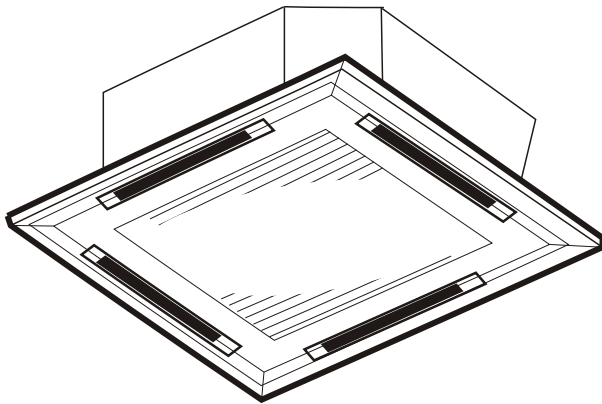


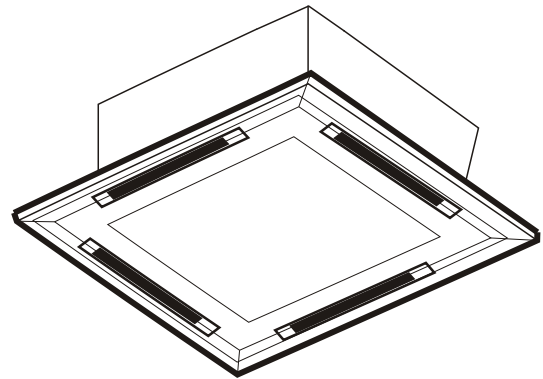
# Galanz

## CEILING CASSETTE TYPE AIR CONDITIONERS

### OWNER'S MANUAL (UNIVERSAL SERIES)



24K/36K/42K/48K



18K

Thank you for choosing our Air Conditioner. Please read this OWNER'S MANUAL carefully prior to using and keep it for further reference.

Safety Awareness	1
Name of Parts	3
Preparation Before Operation	5
Operation of Air Conditioner	6
Guide to Proper Usage	13
Service and Maintenance	14
Installation Explanations	15
Malfunction Codes	27

# SAFETY AWARENESS

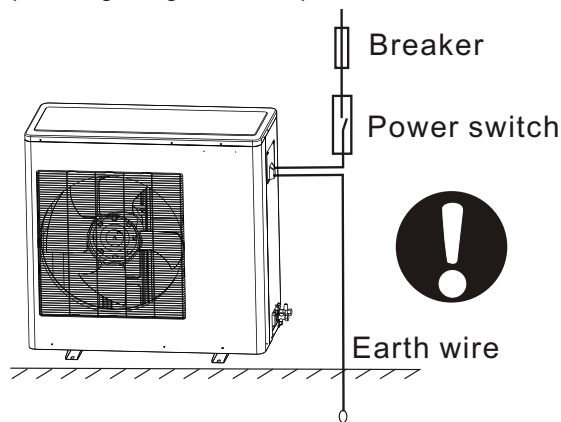
Read and understand thoroughly this safety awareness before use.

The items indicated here are very important safety precautions, which must be followed.

Power resource must be supplied through one specific circuit and ensure only one main power switch equipped. An earth leakage breaker with rated capacity and fuse must be installed to avoid possible electric shocks and fire. Do not damage the power cord. Do not connect the wire from the middle of the power cable or extend it. Piling up heavy objects on the power cable, approaching high temperature supply objects will cause electric shock and fire.

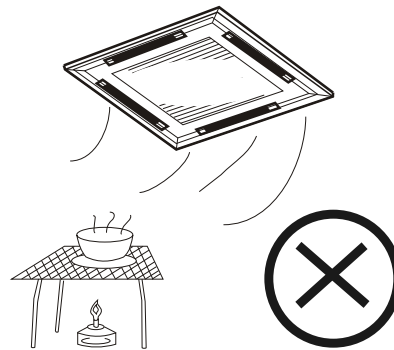
The air conditioner must be earthed firmly.

Do not connect the earth wire to the gas pipeline, water pipeline, lightning rod, or telephone earth wire.

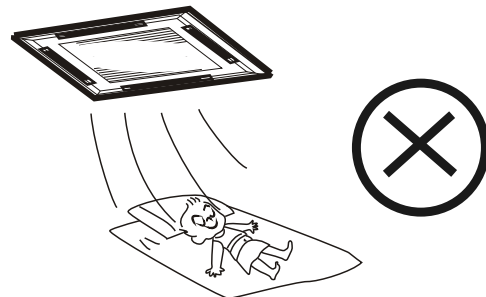


Do not install the air conditioner near flammable gas.

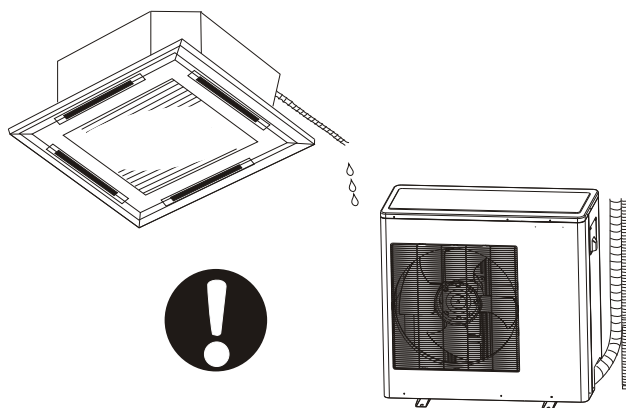
Do not install the air conditioner at acidic, smoggy environment or where steam occurs. Otherwise, it will greatly degrade the machine performance and thus cause irreparable damage.



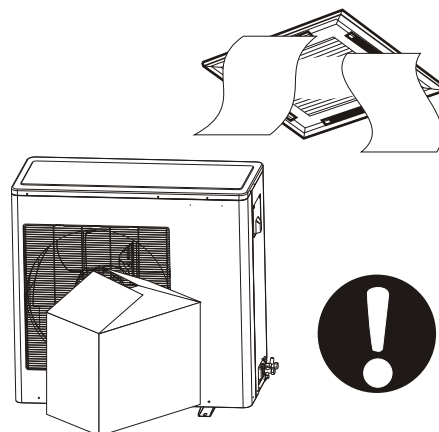
Do not apply the cool air to humans, animals, plants, etc. (Especially there are babies, aged persons and patients in the room)



Ensure that the drainage is correct. Dripping water may cause damage to furniture, due to poor drainage.



Ventilation at both air inlet and outlet must be allowed. Blocking air flow may cause poor performance of unit and also may cause irreparable damage.



This product must not be disposed together with the domestic waste.

This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.

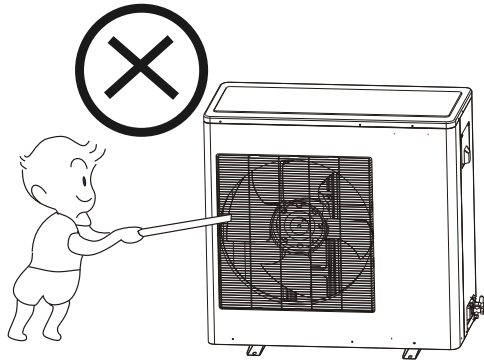


# SAFETY AWARENESS

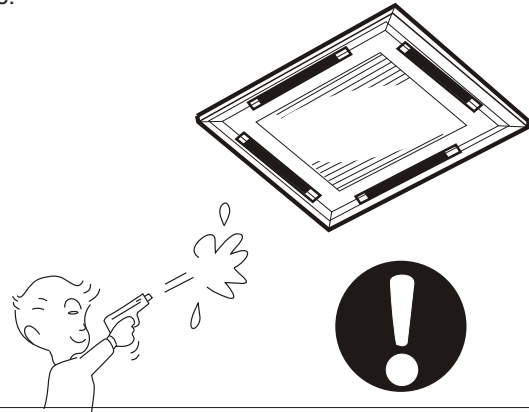
Read and understand thoroughly this safety awareness before use.

The items indicated here are very important safety precautions, which must be followed.

Do not insert a finger, a rod or any other objects into the air outlet/inlet grille. As the fan is running at a high speed, it will cause injury.

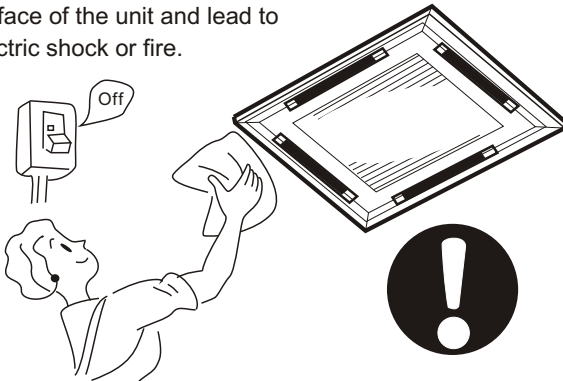


Do not eject any insecticide or flammable spray towards the surface of the air conditioner. Otherwise, it may cause fire.

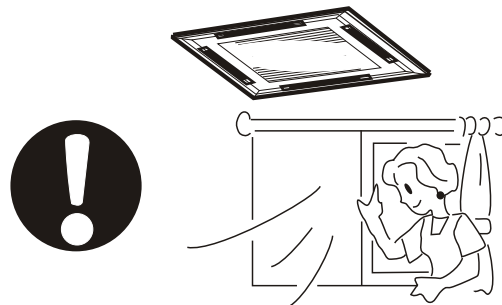


Before cleaning, be sure to stop the operation and shut off the power supply!

For cleaning, do not use water, inflammable things or any other material, which will damage the surface of the unit and lead to electric shock or fire.



Periodically open the door and window for a moment to get some fresh air from outside since the room air may turn turbid after the air conditioner has been running for a long time.



The air conditioner will not auto restart after a power failure. When the power resumes, please restart the air conditioner with the operation of the remote controller.

If you find anything abnormal occurs (such as burning smell during operation), please immediately stop the operation, turn off the air conditioner and contact your local authorised service centre to check the air conditioner.

