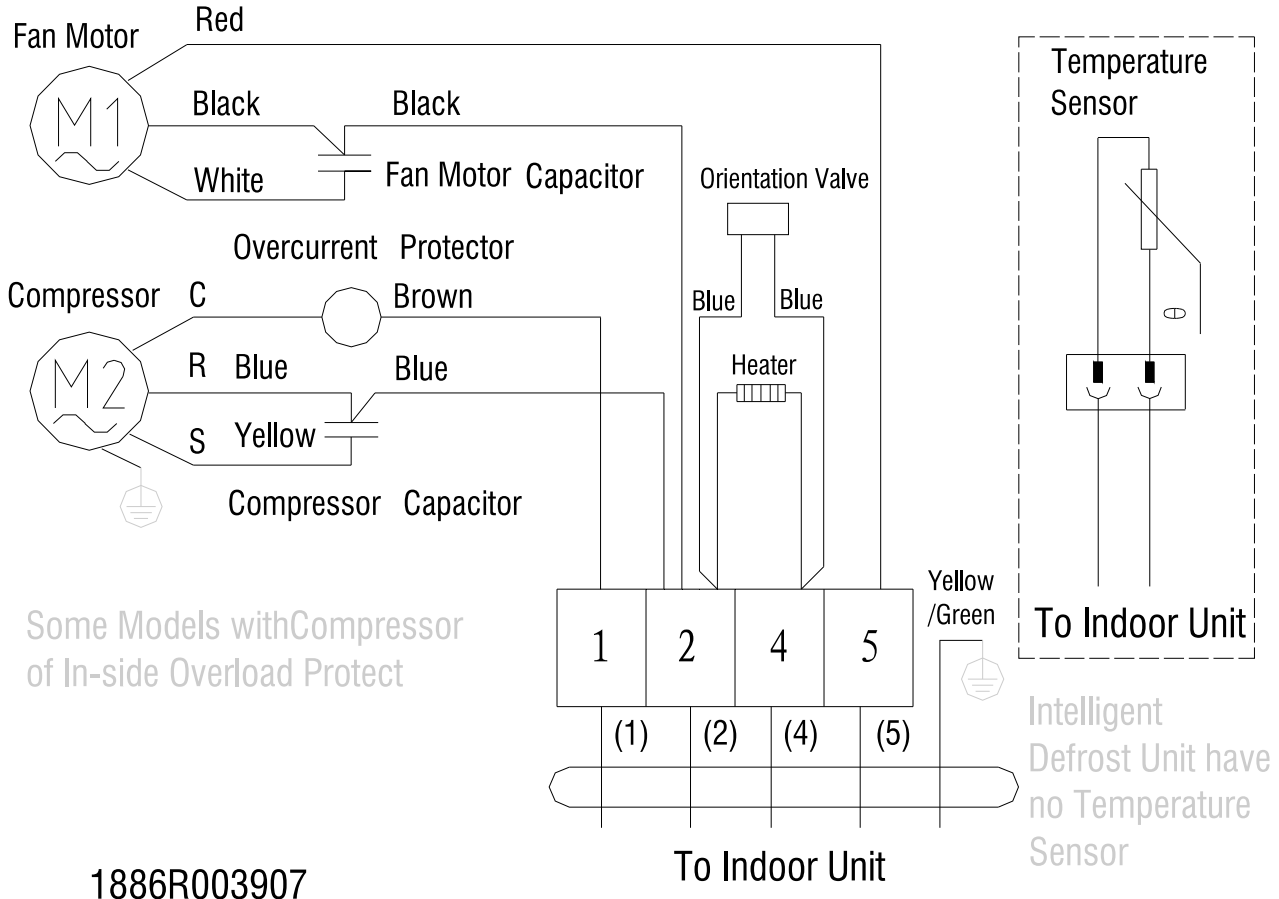
Chapter 6 Wiring Diagram

6.1 Electric chart for 09/12K

Indoor unit



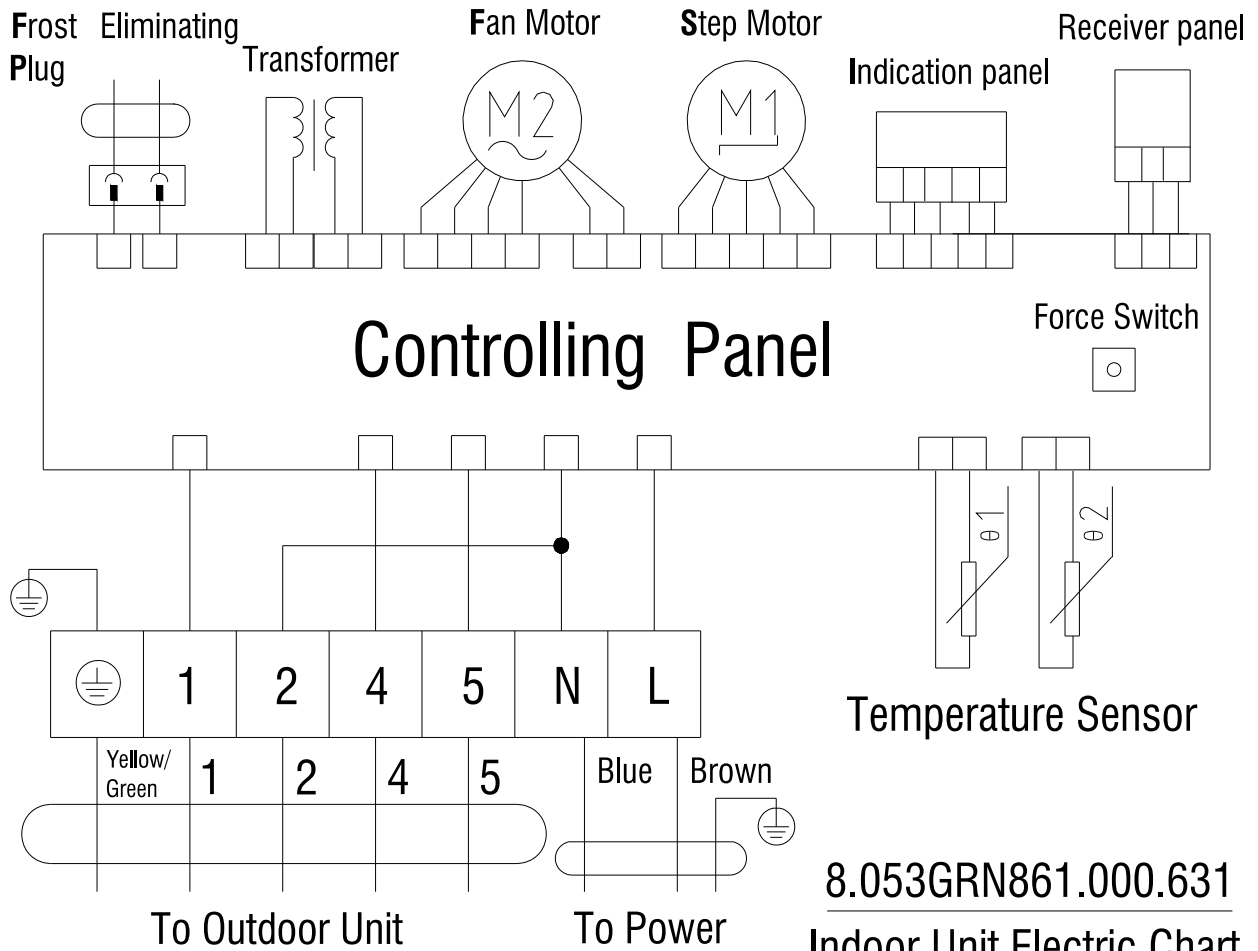
Outdoor unit



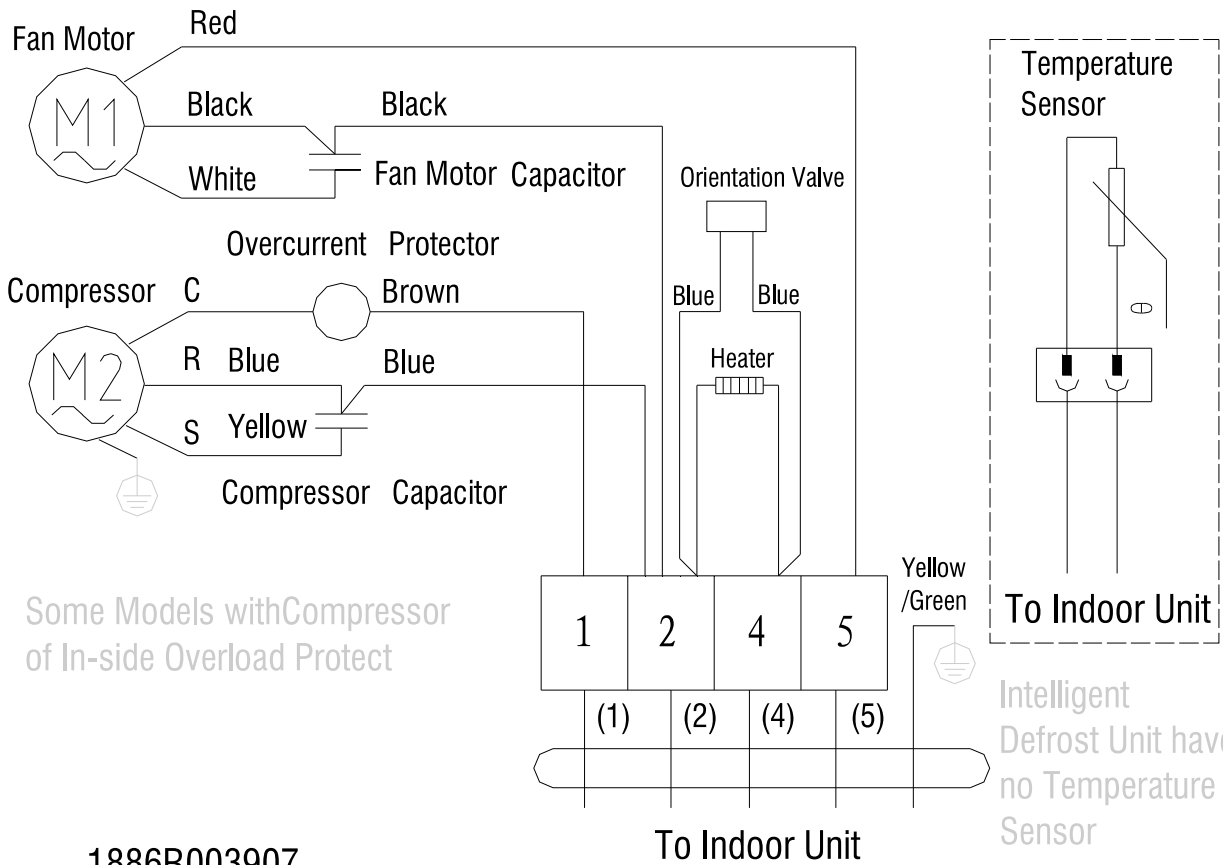
1886R003907
Outdoor Unit Electric Chart

6.2 Electric chart for 18K(Non inverter)

Indoor unit



Outdoor unit



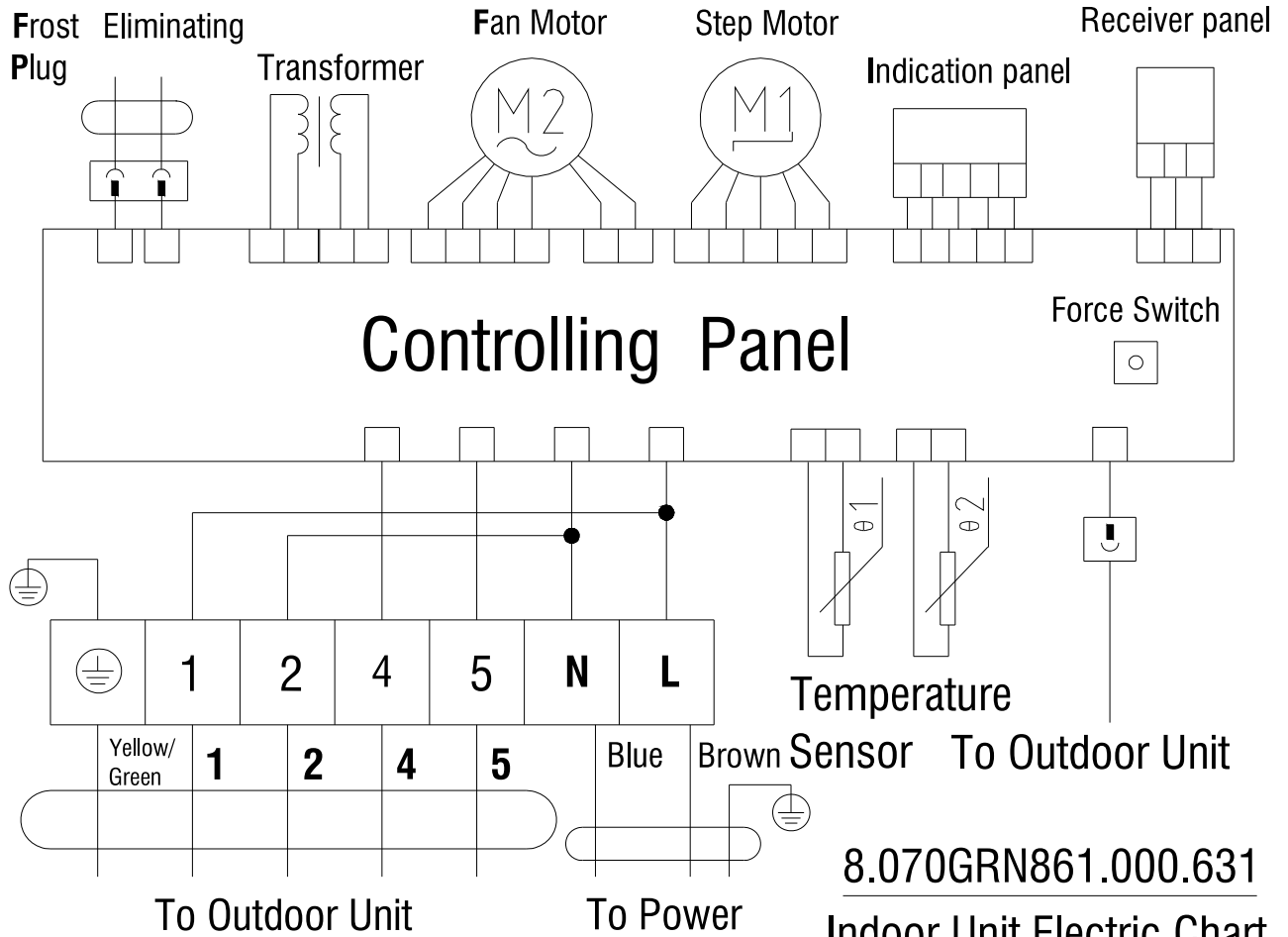
Some Models with Compressor of In-side Overload Protect

