

1

Introduction and Features

Model	Remarks
KFR-80GW/A11-J CP605AU OPEN	1Ph 240V 50Hz R22

## 2 Specifications and Technical Parameters

Model		KFR-80GW/A11-J	
Function		COOLING	COOLING
Rated Voltage		240V~	
Rated Frequency	(Hz)	50HZ	
Total Capacity	(W)	8000	8800
Power Input	(W)	2800	2750
Rated power	(W)	4010	3600
Rated current	(A)	20.5	19.5
Air Flow Volume	(m3/h)	1250	
Dehumidify volume	(l/h)	3.0	
C.O.P/EER	(W/W)	2.86	3.2
Indoor Units	Model of Indoor Unit	KFR-80G/A11-J	
	Fan Motor Speed (r/min) (H/M/L)	1410/1310/1260	
	Output of Fan Motor (w)	35	
	Input of Heater (w)	—	
	Fan Motor Capacitor (uF)	3.5	
	Fan Motor RLA(A)	0.40	
	Fan Type-Piece	Cross flow fan – 1	
	Diameter-Length (mm)	Φ 106 X 890	
	Evaporator	Aluminum fin-copper tube	
	Pipe Diameter(mm)	Φ 7	
	Row - Fin Distance(mm)	2-1.4	
	Row-Fin Gap(mm)	901.6X25.4X381	
	Swing Motor Model	MP24GA	
	Output of Swing Motor (W)	2	
	Fuse (A)	PCB 3.15A Transformer 0.4/0.1A	
	Sound Pressure Level dB (A) (H/M/L)	49/47/44	
	Sound Power Level dB (A) (H/M/L)	59/57/54	
	Dimension (W/D/H)( mm)	1178 X326X227	
	Dimension of Package (W/D/H)( mm)	1265X417X333	
	Net Weight /Gross Weight (kg)	17.5/24	

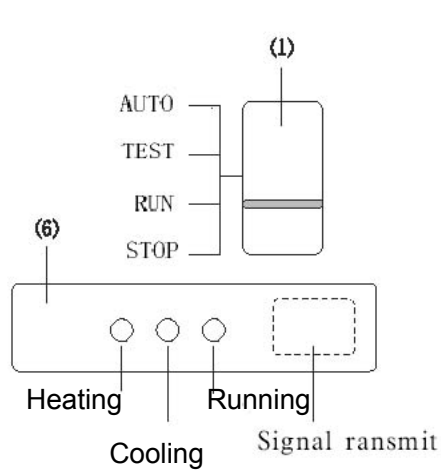
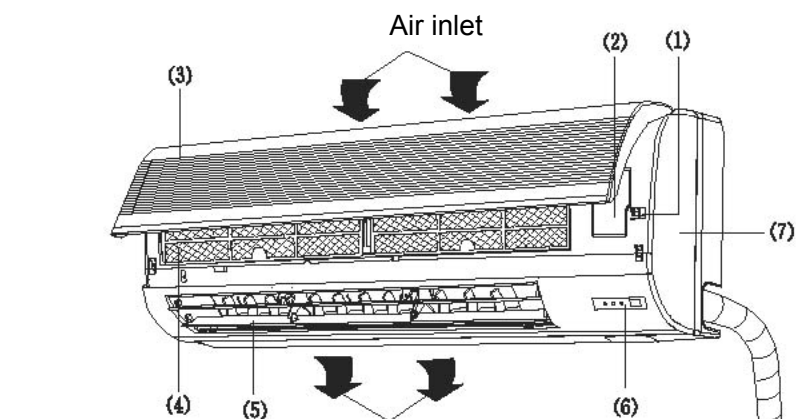
## Air Chill Series

Outdoor Unit	Model of Outdoor Unit			KFR-80W/A11-J
	Compressor Model			ZR36KH-PFJ-522
	Compressor Type			Hermetic motor compressor
	LRA(A)			100
	Compressor RLA(A)			17.1
	Compressor Power Input(W)			2730
	Overload Protector			Internal Inherent Protector
	Throttle Method			Capillary
	Starting Method			Capacitor
	Working Temperature(°C)			-5≤T≤43
	Condenser			Aluminum fin-copper tube
	Pipe Diameter(mm)			Φ 9.52
	Row - Fin distance(mm)			2-1.4
	Coil length (l) x height (H) x coil width (L)			1017.5X813X44
	Fan Speed (r/min)(H/M/L)			920
	Output of Fan Motor (W)			92
	Running Current of Motor(A)			2.26
	Fan Motor Capacitor (uF)			3.5
	Air Flow Volume of Outdoor Unit			----
	Fan Type-Piece			Axial fan –1
	Fan Diameter (mm)			Φ 482
	Defrosting Method			Auto defrost
	Climate Type			Climate Type T1
	Isolation			I
	Moisture Protection			IP24
	Permissible Excessive Operating Pressure for the Discharge Side(MPa)			2.5
	Permissible Excessive Operating Pressure for the Suction Side(MPa)			0.6
	Sound Pressure Level dB (A) (H/M/L)			60
	Sound Power Level dB (A) (H/M/L)			70
	Dimension (W/D/H)( mm)			950X412X840
	Dimension of Package(W/D/H)(mm)			1100X450X995
	Net Weight /Gross Weight (kg)			90/100
	Refrigerant Charge (kg)			R22X2.75kg
Connecting Pipe	Length			5
	Outer Diameter	Liquid Pipe	(mm)	Φ 9.52(3/8")
		Gas Pipe	(mm)	Φ 16(5/8")
	Max. Distance	Height	(m)	15
		Length	(m)	30

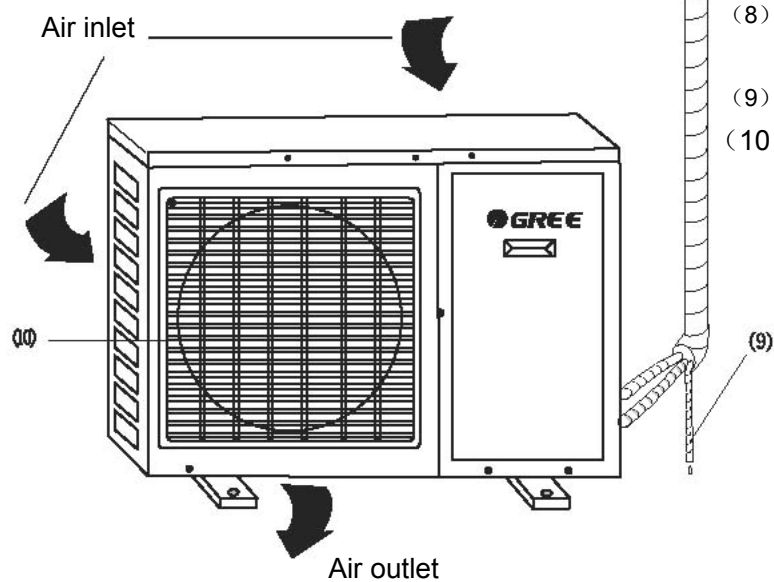
**Parameter data of specifications in the form are subject to change without prior notice. Refer to the actual data specified on the nameplate of the unit.**

### 3 Component Name

Indoor unit



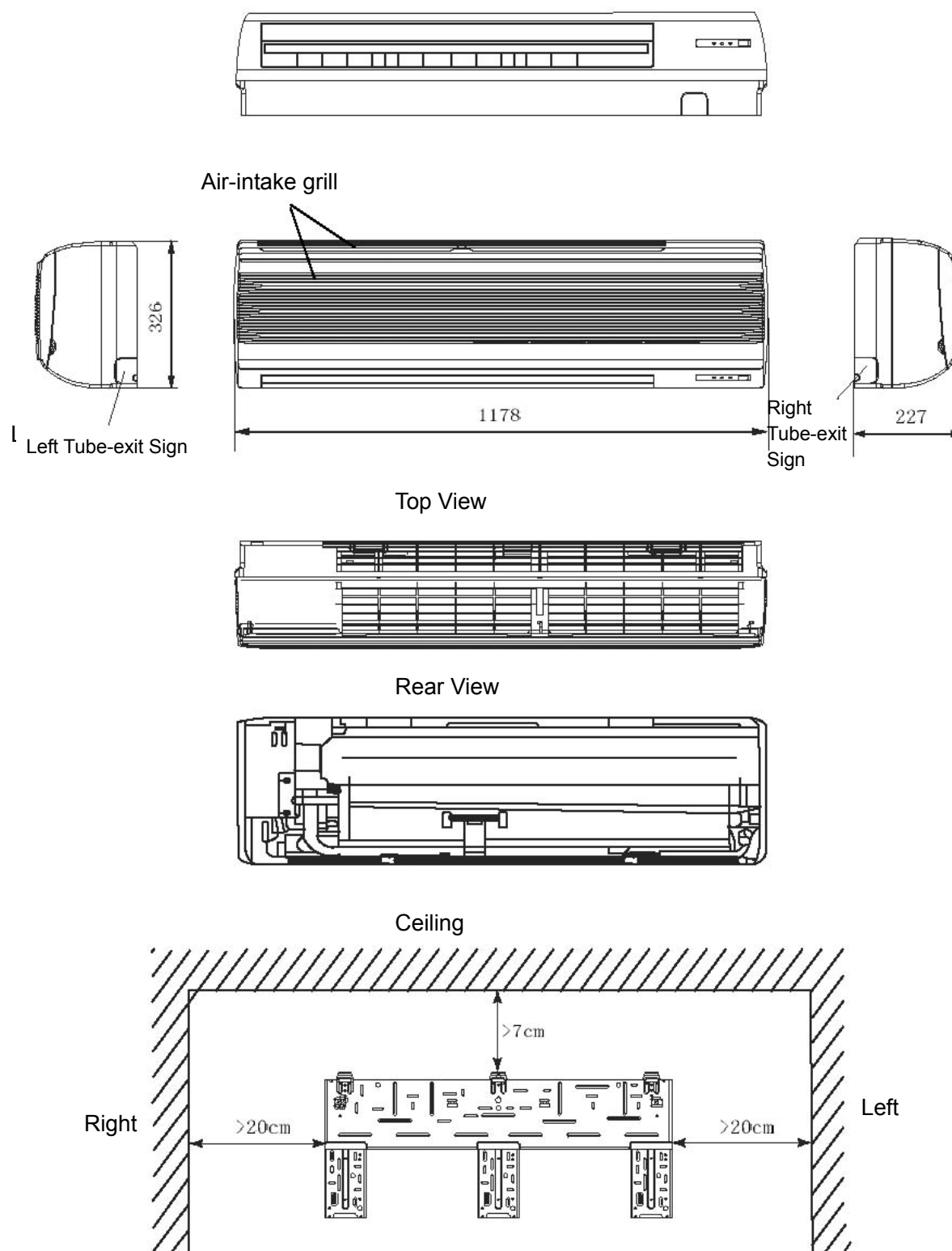
Outdoor Unit



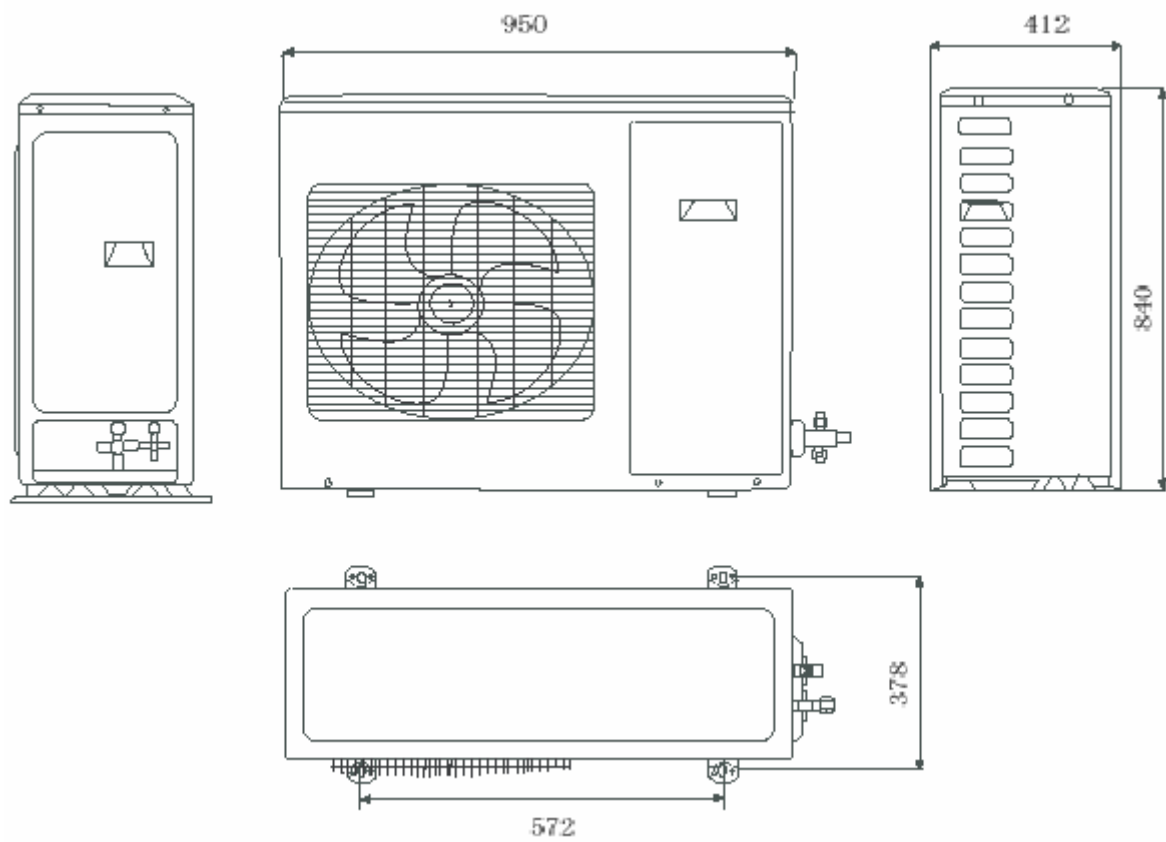
- (1) Manual switch
- (2) Electrical box
- (3) Front panel
- (4) Filter
- (5) Guide louver
- (6) Receiving window
- (7) Front case
- (8) Connecting pipe and cable
- (9) Drainage pipe
- (10) Air outlet grill