**If you find one of the following symptoms, please turn the breaker off quickly and call our authorised service centre for help.**

- The creepage switch always jumps to turn off.
- Some switch or button often fails to work normally.
- The display panel fails to display normally.
- Something abnormal compared with the usual operation.



**Warning:**

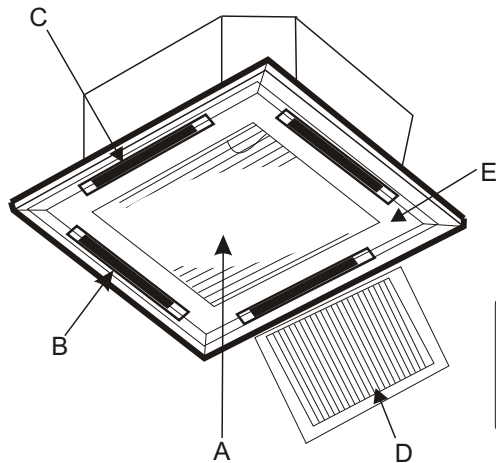
Do not attempt to install, service or move the Air Conditioner by yourself. Incorrect connection may cause fire, electric shock and the unit falling may result in injury or water leakage. Contact our designated air conditioner service centre and specialists. The manufacturer shall not assume responsibility for accidents or injury caused by incorrect connection.

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

# NAME OF PARTS

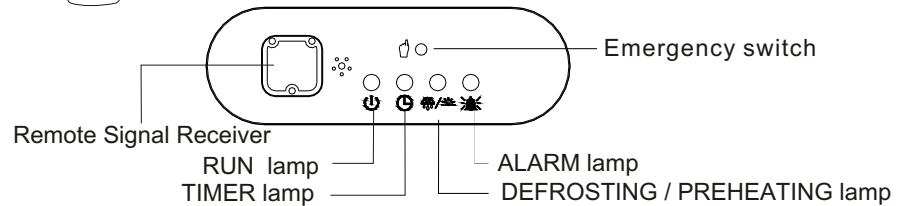
## ◆ THE INDOOR UNIT

For models of 24K, 36K, 42K, 48K

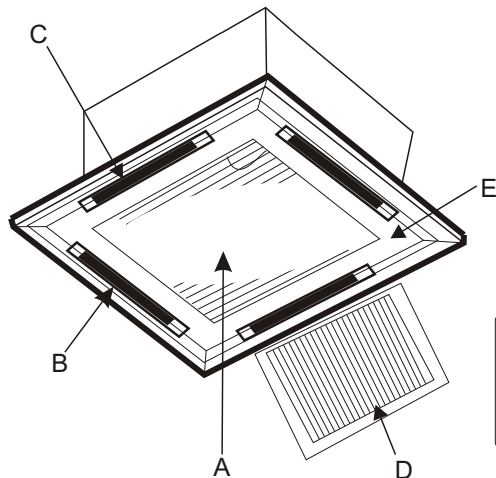


- A. Air inlet: takes in the room air
- B. Air outlet
- C. Deflector: adjust the outlet air direction
- D. Filter
- E. Panel
- F. Remote controller

### The indoor display panel

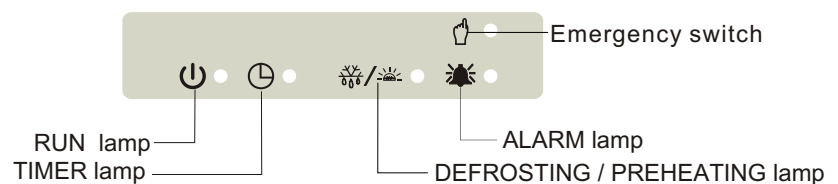


For model of 18K



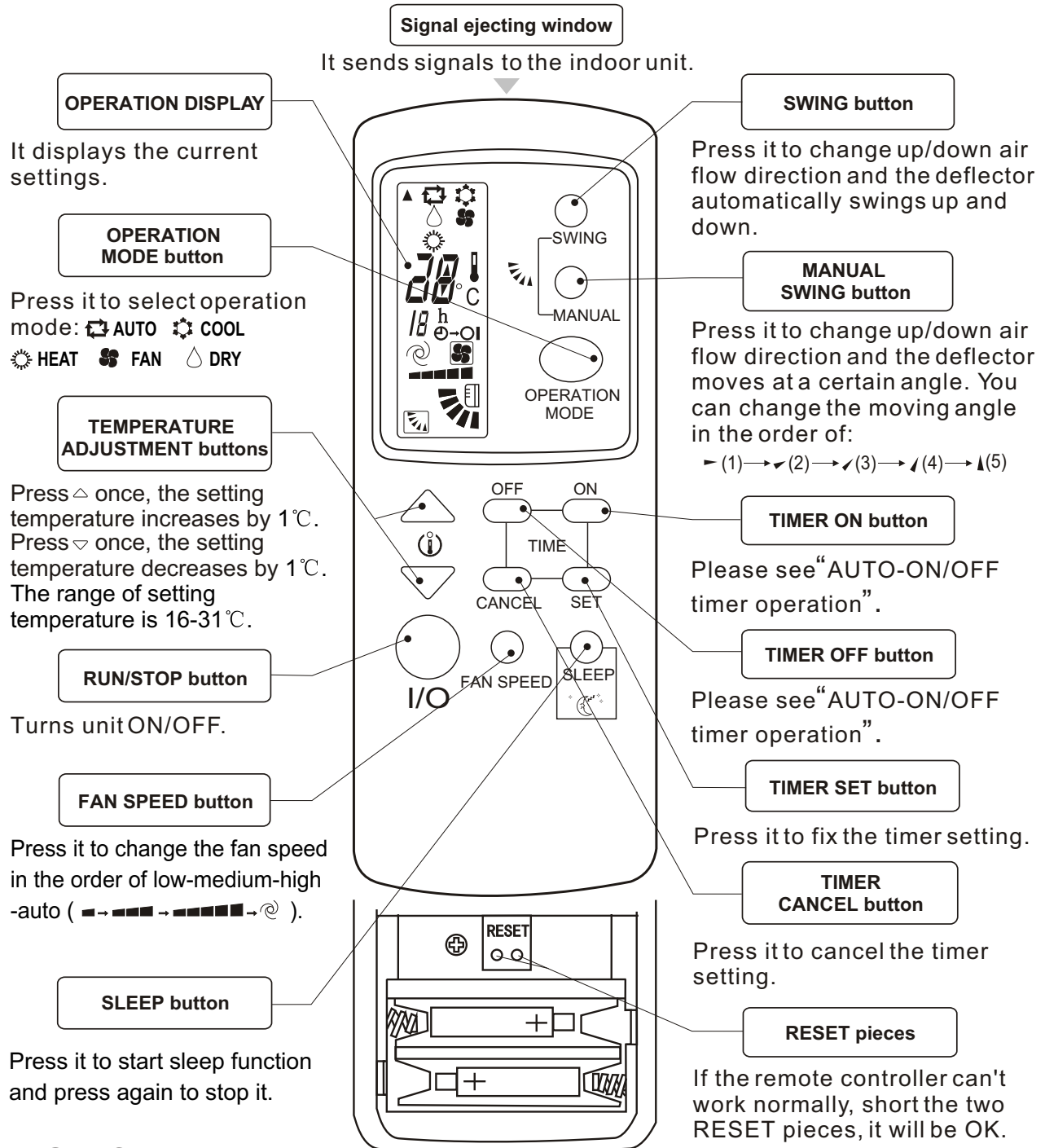
- A. Air inlet: takes in the room air
- B. Air outlet
- C. Deflector: adjust the outlet air direction
- D. Filter
- E. Panel
- F. Remote controller

### The indoor display panel



# NAME OF PARTS

## REMOTE CONTROLLER

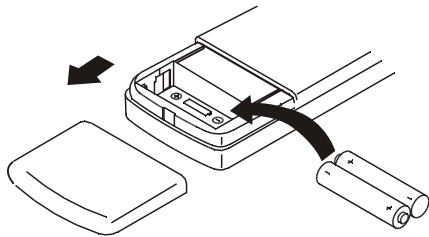


## NOTICE:

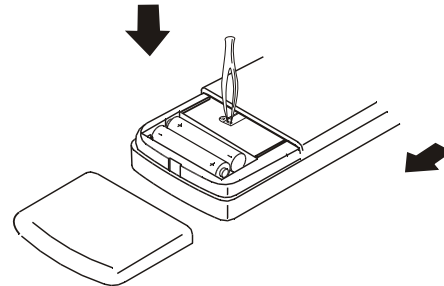
- ◆ Cool only type has no HEAT mode.
- ◆ To operate, the distance should be within 6 meters from the indoor unit with a clear line of sight.
- ◆ Remove the batteries if the remote controller is not to be used for long periods of time.
- ◆ In this illustration, all displays are ON for the purpose of explanation. Some models may not show all these indications.
- ◆ Don't tear the batteries apart or throw them into fire, which will lead to irreparable damage.

# PREPARATION BEFORE OPERATION

- 1** Open the back cover, put in batteries and reset the back cover as before.




- 2** Short RESET pieces with appropriate metal object.





## ⚠ NOTICE

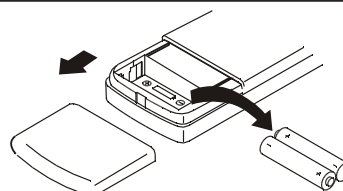
- If the remote controller does not work, short the RESET pieces 

- The signal can be reached within six metres directly in front of indoor unit. 

- Handle remote controller carefully. Do not drop, throw and get it wet. 

- When the button is pressed, indoor unit will beep once or twice, indicating the receiving of the signal. If no beep is heard, press again. 

- Remove batteries if the remote controller is not being used for a period of time. 



# OPERATION OF AIR CONDITIONER

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## ■ OPERATION WITH REMOTE CONTROLLER


### 1 Run/Stop

- Press I/O button once to start operation and press it again to stop operation.
- Once the air conditioner starts operation, it will sound “beep” once and the run indicator lamp is illuminated.

