AUX 奥克斯

Service Manual

Split-Type Air Conditioner

Q Series

On/Off

AUX Imp. & Exp. Company Limited

This manual is for professional maintenance personnel only

CONTENTS

AUX 奥克斯

Part I : Technical Information(根据具体机型删减内容)

1. Summary

1-1 Appearance

➢ **Indoor Unit**

QC   **QD**

QE   **QF**

➢ **Outdoor Unit**
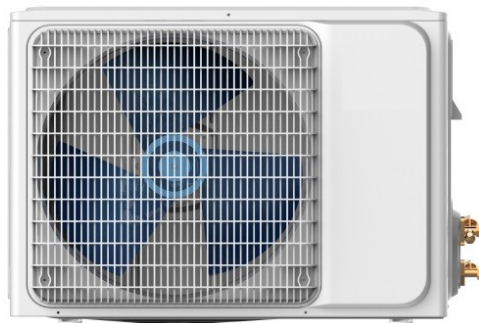
Note: The outdoor grille can be replaced.

1-2 Model List

NO.	MODEL
1	ASW-H09B6A4/QCR1-B5
2	ASW-H12C0C4/QCR1-B4
3	ASW-H18D4B4/QCR1-B4
4	ASW-H24E9A4/QCR1-B8

2. Outline Dimension Diagram

The following data is for reference only and the actual size may vary.

2-1 Indoor Unit

9K、12K

761

199

296

203   376   183

⌀55

⌀55

49

56

133   70

153

18K

822

198

295

236   375   210

⌀55   ⌀55

51   55

133   103   180

24K

1089

227

328

232   564   293

⌀55   ⌀55

53   60

157   75   258

2-2 Outdoor Unit

Unit:mm

9K 、 12K

18K

Unit:mm

Unit:mm
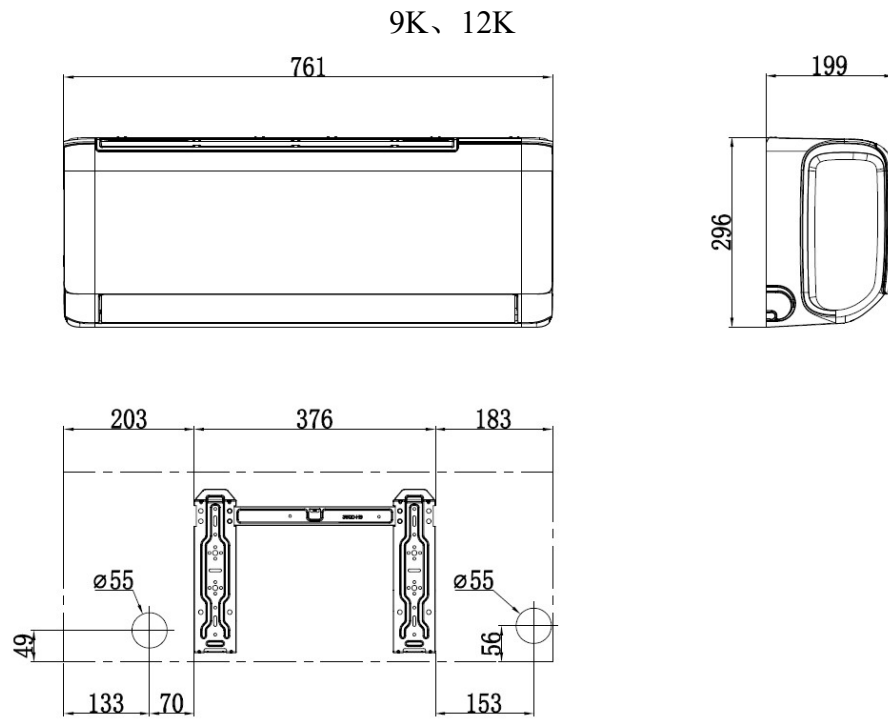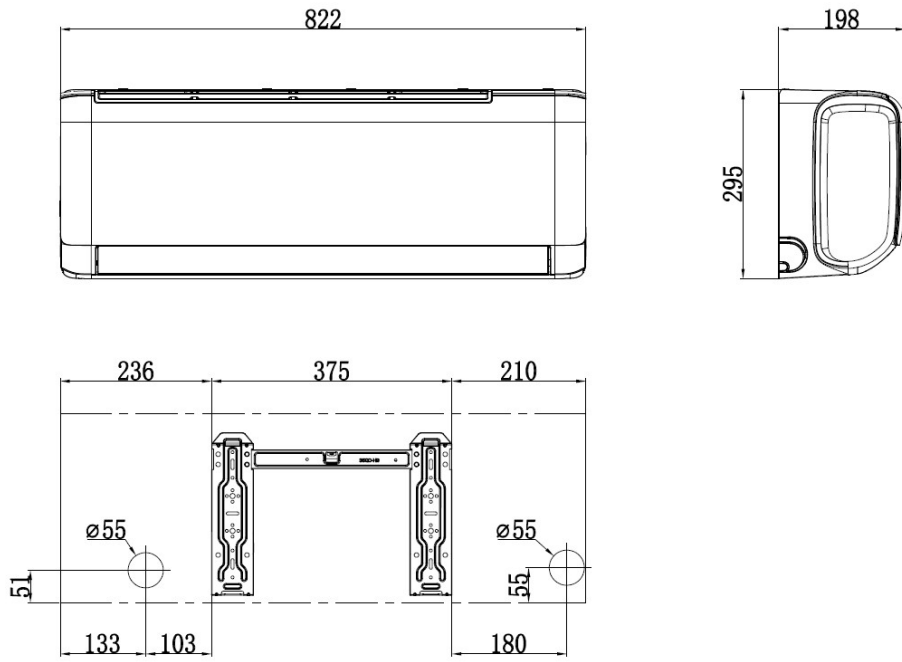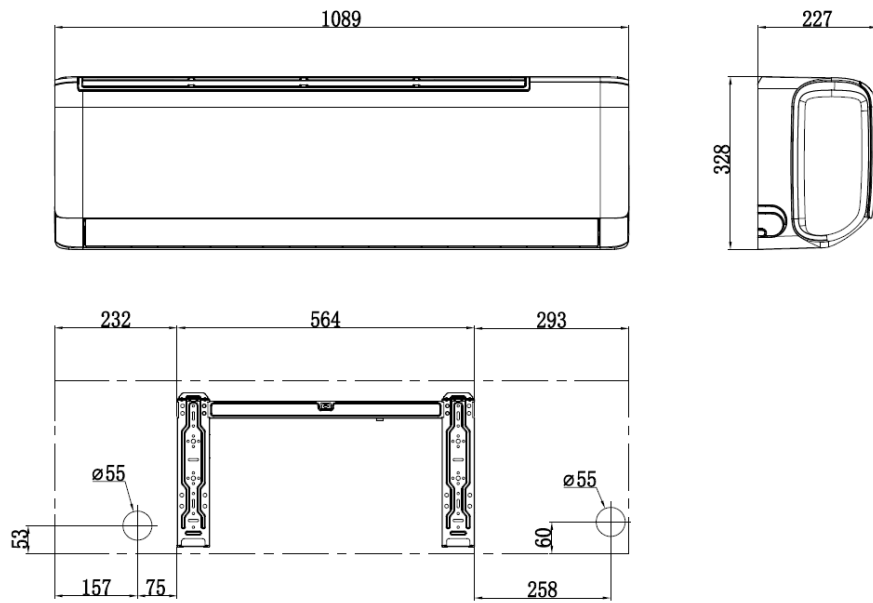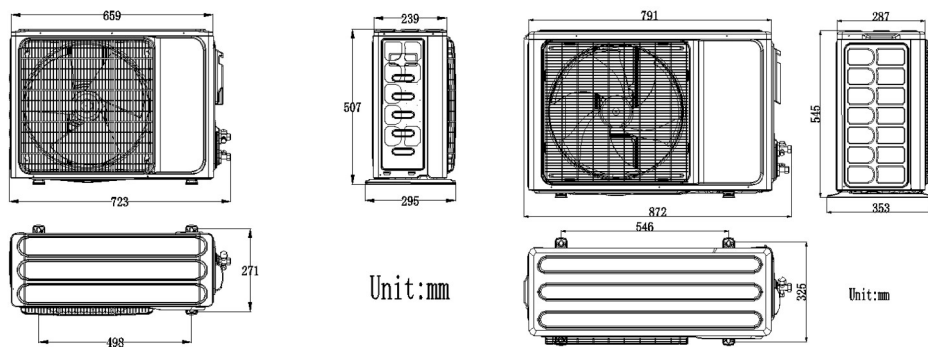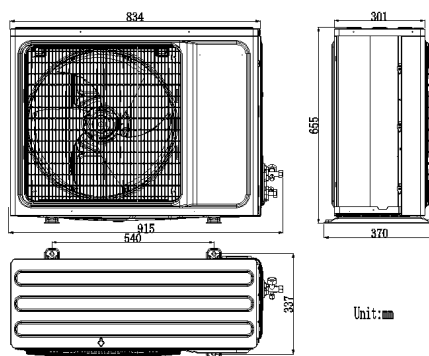
24K

3. Specification sheet

Product Model			ASW-H09B6A4/QCR1-B5	
Nameplate Parameter	Rated Capacity	Cooling	W	2640
		Heating	W	2600
		Dehumidifying	Kg/h	0.8
	Rated Power Consumption	Cooling	W	820
		Heating	W	720
	Rated Running Current	Cooling	A	3.6
		Heating	A	3.2
	Electric heating power		W	/
	Max. Input Power		W	1200
	Max. Input Current		A	6
	EER Cooling		W/W	3.22
	COP Heating		W/W	3.61
	Power supply source		V/Ph/Hz	220-240V-1-50Hz
	Refrigerant			R410A
	Refrigerant Charged		g	475
	Max. Discharge Pressure		Mpa	4.15

	Max. Suction Pressure			Mpa	1.15
	Air Flow Volume			m3/h	600
	Noise level			dB（A）	42
	Noise level			dB（A）	51
	Indoor unit weight （Net）			Kg	7.5
	Outdoor unit weight (Net)			Kg	24
Indoor unit configuration	evaporator	Tube	Length	mm	562
			Diameter	mm	5
	Motor system	Motor	Model	Pcs	YYK18-4B
	Dimension	Net Dimension(W*D*H)		mm	761*295*200
		Packing Dimension(W*D*H)		mm	825*367*277
Connection	Stop Valve		Liquid Valve		DG4
			Gas Valve		DG8
Outdoor unit configuration	Compressor Model				KSN95V11VDZ3
	Compressor Parameter	Brand			MGCC
	Motor system	Motor	Model		YDK25-6
	Condenser	Tube	Length	mm	622
			Diameter	mm	7
	Dimension	Net Dimension (W*D*H)		mm	660×500×265
		Packing Dimension (W*D*H)		mm	780*345*570
Container Loading 20/40/40HC				Set	291

Product Model				**ASW-H12C0C4/QCR1-B4**	
Nameplate Parameter	Rated Capacity	Cooling	W	3100	
		Heating	W	3230	
		Dehumidifying	Kg/h	1	
	Rated Power Consumption	Cooling	W	1290	
		Heating	W	1060	
	Rated Running Current	Cooling	A	6	
		Heating	A	5.6	
	Electric heating power		W	/	
	Max. Input Power		W	1650	
	Max. Input Current		A	8.5	
	EER Cooling		W/W	2.4	
	COP Heating		W/W	3.05	
	Power supply source		V/Ph/Hz	220-240V~/50Hz	
	Refrigerant			R410A	
	Refrigerant Charged		g	510	
	Max. Discharge Pressure		Mpa	4.15	
	Max. Suction Pressure		Mpa	1.15	
	Air Flow Volume		m3/h	600	

	Noise level			dB（A）	44
	Noise level			dB（A）	53
	Indoor unit weight （Net)			Kg	7.5
	Outdoor unit weight （Net)			Kg	24.5
Indoor unit configuration	evaporator	Tube	Length	mm	562
			Diameter	mm	5
	Motor system	Motor	Model	Pcs	YYK18-4F
	Dimension	Net Dimension(W*D*H)		mm	761×295×200
		Packing Dimension(W*D*H)		mm	825×367×277
Connection	Stop Valve		Liquid Valve		DG4
			Gas Valve		DG8
Outdoor unit configuration	Compressor Model				KSM135V3VDZ
	Compressor Parameter	Brand			GMCC
	Motor system	Motor	Model		KSM135V3VDZ
	Condenser	Tube	Length	mm	622
			Diameter	mm	7
	Dimension	Net Dimension (W*D*H)		mm	660×500×240
		Packing Dimension (W*D*H)		mm	780×570×345
Container Loading 20/40/40HC				Set	291

Product Model					**ASW-H18D4B4/QCR1-B4**
Nameplate Parameter	Rated Capacity		Cooling	W	4300
			Heating	W	4550
			Dehumidifying	Kg/h	1
	Rated Power Consumption		Cooling	W	1580
			Heating	W	1360
	Rated Running Current		Cooling	A	7.3
			Heating	A	6.3
	Electric heating power			W	/
	Max. Input Power			W	2200
	Max. Input Current			A	13
	EER Cooling			W/W	2.72
	COP Heating			W/W	3.35
	Power supply source			V/Ph/Hz	220-240V~/50Hz
	Refrigerant				R410A
	Refrigerant Charged			g	980
	Max. Discharge Pressure			Mpa	4.15
	Max. Suction Pressure			Mpa	1.15
	Air Flow Volume			m3/h	650

	Noise level		dB（A）	44
	Noise level		dB（A）	55
	Indoor unit weight （Net)		Kg	8.5
	Outdoor unit weight （Net)		Kg	35.5
Indoor unit configuration	evaporator	Tube	Length	mm	622
			Diameter	mm	5
	Motor system	Motor	Model	Pcs	YYK18-4F
	Dimension	Net Dimension(W*D*H)		mm	822*295*200
		Packing Dimension(W*D*H)		mm	885*367*277
Connection	Stop Valve		Liquid Valve		Dg4
			Gas Valve		Dg10
Outdoor unit configuration	Compressor Model				ASL190UY-C7EQD
	Compressor Parameter	Brand			HIGHLY
	Motor system	Motor	Model		YDK31-6A
	Condenser	Tube	Length	mm	881
			Diameter	mm	7.94
	Dimension	Net Dimension (W*D*H)		mm	800×545×315
		Packing Dimension (W*D*H)		mm	920×620×400
Container Loading 20/40/40HC				Set	214

Product Model				**ASW-H24E9A4/QCR1-B8**
Nameplate Parameter	Rated Capacity	Cooling	W	6300
		Heating	W	6300
		Dehumidifying	Kg/h	2.4
	Rated Power Consumption	Cooling	W	1960
		Heating	W	1700
	Rated Running Current	Cooling	A	8.7
		Heating	A	7.5
	Electric heating power		W	/
	Max. Input Power		W	2950
	Max. Input Current		A	15.7
	EER Cooling		W/W	3.21
	COP Heating		W/W	3.71
	Power supply source		V/Ph/Hz	220～240V-1-50Hz
	Refrigerant			R410A
	Refrigerant Charged		g	1380
	Max. Discharge Pressure		Mpa	4.15
	Max. Suction Pressure		Mpa	1.15
	Air Flow Volume		m3/h	1150

	Noise level			dB（A）	51.5
	Noise level			dB（A）	57
	Indoor unit weight （Net)			Kg	13
	Outdoor unit weight （Net)			Kg	46
Indoor unit configuration	evaporator	Tube	Length	mm	850
			Diameter	mm	7
	Motor system	Motor	Model	Pcs	D-310-50-10A
	Dimension	Net Dimension(W*D*H)		mm	1089×328×227
		Packing Dimension(W*D*H)		mm	1155×397×312
Connection	Stop Valve		Liquid Valve		DG4
			Gas Valve		DG13
Outdoor unit configuration	Compressor Model				GSH239UY-C8DU1
	Compressor Parameter	Brand			HIGHLY
	Motor system	Motor	Model		YDK69-6B
	Condenser	Tube	Length	mm	791
			Diameter	mm	7
	Dimension	Net Dimension (W*D*H)		mm	825×655×310
		Packing Dimension (W*D*H)		mm	945×725×435
Container Loading 20/40/40HC				Set	155

4. Function and Control

4-1 H-Style

1) Remote Controller Introduction

➤ **Introduction for Buttons on Remote Controller**
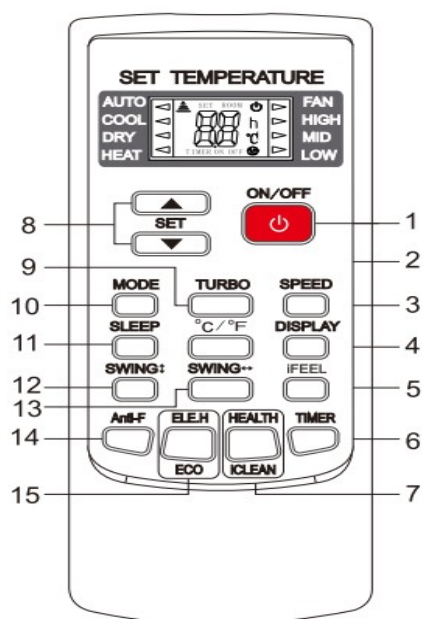
Note：

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. Some functions are optional and don't work according to the model.

1. ON/OFF
* Press this button to turn on/off the unit.
* This will clear the existing timer and SLEEP settings.
2. ℃/℉
* Press this button to set the temperature display to Fahrenheit, which is displayed by default in Celsius. The "℃" will not be displayed on the LCD.
* Press this button again to restore the temperature display to Celsius.
Note: Temperature display in Fahrenheit is not available for some models. When temperature is displayed in Fahrenheit on the remote controller, it might be in Celsius on the unit, the function and operation of which will not be affected.
3. SPEED
* Press this button, you can select the motor speed as follows:
Low → Mid → High → Auto
Note: AUTO air speed is not available in fan mode.
4. DISPLAY
* Press this button to turn on/off the display. This is for the convenience of users who are unconformable sleeping with the backlight on.
5. iFEEL
* Press this button to set the temperature display on the remote controller to ambient temperature and press this button again to set it to preset temperature.
6. TIMER

* With the unit ON, press this button to set OFF timer or with it OFF to set ON timer.
* Press this button once, a "ON(OFF)" will flash. Press "▲"or " ▼" to set the number of hours in which the unit will be turned ON/OFF, with an interval of 0.5 hour if less than 10 hours, or 1 hour if longer than 10 hours and a range of 0.5-24 hours.
* Press it again to confirm the setting the "ON (OFF)" will stop flashing.
* If the timer button is not pressed longer than 10 seconds after the "ON (OFF)" start flashing, the timer setting will be exited.
* If a timer setting is confirmed, pressing this button again will cancel it.
Note: When a ON timer is set, all function buttons (except SLEEP DISPLAY and iFEEL can't be set) are valid and when the ON time set is up, the unit will operate as preset.

7. HEALTH/iCLEAN **This button has two functions.**
a. HEALTH
* Press this button with the unit ON to activate health related functions, such as negative ion, electrostatic precipitation, PM2.5 removal, etc, depending on the actual configuration of each model.
* Press this button again to deactivate the HEALTH function.
b. iCLEAN
* Press this button with the unit OFF, the remote controller will display "CL" and the unit will automatically clean dust off the evaporator and dry it, to increase the cooling and heating efficiency.
* The iCLEAN function runs for approximately 30 minutes, during which if the unit is turned on with the remote controller or this button is pressed again, the iCLEAN will be deactivated.

8. ▲ or ▼
* Each time the "▲" is pressed, the temperature setting will increase by 1℃ and each time the "▼" is pressed, it will decrease by 1℃.
* a. lf the type of controller remote is YKR-H/101E or YKR-H/102E setting temperature range is 16℃~32℃(60℉~90℉).
b. lf the type of controller remote is YKR-H/132E setting temperature range is 20℃~28℃ (68℉~82℉).
c. Some area don't have the YKR-H/132E.Local regulation and actual object shall prevail.
Note: The temperature cannot be set in AUTO or fan mode, thus these two buttons are not functional.

9. TURBO
* Press this button only in COOL or HEAT mode to set TURBO on or off to speedy the cooling or heating.
* When TURBO is on the air speed is HIGH.
* When TURBO is off the air speed will restore to previous status.

10. MODE
* Press this button you can select the running mode as follows:

    → AUTO → COOL → DRY → HEAT →FAN ⌐

Note: HEAT mode is not available for cool only units.

11. SLEEP

* Press this button to enter SLEEP mode, which the unit will exit after 10 hours of continuous operation and restore to the previous status.

Note: The SLEEP function cannot be activated in fan mode.

12. SWING ↕

* Press this button to activate up/down swing and press it again to fix the swing position.

13. SWING ←→

* Press this button to activate left/right swing and press it again to fix the swing position.

14. Anti-F

* The Anti-F functions when the unit is turned off with the remote controller in COOL, DRY or AUTO mode. It will operate in HEAT mode (Fan mode for cool only units), with the Indoor Unit motor running with weak flow for 3 minute before stop, to remove the moisture within the evaporator so as to prevent it from giving bad smell from mold.

* This function is not set in the factory. You may set it or cancel it any time you want as follows: With both the unit and the remote controller OFF, point the remote controller at the unit and press

"Anti-F" button once, the buzzer will sound 5 times after 5 times, indicating this function is set. Once set, this function will remain valid except when the unit is power off or until it is canceled.

* To cancel Anti-F:

1. Power off the unit.

2. With both the unit and the remote controller OFF, point the remote controller at the unit and press this button once, the buzzer will sound 3 times after 5 times, indicating this function is canceled.

Note:

* With Anti-F activated, it is advised not to turn ON the unit again before it is fully OFF.

*Anti-F function will be invalid when OFF timer is set.

15.This button has two functions.

a. ELE.H   (Optional)

* If this button is pressed in HEAT mode, the electric heating will be turned on/off.

b. ECO (Optional)

* If this button is pressed in COOL mode, the unit will enter the ECO mode which has the lowest electricity consumption, and exit it automatically 8 hours after.

* Changing modes or turning off the remote controller will automatically cancel the ECO function.

* Press ECO button in ECO mode to exit this mode. Note: The ECO mode only works for inverter units.

2) Introduction for mode settings

★Automatic operation mode

1. Press the "MODE" button, select the automatic operation mode.

2. By pressing the "SPEED" button, you can select the motor speed from LOW, MID, HIGH, AUTO.

3. Press the "ON/OFF" button, the air-conditioner starts to operate.

4. Press the "ON/OFF" button again, the air-conditioner stops.

Note: In the fan operation mode the temperature settings is non-effective.

★**Cooling/Heating operation mode**

1. Press the "MODE" button, select the Cooling or Heating operation mode.

2. By pressing the "▲"or "▼"button, you can set the temperature the display changes as you touch the button.

3. By pressing the "SPEED" button, you can select the motor speed from LOW, MID, HIGH, AUTO.

4. Press the "ON/OFF" button, the air-conditioner starts to operate.

5. Press the "ON/OFF" button again, the air-conditioner stops.

Note: The cold wind type has no heating function.

★**Fan operation mode**

1. Press the "MODE" button, select the fan operation mode.

2. By pressing the "SPEED" button, you can select the motor speed from LOW, MID, HIGH.

3. Press the "ON/OFF" button, the air-conditioner starts to operate.

4. Press the "ON/OFF" button again, the air-conditioner stops.

Note: In the fan operation mode the temperature settings is non-effective.

★**Drying operation mode**

1. Press the "MODE" button, select the drying operation mode.

2. By pressing the "▲"or "▼"button, you can set the temperature the display changes as you touch the button.

3. By pressing the "SPEED" button, you can select the motor speed from LOW, MID, HIGH, AUTO.

4. Press the "ON/OFF" button, the air-conditioner starts to operate.

5. Press the "ON/OFF" button again, the air-conditioner stops.

★**Backlight function (for remote controllers with such function only)**

The remote controller has a backlight which can be turned on by pressing any button for the convenience of operation in darkness. The backlight will be automatically turned off if there is no operation within 10 seconds.

3) Precautions

• Before first time use of the remote controller install the batteries and ensure the "+"and "_" poles are correctly positioned.

• Ensure the remote controller is pointed to the signal receiving Window and that there is no obstruction in between and the distance is 8m at the maximum.

• Do not let the remote controller drop or fling it at will.

Do not let any liquid in the remote controller.

Do not expose the remote controller directly to the sunlight or excessive heat.