## 4 Overall and Installing Dimension

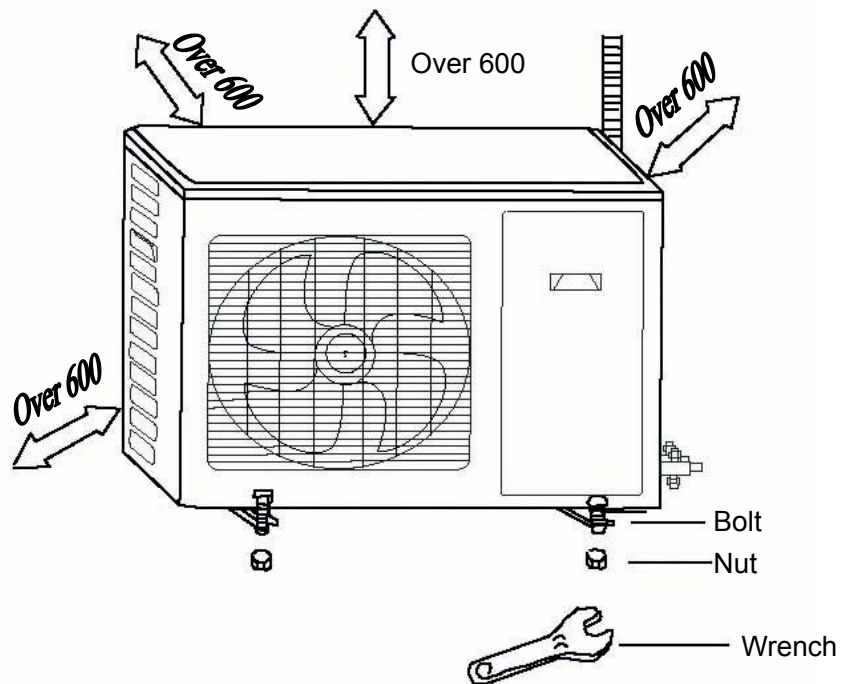
### 4.1 Overall and Installing Dimension of Indoor Unit



## 4.2 Overall and Installing Dimension of Outdoor Unit

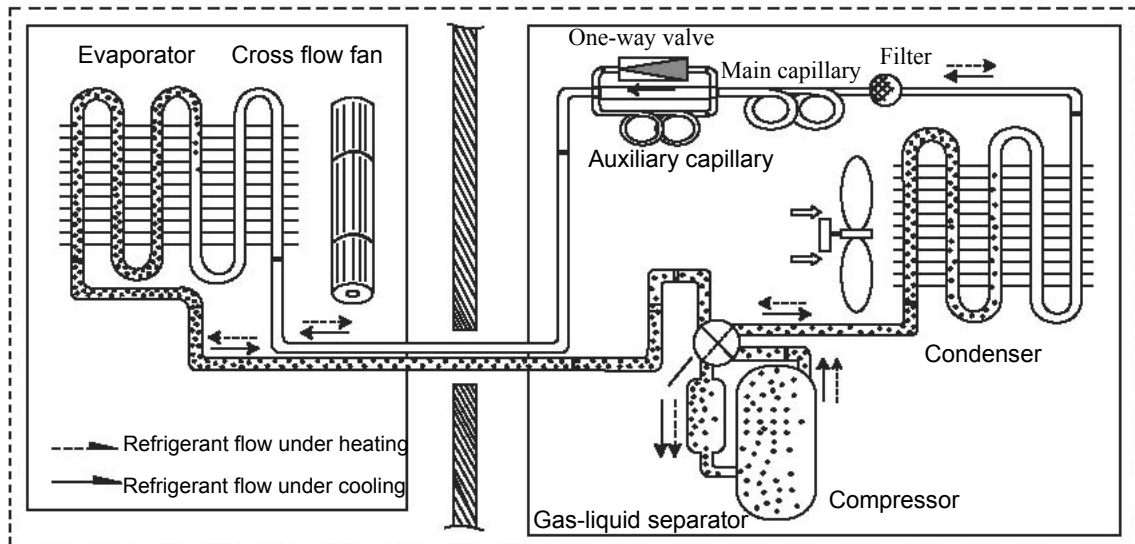


Unit: mm



## 5 System Diagram

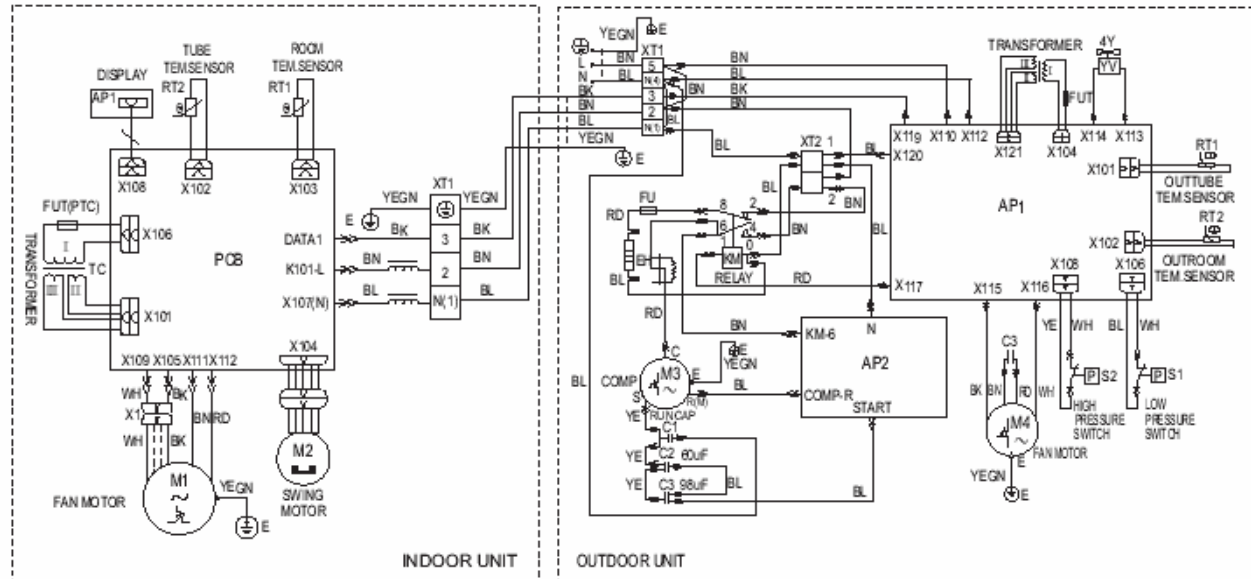
### 5.1 System Diagram for Cooling-and-Heating Unit



Switch on the power to start indoor and outdoor unit. Under cooling mode, the low-temp. and low-pressure refrigerant vapor from indoor evaporator is absorbed into compressor, where it is compressed into high-temp. and high-pressure gas. The gas refrigerant flows into outdoor heat exchanger, where under the force of axial flow fan, it is liquidized after heat exchange with outdoor air. After that, the liquidized refrigerant flows through capillary for decrease of temperature and pressure and then enters into indoor heat exchanger, where it becomes low-temperature and low-pressure refrigerant vapor after heat exchange with indoor air to be regulated. This process is repeated in cycle to achieve the purpose of cooling. Under heating mode, the solenoid 4-way valve is activated to make the refrigerating process cycle in reverse, in which case the refrigerant in indoor unit gives out heats via heat exchanger but absorbing heats from outdoor heat exchanger. This forms a heating cycle via heat pump, thus to achieve the purpose of heating.

## 6 Electrical Diagram

KFR-80GW/A11-J



In case of any change in the Electrical Diagram shown above, please follow the drawing on cabinet.



## Remote Controller Function Manual and Operating Instructions

### 7.1 Remote Controller Function Manual

#### 7.1.1 Temperature Parameters

- ◆ Indoor preset temperature ( $T_{\text{preset}}$ )
- ◆ Indoor ambient temperature ( $T_{\text{amb.}}$ )

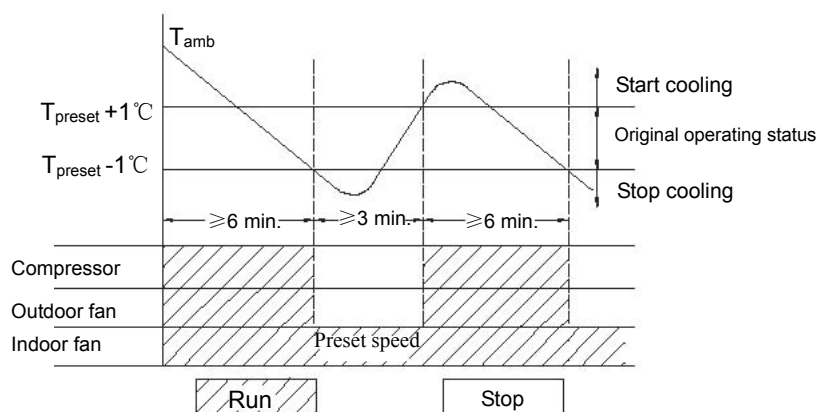
#### 7.1.2 Basic Functions

- ◆ Once started under any mode, the compressor will not be stopped within 6 minutes with the change of ambient temperature. Once stopped, it cannot be restarted unless after 3-minute lag.

##### 7.1.2.1 Cooling Mode

##### 7.1.2.1.1 Cooling Conditions and Process

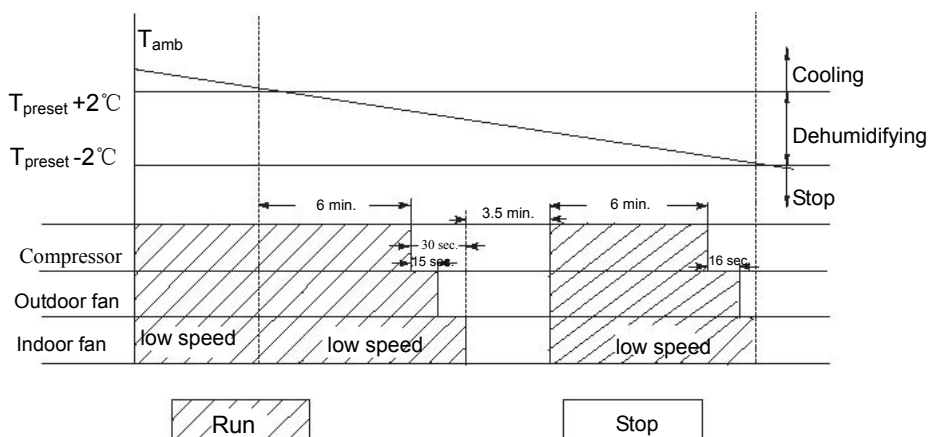
- ◆ When  $T_{\text{amb.}} \geq T_{\text{preset}} + 1^\circ\text{C}$ , the unit will run under cooling mode, in which case the compressor and outdoor fan will start and the indoor fan will run at preset speed.
- ◆ When  $T_{\text{amb.}} \leq T_{\text{preset}} - 1^\circ\text{C}$ , the cooling function will be inactivated, in which case the compressor and outdoor fan will be stopped and the indoor fan will run at preset speed.
- ◆ When  $T_{\text{preset}} - 1^\circ\text{C} < T_{\text{amb.}} < T_{\text{preset}} + 1^\circ\text{C}$ , the unit will maintain its former status.
- Under this mode, the 4-way valve will be de-energized and the temperature can be set within a range from 16 to 30  $^\circ\text{C}$ .



##### 7.1.2.2 Dehumidifying Mode

##### 7.1.2.2.1 Working Conditions and Process of Dehumidifying

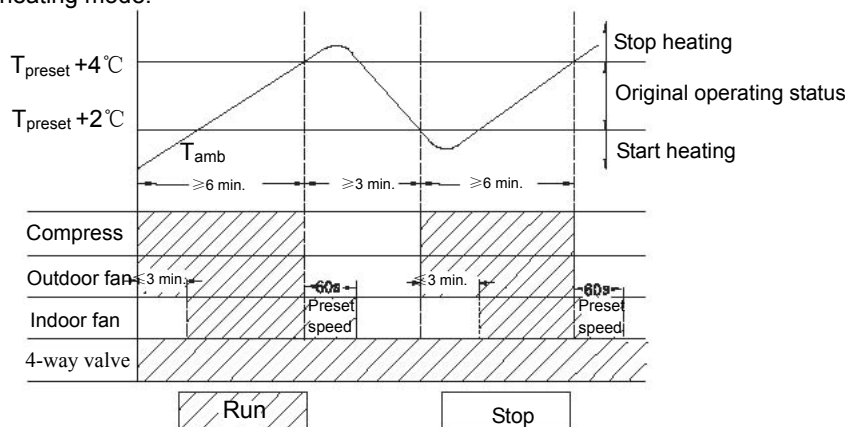
- ◆ When  $T_{\text{amb.}} > T_{\text{preset}} + 2^\circ\text{C}$ , the unit will run under cooling mode, in which case the compressor and outdoor fan will be started and the indoor fan will run at low speed.
- ◆ When  $T_{\text{preset}} - 2^\circ\text{C} \leq T_{\text{amb.}} \leq T_{\text{preset}} + 2^\circ\text{C}$ , the unit will run under dehumidifying mode, in which case the indoor fan will run at low speed. After the compressor and outdoor fan has run 6 minutes, the compressor will be stopped, the outdoor fan will be stopped after 15-second lag and the indoor fan will be stopped after 30 seconds. After 3.5 minutes, the compressor and outdoor fan will be started, and the indoor fan will run at low speed. The dehumidifying process is so repeated in cycle.
- ◆ When  $T_{\text{amb.}} < T_{\text{preset}} - 2^\circ\text{C}$ , the compressor, outdoor fan and indoor fan will be stopped.
- Under this mode, the 4-way valve will be de-energized and the temperature can be set within a range from 16 to 30  $^\circ\text{C}$ .



### 7.1.2.2 Heating Mode

#### 7.1.2.2.1 Heating Conditions and Process

- ◆ When  $T_{amb.} \leq T_{preset} + 2^{\circ}\text{C}$ , the unit will run under heating mode, in which case the 4-way valve, compressor and outdoor fan will be started, and indoor fan will run under cold air prevention conditions.
- ◆ If  $T_{amb.} \geq T_{preset} + 4^{\circ}\text{C}$ , the compressor and outdoor fan will be stopped, the 4-way valve is still energized and the indoor fan will run at preset speed for 60 seconds before it is stopped.
- ◆ When  $T_{preset} + 2^{\circ}\text{C} < T_{amb.} < T_{preset} + 4^{\circ}\text{C}$ , the unit will maintain its original operating status.
- The temperature can be set within a range from 16 to 30°C. The 4-way valve is de-energized 2 minutes after the unit is stopped under heating mode.



#### 7.1.2.2.2 Cold Air Prevention Condition

Under heating mode, the indoor fan will not be started if the indoor heat exchanger does not reach a specific temperature under following three condition, so as to avoid blowing out of cold air (within 3 minutes):

1. At the start of heating;
2. At the end of auto defrosting
3. Heating under low-temperature environment.

#### 7.1.2.2.3 Defrosting Conditions and Process

- ◆ When the condenser is detected to have frost, the system will enter into defrosting mode, in which case the heating indicator will blink, the compressor, indoor fan, outdoor fan and switchover valve will be stopped. The compressor will be restarted after 25 seconds.
- ◆ When it is detected that the frost in condenser is completely eliminated, the 4-way valve and outdoor fan will be started, while the indoor fan will run under cold air prevention condition.