Intelligent Defrost Unit have no Temperature Sensor

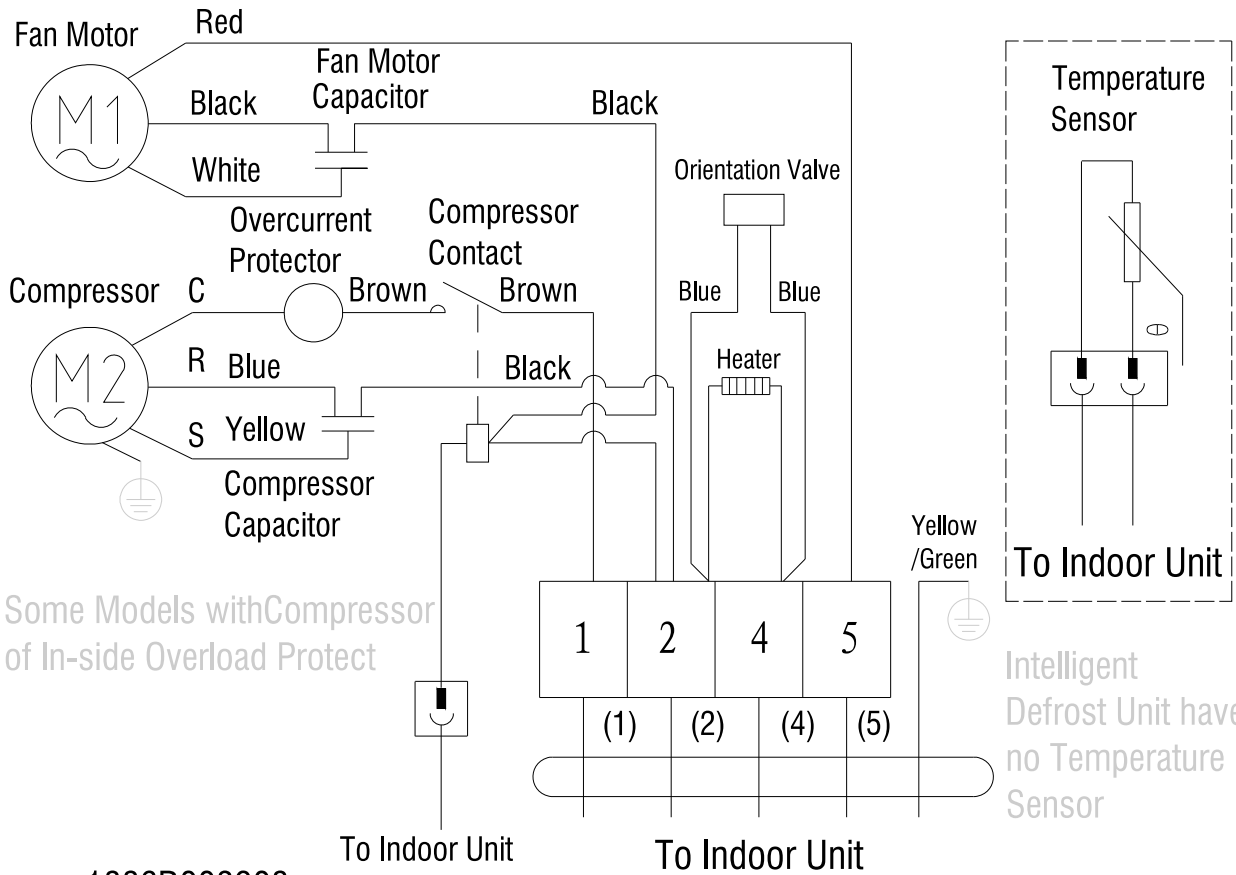
1886R003907
Outdoor Unit Electric Chart

6.3 Electric chart for 24K(Non inverter)

Indoor unit



Outdoor unit









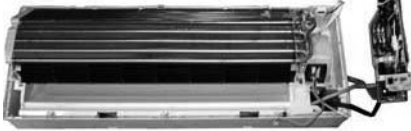
1886R003908
Outdoor Unit Electric Chart

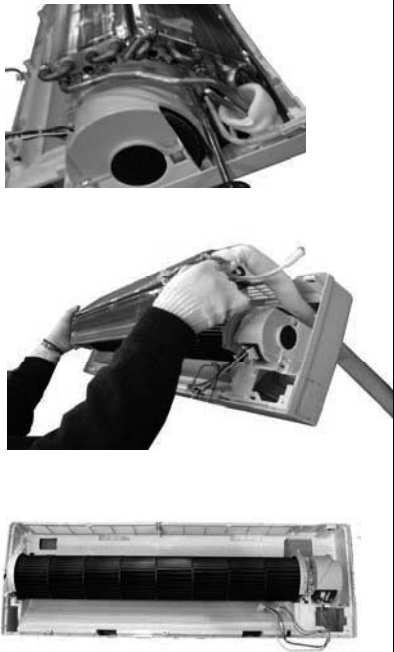
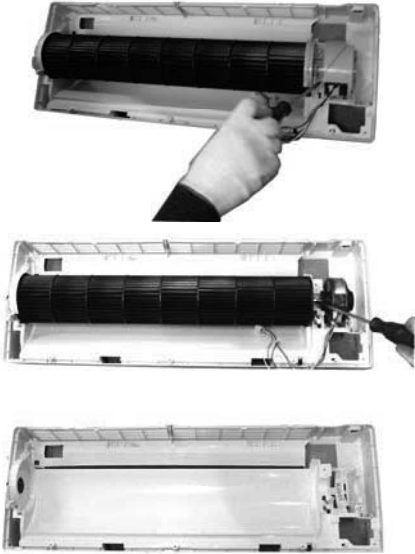
Disassembly Of The Parts

(1)Indoor unite and outdoor unit of 9000BTU~12000BTU

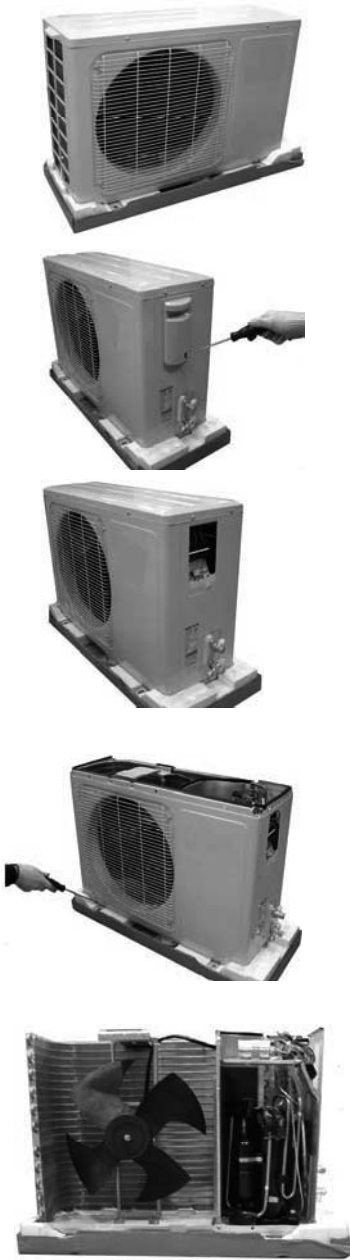
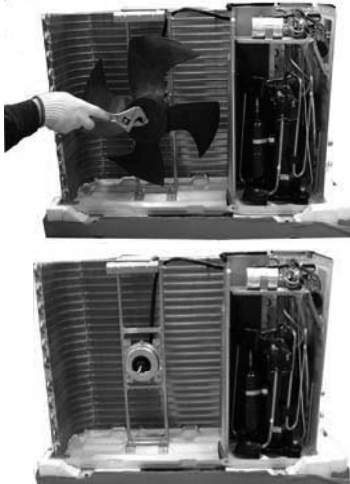
Attention: Turn off the air-conditioner and pull out the plug of the power supply before the service.



1. Indoor unit:

No.	Part	Operation Process	Remark
1	Panel	<p>1) Turn off the air-conditioner and cut off the power supply;</p> <p>2) Tear the adhesive tape sticking to the panel;</p> <p>3) Hold the handles at both sides of the panel and push upward to have it slip out;</p> <p>4) Grasp the both sides of the panel and push upward;</p> <p>5) Turn the upper board by 90°and unload it from the connecting pole carefully;</p> <p>6) Take out the filter from the right and left side.</p> <p>7) Screw off the bolts on the electrical box cover and unload the box cover;</p> <p>8) Screw off the 5 bolts (for 1Hp AC) or 8 bolts (for 1.5Hp AC) on the medium frame;</p> <p>9) Hold the both sides of the medium frame and open it gently</p> <p>10)Turn up the medium frame by about 90°;</p> <p>11)Offload the medium frame once hearing the crack sound;</p>	    
2	Electrical component	<p>1) Do No."1" and "2" firstly, offload the water drainage soft tube;</p> <p>2) Offload the water draining tank from chassis and take out the electrical components.</p>	
3	Water draining tank	<p>1) Do No. "1" firstly;</p> <p>2) Pull out all tie-in connecting with PCB and the temperature sensor, etc.;</p> <p>3) Screw off the screws and bolts as indicated in the picture. Untie the outdoor unit's interconnection cord and</p>	

		<p>power supply cord from the terminal of the electrical box.</p> <p>4) If the main PCB board is loosed by chance, remove it away;</p>	
4	Evaporator	<p>1) Do No."1" , "2" and "3" firstly;</p> <p>2) Offload the connecting pipe;</p> <p>3) Offload the tube clip at the rear;</p> <p>4) Screw off the bolts at the right and left side;</p> <p>5) Lift up the evaporator, and draw it out from the indoor unit;</p>	
5	Indoor fan Fan motor	<p>1) Screw off one bolt from the motor cover, and remove the motor cover;</p> <p>2) Offload the motor from the fan;</p> <p>3) Offload the fan from bearing;</p>	

2. Outdoor unit:

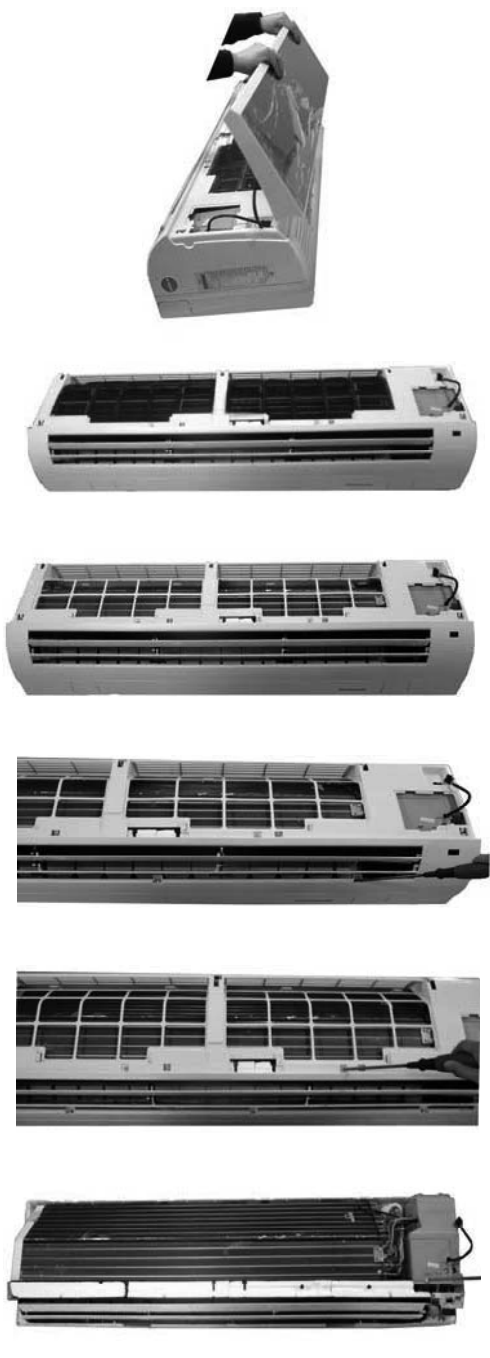

No.	Part	Operation Process	Remark
1	General operation	<p>1) Screw off one fastening bolt from the electrical box cover, and offload the box cover;</p> <p>2) Pull out the interconnection cord from the electrical box;</p> <p>3) Screw off the five fastening bolts from the cover board, and offload the board; Screw the six fastening bolts from the front panel, and offload the front panel;</p> <p>4) Screw off the fastening bolts from the electrical assembly;</p> <p>5) Screw off the eight fastening bolts and offload the outer frame;</p>	
2	Outdoor fan motor	<p>1) Do No. "1" firstly;</p> <p>2) Screw off the fastenings screws clockwise.</p> <p>3) Offload the fan.</p> <p>4) Screw off the four fastening bolts and offload the fan motor;</p> <p>5) Screw off the two fastening bolts and offload the fan motor bracket.</p>	