• If the remote controller does not function normally remove the batteries for 30 second before reinstall them. If that doesn't work replace the batteries.

• When replacing the batteries do not mix the new batteries with old ones or mix batteries of different types which could cause failure of the remote controller.

• If the remote controller is not to be used for a long period of time remove the batteries first lest the leakage from them may damage the remote controller.

• Properly dispose the discarded batteries.

Note:

1. This is a universal remote controller which provide all the function buttons. Please understand that some of the buttons may not function, depending on the specific air

conditioner you have purchased. (If a specific function is not available on the air conditioner, pressing the corresponding button will simply have no respond.)

2. HEAT and ELE.H functions are not available for cool only models, thus these two buttons do not work correspondingly.
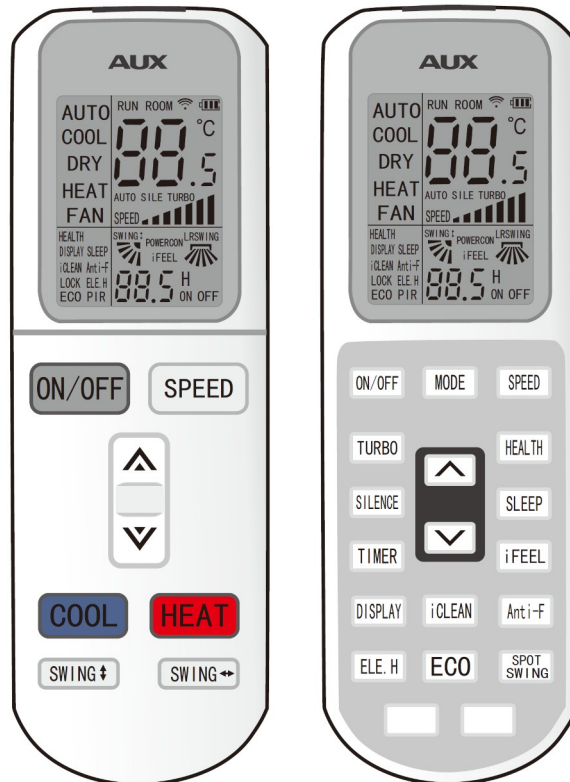
➢ **Battery use and replacement**
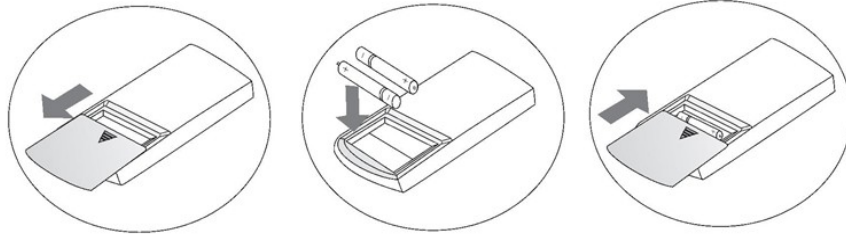
1. Slide to open the cover according to the direction indicated by the arrowhead.

2. Insert two brand new batteries (7#) and position the batteries to the right electric poles (+ & -).

3. Put back the cover.

4-2 L-Style

1) Remote Controller Introduction

● **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.**
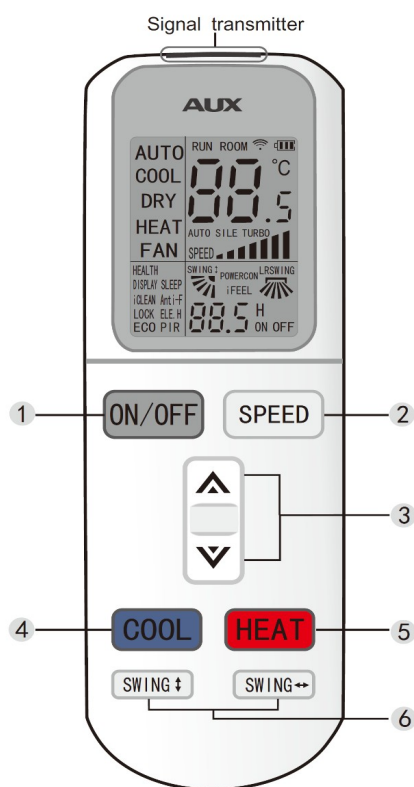
Note : remote controller outside buttons only valid when surface cover is closed.

①**"ON/OFF"button**

* Press this button , the unit will be started or stopped, which can clear the timer or sleeping function of last time.

②**"SPEED"button**

* Press this button, speed will change as below:

③**"∧ "or "∨ "button**

*When press "∧ "button, the setting temperature will be increased by 0.5℃. When press "∨ "button, the setting temperature will be decreased by 0.5℃

* The temperature will be changed quickly by pressing the button continuously and setting temperature range is 16℃to 32℃.

④**"COOL"button**

* Press the COOL button, the mode of operation is shifted into cooling.

⑤**"HEAT"button**

* Press the HEAT button, the mode of operation is shifted into heating.

* Note: cooling only unit has no heating function.

⑥**"SWING"button（SWING and SWING   ）←→**

* Press this button to open up/down(left/right) swing function, press it again, fix louver position.

* Up/down(left/right) setting is only valid in this mode, it will not affect louver position in other modes.

* Up/down(left/right) swing has memory function, it can keep primary setting when turn off then turn on or switch from other modes to primary mode.

NOTE:

This manual introduces function for all of the remote control, maybe you press one button without any reaction, well, the air-conditioner you bought hasn't this function.

Remote controller inside

Signal transmitter

Open it from left to right
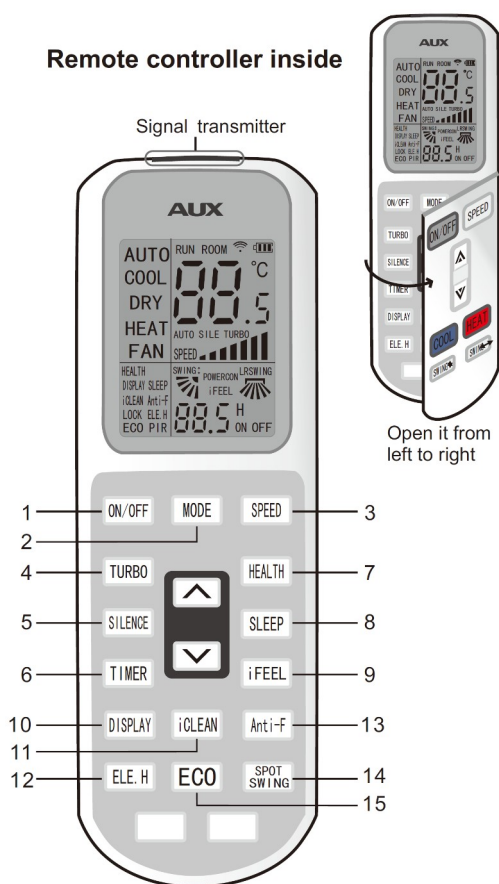
1."ON/OFF" button

* Press this button, the unit will be started or stopped, which can clear the timer or sleeping function of last time.
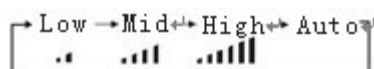
2."MODE"button

* Press this button, the running mode will change as below:

AUTO→COOL→DRY→HEAT→FAN

* Note: cooling only unit has no heating function.

3. "SPEED" button

* Press this button, speed will change as below:

Low → Mid → High → Auto

4. "TURBO" button

* Set turbo on or off(the characters of turbo will appear or disappear)by pressing this key under cooling or heating mode.

* Once energized, the unit will be defaulted to be turbo off.

* This function cannot be set under auto, dry or fan mode, and characters of turbo won't appear.

5. "SILENCE" button

* Set silence on or off(the characters of silence will appear or disappear)by pressing this key.

* Once energized, the unit will be defaulted to be silence off.

6. "TIMER" button

* On the status of the unit on, press this button to set timer off. On the status of the unit off, press this button to set timer on.

* Press this key once, words H on (off) will appear and flicker. In which case, press button to adjust time (press "⋀ / ⋁" button to adjust time (press ⋀ / value quickly), the setting time range is from 0.5 to 24 hr. ; press this key once again to fix the time, then remote controller will send out the signal immediately and H on/off will stop flickering.

* If the time of that no press timer button under flickering status is above 10s, the timer setting will quit.

* If the timer has been set, press this button once again to quit it.

7."HEALTH" button

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

8."SLEEP" button

* Press the SLEEP button, the sleeping indicator light of indoor unit flashes on.

* The air-conditioner runs in sleeping mode for 10 hours and quit sleep mode, recover back to former mode.

* The unit will turn off automatically if the timing mode are running out of time.

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

9."iFEEL" 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.

10."DISPLAY" button

* In display mode, press button once, shut off display, press it again, LCD will show ambient & setting temperature after flashing 5s.

It's convenient for users who are not adapt to noctilucence and it's also convenient for checking ambient &setting temperature anytime.

11."iCLEAN" button

* When remote controller is at the off state, press "iCLEAN" button, the unit runs "iCLEAN" function .

* The purpose of this function is to clean dust on evaporator and dry the inside water of evaporator and to prevent the evaporator going moldy due to water deposition and boasting strange smell.

* After setting "iCLEAN" function, press "iCLEAN" button or "ON/OFF" button to quit it.

* The clean function will be stop working after about 30 minutes running working without any operation.

12."ELE.H" button(only for hot pump type)

* In heating mode, press this button, the mode of operation is shifted into supplementary electric heating.

13."Anti-FUNGUS" button

* 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.

* 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 Indoor Unit motor runs for 3 minutes with weak wind before stop.

* 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 "Anti-FUNGUS" button for one time, the buzzer keep beeping five times again after five times beep, 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 default.

* To cancel the function: 1. Under "off" status of the A/C and the remote controller, point the remote controller toward the A/C and continuously press "Anti-FUNGUS" button for one time, the buzzer keep beeping three times again after five times beep, indicating that this function has been cancelled; 2. Power off the whole A/C.

* When this function is on, it is suggested not to restart the A/C before it is completely stop.

* This function will not run in case of time stop.

14."SPOT SWING" button

* Press this button, the horizontal wind direction vanes can swing 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.

15."ECO" button

* In cooling mode, press this button, the unit will runs "ECO" economic operation mode which costs the least power consumption.

* After running for 8h, it will automatically exit, otherwise, press this button once again to quit it.

* Note: The unit will turn off automatically if the timing mode are running out of time.

2) Introduction for mode settings

★**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 ON/OFF button, the air-conditioner starts to operate.

2. Press the MODE button, select the automatic operation mode.

3. Press the SPEED button, you can select motor speed. You can select motor speed from LOW, MID, HIGH, AUTO.

4. Press the button again, the air-conditioner stops.

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

1.Press the ON/OFF button, the air-conditioner starts to operate.

2.Press the MODE button, select the Cooling or Heating

3.Press the "△"or "▽"button, set the temperature, temperature can be set at 1℃difference range from 16-32℃.

4.Press the SPEED button, you can select motor speed. You can select motor speed from LOW, MID, HIGH, AUTO.

5.Press the button again, the air-conditioner stops.

★**Fan operation mode**

1. Press the ON/OFF button, the air-conditioner starts to operate.

2. Press the MODE button, select the Cooling or Heating operation mode.

3. Press the SPEED button, you can select motor speed. You can select motor speed from LOW, MID, HIGH.

4. Press the button again, the air-conditioner stops.

Remark: In the circulation operation mode, to set the temperature is non-effective.

★**Drying operation mode**

1. Press the ON/OFF button, the air-conditioner starts to operate.

2. Press the MODE button, select the Dry operation mode.

3. Press the "△"or "▽"button, set the temperature, temperature can be set at 1℃difference range from16-32℃.

4. Press the SPEED button, you can select motor speed. You can select motor speed from LOW, MID, HIGH, AUTO.

5. Press the button again, the air-conditioner stops.

3) Precautions

1.Aim the remote controller towards the receiver on the air- conditioner.

• The remote controller should be within 8 meters away from the receiver.

• No obstacles between the remote controller and receiver.

• Do not drop or throw the remote controller.

• Do not put the remote controller under the forceful sun rays or heating facilities and other heating sources.

• Use two 7# batteries, do not use the electric batteries.

• Take the batteries out of remote controller before stop its using for long.

• 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.

• If reset phenomenon occurs on pressing the button of the remote controller, the electric quantity is deficient and new batteries need to be substituted.

• The waste battery should be disposed properly.

Note:

* The picture is general remote controller, contains almost all of the function buttons. They may be slightly different from material abject(depend on model).

* 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.

* The cooling only units don't have the function of heating or electric heating. When the remote controller turns to such function buttons, the units will not result such effect. Please don't turn the remote controller to such buttons.
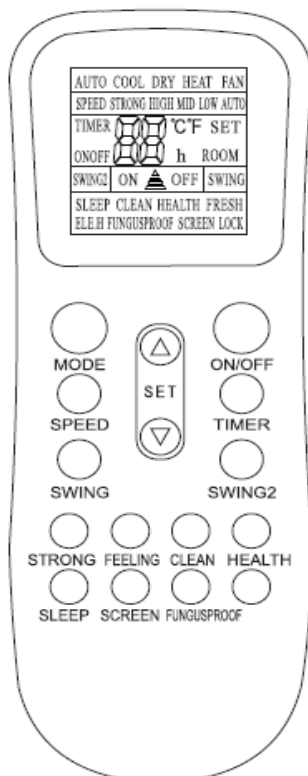

4-3 K-Style

1) Remote Controller Introduction

● **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.

The cooling only u... heating or electric heating When the remote controller turns to s... s will not result such effect.
* Please don't tum t... uttons.

Note : The picture is general remote controller, **contains** almost all of the function buttons,
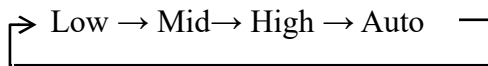
They may be slightly different from material abject(depend on model).

1. "ON/OFF" button

You can start or stop the air-conditioner by pressing this button.

2."SPEED" button

You can select motor speed as the following:

Low → Mid→ High → Auto

3. "SWING2" button

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

4."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.

5."STRONG"button

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

6."TIMER"button

Setting the "ON" timer time：

a. When remote controller is at off state, press "T IMER" button, the LCD displays "TIMER ON" and the timer time, the range of setting time is 0.5h to 24h.

b. You can press the "△ 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.

c. Press "TIMER" button again, to set the timer on function.

d. You can set another function to insure the suitable state after air conditioner turn on (including mode, temperature, swing, motor 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：

a. 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.

b. You can press the " △ 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.

c. Press "TIMER" button again, to set the timer on function.

7."TIMER"button

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

8. "△or " ▽utton

Press the "+"or "-" button, you can set the temperature range from 16℃ to 32℃, Display will change when you touch the button.

9."CLEAN"button

a. When remote controller is at the off state, press "clean" button, the wind guiding bars turn to initial positions for cooling, the A/C runs "clean" function with max duration 35mins. The purpose of this function is to clean dust on evaporator and dry the inside water of evaporator and to prevent the evaporator going moldy due to water deposition and boasting strange smell.

b. 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.

c. The clean function will be stop 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.

10."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.

11."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℃ after 1hour and another 1℃ automatically after 1 hour.

3. After the setting of sleeping mode, the heating operation enables the set temperature to drop 1℃ after 1hour and another 2℃ 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, the remote controller clears sleeping mode away.

12. "SWING" button

Press this button, the horizontal wind direction vanes can swing 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.

13."SLEEP"button

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

14."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 Indoor Unit motor runs for three minutes with weak wing 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" push button for one time, the buzzer keep beeping five times again after five times beep, 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 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" push button for one time, the buzzer keep beeping three times again after five times beep, including 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.

2) Introduction for mode settings

★**Automatic operation mode**

1. Press the ON/OFF button the air-conditioner starts to operate.

2. Press the MODE button select the automatic operation mode.

3. Press the SPEED button, you can select motor speed. You can select motor speed from LOW, MID, HIGH, AUTO.

4. Press the button again, the air-conditioner stops.

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

1. Press the ON/OFF button, the air-conditioner starts to operate.

2. Press the MODE button, select the Cooling or Heating operation mode.

3. Press the $\triangle$ "or '∇ " button, set the temperature, temperature can be set at 1°Cdifference range from 16-32℃.

4. Press the SPEED button you can select motor speed. You can select motor speed from LOW, MID, HIGH, AUTO.

5. Press the button again, the air-conditioner stops.

★**Fan operation mode**

1. Press the ON/OFF button, the air-conditioner starts to operate.

2. Press the MODE button, select the Cooling or Heating operation mode.

3. Press the SPEED button, you can select motor speed. You can select motor speed from LOW, MID, HIGH.

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

★**Drying operation mode**

1. Press the ON/OFF button, the air-conditioner starts t operate.

2. press the MODE button, select the Dry operation mode.

3. Press the '$\triangle$ "or '∇ " button, set the temperature, temperature can be set at 1°Cdifference range from 16-32℃.

4. Press the SPEED button you can select motor speed. You can select motor speed from LOW, MID, HIGH, AUTO.

5. Press the button again, the air-conditioner stops.

Note:

This manual introduces function for all of the remote control, maybe you press one button without any reaction, well, the air-conditioner you bought hasn't this function.
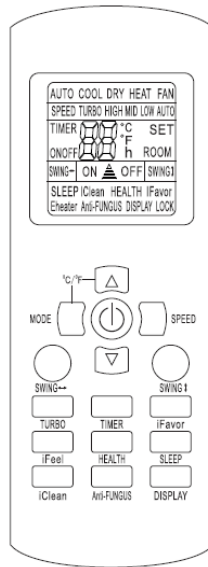
★Fix batteries

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.

Attention

1. Aim the remote controller towards the receive 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 to 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.

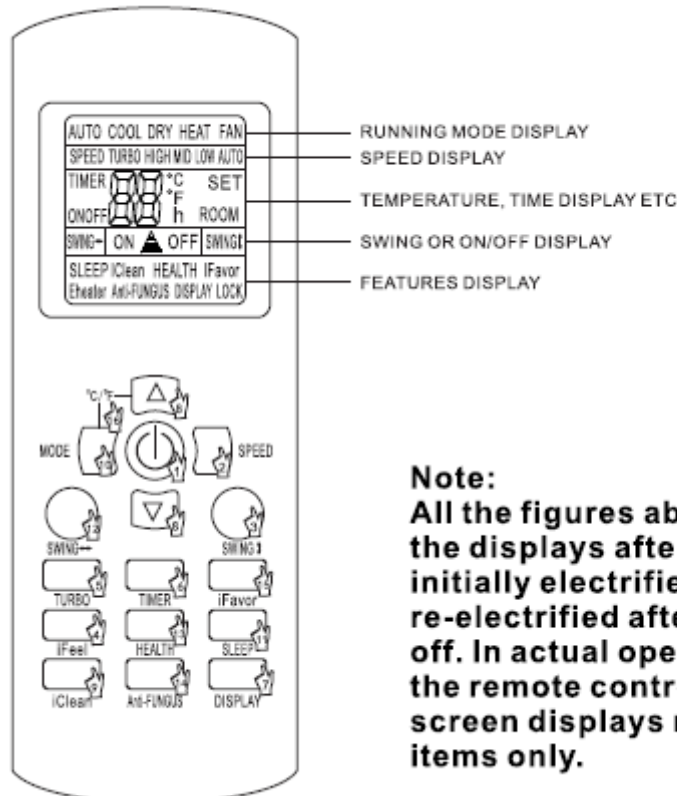10. The waste battery should be disposed properly.

4-4 P-Style

1) Remote Controller Introductions

◆ Read this "instructions" carefully so that you can use the air-conditioner safely and correctly.

◆ Take good care of the "instructions [11] so that it can be referred to at any time.

➤ **Buttons description**

RUNNING MODE DISPLAY

SPEED DISPLAY

TEMPERATURE, TIME DISPLAY ETC

SWING OR ON/OFF DISPLAY

FEATURES DISPLAY

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.

The cooling only units don't have the function of heating or electric heating. When the remote controller turns to such function buttons the units wi1l not result such effect.
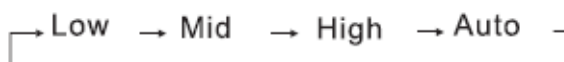*Please don't turn the remote controller to such buttons.

Note: The picture is general remote controller contains almost all of the function buttons. They may be slightly different from material abj ect (depend on model).

1. "ON/OFF" button

You can start or stop the air-conditioner by pressing this button.

2. "SPEED" button

You can select motor speed as the following:

$$\rightarrow \text{Low} \rightarrow \text{Mid} \rightarrow \text{High} \rightarrow \text{Auto}$$

3. "SWING ❙" button

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

4. "iFeel" button

When it displays "iFeel" 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.

5. "TURBO" button

Only under the state of cooling or heating mode, press this button, the motor speed is adjusted to strong auto-maticlly and the LCD displays "TURBO" the "TURBO" function is started to reach the highest cooling or heating.

6. "TIMER" button

Setting the "ON" timer time:

a. 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 O.5h to 24h.

b. You can press the "△" or "▽" button to adjust the timer time, each touch will be set time to increase or reduce O.5h before 10 hours ago, after ten hours will be set time to increase or reduce 1h per pressing to enables your required timer.

c. Press "TIMER" button again, to set the timer on function.

d. You can set another function to insure the suitable state after air conditioner turn on (including mode temperature swing motor 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:

a. 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 O.5h to 24h.

b. You can press the"△ "or " ▽ " button to adjust the timer time each touch will be

set time to increase or reduce O.5h before 10 hours ago, after ten hours will be set time to increase or reduce 1h per pressing, to enable your required timer.
c. Press "TIMER" button again, to set the timer off function.

7. "DISPLAY" button

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

8. " △ " or " ▽ " button

Press the "△"or "▽" button, you can set the temperature range from 16℃ to 32℃,

display will change when you touch the button.

9. "iClean" button

a. When remote controller is at the off state, press "iClean" button, the wind guiding bars turn to initial positions for cooling, the A/C runs "iClean" function with max duration 35mins.The purpose of this function is to clean dust on evaporator and dry the inside water of evaporator and to prevent the evaporator going moldy due to water deposition and boasting strange smell.
b. After setting "iClean" function, press "iClean" button again to cancel "iClean" function or press "ON/OFF" button to cancel "iClean" function and start A/C.
c. The clean function will be stop working after 35 minutes running working without any operation.
Note: "iClean" function can be set in parallel with "time start" function; in this case "time start" function will be executed after "iClean" function.

10. "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.

11. "SLEEP" button

1. Press the "SLEEP -button to enter SLEEP mode.
2. Then in COOL or HEAT mode, the set temperature will be automatically controlled based on sleeping time.
3. The unit will automatically exit SLEEP function when the sleeping time is up.
Remark: press the MODE or ON/OFF button the remote controller clears sleeping mode away.

12. "SWING ⎯ " button

Press this button, the horizontal wind direction vanes can swing 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.

13. "HEALTH" button

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

14. "Anti-FUNGUS" 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), he Indoor Unit motor 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 A1C and continuously press "Anti-FUNGUS" pushbutton for one time the buzzer keep beeping five times again after five times beep indicating that this function is ready. In case this function has been set, unless the whole A1C is powered off or the function is manually cancelled, the A1C then has this function as 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 "Anti-FUNGUS" pushbutton for one time , the buzzer keep beeping three times again after five times beep 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.

15. "iFavor" button

The button is a shortcut, users could reserve the data of mode, wind speed, set temperature, swing and when pressing on it, it could operate in the mode users set before. Method:1.turn on the air conditioner make adjustment to the ideal mode you wanted.2.keep pressing the shortcut button for three seconds till the display screen give the signal that represents the shortcut button and glitter for three times then reserve the operation mode in the remote controller it's done. To take place of the previous operation mode just do it as shown above**.**

16. "°C/°F" button

The temperature is displayed by default in Celsius. To set the temperature display to Fahrenheit, Press "△" and "MODE" buttons at the same time for at least 3 seconds whether the remote controller is on or off .

Press "△"and "MODE" buttons at the same time again for at least 3 seconds to restore the temperature display to Celsius.

Note: Temperature display in Fahrenheit is not available for some models. When

temperature is displayed in Fahrenheit on the remote controller, it might be in Celsius on the unit, the function and operation of which will not be affected.

These combined buttons are for remote controllers with ℃/℉ switching function only if there is no " ⌝⌐ " symbol on your remote controller, then switching function is not available.

2) Introduction for mode settings

★**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 ON/OFF button, the air-conditioner starts to operate.

