

USER'S MANUAL

# FREE COMBI SERIES

FC-H07AIF, FC-H09AIF, FC-H12AIF





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★ Thank you for choosing SINCLAIR air conditioner, please read this owner's manual carefully before operating the unit and keep it carefully for consultation.

◆ (Please read the following carefully before operating the unit.)

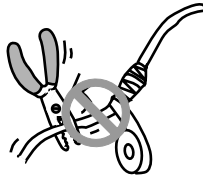
## WARNING



★ **Earth:** It must be reliably earthed. The earth wire must be connected to the special grounding devices. Can't be connected to the water pipe, gas pipe, sewage drain or the places where are not reliable earthed.

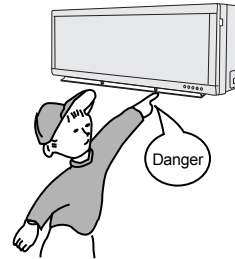
★ **Never damage the wires or use the inapplicable wires.**

Otherwise, it may cause electric shock or fire.



★ **Don't insert your hands or stick into the air intake or outlet vents.**

It can cause danger.

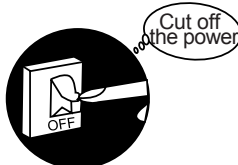


★ **Don't apply the cold wind to the body for a long time.** It cause the physical condition deferioration and health problems.



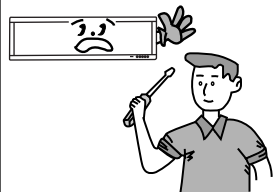
★ **When having a burning smell or smoke, please turn off the power supply and contact with the service center.**

If abnormity still exists, the air conditioner could be damaged, or may cause electric shock or fire.

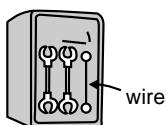


★ **Don't attempt to repair the air conditioner by yourself.**

The improper maintenance will cause electric shock or fire, should contact with the service center.



★ Don't use fuse excluding the fuse of correct capacity. Improper wire could cause the break down or fire.



★ Keep chemical spray away from the outdoor unit for more than 1 meter. It is likely to ignite and explode.

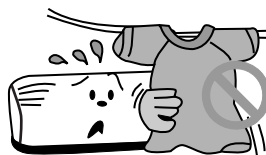


★ Don't place a space heater near the air conditioner.

Airflow from the air conditioner can cause incomplete combustion to the space heater and may cause intoxication of carbon monoxide.



★ Don't block the air intake or outlet vents of both the outdoor and indoor units. It can decrease the air conditioning capacity or cause a malfunction.



## ◆ Models and specifications

Model	FC-H07AIF	FC-H09AIF	FC-H12AIF
Cooling capacity(W)	2100	2900	3500
Heating capacity(W)	2600	2800	3800
Rated power supply	220-240V~ 50Hz		
Noise dB(A)	37	38	40
Climate Type	T1		
Waterproof level	IP24		
Isolation	I		
Weight(kg)	11		
Indoor unit boundary dimensions(WxHxD)(mm)	1000×290×150		

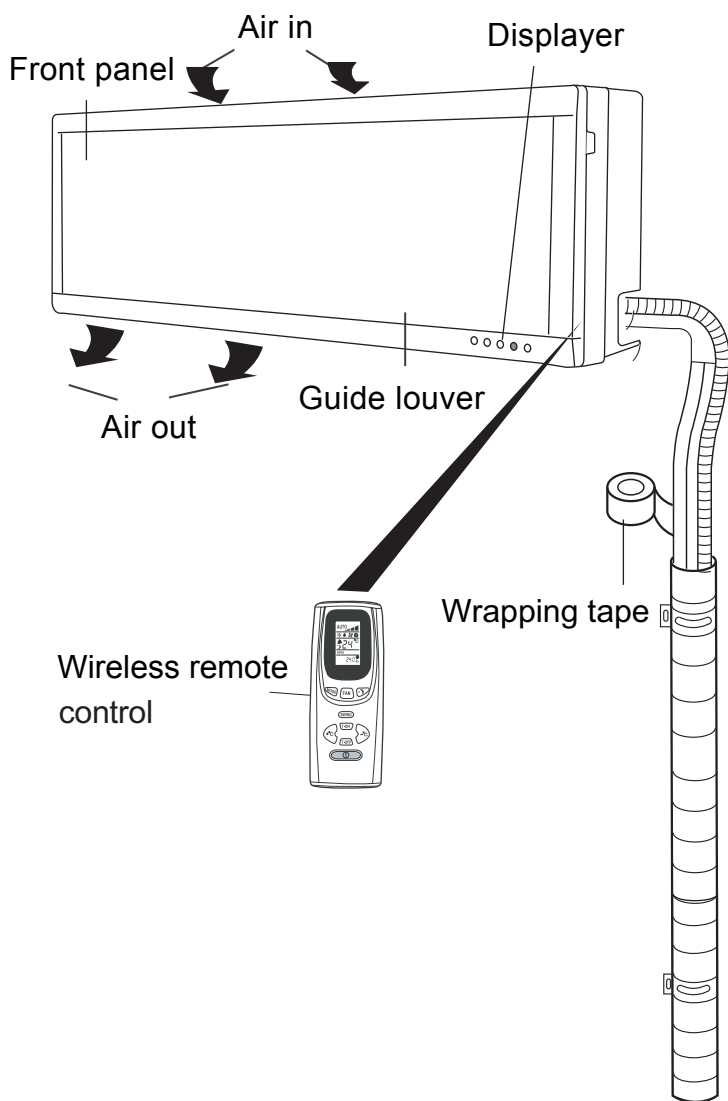
\* If there is any change, please see the nameplate for actual data.

