

HITACHI

Inspire the Next

SPLIT TYPE

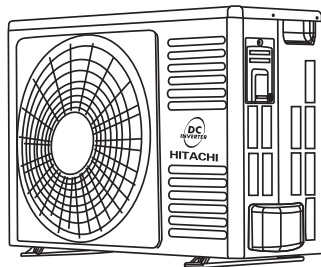
INDOOR UNIT/OUTDOOR UNIT

ENGLISH

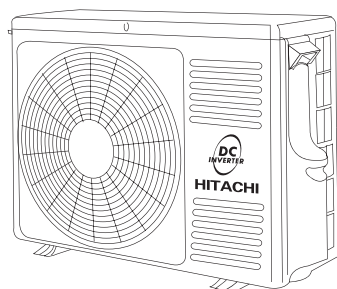
MODEL

RAS-X10HAK/RAC-X10HAK
RAS-X13HAK/RAC-X13HAK

OUTDOOR UNIT

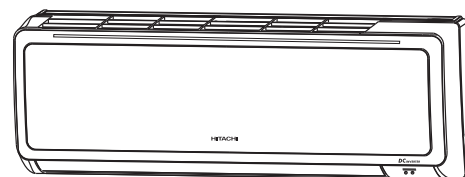


RAC-X10HAK



RAC-X13HAK

INDOOR UNIT



RAS-X10HAK
RAS-X13HAK



Instruction manual




To obtain the best performance and ensure years of trouble free use, please read this instruction manual completely.

Page 1~16








SAFETY PRECAUTION

- Please read the "Safety Precaution" carefully before operating the unit to ensure correct usage of the unit.
- Pay special attention to signs of "▲ **Warning**" and "▲ **Caution**". The "Warning" section contains matters which, if not observed strictly, may cause death or serious injury. The "Caution" section contains matters which may result in serious consequences if not observed properly. Please observe all instructions strictly to ensure safety.
- The sign indicate the following meanings.




 Make sure to connect earth line.	 The sign in the figure indicates prohibition.
 Indicates the instructions that must be followed.	

- Please keep this manual after reading.






PRECAUTIONS DURING INSTALLATION

 WARNING	● Do not reconstruct the unit. Water leakage, fault, short circuit or fire may occur if you reconstruct the unit by yourself.	
	● Please ask your sales agent or qualified technician for the installation of your unit. Water leakage, short circuit or fire may occur if you install the unit by yourself.	
 CAUTION	● Please use earth line. Do not place the earth line near water or gas pipes, lightning-conductor, or the earth line of telephone. Improper installation of earth line may cause electric shock.	
	● A circuit breaker should be installed depending on the mounting site of the unit. Without a circuit breaker, the danger of electric shock exists.	
	● Do not install near location where there is flammable gas. The outdoor unit may catch fire if flammable gas leaks around it.	
	● Please ensure smooth flow of water when installing the drain hose.	

PRECAUTIONS DURING SHIFTING OR MAINTENANCE

 WARNING	● Should abnormal situation arises (like burning smell), please stop operating the unit and turn off the circuit breaker. Contact your agent. Fault, short circuit or fire may occur if you continue to operate the unit under abnormal situation.	
	● Please contact your agent for maintenance. Improper self maintenance may cause electric shock and fire.	
	● Please contact your agent if you need to remove and reinstall the unit. Electric shock or fire may occur if you remove and reinstall the unit yourself improperly.	

PRECAUTIONS DURING OPERATION

 WARNING	● Avoid an extended period of direct air flow for your health.	
	● Do not put objects like thin rods into the panel of blower and suction side because the high-speed fan inside may cause danger.	
	● Do not use any conductor as fuse wire, this could cause fatal accident.	
	● During thunder storm, disconnect and turn off the circuit breaker.	

PRECAUTIONS DURING OPERATION

ENGLISH

- Do not connect the power cable with an extension cable or do not plug too many leads of the other electric appliance into the socket where this cable is plugged. In addition, wire the cable with some allowances to prevent the cable from stretching. Not doing so will cause an electrical shock, heat generation or fire.



- Do not bundle the power cable, pull it, put something on it, heat it, process it, or put it between things. Breakage of the power cable may result. Use of a damaged cable may cause an electrical shock or a fire.



- The product shall be operated under the manufacturer specification and not for any other intended use.



- Do not attempt to operate the unit with wet hands, this could cause fatal accident.