2. Press the MODE button, select the automatic operation mode.

3. Press the SPEED button, you can select motor speed.

You can select motor speed from LOW, MID, HIGH, AUTO.

4. Press the button again, the air-conditioner stops.

★**Cooling/Heating operation mode**

(Cold wind type has no heating function)

1. Press the ON/OFF button, the air-conditioner starts to operate.

2. Press the MODE button, select the Cooling or Heating operation mode.

3. Press the "△" or "▽",set the temperature, temperature can be 5et at 1"C difference range from 16-32℃.

4. Press the SPEED button, you can select motor speed. You can select motor speed from LOW, MID, HIGH, AUTO.

5. Press the button again, the air-conditioner stops.

Note:

This manual introduces function for all of the remote control , maybe you press one button without any reaction, well, the air-conditioner you bought hasn't this function.

3) Attention

1. Aim the remote controller towards the receiver on the airconditioner.

2. The remote controller should be within 8 meters away from the receiver.

3. No obstacles between the remote controller and receiver.

4.00 not drop or throw the remote controller.

5.00 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.

4-5 T-Style

1) Remote Controller Introductions
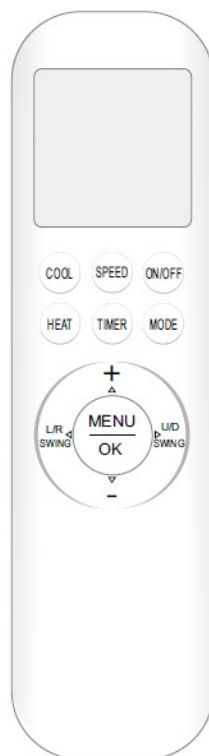
● **Carefully read this "instructions" for safe and correct use of the air-conditioner.**

●**carefully keep the "instructions" manual as it can be referred to at any time.**
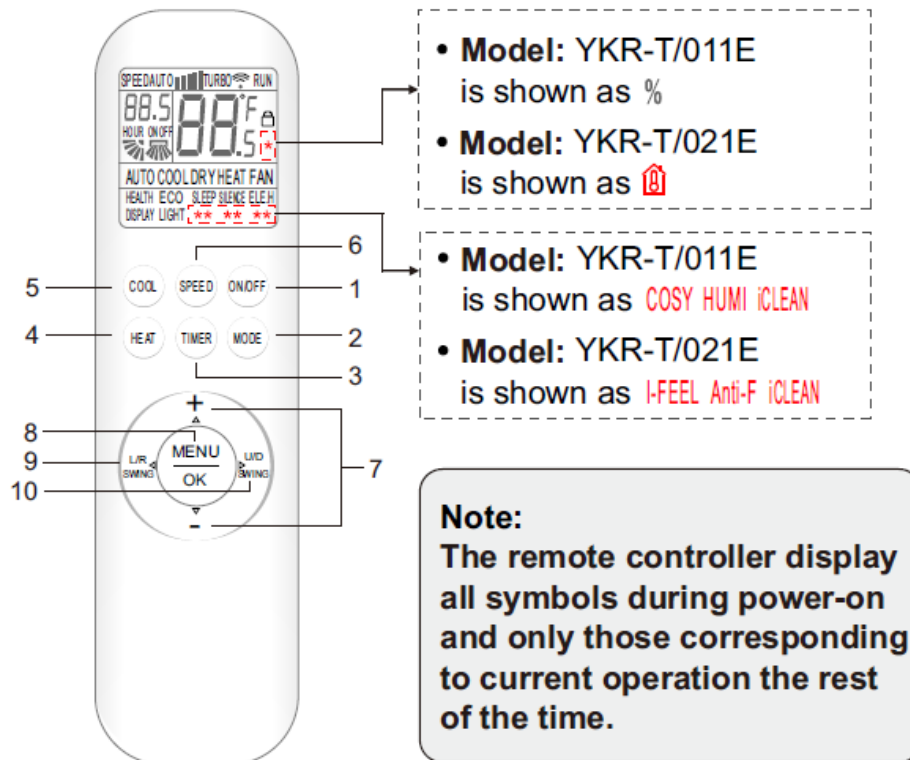
➢ **Buttons description**

• **Model:** YKR-T/011E
  is shown as %
• **Model:** YKR-T/021E
  is shown as 🔋

• **Model:** YKR-T/011E
  is shown as COSY HUMI iCLEAN
• **Model:** YKR-T/021E
  is shown as I-FEEL Anti-F iCLEAN

Note:
The remote controller display all symbols during power-on and only those corresponding to current operation the rest of the time.

1. ON/OFF Button

* Press this button to turn on/off the unit.

* This will clear the existing timer and SLEEP settings.

2. MODE Button

* Press this button, you can select the running mode as follows:

Note: HEAT mode is not available for cool only units.

3. TIMER Button

* With the unit ON, press this button to set OFF timer or with it OFF to set ON timer.

* Press this button once, the "ON(OFF)" will flash. Press " + " or " - "to set the number of hours in which the unit will be turned ON/OFF, with an interval of 0.5 hour , and a range of 0.5-24 hours.

* Press it again to confirm the setting, the "ON (OFF)" will stop flashing.

4. HEAT Button

* Press this button to enter HEAT mode.

5. COOL Button

* Press this button to enter COOL mode.

6. SPEED Button

* Press this button, you can select the motor speed as follows:

```
┌→ Low → Mid → High → Turbo → Auto ┐
│    ( ▪ )  ( ▪▪▪ )  ( ▪▪▪▪▪ )  (TURBO)  (AUTO)  │
```

Note: AUTO air speed is not available in Fan mode.

   This button is invalid in dry mode.

7. + & - Button

* Each time the " + " is pressed, the temperature setting will increase by 1℃(1℉) and each time the " - " is pressed, it will decrease by 1℃(1℉) .

* The temperature setting ranges from 16℃ (60℉)～32℃(90℉).

Note: The temperature cannot be set in AUTO or Fan mode.

8. MENU & OK Button

* Press MENU button to enter the function selection mode. Then press △, ▽, ◁

and ▷ to choose the function which you want. After, press OK button, turn on this function.

* In function selection mode, press △, ▽, ◁ and , the character in LCD will be flashing if the function can be selected.

9. L/R SWING Button

* Press this button to activate left/right swing and press it again to fix the swing position.

10. U/D SWING Button

* Press this button to activate up/down swing and press it again to fix the swing position.

Note:

* When the unit is on, press the "U/D SWING" button and hold for 3 seconds, the button will shift to be the functional button of "Rated swinging", and then press the "U/D SWING" button to select the positions of Rated swinging.

* Only by pressing the "U/D SWING" button again and hold for 3 seconds or reinstall the battery of the remote control, can the "U/D SWING" button resume its original function. The power on/off button of the remote control can not enable the exit of the "Rated swinging" function.

11. HEALTH

* When the unit is on, press MENU button ,then press △, ▽, ◁ and ▷ to choose "HEALTH" character, when the "HEALTH" character will blink, and press the "OK" button to highlight (not highlight) the "HEALTH" character, which will activate (deactivate) the health function.

12. ECO

* In COOL mode, the variable frequency air-conditioner will enter the ECO mode, which consumes the least electricity, and exit it automatically 8 hours after.

* The ECO mode is not available on the fixed frequency air-conditioner.

* Changing modes or turning off the remote controller will automatically cancel the ECO function.

* In the cooling mode, press the "MENU" button, press △, ▽, ◁ and ▷ to choose the "ECO" character, when the "ECO" character will blink, and press the "OK" button to highlight (not highlight) the "ECO" character , which will activate (deactivate) the ECO function.

Note: The electricity consumption is affected by the ambient temperature and the house structure etc., and when the ambient temperature is high or the house has a large area, be cautious to use the ECO mode.

13. SLEEP

* When the unit is on, press MENU button ,then press △ , ▽ , ◁ and ▷ to choose the "SLEEP" character, when the "SLEEP" character will blink, and press the "OK" button to highlight (not highlight) the "SLEEP" character , which will activate (deactivate) the function of sleep mode.

* The unit will exit SLEEP mode after 10 hours of continuous operation and restore to the previous status.

Note: The SLEEP function cannot be activated in FAN and AUTO mode.

In the sleep mode, the screen of the air-conditioner is off.

14. SILENCE

* When the unit is on, press the "MENU" button, then press △ , ▽ , ▷ and ▷ to choose the "SILENCE" character, when the "SILENCE" character will blink, and press the "OK" button to highlight (not highlight) the "SILENCE" character , which will activate (deactivate) the function of silent wind.

15. ELE.H

* When the unit is on, press the "MENU" button, then press △ , ▽ , ▷ and ▷ to choose the "SILENCE" character, when the "SILENCE" character will blink, and press the "OK" button to highlight (not highlight) the "SILENCE" character , which will activate (deactivate) the function of silent wind.

* The unit will activate the auxiliary heating function automatically according to the ambient temperature, so as to accelerate the heating.

* This button is disabled on some models.

16.DISPLAY

* Press the "MENU" button, then press △ , ▽ , ▷ and ▷ to choose the "DISPLAY" character, when the character "DISPLAY" will blink, and press the "OK" button to activate (deactivate) the function of screen display.

17.LIGHT

* The unit will activate or deactivate automatically the function of display on the air-conditioner screen according to the indoor ambient brightness.

* When the unit is on, press the "MENU" button, ,then press △ , ▽ , ▷ and ▷ to choose the "LIGHT" character, when the "LIGHT" character will blink, and press the "OK" button to highlight (not highlight) the character "LIGHT", which will activate (deactivate) the function of light sensing.

22.Anti-F(Only YKR-T/021E)

* Anti-F function: When the unit is closed under the modes of cooling, dry or auto (cooling), it will continue to operate for about 3 minutes to dry the moisture on the

evaporator, so as to prevent the accumulation of bacteria on the evaporator, which causes fungus and strange smell and is harmful to the health.

* When the unit is off, press the "MENU" button, then press △, ▽, ▷ and ▷ to choose the "Anti-F" character , when the "Anti-F" character will blink, and press the "OK" button to highlight (not highlight) the "Anti-F" character , which will activate (deactivate) the Anti-F function.

18. COSY(Only YKR-T/011E)

* When the air-conditioner is on under the modes of cooling, press the "MENU" button, then press △, ▽, ▷ and ▷ to choose the "COSY" character ,when the "COSY" character will blink, and press the "OK" button to highlight (not highlight) the character "COSY", which will activate (deactivate) the function of cleaning.

* When the "COSY" function is on, the motor speed is auto and it will cancel the swinging function.

When the "COSY" function is on, these operations that turn off the unit, change the mode, and set SLEEP, motor speed, swinging function will automatically exit the "COSY" function, then restore to the previous status.

19.HUMI(Only YKR-T/011E)

* Press the "MENU" button, then press △, ▽, ▷ and ▷ to choose the "HUMI" character, when the "HUMI" character will blink, and press the "OK" button to highlight (not highlight) the "HUMI" character , which will activate(deactivate) the humidifying function.

Note: The humidifying function is not available under the dry mode.

20. Iclean

* The unit will clean automatically the dusts on the evaporator and dry or blow-dry the moisture.

* When the air-conditioner is off, press the "MENU" button, then press △, ▽, ▷ and ▷ to choose the "iCLEAN" character , when the "iCLEAN" character will blink, and press the "OK" button to highlight (not highlight) the character "iCLEAN", which will activate (deactivate) the function of cleaning.

* The cleaning function will close automatically after 30 minutes.

21. Child-lock

* Press the "HEAT" and "MODE" buttons at the same time and hold for at least 3 seconds to activate or deactivate the child-lock function.

* When the child-lock function is activated, the remote control will indicate " 🔒 ".

* If the timer button is not pressed longer than 10 seconds after the "ON (OFF)" start flashing, the timer setting will be exited.

* If a timer setting is confirmed, pressing this button again will cancel it.

22.Anti-F(Only YKR-T/021E)

* Anti-F function: When the unit is closed under the modes of cooling, dry or auto (cooling), it will continue to operate for about 3 minutes to dry the moisture on the evaporator, so as to prevent the accumulation of bacteria on the evaporator, which causes fungus and strange smell and is harmful to the health.

* When the unit is off, press the "MENU" button, then △ ▽ ▷ and ▷ to choose the "Anti-F" character , when the "Anti-F" character will blink, and press the "OK" button to highlight (not highlight) the "Anti-F" character , which will activate (deactivate) the Anti-F function.

23. I-FEEL(Only YKR-T/021E)

* When the unit is on, press the "MENU" button, then press △ ▽ ▷ and ▷ to choose the "I-FEEL" character, when the "I-FEEL" character will blink, and press the "OK" button to highlight (not highlight) the "I-FEEL" and " 🏠 " character ,which will activate (deactivate) the I-FEEL function .

2) Usage

★**Fix batteries**
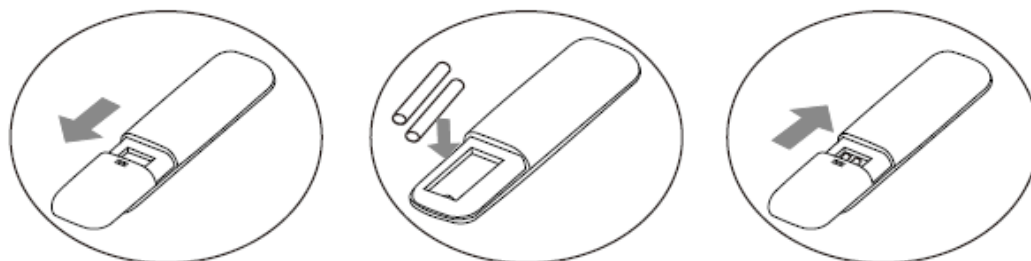
1. Slide to open the cover according to the direction indicated by the arrowhead.
2. Insert two brand new batteries (7#), and position the batteries to the right electric poles (+＆-).
3. Put back the cover.
★ **Auto operation mode**
1. Press the "MODE" button, select the auto operation mode.
2. By pressing the "SPEED" button, you can select the motor speed from LOW, MID, HIGH, AUTO.
3. Press the "ON/OFF" button, the air-conditioner starts to operate.
4. Press the "ON/OFF" button again, the air-conditioner stops.
★ **Cooling/Heating operation mode**
1. Press the "MODE" button, select the Cooling or Heating operation mode.
2. By pressing the " ＋ "or " - "button, you can set the temperature range from 16℃ (60℉)～32℃(90℉), the display changes as you touch the button.

3. By pressing the "SPEED" button, you can select the motor speed from LOW, MID, HIGH, TURBO ,AUTO.

4. Press the "ON/OFF" button, the air-conditioner starts to operate.

5. Press the "ON/OFF" button again, the air-conditioner stops.

Note: The cold wind type has no heating function.

★ **Fan operation mode**

1. Press the "MODE" button, select the fan operation mode.

2. By pressing the "SPEED" button, you can select the motor speed from LOW, MID, HIGH.

3. Press the "ON/OFF" button, the air-conditioner starts to operate.

4. Press the "ON/OFF" buttn again, the air-conditioner stops.

Note: In the fan mode, the temperature settings is non-effective.

★ Drying operation mode

1. Press the "MODE" button, select the drying operation mode.

2. By pressing the " + "or " - "button, you can set the temperature range from 16°C (60°F)～32°C(90°F), the display changes as you touch the button.

4. Press the "ON/OFF" button, the air-conditioner starts to operate.

5. Press the "ON/OFF" button again, the air-conditioner stops.

Note: In the dry mode, the speed settings is non-effective.

3) Precautions

● Before first time use of the remote controller, install the batteries and ensure the "+"and "-" poles are correctly positioned.

● Ensure the remote controller is pointed to the signal receiving window, and that there is no obstruction in between and the distance is 8m at the maximum.

● Do not let the remote controller drop or fling it at will.

Do not let any liquid in the remote controller.

Do not expose the remote controller directly to the sunlight or excessive heat.

● If the remote controller does not function normally, remove the batteries for 30 second before reinstall them. If that doesn't work, replace the batteries.

● When replacing the batteries, do not mix the new batteries with old ones or mix batteries of different types, which could cause failure of the remote controller.

● If the remote controller is not to be used for a long period of time, remove the batteries first, lest the leakage from them may damage the remote controller.

● Properly dispose the discarded batteries.

Note:

1. This is a universal remote controller which provide all the function buttons. Please understand that some of the buttons may not function, depending on the specific air conditioner you have purchased. (If a specific function is not available on the air conditioner, pressing the corresponding button will simply have no respond.)

2. HEAT and ELE.H functions are not available for cool only models, thus these two buttons do not work correspondingly.

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5. Refrigerant System Diagram

5-1 Cooling Only

➢ **Cooling Mode**

Indoor Unit

Outdoor Unit

Capillary tube

Liquid valve
(2-way valve)

T1

Liquid side

Heat
Exchanger
(Evaporator)

Cross fan

Heat
Exchanger
(Condenser)

Propeller fan

T2

Gas side
37

Gas valve
(3-way valve)

Compressor

Cooling

➤ Cooling Cycle

Indoor heat exchanger (Evaporation)	→ Steam-gas of low pressure →	Compressor (Compression)

Liquid of low pressure
(also a little gas)

Gas of high pressure &
temperature

Super cooled liquid of high
pressure

Capillary (Throttling)	←	Outdoor heat exchanger (Condensation)

5-2 Cooling & Heating

➤ Cooling Mode

Indoor Unit   Outdoor Unit

T1

2-way valve

Liquid side

Capillary tube

Check valve

Capillary tube

Heat Exchanger (Evaporator)

Cross fan

Heat Exchanger (Condenser)

Propeller fan

T2

Gas side

3-way valve

4-way valve

Compressor

Cooling

Gas Leak Check Point

38

➤ Cooling Cycle

Indoor heat exchanger (Evaporation)	— Steam-gas of low pressure →	Compressor (Compression)

Liquid of low pressure (also a little gas) ↑

Gas of high pressure & temperature ↓

4-way valve (Heat pump only)

Capillary (Throttling)	← Super cooled liquid of high pressure —	Outdoor heat exchanger (Condensation)

➤ Heating Mode

Indoor Unit   Outdoor Unit

Capillary tube

2-way valve

Check valve

T1

Liquid side

Heat Exchanger (Evaporator)

Cross fan

Capillary tube

Heat Exchanger (Condenser)

Gas side

T2

3-way valve

4-way valve

Compressor

Heating

Gas Leak

➢ **Heating Cycle**

	Gas of high pressure & temperature	
Indoor heat exchanger (Evaporation)		Compressor (Compression)

Super cooled liquid of low pressure

4-way valve (Heat pump only)

Steam-gas of low pressure

Capillary (Throttling)	Super cooled liquid of high pressure	Outdoor heat exchanger (Condensation)

6. Electrical Part

6.1 Wiring Diagram

● **Indoor Unit**
9-18K

24K

● **Outdoor Unit**
9-18K

Outdoor Unit Electric Chart (First Diagram)

Fan Motor

M1

Orange (Red)

Capacitor

White   Blue (Black)

Blue (Black)

Compressor

M2

Brown

Blue   Blue

C

R

S   Yellow

Capacitor

4-Way Valve

Blue   Violet
(Blue)

Heater

Temperature
Sensor

θ1

1. Some Models with Compressor of In-side Overload Protect
2. Intelligent Defrost Unit have no Temperature Sensor

11326007000687

Outdoor Unit Electric Chart

1	2 (N)	4	5	
(1)	(2)	(4)	(5)	Y/G

To Indoor Unit

24K

Outdoor Unit Electric Chart (Second Diagram)

Fan Motor

Red(Orange)

Capacitor

White   Black(blue)

Black(Blue)

O.L.P   Contact

Brown   Brown

Compressor

C   Yellow   Brown
(Black)

S   Capacitor

R   Blue

Black(Blue)

Oriebtation
Valve

Blue   Blue
(Violet)

Black
(Blue)   Heater

Temperature
Sensor

θ1

To Indoor Unit

Intelligent Defrost Unit have no Temperature Sensor and some models have no Heater

11326007000200

Outdoor Unit Electric Chart

1	2	3	4	5	
Brown	Blue	Black	Blue	Brown	Yellow/Green

To Indoor Unit

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Part II : Installation and Maintenance

7. Main Tools for Installation and Maintenance

Screwdriver , Wire stripper	Tapeline , Spirit level	Allen wrench , Wrench
Hammer , Electric hammer	Water drill punch , Drill	Forming Drill
Cutting Knife	Belling Expander	Thermometer , Electro Probe
Pressure Gage	Pliers , Clip-on Ammeter	Vacuum Pump
Soldering Set	Refrigerant	Safety Belt , Safety Rope

8. Installation

8-1 Notes for Installation

+ **Important Notices**
- Before installation, please contact with local authorized maintenance center, if unit is not installed by the authorized maintenance center, the malfunction may not solved, due to discommodious contact.
- The air conditioner must be installed by professionals according to the national wiring rules and this manual.
- To move and install air conditioner to another place, please contact our local special service center.

+ **Requirements For Installation Position**
- Avoid places of inflammable or explosive gas leakage or where there are strongly aggressive gases.
- Avoid places subject to strong artificial electric/magnetic fields.
- Avoid places subject to noise and resonance.
- Avoid severe natural conditions (e.g. heavy lampblack, strong sandy wind, direct sunshine or high temperature heat sources).
- Avoid places within the reach of children.
- Shorten the connection between the indoor and outdoor units.
- Select where it is easy to perform service and repair and where the ventilation good.
- The outdoor unit shall not be installed in any way that could occupy an aisle, stairway, exit, fire escape, catwalk or any other public area.
- The outdoor unit shall be installed as far as possible from the doors and windows of the neighbors as well as the green plants.

+ **Requirements for operations at raised height**
- When carrying out installation at 2m or higher above the base level, safety belts must be worn and ropes of sufficient strength be securely fasten to the outdoor unit, to prevent falling that could cause personal injury or death as well as property loss.

+ **Requirements of the mounting structure**
- The mounting rack must meet the relevant national or industrial standards in terms of strength with welding and connection areas rustproofed.
- The mounting rack and its load carry surface shall be able to withstand 4 times or above the weight of the unit, or 200kg, whichever is heavier.
- The mounting rack of the outdoor unit shall be fastened with expansion bolt.
- Ensure the secure installation regardless of what type of wall on which it is installed, to prevent potential dropping that could hurt people.

+ **Electrical Safety Requirements**
- Be sure to use the rated voltage and air conditioners dedicated circuit for the power supply, and the power cord diameter must meet the national requirements.
- Be sure to use the rated voltage and air conditioners dedicated
- When the maximum current of air conditioner is ≥16A, it must use the air switch or leakage protection switch equipped with protection devices.

- The normal operating range is 90%-110% of the local rated voltage.
- The minimum clearance between the air conditioner and the combustibles is 1.5 m.
- The power cable enables communication between the indoor and outdoor units. You must first choose the right cable size before preparing it for connection.

✛ **Grounding Requirements**

- The air conditioner is the type I electrical appliance and must ensure a reliable grounding.
- Do not connect the grounding wire to a gas pipe, water pipe,lightning rod, telephone line, or a circuit poorly grounded to the earth.
- The grounding wire is specially designed and shall not be used for other purpose, nor shall it be fastened with a common tapping screw.

✛ **Others**

- The connection method of the air conditioner and the power cord and the interconnection method of each independent element shall be subject to the wiring diagram affixed to the machine.
- The model and rating value of the fuse shall be subject to the silkscreen on corresponding controller or fuse sleeve.

8-2 Installation of Indoor Unit

➢ **Installation Parts-checking**

Packing list of the indoor unit

NO.	Name	Quantity	Unit
1	Indoor Unit	1	Set
2	Remote Controller	1	PC
3	Batteries(7#)	2	PC
4	Instructions	1	Set
5	Drain pipe	1	PC

NOTE:

※ All accessories shall be subject to actual packaging material, and if there is any difference, please understand.