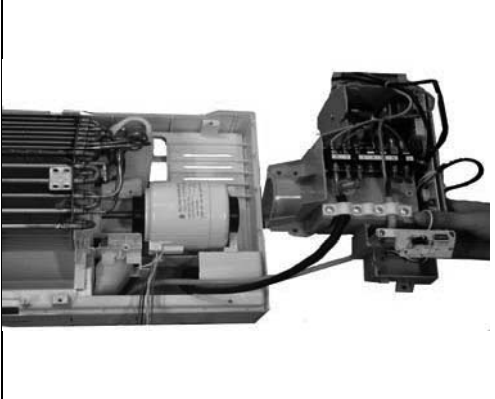
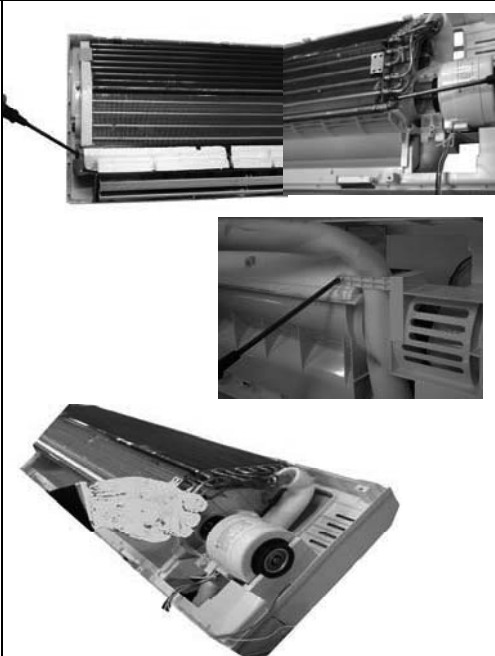
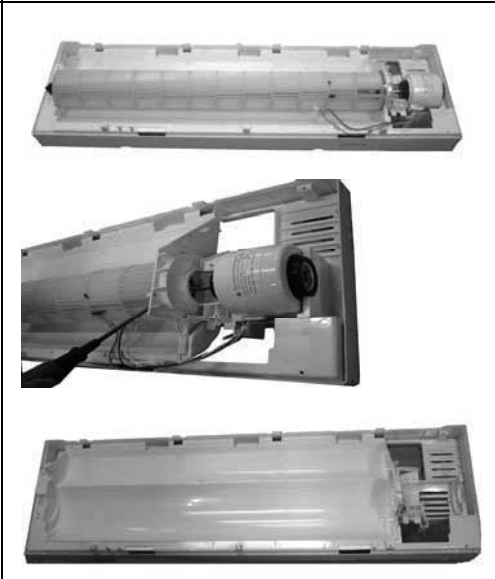
3	Condenser	<ol style="list-style-type: none"> 1) Do No."1" and "2" firstly; 2) Screw off the two fastening bolts; 3) Weld off the inlet and outlet tube; 4) Offload the condenser. 	
4	Compressor	<ol style="list-style-type: none"> 1) Do No."1" , "2"and "3" firstly; 2) Open the cover of compressor, release the connection cord. 3) Weld off the inlet and outlet tube; 4) Screw off the three screws; 5) Offload the compressor. 	

(2)Indoor unite and outdoor unit of 18000BTU~24000BTU


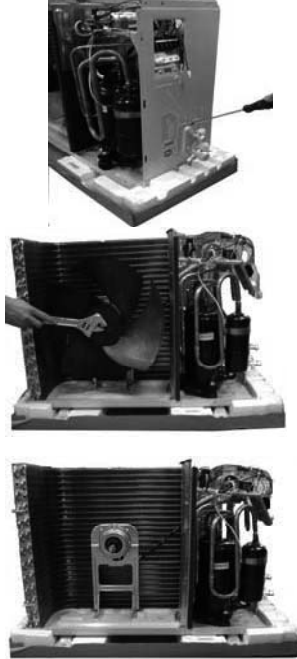

Attention: Turn off the air-conditioner and pull out the plug of the power supply before the service.


1. Indoor unit:

No.	Part	Operation Process	Remark
1	Front panel	<p>1) Turn off the air-conditioner and cut off the power supply;</p> <p>2) Remove the adhesive tape sticking to the panel.</p> <p>3) Hold the handles at both sides of the panel and push upward to have it slip out;</p> <p>4) Grasp the both sides of the panel and push upward;</p> <p>5) Turn the upper board by 90°and unload it from the connecting pole carefully;</p> <p>6) Take out the filter from the right and left side.</p> <p>7) Screw off the bolts on the electrical box cover and unload the box cover;</p> <p>8) Screw off the six bolts on the medium frame;</p> <p>9) Hold the both sides of the medium frame and open it gently;</p> <p>10)Turn up the medium frame by about 90°;</p> <p>11)Offload the medium frame once hearing the crack sound;</p>	
2	Water draining tank	<p>1) Do No."1" and "2" firstly, offload the water draining soft tube;</p> <p>2) Offload the water draining tank from the chassis and take out the electrical components.</p>	

3	Electrical component	<ol style="list-style-type: none"> 1) Do No. "1" firstly; 2) Pull out all tie-in connecting with PCB and the temperature sensor, etc.; 3) Screws off the screws and bolts at the three positions indicated in the picture. Untie the outdoor unit's interconnection cord and power supply cord from the terminal of the electrical box. 4) If the main PCB board is loosed by chance, remove it away; 	
4	Evaporator	<ol style="list-style-type: none"> 1) Do No."1" , "2" and "3" firstly; 2) Offload the connecting pipe; 3) Offload the tube clip at the rear; 4) Screw off the bolts at the right and left side; 5) Lift up the evaporator, and draw it out from the indoor unit; 	
5	Indoor fan and fan motor	<ol style="list-style-type: none"> 1) Offload the motor from the indoor fan; 2) Offload the indoor fan from bearing; 	

2. Outdoor unit

No.	Part	Operation Process	Remark
1	General operation	<p>1) Screw off one fastening bolt from the electrical box cover, and offload the box cover;</p> <p>2) Pull out the connecting cord from the electrical box;</p> <p>3) Screw off the five fastening bolts from the cover board, and offload the cover board; Screw the six fastening bolts from the front panel, and offload the front panel;</p> <p>4) Screw off the fastening bolts from the electrical assembly panel;</p> <p>5) Screw off the eight fastening bolts and offload the outer frame;</p>	 <p>The images show the following steps: 1) The outdoor unit with one bolt removed from the top cover. 2) A screwdriver pulling a cord from the back. 3) The unit with the front panel being removed. 4) The unit with the outer frame being removed, leaving the internal components exposed.</p>
2	Fan motor	<p>1) Do No."1" firstly;</p> <p>2) Screw off the fastening nut(Rotate in clockwise direction);</p> <p>3) Offload the outdoor fan;</p> <p>4) Screw off the four fastening bolts from the electrical motor and offload the electrical motor;</p> <p>5) Screw off the two fastening bolts and offload the bracket;</p>	 <p>The images show the following steps: 1) The unit with the fan cover removed. 2) A hand pulling the fan out of its housing. 3) The unit with the fan removed, showing the motor and bracket.</p>
3	Condenser	<p>1) Do "1", "2" firstly;</p> <p>2) Screw off the fastening bolts at the left and right sides;</p> <p>3) weld off the inlet and outlet tubes;</p> <p>4) Offload the condenser;</p>	 <p>The image shows the condenser coil being pulled out of the unit's frame.</p>

4	Compressor	<ol style="list-style-type: none">1) Do "1" , "2", "3" firstly;2) Open the cover of the compressor, and loosen the connecting cables;3) Weld off the inlet and outlet tubes of the compressor;4) Screw off three flat nuts;5) Offload the compressor;	
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Chapter 8 Troubleshooting Guide

8.1 Error Code

No.	Error Code	Problem
1	E1	Temperature sensor of air intake fault
2	E2	Temperature sensor of outdoor coil fault
3	E3	Temperature sensor of indoor coil fault
4	E4	PG motor of indoor unit feedback fault

8.2 Troubleshooting Guide for 09-12K

1. The Foremost Inspecting Items

(1)The input voltage must be within +10% tolerance of the rated Voltage. If it is not the case, the air-conditioner will probably not work normally.

(2)Check the connecting cord between indoor unit and outdoor unit to see if it is properly connected. The connecting must be done according to the wiring diagram, please also notice that even different models may have the connecting cord of the same specification.

Please check if the marks at the connecting terminal and the marks on the cord can match, otherwise, the air-conditioner will not work normally.

(3)If the following phenomena are found, the problem is not from the air-conditioner itself.

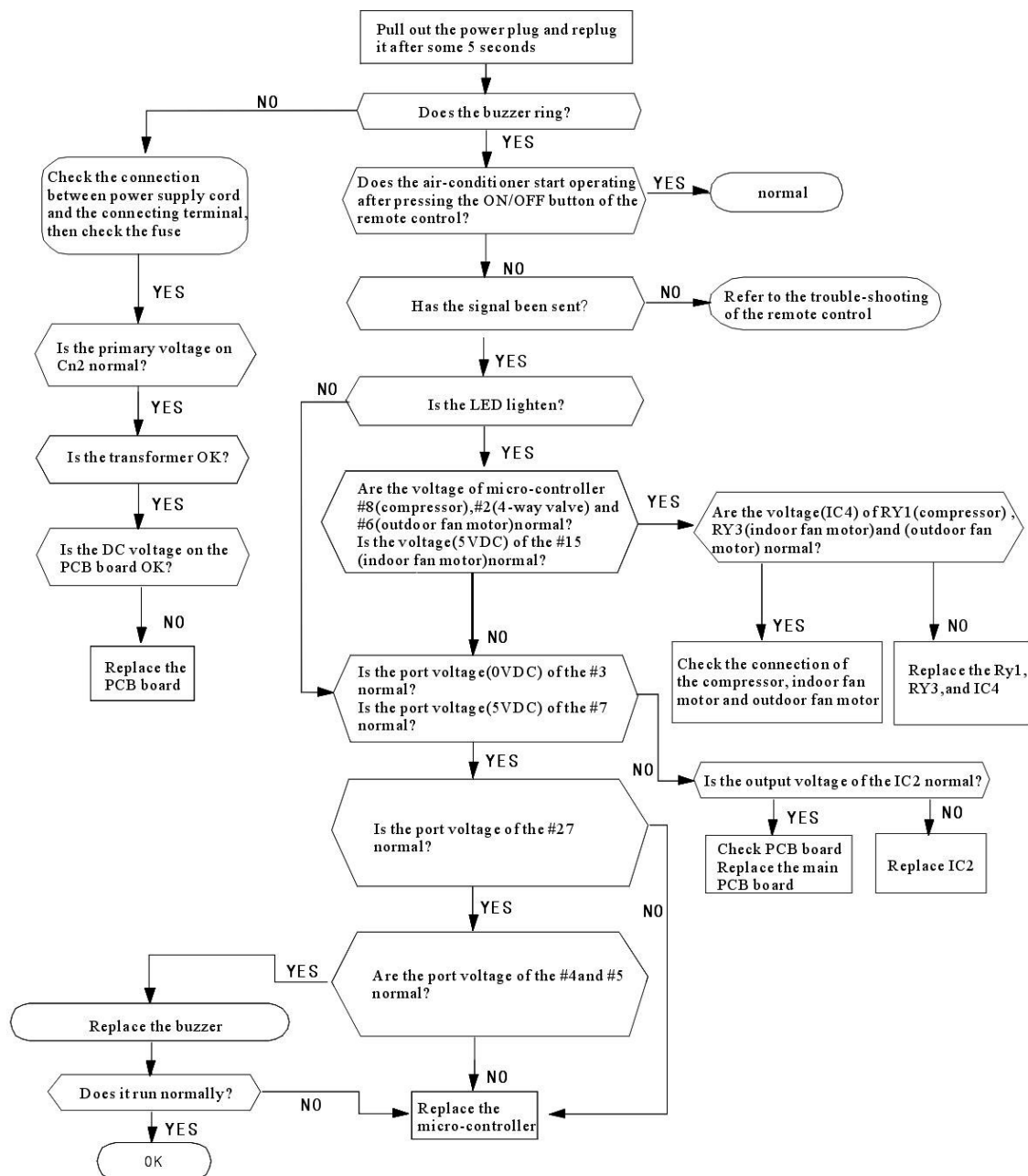
NO.	Problems	Causes
1	The motor is heard operating but the air-conditioner dose not work when the indoor unit is powered on	Since the air-conditioner is powered on, it will come to working condition as long as you press the ON/OFF button of the remote control and the Signal is well received.
2	The compressor stops running but the indoor fan motor keeps working when it is at cooling mode with the indoor temperature higher than set temperature.	If you turn off the air-conditioner and restart it immediatly, it will return to normal in 3 minutes, after that, the air-conditioner will automatically adjust the indoor fan speed to what you set.
3	The compressor works discontinuously at dehumidifying mode.	The air-conditioner will automatically control the working of the compressor according to the inside temperature
4	The air-conditioner does not work while the LED display is on.	The TIMER is set with the air-conditioner; it will be in hold on condition. If the TIMER setting is cancelled, the air-conditioner will return to normal working condition
5	The compressor works discontinuously at cooling and dehumidifying mode, and the indoor fan motor slows down.	The compressor stops internally or the fan motor slows down to prevent the indoor heat exchanger from being frozen.

2. No Power Display

(1) Items

- a) Check if the input voltage is correct?
- b) Check if the AC power supply connecting is correct?
- c) Check if the output voltage of the manostat L7805 (IC2) is correct?