### 7.1.2.3 Protection

#### 7.1.2.3.1 Indoor Antifreeze Protection

If the system is detected to have antifreeze protection under cooling or dehumidifying mode, the compressor and outdoor fan will be stopped, while the indoor fan and swing motor will maintain their original operating status.

When it is detected that the antifreeze protection is released and the compressor has stopped for 3 minutes, the run indicator will remain bright and the controller will run under preset mode.

#### 7.1.2.3.2 Compressor High-pressure Protection

When high-pressure protection is detected, all loads will be closed, all key-press and remote control signals will be shielded, and the run indicator will blink.

When it is detected that the compressor has released high-pressure protection, shielding of key-press and remote control signal will be removed but the run indicator will remain blinking.

To turn off the run indicator, you have to press ON/OFF key to switch off the unit and press it again to restart.

#### 7.1.2.3.3 Compressor Low-pressure Protection

When it is detected that the low-pressure switch is off when the compressor is running, the complete unit will be stopped and the run indicator will blink. After 3 minutes while the low pressure is resumed, the unit will be automatically restarted. If low-pressure switch protection occurs two times successively, the run indicator will blink and cannot resume automatically, so as to remind the user that air is leaking. To resume the run, you have to press ON/OFF key to switch off the unit only when the low pressure is resumed, and then press ON/OFF key again.

If it is detected that the low-pressure switch is off when the compressor is stopped, the complete unit will be stopped, the run indicator will blink and the unit cannot be restarted automatically. You have to press ON/OFF key to switch off the unit and press this key again to restart.

#### 7.1.2.4 Exhaust Pipe High-temp. Protection

After the compressor is started, if it is detected that the exhaust temperature is too high or the exhaust sensor has fault, the run indicator will blink. The unit will be stopped when the indoor ambient temperature reaches the preset value.

After the compressor is stopped for 3 minutes, the complete unit will be restarted when the exhaust temperature is resumed to normal.

In case aforementioned phenomena occurs two times successively, the complete unit cannot resume its operation and the run indicator will blink. You have to press ON/OFF key to switch off the unit and press this key again. If the exhaust temperature is normal, the unit will resume its operation under preset mode.

## 7.1.2.4.5 Indoor high-temp. protection

If it is detected that the evaporator tube temperature is too high under heating mode, the outdoor fan will be stopped. When the evaporator tube temperature resumes to normal, the outdoor fan will be started.

## 7.1.2.4.6 Overload Protection

If it is detected that the current exceeds the specified value (approx. 25A) when the compressor is started, the unit will be stopped when indoor ambient temperature reaches the preset value. The compressor will automatically resume to its original operating status after it is stopped. If protection occurs over 6 times successively, the run indicator will blink and the compressor cannot automatically resume to its original operating status, in which case you have to press ON/OFF key to switch off the unit and press this key again to restart.

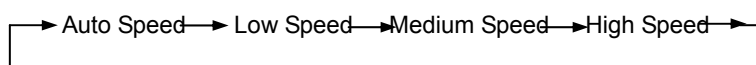
## 7.1.2.4.7 Communication Fault

If it is detected in 3 minutes successively that the indoor and outdoor unit has communication fault, the run indicator will blink and the unit will be stopped when indoor ambient temperature reaches the preset value.

## 7.1.2.3 Fan mode

Indoor run will run at preset speed:

- The temperature can be set within a range from 16 to 30°C. The initial value is 25°C.



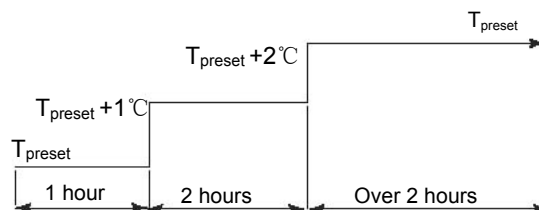
## 7.1.2.4 Auto Mode

Under this mode, the system will automatically select its run mode (cooling, heating or fan) with the change of ambient temperature. Once a mode is started, the unit shall run under such mode at least 30 seconds before it can switch the run status under auto mode according to the ambient temperature.

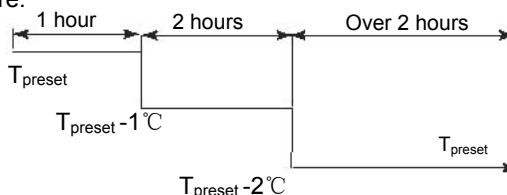
## 7.1.3 Other control

### 7.1.3.1 Sleep Function

- ◆ If the controller is under cooling or dehumidifying mode, the preset temperature will be increased by 1°C one hour after running under sleep mode, and increased by another 1°C after 2 hours. Totally 2°C will be increased in 2 hours. After that, the unit will run at this temperature.



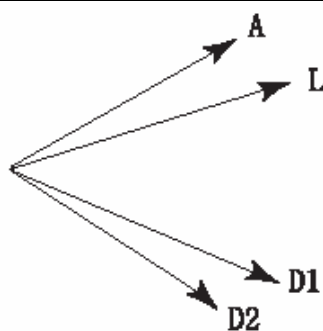
- ◆ If the controller is under heating mode, the preset temperature will be decreased by 1°C one hour after running under sleep mode, and decreased by another 1°C after 2 hours. Totally 2°C will be decreased in 2 hours. After that, the unit will run at this temperature.



- No sleep function under fan mode or auto mode.

### 7.1.3.2 Swing control

- ◆ Once energized, the guide louver will firstly rotate counterclockwise to A position to shut off the air outlet.
- ◆ After the unit is started, the guide louver will rotate to the maximum air outlet, i.e. D2 position and then return to L position. If under swing status, the louver will swing between L and D1 under cooling mode and between L and D2 under heating mode.
- ◆ Under heating mode:
  - If swing is activated: The louver will stop at L position upon prevention of cold air, blowing of residual heats and defrosting. The louver will swing only under normal heating.
  - If swing is inactivated: The louver will stop at its preset position.
- ◆ After the unit is stopped, the guide louver will rotate counterclockwise to A position to shut off the air outlet.



### 7.1.3.3 AUTO ON/OFF function

#### ◆ AUTO ON

Set AUTO ON when the system is under AUTO OFF status. After reaching the time of AUTO ON, the controller will run under preset mode. The time interval for AUTO ON is 0.5h, and can be set within 0.5 ~ 24 hours.

#### ◆ AUTO OFF

You can set AUTO OFF function when the unit is under ON status. Upon the time of AUTO OFF< the system will be switched off. The time interval for AUTO OFF is 0.5h, and can be set within 0.5 - 24 hours.

### 7.1.3.4 Buzzer

◆ When the controller is energized, pressed, or receives a signal from remote controller, the buzzer will give out a beep.

### 7.1.3.5 Automatic Control of Fan Speed

◆ Under heating or cooling mode, the air conditioner can automatically select the fan speed (high, medium or low) with the change of ambient temperature.

### 7.1.3.6 Indicator

#### ◆ Run indicator (red)

Once the controller is just energized, the indicator will give off a blink to indicate the run status. It is bright when the unit is started, becomes black when the unit is stopped, and blinks under defrosting.

#### ◆ Cooling and dehumidifying indicator (green)

Under cooling or dehumidifying mode, it is bright under auto cooling or auto dehumidifying status, and becomes black under other modes.

#### ◆ Heating indicator (yellow)

It is bright under auto heating or heating mode, and becomes black under other modes.

### 7.1.3.7 Power-OFF Memory Function

◆ What is memorized includes the mode, swing, preset temperature and preset fan speed.

◆ Once energized again after any de-energization, the unit can be automatically restarted according to the memory.

### 7.1.3.8 Keys

◆ When handset is used for remote control, if the mode displayed on your handset is heating while the air conditioner is cooling-only type, the unit will run under fan mode.

#### ◆ Dial Switch

Auto: When putting the dial switch to AUTO position, the unit will run under auto mode. If any remote control signal, the unit will run as instructed by remote control signal.

Test: When putting the dial switch to TEST position, the main unit will run under cooling mode and the indoor fan will run at high speed. If any remote control signal, the main unit will run as instructed by the remote control signal, in which case the low pressure switch will be shielded.

Run: When putting the dial switch to RUN position, the main unit will run as instructed by remote control signal.

Stop: When putting the dial switch to STOP position, the complete unit will be stopped.

### 7.1.2.7 Fault and Protection Indicator Display

Fault or Protection	Indicator Display	Remarks:
High-pressure protection	Indoor fault indicator (LED1) is bright; indoor run indicator blinks.	Indoor run indicator blackens for 3 seconds and blinks once.
Low-pressure protection	Indoor fault indicator (LED3) is bright; indoor run indicator blinks.	Indoor run indicator blackens for 3 seconds and blinks 3 times;
Exhaust protection	Indoor fault indicator (LED1、LED3) is bright; indoor run indicator blinks.	Indoor run indicator blackens for 3 seconds and blinks 4 times;
Overload protection	Indoor fault indicator (LED2) is bright; indoor run indicator blinks.	Indoor run indicator blackens for 3 seconds and blinks 5 times;
Communication fault	Indoor fault indicator (LED1、LED2、LED3) is bright; indoor run indicator blinks.	Indoor run indicator blackens for 3 seconds and blinks 6 times;

When multiple faults coexist, the high-level fault will be displayed in priority by a sequence as: communication → exhaust protection → overload protection → high-pressure protection → low-pressure protection

## 7.2 Description and Function of Remote Controller Keys

### Notes:





- Make sure that there is no obstruction between remote controller and signal receiving window.
- Do not fall off or throw the remote controller.
- Do not let any liquid flow into remote controller, or expose the remote controller under direct sunshine or extreme hot temperature.

#### SWING key

One press of this key will enable the guide louver to swing at a specific angle. Another press will stop the guide louver.

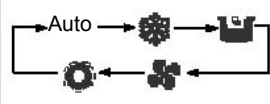
#### TEMP. key

Each press of (+) key will increase the preset temperature by 1°C. Each press of (-) key will decrease the preset temperature by 1°C.

Under “   ” mode, the indoor temperature can be adjusted to any value between 16~30°C.

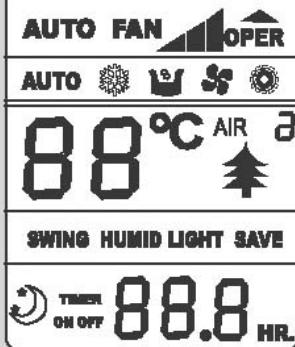
#### MODE key

The run mode will change sequentially as below with each press of MODE key.



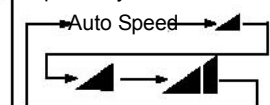
SWING


FAN



#### FAN key

Each press of this key will change the fan speed sequentially as below:



Note: The fan speed is not adjustable under “” mode.

- “  Cooling mode
- “  Dehumidifying mode
- “  Fan mode
- “  Heating Mode

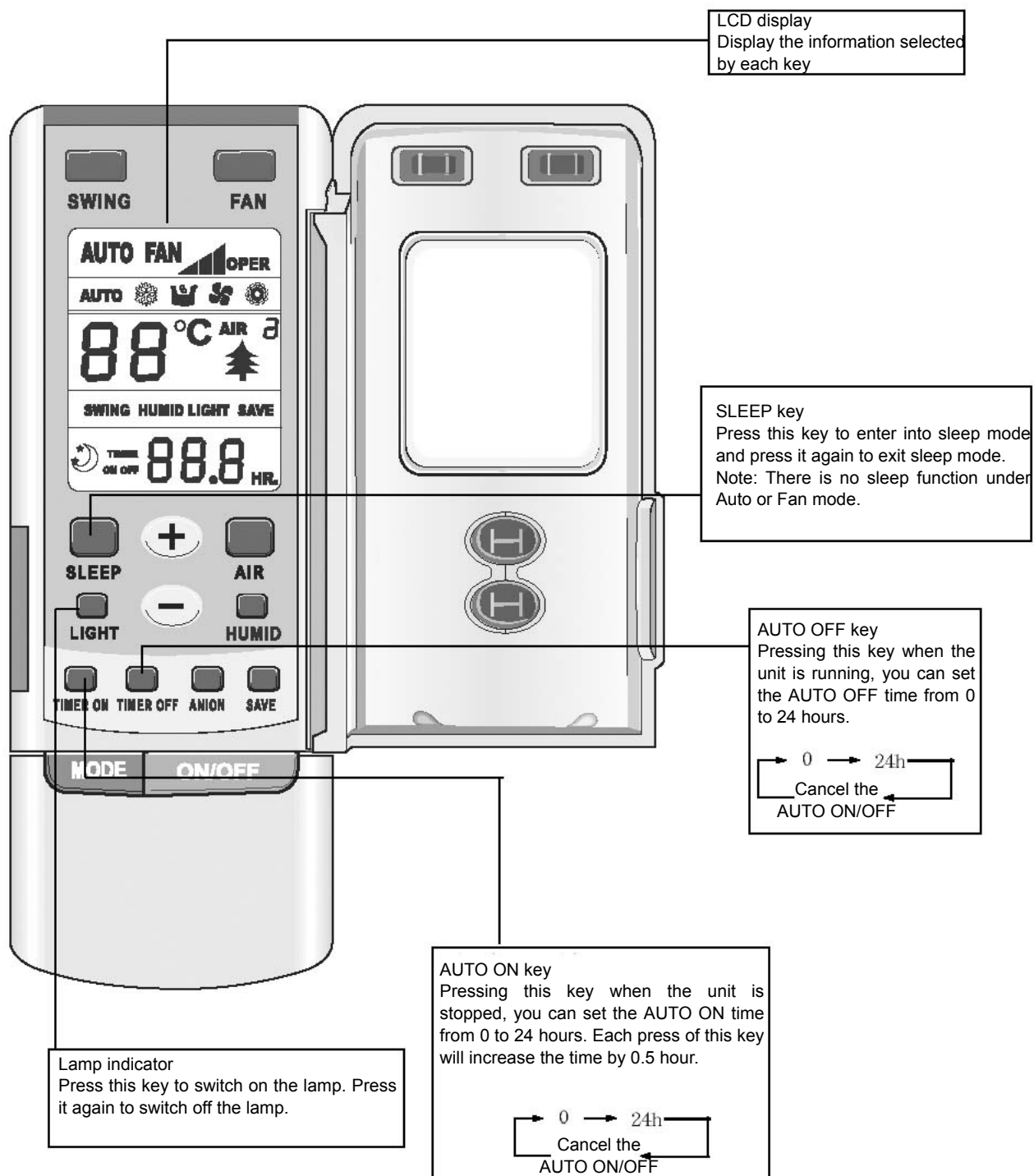
#### ON/OFF key

Press this key to start the air conditioner. Press it again to stop the air conditioner.

### 7.3 Description and Function of Remote Controller Keys (After opening the rear cover)

Note: This remote controller is for general use and applicable to multiple types (functions) of air conditioner.