➢ **Selection of Installation location**

Dimension drawing of indoor unit installation

- Space to the ceiling — **15cm above**
- Space to the wall — **20cm above** (left)
- Space to the wall — **20cm above** (right)
- Space to the floor — **200cm above**
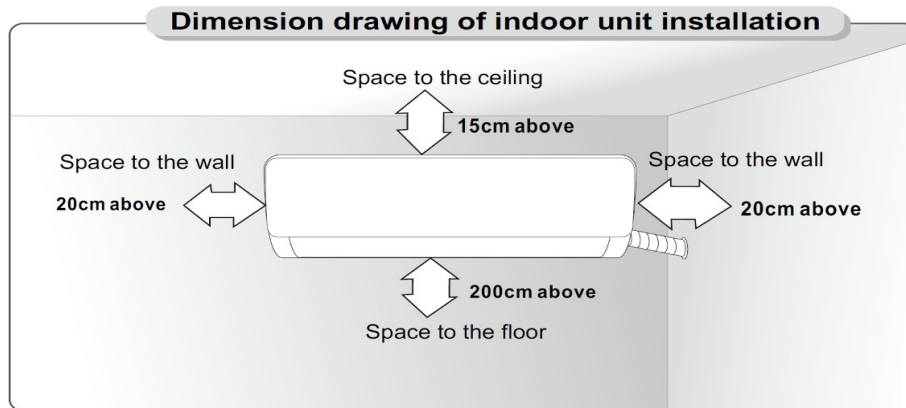
➢ **Mounting plate**

1. The wall for installation of the indoor unit shall be hard and firm, so as to prevent vibration.

2. Use the "+" type screw to fasten the peg board, horizontally mount the peg board on the wall, and ensure the lateral horizontal and longitudinal vertical.

3. Pull the peg board by hand after the installation, to confirm whether it is solid.

➢ **Wall-through Hole**

pe protection ring

Putty

1. Make a hole with an electric hammer or a water drill at the predetermined position on the wall for piping, which shall slant outwardly by 5°-10°.

2. To protect the piping and the cables from being damaged running through the wall, and from the rodents that may inhabit in the hollow wall, a pipe protecting ring shall be installed and sealed with putty.
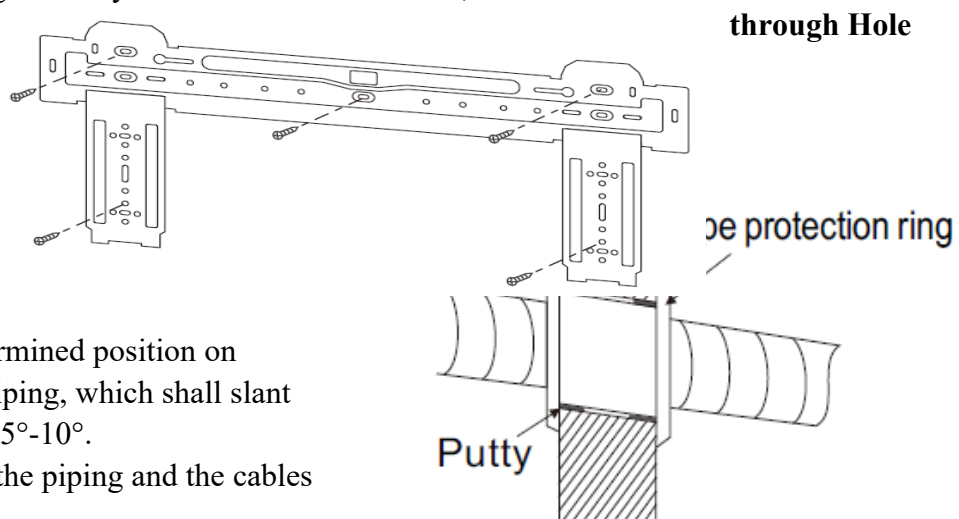
Note: Usually, the wall hole is Φ60mm~ Φ80mm. Avoid pre-buried power wire and hard wall when making the hole.

➢ **Route of Pipeline**

1. Depending on the position of the unit, the piping may be routed sideway from the left or the right (Fig 1), or vertically from the back(Fig 2)(depending on the pipe length of the indoor unit). In the case of sideway routing, cut off the outlet cutting stock of the opposite side.

2. The power cord may be routed separately from the piping. Cut off the outlet cutting

stock and then run the power cord through the hole, keeping the remaining part as a protection from rodents.

Fig 1   Fig 2
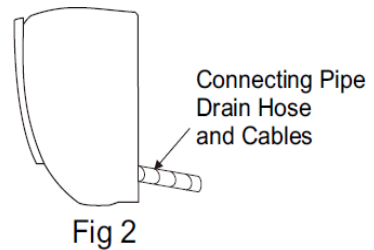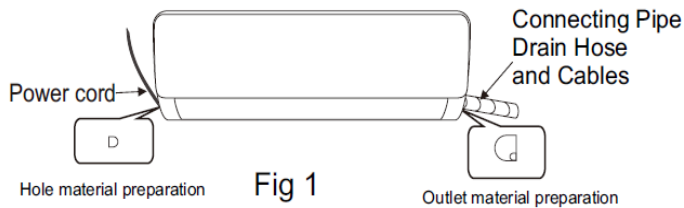
➢ **Drain pipe connection**

1. Remove the mountings and pull the indoor unit pipe out of the housing.
2. Connect the connecting pipe to the indoor unit:
Aim at the pipe center, tighten the Taper nut with fingers, and then tighten the T nut with a torque wrench, and the direction is shown in diagram on the right. The torque used is shown in the following table.

Tightening torque table

The size of pipe(mm)	Torque(N·m)
Φ6/Φ6.35	15 ~ 25
Φ9 /Φ9.5 2	35 ~ 40
Φ12/Φ12.7	45 ~ 60
Φ15.88	73 ~ 78
Φ19.05	75 ~ 80
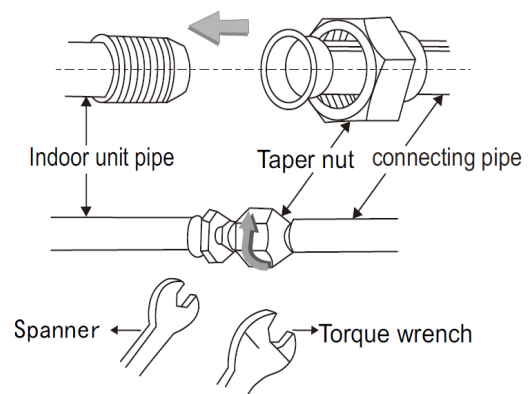
➢ **Wrap the Piping**

1. Use the insulation sleeve to wrap the joint part the indoor unit and the connection pipe, and then use insulating material to pack and seal insulation pipe, to prevent generation of condensate water on the joint part.
2. Connect the water outlet with drain pipes, and make the connection pipe, cables, and the drain hose straight.
3. Use plastic cable ties to wrap the connecting pipes, cables and drain hose. Run the pipe sloping downward.
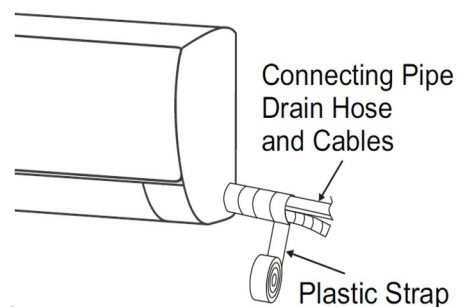
➢ **Fixing the indoor unit**

1. Hang the indoor unit on the peg board, and move the unit from left to right to ensure that the hook is properly positioned in the peg board.
2. Push toward the lower left side and the upper right side of the unit toward the peg board, until the hook is embedded in the slot and makes a "click" sound.
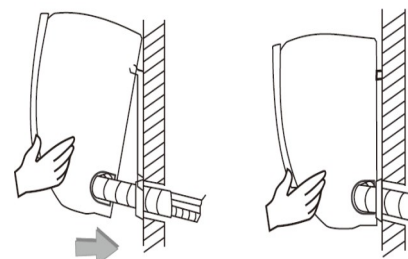
> **Electric Connection Requirement**

● Loosen the screws and remove from the unit.

● Connect the cables respectively to the corresponding terminals of the terminal board of the indoor unit (see the wiring diagram), and if there are signals connected to the plug, just conduct butt joint.

●Ground wire: Remove the grounding screw out of the electric bracket, cover the grounding wire end onto the grounding screw and screw it into the grounding hole.

● Fix the cable reliably with fasteners (Pressing board).

● Put the E-parts cover back in its original place and fasten it with screws.

<div align="center">
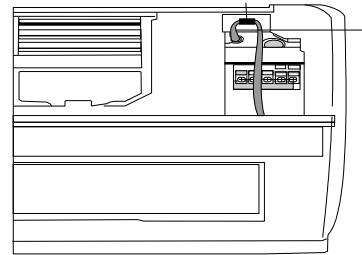
Wiring Diagram

</div>
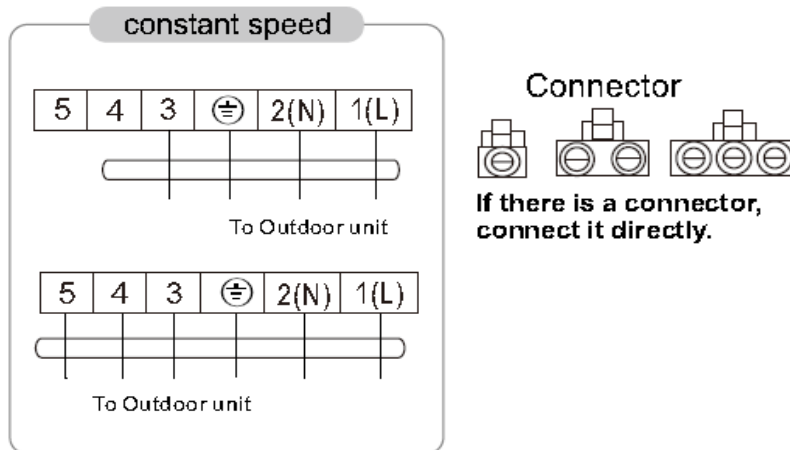
NOTE:

※ This manual usually includes the wiring mode for the different kind of A/C. We cannot exclude the possibility that some special type of wiring diagrams are not included.

※ The diagram are for reference only. If the entity is difference with this wiring diagram, please refer to the detailed wiring diagram adhered on the unit which you purchased.

8-3 Installation of outdoor Unit

> **Packing list of the outdoor unit**

NO.	Name	Quantity	Unit
1	Outdoor Unit	1	Set

2	Connecting pipe	2	PC
3	Plastic Strap	1	ROLL
4	Pipe Protection Ring	1	Set
5	Luting (putty)	1	PACKET

➢ **Selection of Installation location**

Dimension drawing of outdoor unit installation

Installation outdoor unit bolt

Outdoor Unit Size of Shape W1(W2)*H*D) (mm)	A (mm)	B (mm)
665(710)×420×280	430	280
600(645)×485×260	400	290
660(710)×500×240	500	260
700(745)×500×255	460	260
730(780)×545×285	540	280
760(810)×545×285	540	280
790(840)×550×290	545	300
800(860)×545×315	545	315
800(850)×590(690)×310	540	325
825(880)×655×310	540	335
900(950)×700×350	630	350
900(950)×795×330	535	350
970(1044)×803×395	675	409

➢ **Install the connection pipe**

Connect the Outdoor Unit with Connecting Pipe: Aim the counter-bore of the connecting pipe at the stop valve, and tighten the Taper nut with fingers. Then tighten the Taper nut with a torque wrench.
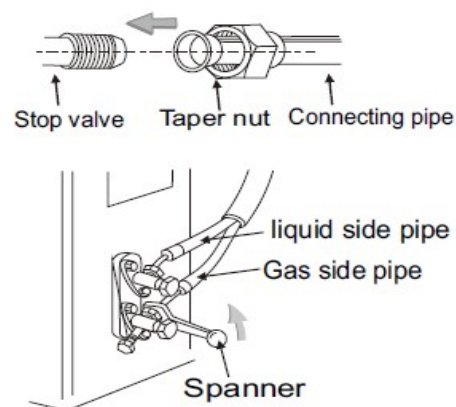
★When prolonging the piping, extra amount of refrigerant must be added so that the operation and performance of the air conditioner will not be compromised.

Piping length	Amount of refrigerant to be added	
≤5M	Not needed	
5- 15M	CC≤12000Btu	20g/m
	CC≥18000Btu	30g/m

Note: This table is for reference only.

➢ **Wiring Connection**

1. Loosen the screws and remove E-parts cover from the unit.
2. Connect the cables respectively to the corresponding terminals of the terminal board of the outdoor unit (see the wiring diagram),and if there are signals connected to the plug, just conduct butt joint.
3. Ground wire: Remove the grounding screw out of the electric bracket, cover the grounding wire end onto the grounding screw and screw it into the grounding hole.
4. Fix the cable reliably with fasteners (Pressing board).
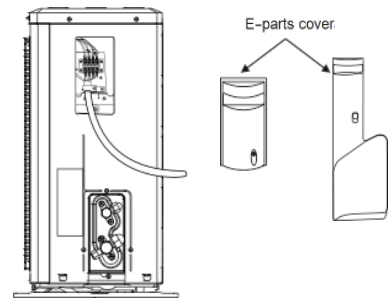
➢ **Wiring diagram**

Wiring Diagram

constant speed

```
L   N   ⏚          1  N(2)  3
   To power          To Indoor unit
```

```
L   N   ⏚          1  N(2)  3  4  5
   To power          To Indoor unit
```

Variable speed

```
⏚   L   N   S   ⏚
   To Indoor unit      To power
```

```
S   N   Lo   L      ⏚         ⏚
   To Indoor unit         To power
```

Connector

If there is a connector, connect it directly.
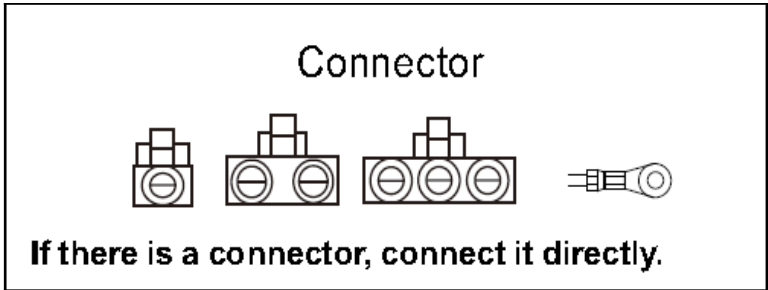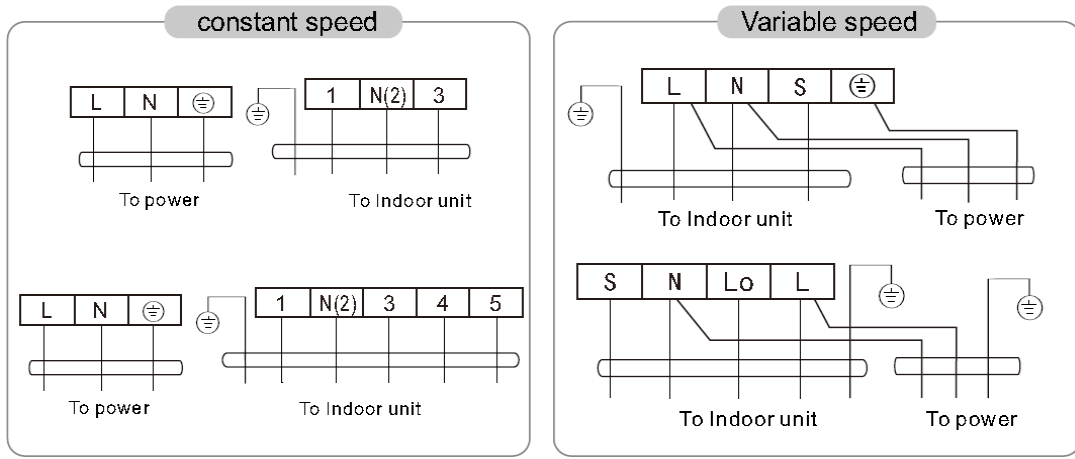
NOTE:

※ This manual is usually includes the wiring mode for the different kind of A/C. We cannot exclude the possibility that some special type of wiring diagrams are not included.

※ The diagram are for reference only. If the entity is difference with this wiring diagram, please refer to the detailed wiring diagram adhered on the unit which you purchased.

➢ **Expelling the air**

★**Outdoor unit refrigerant discharging method**

After the pipe side connection is complete, proceed as follows.
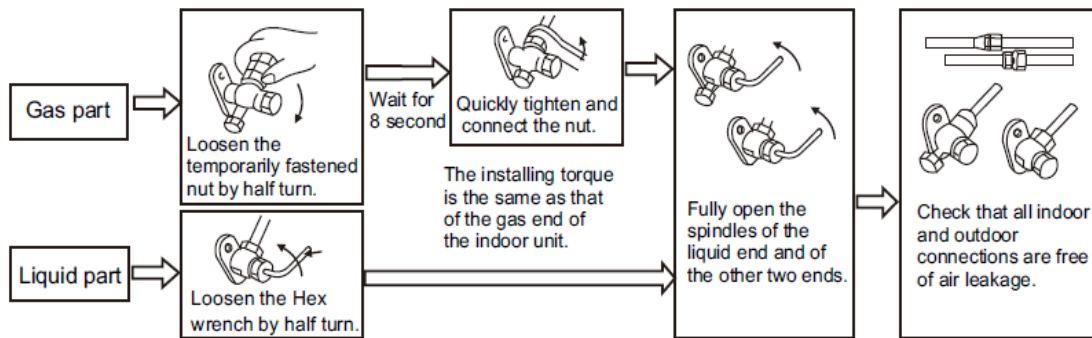
★**Vacuum Pumping Method (R410A refrigerant evacuation must use the vacuum pumping method)**

Before working on the air conditioner, remove the cover of the stop valve(gas and liquid valves)and be sure to retighten it afterward.(to prevent the potential air leakage)

1. To prevent air leakage and spilling tighten all connecting nut of all flare tubes.
2. Connect the stop valve, charge hose, manifold valve, and vacuum pump.
3. Fully open the handle Lo of the manifold valve and apply vacuum for at least 15 minutes and check that the compound vacuum gauge reads -0.1MPa(-76cmHg).
4. After applying vacuum, fully open the stop valve with a hex wrench.
5. Check that both indoor and outdoor connections are free of air leakage.
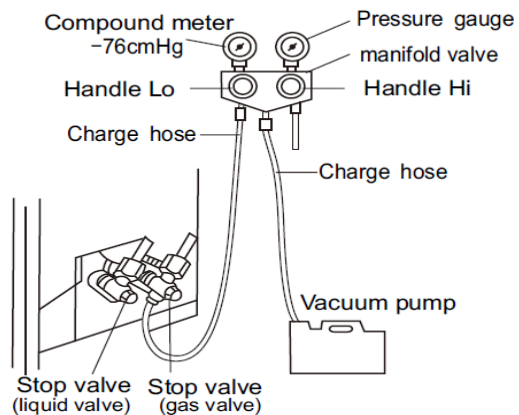
➢ **Outdoor condensation drainage(Heat pump type only)**

When the unit is heating, the condensing water and defrosting water can be out reliably through the drain house.
Installation：
Install the outdoor drain elbow in Φ25 hole on the base plate, and joint the drain hose to the elbow, so that the waste water formed in the outdoor unit can be drained out to a proper plate.
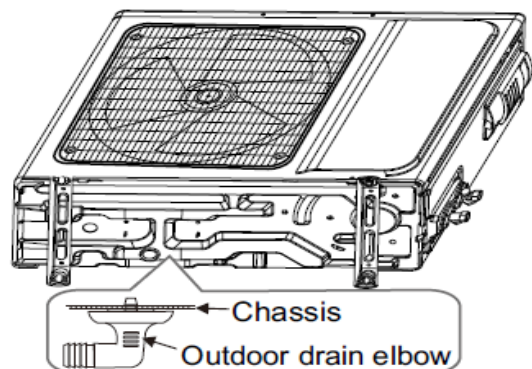
8-4 Check after installation and test operation

1. Check after installation

★ **Electrical Safety Check**
① If the supply voltage is as required.
② If there is any faulty or miss connection in each of the power, signal and grounding wires.
③ If the grounding wire of the air conditioner is securely grounded.

★ **Installation Safety Check**
① If the installation is secure.
② If the water drain is smooth.
③ If the wiring and piping are correctly installed.
④ Check that no foreign matter or tools are left inside the unit.

★ **Leak test of the refrigerant**
Depending on the installation method, the following methods may be used to check for suspect leak, on areas such as the four connections of the outdoor unit and the cores of the cut-off valves and t-valves:
① Bubble method: Apply of spray a uniform layer of soap water over the suspected leak spot and observe carefully for bubble.
② Instrument method: Checking for leak by pointing the probe of the leak detector according to the instruction to the suspect points of leak.

2. Test operation

★ **Test preparation**
※Verify that all piping and connection cables are well connected.
※Confirm that the values at the gas side the liquid-side are fully open.
※Connect the power cord to an independent power socket.
※Install batteries in remote control.

★ **Test Operation method**
① Turn on the power and push the ON/OFF switch button of the remote controller to start the air conditioner.
② Select COOL, HEAT (not available on cool-only models), SWING and other operation modes with the remote controller and see if the operation is ok.

9. Maintenance

9-1 Troubleshooting Guide

Many error codes many appears on this air conditionor, and this troubleshooting guide is prepared for the maintenance personnel to detect the error position and the parts to be replaced during the troubleshooting process. In this Guide, the Troubleshooting Method is guided by the Error Name, and the Reference Code under the General Index is the error code of the Indoor Unit unit of the mainstream model supplied by the Company.

General index:

No.	Error Name	Reference Code
1	Overcurrent Protection of Indoor Unit	E0
2	Indoor Unit temperature sensor error	E1
3	Outdoor Unit coil sensor error	E2
4	Indoor Unit coil sensor error	E3
5	Indoor Unit motor error of **wall mounted air conditioner**（PG motor）	E4
6	Indoor Unit motor error of **wall mounted air conditioner**（DC motor）	E4
7	Indoor EE Failure	Eb
8	High-pressure protection	P2
9	Liquid Deficiency Protection	P3

Example:

Explanation of error	**Cause:** explain the principle of the specific error. **Inspection path:** The basic order of troubleshooting. Related key position
Tools required for inspection	Tools that should be carried for such troubleshooting, and replacing parts that may be necessary for such error.
Frequent problematic part	Any possibly broken part related to the error may be the parts that need to be replaced.
Inspection procedure and key points	All the troubleshooting procedures for the reference of maintenance staff are prepared from simple to complex, from surface to Indoor Unit, and from test to replacement. Although these key points do not cover all the error, and difficult or special problems are not included as well, but they can cover most of the common error.
Special attention	Here are some often-overlooked problems for the reference of the maintenance personnel.

The problems in the market are always more than we think, so it is necessary for the maintenance personnel to understand the principle of air conditioning operation, and to make a flexible judgment of the fault in combination with the actual conditions. We we qlcome the maintenance personnel to constantly put forward new problems in the actual work, record the solutions and enrich our troubleshooting guide list.

AUX 奥克斯

（1）E0 - Overcurrent Protection of Indoor Unit

Explanation of error	Cause: The main PCB detects that the working current of the system exceeds the upper limit of protection, and will indicate "indoor unit overcurrent protectin:. The air conditioner stopps running for protection and displays the failure code E0. Inspection path: current transformer → power line → compressor line → connector assembly
Tools required for inspection	Current clamp and multimeter
Frequent problematic part	Indoor unit panel, power line, compressor and complete machine
Inspection procedure and key points	1. If it is a fixed-frequency model, observe whether the live line passes through the current transformer; if not, lay the line accordingly and reboot for inspection. 2. The current clamp is used to measure the working current and determine whether it is within the normal working current range of the nameplate. If normal working current is detected, it may be the fault of the current transformer and replace the main PCB of the indoor unit. 3. Measure whether the power supply voltage is within the normal operating voltage range; if the working voltage is not normal, it is necessary to consider whether the local grid voltage is stable. 4. If the working current exceeds the range and the working voltage is normal, the system may be blocked and the air-conditioning may be overloaded, which needs to be checked according to the actual situation.

（2）E1- Indoor Unit temperature sensor error

Explanation of error	**Cause:** The detection of short circuit or open circuit of Indoor Unit temperature sensor during the inspection of main PCB in the Indoor Unit machine, indicated by "Indoor Unit temperature sensor error". **Inspection path:** Sensor→Sensor wire→Connectors→Indoor Unit main PCB
Tools required for inspection	Multimeter, 15KΩ standard sensor（25℃）
Frequent problematic part	Indoor Unit temperature sensor, Indoor Unit main PCB
Inspection procedure and key points	1. Check whether there's resistance problem, short circuit or open circuit in the sensor; the resistance value shall be within a reasonable range (15KΩ under the temperature of 25℃) 2. Check whether the sensor wire is broken. 3. Check whether the terminal connectors are well fixed; check whether the weld between the terminal and the main PCB is loose, and pull the terminal slightly for inspection if necessary. 4. Check whether the sensor is affected with damp. 5. In case no standard sensor is available at present, replace the Indoor Unit temperature sensor by other sensor asides, and then check whether the error still exists; if the error disappears, replace the sensor; if the error still exists, check the Indoor Unit main PCB and change if necessary.

Special attention	Most Indoor Unit temperature sensors have a resistance value of 15KΩ. Do not use improper sensor during repairing and maintenance, or it may led to the wrong temperature sensing of the machine, the start error or shutdown error. You can switch the air conditioner to the "Blowing" mode, and judge the accuracy of sensor though environmental temperature displayed on the screen. In case a sensor with the resistance value over 15KΩ is used, the detected temperature will be much lower than the actual temperature, which may lead to the shutdown error under heating mode, or the startup error under cooling mode. In case a sensor with the resistance value below 15KΩ is used, the detected temperature will be much higher than the actual temperature, which may lead to the startup error under heating mode, or the shutdown error under cooling mode.

（3）E2 -Outdoor Unit coil sensor error

Explanation of error	**Cause:** The detection of short circuit or open circuit of Outdoor Unit coil sensor during the inspection of Outdoor Unit maint PCB, indicated by "Outdoor Unit coil sensor error". **Inspection path:** Sensor→Sensor wire→Connectors→Outdoor Unit maint PCB
Tools required for inspection	Multimeter, 20KΩ standard sensor (25℃）
Frequent problematic part	Outdoor Unit coil sensor, Outdoor Unit maint PCB
Inspection procedure and key points	1. Check whether there's resistance problem, short circuit or open circuit in the sensor; the resistance value shall with a reasonable range (about 20KΩ) 2. Check whether the sensor wire is broken. 3. Check whether the terminal connectors are well fixed; check whether the weld between the terminal and the main PCB is loose, and pull the terminal slightly for inspection if necessary. 4. Check whether the sensor is affected with damp. The coil sensor is quite easy to be affected with damp in case the lead of coil sensor is above the copper pipe. 5. In case no standard sensor is available at present, replace the temperature sensor of Outdoor Unit coil by other sensor asides, and then check whether the error still exists; if the error disappears, replace the sensor; if the error still exists, check the Indoor Unit main PCB and change if necessary.

Special attention	Most Indoor Unit temperature sensors have a resistance value of 20KΩ. Do not use improper sensor during repairing and maintenance, or it may led to the start of protection mode due to wrong temperature sensing of the machine, or the protection error. In case a sensor with the resistance value over 20KΩ is used, the detected temperature will be much lower than the actual temperature, which may lead to the frequent entering of defrost mode, the illusory defrosting or the protection error during the cooling process. In case a sensor with the resistance value below 20KΩ is used, the detected temperature will be much higher than the actual temperature, which may lead to defrost error during the heating process, or the start of protection during the cooling process.

（4）E3 -Indoor Unit coil sensor error

Explanation of error	**Cause:** The detection of short circuit or open circuit of Indoor Unit coil sensor during the inspection of Indoor Unit main PCB, indicated by "Indoor Unit coil sensor error". **Inspection path:** Sensor→Sensor wire→Connectors→Indoor Unit main PCB
Tools required for inspection	Multimeter, 5KΩ or 20KΩ standard sensoe（25℃）
Frequent problematic part	Indoor Unit temperature sensor, Indoor Unit main PCB
Inspection procedure and key points	1. Check whether there's resistance problem, short circuit or open circuit in the sensor; the resistance value shall with a reasonable range (about 20KΩ) 2. Check whether the sensor wire is broken. 3. Check whether the terminal connectors are well fixed; check whether the weld between the terminal and the main PCB is loose., and pull the terminal slightly for inspection if necessary. 4. Check whether the sensor is affected with damp. The coil sensor is quite easy to be affected with damp in case the lead of coil sensor is above the copper pipe. 5. In case no standard sensor is available at present, replace the temperature sensor of Indoor Unit coil by other sensor asides, and then check whether the error still exists; if the error disappears, replace the sensor; if the error still exists, check the Indoor Unit main PCB and change if necessary.

Special attention	Most Indoor Unit temperature sensors have a resistance value of 20KΩ. Do not use improper sensor during repairing and maintenance, or it may led to the start of anti-frosting or overheat protection mode due to wrong temperature sensing of the machine. In case a sensor with the resistance value over 20KΩ is used, the detected temperature will be much lower than the actual temperature, which may lead to the high pressure of cold-blast protection system during the heating process, or the frequent start of anti-freezing protection during the cooling process. n case a sensor with the resistance value below 20KΩ is used, the detected temperature will be much higher than the actual temperature, which may lead to the frequent start of overheat protection mode during the heating or the overload protection during the cooling process.

（5） E4 -Indoor Unit motor error of wall mounted air conditioner （PG motor）

Explanation of error	**Cause:** PG motor is equipped with speed feedback signal line. When the feedback signal of speed is not received by the Indoor Unit main PCB, it has no way to recognize the rotating speed of motor, which will be indicated as "Indoor Unit motor error". Main causes for the disappearance of speed feedback signal are as follows: The fan is stucked; 2. The speed feedback component in the motor is broken; 3. Error of receiving circuit for the speed feedback signal from the Indoor Unit main PCB.
Tools required for inspection	Multimeter, A PG motor in normal working condition
Frequent problematic part	Mechanical jam problem of Indoor Unit motor, PG motor, Indoor Unit main PCB
Inspection procedure and key points	1. Check whether the motor can work for a period of time before the error occurs. If yes, the reason of mechanical jam can be exclude. 2. Disconnect the power supply and move the fan blade of Indoor Unit machine by hand to see if there's any resistance. Some occasional Indoor Unit motor error may relate to bearing coordination. 3. Reconnect the drive wire and speed feedback wire, thus to exclude any motor error due to connector loosening. 4. Check whether the plug-in terminal of speed feedback on the PCB is loose, and pull the terminal slightly for inspection if necessary. 5. Replace the motor in the faulted air conditioner with other PG motor (do not fix it with the fan for the time being), if the main PCB still indicates "Indoor Unit motor error", then replace the Indoor Unit main PCB; if the error disappears, replace the Indoor Unit motor.
Special attention	The Indoor Unit main PCB will not indicates "Indoor Unit motor error" when the Indoor Unit motor is still rotating; sometimes such error will not be reported when obvious motor problems exist (such as the low-speed rotation due to damaged motor capacitors, or non-uniform rotating speed due to abnormal speed feedback. Therefore, patience of the maintenance staff is required for the troubleshooting of motor error. You shall compare it with the normal condition, and detect and solve the problem in a flexible way.

(6) E4- Indoor Unit motor error of wall mounted air conditioner (DC motor)

Explanation of error	**Cause:** The Indoor Unit motor of some highly energy efficient models is DC motor using a green plug through which the Indoor Unit main PCB can drive the motor and sense the current rotational speed feedback. When the Indoor Unit main PCB cannot receive the rotational speed feedback signal of the motor, it will indicate "DC motor error". Disappearance of the rotational speed feedback signal may be caused by: 1 The fan is stuck and cannot work; 2 The speed feedback element inside the motor is destroyed; 3 There's something wrong with the speed feedback signal receiving circuit of the Indoor Unit main PCB. **Inspection path:** Is DC motor stuck by foreign matter→FAN destroyed → Motor terminal connectors→Indoor Unit main PCB
Tools required for inspection	Multimeter, a DC motor in normal working condition
Frequent problematic part	Mechanical jam of Indoor Unit motor, Indoor Unit DC motor, Indoor Unit main PCB
Inspection procedure and key points	1. Check whether the motor accelerates to extremely high speed before the error occurs. If it can work for a period, the reason of mechanical jam can be excluded. 2. Plug and unplug the terminal of the DC motor again to exclude any motor error due to connector loosening, and pull the terminal slightly for inspection if necessary. 3. Replace the motor in the faulted air conditioner with other DC motor to plug in the Indoor Unit main PCB (do not fix it with the fan for the time being), if the main PCB still indicates "DC motor error", then replace the Indoor Unit main PCB; if the error disappears, replace the DC motor. 4. Multimeter can be used to distinguish whether it is main PCB problem or motor problem by: connect the motor with the main PCB and pay attention to the second (yellow) and fourth (black) wire from the outermost side among four lines of the terminal of the DC motor. After the air conditioner powers on in the cooling mode for a while, the voltage between the yellow and black wires should rise gradually and the motor should accelerates slowly, if the DC motor still won't rotate, then the DC motor is destroyed.
Special attention	**Five lead wires division:** Count from the outermost side of the four wires of the DC motor terminal, the first blue wire is the speed feedback wire with a voltage of 0.5-5V when the motor rotates; the second yellow wire is the motor driving wire with a voltage of 2.0-7.5V when the motor rotates; the second white wire is 15V power cord with a voltage of 15V in normal condition; the fourth black wire is 0V DC earth wire which is the benchmark of all the voltage tests; the fifth (red) wire is 310V wire which is strong with a voltage of 310V in normal condition, so be careful of electric shock.

(7) Eb- Indoor EE Failure

Explanation of error	Cause: Many parameters need to be preset for the running of the indoor unit of the air conditioner and such parameters are placed in a data storage 8-feet chip, which is called "EEPROM" or "EE" for short. The motor on the Indoor Unit main PCB can only work after reading the data stored in EE and if not read, the failure code "Outdoor EE Failure" will be indicated and raised in the indoor unit. Reasons for data not being read are as follows: 1. wrong EE chip data format; 2. EE chip is broken; 3. bad contact of EE or fault of EE reading circuit; 4. backward installation of EE chip. Inspection path: Indoor Unit main PCB.
Tools required for inspection	/
Frequent problematic part	Bad contact of EE, Indoor Unit main PCB.
Inspection procedure and key points	Replace the Indoor Unit main PCB directly.

(8) P2- High-pressure protection

Explanation of error	Cause: In standby state or when the equipment is running, the high-pressure switch is disconnected three times (within 20 minutes) and reported as " High-pressure protection"; Inspection path: high-pressure switch cable → connector → high-pressure switch → main PCB
Tools required for inspection	Multimeter, connectoin line and high-pressure swtich
Frequent problematic part	High-pressure swtich connectoin line, fluorine deficiency of unit and high-pressure swtich
Inspection procedure and key points	1. Check whether the plug-in terminals are firmly connected and whether the terminals and the main PCB are welded loosely. If necessary, gently pull them to check; 2. Use a multimeter to measure whether it is disconnected; 3. Use the multimeter to check the state of the high-pressure swtich and check whether it is in the OFF state (normally OFF, unusual disconnection); 4. If the pressure is normal and the high-pressure switch is kept open, it is positive that the pressure voltage is faulted; 5. If the pressure switch is normal and the connection line is tact and the failure is still reported, replace the corresponding main PCB.
Special attention	The reason why high-pressure switch is often disconnected is the leakage of equipment. When the high voltage switch is off, first check whether the air conditioner's pressure is normal. If it is normal but the failure is still displayed aftere replacing the Outdoor Unit main PCB, it is possible that the connecting pipe may be too long or the Outdoor Unit ambinet temperature is too low

(9) P3- Liquid Deficiency Protection

Explanation of error	Cause: The liquid volume of the system is less than 30%, which leads to non-refrigeration and liquid shortage protection. Inspection path: whether the valves of the outdoor unit are opened → whether the evaporator, condenser, connectoin pipe are damanged or cracked → whether the environmental temperature sensor and the coil temperature sensor are damaged at the same time
Tools required for inspection	Hex nut, multimeter, pressure gauge
Frequent problematic part	Stop valve, evaporator, condenser and connection pipe
Inspection procedure and key points	1. Check the stop valve and turn it counterclockwise with hexagons to see if the valve is not open and the opening is not enough; 2. Check whether the evaporator, condenser and connection pipe are damaged or cracked, and focus on checking whether there is refrigerant leakage in the welding part and connection pipe joint; 3. Measure the temperature sensor with the multimeter at ambient temperature, and whether the coil temperature sensor has abnormal resistance at the same time.

9-2 Troubleshooting for Normal Malfunction

➢ 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 does 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 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 motor 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 A/C; 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 Motor slows down.	The compressor stops Indoor Unit or the Motor slows down to prevent the indoor heat exchanger from being frozen.

➢ **Fault Diagnosis by Symptom**

①**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
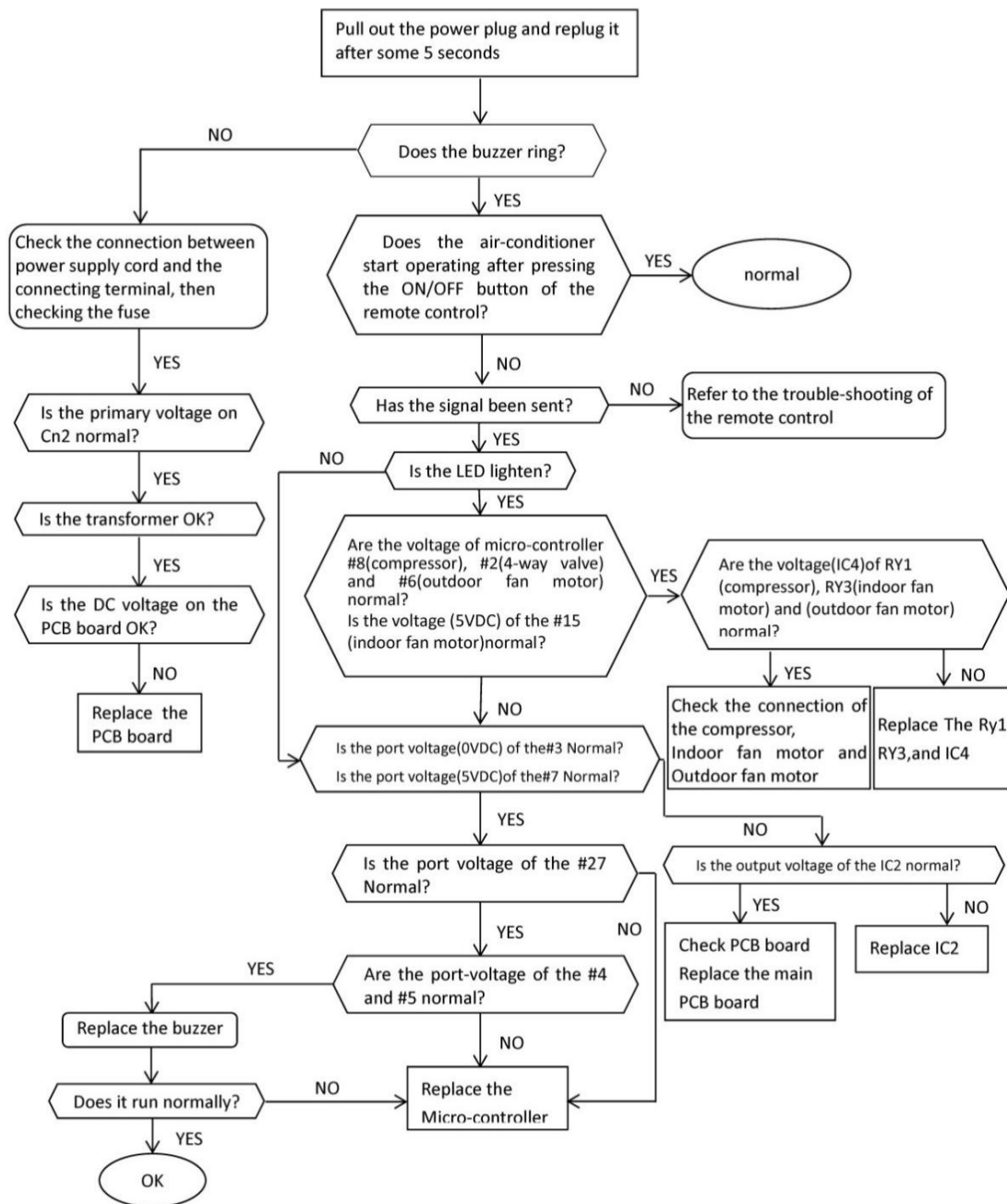
②The Indoor Motor Does Not Work

(1) Items
   a) Check if the indoor Motor is connected correctly to the connector (CN8)?
   b) Check if the AC input voltage is correct?
   c) Check if the IC of indoor Motor is connected correctly to the connector (CN2)?
   d) Check if the capacity of indoor Motor is connected correctly to the connector (CN8)?
(2) Trouble shooting procedure
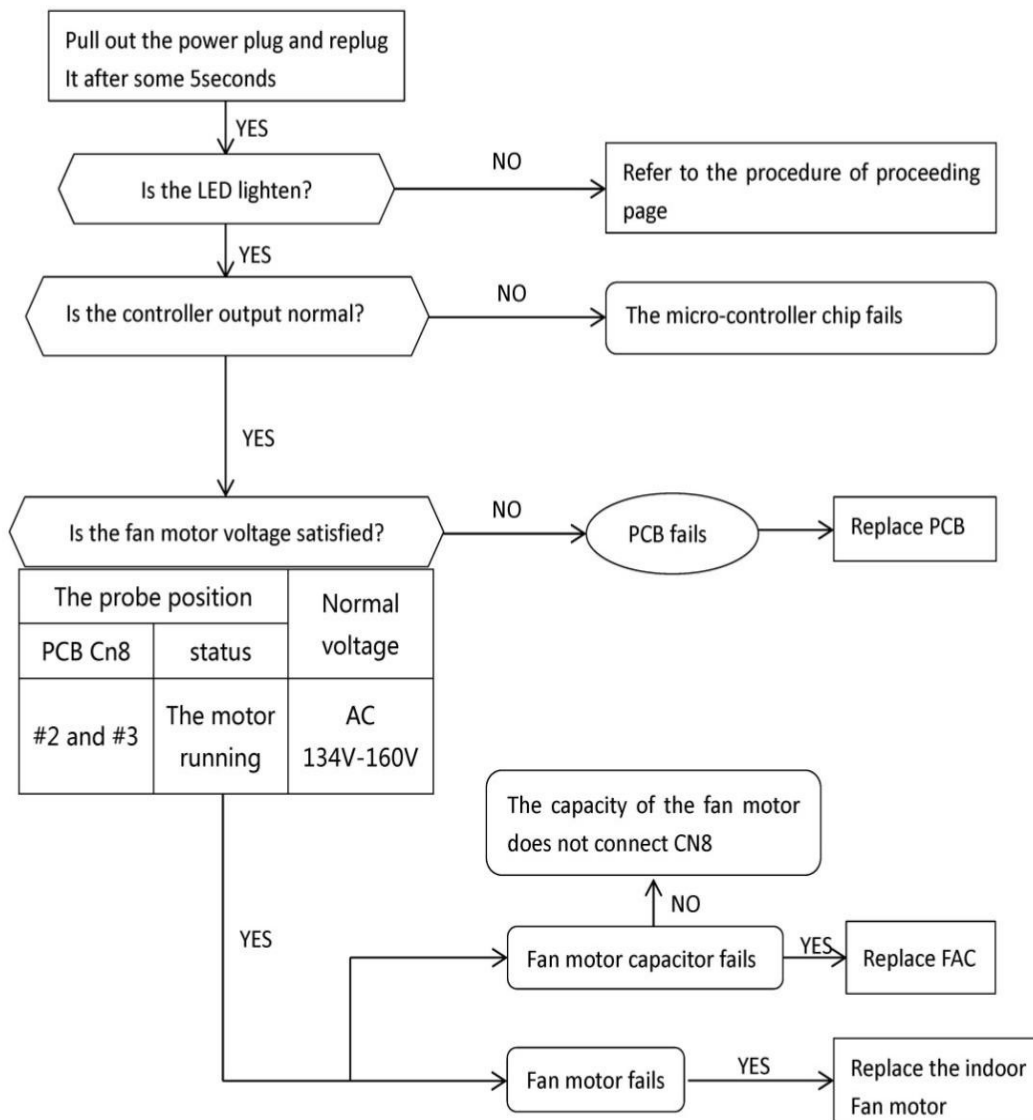
③The Outdoor Unit Does Not Work

(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

```
┌─────────────────────────────────┐
│ Pull out the power plug and      │
│ replug it after some 5 seconds   │
└─────────────────────────────────┘
              │
              ▼
    ⬡ Is the indoor controller    ──NO──▶  ┌──────────────────────────┐
         normal?                            │ Check refer to the "9-3-1"│
              │                             │ part                      │
             YES                            └──────────────────────────┘
              │
              ▼
    ⬡ Is the output voltage of     ──NO──▶  ┌──────────────┐
      relay normal? Is the wire              │ The relay fails│
      connection on the terminal             └──────────────┘
      correct?                                      │
              │                                     ▼
             YES                             ┌──────────────┐
              │                              │ Replace the  │
              ▼                              │ relay        │
    ┌──────────────┐                         └──────────────┘
    │ The outdoor  │
    │ unit is      │
    │ abnormal     │
    └──────────────┘
```
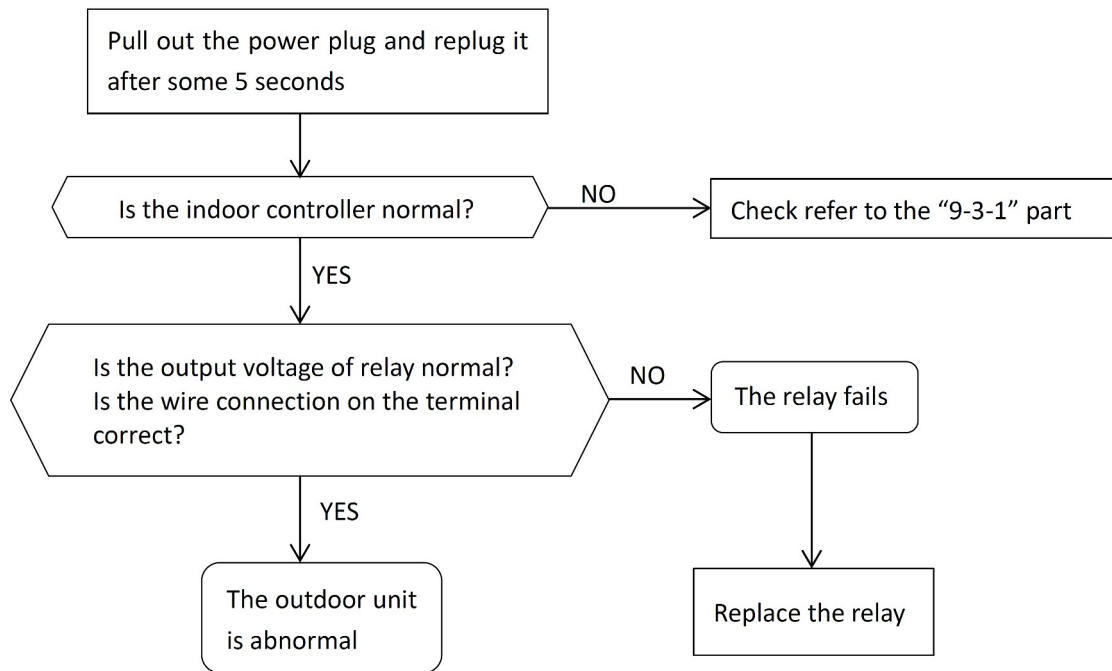
④The Step Motor Does Not Work

(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

```
┌─────────────────────────────────────────────────┐
│ Pull out the power plug and replug it after some 5seconds │
└─────────────────────────────────────────────────┘
                          │
                          ▼
       ┌───────────────────────────────────────┐
       │  Start the air-conditioner with remote control  │
       └───────────────────────────────────────┘
                          │
                          ▼
    ┌──────────────────────────────────┐   NO    ┌──────────────────────┐
    │  Is the LED on the display board lighten?  │ ──────▶ │ Confirm the procedure │
    └──────────────────────────────────┘         │ of the "5-2" part     │
                          │ YES                   └──────────────────────┘
                          ▼
    ┌──────────────────────────────────┐   YES   ┌──────────────────────┐
    │ Does the louver move up and down after pressing │ ──────▶ │      Normal      │
    │ the SWING button on the remote control?  │         └──────────────────────┘
    └──────────────────────────────────┘
                          │ NO
                          ▼
    ┌──────────────────────────────────┐   NO    ┌──────────────────────┐
    │ Is there any voltage change between the  │ ──────▶ │  The chip IC1 fails  │
    │ chips #23,#22,#20,#19              │         └──────────────────────┘
    └──────────────────────────────────┘
                          │ YES
                          ▼
    ┌──────────────────────────────────┐   NO    ┌──────────────────────┐
    │ Is there any voltage change between  │ ──────▶ │  Drive chip IC4      │
    │ 10～13 of the chip ULN2003AFW      │         │  (ULN2003AFW)        │
    └──────────────────────────────────┘         └──────────────────────┘
                          │ YES
                          ▼
              ┌──────────────────────┐
              │  The step motor fails  │
              └──────────────────────┘
```

⑤Heating Mode Can Work, But No Hot Air Blows

(1) Check if the set temperature is lower than the indoor temperature?
(2) Check if the indoor PCB is connected to the terminal correctly?

```
┌─────────────────────────────────┐
│ Restarted in some 5 minutes after│──YES──►┌──────────┐
│ the above problems solved        │        │  Normal  │
└─────────────────────────────────┘        └──────────┘
                │ NO
                ▼
┌─────────────────────────────────┐        ┌──────────────────┐
│ Is the chip IC1#7 voltage DC5.0V?│──NO──►│ The chip IC1 fails│
└─────────────────────────────────┘        └──────────────────┘
                │ YES
                ▼
┌─────────────────────────────────┐        ┌──────────────────┐
│ Is the chip ICI#2 voltage high? │──NO──►│ The chip IC3 fails│
└─────────────────────────────────┘        └──────────────────┘
                │ YES
                ▼
┌─────────────────────────────────┐        ┌──────────────────┐
│ Is the voltage at the connecting│──NO──►│ The chip IC4      │
│ point of chip IC4(ULN2003A)low? │        │ (ULN2003A)fails   │
└─────────────────────────────────┘        └──────────────────┘
                │ YES
                ▼
┌─────────────────────────────────┐   NO   ┌──────────────────┐
│ Is relay output normal?         │──────►│ Replace relay(RY3)│
└─────────────────────────────────┘        └──────────────────┘
                │ YES
                ▼
┌─────────────────────────────────┐
│ The interconnection cord or the │
│ 4-way valve is abnormal         │
└─────────────────────────────────┘
                │ YES
                ▼
┌─────────────────────────────────┐        ┌──────────────────┐
│ Check the interconnection cord  │        │   Replace PCB    │
│ or replace the 4-way valve      │        └──────────────────┘
└─────────────────────────────────┘
```

⑥ Remote Controller Can Not Work

Trouble shooting procedure

```
┌─────────────────────────────────────────────────────┐
│  Take out the batteries and reinsert them after 5 seconds │
└─────────────────────────────────────────────────────┘
                          │
                          ▼
          ┌───────────────────────────┐      NO     ┌──────────────────────────┐
          │     Is the LED lighten?     ├──────────▶ │ Check refer to the "5-2" part │
          └───────────────────────────┘             └──────────────────────────┘
                          │ YES
                          ▼
          ┌───────────────────────────┐      YES    ┌──────────────────────────┐
          │ Is there music when the ON/OFF button │──────────▶ │          Normal          │
          │       was pressed.          │           └──────────────────────────┘
          └───────────────────────────┘
                          │ NO
                          ▼
          ┌───────────────────────────┐      YES    ┌──────────────────────────┐
          │ Is there voltage of batteries lower than │──────▶ │     Replace batteries     │
          │         2.5V?               │           └──────────────────────────┘
          └───────────────────────────┘
                          │ NO
                          ▼
          ┌───────────────────────────┐      NO     ┌──────────────────────────┐
          │   Is the LCD display normal?  ├────────▶ │         LCD fails         │
          └───────────────────────────┘             └──────────────────────────┘
                          │ YES
                          ▼
          ┌───────────────────────────┐      NO     ┌──────────────────────────┐
          │ Is there signal when the ON/OFF button was │──▶ │      Replace buttons      │
          │        pressed.             │           └──────────────────────────┘
          └───────────────────────────┘
                          │ YES
                          ▼
          ┌───────────────────────────┐      NO     ┌──────────────────────────┐
          │ Is there any change on the voltage of chip IC1? │▶ │       The chip fails      │
          └───────────────────────────┘             └──────────────────────────┘
                          │ YES
                          ▼
          ┌───────────────────────────┐      NO     ┌──────────────────────────┐
          │ Is there any change on the voltage Q1? ├──▶ │      Replace audion       │
          └───────────────────────────┘             └──────────────────────────┘
                          │ YES
                          ▼
          ┌───────────────────────────┐      NO     ┌──────────────────────────┐
          │ Is there any change on the voltage LED? ├─▶ │    Emission tube fails    │
          └───────────────────────────┘             └──────────────────────────┘
                          │ YES
                          ▼
          ┌───────────────────────────┐
          │      The receiver fails     │
          └───────────────────────────┘
```

10. Exploded Views and Parts List

10-1 Indoor Unit

AUX 奥克斯
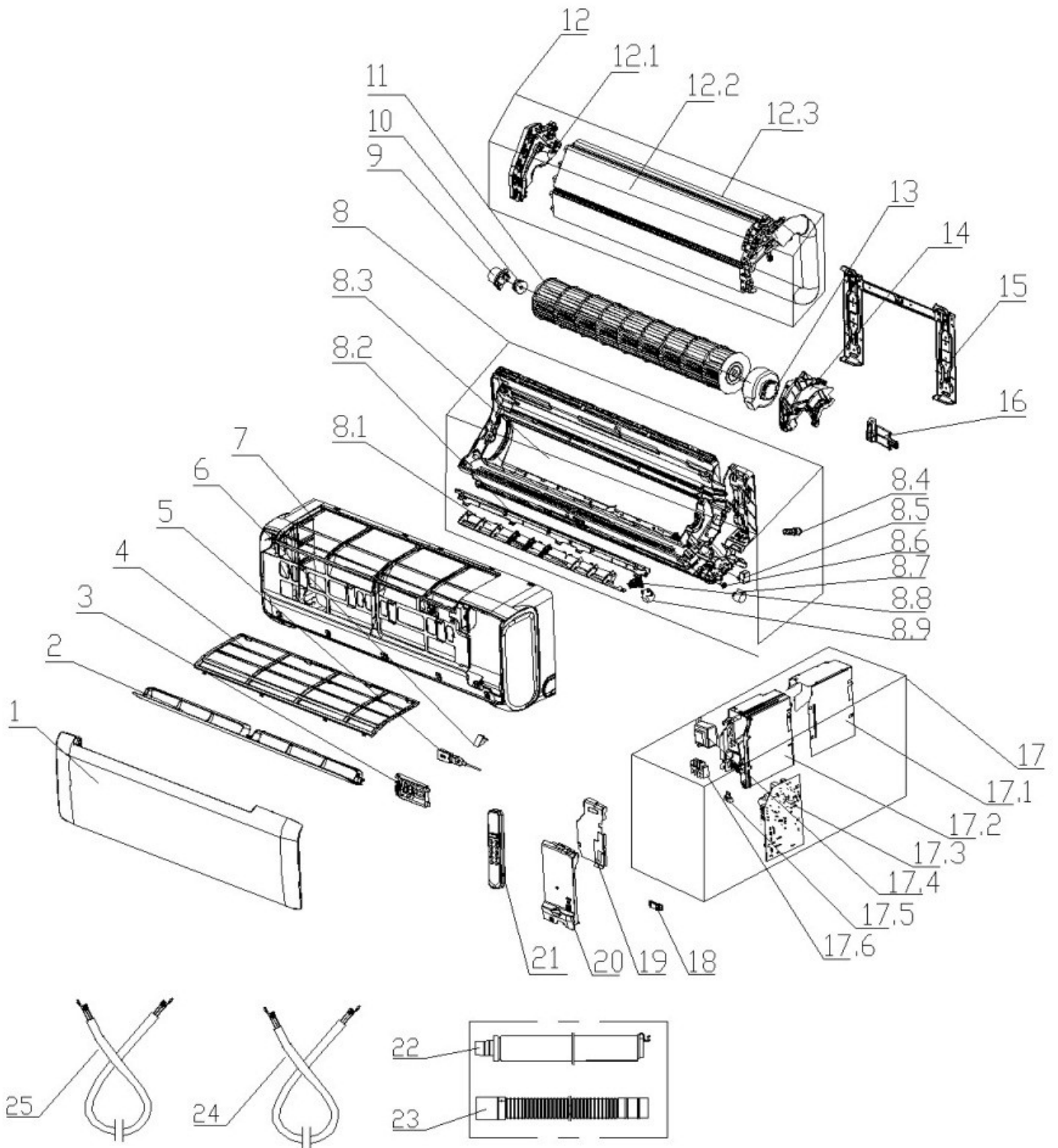
Part List

NO.	Part Name	Quantity	NO.	Part Name	Quantity
1	panel	1	12.2	Evaporator assembly	1
2	air louver（Horizontal）	1	12.3	evaporator assembly	1
3	display board	1	13	indoor fan motor	1
4	filter	1	14	motor cover	1
6	Screw cover	1	15	mounting plate assembly	1
7	medium frame	1	16	pipe clamp	1
8	chassis assembly	1	17	main controller	1
8.1	left-right swing blade	1	17.1	controller box sheet-metal	1
8.2	volute	1	17.2	controller box	1
8.3	chassis	1	17.3	Main control board	1
8.4	stopple	1	17.4	Transformer	1
8.6	step motor shaft sleeve	1	17.5	power wire clamp	1
8.7	air louver step motor	1	17.6	terminal board	1
8.8	main air blade	1	18	wire clamp	1
8.9	air louver step motor	1	20	Middle frame wiring cover fireproof board	1
9	bearing fixed chassis	1	21	Remote controller	1
10	bearing assembly	1	22	water flow tube assembly	1
11	cross flow fan	1	23	water hosepipe	1
12	Evaporator assembly	1	24	power cord	1
12.1	evaporator left side carriage	1	25	power cable	1

10-2 Outdoor Unit

AUX 奥克斯
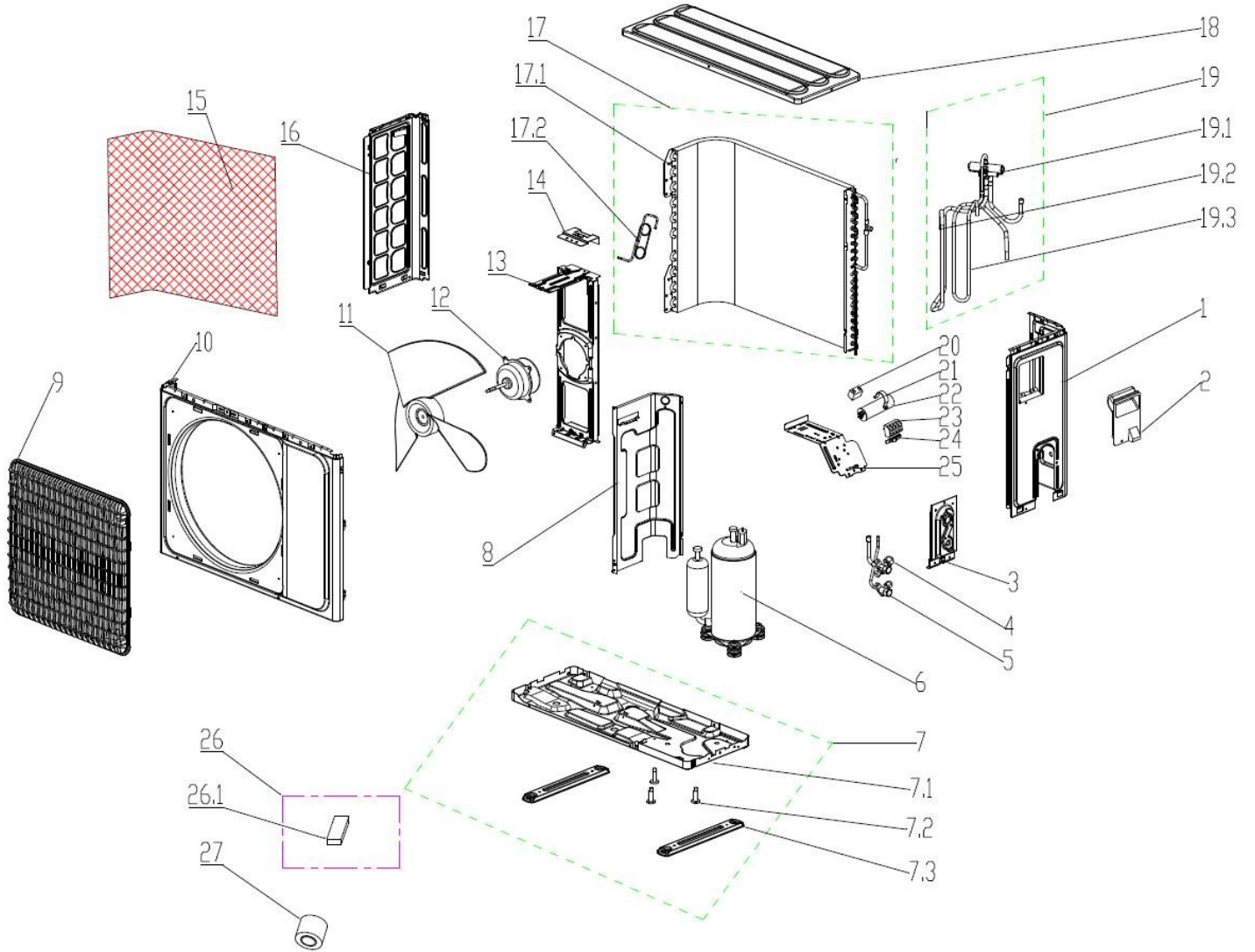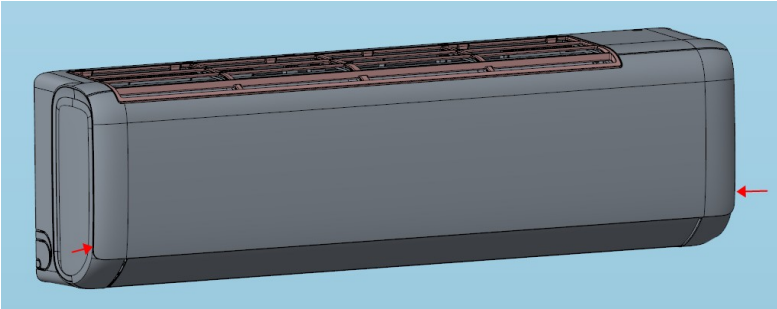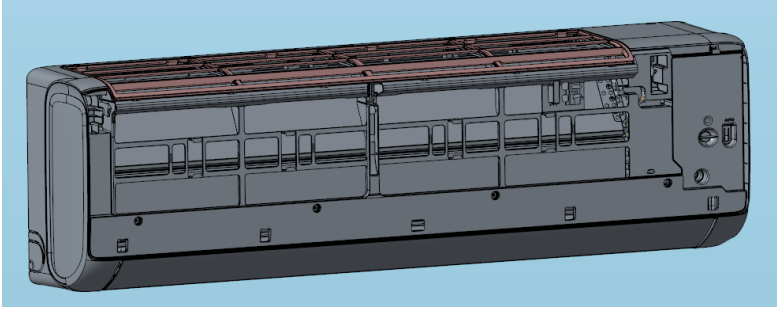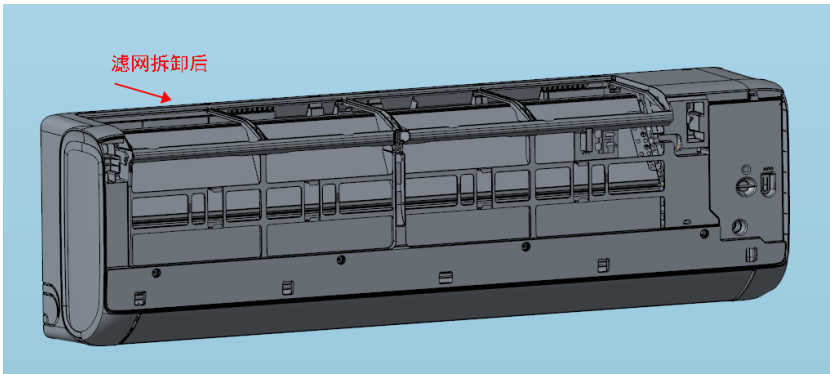
Part List
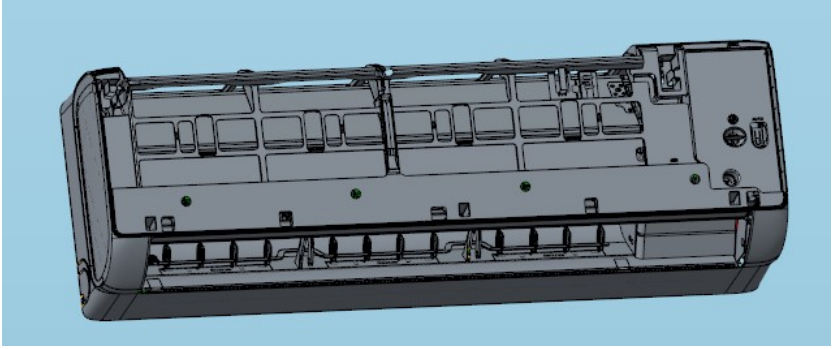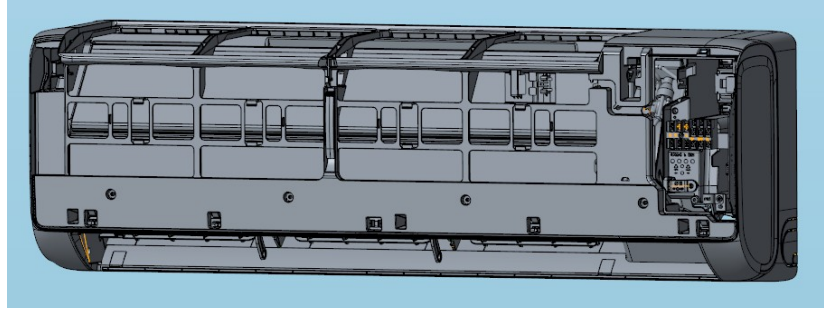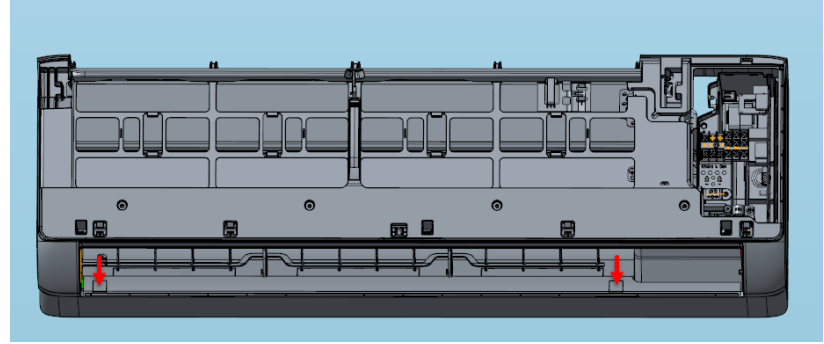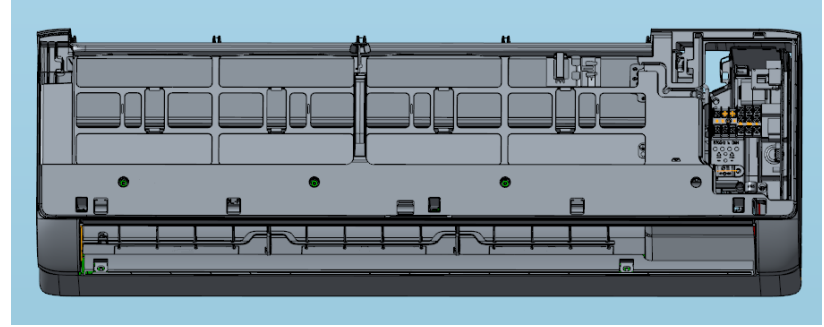
NO.	Part Name	Quantity	NO.	Part Name	Quantity
1	right side board	1	17	Condenser assembly	1
2	E-parts cover	1	17.1	condenser assembly	1
3	valve plate	1	17.2	Capillary assembly	1
4	stop valve	1	18	top cover	1
5	stop valve	1	19	4-way valve tubing assembly	1
6	compressor assembly	1	19.1	4-way valve	1
7	Chassis assembly	1	19.2	suction pipe assembly	1
7.1	chassis	1	19.3	discharge pipe assembly	1
7.2	compressor footing bolt	3	20	Fan motor capacitor	1
7.3	base footing	2	21	Capacitor clamp	1
8	partition board	1	22	Compressor capacitor	1
9	panel grille	1	23	terminal board	1
10	panel	1	24	cable clamp	1
11	axial flow fan	1	24	cable clamp	1
12	motor	1	25	E-parts bracket	1
13	motor support	1	26	accessories	1
14	hanging ear of condenser	1	26.1	putty	1
15	rear grille	1	27	plastic tie	1
16	left side board	1			
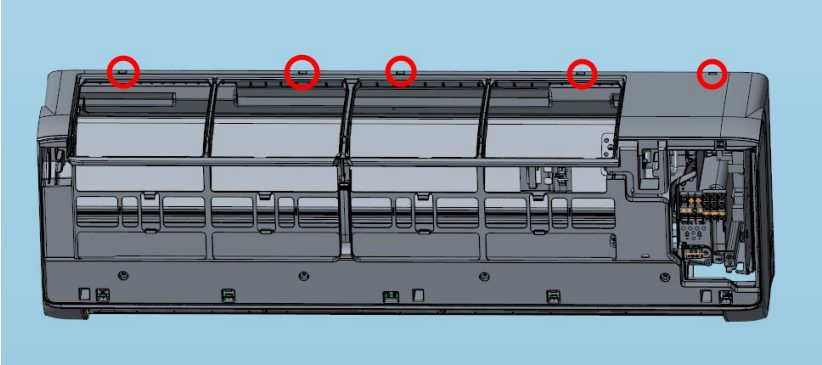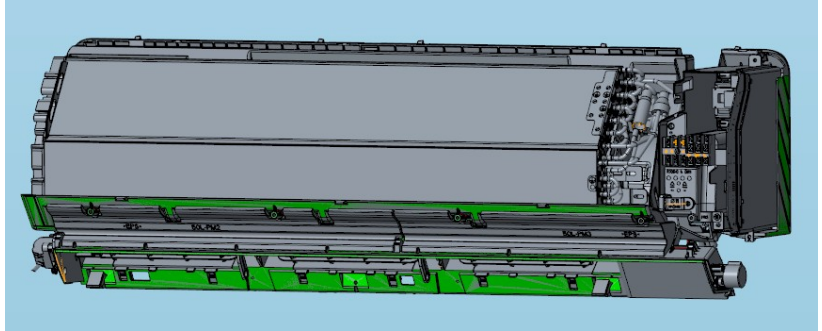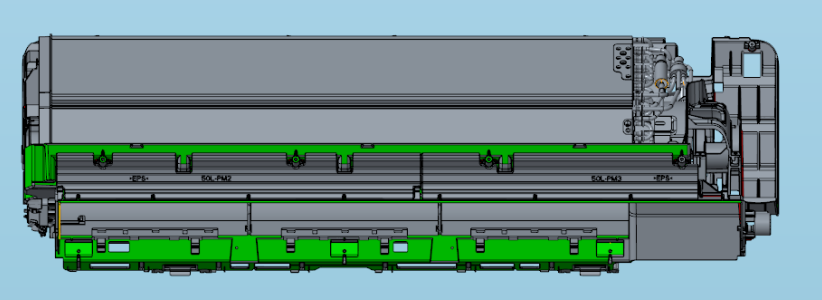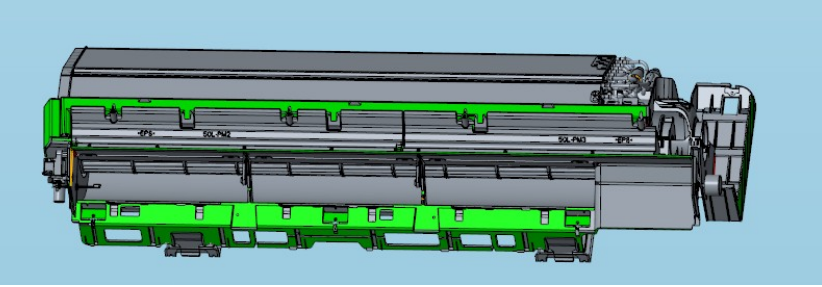
11. Removal Procedure
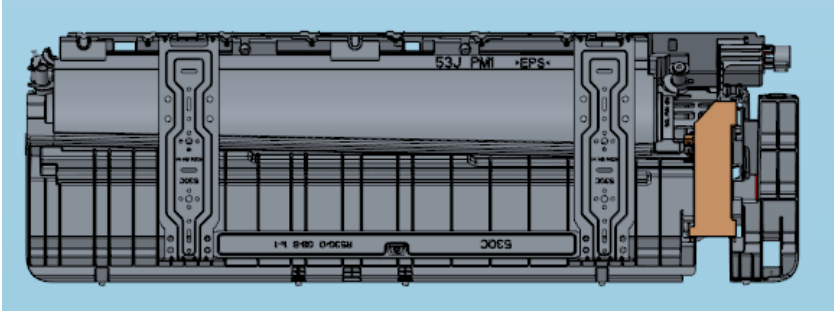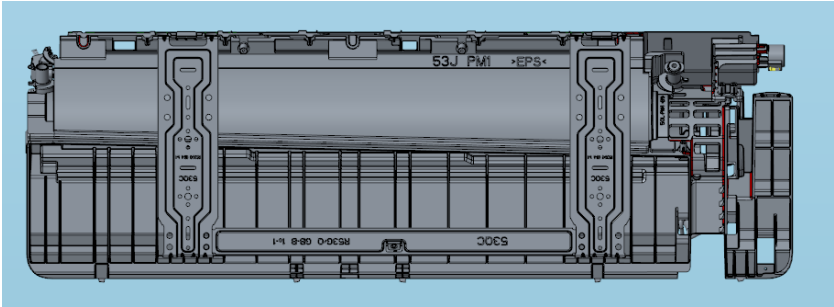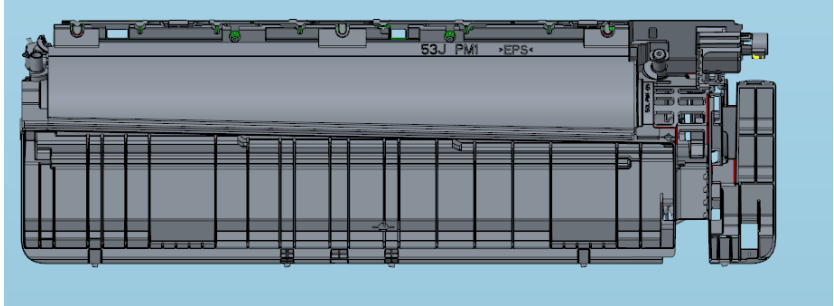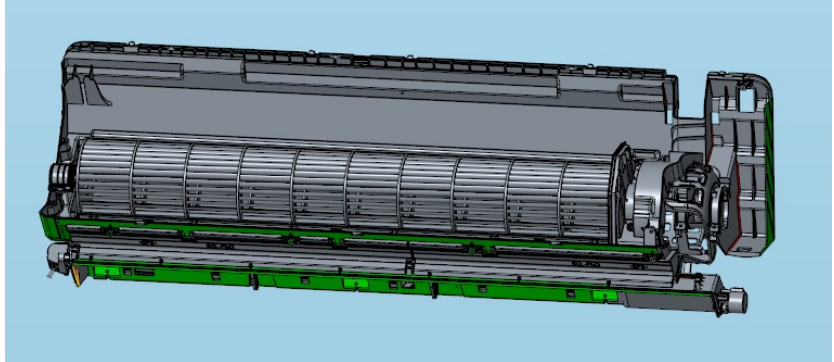
Stop operation of the air conditioner and remove the power cord before repairing the unit.
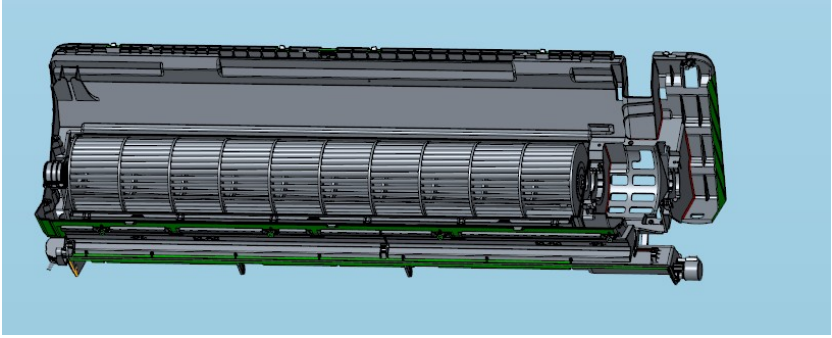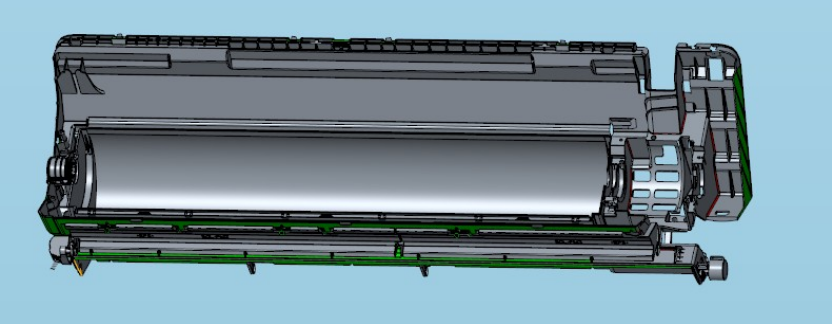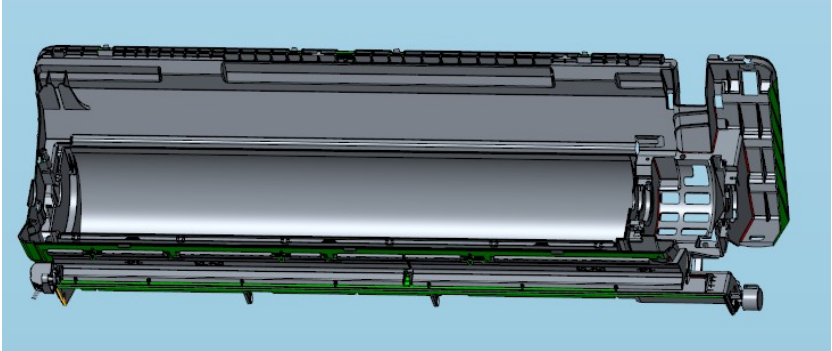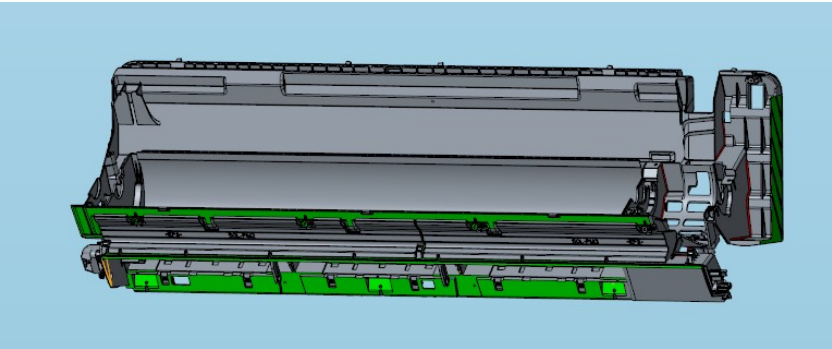
11-1 Indoor Unit