### 2 Temperature Adjustment

- Every press of “△” button increases the setting temperature by 1°C, every press of “▽” button decreases the setting temperature by 1°C.
- The set temperature will be shown on display panel of the remote controller.
- The range of setting temperature is 16-31°C.

### 3 Fan Speed Adjustment

- Press FAN SPEED button to change the fan speed of indoor unit in the order of: low → medium → high → auto (  )

### 4 Sleep Selection

- Press sleep button once to start sleep function and press it again to stop sleep function.
- Once activating sleep function, the sleep indicator lamp will illuminate on the operation panel of the indoor unit.

### 5 Air flow direction adjustment

- Air flow by swinging  
Press swing button on the remote controller, the deflector will swing up and down.
- Directional air flow  
When the deflector moves at your desired angle, press swing button on the remote controller, the deflector stops to blow directional air flow.

### 6 Operation mode selection

Press mode selection button on the remote controller to choose the following mode:

#### ● AUTO mode

In this mode, the air conditioner can automatically adjust the room temperature to decide the most suitable temperature. At the start of operation, the air conditioner will automatically select the operation mode depending on room temperature.

Please refer to the following:

# OPERATION OF AIR CONDITIONER

Room Temperature (RT)	Selected mode
$RT \leq 20^{\circ}\text{C}$	Heating (For cooling only type, dehumidifying mode is selected)
$20^{\circ}\text{C} < RT < 24^{\circ}\text{C}$	Fan
$RT \geq 24^{\circ}\text{C}$	Cooling

- **COOL mode**

In this mode, press temperature adjustment button to set temperature; press fan speed button to change airflow speed of the indoor unit.

Press SWING button to set the airflow angle or adjust the vane swinging up and down.

- **DRY mode**

In this mode, the air conditioner automatically decides the setting temperature and this setting temperature will not appear on display. Neither the setting temperature nor the fan speed could be adjustable. You can press SWING button to set the airflow angle.

- **FAN mode**

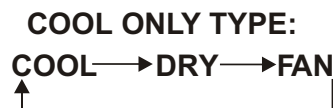
In this mode, only the indoor unit runs like the fan. Press fan speed button to change the airflow speed and press swing button to set the airflow angle.

- **HEAT mode (only applied to heat pump type)**

In this mode, press temperature adjustment button to set temperature; press fan speed button to change the airflow speed of the indoor unit.

Press swing button to set the airflow angle or adjust the vane swinging up and down.

Press mode selection button on the remote controller to cycle the mode in the following order:



- **SLEEP mode**

Sleep mode in cooling and drying running.

A. The indoor fan runs at low speed.

B. After one hour of operation the set temperature will increase by  $1^{\circ}\text{C}$ . One hour later, the set temperature will increase by  $1^{\circ}\text{C}$  once more. The unit will then continue operating at  $2^{\circ}\text{C}$  above the set temperature.

Sleep mode in heating running.

A. The indoor fan runs at low speed.

B. After one hour of operation the set temperature will decrease by  $2^{\circ}\text{C}$ . One hour later, the set temperature will decrease by  $2^{\circ}\text{C}$  once more. The unit will then continue operating at  $4^{\circ}\text{C}$  below the set temperature.









# OPERATION OF AIR CONDITIONER



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## 7 Timer operation

### ● AUTO-ON/OFF timer operation set




1. Press button  when the air conditioner is on to initiate the AUTO-OFF TIMER function. Meanwhile,  of  starts to flash on the display.

Press button  when the air conditioner is off to initiate the AUTO-ON TIMER function. Meanwhile,  of  starts to flash on the display.

2. Every press of button  or  increases the AUTO-ON/OFF time by one hour (12 hours at most) and the digits of AUTO-ON/OFF time will appear on the display.

3. Press button  to set the AUTO-ON/OFF time. The  or  will stop flashing on the remote controller display.


### ● AUTO-ON/OFF timer operation cancellation

If you want timer operation cancelled, press button  until the digits of AUTO-ON/OFF time and  or  disappear on the remote controller display.

### NOTICE:

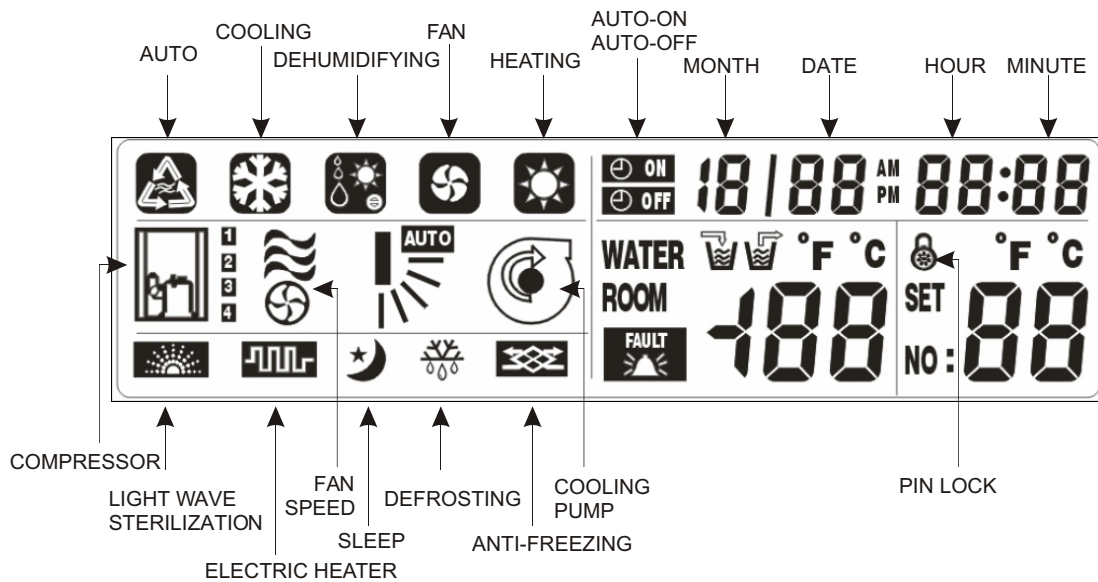
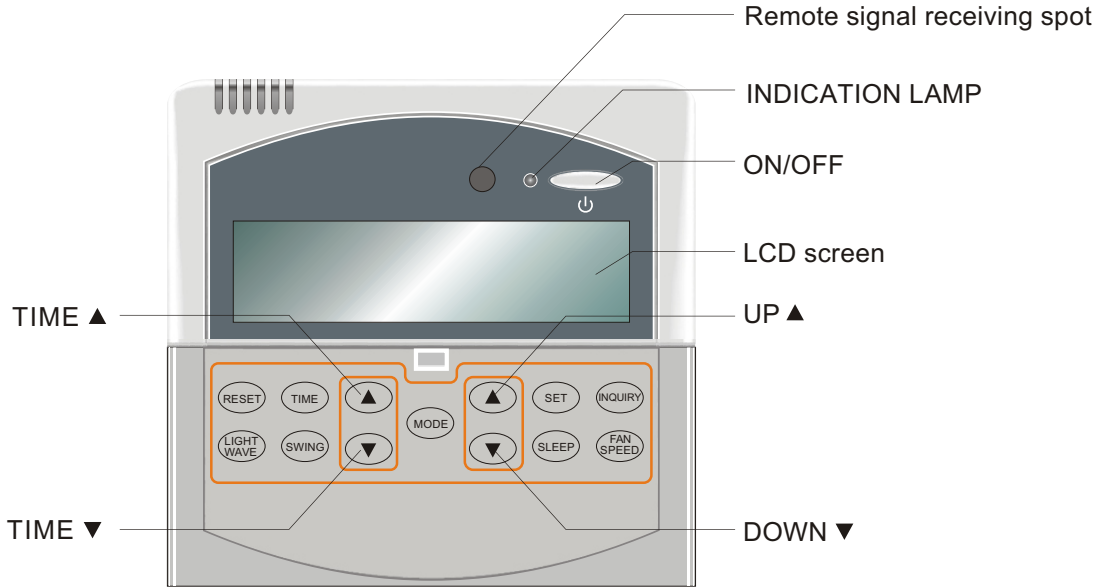
1). TIMER ON/OFF operation must be set again after a power failure.

2). Once the AUTO-ON/OFF time is fixed, if you want to change it, you should cancel the previous AUTO-ON/OFF timer operation.

3). If you press the button  once incautiously after the AUTO-ON/OFF time is fixed, the system will count time anew based on the current display time.

# OPERATION OF AIR CONDITIONER

## WIRE CONTROLLER (OPTIONAL)

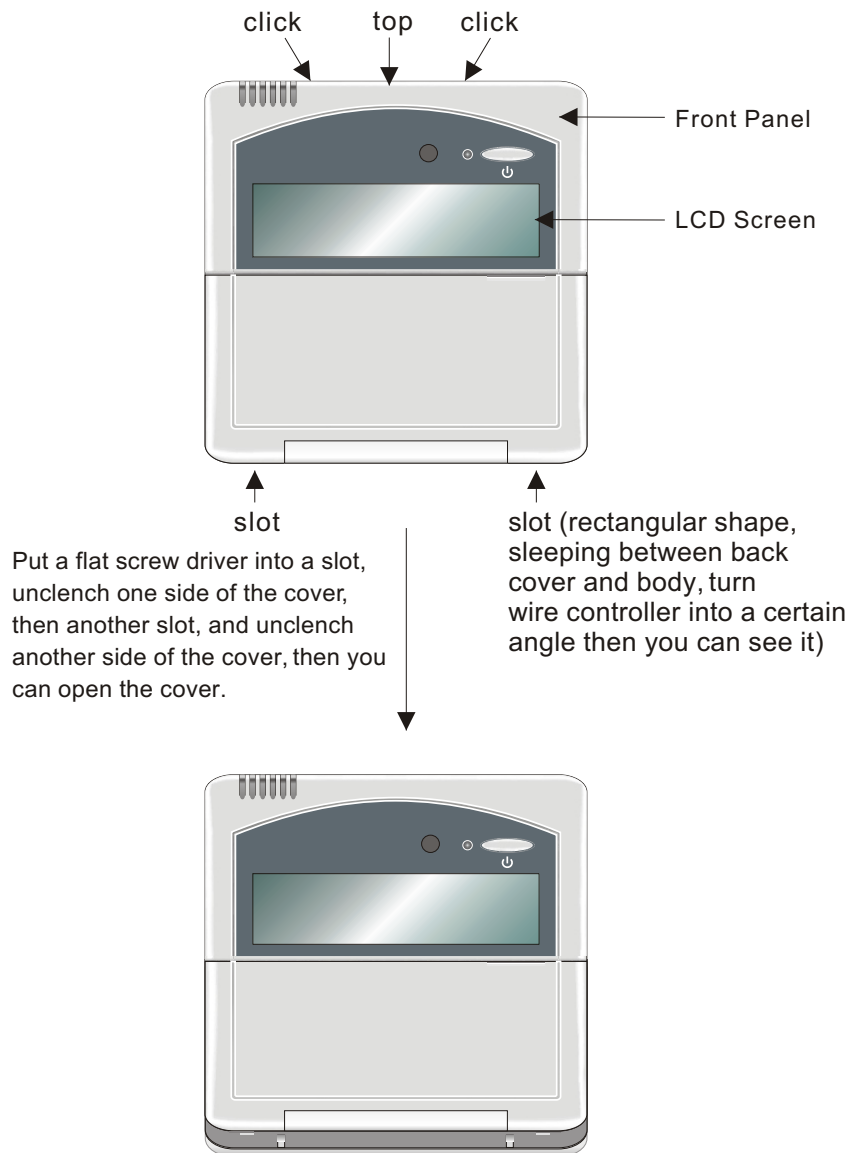


Instruction of symbols on LCD screen  
 (some symbols may not be displayed in practice)

# OPERATION OF AIR CONDITIONER

## Installation of Wire Controller

When installing back cover of wire controller, fit the lower back cover into the body, hold on and click the upper part into the body, then push them together. When dismantling the back cover, follow the steps below:



Note: Do not push the front panel of wire controller with force to avoid crushing the LCD screen or internal PCB board.

# OPERATION OF AIR CONDITIONER

## ■ OPERATION WITH WIRE CONTROLLER

### 1 Run/Stop

- When ON/OFF button is pressed once, the unit starts and the green lamp illuminates.
- When ON/OFF button is pressed again, the unit stops and the red lamp illuminates.

### 2 Temperature Adjustment

- Every press of “UP ▲ ” button increases the setting temperature by 1°C, every press of “DOWN ▼ ” button decreases the setting temperature by 1°C.
- The range of setting temperature is 18-31°C.

### 3 Fan Speed Adjustment

- Press FAN SPEED button to change the fan speed of indoor unit in the order of (the grey part is flashing):

Low	Medium	High	Auto

### 4 Sleep Selection

- Press SLEEP button once to start sleep function and press it again to stop sleep function.
- Once activating sleep function, the sleep indicator lamp will illuminate on the LCD screen of the wire control, and the fan will run at low speed.

### 5 Air flow direction adjustment






- Press SWING button to change the air flow directions of indoor unit in the order of (the grey part is flashing):

Auto Swing	Manual Position 1	Manual Position 2	Manual Position 3	Manual Position 4	Manual Position 5

# OPERATION OF AIR CONDITIONER

## 6 Operation mode selection



When the unit is at standby state, press MODE button to change its operation modes in the order of:

Cooling	Dehumidifying	Fan	Heating	Auto
				

## 7 Date/Time Setting

At normal display page, press “TIME” button once to set the Date/Time and meanwhile the beeper raises Bi sound once; press the “TIME” button again to finish the setting and meanwhile the beeper raises Bi sound twice.


## 8 Timer Operation

- At normal display page, press “TIME ▲” button to set the AUTO-ON timer and meanwhile the lamp  illuminates, while press “TIME ▼” button to set the AUTO-OFF timer and meanwhile the lamp  illuminates
- When setting the timers, press “TIME ▲” or “TIME ▼” to shift the setting items between timer parameter and timer date/time.
- When setting the timers, press “UP ▲” or “DOWN ▼” to change the values of timer parameter and timer date/time.
- Timer parameters:  
00: Invalid timer setting; 01: Valid single-timer; 02: Valid circulated timer.
- When setting the timers, press “TIME” button once to finish the timer setting, and meanwhile the beeper raises Bi sound twice.

## 9 Light Wave function selection



# OPERATION OF AIR CONDITIONER

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- Press LIGHT WAVE button once to start light wave function and press it again to stop the function.
- Once activating light wave function, the lamp  will illuminate on the LCD screen of the wire control.

## 10 Fault and temperature inquiry

Every press of ENQUIRY button changes the display pages between “normal display page” , “sensor temperature inquiry page” , “current fault inquiry page” (if the unit is at fault) and “history fault inquiry page” (if there are faults recorded).

- At sensor temperature inquiry page, press “UP ▲” or “DOWN ▼” button to inquiry the temperatures:  
A0: Room temp.; A1: Indoor coil temp.; A2: Outdoor ambient temp.; A3: Outdoor coil temp.;
- At current fault inquiry page, the lamp  is flashing, and the fault code is shown on the wire control.
- At history fault inquiry page, the lamp  is on, and the fault time, fault code and fault No. are displayed on the wire control.

## 11 Reset Function

- When the unit is at fault and the lamp  is on, press RESET button to unlock the fault lock with a Bi sound indication.
- At history fault inquiry page, press RESET button for 10 seconds to remove the fault record with a Bi sound indication.

## 12 Unit Parameter Inquiry

- When the unit is off, press SET button for 5 seconds until the beeper raises a Bi sound, and then press SET button again to move into unit parameter inquiry mode (ignore keying in the password).  
At unit parameter inquiry mode, press “TIME ▲” and “TIME ▼” to change the parameters to be checked.

# OPERATION OF AIR CONDITIONER

## 13 Unit Parameter modification

- When the unit is off, press SET button for 5 seconds until the beeper raises a Bi sound, and then enter the right password and press SET button again to move into unit parameter modify mode (The word PASS will show up).

Note: Contact the local dealer for the password.

At unit parameter modification mode, press “TIME ▲” and “TIME ▼” to select the parameters to be changed; press “UP ▲” and “DOWN ▼” to change the parameters; Press RESET button to restore all the parameters to factory setting.

### NOTICE

The parameter modification must be permitted by the manufacturer, otherwise the manufacturer will not be responsible for any problems caused by the modification.

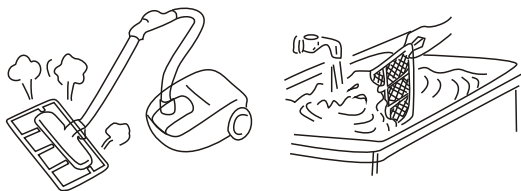
NO.	Parameters	Normal range	Default value	Instructions
01	Room temp. compensation	-5°C~5°C	0°C	
02	Outdoor coil temp. compensation	-5°C~5°C	0°C	“--” means outdoor coil sensor detection is shielded.
03	Coil anti-freezing protection in cooling	-5°C~15°C	-2°C	
04	Coil over-heating protection in heating	50°C~80°C	65°C	
05	Compressor minimum standby time	0~10 mins	3mins	
06	Compressor minimum running time	0~10 mins	3mins	
07	Shielding time of low pressure protection	0~10 mins	3mins	
08	Defrosting time	8~20 mins	8mins	
09	Outdoor coil temp. to end defrosting	8~20 °C	12°C	
10	Automatic restarting	0/1	0	0: enable; 1: disable
11	Fahrenheit or Celsius temperature	0/1	0	0:Celsius; 1:Fahrenheit
12	12 hours or 24 hours mode	0/1	0	0:24 hours; 1:12 hours
13	Mode changing setting	0/1	0	0:On standby or running state, mode changing is available; 1:On running state, mode changing is unavailable;
14	Fan high speed shielding setting	0/1	0	0:Three fan speeds; 1: Shielded high speed
15	Light wave generator/Crankcase heater	0/1	0	0:Light wave generator; 1:Crankcase heater

# GUIDE TO PROPER USAGE

Taking care of your unit will allow you to enjoy a more comfortable cooling&heating effect and save more energy.

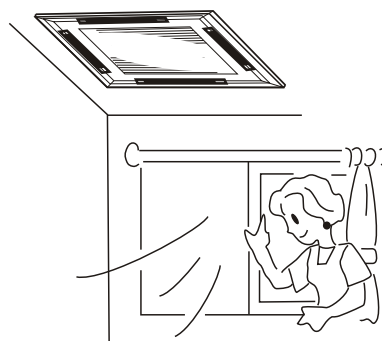
## Clean the air purifying filter periodically

If the air purifying filter becomes clogged with dust/dirt, air flow is restricted and thus reduces cooling&heating efficiency. Please clean the air purifying filter at least once every two weeks.



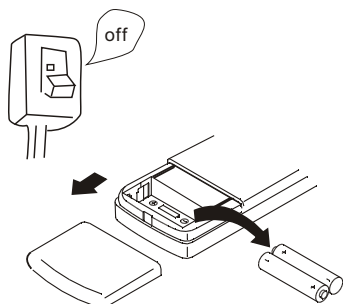
## When cooling, keep away from heat supply objects

During cooling, draw the curtains especially for the windows facing the sun to reduce the incoming heat ; Besides, reduce the frequency of door opening as much as possible.



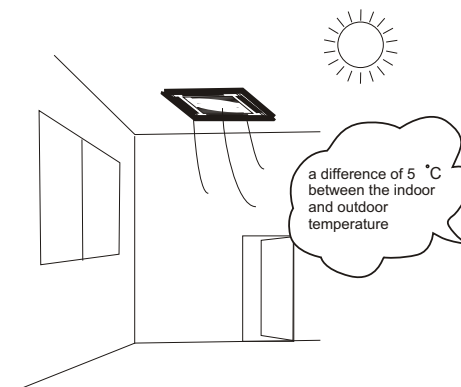
## Switch off the power supply and remove batteries from your remote control, if the air conditioned is not being used for a period of time.

Once the power supply is switched on, the air conditioner will consume electric power even if it does not run. So switching off the power supply can save energy. If the air conditioner is not being used for a period of time, remove batteries from the remote controller as these may leak, causing damage.



## Set the room temperature to your suitable point

During cooling, a difference of 5°C between the indoor and outdoor temperature will suit you better. During cooling, increase of 1°C will save energy by 10%. Too low room temperature will do harm to your health and also wastes energy.





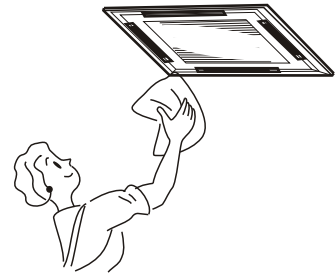
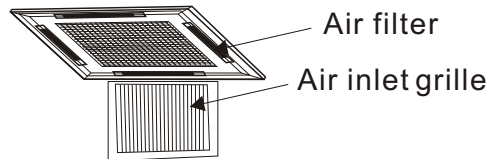
# SERVICE AND MAINTENANCE

All the cleaning and maintenance work shall be done by qualified person. Before cleaning or servicing, be sure to stop the operation and turn off the power supply.

## Cleaning of the air filter and the indoor unit

Cleaning of the air filter

1. Remove the air inlet grille and air filter.
2. Remove all dust on the front grille and air filters with a vacuum cleaner or brush. ( If the dust does not come off easily, wash them with neutral detergent dissolved in warm water below 45°C.)
3. Dry the air filter in the shade, do not parch!
4. Place the air inlet grille and air filter as they were.



Cleaning of the indoor unit

Wipe the indoor unit with a piece of dry, clean cloth.

## If you are not using the air conditioner for a long period of time.

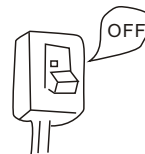
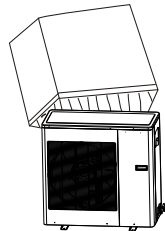
Set the fan of the indoor unit going for 3 to 4 hours to dry out the inside thoroughly.

Switch off the air conditioner and unplug it from the wall socket.

Clean the air filters and the indoor unit thoroughly.

Remove the batteries out of the remote controller and put away the remote controller.

Cover the indoor and outdoor unit with shield to keep off the dust.



## If you have not used the air conditioner for a long period

Check whether both the air inlet and outlet are blocked.

Check whether the air filters are appropriately mounted.

Check whether the drain pipe is blocked, or if there is twist or terminal lift-up.

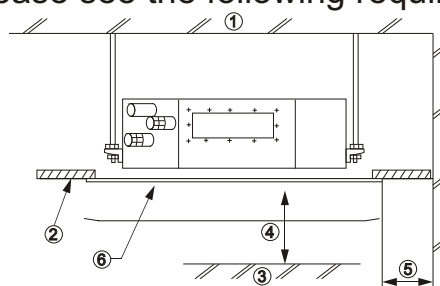
# CHOICE OF INSTALL LOCATION

## INSTALL LOCATION INSTRUCTION

### Location of the indoor unit

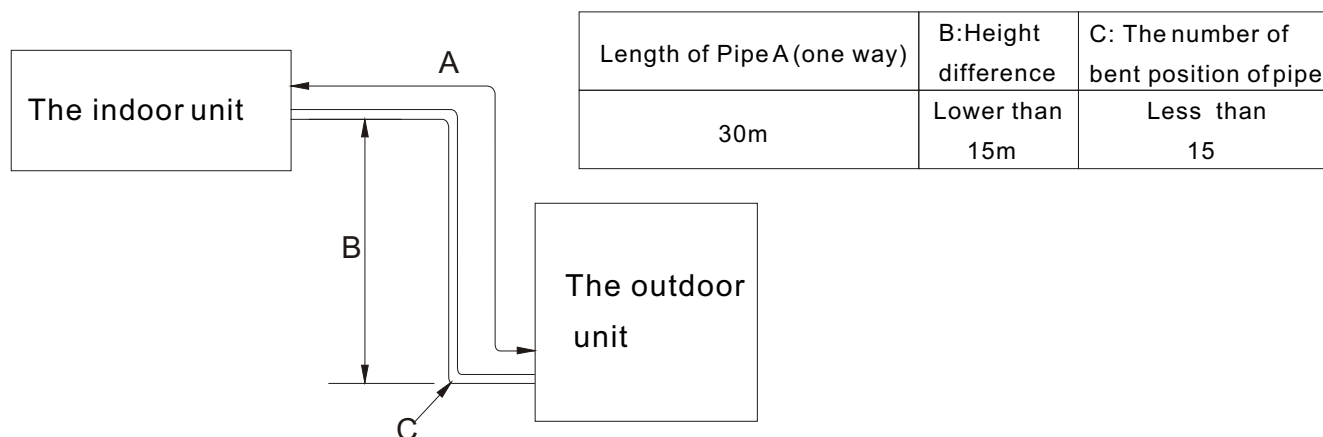
- The appliance must be installed 2.3m above floor.
- Mount on the roof or truss solid enough to bear the weight of the indoor unit.
- A place easy for air circulation around all corners.
- Keep the air inlet and outlet at a far distance from the blockage.
- The appliance must not be installed in the laundry.
- Avoid places where there are steam, lampblack and inflammable gas.
- Keep away from some equipment of high frequency. (Such as soldering machine)
- Avoid places near the fire alarm, for hot air may trigger the fire alarm during heating.
- Avoid places where there are spraying acidity liquor or sulphur.
- Certain maintenance space must be left, please see the following requirement:

1. Ceiling
2. Ceiling inlaid board.
3. Obstacle.
4. Maintenance space of 1m above.
5. Maintenance space of 50cm above.
6. Panel



### Location of the outdoor unit

- Avoid direct sunshine.
- Avoid strong wind.
- Avoid places close to inflammable gas.
- A place easy for conjunction with the power supply as well as with the indoor pipe.
- A place where the operation noise will not annoy your neighbours.
- Avoid installing on the shelf which may strengthen the noise and shake.
- Watch for the condensation water discharging out of the chassis.
- Arrange the height difference of both indoor and outdoor units, the length of refrigerant pipe, number of bent position of pipe as the following requirement:

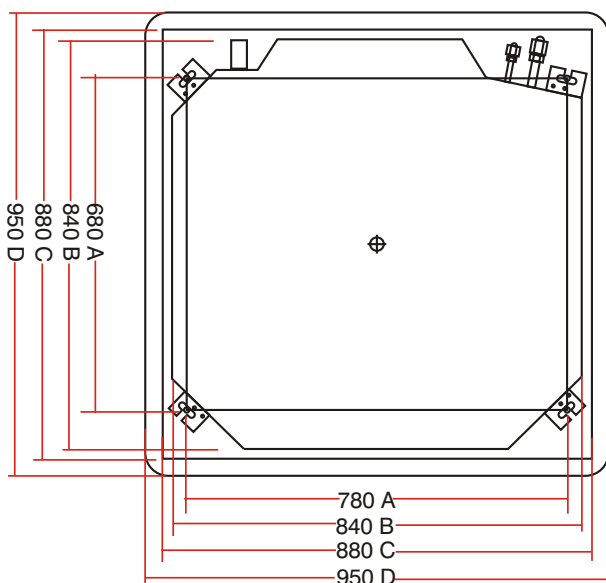


# INSTALLATION OF THE INDOOR UNIT

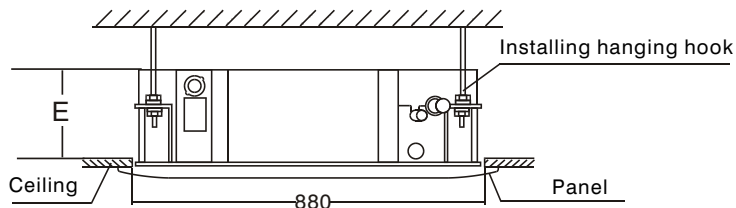
## THE SIZE OF CEILING OPENING AND HANGING RING

Please notice the following size of ceiling opening, and its value may vary as the practical installation.

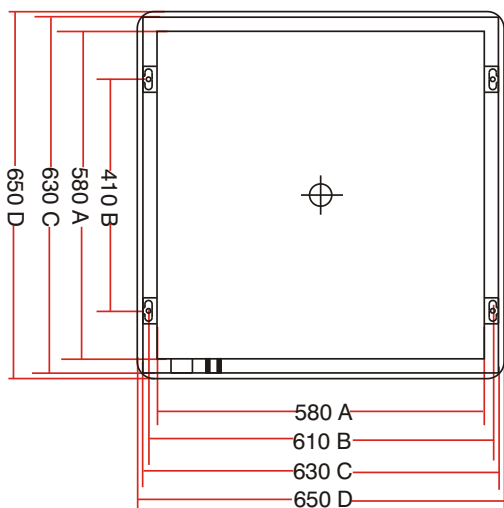
For models of 24K, 36K, 42K, 48K:



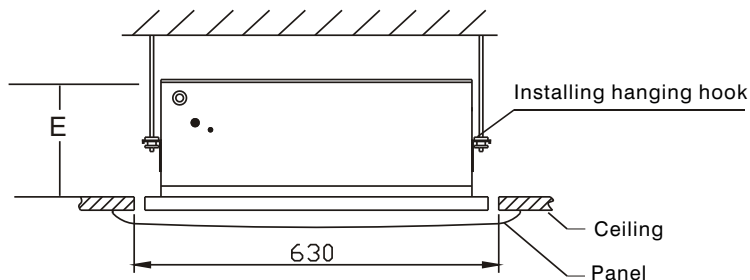
- A. Distance of eyebolt
- B. Size of outer edge of the unit
- C. Ceiling opening size
- D. Size of outer edge of the panel
- E. For 24K:230mm  
For 36K, 48K:300mm



For model of 18K:



- A. Size of outer edge of the unit
- B. Distance of eyebolt
- C. Ceiling opening size
- D. Size of outer edge of the panel
- E. For 18K:255mm



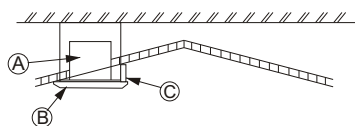
# INSTALLATION OF THE INDOOR UNIT

## DESIGN OF STRUCTURE FOR HANGING

### Notice:

For the sake of safety assurance, the place for hanging must bear enough strength and pressure.

The ceiling should keep horizontal. If installed on the declining ceiling, gasket must be inserted between the ceiling and panel.



A. Indoor unit

B. Panel

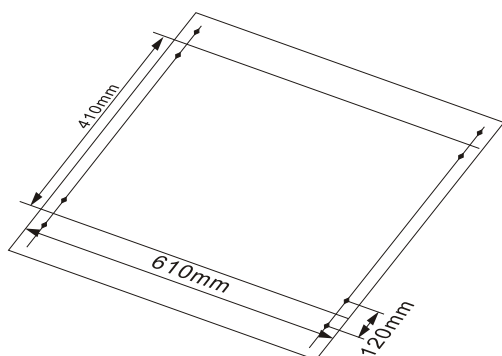
C. Gasket

Install on the roof of reinforced concrete structure.

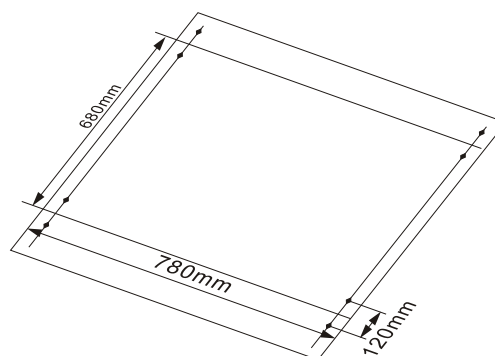
Please fix the inflate bolt F on the mounting plate as the picture 1 shown

Attention: check the inflate bolt to ensure that it is not loose.

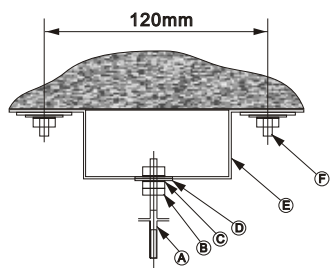
Fix the mounting bracket onto the inflate bolt F and then the eyebolt shall be fit as picture 2 shown.



Picture 1-a (bottom view)  
(For 18 K)



Picture 1-a (bottom view)  
(For 24K, 36K, 42k, 48K)



A. Eyebolt

B. Nut

C. Spring washer

D. Flat washer

E. Mounting bracket

F. Inflate bolt

Picture 2

# INSTALLATION OF THE INDOOR UNIT

Install on the roof of wooden structure

Please choose rafter as hanging material.

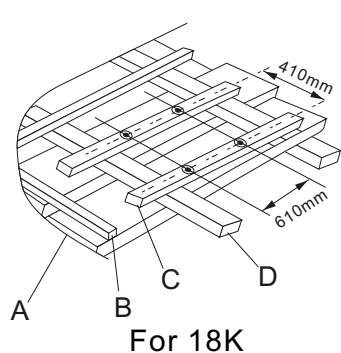
Wooden rafter for hanging the air conditioner must have high reliability.

Notice:

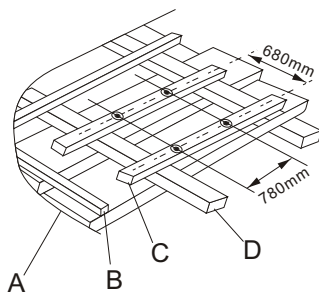
Distance between the rafter should be over 500mm.

Rafter width should not be smaller than 60mm.

Eyebolt  $\Phi$  10mm.



For 18K



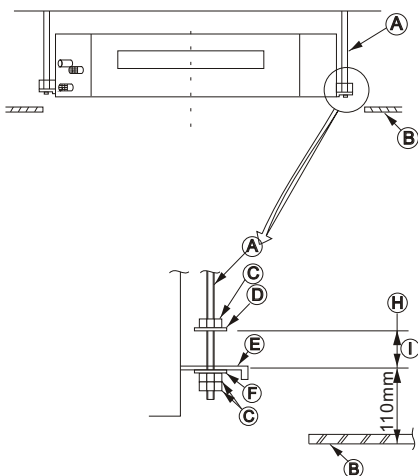
For 24K, 36K, 42K, 48K

- A. Ceiling inlaid board
- B. Girder
- C. Rafter
- D. Peak girder

## HANG OF THE INDOOR UNIT

The eyebolt should be set in this order: M10 nut(1 piece), insulation washer (1 piece, with insulation side downwards), washer (1 piece), nut (2 pieces). Hoist the indoor unit up to approach the bolt, then embed the mounting piece between the insulation washer and the washer.

Attention: if you find the indoor unit difficult to aim at the gearing pore of the ceiling, adjust the slippery slot on the mounting piece.



- A. Eyebolt M10
- B. Ceiling inlaid board
- C. Nut M10
- D. Insulation washer
- E. Mounting piece
- F. Washer
- H. Screw tight after mounting
- I. At least 30mm

# INSTALLATION OF THE OUTDOOR UNIT

## FIXATION OF THE INDOOR UNIT.

Adjust the indoor unit horizontally by level ruler or ethylene tube filled up with water (Please balance by screwing tight or loosening the following two nuts). Ensure there is no clearance between the ceiling inlaid board and the panel, no clearance between the indoor unit and the panel.

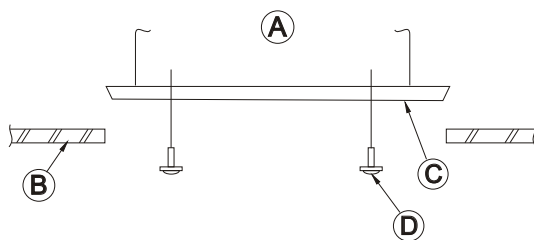
Aim the bottom of the indoor unit at the center of the opening of the ceiling, so as to ensure the same distance between the symmetry side of all direction with the edge of the ceiling. Once determining the position of the indoor unit, screw tight both the upper and bottom screw of the bolt and fix the indoor unit.

## FIXATION OF THE INDOOR UNIT PANEL.

For models of 24K, 36K, 42K and 48K, please fix the panel to the indoor unit with the hooks on it.

For model of 18K, please fix the panel with the screws in it.

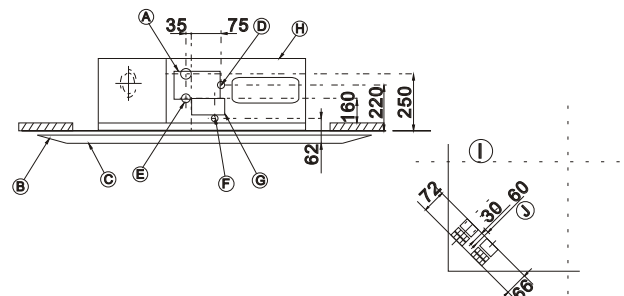
Notice: if there is no panel to fix on the indoor unit, please use the mounting plate as substitution for dustproof panel.



- A. The indoor unit
- B. The ceiling inlaid board
- C. Cardboard for measurement
- D. Four screws with washer

## POSITION OF REFRIGERANT PIPE AND DRAIN PIPE (UNIT: MM)

- A. Drain pipe
- B. The ceiling inlaid board
- C. Panel
- D. Liquid pipe of refrigerant
- E. Gas pipe of refrigerant
- F. Drain plug
- G. Water pump
- H. The indoor unit
- I. Top view
- J. Length of inserted drain pipe



# PIPELINE INSTALLATION (THE INDOOR UNIT)

## INSTALLATION OF REFRIGERANT PIPE

### Installation sequence

(1) Keep the original status of closing of gas valve and liquid valve of the outdoor unit.

Dismantle the nuts, anti-dust cap and piping screw plugs from the indoor and outdoor pipes respectively, and connect horns of the pipes at the mean time (avoid dust, moisture, and other things getting into the pipes.)

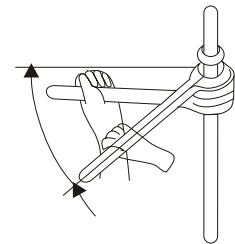
- Smear a thin layer of seal oil on the matching surface of the horns and the connectors before fixing the horn nuts.
- When tightening the nuts, firstly push the horn onto the cone surface of the connector, and keep the leading pipe and the connector in the same axis, then gradually turn the cone nuts clockwise tightly with hands, and then tighten it with a wrench.
- When tightening the nuts with wrench, apply torque according to the right list, if it is not tightened enough, leakage of refrigeration agent may happen, but if it is too tight, the horn surface may be damaged.

Screw torque standard

Copper pipe diameter(mm)	Screw torque (N.m)
∅9.52	35-40
∅15.88	73-78
∅19.05	98-130

Screw angle standard

Pipe diameter	Screw angle
∅9.52	60°-90°
∅15.88	30°-60°
∅19.05	20°-35°



(2) Complete the horns connection in sequence, to finish connection of all the refrigeration agent pipes.

- The bending angle of the pipes should not be less than 90 degree, bending radius should not be less than 100 mm, and bending times should not exceed 3 times.
- After finishing connection of all pipes, use a tester of soap to check if there is leakage in the pipes.
- The connection part of the pipes should be covered with isolation sleeves, to avoid water condensing at these positions, offsetting the isolation sleeves for gas and liquid pipes.

(3) Suction the air out from the maintenance opening of the pipe by a vacuum pump, to form vacuum inside the pipes.

(4) After finishing the above operation, open both the gas valve to let the indoor and outdoor pipes openly connected.

# PIPELINE INSTALLATION

## SUPPLEMENTATION OF REFRIGERANT

### Caution:

Do not try to exhaust the air inside the pipes by refrigeration agent in the outdoor unit. When compensating refrigeration agent, please use the filling port on the gas valve of the outdoor unit.

- If the connecting pipe is less than 5m, do not need to add refrigerant; If it is longer than 5m, please add refrigerant in accordance with the right table.

Type	Allowable length of the pipe (one way)	Supplemental amount of refrigerant
18K	20m	30g per meter
24K/36K/42K/48K	30m	50g per meter

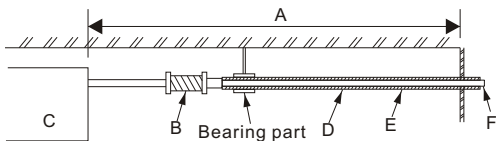
- Vaccummize with vacuum pump.

## INSTALLATION OF DRAIN PIPE

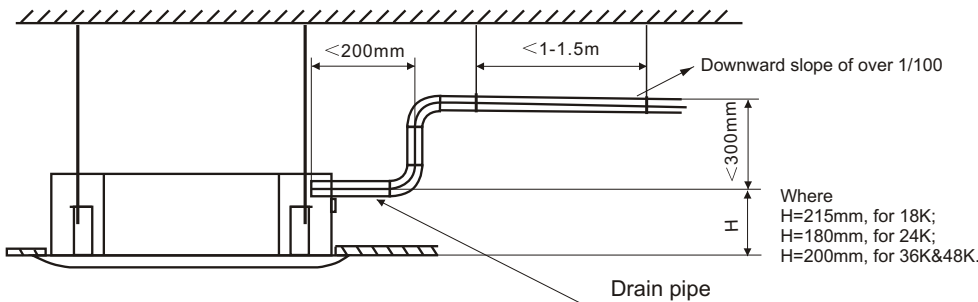
Insert one end of drain pipe into the waterspout ; connect the other end to PVC electric cable slot tube with outside diameter of 20mm. (Please purchase in local market)

The drain pipe should set downwards at 1/100 or more inclination angle.

Please purchase the heat preservation cover to bind up hard PVC pipe to prevent the condensed water flowing out.



- A. 20M at most
- B. Drain pipe
- C. The indoor unit
- D. Insulation material (9mm or above)
- E. Inclination angle of 1/100 or above
- F. Electric cable slot tube



### Notice:

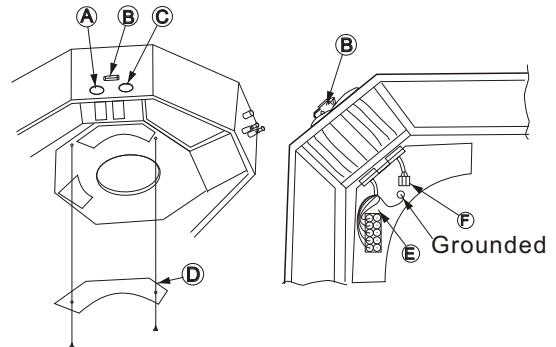
If the drain pipe (or just part of the pipeline) is arranged higher than the drain port of the indoor unit, the height difference must not exceed 300mm, otherwise the water will overflow when the air conditioner stops.



# ELECTRIC INSTALLATION

## WIRING OF THE INDOOR UNIT

1. Pull apart the mounting cover panel D at the connecting part of wire.
2. Put the power supply connecting cable, signal connecting cable through Place A, B and the rubber underlay and link the power supply connecting cable and signal connecting cable correctly.
3. Fix the connecting cable with clip board B.
  - A. Entrance of signal connecting cable
  - B. Clip board
  - C. Entrance of power supply connecting cable
  - D. Mounting cover panel
  - E. Terminal
  - F. Linker



**Attention:** the earth wire must be firmly and the terminal bolt must be screwed tight.

### Explanation of the DIP jumps on the indoor mainboard

#### NOTICE

The way to judge 24V or 220V outdoor unit control mode:  
 If the right warning label is shown on the terminal board, then it is 24V outdoor unit control mode; If not, it is 220V outdoor unit control mode.

**CAUTION!**  
 TERMINAL 1, 2, 3, 4 ARE LOW VOLTAGE SIGNAL (24Vac), SO DON'T APPLY HIGH VOLTAGE, OR BREAKDOWN WILL OCCUR!

### For 2 digits switches

	No.	Setting items	DIP1	DIP2	Consequence	Remarks
	1	Use function setting	ON	---	Cooling only type	
OFF			---	Heat pump type		
2	Communication mode	---	ON	Wave communication	<b>For 24V outdoor unit control mode, only OFF position can be selected.</b>	
		---	OFF	Level communication		

### For 4 digits switches


	No.	Setting items	DIP1	DIP2	DIP3	DIP4	Consequence
	1	Model Setting	ON	OFF	ON	---	18K
OFF			ON	ON	---	24K/36K/42K/48K	
2	light-wave generator or crankcase heater	---	---	---	ON	Equipped	
		---	---	---	OFF	Unequipped	

## WIRING OF THE OUTDOOR UNIT

# ELECTRIC INSTALLATION

1. Dismantle the maintenance plate on the right side of the unit.
2. Loosen the screws of the wire clamber, then take down the clamber.
3. Connect power cables and signal cables to the connector as wiring diagram on the unit.
4. Re-install the dismantled parts to their original state.

## Explanation of the DIP jumps on the outdoor mainboard

	No.	Setting items	DIP1	DIP2	Consequence	Remarks
	1	Use function setting	ON	---	---	Cooling only type
OFF			---	---	Heat pump type	
2	Communication mode	---	ON	---	Wave communication	<b>For 24V outdoor unit control mode, only ON position can be selected.</b>
		---	OFF	---	Level communication	

Note: Renew the power supply to the unit when the jump setting is finished.

## Connecting and layout of the power supply cable

Related parameters are as following:

Unit: mm<sup>2</sup>

Nominal Cooling Capacity (Btu/h)	Indoor Unit Power Cable	Outdoor Unit Power Cable	Indoor and Outdoor Connecting Cable (220V outdoor unit control)			Indoor and Outdoor Connecting Cable (24V outdoor unit control)	
			Cooling Only	Heat Pump	Heat Pump (sensor connecting cable)	Cooling Only	Heat Pump
18000(single phase)	3G2.5	—	3×2.5	5×2.5	2×0.5	2×0.75	4×1.0
24000(single phase)	3G1.0	3G2.5	2×0.75	4×1.0	—	2×0.75	4×1.0
24000(three phases)	3G1.0	5G2.5	2×0.75	4×1.0	—	2×0.75	4×1.0
36000(single phase)	3G1.0	3G4.0	2×0.75	4×1.0	—	2×0.75	4×1.0
36000(three phases)	3G1.0	5G2.5	2×0.75	4×1.0	—	2×0.75	4×1.0
42000(single phase)	3G1.0	3G4.0	2×0.75	4×1.0	—	2×0.75	4×1.0
42000(three phases)	3G1.0	5G2.5	2×0.75	4×1.0	—	2×0.75	4×1.0
48000(single phase)	3G1.0	3G6.0	2×0.75	4×1.0	—	2×0.75	4×1.0
48000(three phases)	3G1.0	5G2.5	2×0.75	4×1.0	—	2×0.75	4×1.0

Note: – The numbers in the above table are based on independent power supply of indoor and outdoor unit.

– The provided cable sizes in the above table can apply to 24 or 220VAC outdoor unit control mode.

- The wiring should be handled by certified electrician, and should be in conformance with regulations of the local power supply department and electrical appliances standards.
- Both the indoor unit and outdoor unit should be properly connected to earth.
- Environment conditions should be taken into account (ambient temperature, direct sunshine).
- The wire dimensions are minimum values for metal-core wires. Consider the voltage loss, and use power supply core of a higher grade.
- If power supply lines are damaged, contact our appointed maintenance department for replacement by special cord.

# OPERATION TEST

## CONFIRMATION BEFORE OPERATION TEST

After finishing the installation of both indoor and outdoor unit, connection of the pipe and wiring, ensure there is no refrigerant leakage, no loose power supply cord or signal cord and no wrong connection of positive and negative pole.

Attention: if there is mistake in power supply cord connecting, the compressor will not run.

## OPERATION TEST

- Switch on the power supply
- Emergency switch operation: every press of emergency switch, the air conditioner runs as the following order:  
forced AUTO mode → forced COOL mode → shut off
- Remote controller operation: if the indoor unit raise sound like Di, Di when pressing I/O button, that indicates the air conditioner is under the operation of remote controller. After that, press every button to test their functions.
- Press function select button and select fan mode to check if there is air blowing out.
- Press function select button and select cool mode to check if there is cool air blowing out.
- Press function select button and select heat mode to check if there is warm air blowing out.
- Press fan speed button and select high speed mode to check if there is strong wind blowing out.
- Press swing button to check if the deflector runs normally.

## EXPERIMENTAL DRAIN DEVICE

After installation, drain device must be checked out carefully.

During operation test, be sure to drain out correctly and no water leakage at the joint.

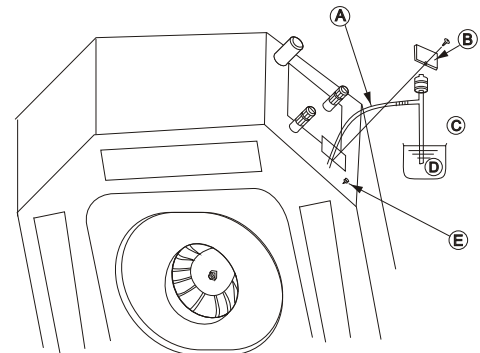
Pull apart the cover B of pipe ingoing hole and inject 1000ml water into the drip tray by water supply pump. While injecting, do not sprinkle the water on the water supply pump.

Be sure to verify that the water should be drained through the drain opening.

After checking, remove the cover B of pipe ingoing hole to its original place and do not drop it. Besides, switch off the main power supply.

Insert the rubber drain plug after water is drained out.

- A. Insert the pump end into 3-5cm.
- B. Cover B of pipe ingoing hole
- C. Approximately 1000ml
- D. Water
- E. Rubber drain plug



# FAULT INDICATING INSTRUCTIONS

## FAULT INDICATION ON INDOOR DISPLAY PANEL

No.	Fault	Display mode
1	Power source fault	RUN lamp flashes 1 time, and ALARM lamp illuminates.
2	Communication of wire controller fault	RUN lamp flashes 2 times, and ALARM lamp illuminates.
3	Communication of outdoor unit fault	
4	Room temp. sensor fault	RUN lamp flashes 3 times, and ALARM lamp illuminates.
5	Indoor coil temp. sensor fault	RUN lamp flashes 4 times, and ALARM lamp illuminates.
6	Outdoor coil temp. sensor fault	RUN lamp flashes 6 times, and ALARM lamp illuminates.
7	Outdoor unit protection alarm	RUN lamp flashes 7 times, and ALARM lamp illuminates.
8	Compressor high pressure/overload protection alarm	RUN lamp flashes 8 times, and ALARM lamp illuminates.
9	Compressor low pressure protection alarm	RUN lamp flashes 9 times, and ALARM lamp illuminates.
10	Condensate water level switch alarm	RUN lamp flashes 10 times, and ALARM lamp illuminates.
11	Indoor coil anti-freeze protection in cooling	RUN lamp flashes 12 times, and ALARM lamp illuminates.
12	Indoor coil overheated protection in heating	
13	Outdoor coil overheated protection in cooling	RUN lamp flashes 13 times, and ALARM lamp illuminates.
14	Unit running failure	RUN lamp flashes 15 times, and ALARM lamp illuminates.
15	Cold air prevention protection in heating	TIMER lamp flashes 1 time, and DEFROSTING/PREHEATING lamp illuminates.
16	Defrosting in heating	TIMER lamp flashes 2 times, and DEFROSTING/PREHEATING lamp illuminates.
17	Indication to clean filter	TIMER lamp flashes 3 times, and DEFROSTING/PREHEATING lamp illuminates.
18	Working indication of crankcase heater	TIMER lamp flashes 4 times, and DEFROSTING/PREHEATING lamp illuminates.

Note: 1. The outdoor coil temp. sensor fault only happens in heating mode.  
 2. As for fault of No. 7,8 or 9, if it happens 3 times continuously, then for the forth time you need to figure out the reason, and then renew the power and restart the unit.

## FAULT INDICATION ON OUTDOOR CONTROL BOARD

No.	Fault	Display mode
1	Power source fault	Fault indicating lamp flashes 1 time.
2	Outdoor coil temp. sensor fault	Fault indicating lamp flashes 4 times.
3	Compressor overload protection alarm	Fault indicating lamp flashes 5 times.
4	Compressor high pressure protection alarm	Fault indicating lamp flashes 6 times.
5	Compressor low pressure protection alarm	Fault indicating lamp flashes 7 times.
6	Compressor outdoor protection alarm	Fault indicating lamp flashes 8 times.

Note:  
 The flash mode of the indicating lamps in the above two tables: The lamp flashes N times in a row, then suspends for 3 seconds, and then goes to another circle until the fault is reset.

# **FAULT INDICATING INSTRUCTIONS**

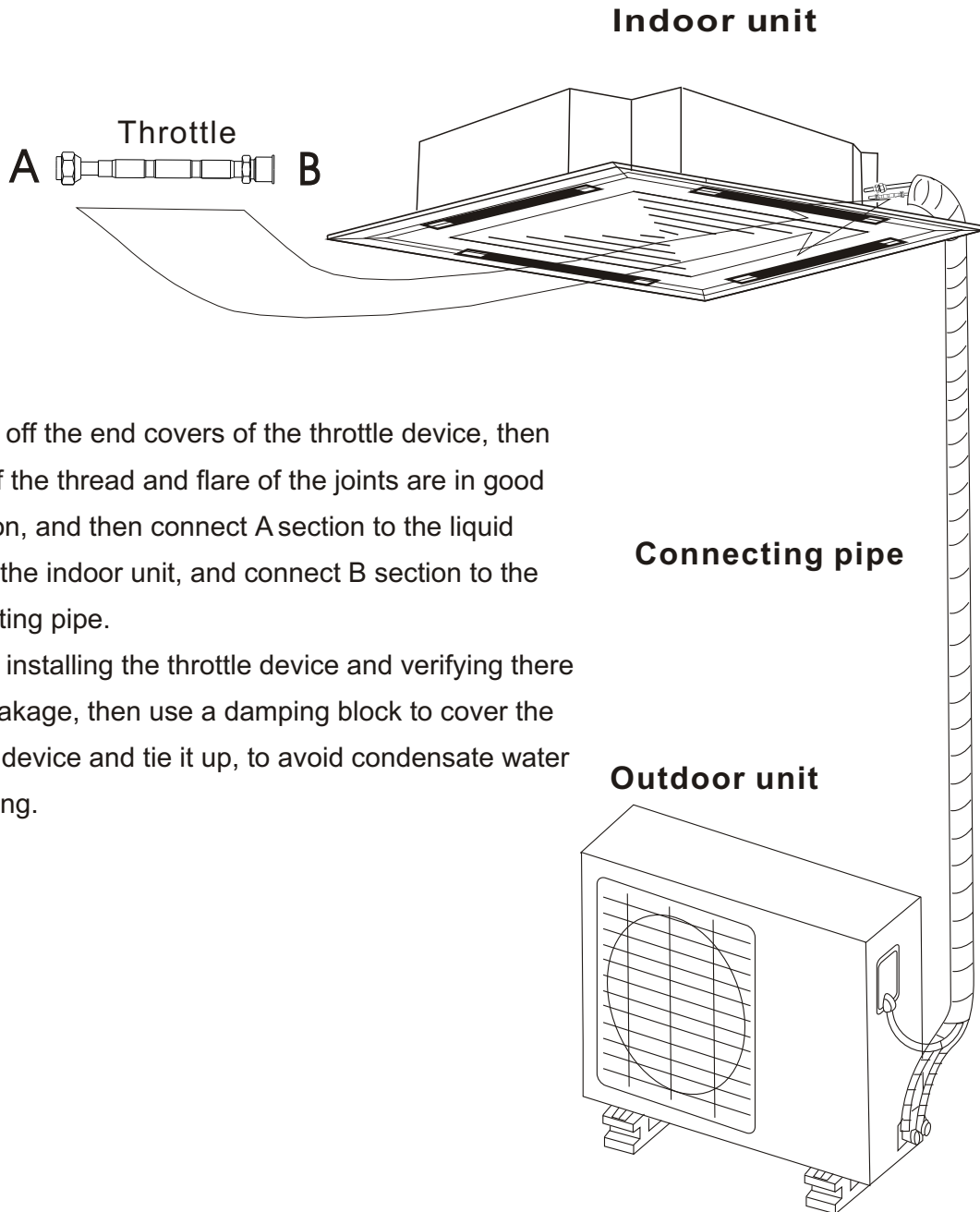
## **FAULT INDICATION ON WIRE CONTROLLER**

No.	Fault codes	Faults	Causes	Treatment
1	A0	Power supply malfunction	Fault phase or short of phase.	Find the reason then correct the wiring.
2	C0	Communication of wire control malfunction	Wire control is not well connected.	Connect the wire control firmly.
3	C1	Communication between indoor and outdoor unit malfunction	Indoor unit and outdoor unit are out of communication	Contact local service center.
4	E1	Indoor ambient temp. sensor malfunction	Sensor is abnormal.	Cut off power supply, check whether the sensor is well connected, if so, replace the abnormal sensor.
5	E2	Indoor unit coil temp. sensor malfunction	Sensor is abnormal.	Cut off power supply, check whether the sensor is well connected, if so, replace the abnormal sensor.
6	E4	Outdoor unit coil temp. sensor malfunction	Sensor is abnormal.	Cut off power supply, check whether the sensor is well connected, if so, replace the abnormal sensor.
7	H1	Outdoor unit protection alarm	Outdoor unit is at fault	Check the cause as the flashing mode of the lamp on outdoor unit main board
8	H2	Compressor high pressure /overload protection alarm	Outdoor temperature is too high; air inlet or outlet is blocked; air filter is very dirty.	Find out the cause and fix it.
9	H3	Compressor low pressure protection alarm	Outdoor temperature is too low; refrigerant has leaked too much; suction pressure drops rapidly when collecting refrigerant to outdoor unit.	Find out the cause and fix it.
10	H4	Condensed water level switch raises an alarm	1. In cooling or dehumidifying mode, too much condensed water occurs or the water is out of smooth drainage.	Normally, the system will solve the fault in 20 minutes automatically. Note: In the process, only "heating" and "fan" mode is available when pressing "mode" button.  1. The system is locked, you need to cut off power supply and check the drainage pump. 2. when the malfunction is worked out, restore the power supply.
			2. The high water level alarm lasts for 20 minutes and still remain, in this case, system will raise sound alarm.	
11	P1	Indoor coil anti-freeze protection when cooling	System protection	Automatic recovery.
12	P2	Indoor coil over-heated protection when heating	System protection	Automatic recovery.
13	P3	Outdoor coil over-heated protection when cooling	System protection	Automatic recovery.
14	FF	Unit running failure	System protection	Restart the unit.
15	P6	Prevention of cold air protection when heating	System protection	Automatic recovery.
16	P7	Defrosting protection when heating	System protection	Automatic recovery.
17	P8	Working indication of crankcase heater	System protection	Automatic recovery.
18	CF	Indication to clean filter	Filter mesh is dirty.	Cut off the power, and then clean the filter.

Note:

– The wire controller can also receive remote signal from remote controller.

## Appendix 1 Throttle Device Installation



1. Take off the end covers of the throttle device, then check if the thread and flare of the joints are in good condition, and then connect A section to the liquid pipe of the indoor unit, and connect B section to the connecting pipe.
2. After installing the throttle device and verifying there is no leakage, then use a damping block to cover the throttle device and tie it up, to avoid condensate water producing.