- When operating the unit with burning equipments, regularly ventilate the room to avoid oxygen insufficiency.



- Do not direct the cool air coming out from the air-conditioner panel to face household heating apparatus as this may affect the working of apparatus such as the electric kettle, oven etc.

- Please ensure that outdoor mounting frame is always stable, firm and without defect. If not, the outdoor unit may collapse and cause danger.



- Do not splash or direct water to the body of the unit when cleaning it as this may cause short circuit.

- Do not use any aerosol or hair sprays near the indoor unit. This chemical can adhere on heat exchanger fin and blocked the evaporation water flow to drain pan. The water will drop on tangential fan and cause water splashing out from indoor unit.



- Please switch off the unit and turn off the circuit breaker during cleaning, the high-speed fan inside the unit may cause danger.

- Turn off the circuit breaker if the unit is not to be operated for a long period.



- Do not climb on the outdoor unit or put objects on it.

- Do not put water container (like vase) on the indoor unit to avoid water dripping into the unit. Dripping water will damage the insulator inside the unit and causes short-circuit.



- Do not place plants directly under the air flow as it is bad for the plants.

- When operating the unit with the door and windows opened, (the room humidity is always above 80%) and with the air deflector facing down or moving automatically for a long period of time, water will condense on the air deflector and drips down occasionally. This will wet your furniture. Therefore, do not operate under such condition for a long time.

- If the amount of heat in the room is above the cooling or heating capability of the unit (for example: more people entering the room, using heating equipments and etc.), the preset room temperature cannot be achieved.

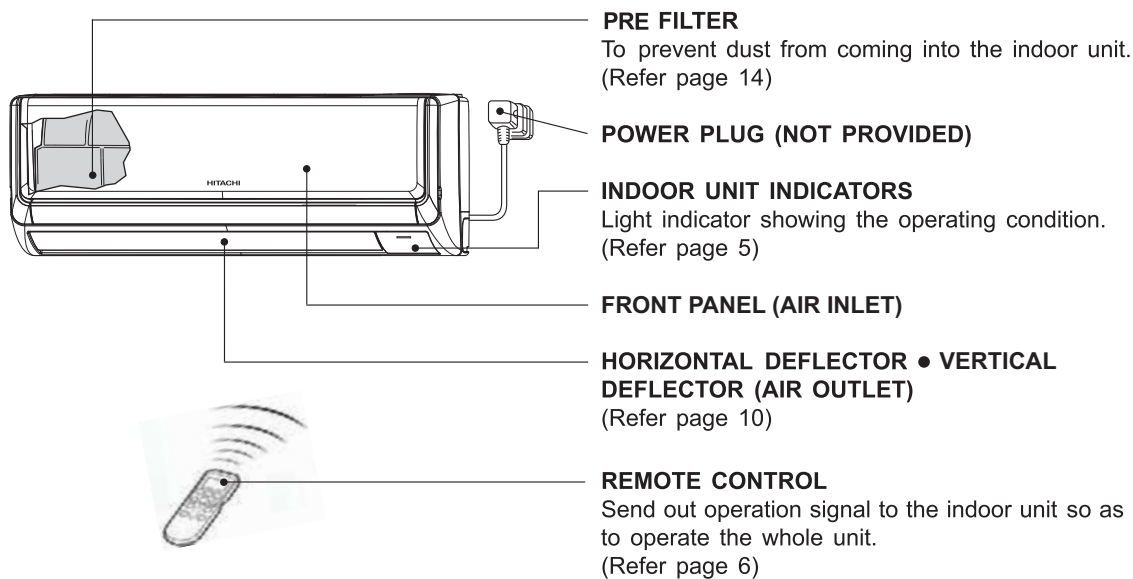
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children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

- "If 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."

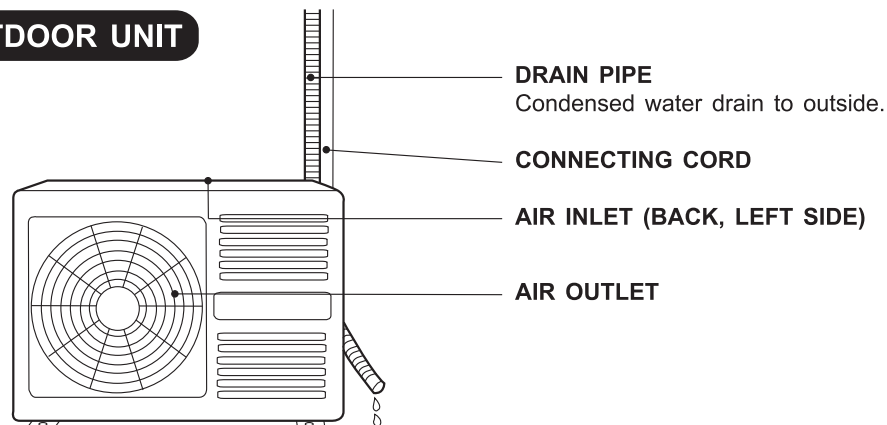
WARNING

NAMES AND FUNCTIONS OF EACH PART

INDOOR UNIT



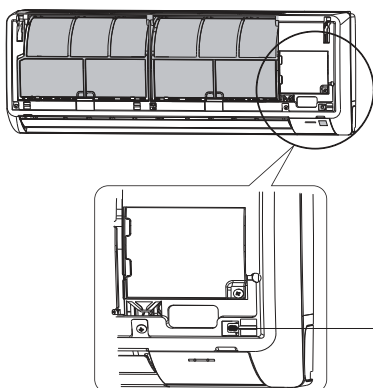
OUTDOOR UNIT



MODEL NAME AND DIMENSIONS

MODEL	WIDTH (mm)	HEIGHT (mm)	DEPTH (mm)
RAS-X10HAK/RAS-X13HAK	780	280	220
RAC-X10HAK	700	505	258
RAC-X13HAK	750	548	288

OPERATION INDICATOR

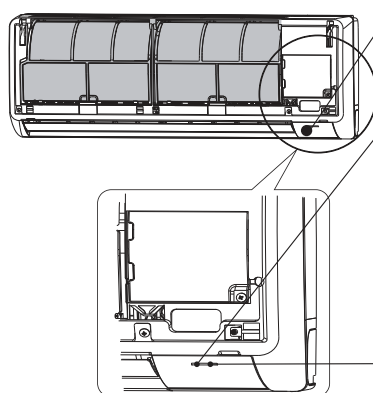


TEMPORARY SWITCH

Use this switch to start and stop when the remote controller does not work.

- By setting the temporary switch, the operation is done in previously set operation mode.
- When the operation is done using the temporary switch after the power source is turned off and turn on again, the operation is done in automatic mode.

INDOOR UNIT INDICATORS



SIGNAL RECEIVER

There will be a beep sound when this receiver receives signal from remote controller.

OPERATION LAMP

This lamp lights during operation.

The OPERATION LAMP flashes in the following cases during heating.

(1) During preheating

For about 2–3 minutes after starting up.

(2) During defrosting

Defrosting will be performed about once an hour when frost forms on the heat exchanger of the outdoor unit, for 5–10 minutes each time.

TIMER LAMP

This lamp lights when the timer is working.

OPERATION INDICATOR

- The auto restart feature prompts the air-conditioner to restart in its previous setting right after the power failure.
- In case of the power failure during the use of timer mode (Sleep Timer or ON/OFF Timer), timer mode is cancelled and the air-conditioner stops operation.
- Please reset the remote controller to restart the unit after the power has been restored.

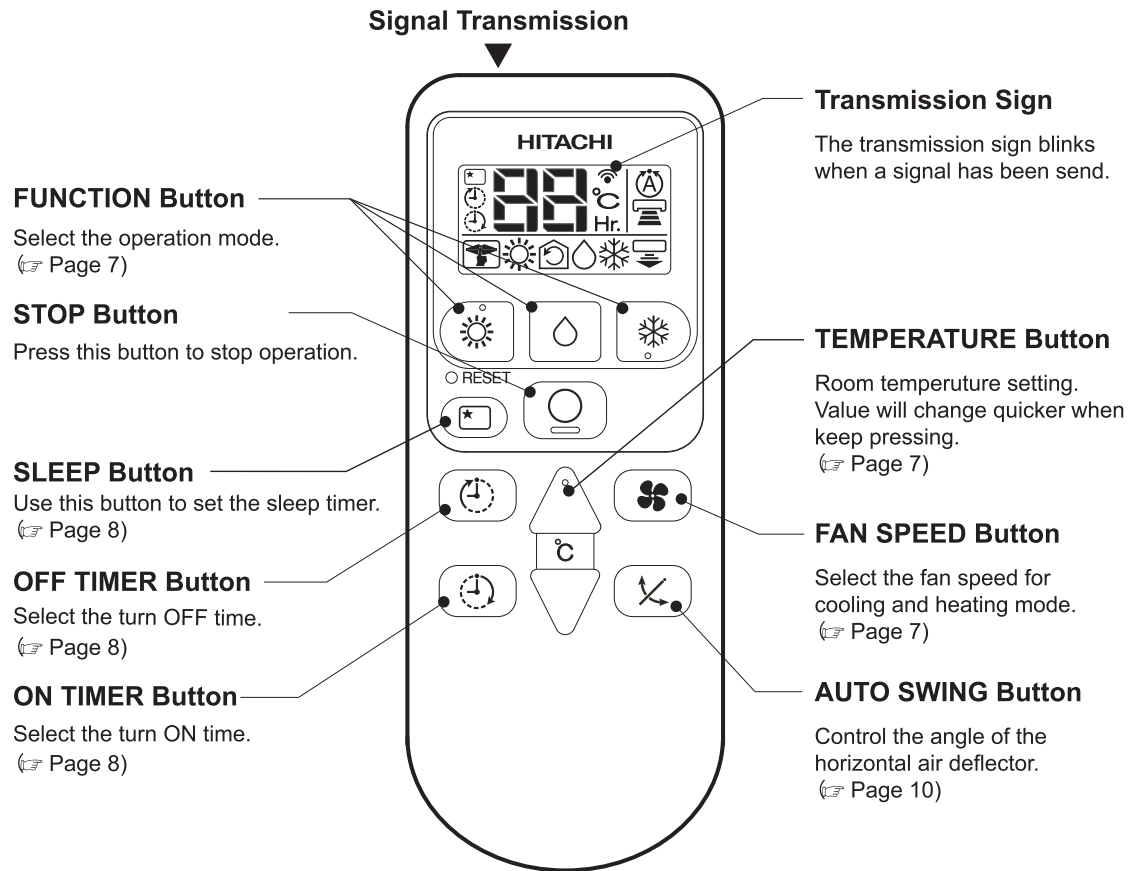
Note

- The recommended maximum and minimum operating temperatures of the hot and cold sides should be as below:

		Cooling		Heating	
		Minimum	Maximum	Minimum	Maximum
Indoor	Dry bulb °C	21	32	20	27
	Wet bulb °C	15	23	12	19
Outdoor	Dry bulb °C	21	43	7	21
	Wet bulb °C	15	26	2	15

NAMES AND FUNCTIONS OF REMOTE CONTROL UNIT

- This controls the operation function and timer setting of the room air conditioner. The range of control is about 7 meters. If indoor lighting is controlled electronically, the range of control may be shorter.



Precautions for Use

- Do not put the remote controller under direct sunlight and high temperature.
- Do not drop it on the floor, and protect it from water.
- If you press the FUNCTION button during operation, the air conditioner may stop for about 3 minutes for protection before you can start it again.

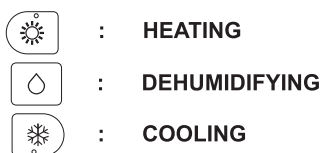
MANUAL OPERATION [Heating • Dehumidify • Cooling]

- Please use under below condition when you want to set the function mode, room temperature and fan speed by manually.

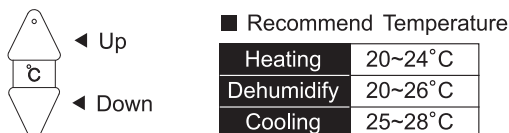
HEATING	DEHUMIDIFYING	COOLING
Outdoor Temperature 24°C below	Room Temperature 16°C above	Outdoor Temperature 21°C above

1 OPERATION MODE SELECTION

- Each time you press the button, the mode will change as the below.



2 ROOM TEMPERATURE SETTING



- The cooling operation does not start if the temperature setting is higher than the current room temperature.