### ※ Working temperature range

	Indoor side DB/WB(°C)
Maximum cooling	32/23
Minimum cooling	21/15
Maximum heating	27/-
Minimum heating	20/-

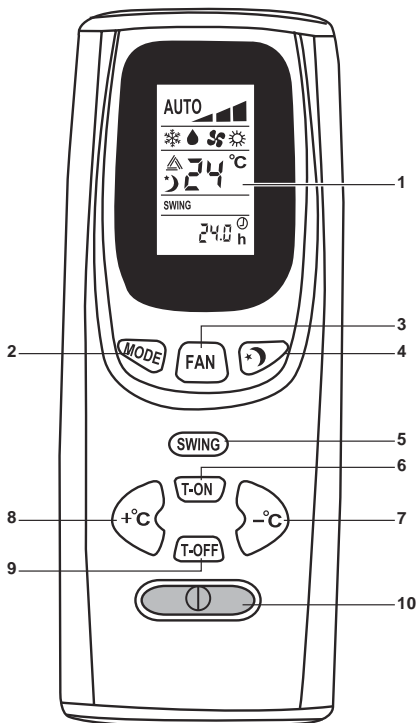
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## ◆ Names and functions of each part



# Wireless remote control operation procedure

The remote control sends signals to the appliance.



## Meaning of the symbols shown on the liquid crystal display:

Automatic fan speed  
Low fan speed  
Medium fan speed  
High fan speed  
Cooling indicator  
Dehumidification indicator  
Fan only operation indicator  
Heating indicator  
Automatic mode indicator  
SLEEP indicator  
Louver swing indicator

### 1. Liquid crystal display

### 2. MODE button

Used to select the operating mode.

### 3. FAN button

Used to set the fan speed, in sequence, to automatic, low, medium, high.

### 4. SLEEP button

Used to set or cancel SLEEP mode.

### 5. SWING button

Used to start or stop the movement of the vertical louvers.

### 6. TIMER ON button

When the appliance is off, this button is used to switch the air-conditioner on automatically.

### 7-8. ROOM TEMPERATURE SETTING buttons

Used to set the room temperature.

### 9. TIMER OFF button

When the appliance is on, this button is used to switch the air-conditioner off automatically.

### 10. Ⓢ button

Used to switch appliance on or off.



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## HOW TO FIT THE BATTERIES

- Remove the cover of the battery compartment in the direction of the arrow.
- Fit the new batteries, making sure the (+) and (-) signs on the battery match correctly.
- Put the cover back on by sliding it into position.

**Use 2 x R03 AAA (1.5 V) batteries.**  
**Do not use rechargeable batteries.**  
**Replace the used batteries with new batteries of the same type when the display is no longer visible.**  
**The batteries last around one year**  
**The batteries in the remote control must be disposed of appropriately according to the legislation in force in the country concerned.**

## TIPS ON STORING AND USING THE REMOTE CONTROL

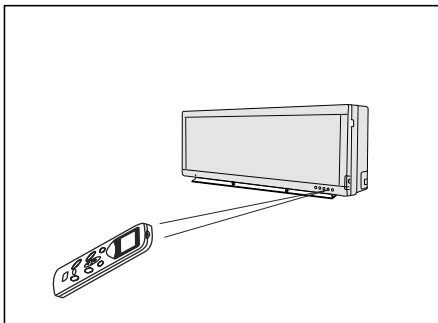
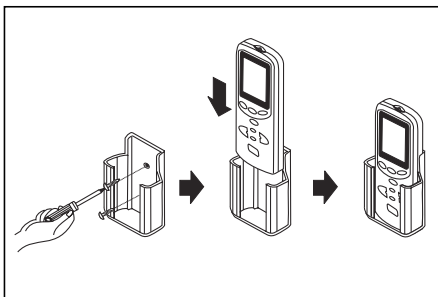
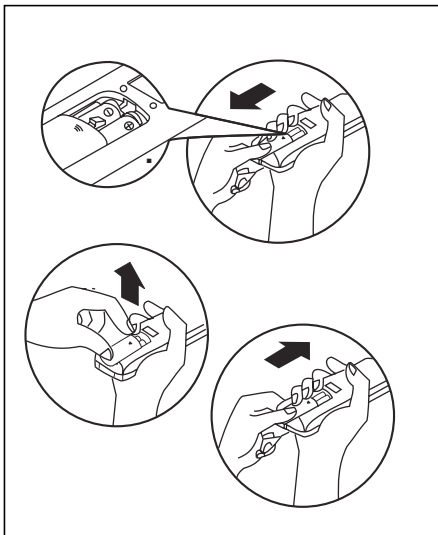
The remote control can be stored in a special support mounted on the wall.

**The remote control holder is an optional accessory.**

## HOW TO USE THE REMOTE CONTROL

To switch the air-conditioner on, aim the remote control towards the signal receiver. The remote control will work at a distance of up to 8 metres from the indoor unit.

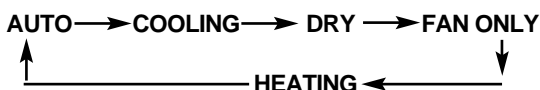
**Store the remote control at least 1m from television sets or other electrical appliances.**



## OPERATING MODES

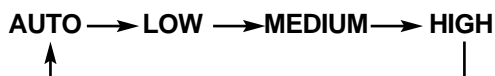
### 1. Selecting the operating mode

Each time that the **MODE** button is pressed the operating mode is changed, in the following sequence:



### 2. FAN mode

Each time that the **FAN** button is pressed, the speed is speed is changed, in the following sequence:



### 3. Setting the temperature



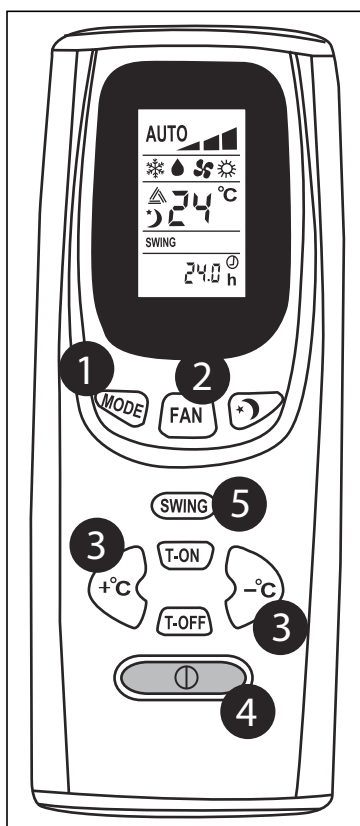
Press once to increase the set temperature by 1°C.



Press once to **decrease** the set temperature by 1°C.

Range of temperature settings available:

HEATING	16°C ~ 30°C
COOLING	16°C ~ 30°C
DEHUMIDIFICATION	16°C ~ 30°C
FAN ONLY	16°C ~ 30°C



#### 4. Starting the appliance

Press the button  .

When the unit is switched on it will start operating in the mode selected prior to being switched off.

#### 5. Adjusting the air flow

Pressing the "SWING" button starts moving the air flow louvers start automatically; pressing the "SWING" button again stops the louvers.

### AUTO OPERATING MODES

**Press the MODE button until**

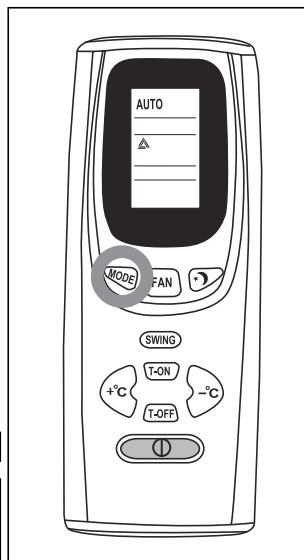
**displaying AUTO (  ); in**

this mode, the temperature is set automatically based on the actual room temperature.

**The operating mode and the temperature setting depend on the room temperature.**

In AUTO mode, the pre-set temperature is 25°C in cooling mode, and it is 20°C in heating mode.

Room temperature	Mode
20°C ~ 25°C	PREVIOUE MODE OR FAN
higher than 25°C	COOLING
Lower than 20°C	HEATING



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## AUTOMATIC START

After having switched the appliance off, press the T-ON button to set the time you want the air-conditioner to switch back on; pressing the T-ON button again increases the time by 30 minutes, until a maximum of 24 hours from when the TIMER is set.

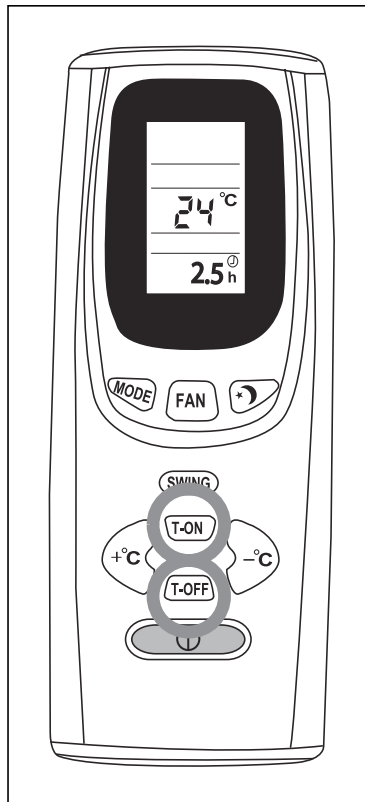
E.g.: If the setting is performed at 4 p.m. and the TIMER is set to 2.5h, the appliance will start at 6.30 p.m.

**When the unit is switched on it will start operating in the mode selected prior to being switched off.**

## AUTOMATIC STOP

When the appliance is on, press the T-OFF button to set the time you want the air-conditioner to switch off; pressing the T-ON button again increases the time by 30 minutes, until a maximum of 24 hours from when the TIMER is set.

E.g.: If the setting is performed at 8.30 p.m. and the TIMER is set to 3.5h, the appliance will switch off at midnight.

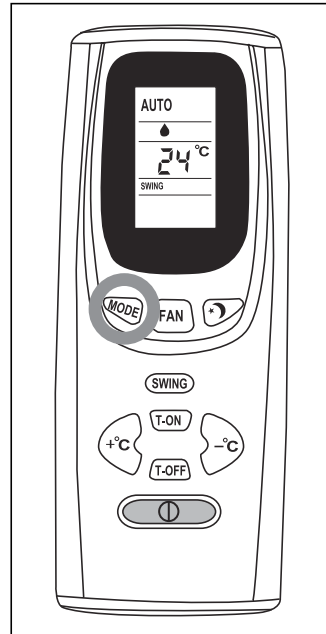


## DEHUMIDIFICATION MODE

Press the MODE button until displaying the DRY (💧) mode.

The appliance will start according to the room temperature and the set temperature:

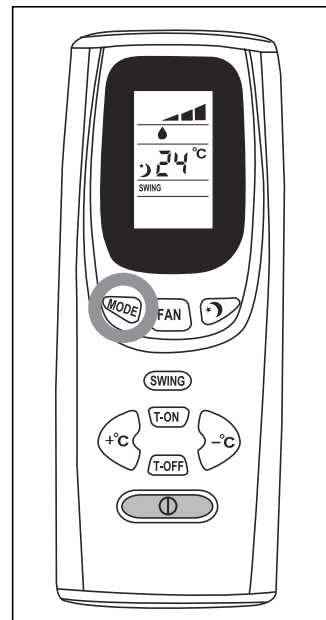
- If the room temperature is lower than the set temperature, the compressor, the outdoor unit will stop.
- If the room temperature is more than 0.5°C above the set temperature, the appliance automatically starts in dehumidification mode.



## SLEEP MODE

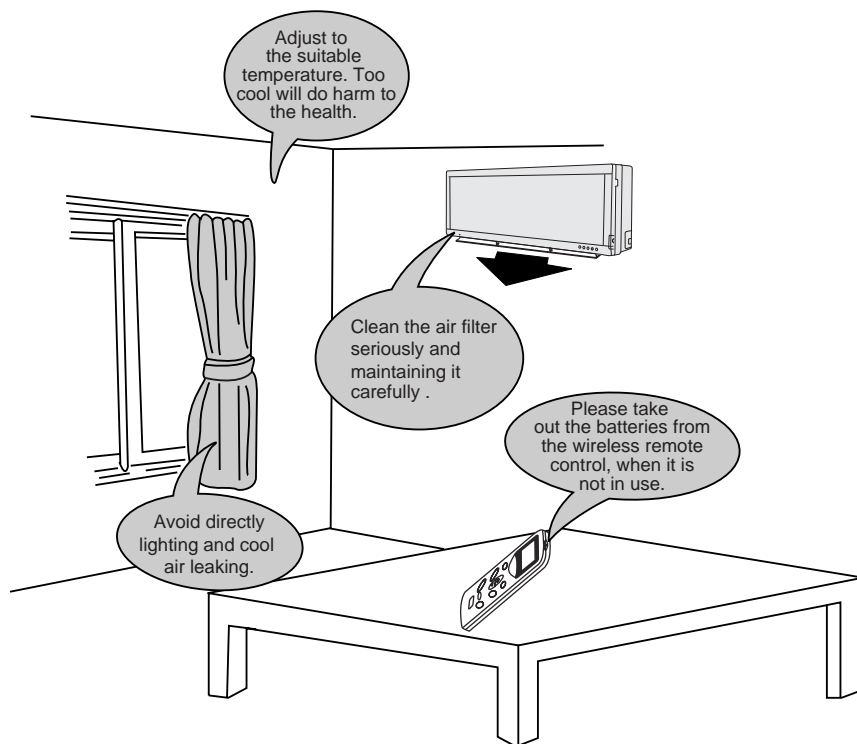
When the unit is cooling or drying, if SLEEP operation is set, SET TEMP. would increase 1 °C in 1 hour and 2 °C in 2 hours.

When the unit is heating , if SLEEP operation is set, SET TEMP. would decrease 1°C in 1 hour and 2 °C in 2 hours.



## ◆ The best operating methods

It aims at saving the energy and operating the unit conveniently and safely.



### Earth wire

Earth wire must be connected to the special device of the building. If haven't please ask the professional to install. There must be electricity leakage protection switch of enough power capacity and air switch with enough space. (25A), earth wire cannot be connected to gas pipe, water pipe, or wires of the lightning rod and telephone.

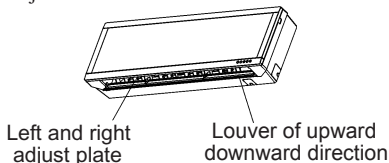
## ◆ User notices

- **Select the most appropriate temperature.**  
It can preclude the electricity wasted.

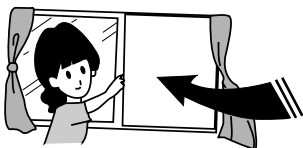


- **The airflow direction can be adjusted appropriately.**

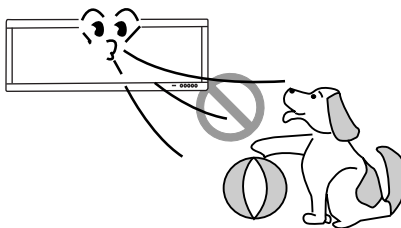
When the unit is running, adjust up and down adjusting plate by wireless remote control can adjust vertical direction of air, hold the adjust plate that control left and right direction can adjust horizontal flow direction of air.



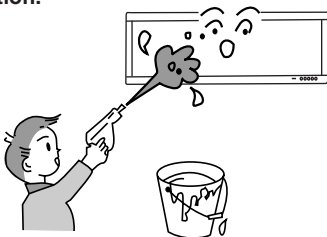
- **Don't leave windows and doors open for a long time while operating the air conditioner.**  
It can decrease the air conditioning capacity.



- **Don't blow the wind to animals and plants directly. It can cause a bad influence to them.**



- **Splashing water on the air conditioner can cause an electric shock and malfunction.**



- **The supply cords of this air conditioner is adopting Y-type connection. If the supply cord is damaged, it must be replaced by manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.**

- **Air conditioner could be operated with the voltage fluctuation  $230 \pm 10\%$ . Otherwise, compressor would vibrate terribly to damage refrigeration system.**

- **Don't use the air conditioner for other purposes, such as drying clothes, preserving foods, etc.**

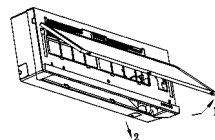
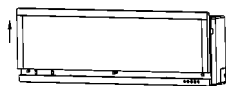
## ◆ Care and Maintenance

### Warning

- ▲ Stop the unit and pull out the plug before cleaning the unit, or electric shock will be happened.
- ▲ Don't get wet the unit, for it will cause the electric shock, make sure don't wash the unit by water.
- ▲ The volatile liquid, such as thinner or gas will damage the face of unit. (only using the soft cloth and wet cloth with neutral cleaning fluid to clean the body of unit)

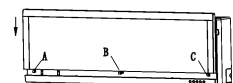
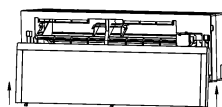
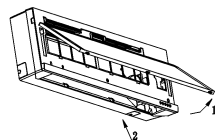
### Unpick and wash the filter

1. Uplift the panel upwards by hand according to the direction of arrowhead.
2. Put down the panel according to direction of arrowhead.
3. Uplift the panel a little bit according to the direction of arrow 1, then take out the filter according to arrow 2. Clean the filter by cleaner or water, when the filter is dirty (oil), it can be washed by warm water (below 45°C) dissolving with neutral cleaning fluid, then dry it on the shady and cool place.




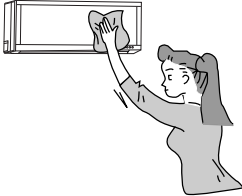
### Installation of filter

1. Uplift the panel a little bit from the direction of arrowhead 1, then insert the filter below the panel according to arrowhead 2.
2. Uplift the panel according to the direction of arrowhead to the location shown as Fig.
3. Insert the clamp A, B, C back to the three rotating shafts and cover the panel.



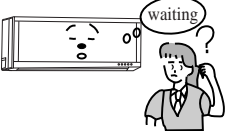


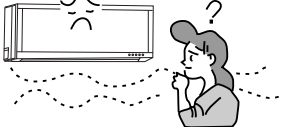
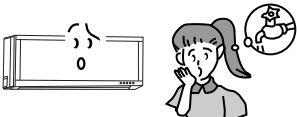


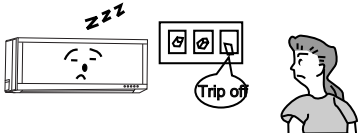
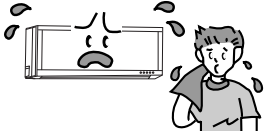
Check before use	
<ol style="list-style-type: none"> <li>1. Be sure that nothing obstructs the air outlet and intake vents.</li> <li>2. Check that whether ground wire is properly connected or not.</li> <li>3. Check that whether the batteries of air connectioner are changed or not</li> </ol>	


Maintenance after use	
<ol style="list-style-type: none"> <li>1. Clean filters and other parts.</li> <li>2. Turn main power off.</li> <li>3. Clear dust from the outdoor unit.</li> </ol>	

## ◆ Trouble shooting

**Warning: Don't attempt to repair the air conditioner by yourself, it can cause an electric shock or fire. Please check the following items before asking for repair, it can save your time and money.**

Phenomenon	Trouble Shooting
<p>The unit can not operte immediately when the air conditioner is restarted.</p> 	<p>Once the air conditioner is stopped, it will not operate in approximately 3 minutes to protect itself.</p>

Phenomenon	Trouble Shooting
<p>There's unusual smell blowing from the outlet after operation is started.</p> 	<p>This is caused by the odors in the room which have been breathed into the air conditioner.</p>
<p>Sound of water flow can be heard during operation.</p> 	<p>This is caused by the refrigerant flowing inside the unit.</p>
<p>Mist is emitted during cooling operation.</p> 	<p>Because the air of the room is cooled down rapidly by the cold wind and it looks like the fog.</p>
<p>Creaking noise can be heard when start or stop the unit.</p> 	<p>This is caused by the deformation of plastic due to the change of temperature.</p>
<p>Air conditioner does not operate at all.</p> 	<ul style="list-style-type: none"> <li>• Has the power been shut down?</li> <li>• Is the wiring loose?</li> <li>• Is the leakage protection switch in operation?</li> <li>• Is voltage higher or lower?</li> <li>• Is TIMER ON in operation?</li> </ul>
<p>Cooling (Heating) efficiency is not good.</p> 	<ul style="list-style-type: none"> <li>• Is SET TEMP. suitable?</li> <li>• Is air inlet or outlet obstructed?</li> <li>• Are air filters dirty?</li> <li>• Are the windows and door closed?</li> <li>• Is indoor fan speed set at low speed?</li> <li>• Is there any other heat source in your room?</li> </ul>

Phenomenon	Trouble Shooting
<p>Wireless remote control is not available.</p> 	<ul style="list-style-type: none"> <li>• Remote control can't be used occasionally when the air conditioner is disturbed or changing its functions frequently. At that time, pull out the power plug and insert it again to recover the operation.</li> <li>• Is the remote control out of effective distance to the indoor unit? Are there any obstruction between the remote control and the signal receptor?</li> <li>• Replace the worn batteries of remote control if the voltage of the batteries is not sufficient.</li> </ul>

**Immediately stop all operations and plug out, contact the dealer in following situations.**

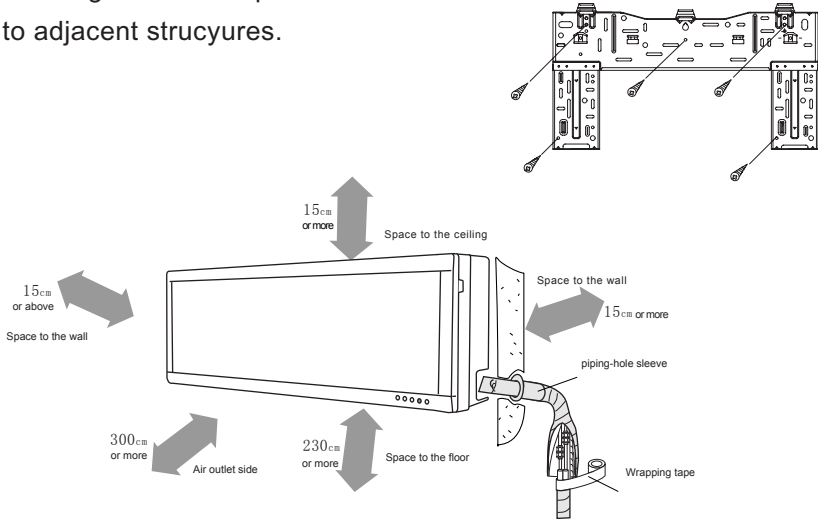


If you have any questions, please inform the service center.

- ▲ There are harsh sound during operation;
- ▲ The fuse and protection switch often trip off;
- ▲ Carelessly splash water or something into the unit or wireless remote control;
- ▲ Water is leaking in the room;
- ▲ There is an abnormal heat in power supply cord and power plug.

## ◆ Installation dimension diagram

- ★ The dimensions of the space necessary for correct installation of the appliance including the minimum permissible distances to adjacent structures.



(NOTE: The indoor unit installation of dual split type unit is taking one of the indoor units for example, the installation of another indoor unit is the same as that one.)

### Important Notes

- ★ The installation must be done by trained and qualified service personnel with reliability according to this manual.
- ★ Contact service center of SINCLAIR before installation to avoid the malfunction due to unprofessional installation.
- ★ When picking up and moving the units, you must be guided by trained and qualified person.

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## ◆ Installation location

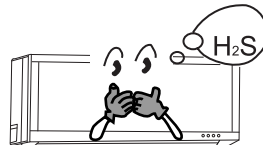
### Indoor unit

1. The appliance shall not be installed in the laundry.
2. The inlet and outlet should not be covered so that the outflow air can reach all parts of the room.
3. Install in a location from which the condensation water can be drained out conveniently and that is permitting easy connection with the outdoor unit.
4. Avoid a location where there is heat source, high humidity or inflammable gas.
5. Install in a location where is strong enough to withstand the full weight and vibration of the unit.
6. Ensure the indoor unit installation accord with the installation dimension.
7. Be sure to leave enough space to allow access for routine maintenance. The indoor unit should be installed at 2.3m or higher above the floor.
8. Select a place about 1m or more away from the TV set or any other electric appliances.
9. Select a place where the air filter can be easily taken out.
10. Do not use the unit in the immediate surroundings of a laundry, a bath, a shower or a swimming pool.

#### NOTE:

Install in the following place may cause malfunction. If it is unavoidable contact with service center please.

- Place where machine oil is used.
- The place where a lot of salinities such as coast exists.
- Place where a sulfured gas such as the hot spring zones is generated.
- Place where high-frequency waves are generated by radio equipment, welders and medical equipment.
- Other place with special circumstance.



## ◆ Install the indoor unit

### ☆ Install the rear panel

1. Always mount the rear panel horizontally. As the water drainage pipe at the left, this side should not be too high when adjusting the rear panel. It had better to adjust this side a little lower.
2. Fix the rear panel on the selected location.
3. Be sure that the rear panel has been fixed firmly enough to withstand the weight of an adult of 60kg; furthermore, the weight should be evenly shared each screw.

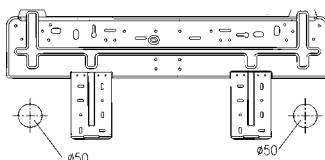


Fig. 1

### ☆ Install the drain hose

1. For well draining, the drain hose should be placed at a downward slant.
2. Do not wrench or bend the drain hose or flood its end by water.
3. When the long drainage hose passing through indoor should wrap the insulation materials.

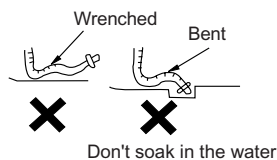


Fig. 2

### ☆ Install the connection pipes

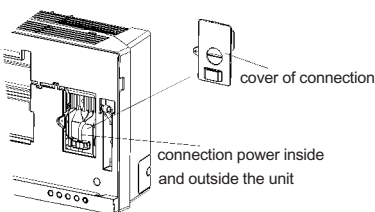
Connect the connection pipes with the relevant union pipes of the indoor unit and tighten the flare nut of the connection pipes.

### Note :

- ▲ Connect the connection pipes with the indoor unit firstly and the outdoor unit secondly.
- ▲ Be careful in bending the connection pipes or you will damage the pipe.
- ▲ If the tightening torque is too great in tightening the flare nuts, leakage will happen.
- ▲ The appliance shall be installed in accordance with national wiring regulations.

### ☆ Electric wiring

1. Open the panel upwardly.
2. Disassembly the fixing bolts of connection cover, shown in the Fig. at right side.
3. Power connecting wire cross through down to up from the bottom of case.



4. Connect blue wire in power connect wire onto "N(1)" terminal, black wire onto "2" terminal, brown wire onto "3" terminal, yellow-green wire (i.e. earth wire) onto "⊕" terminal (as shown in fig.3); and press the power connect wire by wire groove that in front of line bank that installed in electric box.
5. Install the cover plate on where it was and tighten screws.
6. Cover panel.

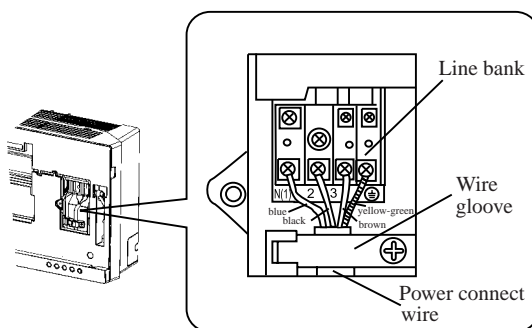


Fig.3

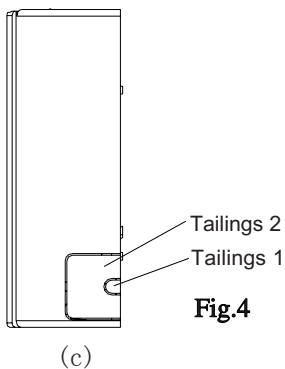
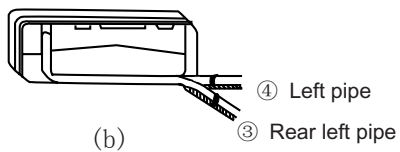
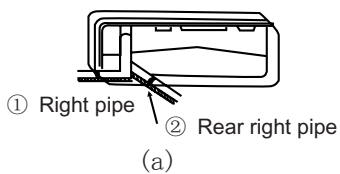
## ☆ Install Indoor Unit

1. Please refer to the fig. (a) and (b) for routing piping type of indoor unit. When routing the piping (wiring) from the left or right side, cut off the tailings of the pipe left from chassis of main unit (as shown in fig.4(c):

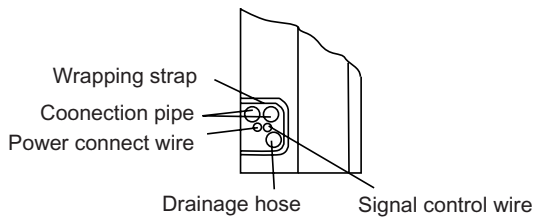
- (1) Cut off tailings 1 when only power cord is routed;
- (2) Cut off tailings 1 and 2 when connection pipe and power cord are routed.

Methods ①、②、③ are recommended piping ways.

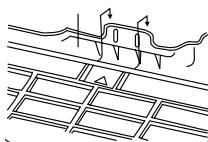
2. After wrapped pipe and wire, pull them through the pipe hole (as shown in fig.5).
3. Hang the mounting slot behind indoor unit on the pothook of the rear panel and move it to check if it is firm enough (as shown in fig.6).
4. Ensure the install height of indoor unit is 2.3m or higher.



**Fig.4**



**Fig.5**



**Fig.6**

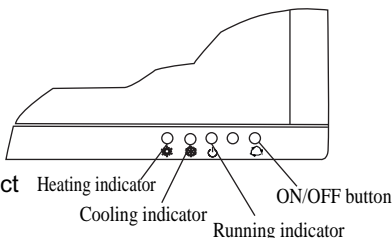


# Test operation and check after installation

## ☆ Test operation

### 1. Preparation for trial run

- (1) Don't turn on power supply if entire installations are not completed.
- (2) Connect of control circuit should be correct all wire connect should be firm.
- (3) Cut-off valves of both thick and thin pipes should be turned on.
- (4) All scattered components, especially metal scrap thrum etc., should be cleared from unit.



### 2. Test operation method

- (1) Press ON/OFF on wireless remote control after connecting to power supply, unit begins running.
- (2) Press MODE to select run mode of COOL, HEAT and SWING etc. to check if it can run normally.
- (3) When wireless remote control is losed, operation unit by following mode:
  - (a) When unit is halt, press the ON/OFF button, then unit begins running in AUTO micro-computer select COOL, DRY, HEAT or FAN automatically according to indoor temp. to make comfort effect. Repress ON/OFF to stop the unit from running.
  - (b) When unit is running, press ON/OFF to stop unit from running.

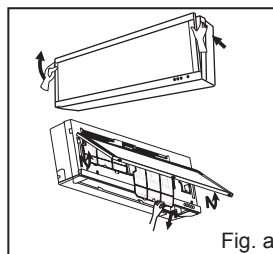
## ☆ Check after installation

Items to be checked	Possible malfunction
Is the installation firm enough?	Unit may drop, shake or emit noise
Is leakage test done?	It may cause insufficient of cooling (heating) capacity
Is heat insulation sufficient?	Condensation or water drop may occur
Is drainage smooth?	Condensation or water drop may occur
Is the power voltage the same with that in product nameplate?	Malfunction or burn out of parts may occur
Is the install of circuit and pipeline correct?	Malfunction or burn out of parts may occur
Is the unit earthed safely?	Creepage may o ccur
Is model of wire fits that of regulation?	Malfunction or burn out of parts may occur
Is both the air inlet or outlet vent of indoor and outdoor unit blocked?	Insufficient of cooling (heating) capacity may occur.
Is length of refrigerant pipe and charge amount recorded?	Charge amount of refrigerant is hard to handle.

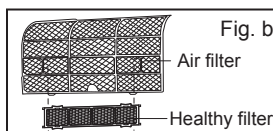
# Installation and Maintenance of Healthy Filter

## ☆ Installation Instructions

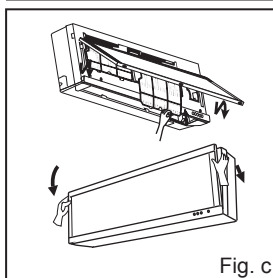
1. Forcibly pull the panel for a specific angle from the two ends of the front panel according to the arrow direction. Then pull the air filter downwards to remove it. (See Fig.a)



2. Mount the healthy filter onto the air filter, (as shown in Fig.b).



3. Mount the air filter properly along the arrow direction in Fig.c, and then close the panel cover.



## ☆ Cleaning and Maintenance

Take out the healthy filter before cleaning and reinstall it after cleaning according to the installation instruction. Pay special attention to that silver ion filter can't be cleaned with water, while active carbon, photocatalyst, low temperature conversion (LTC) catalyst, formaldehyde eliminator, catechin or mite killing filter can, but can't with brush or hard things. Dry it in the shade or sun after cleaning, but not by wiping.

## ☆ Service Life

The healthy filter commonly has its usage lifetime for one year under normal condition. As for silver ion filter, it is invalid when its surface becomes black (green).

- This supplementary instruction is provided for reference to the unit with healthy filter. If the graphics provided herein is different from the physical goods, the latter one shall prevail. The quantity of healthy filters shall be based on the actual delivery.