Part	Procedure	Diagram
1	1) Turn off the power, hold the middle panel with the middle finger, 2) open the panel upwards, remove the panel fixing shaft, and remove the panel.	
2	Remove front Panel	
3	Remove air filter	滤网拆卸后
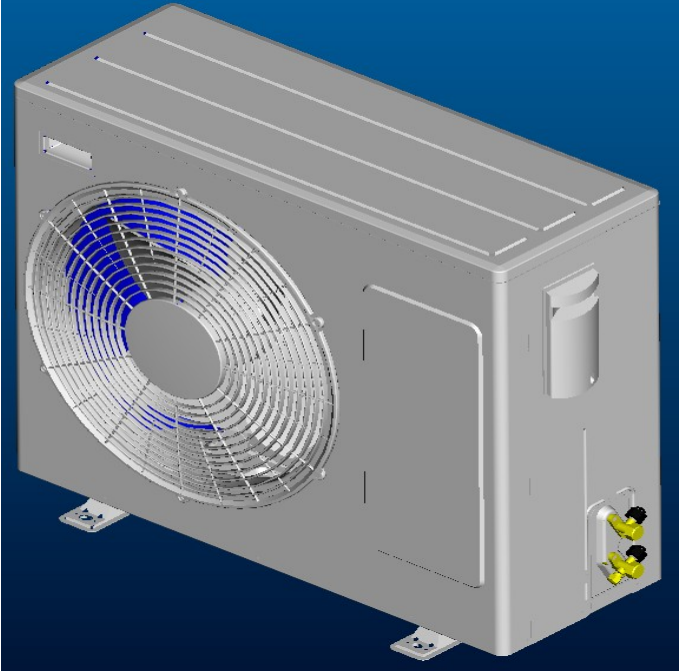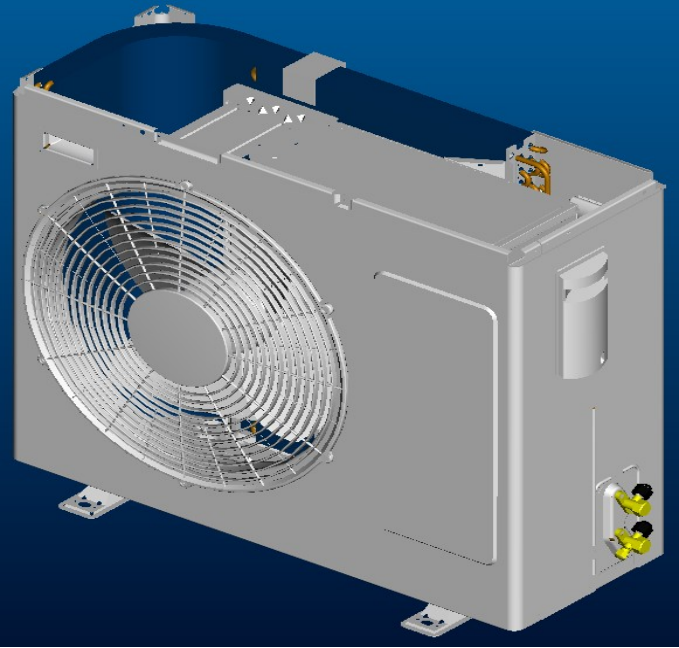
4	Remove air louver	
5	Remove medium frame cover	
6	Press down hard on the center frame screw cover	
7	Remove the two screw caps	

8	Remove medium frame cover screw	
9	Remove medium frame	
10	Remove electric box	
11	Remove disassembly of guide vane and connecting rod	

12	After removing disassembly of guide vane and connecting rod	
13	Remove pipe clamp	
14	Remove hanging plate	
15	Remove evaporator	

16	Remove motor	
17	Remove the blade	
18	Removal of bearing mounting	
19	Remove the stepper motor	

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11-2 Outdoor Unit

Part	Procedure	Diagram
1	Outdoor unit	
2	Remove top cover	
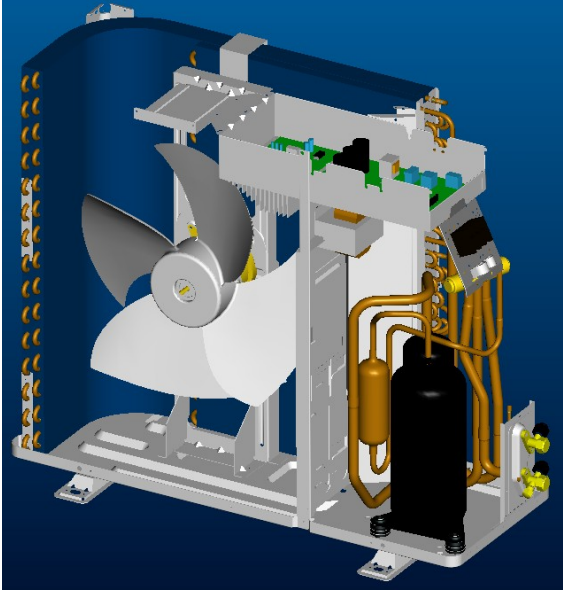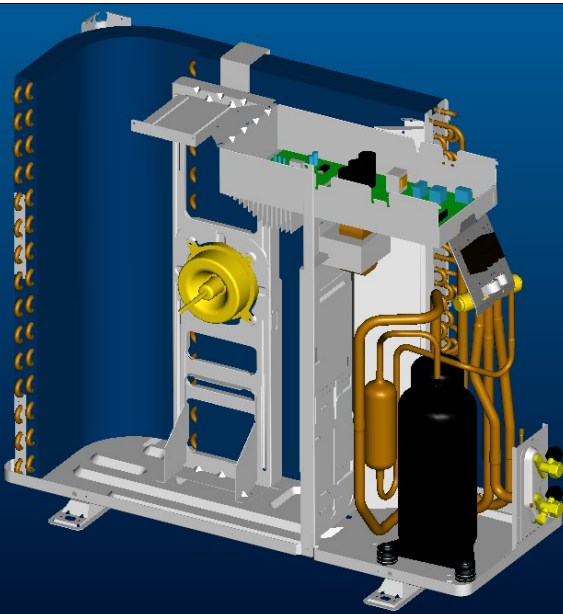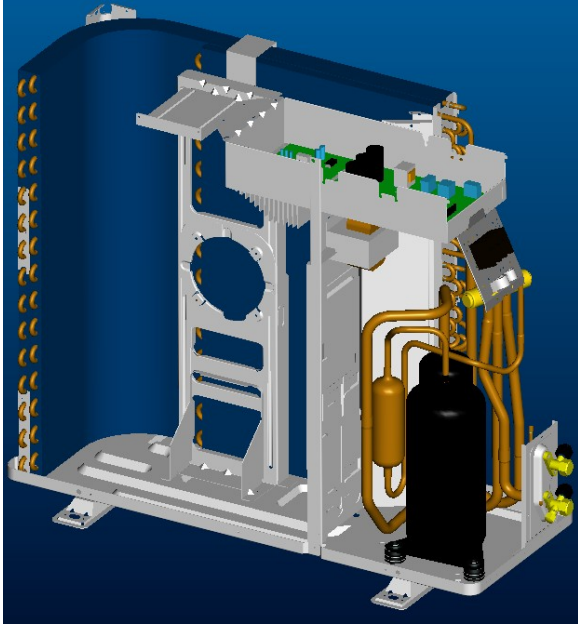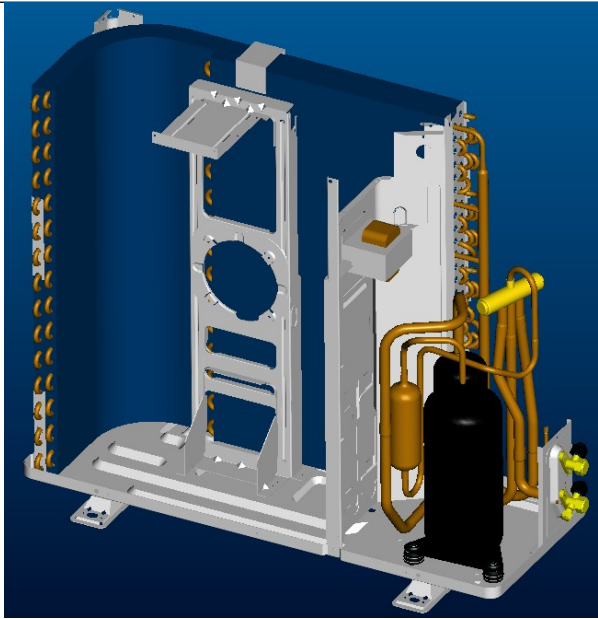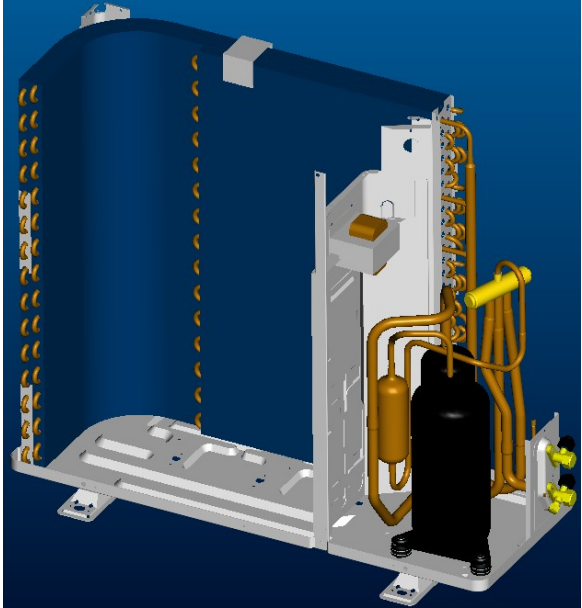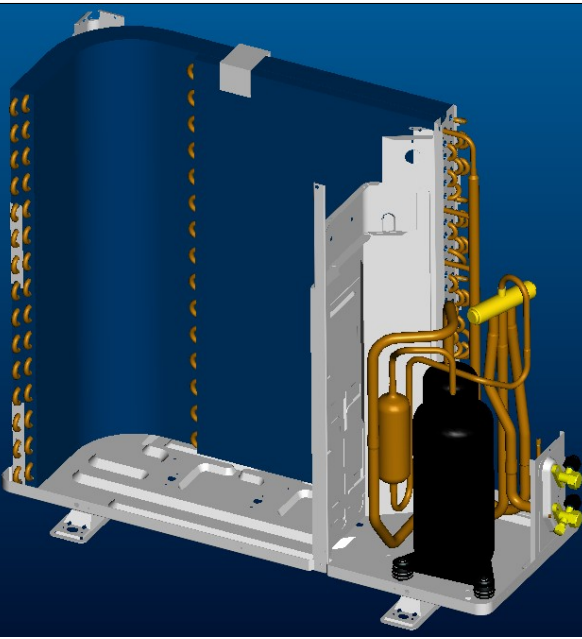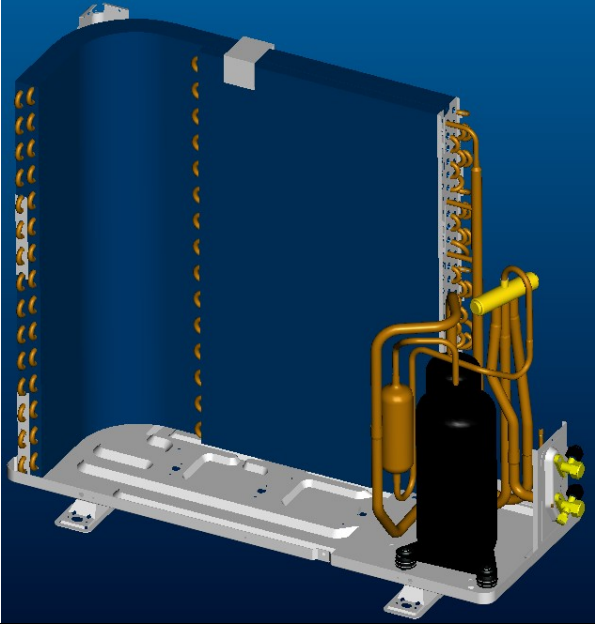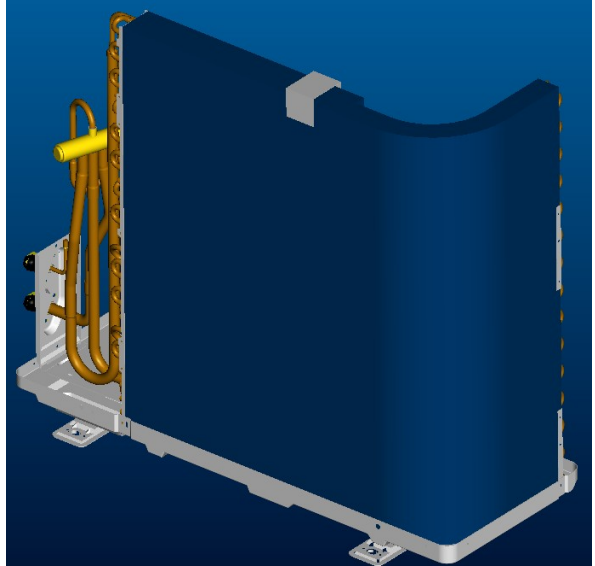
3	Remove panel grille	
4	Remove front panel	
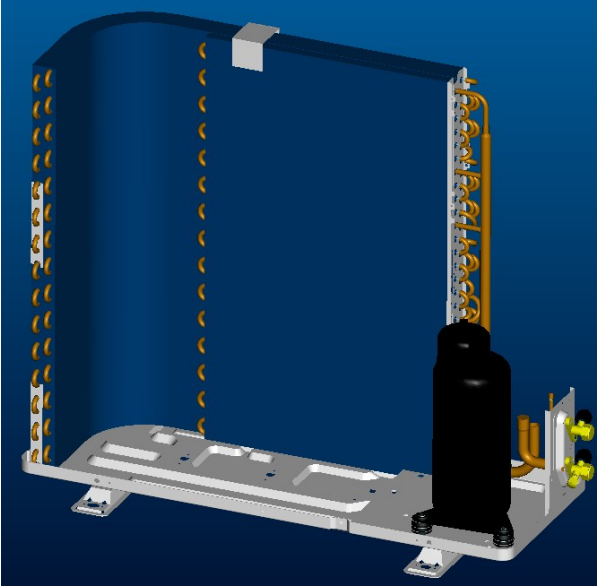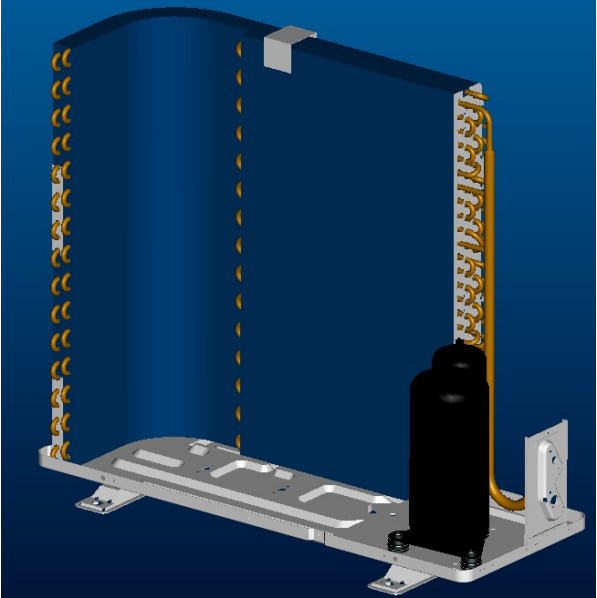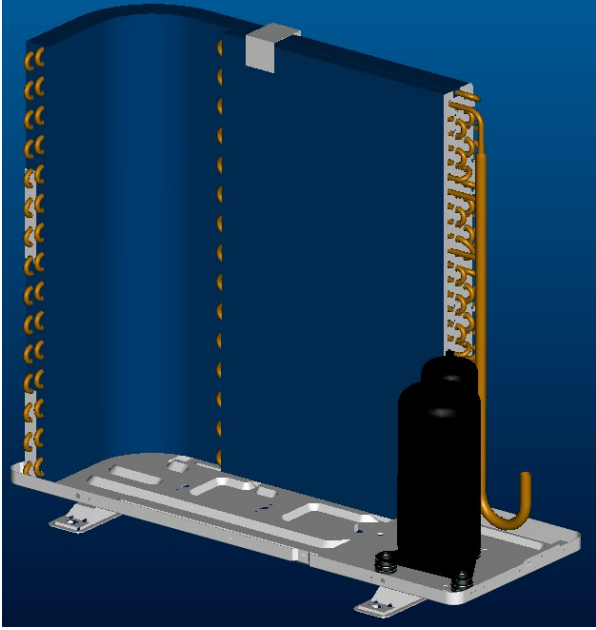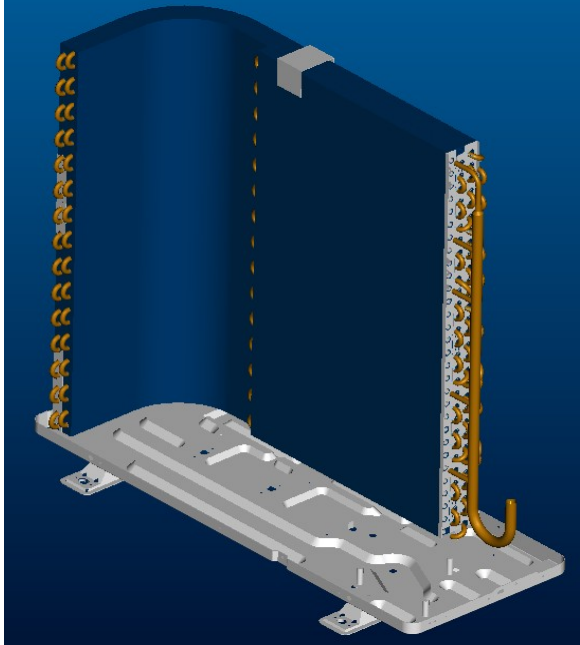
5	Remove right side panel	
6	Remove axial flow blade	
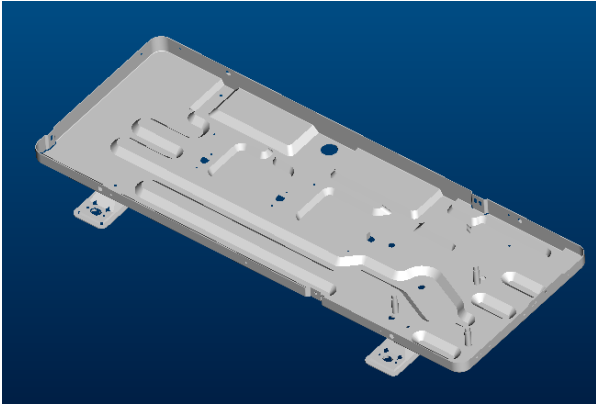
7	Remove outer motor	
8	Remove electric plane	

9	Remove motor support	
10	Remove reactor	

11	Remove partition board	
12	Remove left side support plate	

13	Remove pipeline assembly	
14	Remove stop valve assembly	

15	Remove valve plate	
16	Remove compressor	

17	Remove condenser	

Appendix

AUX Common Sensor R-T Analysis Table

Temperature sensor R-T analysis table （15K）								
Sensor standard resistance：15KΩ±3%　　　B:B(25/50)=3950K±2％Reference temperature：25（℃）								
MCU_A/D exchange ±3LSB（at10bit）								
Series (sampling) resistor：10（KΩ）±1%（except disk sensor）								
Single chip (A/D reference voltage) supply voltage：5V								
Temp	Resistance（KΩ）			MCU Input voltage（V）			A/D Exchange value		
（℃）	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
-25.0	183.4	199.1	216.0	0.219	0.239	0.261	42	49	56
-24.0	172.8	187.4	203.0	0.233	0.253	0.276	45	52	60
-23.0	162.9	176.5	190.9	0.247	0.268	0.292	47	55	63
-22.0	153.7	166.2	179.6	0.261	0.284	0.308	50	58	66
-21.0	145.0	156.7	169.1	0.277	0.300	0.326	54	61	70
-20.0	136.9	147.7	159.2	0.293	0.317	0.344	57	65	73
-19.0	129.2	139.3	150.0	0.310	0.335	0.363	60	69	77
-18.0	122.1	131.4	141.4	0.327	0.354	0.382	64	72	81
-17.0	115.4	124.1	133.3	0.346	0.373	0.402	68	76	85
-16.0	109.1	117.2	125.7	0.365	0.393	0.424	72	81	90
-15.0	103.1	110.7	118.6	0.385	0.414	0.446	76	85	94
-14.0	97.59	104.6	112.0	0.406	0.436	0.469	80	89	99
-13.0	92.37	98.88	105.8	0.428	0.459	0.493	85	94	104
-12.0	87.45	93.52	99.92	0.451	0.483	0.518	89	99	109
-11.0	82.83	88.48	94.43	0.474	0.508	0.543	94	104	114
-10.0	78.48	83.74	89.27	0.499	0.533	0.570	99	109	120
-9.0	74.39	79.29	84.43	0.525	0.560	0.598	104	115	125
-8.0	70.54	75.10	79.88	0.551	0.588	0.626	110	120	131
-7.0	66.90	71.15	75.61	0.579	0.616	0.656	116	126	137
-6.0	63.48	67.44	71.59	0.607	0.646	0.686	121	132	144
-5.0	60.25	63.95	67.80	0.637	0.676	0.718	127	138	150
-4.0	57.21	60.65	64.24	0.668	0.708	0.750	134	145	157
-3.0	54.34	57.55	60.89	0.699	0.740	0.784	140	152	163
-2.0	51.63	54.62	57.73	0.732	0.774	0.818	147	158	171
-1.0	49.07	51.86	54.76	0.766	0.808	0.853	154	166	178
0.0	46.65	49.25	51.95	0.800	0.844	0.890	161	173	185
1.0	44.37	46.79	49.31	0.836	0.880	0.927	168	180	193
2.0	42.21	44.47	46.81	0.873	0.918	0.965	176	188	201
3.0	40.17	42.28	44.46	0.911	0.956	1.005	183	196	209
4.0	38.24	40.20	42.24	0.949	0.996	1.045	191	204	217
5.0	36.41	38.25	40.14	0.989	1.036	1.086	200	212	225

6.0	34.68	36.39	38.16	1.030	1.078	1.128	208	221	234
7.0	33.05	34.64	36.29	1.072	1.120	1.170	216	229	243
8.0	31.50	32.99	34.52	1.114	1.163	1.214	225	238	252
9.0	30.03	31.42	32.84	1.158	1.207	1.258	234	247	261
10.0	28.64	29.94	31.26	1.203	1.252	1.304	243	256	270
11.0	27.32	28.53	29.77	1.248	1.298	1.350	253	266	279
12.0	26.07	27.20	28.35	1.294	1.344	1.396	262	275	289
13.0	24.89	25.94	27.01	1.341	1.391	1.443	272	285	299
14.0	23.76	24.74	25.74	1.389	1.439	1.491	281	295	308
15.0	22.69	23.61	24.54	1.437	1.488	1.540	291	305	318
16.0	21.68	22.53	23.40	1.486	1.537	1.589	301	315	328
17.0	20.72	21.51	22.32	1.536	1.587	1.639	312	325	339
18.0	19.80	20.55	21.30	1.587	1.637	1.689	322	335	349
19.0	18.94	19.63	20.33	1.637	1.687	1.739	332	346	359
20.0	18.11	18.75	19.40	1.689	1.739	1.790	343	356	370
21.0	17.33	17.93	18.53	1.741	1.790	1.841	354	367	380
22.0	16.58	17.14	17.70	1.793	1.842	1.893	364	377	391
23.0	15.87	16.39	16.91	1.846	1.895	1.945	375	388	401
24.0	15.19	15.68	16.16	1.899	1.947	1.997	386	399	412
25.0	14.55	15.00	15.45	1.953	2.000	2.049	397	410	423
26.0	13.91	14.36	14.80	2.004	2.053	2.103	407	420	434
27.0	13.31	13.74	14.18	2.056	2.106	2.157	418	431	445
28.0	12.73	13.16	13.59	2.107	2.159	2.212	429	442	456
29.0	12.18	12.60	13.03	2.159	2.212	2.267	439	453	467
30.0	11.66	12.08	12.49	2.211	2.264	2.321	450	464	478
31.0	11.17	11.57	11.98	2.262	2.318	2.374	460	475	489
32.0	10.69	11.09	11.49	2.314	2.371	2.429	471	486	500
33.0	10.24	10.63	11.03	2.365	2.424	2.483	481	496	511
34.0	9.816	10.20	10.59	2.416	2.475	2.536	492	507	522
35.0	9.408	9.782	10.16	2.468	2.528	2.589	502	518	533
36.0	9.019	9.385	9.758	2.518	2.579	2.641	513	528	544
37.0	8.648	9.007	9.372	2.568	2.631	2.694	523	539	555
38.0	8.294	8.645	9.003	2.619	2.682	2.745	533	549	565
39.0	7.957	8.300	8.651	2.668	2.732	2.797	543	560	576
40.0	7.635	7.971	8.315	2.718	2.782	2.847	554	570	586
41.0	7.328	7.657	7.993	2.766	2.832	2.898	564	580	596
42.0	7.034	7.356	7.686	2.815	2.881	2.947	573	590	607
43.0	6.755	7.069	7.391	2.863	2.929	2.996	583	600	617
44.0	6.487	6.795	7.110	2.910	2.977	3.045	593	610	627
45.0	6.232	6.532	6.841	2.957	3.024	3.092	603	619	636
46.0	5.988	6.282	6.584	3.003	3.071	3.139	612	629	646
47.0	5.755	6.042	6.337	3.049	3.117	3.185	621	638	655
48.0	5.532	5.812	6.101	3.094	3.162	3.231	631	648	665
49.0	5.319	5.593	5.875	3.138	3.207	3.275	640	657	674
50.0	5.115	5.382	5.659	3.181	3.251	3.319	649	666	683
51.0	4.919	5.180	5.450	3.225	3.294	3.362	657	675	692
52.0	4.732	4.987	5.251	3.267	3.336	3.405	666	683	700

53.0	4.553	4.802	5.060	3.309	3.378	3.446	675	692	709
54.0	4.382	4.625	4.877	3.350	3.419	3.487	683	700	717
55.0	4.219	4.457	4.703	3.390	3.459	3.527	691	708	725
56.0	4.061	4.293	4.534	3.429	3.498	3.566	699	716	733
57.0	3.911	4.137	4.373	3.468	3.537	3.604	707	724	741
58.0	3.767	3.988	4.218	3.506	3.574	3.642	715	732	749
59.0	3.630	3.845	4.070	3.543	3.611	3.678	723	740	756
60.0	3.498	3.708	3.927	3.580	3.648	3.714	730	747	764
61.0	3.371	3.577	3.791	3.616	3.683	3.749	737	754	771
62.0	3.250	3.450	3.660	3.650	3.717	3.783	745	761	778
63.0	3.134	3.329	3.534	3.685	3.751	3.816	752	768	785
64.0	3.022	3.213	3.413	3.718	3.784	3.848	758	775	791
65.0	2.915	3.102	3.297	3.751	3.816	3.880	765	782	798
66.0	2.813	2.995	3.185	3.783	3.848	3.911	772	788	804
67.0	2.714	2.892	3.078	3.814	3.878	3.941	778	794	810
68.0	2.620	2.793	2.975	3.845	3.908	3.970	784	800	816
69.0	2.529	2.698	2.876	3.874	3.938	3.999	790	806	822
70.0	2.442	2.607	2.781	3.903	3.966	4.026	796	812	828
71.0	2.358	2.519	2.689	3.932	3.994	4.054	802	818	833
72.0	2.278	2.435	2.601	3.960	4.021	4.080	808	823	839
73.0	2.200	2.354	2.516	3.987	4.047	4.106	813	829	844
74.0	2.126	2.276	2.435	4.013	4.073	4.131	819	834	849
75.0	2.055	2.201	2.356	4.039	4.098	4.155	824	839	854
76.0	1.986	2.129	2.280	4.064	4.122	4.178	829	844	859
77.0	1.920	2.060	2.208	4.088	4.146	4.201	834	849	863
78.0	1.857	1.993	2.138	4.112	4.169	4.223	839	854	868
79.0	1.796	1.929	2.070	4.135	4.191	4.245	844	858	872
80.0	1.737	1.867	2.005	4.158	4.213	4.266	849	863	877
81.0	1.681	1.808	1.942	4.180	4.234	4.287	853	867	881
82.0	1.626	1.750	1.882	4.201	4.255	4.307	857	871	885
83.0	1.574	1.695	1.824	4.222	4.275	4.326	862	876	889
84.0	1.524	1.642	1.767	4.243	4.295	4.344	866	880	893
85.0	1.475	1.590	1.713	4.262	4.314	4.363	870	884	897
86.0	1.428	1.541	1.661	4.282	4.332	4.381	874	887	900
87.0	1.383	1.493	1.611	4.300	4.350	4.398	878	891	904
88.0	1.340	1.447	1.562	4.319	4.368	4.414	881	895	907
89.0	1.298	1.403	1.515	4.336	4.385	4.431	885	898	910
90.0	1.258	1.360	1.470	4.354	4.401	4.446	889	901	914
91.0	1.219	1.319	1.426	4.370	4.417	4.462	892	905	917
92.0	1.181	1.279	1.384	4.387	4.433	4.477	895	908	920
93.0	1.145	1.241	1.343	4.403	4.448	4.491	899	911	923
94.0	1.110	1.204	1.304	4.418	4.463	4.505	902	914	926
95.0	1.077	1.168	1.266	4.433	4.477	4.518	905	917	928
96.0	1.044	1.134	1.229	4.448	4.491	4.532	908	920	931
97.0	1.013	1.100	1.194	4.462	4.505	4.544	911	923	934
98.0	0.9826	1.068	1.160	4.476	4.518	4.557	914	925	936
99.0	0.9535	1.037	1.127	4.489	4.530	4.569	916	928	939

100.0	0.9252	1.007	1.095	4.502	4.543	4.580	919	930	941
101.0	0.8981	0.9778	1.064	4.515	4.555	4.592	922	933	943
102.0	0.8717	0.9497	1.034	4.527	4.566	4.603	924	935	946
103.0	0.8463	0.9225	1.005	4.539	4.578	4.613	927	938	948
104.0	0.8218	0.8963	0.9767	4.551	4.589	4.624	929	940	950
105.0	0.7981	0.8710	0.9497	4.562	4.599	4.634	931	942	952

| **Temperature sensor R-T analysis table (20K)** |
| Sensor standard resistance：20KΩ±3%　B:B(25/50)=3950K±2％　reference temperature：25（℃） |
| MCU_A/D exchange ±3LSB（at10bit） |

Series（sampling）resistor：10（KΩ）±1%								
Single chip (A/D reference voltage) supply voltage：5V								
Temp	Resistance（KΩ）			MCU Input voltage（V）			A/D Exchange value		
（℃）	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
-30	318.3	347.0	377.6	0.128	0.140	0.154	23	29	34
-29	299.6	326.2	354.6	0.136	0.149	0.163	25	30	36
-28	282.2	306.9	333.4	0.144	0.158	0.173	27	32	38
-27	265.9	289.0	313.5	0.153	0.167	0.183	28	34	40
-26	250.8	272.2	295.1	0.162	0.177	0.194	30	36	43
-25	236.6	256.5	277.9	0.172	0.188	0.205	32	38	45
-24	223.3	241.9	261.8	0.182	0.198	0.216	34	41	47
-23	210.9	228.2	246.7	0.193	0.210	0.229	37	43	50
-22	199.2	215.3	232.6	0.204	0.222	0.241	39	45	52
-21	188.3	203.3	219.4	0.216	0.234	0.255	41	48	55
-20	178.0	192.0	207.0	0.228	0.248	0.268	44	51	58
-19	168.3	181.4	195.4	0.241	0.261	0.283	46	54	61
-18	159.2	171.4	184.4	0.255	0.276	0.298	49	56	64
-17	150.7	162.0	174.2	0.269	0.291	0.314	52	60	67
-16	142.6	153.2	164.6	0.284	0.306	0.331	55	63	71
-15	135.0	144.9	155.5	0.299	0.323	0.348	58	66	74
-14	127.9	137.1	147.0	0.315	0.340	0.366	62	70	78
-13	121.2	129.8	138.9	0.333	0.358	0.385	65	73	82
-12	114.9	122.9	131.4	0.350	0.376	0.404	69	77	86
-11	108.9	116.4	124.3	0.369	0.396	0.424	73	81	90
-10	103.3	110.3	117.7	0.388	0.416	0.445	76	85	94
-9	98.00	104.5	111.4	0.408	0.437	0.467	81	89	99
-8	93.01	99.10	105.6	0.429	0.458	0.490	85	94	103
-7	88.29	93.98	100.0	0.450	0.481	0.513	89	98	108
-6	83.84	89.15	94.78	0.473	0.504	0.538	94	103	113
-5	79.63	84.60	89.85	0.496	0.529	0.563	99	108	118
-4	75.67	80.30	85.12	0.521	0.554	0.589	104	113	124
-3	71.91	76.24	80.75	0.546	0.580	0.616	109	119	129
-2	68.37	72.41	76.62	0.572	0.607	0.644	114	124	135
-1	65.02	68.79	72.72	0.599	0.635	0.672	120	130	141
0	61.85	65.37	69.04	0.627	0.663	0.702	125	136	147
1	58.85	62.14	65.56	0.656	0.693	0.732	131	142	153
2	56.01	59.08	62.28	0.686	0.724	0.764	137	148	159
3	53.33	56.20	59.18	0.717	0.755	0.796	144	155	166
4	50.79	53.46	56.25	0.748	0.788	0.829	150	161	173
5	48.38	50.88	53.43	0.782	0.821	0.864	157	168	180
6	46.10	48.43	50.81	0.815	0.856	0.899	164	175	187
7	43.94	46.12	48.34	0.850	0.891	0.934	171	182	194
8	41.90	43.92	45.99	0.886	0.927	0.971	178	190	202
9	39.95	41.85	43.78	0.922	0.964	1.009	186	198	210
10	38.11	39.88	41.68	0.960	1.002	1.047	194	205	218
11	36.37	38.02	39.69	0.998	1.041	1.087	201	213	226

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12	34.71	36.25	37.81	1.038	1.081	1.127	209	221	234
13	33.14	34.57	36.03	1.078	1.122	1.168	218	230	242
14	31.65	32.98	34.34	1.119	1.163	1.210	226	238	251
15	30.23	31.47	32.74	1.161	1.206	1.252	235	247	259
16	28.88	30.04	31.22	1.204	1.249	1.295	244	256	268
17	27.61	28.69	29.78	1.248	1.292	1.339	252	265	277
18	26.39	27.40	28.41	1.292	1.337	1.384	262	274	286
19	25.24	26.17	27.12	1.337	1.382	1.429	271	283	296
20	24.14	25.01	25.89	1.383	1.428	1.475	280	293	305
21	23.09	23.90	24.72	1.430	1.475	1.521	290	302	315
22	22.10	22.85	23.61	1.477	1.522	1.568	300	312	324
23	21.16	21.85	22.55	1.525	1.570	1.616	309	321	334
24	20.26	20.90	21.55	1.574	1.618	1.664	319	331	344
25	19.40	20.00	20.60	1.623	1.667	1.712	329	341	354
26	18.55	19.14	19.73	1.670	1.716	1.763	339	351	364
27	17.74	18.32	18.91	1.718	1.765	1.814	349	362	375
28	16.97	17.55	18.12	1.766	1.815	1.866	359	372	385
29	16.24	16.80	17.37	1.815	1.865	1.917	369	382	396
30	15.54	16.10	16.66	1.864	1.916	1.970	379	392	406
31	14.88	15.43	15.98	1.913	1.966	2.022	389	403	417
32	14.25	14.79	15.33	1.962	2.017	2.074	399	413	428
33	13.65	14.18	14.71	2.011	2.068	2.127	409	424	439
34	13.08	13.59	14.12	2.061	2.119	2.179	419	434	449
35	12.53	13.04	13.55	2.111	2.170	2.231	429	444	460
36	12.01	12.51	13.01	2.160	2.221	2.284	439	455	471
37	11.52	12.00	12.50	2.210	2.272	2.336	450	465	481
38	11.05	11.52	12.01	2.260	2.323	2.388	460	476	492
39	10.60	11.06	11.54	2.309	2.374	2.440	470	486	503
40	10.17	10.62	11.09	2.358	2.425	2.492	480	497	513
41	9.757	10.20	10.66	2.408	2.475	2.543	490	507	524
42	9.367	9.803	10.25	2.457	2.525	2.594	500	517	534
43	8.994	9.420	9.856	2.506	2.575	2.645	510	527	545
44	8.638	9.054	9.480	2.554	2.624	2.695	520	537	555
45	8.298	8.705	9.121	2.602	2.673	2.745	530	547	565
46	7.973	8.371	8.778	2.650	2.722	2.794	540	557	575
47	7.663	8.051	8.449	2.698	2.770	2.843	549	567	585
48	7.367	7.745	8.134	2.745	2.818	2.891	559	577	595
49	7.083	7.453	7.832	2.792	2.865	2.939	569	587	605
50	6.812	7.176	7.543	2.838	2.911	2.986	578	596	615
51	6.553	6.905	7.267	2.883	2.958	3.032	588	606	624
52	6.305	6.649	7.002	2.929	3.003	3.078	597	615	633
53	6.068	6.403	6.747	2.974	3.048	3.123	606	624	643
54	5.841	6.168	6.504	3.018	3.093	3.168	615	633	652
55	5.623	5.942	6.270	3.061	3.136	3.212	624	642	661
56	5.415	5.726	6.046	3.104	3.179	3.255	633	651	670
57	5.216	5.519	5.831	3.147	3.222	3.297	641	660	678
58	5.025	5.321	5.625	3.188	3.263	3.339	650	668	687

59	4.842	5.131	5.428	3.229	3.304	3.380	658	677	695
60	4.667	4.948	5.238	3.270	3.345	3.420	667	685	703
61	4.499	4.773	5.055	3.310	3.385	3.459	675	693	711
62	4.338	4.605	4.880	3.349	3.423	3.498	683	701	719
63	4.183	4.444	4.712	3.388	3.462	3.536	691	709	727
64	4.035	4.289	4.551	3.425	3.499	3.573	699	717	735
65	3.893	4.140	4.396	3.463	3.536	3.609	706	724	742
66	3.756	3.998	4.247	3.499	3.572	3.645	714	732	749
67	3.625	3.861	4.103	3.535	3.607	3.679	721	739	757
68	3.500	3.729	3.966	3.570	3.642	3.713	728	746	763
69	3.379	3.603	3.833	3.604	3.676	3.747	735	753	770
70	3.263	3.481	3.706	3.638	3.709	3.779	742	760	777
71	3.152	3.364	3.583	3.671	3.741	3.811	749	766	783
72	3.045	3.252	3.466	3.703	3.773	3.842	755	773	790
73	2.942	3.144	3.352	3.735	3.804	3.872	762	779	796
74	2.843	3.040	3.243	3.766	3.834	3.902	768	785	802
75	2.748	2.940	3.138	3.797	3.864	3.931	775	791	808
76	2.657	2.844	3.037	3.826	3.893	3.959	781	797	814
77	2.569	2.751	2.940	3.855	3.921	3.986	787	803	819
78	2.485	2.662	2.846	3.884	3.949	4.013	792	809	825
79	2.403	2.577	2.756	3.911	3.976	4.039	798	814	830
80	2.325	2.494	2.669	3.938	4.002	4.064	804	820	835
81	2.250	2.415	2.585	3.965	4.027	4.089	809	825	840
82	2.178	2.338	2.504	3.991	4.053	4.113	814	830	845
83	2.108	2.264	2.426	4.016	4.077	4.137	819	835	850
84	2.041	2.193	2.351	4.040	4.101	4.159	824	840	855
85	1.976	2.125	2.279	4.064	4.124	4.182	829	845	859
86	1.914	2.059	2.209	4.088	4.146	4.203	834	849	864
87	1.854	1.995	2.142	4.111	4.168	4.225	839	854	868
88	1.796	1.934	2.077	4.133	4.190	4.245	843	858	872
89	1.740	1.875	2.014	4.155	4.211	4.265	848	862	877
90	1.687	1.818	1.954	4.176	4.231	4.284	852	866	880
91	1.635	1.763	1.895	4.197	4.251	4.303	856	871	884
92	1.585	1.710	1.839	4.217	4.270	4.322	861	874	888
93	1.537	1.659	1.785	4.236	4.289	4.340	865	878	892
94	1.490	1.609	1.732	4.256	4.307	4.357	869	882	895
95	1.446	1.561	1.681	4.274	4.325	4.374	872	886	899
96	1.402	1.515	1.632	4.292	4.342	4.391	876	889	902
97	1.360	1.471	1.585	4.310	4.359	4.407	880	893	905
98	1.320	1.428	1.539	4.327	4.375	4.422	883	896	909
99	1.281	1.386	1.495	4.344	4.391	4.437	887	899	912
100	1.243	1.346	1.452	4.360	4.407	4.452	890	903	915
101	1.207	1.307	1.411	4.376	4.422	4.466	893	906	918
102	1.172	1.270	1.371	4.392	4.437	4.480	896	909	921
103	1.137	1.233	1.332	4.407	4.451	4.494	900	912	923
104	1.104	1.198	1.295	4.422	4.465	4.507	903	914	926
105	1.070	1.164	1.258	4.436	4.479	4.521	906	917	929