Please understand that the keys not applicable to this air conditioner will not be described herein.



## **7.4 Installation of Remote Controller Battery**

### **● Operating Guideline**

#### **General Procedures:**

1. Switch on the power and press ON/OFF key to start the air conditioner.
2. Press MODE key to select your desired run mode.
3. Press SWING key to enable the guide louver to swing at a specific angle. Press it again to stop the swing.
4. Press FAN key to set the fan speed.
5. Press +/- key to set your desired temperature.

#### **Optional Procedures:**

6. Press SLEEP key from remote controller to set the sleep mode.
7. Press AUTO ON/OFF key and then press +/- key to set the timer.

Note: When auto mode is selected, the air conditioner will automatically select an appropriate run mode according to the indoor temperature, making the environment comfortable.

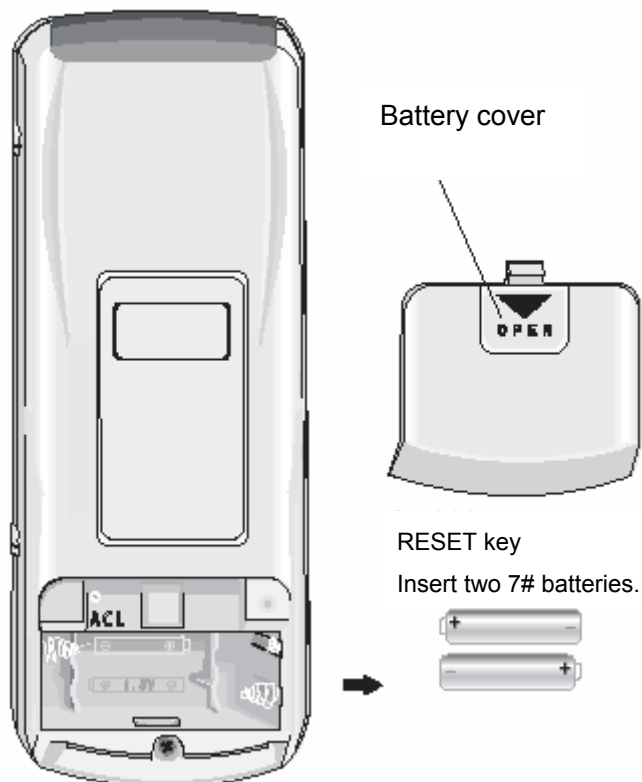
### **● Replacement of Remote Controller Battery**

Two pieces of 7# alkali dry batteries are used in the remote controller.

1. Slide the battery cover of remote controller downward. Remove the old batteries and replace with two pieces of new batteries (Take care that the polarity shall be correct)
2. Close the battery cover of remote controller.

#### **Note:**

- Do not use new batteries together with old batteries, or use different types of batteries together.
- To avoid leakage of liquid and damage to the remote controller, please take out the batteries if you will not use the remote controller in several weeks.
- Operate the remote controller within effective range.
- Keep the remote controller at least 1 meter away from television set or sound equipment.



**8.1 Disassembly Procedures of Indoor Unit****8.1.1 Disassemble Front Panel**

Push the filter inward and then pull it upward to remove it. Twist off screws to remove the cover plate of electric box.

(refer to Figure 8-1)

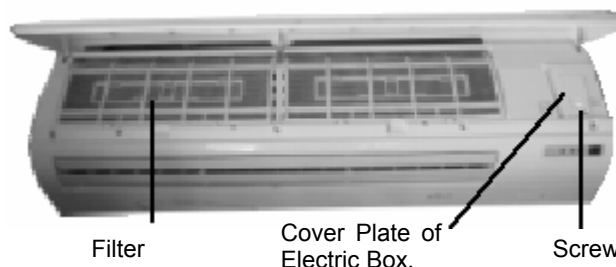


Figure 8-1

**8.1.2 Disassemble Filter**

Pull open the front panel. Push the front panel along the front case groove fixing the front panel to remove it.

(refer to Figure 8-2)

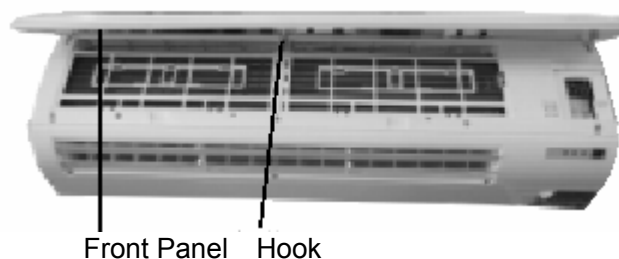


Figure 8-2

**8.1.3 Disassemble Guide Louver**

Manually bend the guide louver to loose the clasp at the guide louver. Remove the guide louver.

(refer to Figure 8-3)

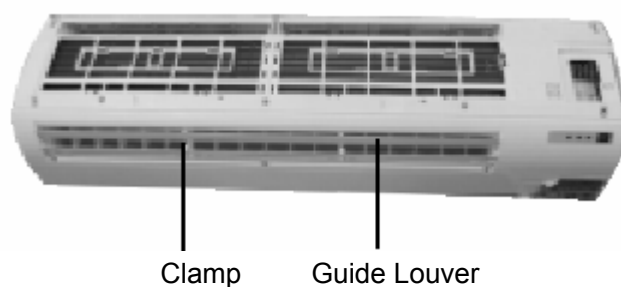


Figure 8-3



## Operating Procedures / Photos

### 8.1.4 Disassemble Front Case

Unscrew the three screw cover at the front case, unscrew the six screws, and pull backward the front case to remove it.

(refer to Figure 8-4)

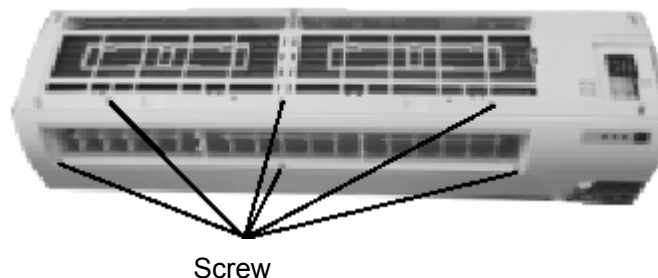


Figure 8-4

### 8.1.5 Disassemble Electric Box Cover

Unscrew the screw fixing the light plate to remove the light plate. Hold the electric box cover to press it inward so that the clasps at both sides are loose. Lift the electric box cover to remove it.

(refer to Figure 8-5)

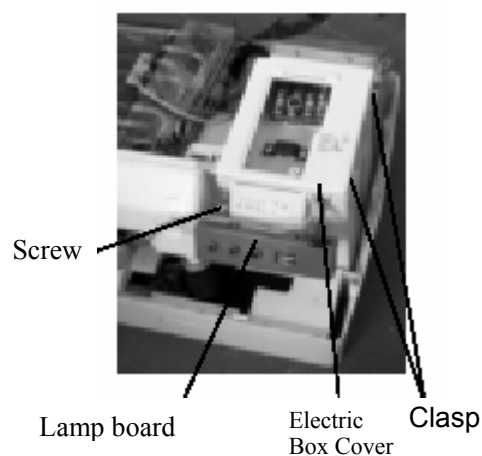


Figure 8-5

### 8.1.6 Disassemble Electric Box

Remove the grounding wire of evaporator. Take apart the tube sensor. Unplug the socket connectors of indoor motor and swing motor at the electric box. Use screwdriver to screw off the fixing screw of electric box. Take out the electric box.

(refer to Figure 8-6)

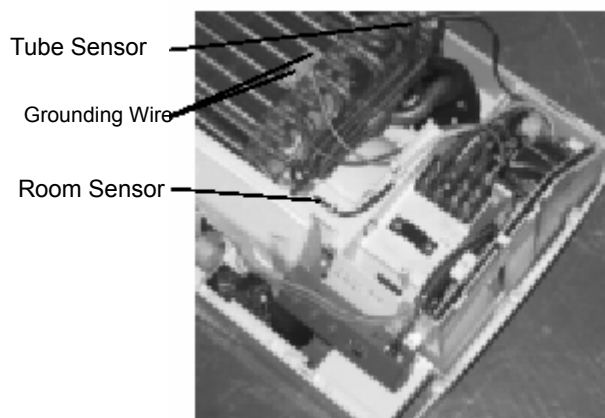


Figure 8-6

#### 8.1.7 Disassemble Water Tray

Push open the clasp fixing the water tray, and pull the water tray upward to remove the water tray.

(refer to Figure 8-7)

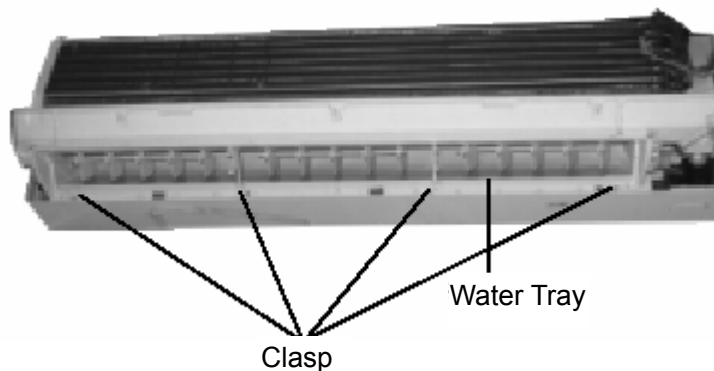


Figure 8-7

#### 8.1.8 Disassemble Evaporator

Use screwdriver to screw off the two screws at the rear pipe clamp to remove the rear pipe clamp. Screw off the screws at the left and right sides of the evaporator, and take the evaporator out, so that the side plate clasp of the evaporator is released from the groove.

(refer to Figure 8-8, 8-9 and 8-10)

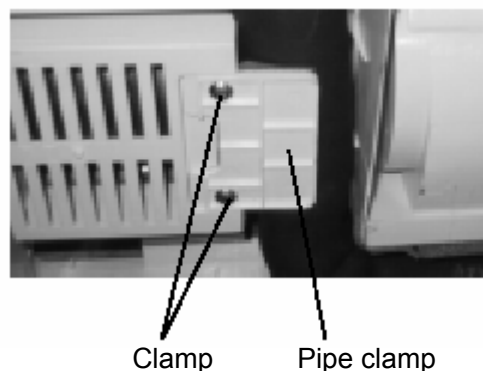


Figure 8-8



Figure 8-8

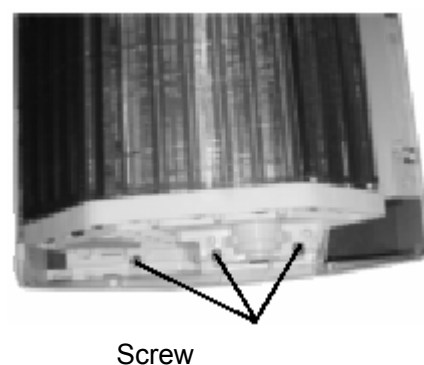


Figure 8-9

## **8.2 Disassembly Procedures of Indoor Unit**

### Operating Procedures / Photos

#### **8.2.1** Disassemble Front Side Plate

Screw off the four screws around the front side plate to remove the front side plate.

(refer to Figure 8-14)

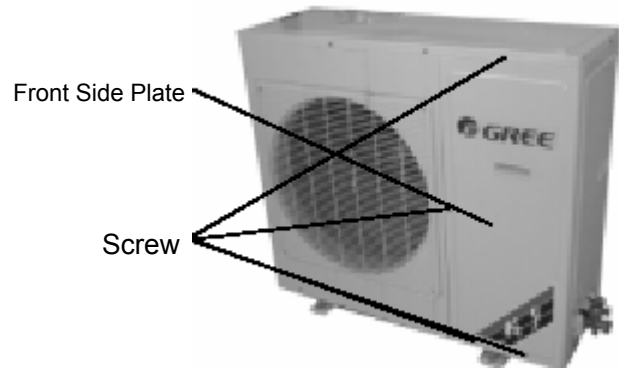


Figure 8-14

#### **8.2.2** Disassemble Top Cover

Screw off the tapping screws around the top cover, and then pull the top cover upward to remove it.

(refer to Figure 8-15)

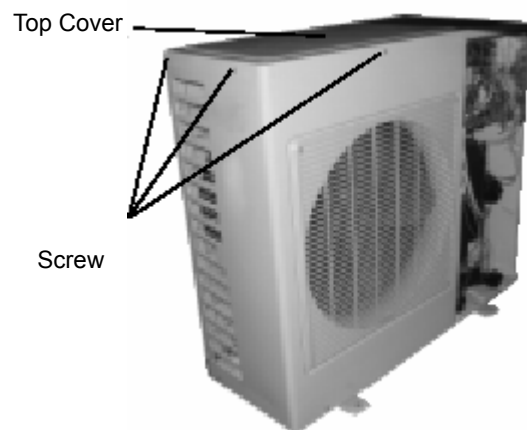


Figure 8-15

#### **8.2.3** Remove the rear grill

Screw off the four screws around the rear grill to remove the rear grill.

(refer to Figure 8-16)

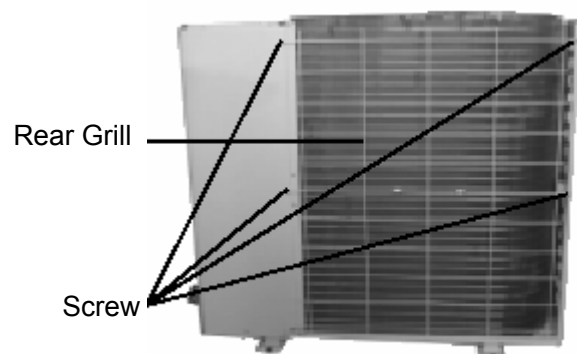
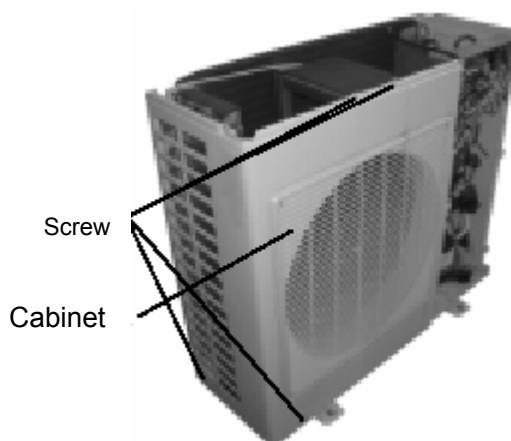


Figure 8-16

#### 8.2.4 Disassemble Cabinet

Use screwdriver to screw off the screws around the cabinet to remove the cabinet. (refer to Figure 8-17)



#### 8.2.5 Disassemble Electric Box

Use screwdriver to screw off the two screws fixing the electric box, and pull the electric box to remove it.  
(refer to Figure 8-18)

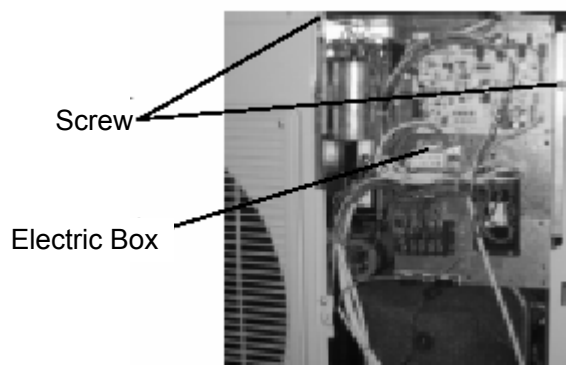


Figure 8-18

#### 8.2.6 Disassemble Right Side Plate

Use screwdriver to screw off the six screws at the right side plate, condenser side plate, gas valve and liquid valve, and then pull the right side plate sub-assy upward to remove it.  
(refer to Figure 8-19)

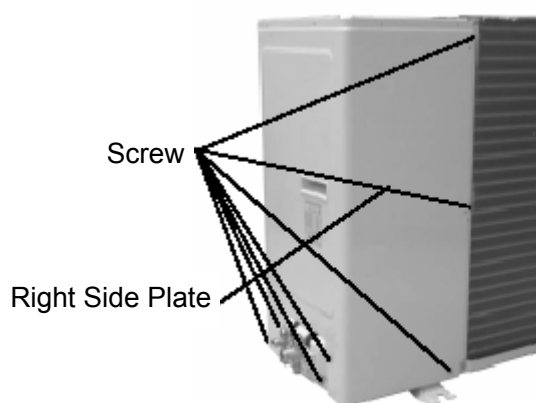


Figure 8-19

## Operating Procedures / Photos

### 8.2.7 Disassemble Axial Flow Fan

Use spanner to remove the nut at the fan to remove the axial flow fan.