(2) Trouble shooting procedure



3. The Indoor Fan Motor Does Not Work

(1) Items

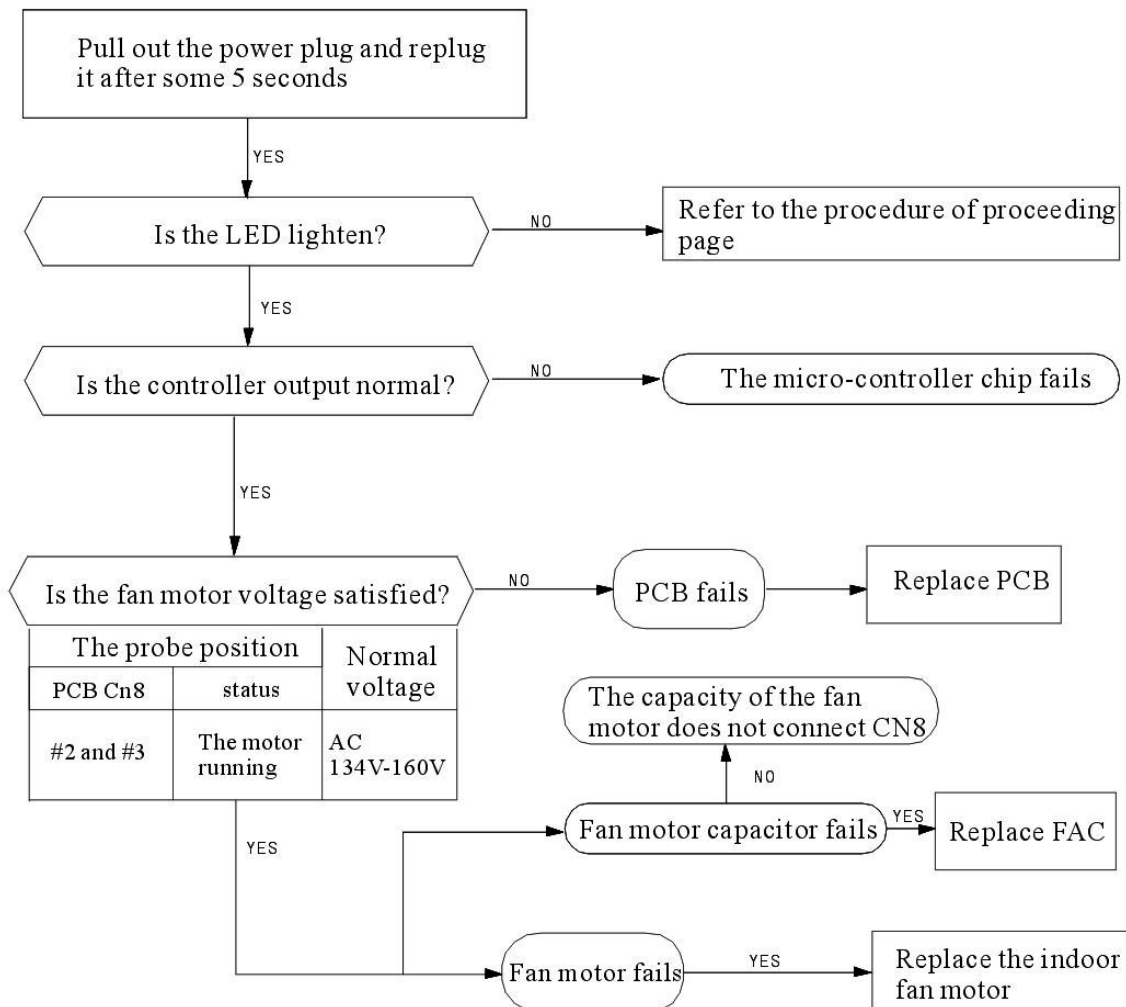
a) Check if the indoor fan motor is connected correctly to the connector (CN8)?

b) Check if the AC input voltage is correct?

c) Check if the IC of indoor fan motor is connected correctly to the connector (CN2)?

d) Check if the capacity of indoor fan motor is connected correctly to the connector (CN8)?

(2) Trouble shooting procedure

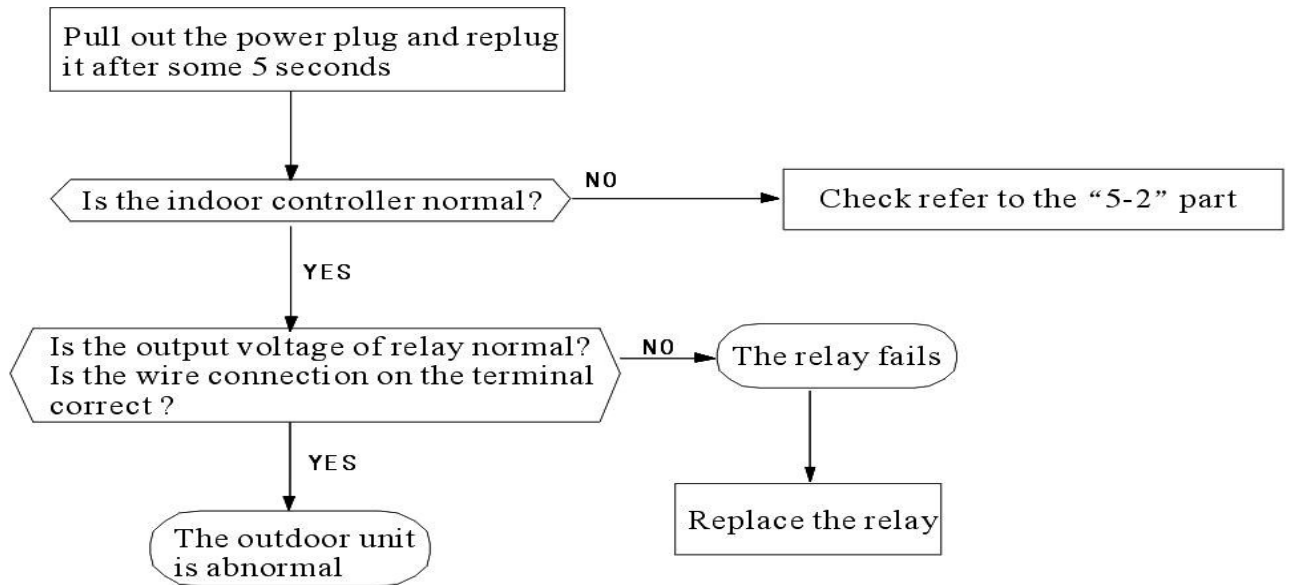


4. The Outdoor Unit Does Not Work

(1) Items

- a) Check if the input voltage is correct?
- b) Check if the wire connection of the outdoor connecting terminal is correct?

(2) Trouble shooting procedure



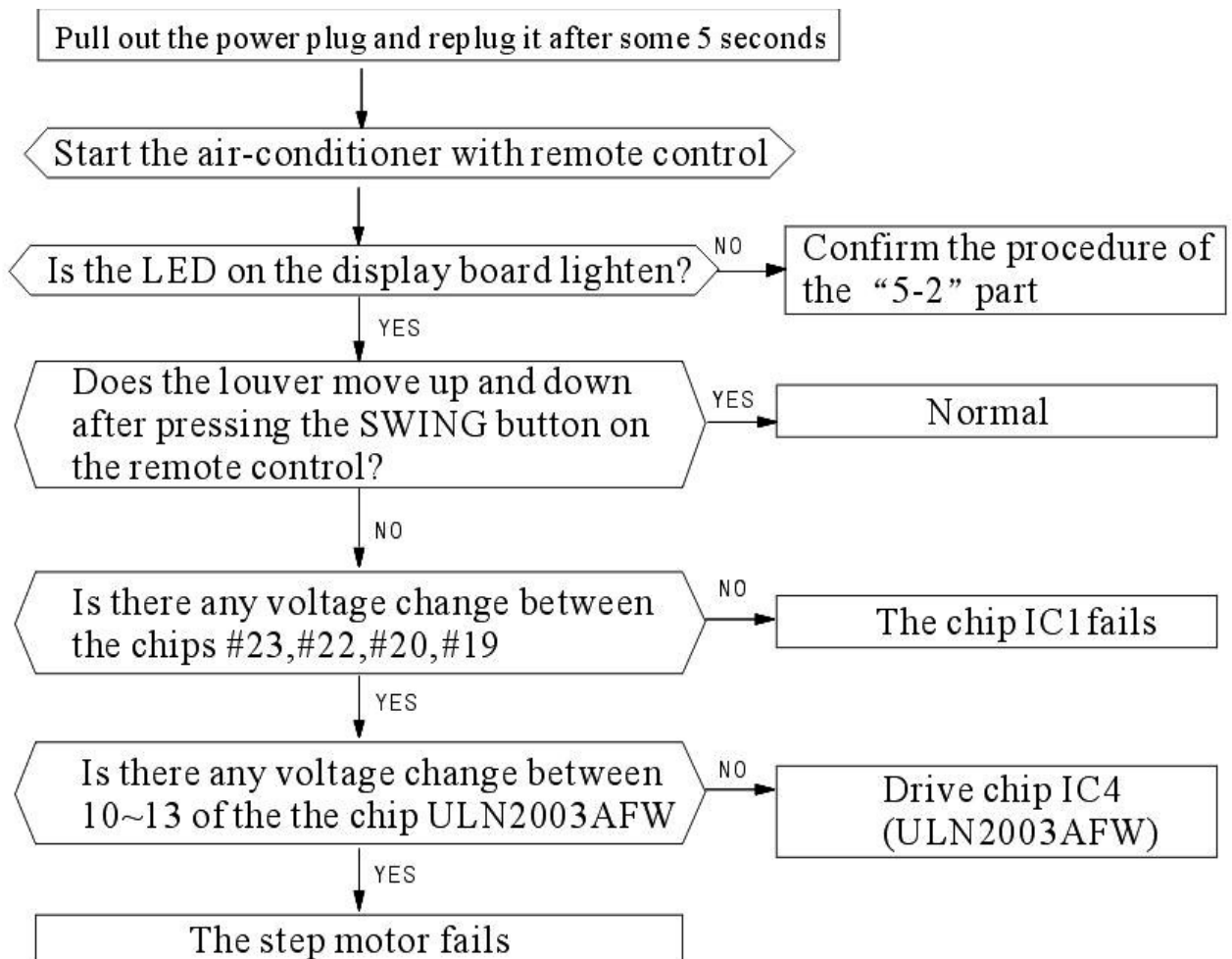
5. The Step Motor Does Not Work

(1) Items

a) Check if the input voltage is correct?

b) Check if the step motor controlling the up-down movement firmly connected to Cn2?

