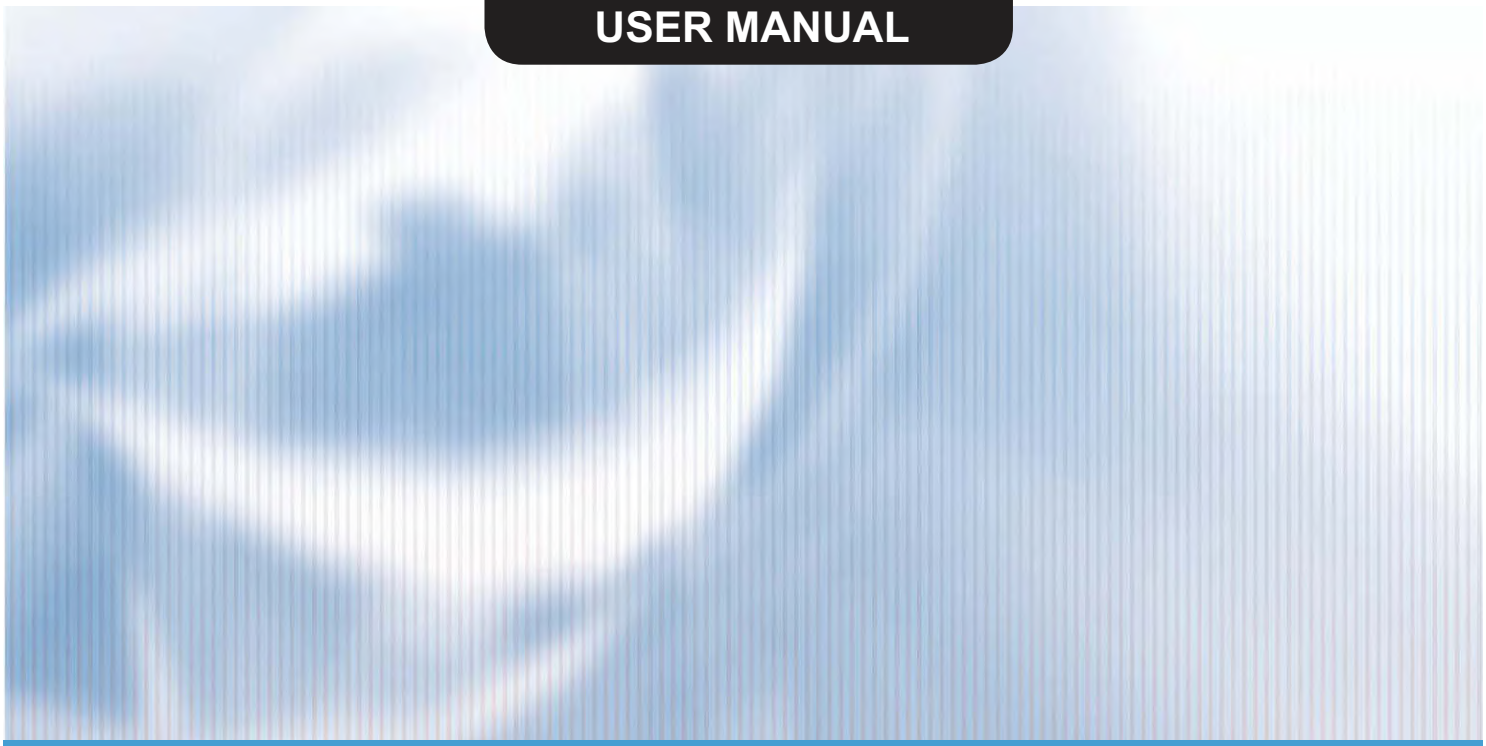
EN

USER MANUAL



# RAY SERIES INDOOR UNIT

## ASH-xxBIR

sinclair
AIR CONDITIONING

“Original instructions”

IMPORTANT NOTE:

Read this manual carefully before installing or operating your new air conditioning unit. Make sure to save this manual for future reference.

# Content

## Operation Notices

The Refrigerant .....1
Precautions.....2
Parts name .....7

## Screen Operation Guide

Buttons on remote controller .....9
Introduction for buttons on remote controller.....9
Function introduction for combination buttons.....12
Replacement of batteries in remote controller.....12
Emergency operation .....12

## Maintenance

Clean and maintenance.....13

## Malfunction

Malfunction analysis .....14

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.

If it needs to install, move or maintain the air conditioner, please contact dealer or local service center to conduct it at first. Air conditioner must be installed, moved or maintained by appointed unit. Otherwise, it may cause serious damage or personal injury or death.

Frequency band(s) in which the radio equipment operates：2400MHz-2483.5MHz
Maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates：20dBm

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

R32: 675

## Explanation of Symbols

| | |
|---|---|
| DANGER | Indicates a hazardous situation that, if not avoided, will result in death or serious injury. |
| WARNING | Indicates a hazardous situation that, if not avoided, could result in death or serious injury. |
| CAUTION | Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury. |
| NOTICE | Indicates important but not hazard-related information, used to indicate risk of property damage. |
| ⚠ | Indicates a hazard that would be assigned a signal word WARNING or CAUTION. |

## Exception Clauses

Manufacturer will bear no responsibilities when personal injury or property loss is caused by the following reasons.

1. Damage the product due to improper use or misuse of the product;
2. Alter, change, maintain or use the product with other equipment without abiding by the instruction manual of manufacturer;
3. After verification, the defect of product is directly caused by corrosive gas;
4. After verification, defects are due to improper operation during transportation of product;
5. Operate, repair, maintain the unit without abiding by instruction manual or related regulations;
6. After verification, the problem or dispute is caused by the quality specification or performance of parts and components that produced by other manufacturers;
7. The damage is caused by natural calamities, bad using environment or force majeure.

Appliance filled with flammable gas R32.

Before use the appliance, read the owner's manual first.

Before install the appliance, read the installation manual first.

Before repair the appliance, read the service manual first.

## The Refrigerant

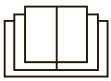
- To realize the function of the air conditioner unit, a special refrigerant circulates in the system. The used refrigerant is the fluoride R32, which is specially cleaned. The refrigerant is flammable and inodorous. Furthermore, it can leads to explosion under certain conditions. But the flammability of the refrigerant is very low. It can be ignited only by fire.
- Compared to common refrigerants, R32 is a nonpolluting refrigerant with no harm to the ozonosphere. The influence upon the greenhouse effect is also lower. R32 has got very good thermodynamic features which lead to a really high energy efficiency. The units therefore need a less filling.

**WARNING:**

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacture. Should repair be necessary, contact your nearest authorized Service Centre. Any repairs carried out by unqualified personnel may be dangerous. The appliance shall be stored in a room without continuously operating ignition sources. (for example: open flames, an operating gas appliance or an operating electric heater.) Do not pierce or burn.

Appliance shall be installed, operated and stored in a room with a floor area larger than X $m^2$. (Please refer to table "a" in section of " Safety Operation of Inflammable Refrigerant" for Space X.)

Appliance filled with flammable gas R32. For repairs, strictly follow manufacturer's instructions only. Be aware that refrigrants not contain odour. Read specialist's manual.



## WARNING

### Operation and Maintenance

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Do not connect air conditioner to multi-purpose socket. Otherwise, it may cause fire hazard.
- Do disconnect power supply when cleaning air conditioner. Otherwise, it may cause electric shock.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not spray water on indoor unit. It may cause electric shock or malfunction.
- After removing the filter, do not touch fins to avoid injury.
- Do not use fire or hair dryer to dry the filter to avoid deformation or fire hazard.

## WARNING

- Maintenance must be performed by qualified professionals. Otherwise, it may cause personal injury or damage.
- Do not repair air conditioner by yourself. It may cause electric shock or damage. Please contact dealer when you need to repair air conditioner.
- Do not extend fingers or objects into air inlet or air outlet. It may cause personal injury or damage.
- Do not block air outlet or air inlet. It may cause malfunction.
- Do not spill water on the remote controller, otherwise the remote controller may be broken.
- When below phenomenon occurs, please turn off air conditioner and disconnect power immediately, and then contact the dealer or qualified professionals for service.
  - Power cord is overheating or damaged.
  - There's abnormal sound during operation.
  - Circuit break trips off frequently.
  - Air conditioner gives off burning smell.
  - Indoor unit is leaking.
- If the air conditioner operates under abnormal conditions, it may cause malfunction, electric shock or fire hazard.
- When turning on or turning off the unit by emergency operation switch, please press this switch with an insulating object other than metal.
- Do not step on top panel of outdoor unit, or put heavy objects. It may cause damage or personal injury.

## WARNING

**Attachment**

- Installation must be performed by qualified professionals. Otherwise, it may cause personal injury or damage.
- Must follow the electric safety regulations when installing the unit.
- According to the local safety regulations, use qualified power supply circuit and circuit break.
- Do install the circuit break. If not, it may cause malfunction.
- An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
- Including an circuit break with suitable capacity, please note the following table.Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload.
- Air Conditioner should be properly grounded. Incorrect grounding may cause electric shock.
- Don't use unqualified power cord.
- Make sure the power supply matches with the requirement of air conditioner.Unstable power supply or incorrect wiring or malfunction. Please install proper power supply cables before using the air conditioner.
- Properly connect the live wire, neutral wire and grounding wire of power socket.
- Be sure to cut off the power supply before proceeding any work related to electricity and safety.

## WARNING

- Do not put through the power before finishing installation.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
- The appliance shall be installed in accordance with national wiring regulations.
- Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.
- The air conditioner is the first class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
- The yellow-green wire in air conditioner is grounding wire, which can't be used for other purposes.
- The grounding resistance should comply with national electric safety regulations.
- The appliance must be positioned so that the plug is accessible.
- All wires of indoor unit and outdoor unit should be connected by a professional.
- If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.

## WARNING

- For the air conditioner with plug, the plug should be reachable after finishing installation.
- For the air conditioner without plug, an circuit break must be installed in the line.
- If you need to relocate the air conditioner to another place, only the qualified person can perform the work. Otherwise, it may cause personal injury or damage.
- Select a location which is out of reach for children and far away from animals or plants.If it is unavoidable, please add the fence for safety purpose.
- The indoor unit should be installed close to the wall.
- Instructions for installation and use of this product are provided by the manufacturer.

## Working temperature range

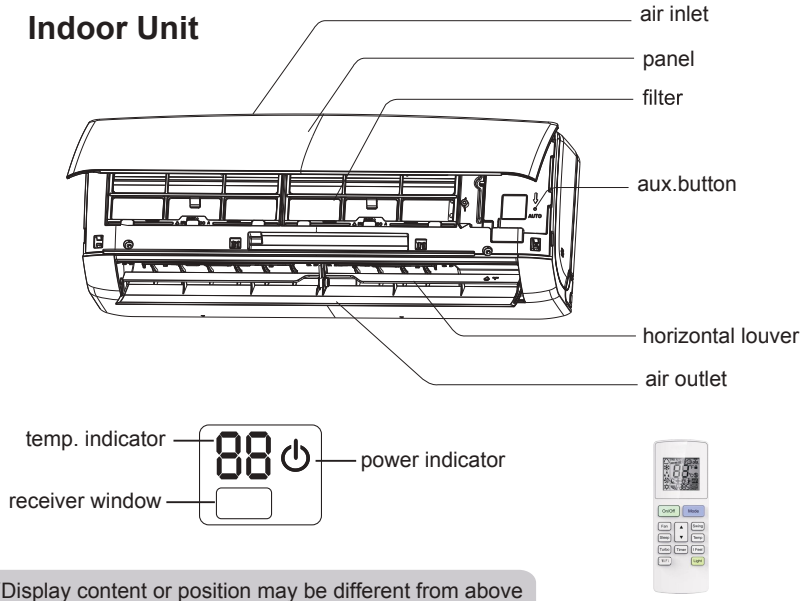
| | Indoor side DB/WB(℃ ) | Outdoor side DB/WB(℃ ) |
|---|---|---|
| Maximum cooling | 32/23 | 43/26 |
| Maximum heating | 27/- | 24/18 |

***NOTICE:***

- The operating temperature range (outdoor temperature) for cooling only unit is -15℃ ~ 43℃ ; for heat pump unit is -15℃ ~ 43℃ .

# Parts Name

## Indoor Unit



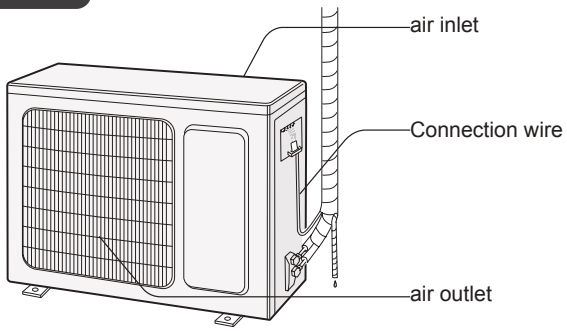

(Display content or position may be different from above graphics, please refer to actual products)

***NOTICE:***

Actual product may be different from above graphics, please refer to actual products.

# Parts Name

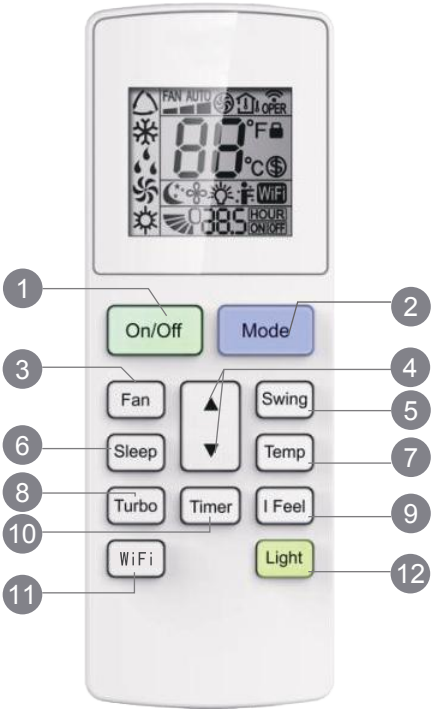
## Outdoor Unit




***NOTICE:***

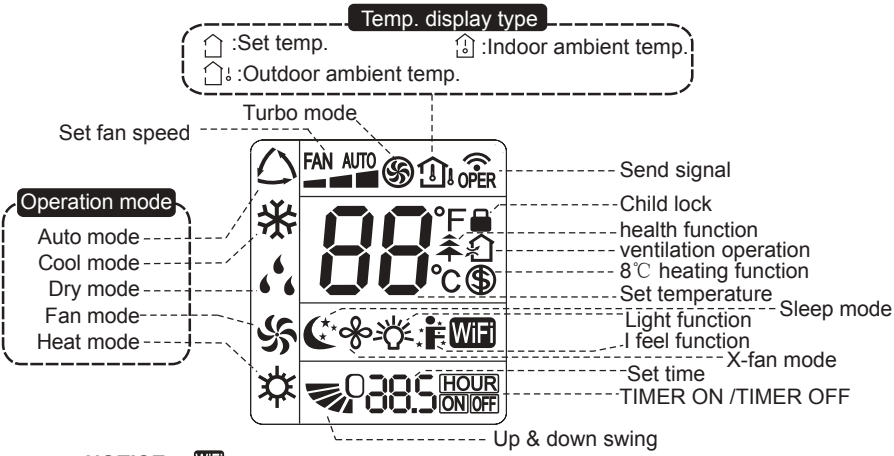
Actual product may be different from above graphics, please refer to actual products.

# Buttons on remote controller




1. On/Off button
2. Mode button
3. Fan button
4. ▲/ ▼ button
5. Swing button
6. Sleep button
7. Temp button
8. Turbo button
9. I Feel button
10. Timer button
11. WiFi button
12. Light button

# Introduction for buttons on remote controller




***NOTICE:*** " WiFi " This is a general remote controller. Some models have this function while some do not. Please refer to the actual models.

# Introduction for buttons on remote controller

**Note:**

- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Operation indictor "⏻" is ON (red indicator, the colour is different for different models). After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a “de” sound, which means the signal has been sent to the air conditioner.
- Under off status, set temperature and clock icon will be displayed on the display of remote controller (If timer on, timer off and light functions are set, the corresponding icons will be displayed on the display of remote controller at the same time); Under on status, the display will show the corresponding set function icons.

## 1 On/Off button

Press this button to turn on the unit. Press this button again to turn off the unit.

## 2 Mode button

Each time you press this button,a mode is selected in a sequence that goes from AUTO, COOL, DRY, FAN, and HEAT *, as the following:

AUTO ▶ COOL ▶ DRY ▶ FAN ▶HEAT*

* Note: Only for models with heating function.

## 3 Fan button

This button is used for setting Fan Speed in the sequence that goes from AUTO, ◢ ◢◢ , to ◢◢◢ , then back to Auto.

Note:

- Fan speed under dry mode is low speed.
- X-FAN function: Hold fan speed button for 2s in COOL or DRY mode, the icon “ ” is displayed and the indoor fan will continue operation for a few minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.
  This function indicates that moisture on evaporator of indoor unit will be blowed after the unit is stopped to avoid mould.
  - Having set X-FAN function on: After turning off the unit by pressing ON/OFF button indoor fan will continue running for a few minutes. at low speed. In this period, Hold fan speed button for 2s to stop indoor fan directly.
  - Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

## 4 ▲ / ▼ button

Press ▲/ ▼ button to increase/decreaseset temperature. In AUTO mode, set temperature is not adjustable. When setting Timer On or Timer Off, press "▲" or "▼" button to adjust the time.

# Introduction for buttons on remote controller

## 5 Swing button

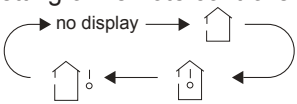
Press this button to set up & down swing angle.

## 6 Sleep button

Under Cool or Heat mode, press this button to turn on Sleep function. Press this button again to cancel Sleep function. Under Fan、Dry and Auto modes, this function is unavailable.

## 7 Temp button

Press this button, you can see indoor set temperature, indoor ambient temperature on indoor unit's display. The setting on remote controller is selected circularly as below:




**Note:**

- Outdoor temperature display is not available for some models. At that time, indoor unit receives " " signal, while it displays indoor set temperature.

## 8 Turbo button

Press this button to activate / deactivate the Turbo function Under COOL or HEAT mode.

## 9 I Feel button

Press this button to start I FEEL function and " " will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to close I FEEL function and " " will disappear.

- When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.

## 10 Timer button

- Under ON status, press this button to set timer OFF; Under OFF status, press this button to set timer ON.
- Press this button once and the characters of HOUR ON (OFF) will flash to be displayed. Meanwhile, press "▲" button or "▼" button to adjust timer setting (time will change quickly if holding "▲" or "▼" button). Time setting range is 0.5~24hours. Press this button again to confirm timer setting and the characters of HOUR ON (OFF)will stop flashing.
  If the characters are flashing but you haven't press timer button,timer setting status will be quit after 5s.If timer is confirmer, press this button again to cancel timer.

## 11 WiFi button

Press " **WiFi** " button to turn on or turn off WiFi function. When WiFi function is turned on, the " **WiFi** " icon will be displayed on remote controller; Under status of unit off, press "MODE" and " **WiFi** " buttons simultaneously for 1s, WiFi module will restore to factory default setting.

- This function is only available for some models.

# Introduction for buttons on remote controller

**12** Light button

Press this button to turn on the display's light and press this button again to turn off the display's light.

# Function introduction for combination buttons

**Combination of "▲" and "▼" buttons: About lock**

Press "▲" and "▼" buttons simultaneously 3s to lock or unlock the keypad. If the remote controller is locked, is displayed. In this case, pressing any button, blinks three times.

**Combination of "MODE" and "▼" buttons: About switch between Fahrenheit and centigrade**

At unit OFF, press "MODE" and "▼" buttons simultaneously to switch between ℃ and ℉.

**Combination of "TEMP" and "TIMER" buttons: About Energy-saving Function**

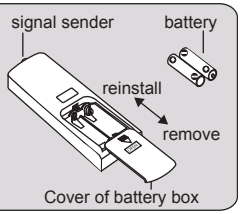
Press "TEMP" and "TIMER" simultaneously in COOL mode to start e nergy-saving function. Nixie tube on the remote controller displays "SE". Repeat the operation to quit the function.

**Combination of "TEMP" and "TIMER" buttons: About 8 ℃Heating Function**

Press "TEMP" and "TIMER" simultaneously in HEAT mode to start 8℃ Heating Function Nixie tube on the remote controller displays "$" and a selected temperature of "8℃". (46℉ if Fahrenheit is adopted). Repeat the operation to quit the function.

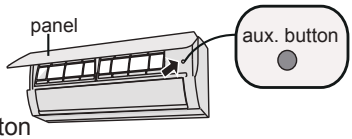
# Replacement of batteries in remote controller

1. Press the back side of remote controller marked with "OPEN", as shown in the fig, and then push out the cover of battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.
3. Reinstall the cover of battery box.




# Emergency operation

If remote controller is lost or damaged, please use auxiliary button to turn on or turn off the air conditioner. The operation in details are as below:
As shown in the fig. Open panel, press aux. button to turn on or turn off the air conditioner. When the air conditioner is turned on, it will operate under auto mode.




⚠ **WARNING:**
Use insulated object to press the auto button

# Clean and Maintenance

**⚠ WARNING**

- Turn off the air conditioner and disconnect the power before cleaning the air conditioner to avoid electric shock.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not use volatile liquid to clean the air conditioner.

## Clean surface of indoor unit

When the surface of indoor unit is dirty, it is recommended to use a soft dry cloth or wet cloth to wipe it.

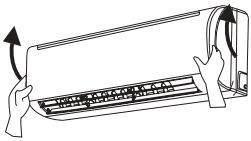
***NOTICE:***

- Do not remove the panel when cleaning it.

## Clean filter

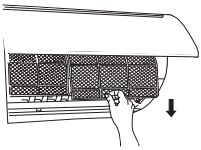
**1 Open panel**

Pull out the panel to a certain angle as shown in the fig.



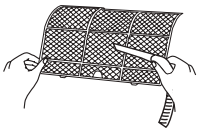
**2 Remove filter**

Remove the filter as indicated in the fig.



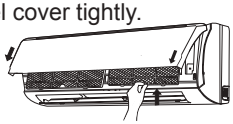
**3 Clean filter**

- Use dust catcher or water to clean the filter.
- When the filter is very dirty, use the water (below 45℃ ) to clean it, and then put it in a shady and cool place to dry.



**4 Install filter**

Install the filter and then close the panel cover tightly.



**⚠ WARNING**

- The filter should be cleaned every three months. If there is much dust in the operation environment, clean frequency can be increased.
- After removing the filter, do not touch fins to avoid injury.
- Do not use fire or hair dryer to dry the filter to avoid deformation or fire hazard.

***NOTICE:* Checking before use-season/Checking after use-season**

# Malfunction analysis

## General phenomenon analysis

Please check below items before asking for maintenance. If the malfunction still can't be eliminated, please contact local dealer or qualified professionals.

| Phenomenon | Check items | Solution |
|---|---|---|
| Indoor unit can't receive remote controller's signal or remote controller has no action. | ● Whether it's interfered severely (such as static electricity, stable voltage)? | ● Pull out the plug. Reinsert the plug after about 3min, and then turn on the unit again. |
| | ● Whether remote controller is within the signal receiving range? | ● Signal receiving range is 8m. |
| | ● Whether there are obstacles? | ● Remove obstacles. |
| | ● Whether remote controller is pointing at the receiving window? | ● Select proper angle and point the remote controller at the receiving window on indoor unit. |
| | ● Is sensitivity of remote controller low; fuzzy display and no display? | ● Check the batteries. If the power of batteries is too low, please replace them. |
| | ● No display when operating remote controller? | ● Check whether remote controller appears to be damaged. If yes, replace it. |
| | ● Fluorescent lamp in room? | ● Take the remote controller close to indoor unit.<br>● Turn off the fluoresent lamp and then try it again. |
| | ● Air inlet or air outlet of indoor unit is blocked? | ● Eliminate obstacles. |
| No air emitted from indoor unit | ● Under heating mode, indoor temperature is reached to set temperature? | ● After reaching to set temperature, indoor unit will stop blowing out air. |
| | ● Heating mode is turned on just now? | ● In order to prevent blowing out cold air, indoor unit will be started after delaying for several minutes, which is a normal phenomenon. |

# Malfunction analysis

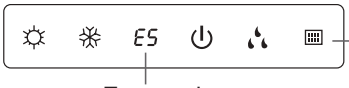
| Phenomenon | Check items | Solution |
|---|---|---|
| Air conditioner can't operate | ● Power failure? | ● Wait until power recovery. |
| | ● Is plug loose? | ● Reinsert the plug. |
| | ● Air switch trips off or fuse is burnt out? | ● Ask professional to replace air switch or fuse. |
| | ● Wiring has malfunction? | ● Ask professional to replace it. |
| | ● Unit has restarted immediately after stopping operation? | ● Wait for 3min, and then turn on the unit again. |
| | ● Whether the function setting for remote controller is correct? | ● Reset the function. |
| Mist is emitted from indoor unit's air outlet | ● Indoor temperature and humidity is high? | ● Because indoor air is cooled rapidly. After a while, indoor temperature and humidity will be decrease and mist will disappear. |
| Set temperature can't be adjusted | ● Unit is operating under auto mode? | ● Temperature can't be adjusted under auto mode. Please switch the operation mode if you need to adjust temperature. |
| | ● Your required temperature exceeds the set temperature range? | ● Set temperature range: 16℃ ~30℃ . |
| Cooling (heating) effect is not good. | ● Voltage is too low? | ● Wait until the voltage resumes normal. |
| | ● Filter is dirty? | ● Clean the filter. |
| | ● Set temperature is in proper range? | ● Adjust temperature to proper range. |
| | ● Door and window are open? | ● Close door and window. |
| Odours are emitted | ● Whether there's odour source, such as furniture and cigarette, etc. | ● Eliminate the odour source.<br>● Clean the filter. |

# Malfunction analysis

| Phenomenon | Check items | Solution |
|---|---|---|
| Air conditioner operates abnormally | ● Whether there's interference, such as thunder, wireless devices, etc. | ● Disconnect power, put back power, and then turn on the unit again. |
| "Water flowing" noise | ● Air conditioner is turned on or turned off just now? | ● The noise is the sound of refrigerant flowing inside the unit, which is a normal phenomenon. |
| Cracking noise | ● Air conditioner is turned on or turned off just now? | ● This is the sound of friction caused by expansion and/or contraction of panel or other parts due to the change of temperature. |

## Error Code

● When air conditioner status is abnormal, temperature indicator on indoor unit will blink to display corresponding error code. Please refer to below list for identification of error code.




Indoor display

Error code

Above indicator diagram is only for reference. Please refer to actual product for the actual indicator and position.

| Error code | Troubleshooting |
|---|---|
| E5/E6/E8/ U8/H3/H6 | It can be eliminated after restarting the unit. If not, please contact qualified professionals for service. |
| C5/F0/F1/F2 | Please contact qualified professionals for service. |

Note: If there're other error codes, please contact qualified professionals for service.

**⚠ WARNING**

■ When below phenomenon occurs, please turn off air conditioner and disconnect power immediately, and then contact the dealer or qualified professionals for service.
- ● Power cord is overheating or damaged.
- ● There's abnormal sound during operation.
- ● Air conditioner gives off burning smell.
- ● Air switch trips off frequently.
- ● Indoor unit is leaking.

■ Do not repair or refit the air conditioner by yourself.

■ If the air conditioner operates under abnormal conditions, it may cause malfunction, electric shock or fire hazard.

# NOTE CONCERNING PROTECTION OF ENVIRONMENT

This product must not be disposed of via normal household waste after its service life, but must be taken to a collection station for the recycling of electrical and electronic devices. The symbol on the product, the operating instructions or the packaging indicate such disposal procedures. The materials are recyclable in accordance with their respective symbols. By means of re-use, material recycling or any other form of recycling old appliances you are making an important contribution to the protection of our environment. Please ask your local council where your nearest disposal station is located.

# INFORMATION CONCERNING USED REFRIGERANT MEDIUM

This unit is containing fluorinated gases included in the Kyoto protocol. The maintenance and the liquidation must be carried out by qualified personnel.
Type of refrigerant: R32
The quantity of the refrigerant: please see the unit label.
The value GWP: 675 (1 kg R32 = 0,675 t CO2 eq)
GWP = Global Warming Potential

Appliance filled with flammable gas R32.

In case of quality problem or other please contact your local supplier or authorized service center.
**Emergency number: 112**

# PRODUCER

SINCLAIR CORPORATION Ltd.
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Great Britain

This product was manufactured in China (Made in China).

# REPRESENTATIVE

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