(refer to Figure 8-20)

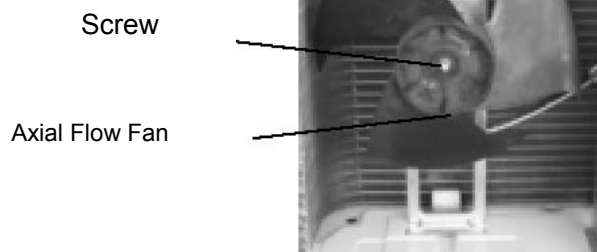


Figure 8-20

### 8.2.8 Disassemble Outdoor Motor

Screw off the four tapping screws fixing the motor, pull out the motor lead-out cable plug, and remove the motor. Screw off the two tapping screws fixing the motor support, and pull the motor support upward to remove it.

(refer to Figure 8-21)

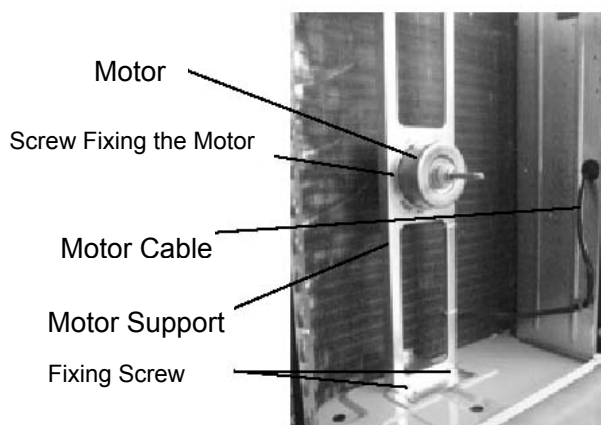


Figure 8-21

### 8.2.9 Disassemble 4-Way Valve

(Only Heating and Cooling Unit has such valve)  
Screw off the holding nut of the 4-way valve coil and remove the coil. Use wet cotton cloth to wrap the 4-way valve, unsold the four soldering points connecting the 4-way valve, and remove the 4-way valve. Be quick during the unsoldering process, pay attention to keep the wrapping cloth wet and do not allow the soldering flame to burn the compressor lead-out cable.

(refer to Figure 8-22)

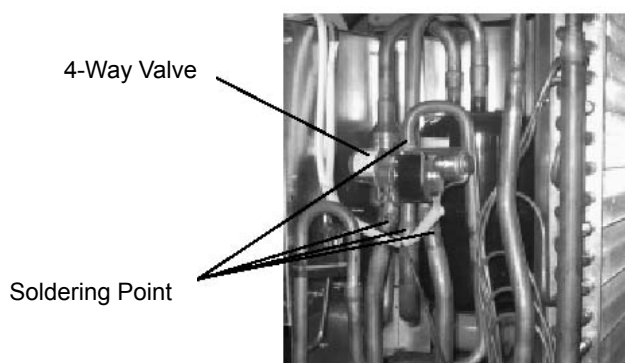


Figure 8-22

### 8.2.7 Disassemble Capillary

Unsold the soldering points at the capillary, the valve and the condenser to remove the capillary. Pay attention not to allow the soldering slag to block the capillary.

(refer to Figure 8-23)

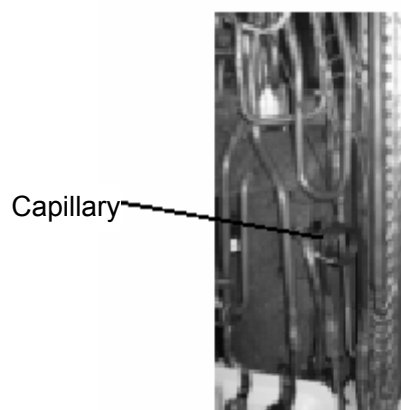


Figure 8-23

### 8.2.8 Disassemble Valve

Unscrew the two screws fixing the gas valve, unsolder the soldering point between the gas valve and the return-air duct and remove the gas valve

(note: when unsoldering the soldering point, use wet cloth to completely wrap the gas valve to prevent valve body from being harmed by high temperature).

Unscrew the two screws fixing the liquid valve, unsolder the soldering point connecting the liquid valve and the fork type pipe, and remove the liquid valve.

(refer to Figure 8-24)

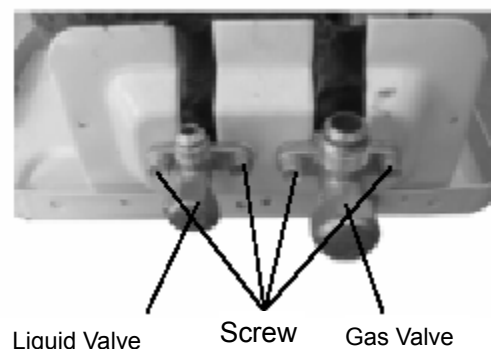


Figure 8-24

### 8.3.9 Disassemble Compressor

Firstly unsolder the pipes connecting the compressor, and then unscrew the three foot nuts at the compressor to remove the compressor.

(refer to Figure 8-25)

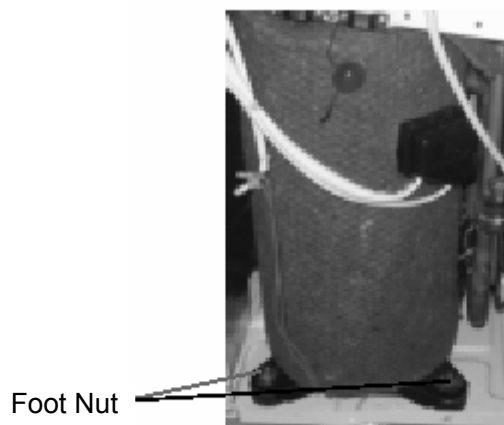
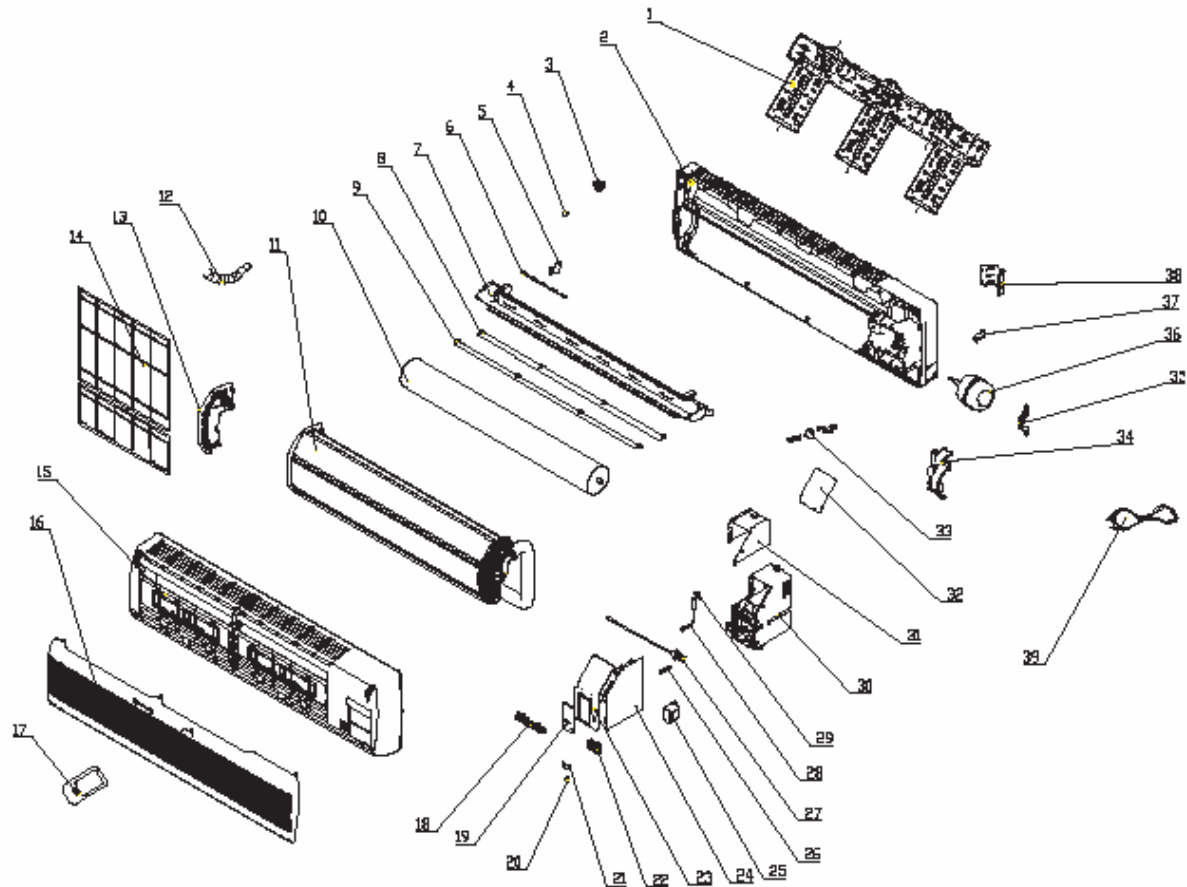


Figure 8-25

## 9 Exploded View and Components and Parts List

### 9.1 Exploded View of Indoor Unit

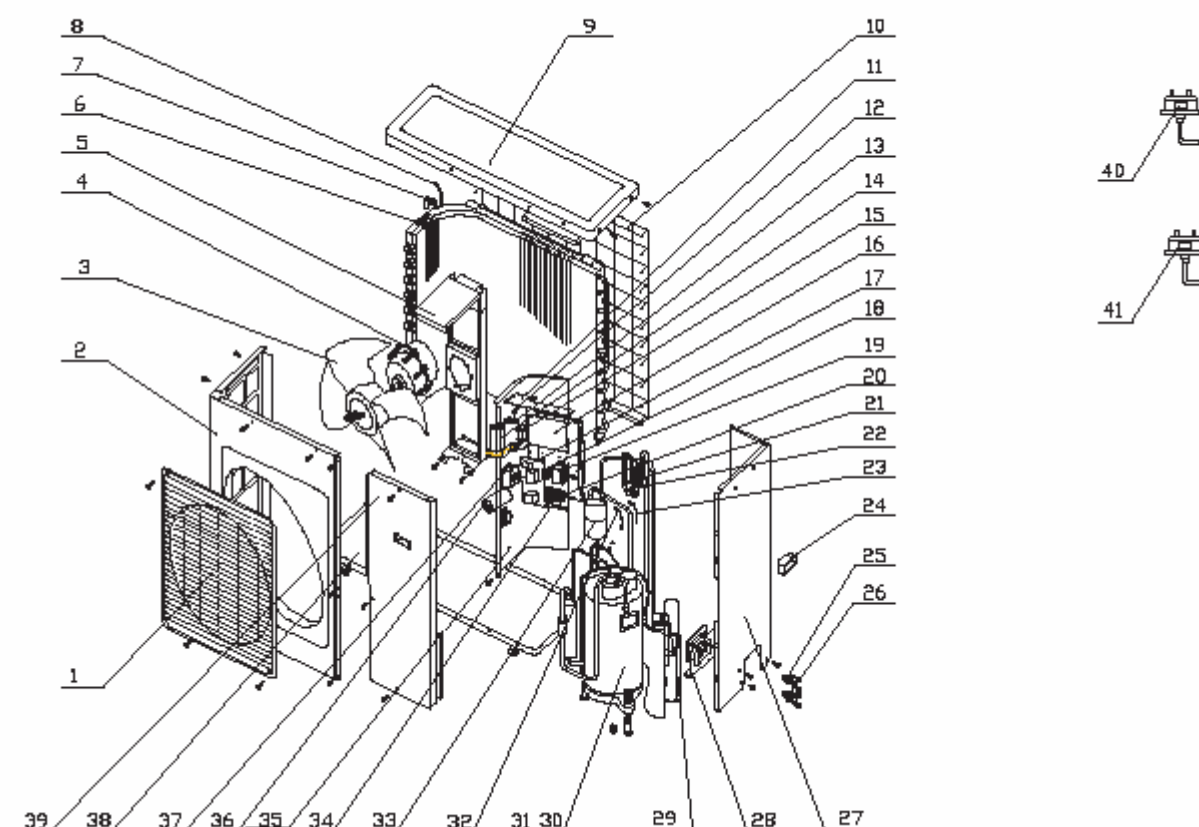


## 9.2 Components and Parts List of Indoor Unit

No.	Description	Part Code	Qty
		KFR-80G/A11-J	
1	Wall-Mounting Frame	01252398	1
2	Rear Case	22202040	1
3	Fan Bearing	76512203	1
4	Screw Cover	242520053	3
5	Swing Louver	10512030	15
6	Swing Link	10582040	3
7	Water Tray	20182043	1
8	Guide Louver (up)	10512062	1
9	Guide Louver (down)	10512063	1
10	Cross Flow Fan	10352420	1
11	Evaporator Assy	010041291	1
12	Drainage Pipe	05232411	1
13	Evaporator Support (left)	24212041	1
14	Filter	11122051	2
15	Front Case	20002572	1
16	Front Panel	20002375	1
17	Remote Controller Y512	30512506	1
18	Receiver Board JD	30046093	1
19	Electric Box Cover	20102252	1
20	Switch Lever	10582007	1
21	Wire Clamp	71010103	1
22	Terminal Board T4B3A	42011233	1
23	Electric Box Cover	20102251	1
24	Main PCB	30035224	1
25	Transformer SC28B5	43110204	1
26	Fuse 3.15A 250VAC	46010014	1
27	Room Sensor	390000451	1
28	Tube Sensor	390000591	1
29	Sensor Insert	42020063	1
30	Electric Box	20102250	1
31	Lower Shield of Electric Box	01592034	1
32	Upper Shield of Electric Box	01592033	1
33	Stepping Motor MP28EA	15212102	1
34	Evaporator Support (right)	24212042	1
35	Motor Clamp	26112069	1
36	Motor FN25E	150121051	1
37	Fixer(evaporator)	02112009	1
38	Pipe Clamp	26112071	1
39	Connecting Cable	400205237	1