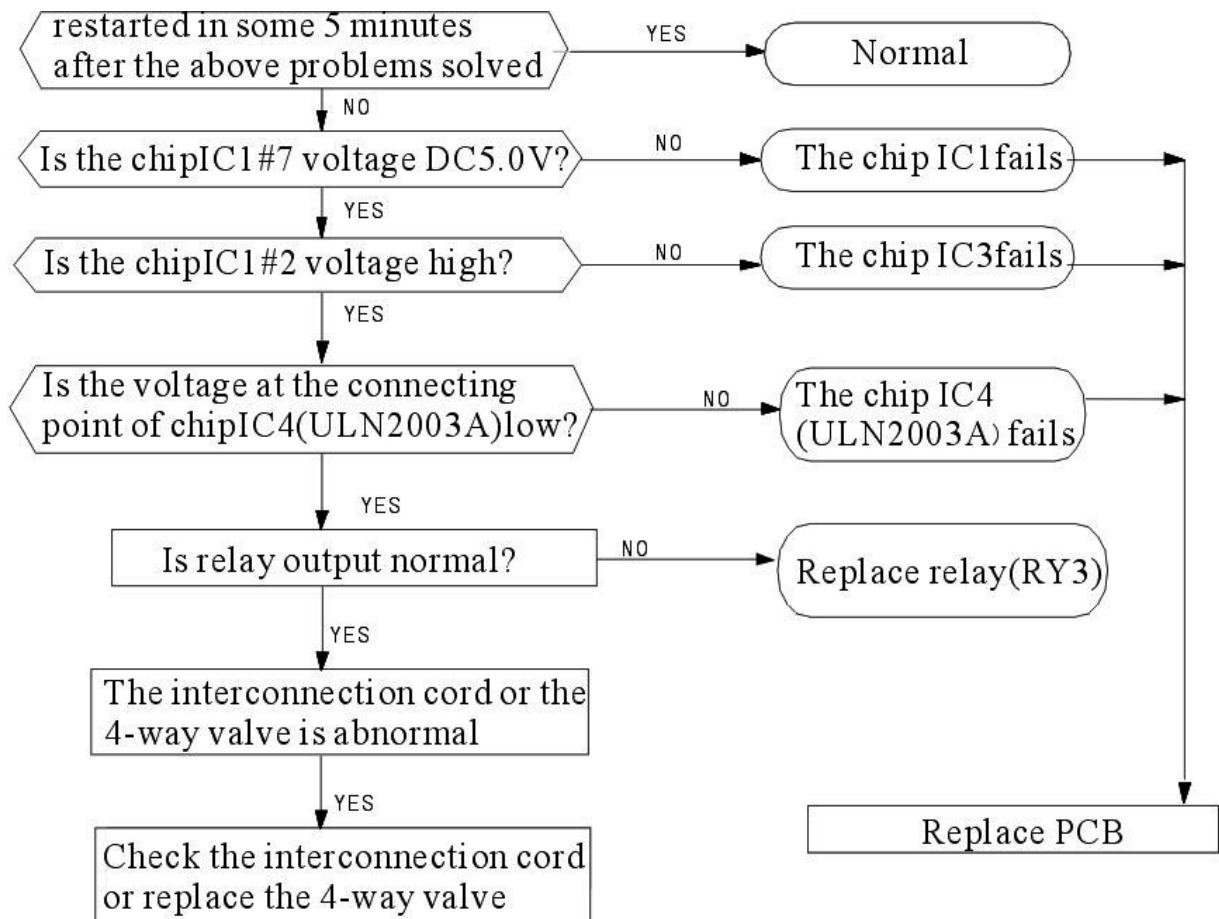
(2) Trouble shooting procedure



6. Heating Mode Can Work, But No Hot Air Blow

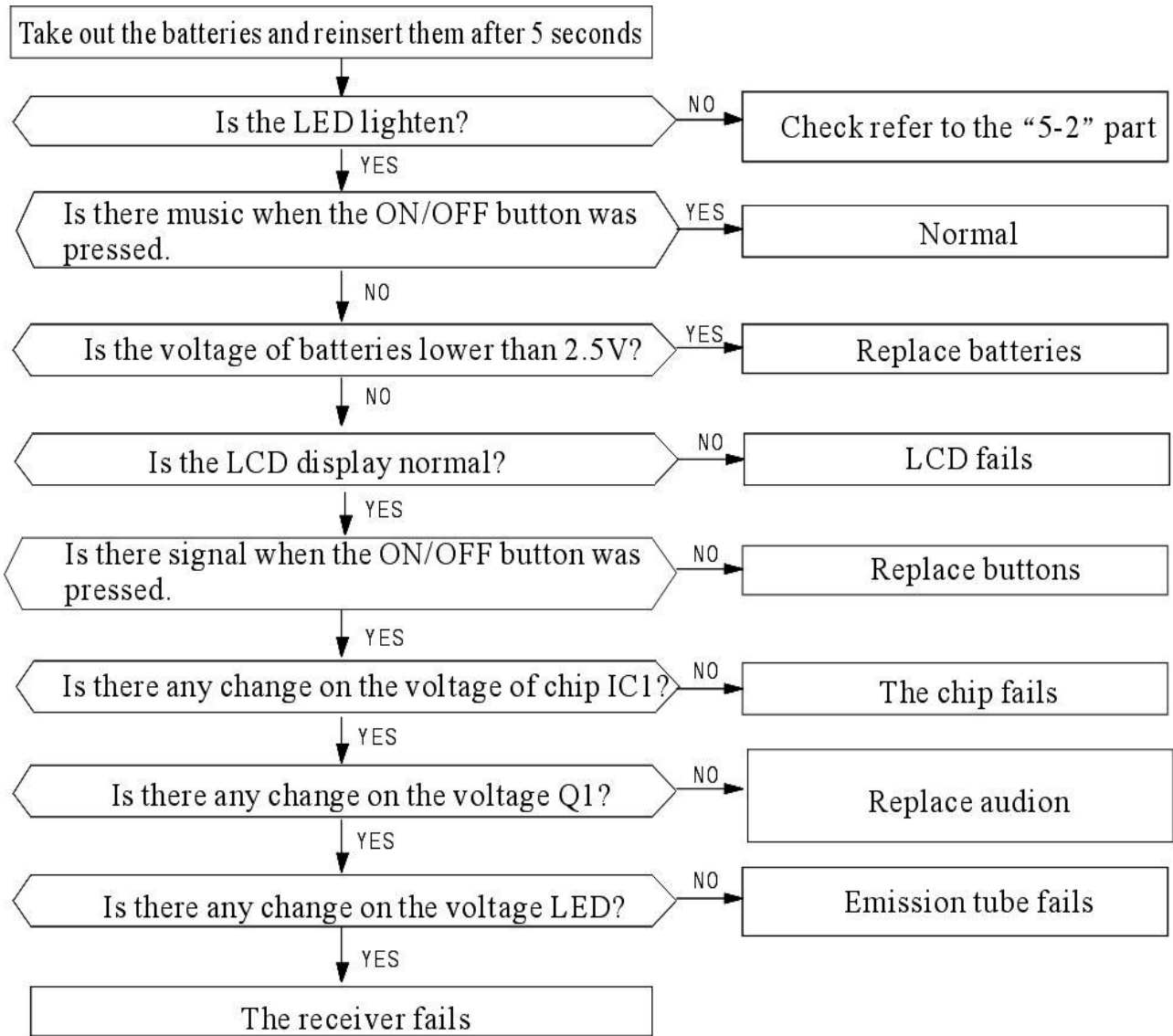
(1) Check if the set temperature is lower than the indoor temperature?

(2) Check if the indoor PCB is connected to the terminal correctly?



7. Remote Control Can Not Work

Trouble shooting procedure



8. The Failure Analysis of the Main Parts

Part	Analysis																										
Heat exchanger	Measure resistance																										
	Normal	<table border="1"> <thead> <tr> <th>Environment temperature</th> <th>15℃</th> <th>20℃</th> <th>25℃</th> <th>30℃</th> <th>35℃</th> <th>40℃</th> </tr> </thead> <tbody> <tr> <td>Resistance of transformer(KΩ)</td> <td>7.45</td> <td>6.08</td> <td>5</td> <td>4.13</td> <td>3.43</td> <td>2.86</td> </tr> </tbody> </table>	Environment temperature	15℃	20℃	25℃	30℃	35℃	40℃	Resistance of transformer(KΩ)	7.45	6.08	5	4.13	3.43	2.86											
		Environment temperature	15℃	20℃	25℃	30℃	35℃	40℃																			
Resistance of transformer(KΩ)	7.45	6.08	5	4.13	3.43	2.86																					
Abnormal	∞: Turn-off ; 0Ω: Short-cut																										
The indoor fan motor	Detecting the resistance between each connecting terminal																										
	Normal	Environment temperature (10℃ ~30℃) <table border="1"> <thead> <tr> <th colspan="2">Between</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>Blue、yellow</td> <td>Main</td> <td>410Ω ±10%</td> <td>350Ω ±10%</td> <td>370Ω ±10%</td> </tr> <tr> <td>Blue、red</td> <td>Auxiliary</td> <td>325Ω ±10%</td> <td>270Ω ±10%</td> <td>300Ω ±10%</td> </tr> <tr> <td colspan="2">Input</td> <td colspan="3">YYK13-4: 13W YYK19-4: 19W</td> </tr> </tbody> </table>	Between		1	2	3	Blue、yellow	Main	410Ω ±10%	350Ω ±10%	370Ω ±10%	Blue、red	Auxiliary	325Ω ±10%	270Ω ±10%	300Ω ±10%	Input		YYK13-4: 13W YYK19-4: 19W							
		Between		1	2	3																					
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Input		YYK13-4: 13W YYK19-4: 19W																									
Abnormal	∞: Turn-off ; 0Ω: Short-cut																										
Detecting the voltage between the signal wire of fan motor and ground																											
Normal	<table border="1"> <thead> <tr> <th>Between</th> <th>Voltage</th> </tr> </thead> <tbody> <tr> <td>Gray、Orange</td> <td>0.5V~4.5V</td> </tr> <tr> <td>Yellow、Orange</td> <td>5V</td> </tr> </tbody> </table>	Between	Voltage	Gray、Orange	0.5V~4.5V	Yellow、Orange	5V																				
Between	Voltage																										
Gray、Orange	0.5V~4.5V																										
Yellow、Orange	5V																										
Abnormal	voltage<0, voltage>5 is abnormal																										
Step motor	Normal	Environment temperature (10℃ ~30℃) <table border="1"> <thead> <tr> <th colspan="2">Between</th> <th>1</th> <th>2</th> <th>-</th> </tr> </thead> <tbody> <tr> <td colspan="2"></td> <td>24BYJ48</td> <td>35BYJ412B</td> <td>-</td> </tr> <tr> <td>Blue、yellow</td> <td>-</td> <td>Above 300Ω</td> <td>Around 120Ω</td> <td>-</td> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td colspan="2">Input</td> <td>1.5W</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Between		1	2	-			24BYJ48	35BYJ412B	-	Blue、yellow	-	Above 300Ω	Around 120Ω	-	-	-	-	-	-	Input		1.5W	-	-
		Between		1	2	-																					
				24BYJ48	35BYJ412B	-																					
Blue、yellow		-	Above 300Ω	Around 120Ω	-																						
-	-	-	-	-																							
Input		1.5W	-	-																							
Abnormal	∞: Turn-off ; 0Ω: Short-cut																										
The outdoor fan motor	Detecting the resistance between the red wire and every connecting end																										
	Normal	When the temperature is 20℃ ~30℃ ,around 300Ω and 120Ω																									
	Abnormal	∞: Turn-off ; 0Ω: Short-cut																									

8.3 Troubleshooting Guide for 18-24K

1. The Foremost Inspecting Items

(1)The input voltage must be within +10% tolerance of the rated Voltage. If it is not the case, the air-conditioner will probably not work normally.

(2)Check the connecting cord between indoor unit and outdoor unit to see if it is properly connected. The connecting must be done according to the wiring diagram, please also notice that even different models may have the connecting cord of the same specification.

Please check if the marks at the connecting terminal and the marks on the cord can match, otherwise, the air-conditioner will not work normally.

(3)If the following phenomena are found, the problem is not from the air-conditioner itself.

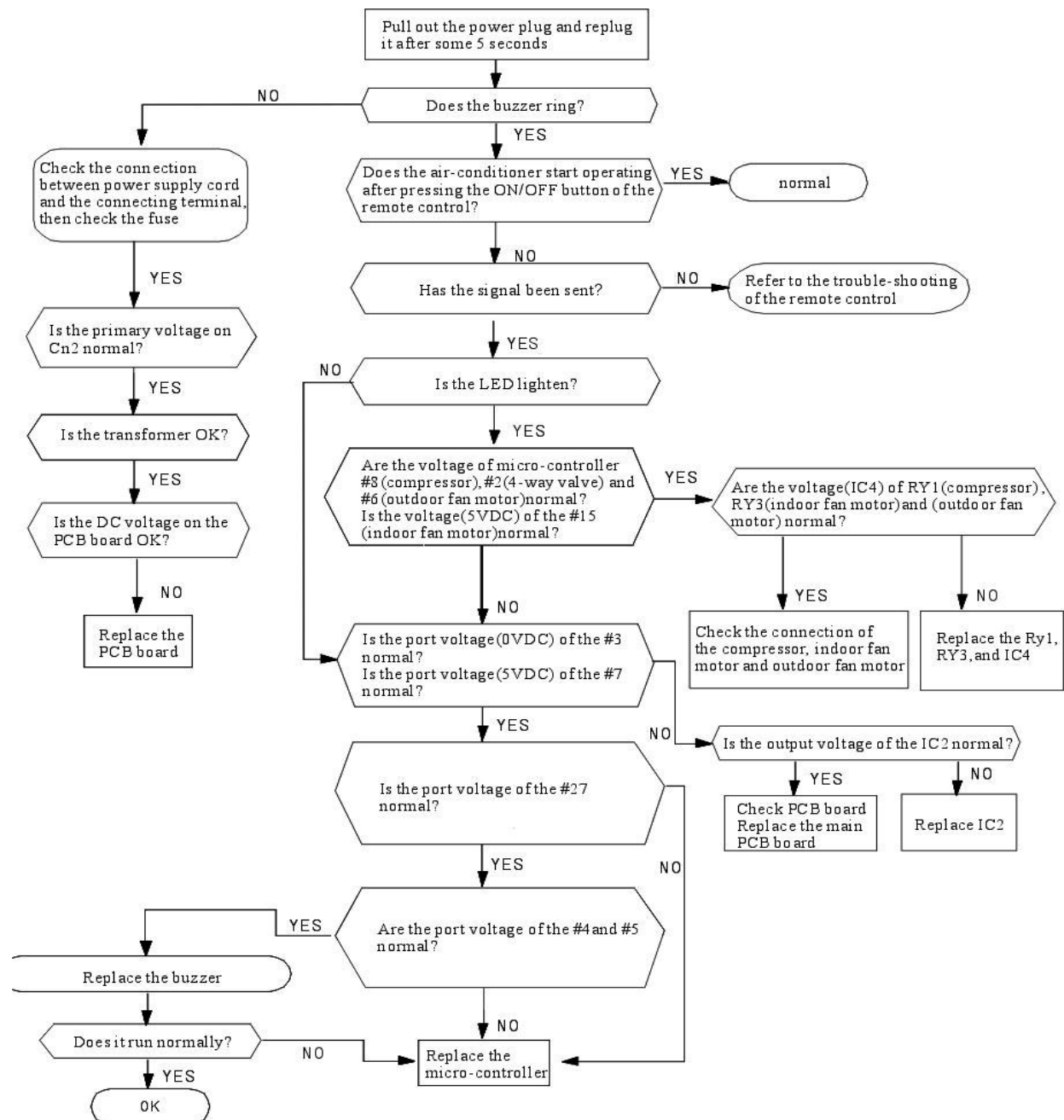
NO.	Problems	Causes
1	The motor is heard operating but the air-conditioner dose not work when the indoor unit is powered on	Since the air-conditioner is powered on, it will come to working condition as long as you press the ON/OFF button of the remote control and the signal is well received.
2	The compressor stops running but the indoor fan motor keeps working when it is at cooling mode with the indoor temperature higher than set temperature.	If you turn off the air-conditioner and restart it immediately, it will return to normal in 3 minutes, after that, the air-conditioner will automatically adjust the indoor fan speed to what you set.
3	The compressor works discontinuously at dehumidifying mode.	The air-conditioner will automatically control the working of the compressor according to the inside temperature
4	The air-conditioner does not work while the LED display is on.	The TIMER is set with the air-conditioner; it will be in hold on condition. If the TIMER setting is cancelled, the air-conditioner will return to normal working condition.
5	The compressor works discontinuously at cooling and dehumidifying mode, and the indoor fan motor slows down.	The compressor stops internally or the fan motor slows down to prevent the indoor heat exchanger from being frozen.

2. No Power Display

(1) Items

- ① Check if the input voltage is correct?
- ② Check if the AC power supply connecting is correct?
- ③ Check if the output voltage of the manostat L7805(IC2) is correct?