3 FAN SPEED SETTING

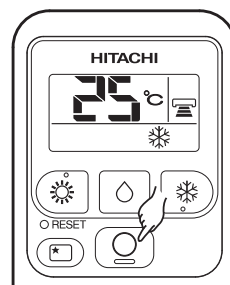
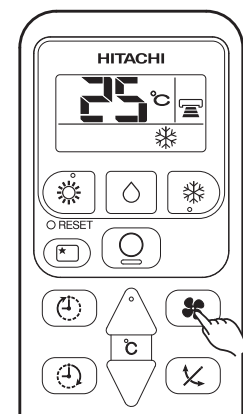
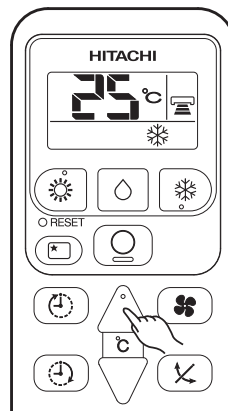
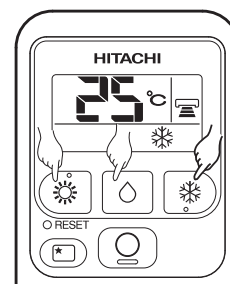
- Each time you press the button, fan speed will change as below sequence.

- HEATING** } : AUTO → HIGH → MED → LOW
- DEHUMIDIFYING** : LOW (FIXED)

4 Press the (STOP) button

- Operation stops with a signal received sound "beep".

ENGLISH




TIMER RESERVATION

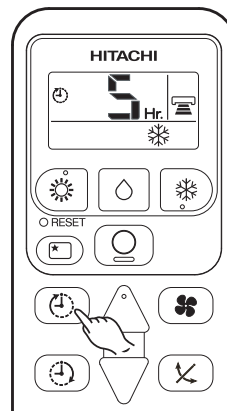
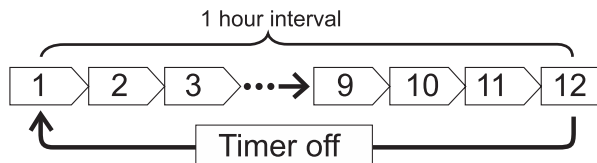
■ ON Timer and OFF Timer are available.

Timer Reservation


■ Operation will stop at setting time.

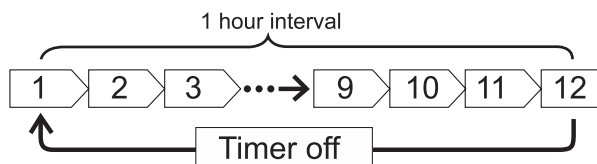
1 OFF TIME setting

- Select the OFF TIME by pressing the  (OFF) Button.
- Setting time will change according to the below sequence when you press the button.

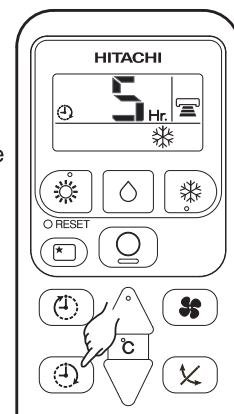


2 ON TIME setting


- Select the ON TIME by pressing the  (ON) Button.
- Setting time will change according to the below sequence when you press the button.

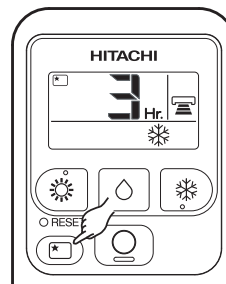
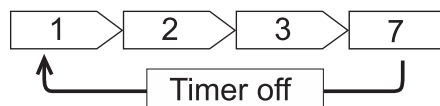


■ Operation will start for setting temperature at setting time
(The starting time may different depending on the room temperature and set temperature).



3 Sleep timer setting

- Select the OFF TIME by pressing the  (SLEEP) Button.
- Setting time will change according to the below sequence when you press the button.



NOTE

- The device will continue working for the designated number of hours and then turn off. Point the signal window of the remote controller toward the indoor unit, and press the SLEEP button. The timer information will be displayed on the remote controller. The TIMER lamp lights with a beep from the indoor unit.
- If you set the sleep timer when the off-timer or on-timer has been set earlier, the sleep timer becomes effective instead of the on-timer or off-timer set earlier.

Explanation of the sleep timer

The device will control the FAN SPEED and room temperature automatically so as to be quiet and good for people's health.

You can set the sleep timer to turn off after 1, 2, 3 or 7 hours. The FAN SPEED and room temperature will be controlled as shown below.


Operation with the sleep timer

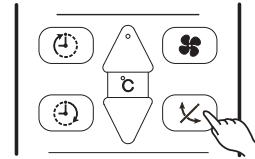
Function	Operation
Heating “☀”	<p>The room temperature will be controlled 5°C below the temperature setting 30 minutes after the setting of the sleep timer. The FAN SPEED will be set to LOW immediately.</p> <p>The room temperature is kept at about 12°C minimum.</p>
Cooling “❄” and Dehumidifying “💧”	<p>The FAN SPEED will be set to LOW immediately.</p> <p>The room temperature is kept at about 25-28°C.</p>


ADJUSTING THE AIR DEFLECTOR

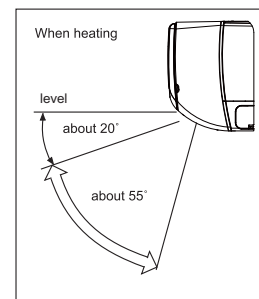
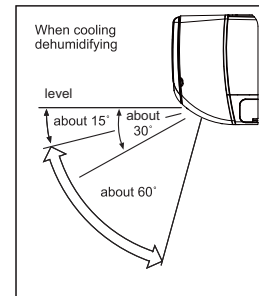
1

Adjustment of the conditioned air in the upward and downward directions.

The horizontal air deflector is automatically set to the proper angle suitable for each operation. The deflector can be swung up and down continuously and also set to the desired angle using the “ (AUTO SWING)” button.



- If the “ (AUTO SWING)” button is pressed once, the horizontal air deflector swings up and down. If the button is pressed again, the deflector stops in its current position. Several seconds (about 6 seconds) may be required before the deflector starts to move.
- Use the horizontal air deflector within the adjusting range shown on the right.
- When the operation is stopped, the horizontal air deflector moves and stops at the position where the air outlet closes.



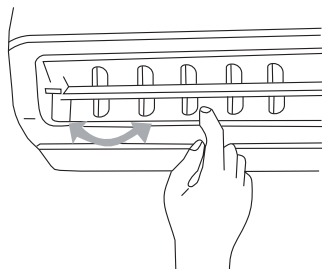
CAUTION

- In “Cooling” operation, do not keep the horizontal air deflector swinging for a long time. Some dew may form on the horizontal air deflector and dew may drop.

2

Adjustment of the conditioned air to the left and right.

Hold the vertical air deflector as shown in the figure and adjust the conditioned air to the left and right.



HOW TO EXCHANGE THE BATTERIES IN THE REMOTE CONTROLLER

When using the remote control, if there is no response from the air conditioner unit and / or the remote control has fading and dim displays, the batteries in the remote control device need to be removed and replaced with new ones.

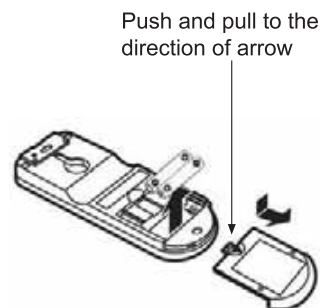
- 1 Remove the cover as shown in the figure and take out the old batteries.



- 2 Install the new batteries.
The direction of the batteries should match the marks in the case.

CAUTION

1. Do not use new and old batteries, or different kinds of batteries together.
2. Take out the batteries when you do not use the remote controller for 2 or 3 months.



ENGLISH

THE IDEAL WAYS OF OPERATION

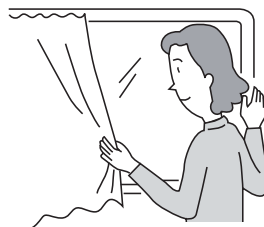
Suitable Room Temperature



⚠ Warning

Freezing temperature is bad for health and a waste of electric power.

Install curtain or blinds



It is possible to reduce heat entering the room through windows.

Ventilation

⚠ Caution

Do not close the room for a long period of time. Occasionally open the door and windows to allow the entrance of fresh air.



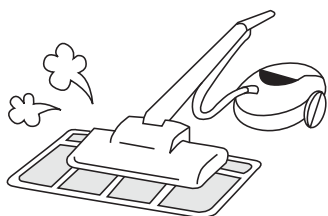
Effective Usage Of Timer

At night, please use the "OFF or ON timer operation mode", together with your wake up time in the morning. This will enable you to enjoy a comfortable room temperature. Please use the timer effectively.



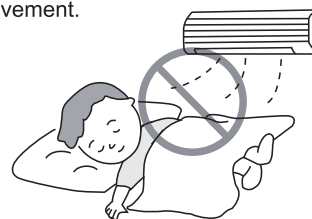
Do Not Forget To Clean The Pre Filter

Dusty Pre filter will reduce the air volume and the cooling efficiency. To prevent from wasting electric energy, please clean the filter every 2 weeks.



Please Adjust Suitable Temperature For Baby And Children

Please pay attention to the room temperature and air flow direction when operating the unit for baby, children and old folks who have difficulty in movement.

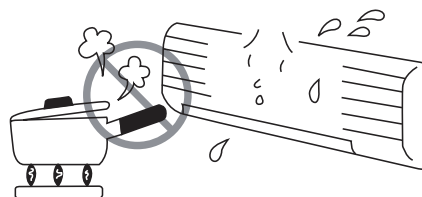


FOR USER'S INFORMATION

The Air Conditioner And The Heat Source In The Room

⚠ Caution

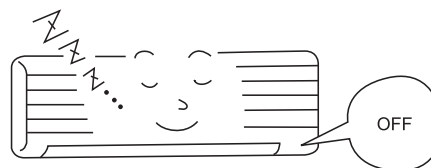
If the amount of heat in the room is above the cooling capability of the air conditioner (for example: more people entering the room, using heating equipments and etc.), the preset room temperature cannot be achieved.



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Not Operating For A Long Time

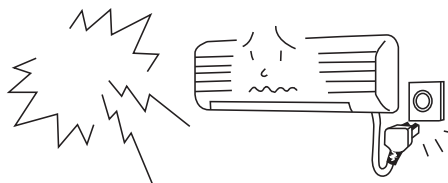
When the indoor unit is not to be used for a long period of time, please switch off the power from the mains. If the power from mains remains "ON", the indoor unit still consumes about 8W in the operation control circuit even if it is in "OFF" mode.



When Lightning Occurs

⚠ Warning

To protect the whole unit during lightning, please stop operating the unit and remove the plug from the socket.



MAINTENANCE

⚠ CAUTION

Cleaning and maintenance must be carried out when filter lamp lights. Before cleaning, stop operation and switch off the power supply.

1. AIR FILTER

Clean the Pre-filter, as it removes dust inside the room. In case the Pre-filter is full of dust, the air flow will decrease and the cooling capacity will be reduced. Further, noise may occur. Be sure to clean the Pre-filter following the procedure below.

PROCEDURE

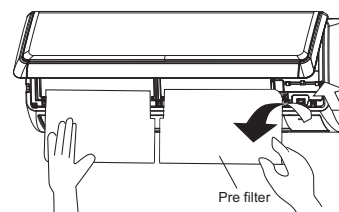
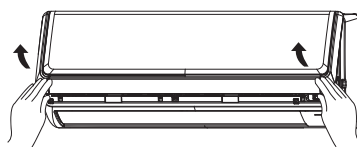
- 1 Open the front panel and remove the Pre-filter
 - Gently lift and remove the air purifying filters from the air purifying filter frame.

- 2 Vacuum dust from the Pre-filter and air purifying filter using vacuum cleaner. If there is too much dust, rinse under running tap water and gently brush it with soft bristle brush. Allow filters to dry in shade.

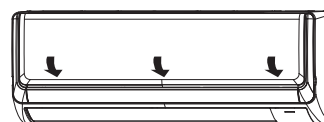
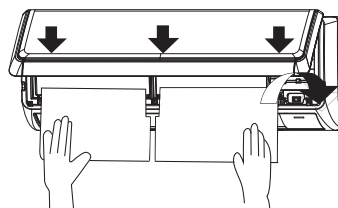


- 3
 - Re-insert the air purifying filter to the filter frame. Set the Pre-filter with "FRONT" mark facing front, and slot them into the original state.
 - After attaching the Pre-filters, push the front panel at three arrow portions as shown in figure and close it.

REMOVING METHOD



INSTALLATION METHOD

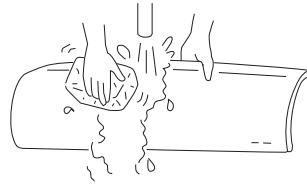


⚠ CAUTION

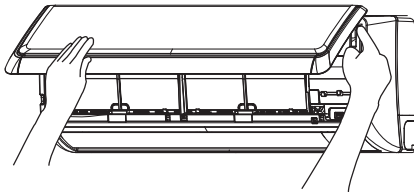
- Do not wash with hot water at more than 40°C. The filters may shrink.
- When washing it, shake off moisture completely and dry it in the shade; do not expose it directly to the sun. The filters may shrink.

2. CLEANING OF FRONT PANEL

- Remove the front panel and wash with clean water.
Wash it with a soft sponge.
After using neutral detergent, wash thoroughly with clean water.
- When front panel is not removed, wipe it with a soft dry cloth. Wipe the remote controller thoroughly with a soft dry cloth.
- Wipe the water thoroughly.
If water remains at indicators or signal receiver of indoor unit, it causes trouble.
Method of removing the front panel.
Be sure to hold the front panel with both hands to detach and attach it.

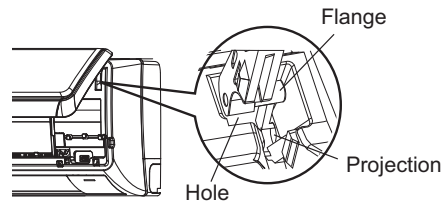


Removing the Front Panel



- When the front panel is fully opened with both hands, push the right arm to the inside to release it, and while closing the front panel slightly, pull it out forward.

Attaching the Front Panel



- Move the projections of the left and right arms into the Flanges in the unit and securely insert them into the holes.

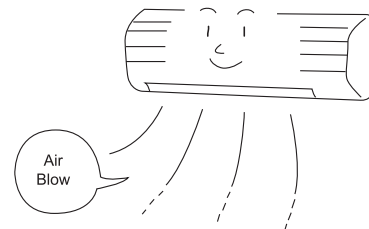
⚠ CAUTION

- Do not splash or direct water to the body of the unit when cleaning it as this may cause short circuit.
- Never use hot water (above 40°C), benzine, gasoline, acid, thinner or a brush, because they will damage the plastic surface and the coating.




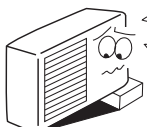
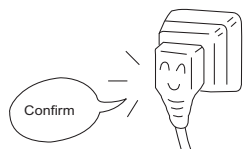
3. MAINTENANCE AT BEGINNING OF LONG OFF PERIOD

- Running the unit setting the operation mode to ❄ (COOL), the temperature to 32°C and the fan speed to HI for about half a day on a fine day, and dry the whole of the unit.
- Disconnect the power plug.



REGULAR INSPECTION

PLEASE CHECK THE FOLLOWING POINTS BY QUALIFIED SERVICE PERSONAL EITHER EVERY HALF YEARLY OR YEARLY. CONTACT YOUR SALES AGENT OR SERVICE SHOP.

1		Is the earth line disconnected or broken?
2		Is the mounting frame seriously affected by rust and is the outdoor unit tilted or unstable?
3		Is the plug of power line firmly plugged into the socket? (Please ensure no loose contact between them).

AFTER SALE SERVICE AND WARRANTY

WHEN ASKING FOR SERVICE, CHECK THE FOLLOWING POINTS.

CONDITION	CHECK THE FOLLOWING POINTS
When it does not operate	<ul style="list-style-type: none"> Is the fuse all right? Is the voltage extremely high or low? Is the circuit breaker "ON"?
When it does not cool well When it does not hot well	<ul style="list-style-type: none"> Is the air filter blocked with dust? Does sunlight fall directly on the outdoor unit? Is the air flow of the outdoor unit obstructed? Are the doors or windows opened, or is there any source of heat in the room? Is the set temperature suitable?



Notes

- In quiet operation or stopping the operation, the following phenomena may occasionally occur, but they are not abnormal for the operation.
 - Slight flowing noise of refrigerant in the refrigerating cycle.
 - Slight rubbing noise from the fan casing which is cooled and then gradually warmed as operation stops.
- The odor will possibly be emitted from the room air conditioner because the various odor, emitted by smoke, foodstuffs, cosmetics and so on, sticks to it. So please clean the air filter and the evaporator regularly to reduce the odor.

- Please contact your sales agent immediately if the air conditioner still fails to operate normally after the above inspections. Inform your agent of the model of your unit, production number, date of installation. Please also inform him regarding the fault.
- Power supply shall be connected at the rated voltage, otherwise the unit will be broken or could not reach the specified capacity.