## 9.3 Exploded View of Outdoor Unit



**9.4 Components and Parts List of Outdoor Unit**

No.	Description	Part Code	Qty
		KFR-80W/A11-J	
1	Front Grill	22265403	1
2	Front Plate	01435402	1
3	Axial Flow Fan	10335401	1
4	Motor FW60T	15015401	1
5	Motor Support	01705402	1
6	Condenser Assy	011032341	1
7	Temp Sensor Support	24215101	1
8	Ambient Sensor	390002064	1
9	Top Cover	01255404	1
10	Rear Grill	01475401	1
11	Capacitor CBB65 55uF/450V	01413075	1
12	Electric Plate	01403346	1
13	Capacitor CBB65 55uF/450V	33000038	1
14	Capacitor CBB65 60uF/450V	33000039	1
15	Capacitor CBB61 3uF/450V	33010027	1
16	Main PCB	30035222	1
17	Soft Start Device	30116034	1
18	Terminal Board 2-8	42011103	1
19	Transformer 57X30G	43110232	1
20	Terminal Board	42010258	1
21	4-way Valve Coil	430004002	1
22	4-way Valve	43000404	1
23	Temp Sensor	390001921	1
24	Handle	26235252	1
25	Gas Valve Assy	07105251	1
26	Liquid Valve Assy	071302231	1
27	Rear Side Plate	01305402	1
28	Valve Support	01715001	1
29	Capillary Assy	030038651	1
30	Compressor ZR36KH-PFJ-522	00100066	1
31	Overload Protector	/	1
32	Temp Sensor	/	1
33	Gas-liquid Separator	07255251	1
34	Isolation Washer C	70410523	1
35	Clapboard	01235403	1
36	Capacitor 88-108uF/98uF/330VAC	33010603	1
37	AC Contactor CJX9B-25S/01#	44010222	1
38	Metal Base	012054022	1
39	Front Side Plate	01305406	1
40	Low Pressure Switch	46020007	1
41	Pressure Switch	46020003	1

## 10 Care and Maintenance

### Warning

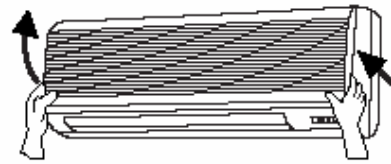
- Be sure to stop the unit and plug off the power before cleaning your air conditioner. Otherwise, electric shock may happen.
- Wetting of air conditioner may cause the risk of electric shock. Make sure not to wash your air conditioner in any case.
- Volatile liquids such as thinner or gasoline will cause damage to the appearance of air conditioner. (Only use soft dry cloth or wet cloth soaked with neutral detergent to clean the air conditioner cabinet).



### 10.1 Clean the front panel

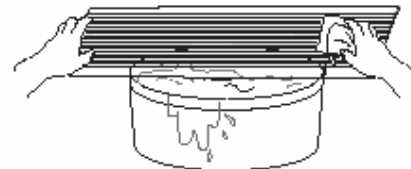
#### ① Remove the front panel

From the grooves on two ends of the front panel, pull the front panel open along the arrow direction to remove it.



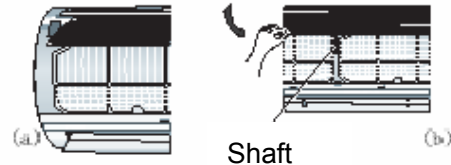
#### ② Clean the front panel

Wash with soft brush soaked with water and neutral detergent. Wipe off the water and dry the panel.



#### ③ Install the front panel

Place the holder on two ends of the front panel into the holding groove and put the middle shaft into groove. Cover the front panel and clamp it securely along the arrow direction.



### 10.2 To Clean the air filter

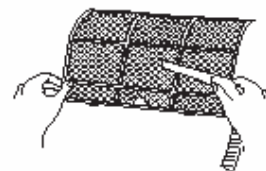
#### ① Remove the air filter

From the grooves on two ends of the front panel, pull the front panel open to an angle along the arrow direction. Then, pull the air filter downward to remove it, as shown on right.



#### ② Clean the air filter

Wash the filter with vacuum cleaner or water. If the filter is too dirty, wash with warm water (below 45°C) that is added with neutral detergent. Then dry it at a cool place, as shown on right.



#### ③ Install the air filter

Push the air filter into the groove of front grill. Use your hand to push the two clamps inward and close the filter.

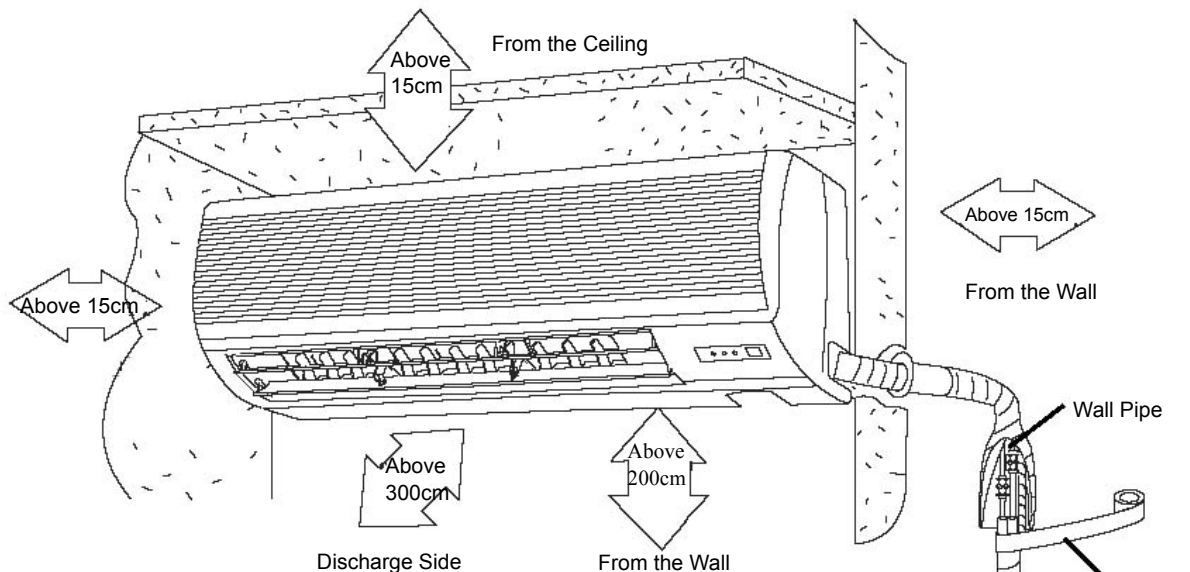


#### Notes:

**Never expose the front grill or air filter directly under the sun. Never clean it with hot water over 45°C or dry it on fire, (as this will cause decoloring, fire or deformation).**

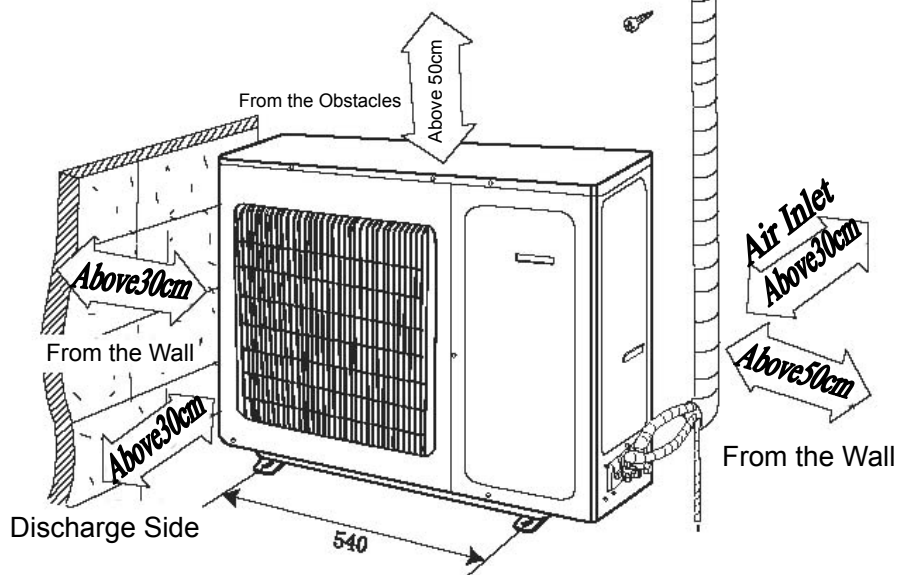
## 11 Installation Instructions

### 11.1 Installation Dimension Drawing



#### Important Caution:

- ◆ The air-conditioning unit must be installed by professional technicians to ensure smooth and sound use.
- ◆ Contact the local Gree installation and service agency before installation. Air-conditioning unit installed by an agency not designated by Gree may not be served timely when in failure owing to inconvenient business contact.
- ◆ Any change of installation position must be guided by professional technicians.



**11.2 Selection of Installation Position****① Indoor Unit**

- The air inlet and air outlet must be far away from obstacles to ensure that airflow can reach every corner of the room;
- Choose a position where condensation water can be easily discharged and the outdoor unit can be easily connected;
- Choose a place far away from heat sources, steam or flammable gases;
- Choose a place where the weight of indoor unit can be withstood and operating noise and vibration are not increased;
- Ensure the installation of indoor unit is in conformity with the requirements of installation dimension drawing;
- Ensure sufficient clearance and space for service and maintenance; Ensure the indoor unit is at least 200cm from the floor;
- Choose a position at least 1 meter from any TV, sound system or other household electric appliances;
- Choose a place so that the air filter can be easily pulled out;

**② Outdoor Unit**

- A place where noise and airflow generated by air exhaust do not affect the neighbors;
- Choose a place with good ventilation to ensure good ventilation of outdoor unit;
- No obstacles near the outdoor unit obstructing the air intake and air exhaust of the unit;
- The installation position shall be able to withstand the weight and vibration of the outdoor unit and ensure safe installation;
- A place without the leakage of any flammable gases or corrosive gases;
- Ensure the installation of outdoor unit is in conformity with the requirements of installation dimension drawing.

**Caution:**

Installation at the following places may cause failure of the air-conditioning unit. Please contact Gree installation and service agency if the installation at such places cannot be avoided.

- A place full of machine oil;
- A region with saline-sodic soil near the sea;
- A place with sulphide gases (such as sulphur spring);
- A place with high frequency facilities, such as radio equipment, electric welder or medical equipment;
- An environment with special conditions.



## 11.3 Installing Indoor Unit

### ① Installing Wall-Mounting Frame

- Adopt the line-hanging method to decide the horizontal position. As the drainage pipe outlet is at the left, the left side of the wall-mounting frame shall be slightly lower.
- Use screws to secure the wall-mounting frame on the wall.
- After installation is completed, manually pull the wall-mounting frame to check if it is secured. The mounted frame shall be able to withstand the weight of an adult (60 kg) and the fixing screws shall have relatively even stress.

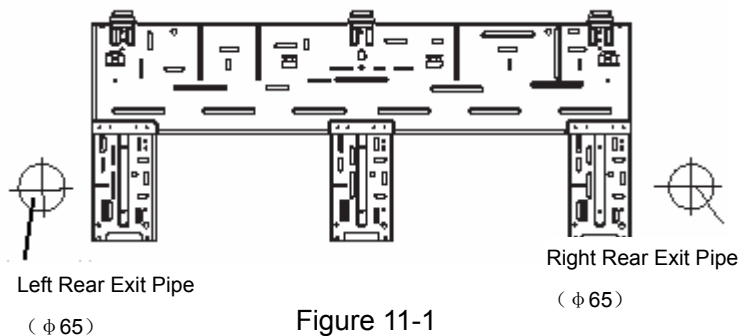


Figure 11-1

### ② Drilling Hole for Fitting Pipe

- As shown in Figure 11-2, a fitting pipe can extend outward from 6 directions. Choose one direction as needed.
- After deciding the hole position of the fitting pipe according to Figure 11-1, drill a declining hole (Φ65) ;
- To prevent the fitting pipe and the cable passing through the wall from being harmed, install a wall pipe.

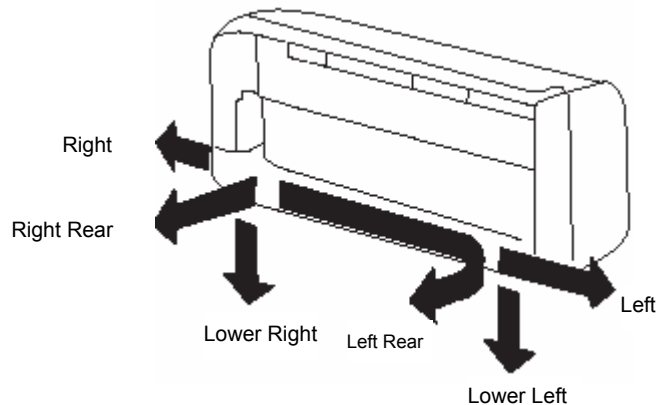


Figure 11-2

### ③ Installing Drainage Pipe

- The flexible drainage pipe must descend to allow smooth running of water.
- Pay attention not to allow twists, ridges and distortion of the drainage pipe in the layout and not to immerse the outlet in water.
- Extended part of flexible drainage pipe passing through the indoor unit must be wrapped by thermal insulation material.

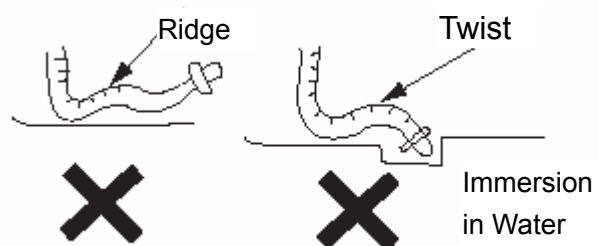


Figure 11-3

### ④ Installing Connecting Pipe

Connect the connecting pipe with the two education pipes of the indoor unit correspondingly. Tighten the joint nut of the connecting pipe (refer to the following part of “Installing Connecting Pipe” ).