(2) Trouble shooting procedure

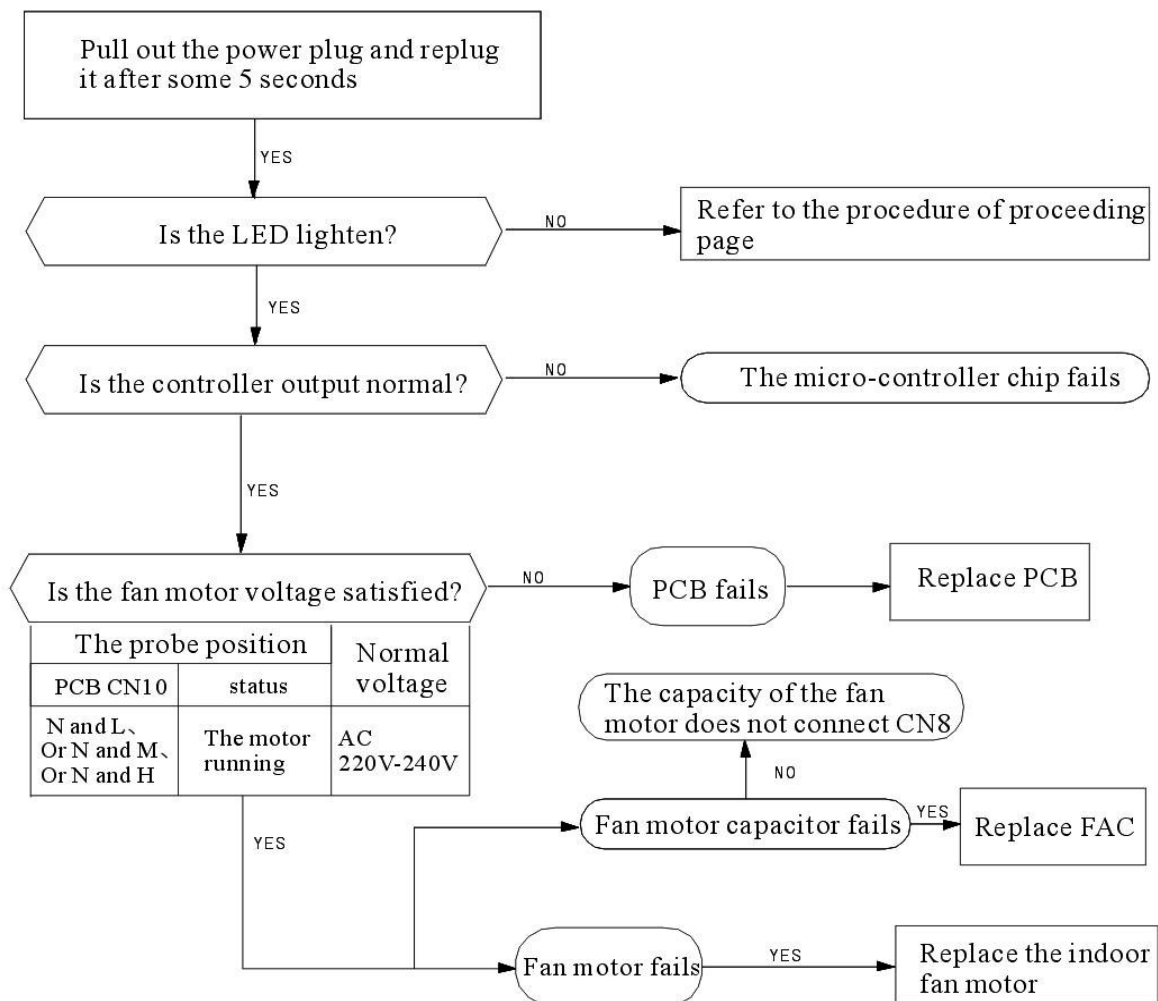


3. The Indoor Fan Motor Does Not Work

(1) Items

- ① Check if the indoor fan motor is connected correctly to the connector(CN8)?
- ② Check if the AC input voltage is correct?
- ③ Check if the IC of indoor fan motor is connected correctly to the connector(CN2)?
- ④ Check if the capacity of indoor fan motor is connected correctly to the connector(CN8)?

(2) Trouble shooting procedure

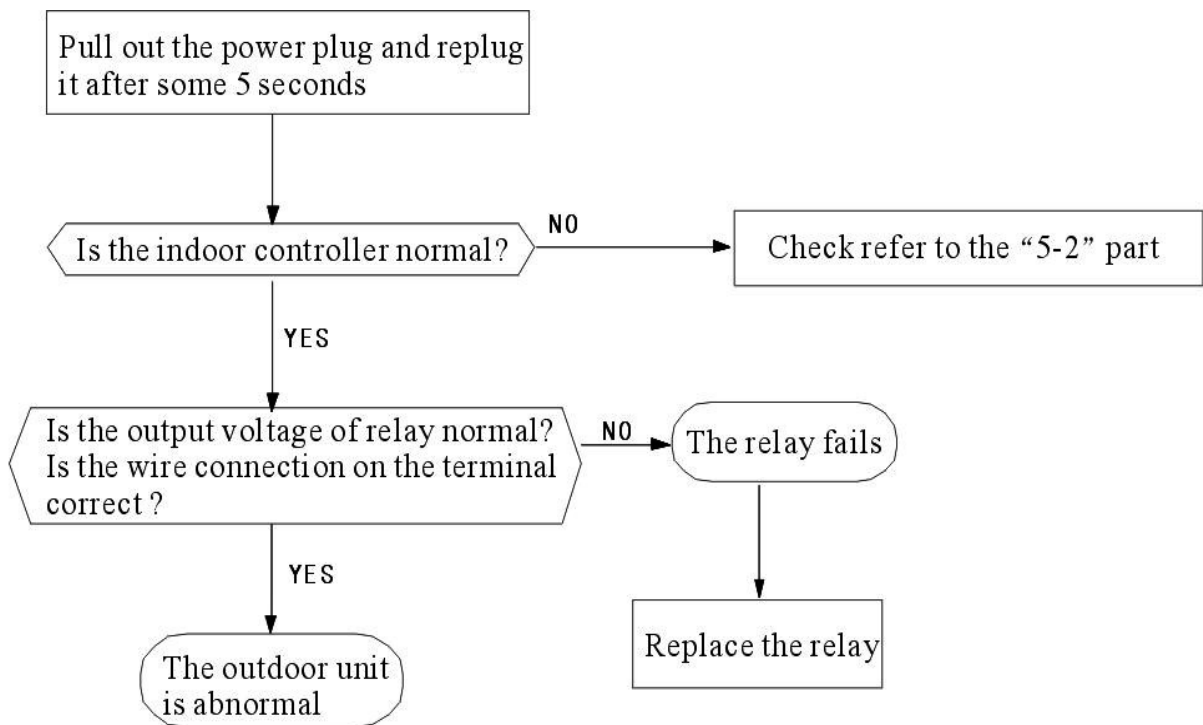


4. The Outdoor Unit Does Not Work

(1) Items

- ① Check if the input voltage is correct?
- ② Check if the wire connection of the outdoor connecting terminal is correct?

(2) Trouble shooting procedure



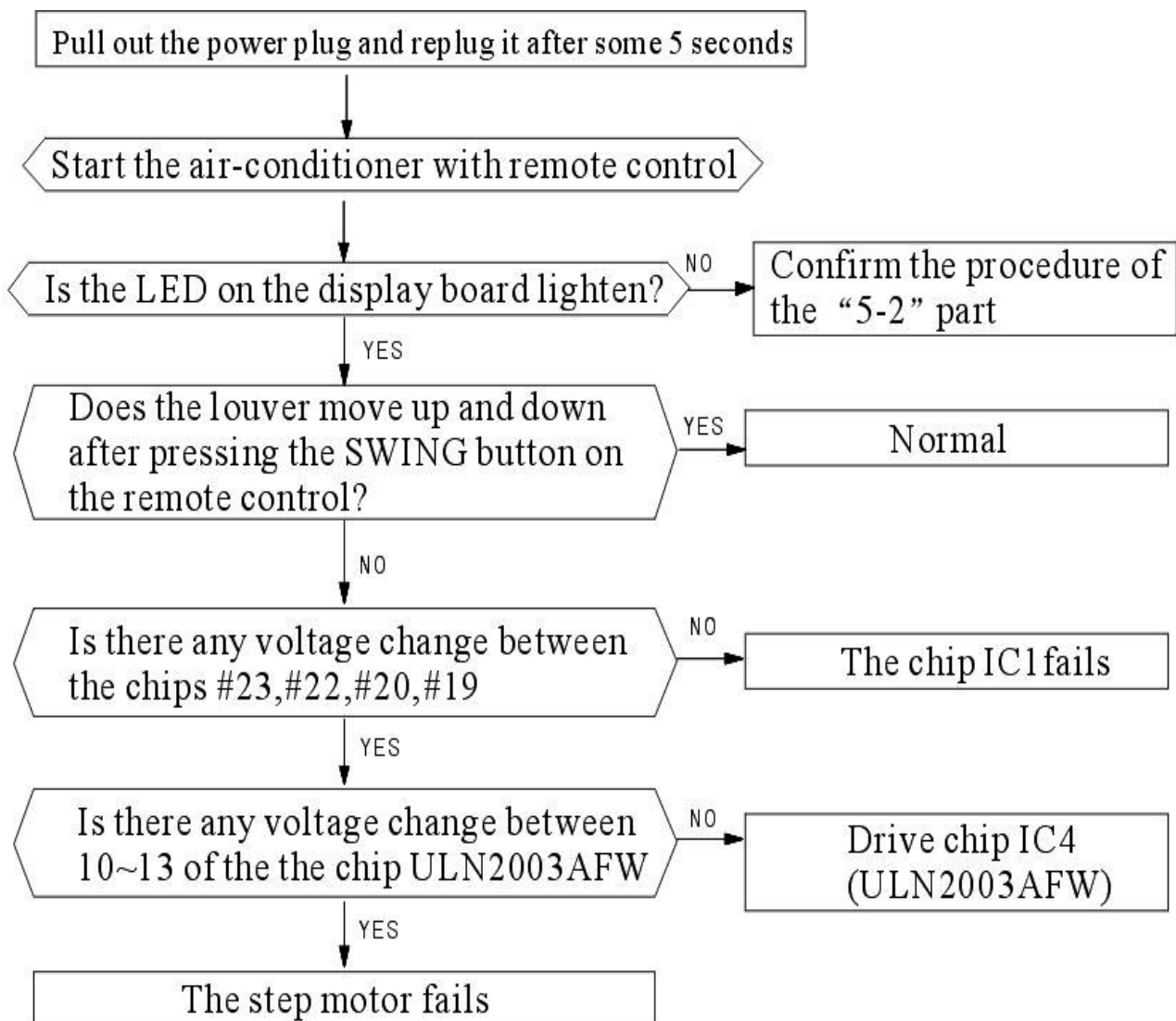
5. The Step Motor Does Not Work

(1)Items

①Check if the input voltage is correct?

②Check if the step motor controlling the up-down movement firmly connected to Cn2?

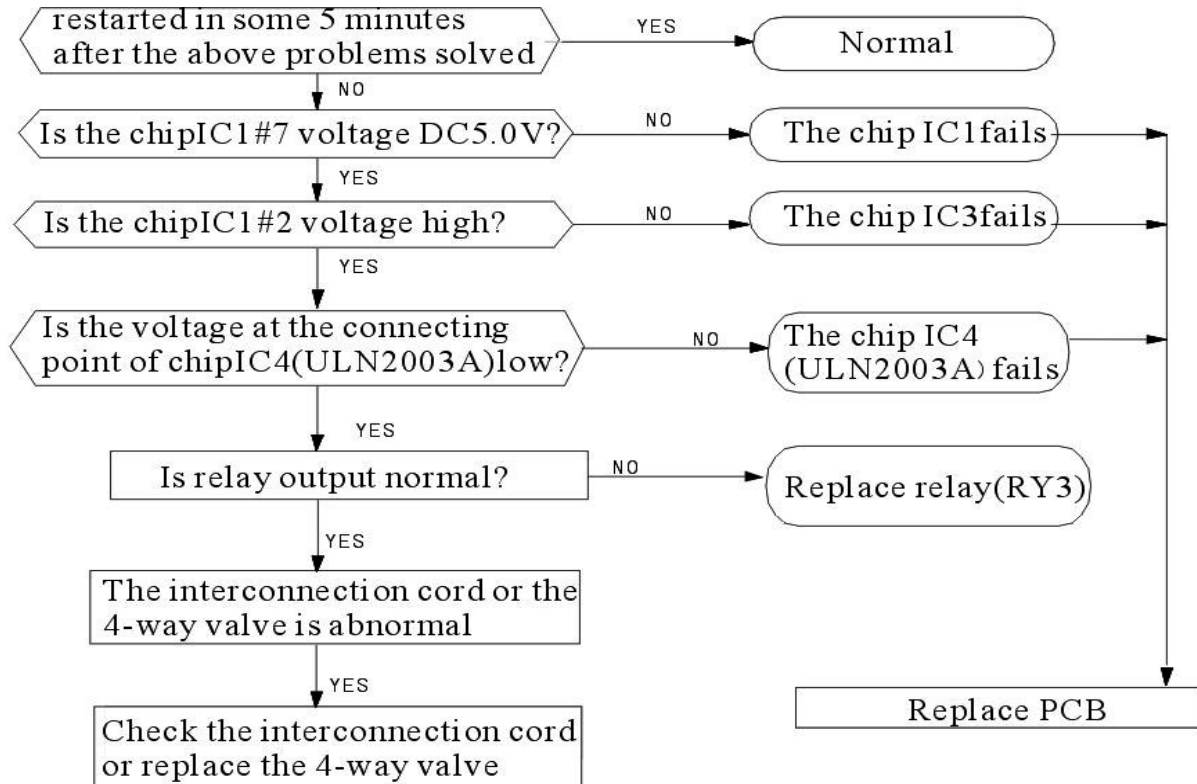
(2)Trouble shooting procedure



6. Heating Mode Can Work, But No Hot Air Blow

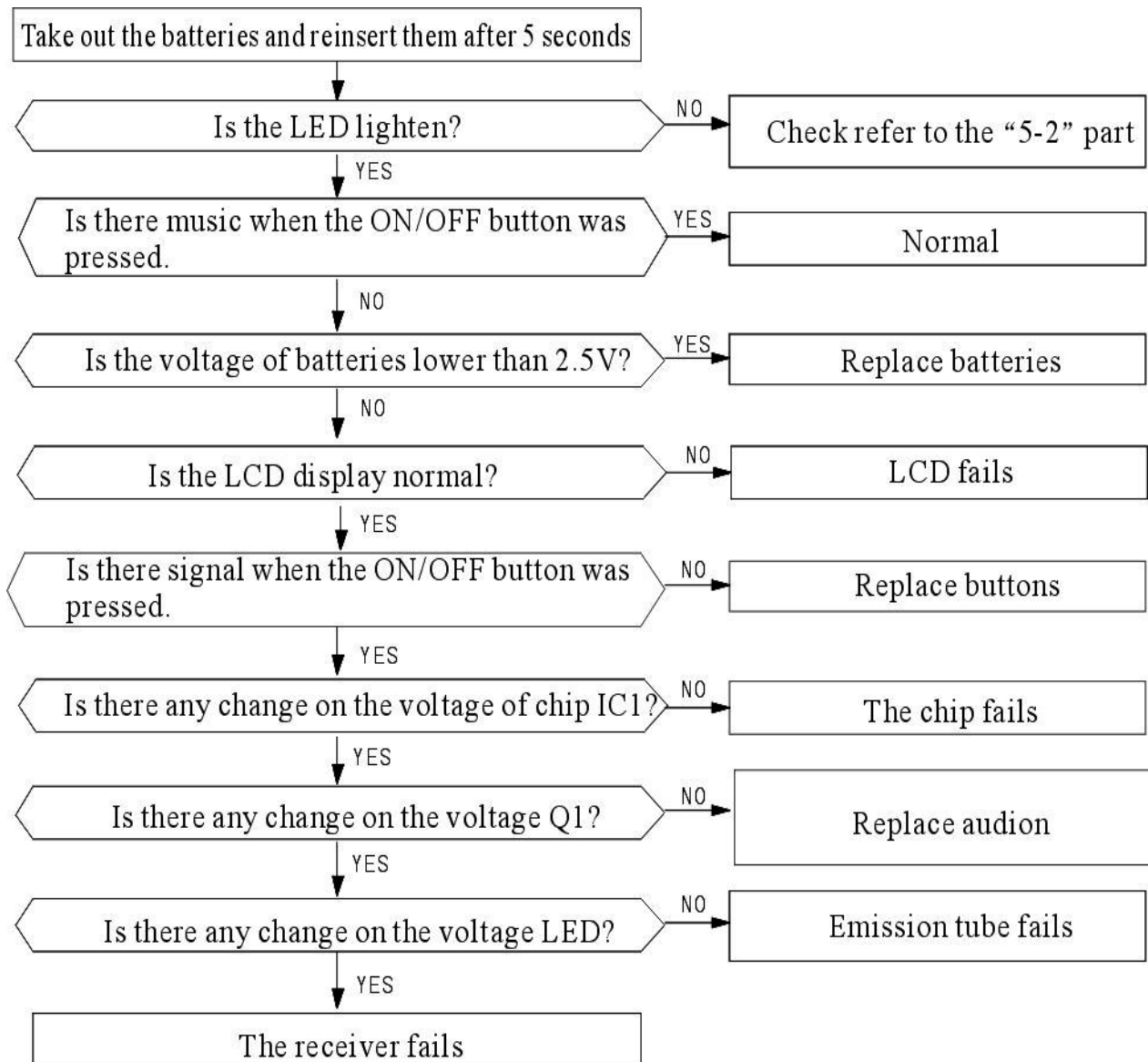
(1) Check if the set temperature is lower than the indoor temperature?

(2) Check if the indoor PCB is connected to the terminal correctly?



7. Remote Control Can Not Work

Trouble shooting procedure

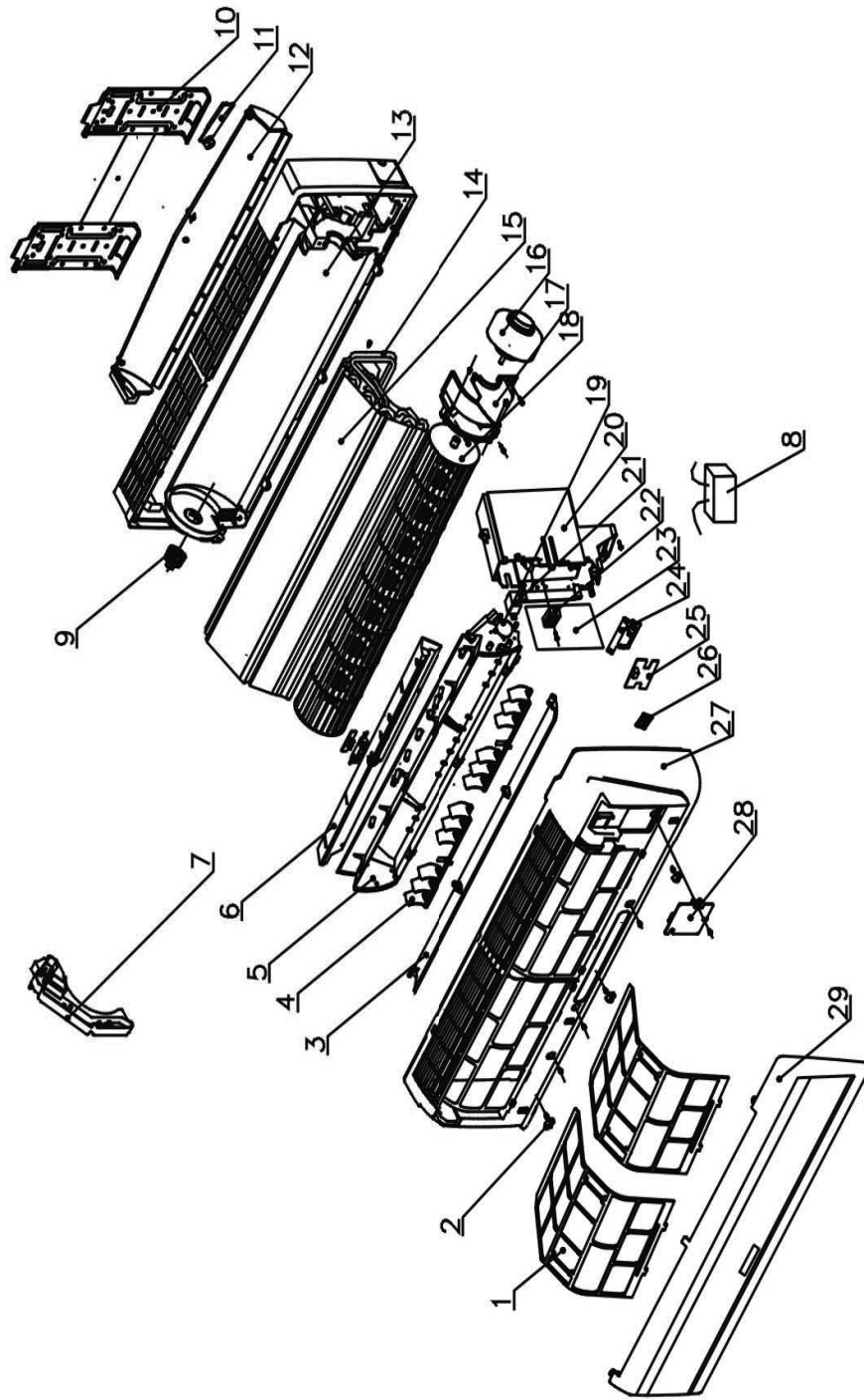


8. The Failure Analysis of the Main Parts

Part	Analysis							
Transformer Heat exchanger	Measure resistance							
	Normal	Environment temperature	15°C	20°C	25°C	30°C	35°C	40°C
		Resistance of transformer(KΩ)	7.45	6.08	5	4.13	3.43	2.86
Abnormal	∞ : Turn-off ; 0Ω : Short-cut							
Step motor	Normal	Environment temperature (10°C ~30°C)						
		Between	1		2		-	
			24BYJ48		35BYJ412B		-	
		Blue, yellow	-	Above300Ω		Around120Ω		-
		-	-	-	-	-	-	
Input	1.5W		-	-	-			
Abnormal	∞ : Turn-off ; 0Ω : Short-cut							
The outdoor fan motor	Detecting the resistance between the red wire and every connecting end							
	Normal	When the temperature is20°C ~30°C ,around 300Ω and 120Ω						
	Abnormal	∞ : Turn-off ; 0Ω : Short-cut						

Chapter 9 Exploded Views & Parts List

9.1 Indoor unit for 09/12K E#



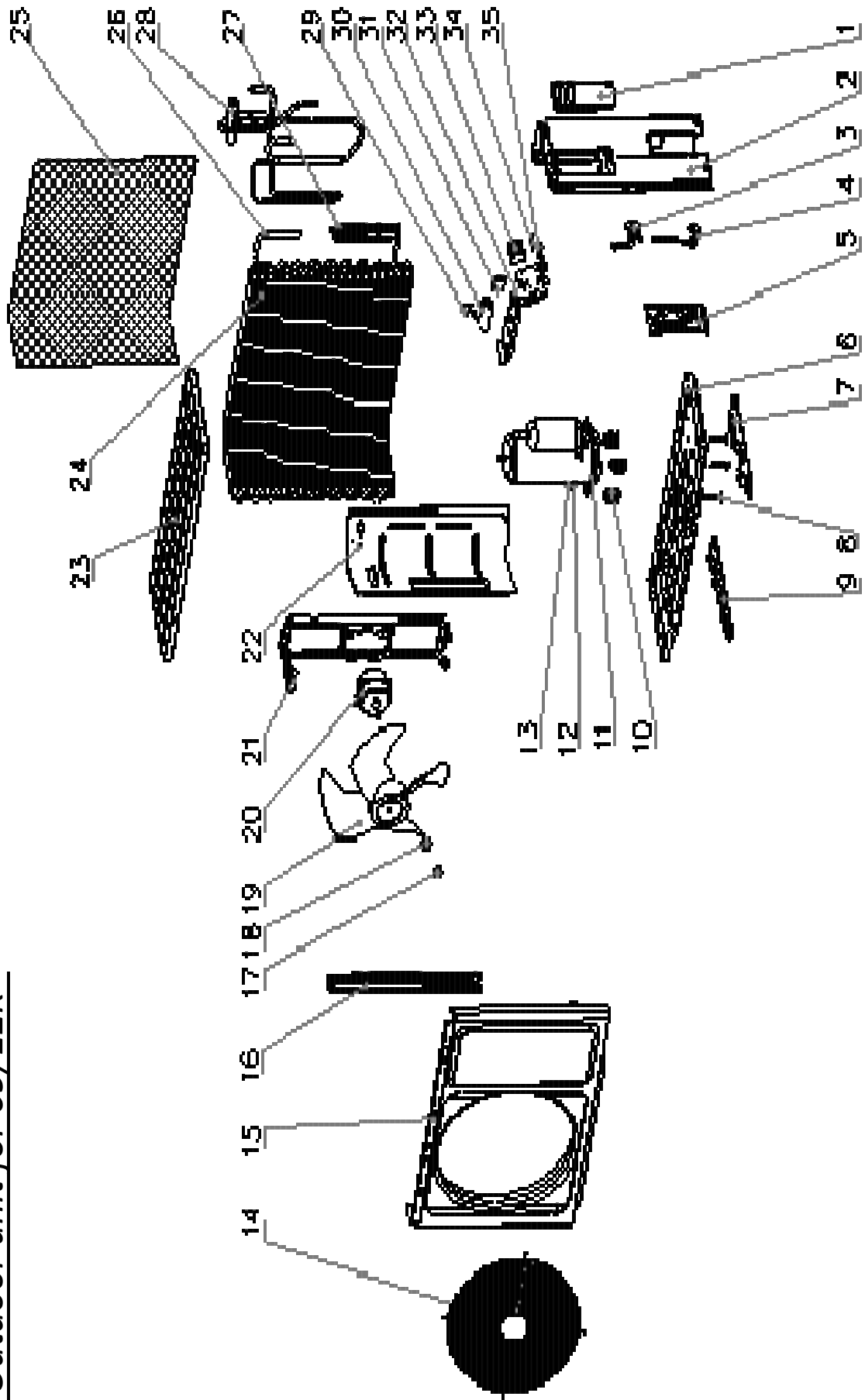
Parts List of Indoor unit for 09K

No	Name	Material	Number
1	Filter		2
2	Screw cover		3
3	Horizontal air blade		1
4	Vertical air blade		2
5	Air blade holder		1
6	Foam of air blade holder		1
7	Plastic holder for left crutch of evaporator		1
8	Negative ion generator		1
9	Plastic bearing holder		1
10	Mounting plate		1
11	Clamp of copper pipe		1
12	Foam of chassis		1
13	Chassis		1
14	Tubing		1
15	Evaporator		1
16	Indoor fan motor		1
17	Cover of indoor fan motor		1
18	Indoor fan		1
19	Step motor		1
20	Controller box		1
21	Transformer		1
22	Terminal board		1
23	Main PCB		1
24	Receiver holder of remote controller		1
25	Auxiliary PCB		1
26	Receiver window		1
27	Medium frame		1
28	Cover of medium frame		1
29	Panel		1

Parts List of Indoor unit for 12K

No	Name	Material	Number
1	Filter		2
2	Screw cover		3
3	Horizontal air blade		1
4	Vertical air blade		2
5	Air blade holder		1
6	Foam of air blade holder		1
7	Plastic holder for left crutch of evaporator		1
8	Negative ion generator		1
9	Plastic bearing holder		1
10	Mounting plate		1
11	Clamp of copper pipe		1
12	Foam of chassis		1
13	Chassis		1
14	Tubing		1
15	Evaporator		1
16	Indoor fan motor		1
17	Cover of indoor fan motor		1
18	Indoor fan		1
19	Step motor		1
20	Controller box		1
21	Transformer		1
22	Terminal board		1
23	Main PCB		1
24	Receiver holder of remote controller		1
25	Auxiliary PCB		1
26	Receiver window		1
27	Medium frame		1
28	Cover of medium frame		1
29	Panel		1

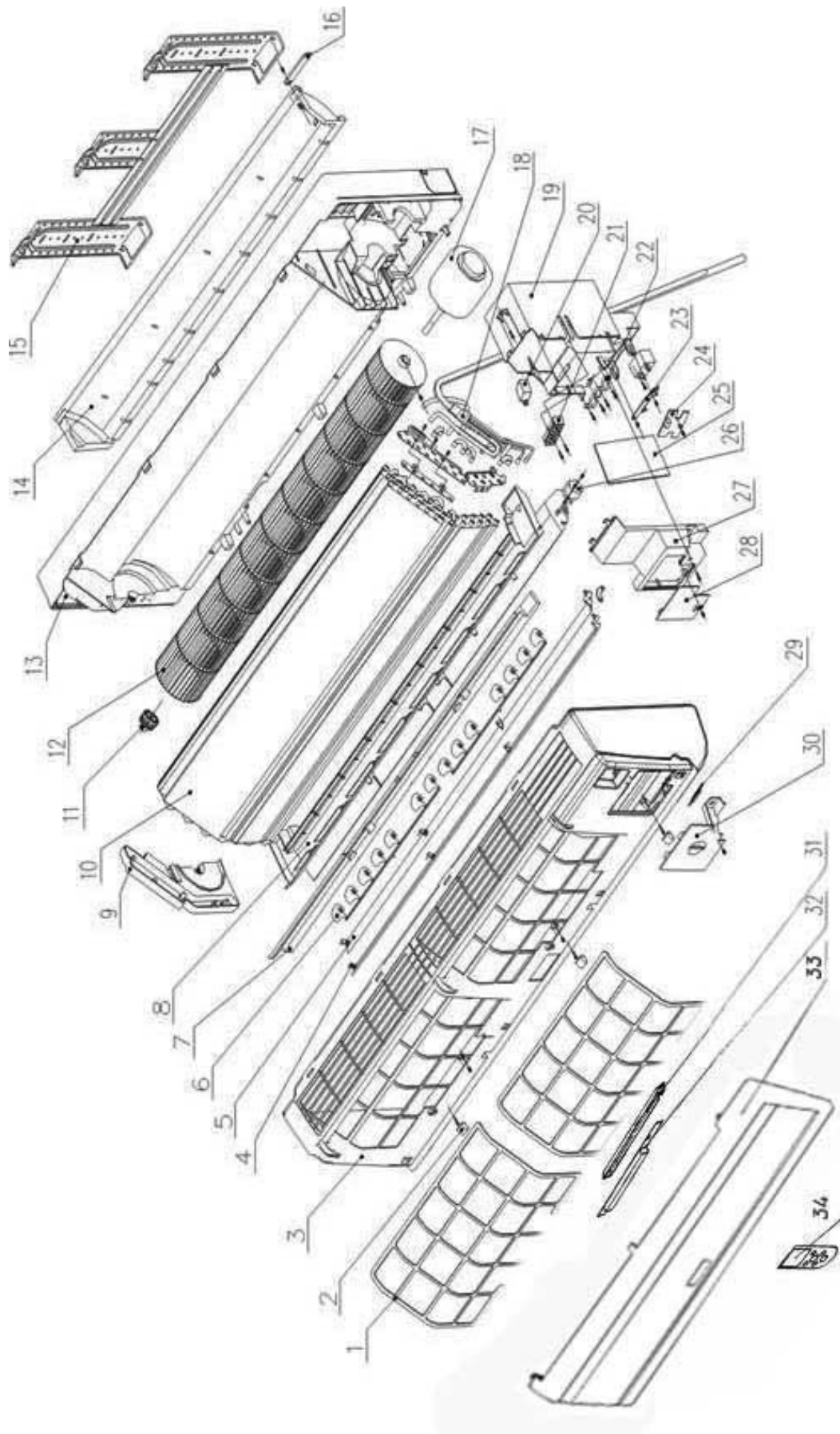
9.2 Outdoor unit for 09/12K



Parts List of Outdoor unit for 09/12K

NO	Item Description	Material	Qty
1	Cover for electric unit		1
2	Right-hand board		1
3	Gas valve		1
4	Liquid valve		1
5	Valve panel		1
6-9	Outdoor chassis		1
10-11	Compressor assembly		1
12-13	Type hex nuts and big gasket assemblies		3
14	Plastic panel net		1
15	Panel		1
16	Left propping board		1
17	Hex nut		1
18	Single coil spring lock washer slight type		1
19	Axial-flow wind leaves		1
20	Outdoor electric motor		1
21	Holder for electric motor		1
22	Wind-fending standing board		1
23	Top cover		1
24-27	Condenser assembly		1
28	Four-way valve		1
29	Capacitance embrace climb		1
30	Capacitor for compressor		1
31	Capacitor for motor		1
32	Holder for wiring unit		1
33	Terminal board		1
34	Power source jumper linking piece		1
35	Power source jumper linking piece floor		1
	Condens Coil temp sensor		1

9.3 Indoor unit for 18/24K E#



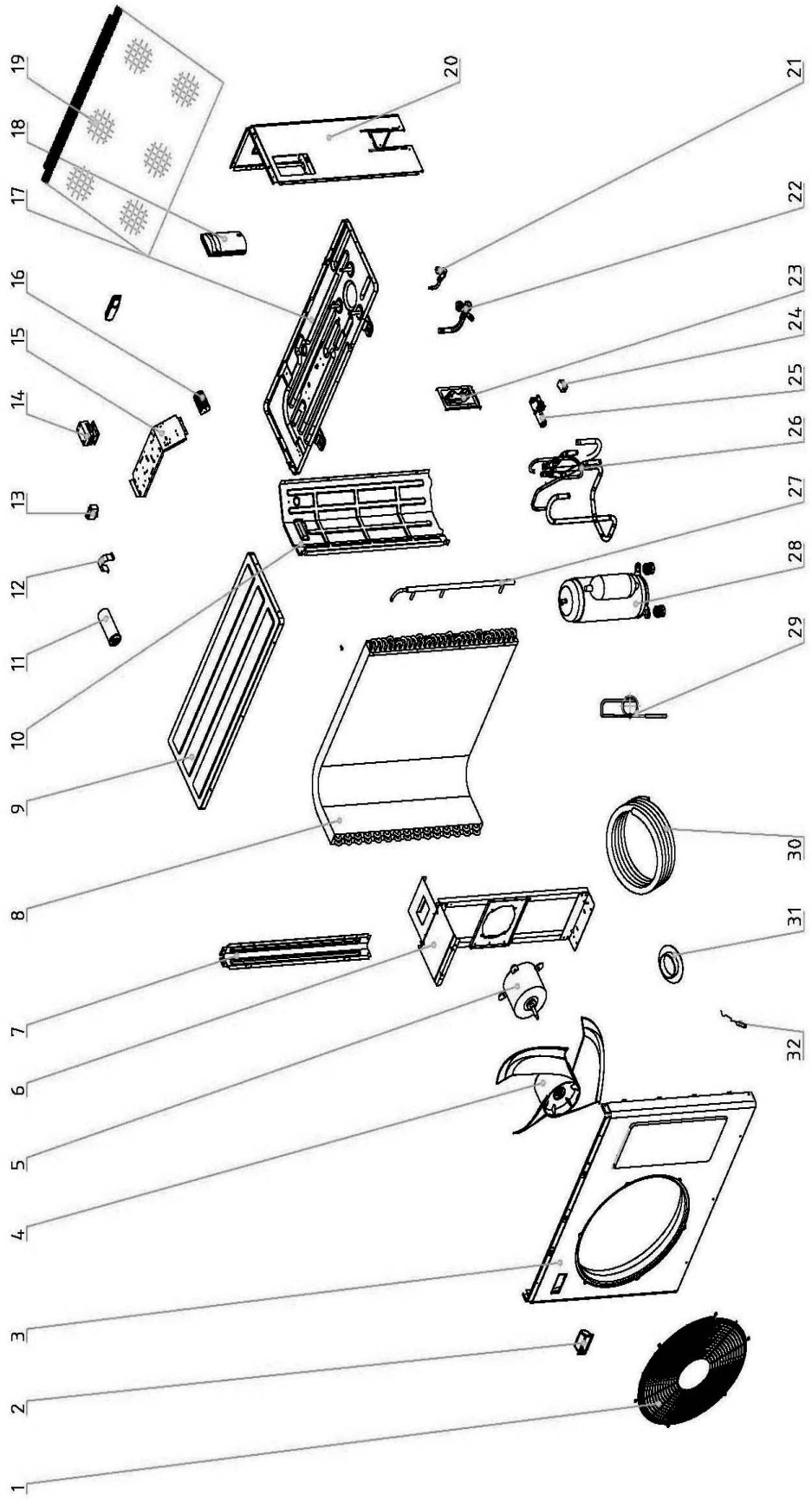
Parts List of Indoor unit for 18K

No.	Name	quantity	Material
1	Filter	2	
2	Screw cover	3	
3	Medium frame	1	
4	Horizontal air blade A	1	
5	Horizontal air blade B	1	
6	Vertical air blade	1	
7	Foam of air blade holder	3	
8	Air blade holder	1	
9	Plastic holder for left crutch	1	
10	evaporator	1	
11	plastic bearing holder	1	
12	Indoor fan	1	
13	Chassis	1	
14	Foam of chassis	1	
15	Mounting plate	1	
16	Pipe clap	1	
17	Indoor fan motor	1	
18	Catching pipe assembly	1	
19	Controller box	1	
20	transformer	1	
21	Terminal board	1	
22	Clamping plate	1	
23	Receiver holder of remote	1	
24	Auxiliary PCB 1	1	
25	Main PCB	1	
26	Step motor	1	
27	Control box	1	
28	Cover of the control box	1	
29	Window for receiving	1	
30	Cover of medium frame	1	
31	Board of indication lights	1	
32	Display board	1	
33	Panel	1	
34	Remote control	1	

Parts List of Indoor unit for 24K

No.	Name	quantity	Material
1	Filter	2	
2	Screw cover	3	
3	Medium frame	1	
4	Horizontal air blade A	1	
5	Horizontal air blade B	1	
6	Vertical air blade	1	
7	Foam of air blade holder	3	
8	Air blade holder	1	
9	Plastic holder for left crutch	1	
10	evaporator	1	
11	plastic bearing holder	1	
12	Indoor fan	1	
13	Chassis	1	
14	Foam of chassis	1	
15	Mounting plate	1	
16	Pipe clap	1	
17	Indoor fan motor	1	
18	Catching pipe assembly	1	
19	Controller box	1	
20	transformer	1	
21	Terminal board	1	
22	Clamping plate	1	
23	Receiver holder of remote	1	
24	Auxiliary PCB 1	1	
25	Main PCB	1	
26	Step motor	1	
27	Control box	1	
28	Cover of the control box	1	
29	Window for receiving	1	
30	Cover of medium frame	1	
31	Board of indication lights	1	
32	Display board	1	
33	Panel	1	
34	Remote control	1	

9.4 Outdoor unit for 18/24K E#



Parts List of Outdoor unit for 18K

No	Name	Number	Remarks
1	Panel net	1533R000021	
2	Handle		18/24K only
3	Panel	1506R000312	
4	Axial-flow fan	1843R000101	
5	Fan motor	16118000900A	
6	Motor bracket	1804R000100	
7	Support the left side of the plate	1804R000081	
8	Condenser assembly	1543R000272	
9	Top cover board	1831R000016	
10	Partition panel	1815R000100	
11	Compressor capacitor	1627R000200	
12	Hold capacitor climb	1811R000200	
13	Fan motor capacitor	1627R000109	
14	AC relay		24K only
15	Holder for wiring unit	1804R000500	
16	Terminal board	1557R000100	
17	Chassis assembly	1502R000020	
18	Handle	1831R000100	
19	Net back cover	1533R000012	
20	Right side plate	1805R000032	
21	Liquid valve assembly	1545R000372	
22	Gas valve assembly	1545R000272	
23	Valve panel	1815R000006	
24	Four way valve circuit	1545R000268A	
25			
26	Four way valve assembly	15450001125	
27	Condenser return air tube	15460000672	
28	Compressor	1543R100200	
29	Capillary assembly	15450002125	
30	Connecting pipe	T1518R180007	
31	Annex installation	1518R181700	
32	Outdoor coil temperature sensor		18/24 only

Parts List of Outdoor unit for 24K

No	Name	Number	Remarks
1	Panel net	1533R000021	
2	Handle		18/24K only
3	Panel	1506R000312	
4	Axial-flow fan	1843R000101	
5	Fan motor	16118000900A	
6	Motor bracket	1804R000100	
7	Support the left side of the plate	1804R000081	
8	Condenser assembly	1543R000272	
9	Top cover board	1831R000016	
10	Partition panel	1815R000100	
11	Compressor capacitor	1627R000200	
12	Hold capacitor climb	1811R000200	
13	Fan motor capacitor	1627R000109	
14	AC relay		24K only
15	Holder for wiring unit	1804R000500	
16	Terminal board	1557R000100	
17	Chassis assembly	1502R000020	
18	Handle	1831R000100	
19	Net back cover	1533R000012	
20	Right side plate	1805R000032	
21	Liquid valve assembly	1545R000372	
22	Gas valve assembly	1545R000272	
23	Valve panel	1815R000006	
24	Four way valve circuit	1545R000268A	
25			
26	Four way valve assembly	15450001125	
27	Condenser return air tube	15460000672	
28	Compressor	1543R100200	
29	Capillary assembly	15450002125	
30	Connecting pipe	T1518R180007	
31	Annex installation	1518R181700	
32	Outdoor coil temperature sensor		18/24 only