#### Caution:

- Connect the connecting pipe to the indoor unit first and then connect it to the outdoor unit.
- Pay attention to the bending and layout when preparing the connecting pipe in order not to harm it.
- Do not screw the joint nut too tightly, otherwise leakage will be caused.

## ⑤ Electrical Cable Connection

- Pull open the front panel from the above.
- Disassemble the cover plate of electric box and twist off the wire-pressed clamp (refer to Figure 11-4).
- Pull the power connection cable upward through the cable-cross holes in the base plate and the bottom of the electric box;
- Connect the blue wire of the power connection cables to the “N (1)” terminal of the terminal board, connect the brown wire to the “2” terminal, and connect the black wire to the “3” terminal and connect the yellow-green wire to the “⊕” terminal (refer to Figure 11-4).
- Install the wire-pressed clamp back into position and tighten the screw to ensure the wire-pressed clamp presses tightly the power connection cable; Install the cover plate of the electric box back and fix it with screws.
- Install the front panel back into position

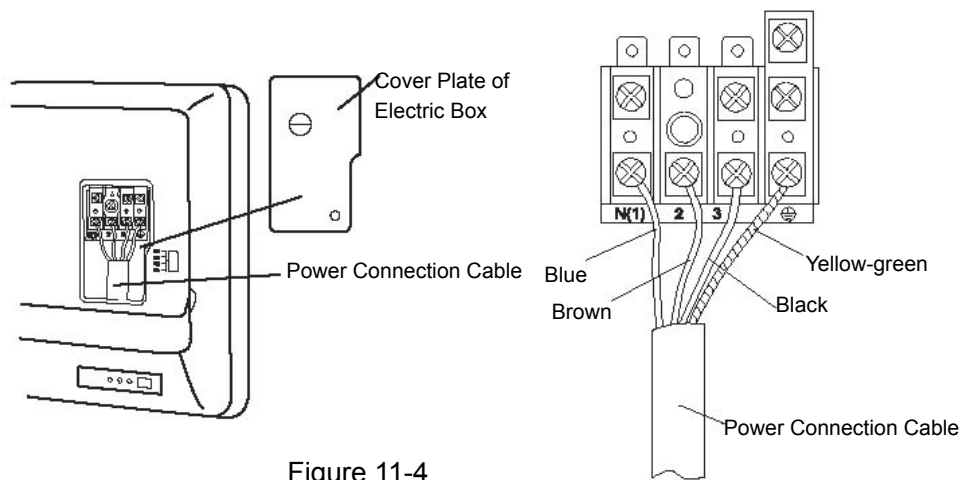


Figure 11-4

### Caution:

All electrical installation shall be carried out by professional technicians in accordance with the local laws and regulations.

The power supply must be of rated voltage of the unit and special electrical line for air-conditioning.

It is required to install a leakage protection switch and an air switch with sufficient capacity.

The diameter of flexible power cable must be large enough; damaged flexible power cable and connection cable must be replaced by cables of such special purpose.

The socket must have reliable grounding. It is prohibited to connect the grounding wire to the gas pipeline, the water supply pipeline, the grounding wire of lightning rod or the grounding wire of telephone line.

Carry out installation in accordance with the state line layout rules.

## ⑥ Installing Indoor Unit

- When laying the pipe (line) at the left or right side, cut as needed the extra part of the fitting pipe left at the tube-exit plate of the unit base.
- ① When only drawing out the power line, pull the power line through the cross hole;
- ② When drawing out the connecting pipe and the electrical line, pull them through the cross hole;
- Wrap the fitting pipe and the cable (refer to Figure 11-6) and pull them through the fitting pipe hole.
- Hung the claws at the rear side of the indoor unit to the hook on the wall-mounting frame. Move the unit left and right to see if it is steady.
- The installation height of the indoor unit must be at least 2.0m.
- Take the two pieces of air cleaner screens from the packing accessory bag and install them onto the unit.

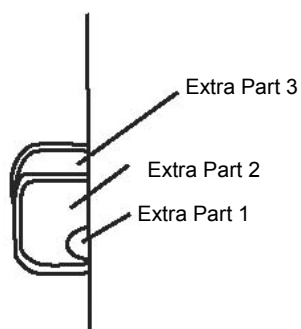


Figure 11-5

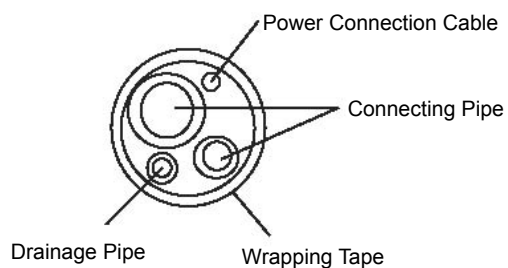


Figure 11-6



## 11.4 Unit Installing Outdoor Unit

### ① Installing Connecting Pipe

- The taper end of the connecting pipe must be in line with the corresponding tape face of the valve joint.
- Use force to manually tighten the nut of the connecting pipe and then use spanner to tighten the nut (refer to Figure 11-7).

**Caution: Excess torque may damage the nut.**

Refer to the following table for tightening torque:

Hexagon Nut	Tightening Torque (N.M)
φ 9.5	31-35
φ 16	60-65

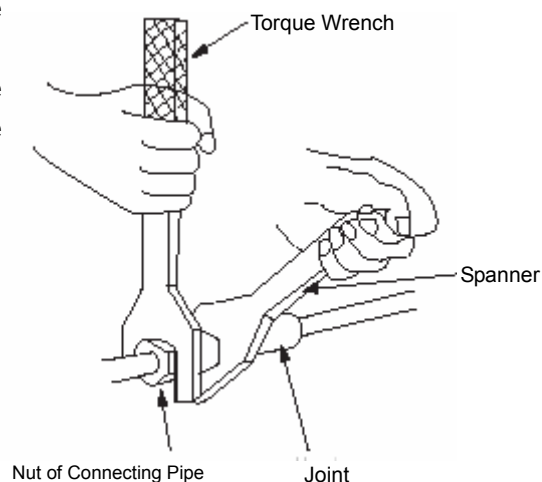


Figure 11-7

### ② Fitting Line Connection

- Disassemble the right side plate of the outdoor unit, drill cable-cross hole for the outdoor unit and attach the cable-cross loop.
- Remove the cable clamp, connect the power connection cable and the power cable with the terminals at the row of connection and fix the connection as shown in Figure 11-8.
- Use cable clamp to fix the cable connection cable and the power cable.
- Confirm the line connections are correct and safe.
- Install the front side plate.

**Caution:**

- Wrong line connection may cause electrical failure.
- When fixing the cable, a certain degree of freedom shall be maintained for the cable between the connection point and the fixing point.

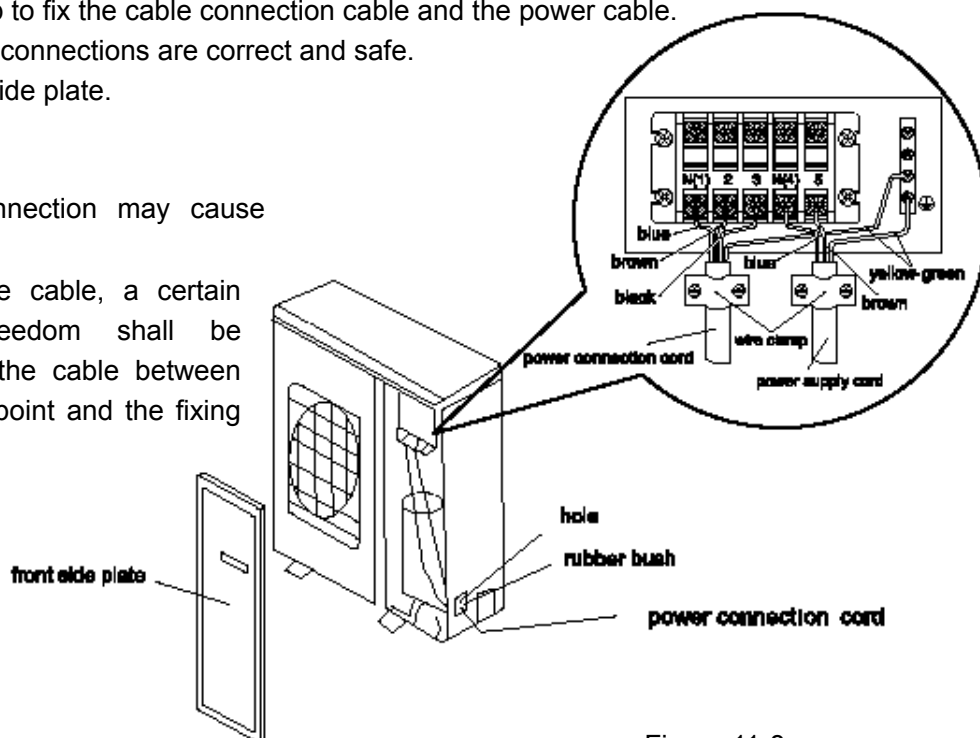


Figure 11-8

### ③ Vacuum-pumping and Leakage Inspection

- Remove the nut cover at the shutoff valve.
- Align with the center of the fitting pipe and manually tighten the conical nut sufficiently.
- Use spanner to tighten the conical nut.
- Remove the liquid valve cap, the gas valve cap and the nut of refrigerant charging mouth.
- Use inner hexagon spanner to twist off the liquid valve body and at the same time use screwdriver to open the valve core of the liquid valve. Now gas shall flow out.
- After gas continues flowing out for about 15 second and refrigerant gas begins to flow out, close the valve core and tighten the nut of refrigerant charge mouth.
- Completely open the valve body of the liquid valve and the gas valve. ( Figure 11-9)
- Turn and tighten the valve cap, then use soap water or a leak detector to check if there is gas leakage at the outdoor and indoor units and the pipeline connections.
- If conditions permit, use a vacuum pump to exhaust air in the unit from the valve core. ( Figure 11-10)

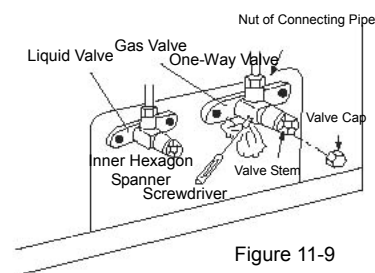


Figure 11-9

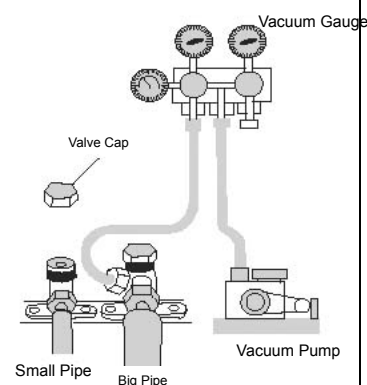


Figure 11-10

- Remove the nut cover of the refrigerant charge mouth at the gas valve.
- Connect the middle flexible charge tube at the vacuum gauge with the vacuum pump and connect the low pressure (LO) end with the refrigerant charge mouth of the gas valve. ( Figure 11-10)
- Start the vacuum pump for vacuum pumping. When the multi-use meter reads 1bar, put the low pressure (LO) handle at the vacuum gauge in the complete close position. Keep the status for above 15 minutes and ensure the pressure of the vacuum pump maintains unchanged.
- Remove the valve caps of the liquid valve and the gas valve.
- Use inner hexagon spanner to loose the valve body of the liquid valve slightly so that the pressure at the vacuum pump increases to above 0bar.
- Disconnect the flexible charge tube from the refrigerant charge mouth of the gas valve and put back the nut cover of the refrigerant charge mouth to make sure it caps the mouth tightly.
- Use inner hexagon spanner to open the valve body of the liquid valve and the gas valve.
- Screw the valve caps of the gas valve and the liquid valve tightly and inspect if there is any leakage.

### ④ Draining of Condensate Water of Outdoor Unit

- When the air-conditioning unit is in the heating mode, the condensate water generated at the outdoor unit and the water generated by defrosting shall be drained through the drainage pipe to proper place.

#### Installation Method

- As shown in Figure 11-11, insert the drainage joint of the outdoor unit into the  $\phi 25$  hole on the base plate. Connect the drainage pipe to the drainage mouth so as to drain the condensate water and water generated by defrosting to proper place.

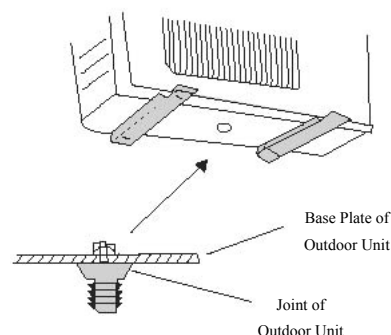


Figure 11-11

## 11.5 Test Run and Check Items after Installation

### ① Test Run

#### 1. Preparation of Test Run

- Do not switch on the power before all installation work is completed.
- Confirm that the control line is correctly installed and all electrical lines are firmly connected.
- Open the shutoff valves of the big and small pipes.
- Remove all foreign articles, especially metal scraps and line ends, from the unit.

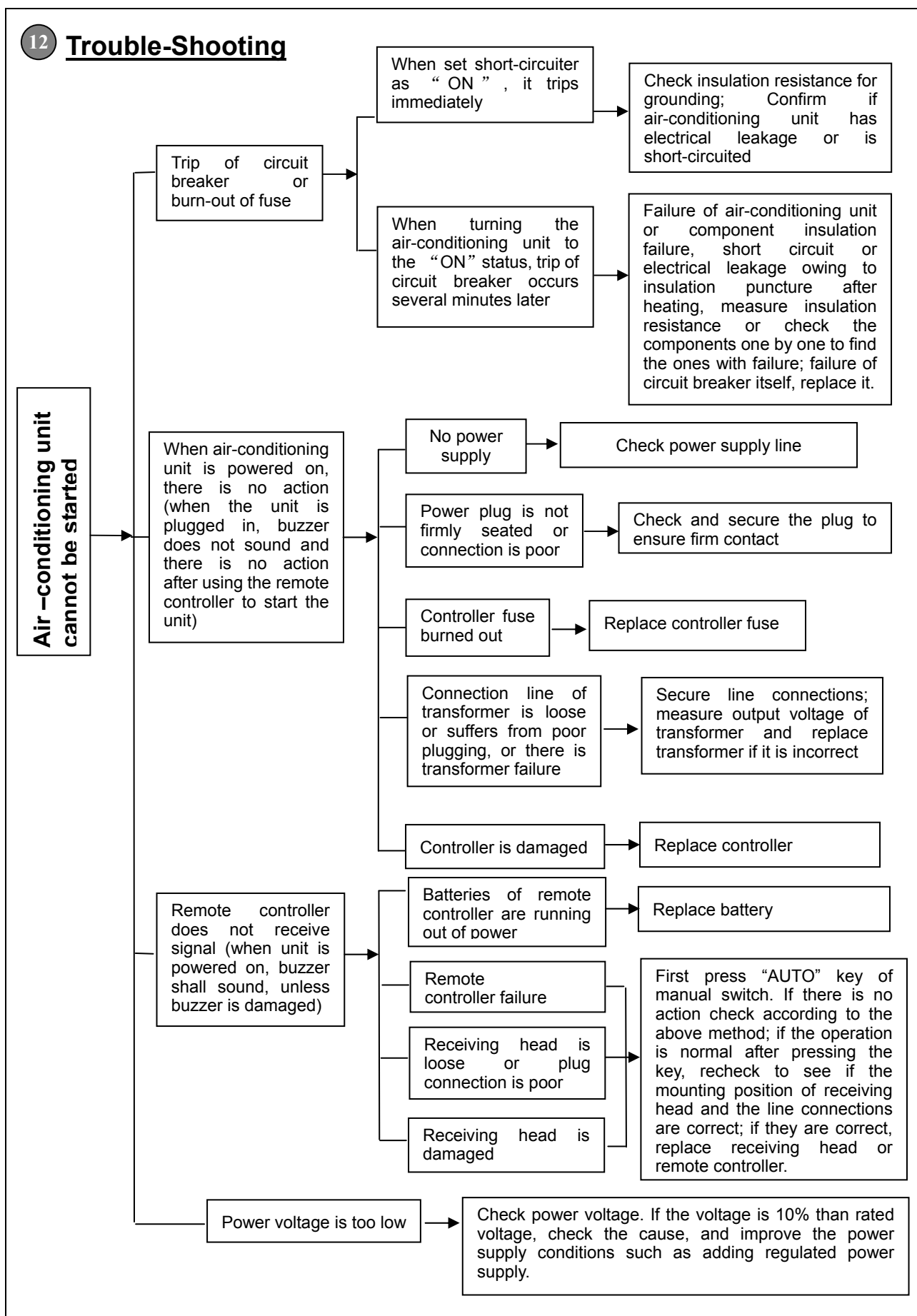
#### 2. Method of Test Run

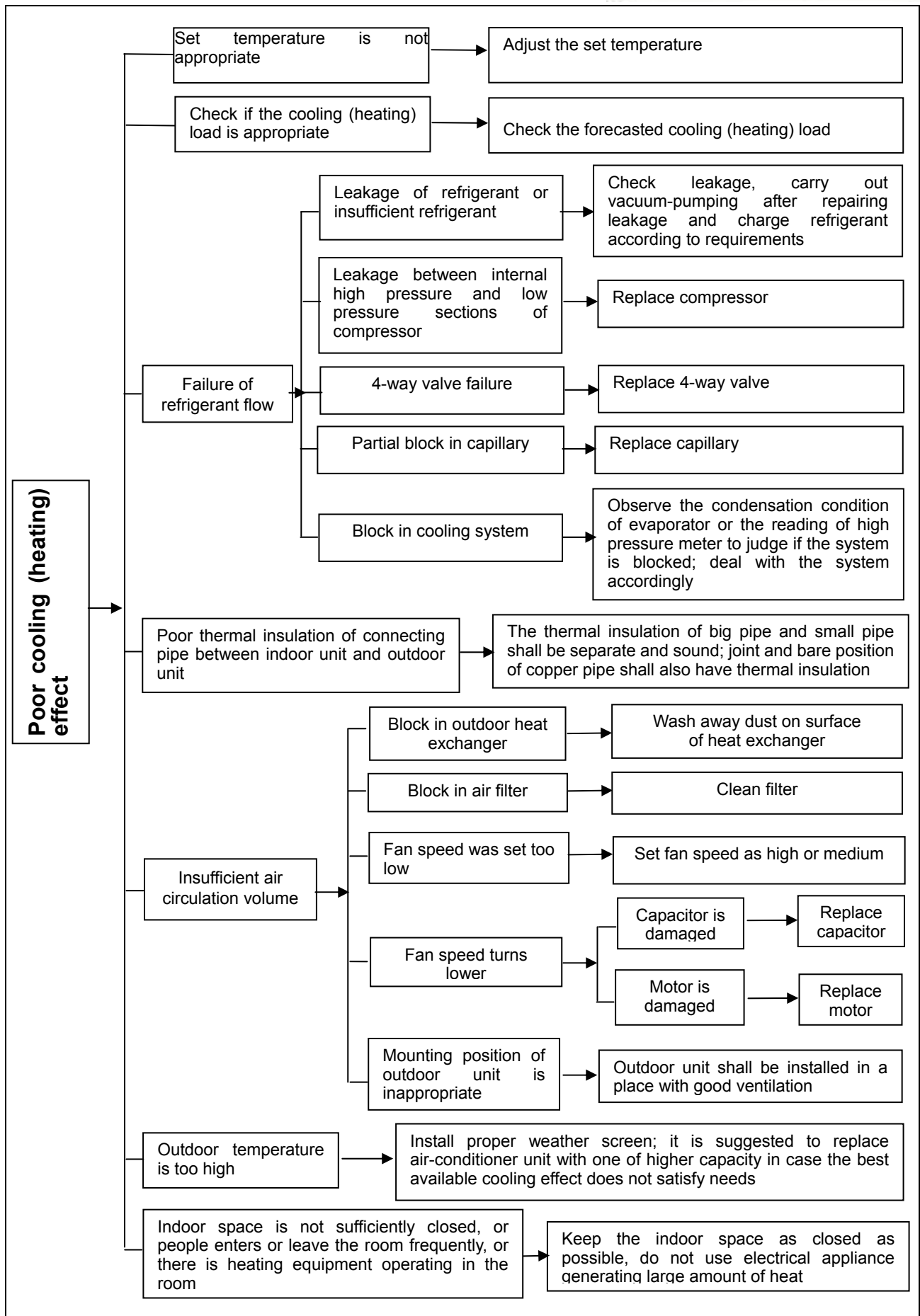
- Connect to the power supply, press the “ON/OFF” key on the remote controller, and the air-conditioning unit starts to operate.
- Press the Mode key, select the operating mode such as cooling and air supply, and observe if the operation is normal.
- Emergency Operation : in case the remote controller is lost, use ball pen head or similar articles to carry out the following operation :
  - (1) When the unit is stopped, use the ball pen head to press the keyswitch, then the unit shall start auto operation. The microprocessor shall automatically select cooling, heating or air supply according to the room temperature to reach a comfortable effect.
  - (2) When the unit is in operation, use the ball pen head to press the keyswitch, then the unit stops operation.

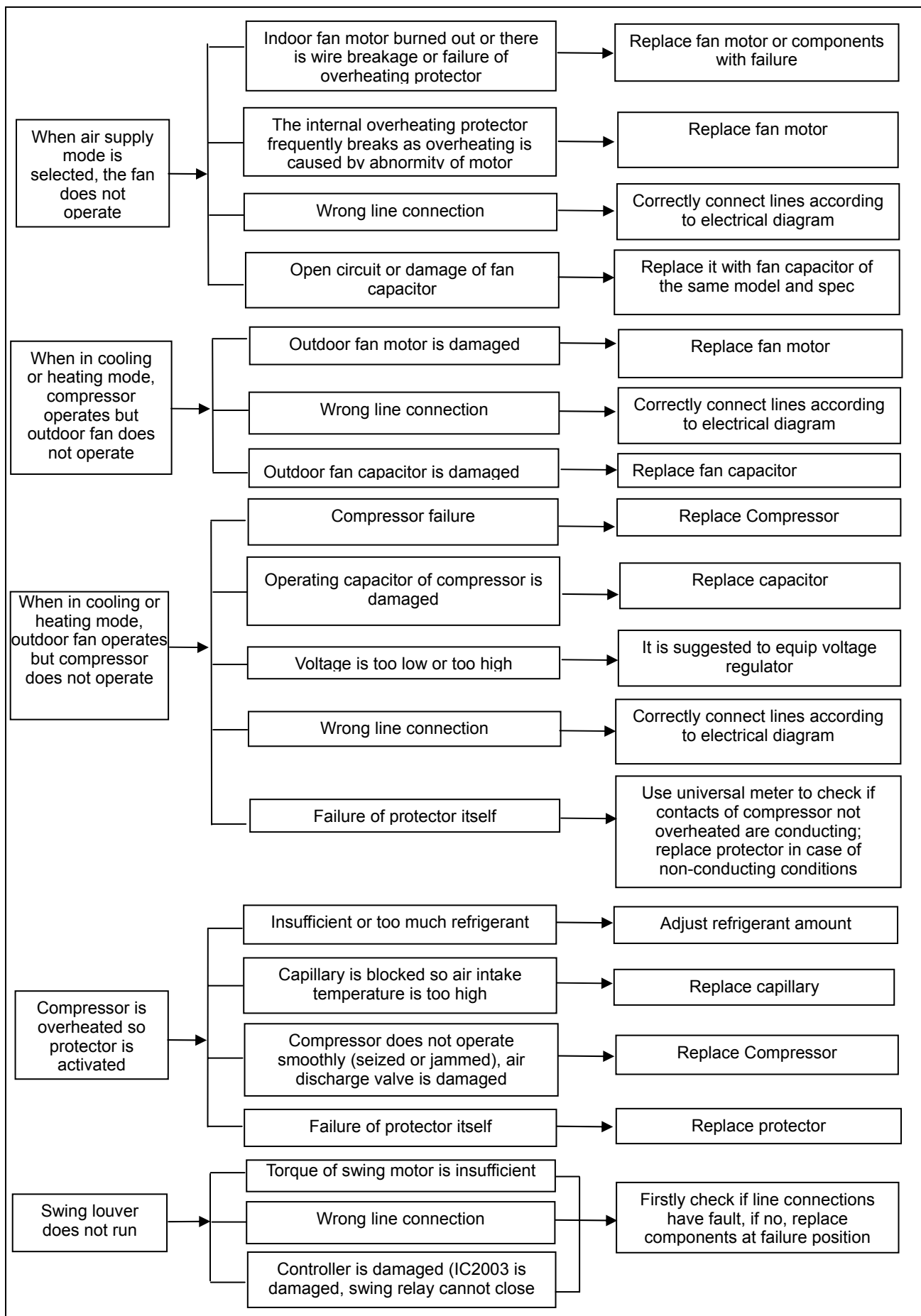
### ② Check Items After Installation

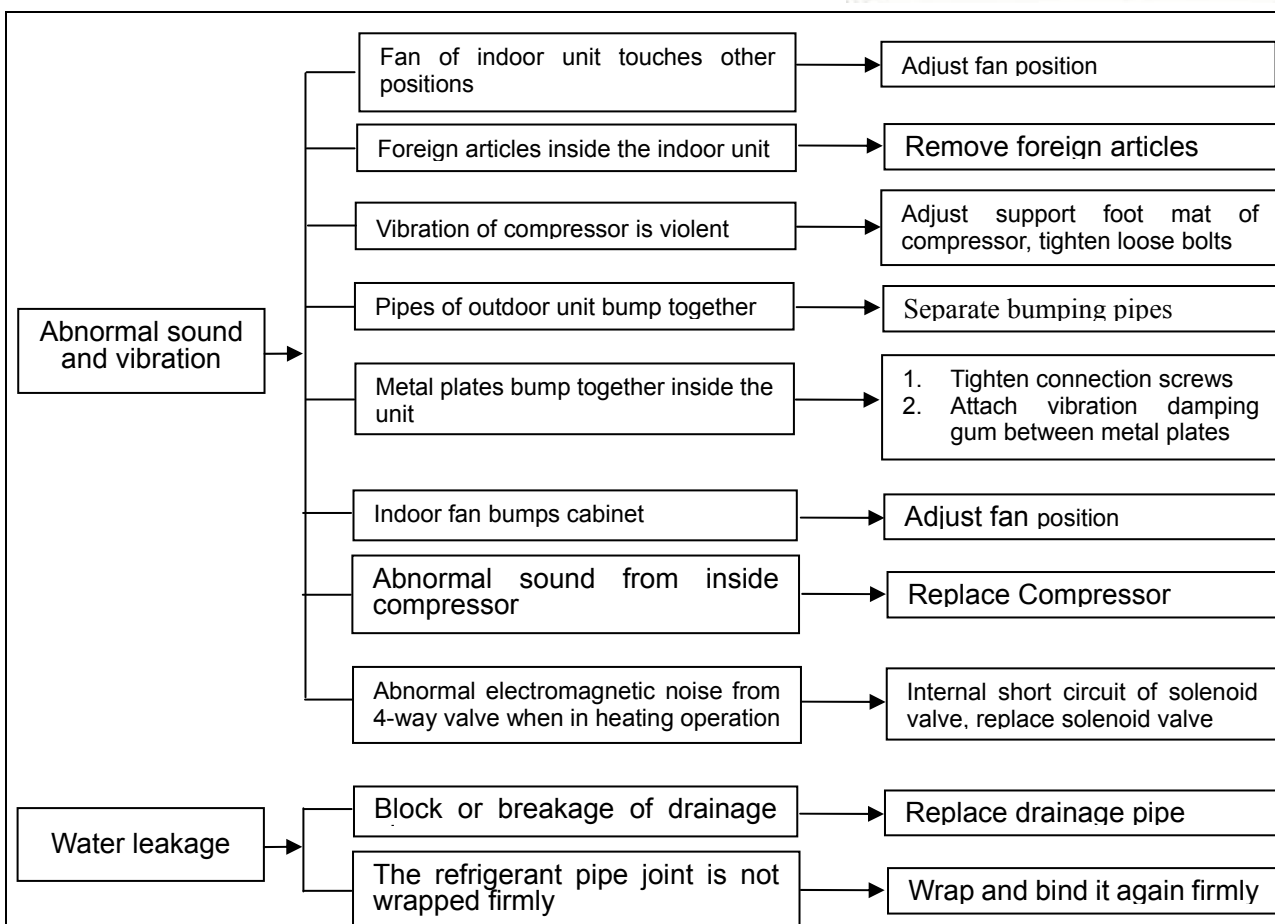
Check Items	Problems Owing to Improper Installation
Is the installation reliable?	The unit may drop, vibrate or make noises
Has the gas leakage been checked?	May cause unsatisfactory cooling (heating) effect
Is the thermal insulation of the unit sufficient?	May cause condensation and water dropping
Is the drainage smooth?	
Does the power supply voltage accord with the rated voltage specified on the nameplate?	The unit may bread down or the components may be burned out
Are the lines and pipelines correctly installed?	
Has the unit been safely grounded?	Risk of electrical leakage
Are the models of lines in conformity with requirements?	
Are there any obstacles near the air inlet and outlet of the indoor and outdoor units?	
Have the length of refrigerating pipe and refrigerant charge amount been recorded?	It is not easy to decide the charge amount of refrigerant.

## 12 Trouble-Shooting









In case of the following protection or failures, the indoor unit shall display corresponding codes, which are explained as follows: