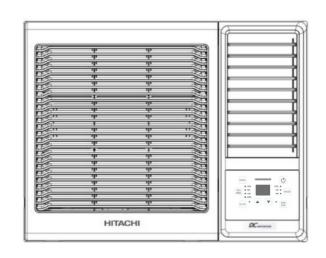
HITACHI

INSTALLATION & OPERATION MANUAL

Window Type Air Conditioner Inverter Cooling only Series R410A

Model RAW-VJ07SCASK RAW-VJ10SCASK RAW-VJ13SCASK RAW-VJ18SCASK RAW-VJ24SCASK





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Thank you for choosing Hitachi air conditioner. Please read this operating manual carefully before operating the unit and keep it for consultation.



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NOTICE:

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.

The appliance shall be installed in accordance with national wiring regulations. 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.

Please read this operating manual carefully before operating the unit. The figures in this manual may be different with the material objects, please refer to the material objects for reference.

Explanation of Symbol



Indicates a hazardous situation that, if not avoided, will result in death or serious injury.



Indicates a hazardous situation that, if not avoided, could result in death or serious injury.



Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.



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, the 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.

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.

When refrigerant leaks or requires discharge during installation, maintenance, or disassembly, it should be handled by certified professionals or otherwise in compliance with local laws and regulations.

Precautions

A Warning

Children shall not play with the appliance.

The air conditioner should be installed in accordance with national wiring regulations.

Air Conditioner should be properly grounded. Incorrect grounding may cause electric shock.

- 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.
- Do not connect air conditioner to multi-purpose socket. Otherwise, it may cause fire hazard.
- Do install the switch. If not, it may cause malfunction.
- Do not spill water on the remote control, otherwise the remote control may be broken.
- Do not spray water on air conditioner. It may cause electric shock or malfunction.
- Do not extend fingers or objects into air inlet or air outlet. It may cause personal injury or damage.
- Do not step on air conditioner, or put heavy objects. It may cause damage or personal injury.
- Do not block air outlet or air inlet. It may cause malfunction.
- Do disconnect power supply when cleaning air conditioner. Otherwise, it may cause electric shock.
- Do not repair air conditioner by yourself. It may cause electric shock or damage.
- Maintenance must be performed by qualified professionals. Otherwise, it may cause injury or damage.
- Please contact dealer when you need to repair air conditioner.

Please install the devices for short-circuit protection and electrical leakage protection when installing the air conditioner.

According to the local safety regulations, use qualified power supply circuit and circuit break.

Operating condition

Please operate air conditioner in the correct conditions as follows.

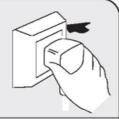
COOL mode operation	DRY mode operation
Outdoor temperature should be in range of 18°C to 43°C. Otherwise it is possible for air conditioner to breakdown.	Outdoor temperature should be in range of 18°C to 43°C. Otherwise it is possible for air conditioner to breakdown.
Room humidity should be lower than 90%. Otherwise, it is possible for air conditioner to dew at the surface and even drop water after running for a long period of time, but this is normal.	
Please refer to P.4 for indoor temperature range.	

Power requirement



Rated Voltage: 220 V +/- 10%

The electric components will be damaged when the voltage is too high. If the voltage is too low, the compressor will vibrate violently to damage the refrigerant system and easily cause the compressor and electric components not working.





The ground must be connected. Special socket must be used. Furthermore, the socket and wiring must conform to the wiring regulations. And the earthing method must be reliable. In fixed circuit, there must be electricity leakage protection switch of enough power capacity and air switch with enough space.



Earth wire

To ensure the reliable earthing, please do not connect earth wire to the following places:

Water pipe



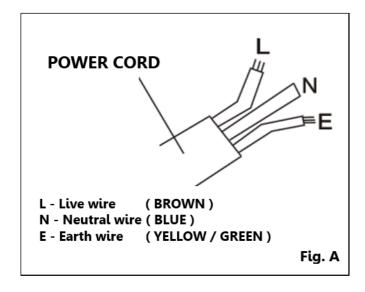
Operation Temperature:

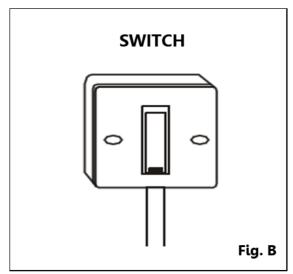
Cooling operation	Outdoor temp:	18-43 °C / 64-109°F
	Indoor temp:	17-32°C / 62-90°F

Note: Performance may be reduced outside of these operating temperatures.

Power cord

- 1. Model: RAW-VJ24SCASK is supplied without plug. It needs to be installed by a qualified technician for safety purpose.
- 2. Power point requirement: CONNECTION / SPUR UNITS MINIMUM POWER 220V 30A
- 3. Power cord conductors are distinguished according to color as follows (see Fig.A)
- 4. For your safety and protection, this unit is earthed through the power cord (see Fig.B) Please contact the manufacturer or its service agent or a similar qualified person if you want to replace it.
- 5. Be sure that the unit is being correctly grounded. The wall outlet (Switch) should be provided with reliable earth wire.
- 6. The unit should be provided with an individual circuit and the circuit breaker/ fuse rating should be the same as that of the power cord.





NOTE:

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your connection units – Proceed as follows:

The wire which is coloured BROWN must be connected to the terminal which is marked L. The wire which is coloured BLUE must be connected to the terminal which is marked N. The wire which is coloured YELLOW / GREEN must be connected to the terminal which is marked \bot .

Installation

Installation precaution:

Please contact the professional technician to install the unit and don't install it by yourself. Otherwise, we are not responsible for the damage of unit.

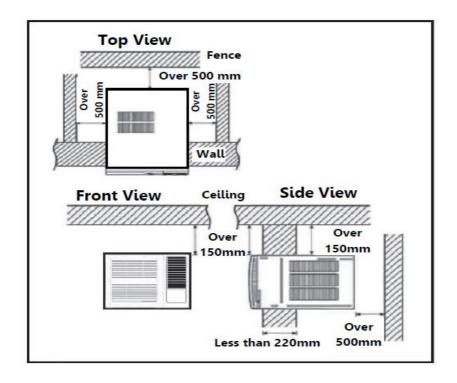


Location:

- The condensation water must be drained away easily.
- Install air conditioner unit far away from TV set or radio etc. to avoid disturbing video or voice.
- Avoid a place where is possible for inflammable gas to leak out.
- Avoid other heat sources or direct sunlight.
- Avoid a place where is easy for children to touch.

How to install

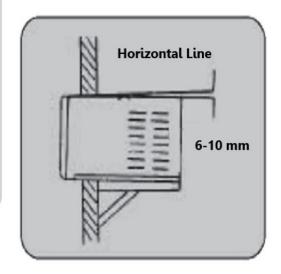
- Choose a location where there are no any obstacle surrounding the unit, and the plug is accessible.
- Prepare the installation hole slightly bigger than unit size.
- Choose the installation space according to the following diagram.



Installation

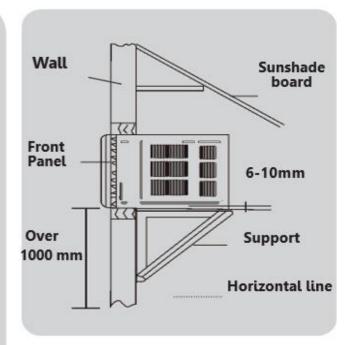
Installation procedure:

- 1. Remove the sticker from the front panel.
- 2. Put the unit into the installation hole. When installing the unit, it should slant down to the back to make sure the condensation water can be drained away easily. (Slant about 6-10mm) (Shown at right figure.)
- 3. The installation place should be strong enough to avoid the enlargement of noise or vibration.
- 4. Fill up sews in the cabinet with sealant.



Installation assistance:

- Use iron support
 The installation hole should be strong enough to support the air conditioner.
 If it cannot, iron support has to be used in outdoors. Iron support should be fixed on the building (Shown at right figure.)
- Use sunshade board
 Air conditioner should avoid anything
 to be dropped onto it and avoid direct
 sunlight. If there is no cover on it, you
 should contact the seller for installing
 the sunshade board. When installing
 the sunshade board, don't let it block
 the air inlet at the side grille.



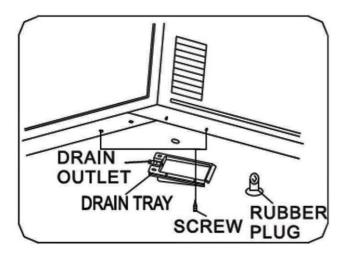
Installation

Drain water for another style:

To get the maximum cooling efficiency, the air conditioner is designed to splash the condensate on the condenser coil. Please install the drainage tray when installing the air conditioner if necessary.

To the cooling only unit, if the splashing sound annoys you, you can use an outside drain as shown in the following procedure. However, it may reduce the performance.

- 1. Slide out the chassis from the cabinet.
- 2. Remove the rubber plug from the body base plate.
- 3. Install the drain tray to the corner of the cabinet with 2 screws.
- 4. Connect the drain hose to the outlet on the drain pan bottom.
- 5. Slide the chassis into its original place in the cabinet.



* For RAW-VJ18SCASK and RAW-VJ24SCASK, there will be 2 drain trays provided. Select the appropriate drain tray according to actual condition.

Note:

Due to different installation environments and humidity, it is recommended that customers consider installing an external large drain pan and connect to drain hose.

All costs and whether the location of the external large drain pan and drain hose are suitable for installation, please consult with qualified installers.

Notes for installation

Removal

Before removing air conditioner to the other place, you should contact the seller firstly.

Then it must be done under the direction of the professional technician.



Noise

- Install in a location where is firm enough to avoid the enlargement of noise and vibration.
- Don't put anything in front of the outlet of the unit to avoid enlarging noise.
- Be sure that hot air or noise will not cause inconvenience to neighbors.
- Please contact the seller as soon as there is strange noise during operation. Please use the safety support.



Electric Wiring

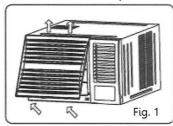
- Must connect with ground reliably.
- The exclusive circuit must be used. Removable socket can't be used because of poor contact. It can cause overheat or fire.
- Don't pull the power cord strongly.
- In fixed circuit, there must be electricity leakage protection switch and leakage current is less than 30 mA.
- Switch (circuit breaker) should be installed in the circuit and its capacity are 15 A (RAW-VJ07SCASK, RAW-VJ10SCASK and RAW-VJ13SCASK), and 30 A

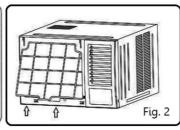


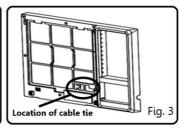
Installation Steps

Step 1. Remove the front panel and the air filter

- 1. Hold the slot under the front panel, then uplift outwards, and remove the front panel (See Fig. 1).
- 2. Pinch the handle under the air filter and make the air filter arched, remove it from the slot from underside to upside (See Fig. 2).
- 3. Cut and remove the cable tie (See Fig. 3) fixing between the panel and the temperature sensor behind the air filter. (Only applicable for RAW-VJ18SCASK and RAW-VJ24SCASK).

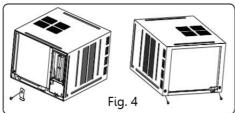


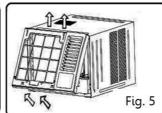


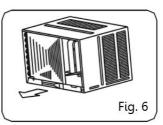


Step 2. Remove the frame.

- 1. Remove one screw on the chassis fixing bracket, then remove the chassis fixing bracket. Remove the two screws located on the back of the cabinet as shown in Fig. 4 if necessary.
- 2. Grasp the left corner of the frame's underside, then loosen the frame. (See Fig. 5). After that use a flathead screwdriver to press the clip connecting between the control panel and the frame, finally remove the frame.
- 3. Grasp the handle on the chassis and carefully silde the air conditioner out of the cabinet (See Fig. 6). Rubber Plug is fixed in the drain hole. Please use the spare rubber plug given into the package if necessary.





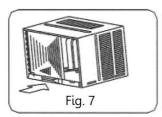


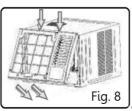
Step 3. Install the frame.

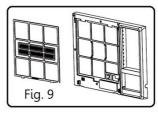
- 1. Push the unit chassis into the cabinet (See Fig. 7).
- 2. Install the frame (See Fig. 8) and fix the screws on the frame (See Fig. 4)

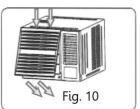
Step 4. Install the air filter and front panel.

- 1. Install the Silver Ion air filter into the frame's slot from upside to underside. (See Fig. 9).
- 2. Hang the front panel on the frame's buckle, then press the front panel into the frame's slot until you hear a click (See Fig. 10)



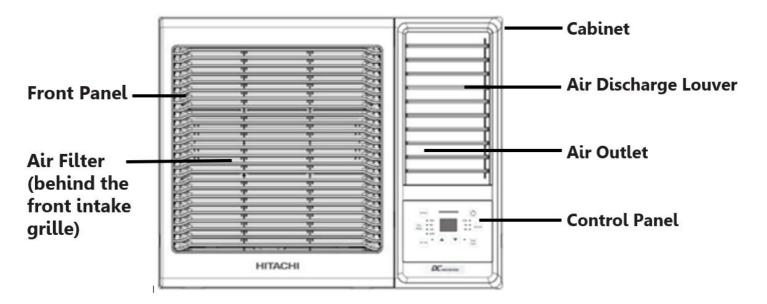






Part identification

Panel outlook picture is just for reference, please take the real unit as standard outlook.

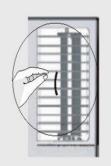


• Airflow direction Adjustment

Horizontal airflow direction vane

(Airflow direction adjustment up and down)

The horizontal airflow direction vane is controlled by positioning the vane to discharge the air upwards, downwards or straight out.



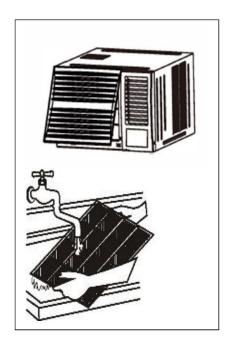
Air Filter

The air filter behind the inlet grille should be checked and cleaned at least once every 2 weeks (or as necessary) to maintain optimal performance of the air conditioner.

How to remove the air filter

Tum off the unit, tum off the circuit breaker

- 1. Hold the tabs under the front panel, then uplift it outwards over the protection tab or remove the front panel.
- 2. Pinch the handle under the air filter and make the air filter arched, remove it from the slot from underside to upside.
- 3. Clean the filter with warm soap water. The water should be below 40°C to prevent distortion of the filter.
- Rinse off and gently shake off excessive water from the filter. Allow the filter to dry before placing back. To prevent distortion of the filter, do not dry under direct sunlight.



Cabinet Cleaning

- Be sure to unplug the air conditioner to prevent shock or fire hazard. The cabinet
 and front may be dusted with an oil-free cloth or washed with a cloth dampened in
 a solution of warm water and mild liquid dishwashing detergent. Rinse thoroughly
 and wipe dry.
- Never use harsh cleaners, wax or polish on the cabinet front.
- Be sure to wring excessive water from the cloth before wiping around the controls.
- Excessive water in or around the controls may cause damage to the air conditioner.
- Plug in air conditioner.

NOTE:

Never use water over 40° C, alcohol, gasoline, acid, solvent or brush to clean the front panel as this will damage the surface of the part.

Winter Storage

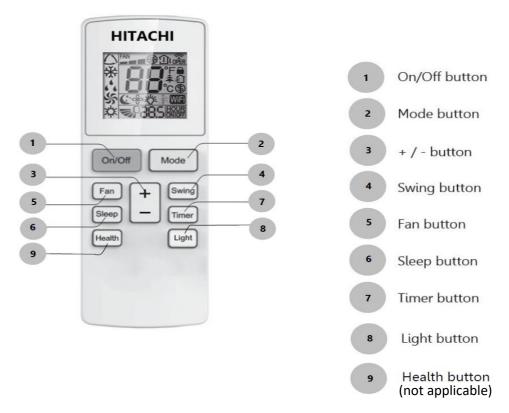
If you plan to store the air conditioner during the winter, remove it carefully from the window according to the installation instructions. Cover it with plastic or place it to the original carton.

CAUTION

NEVER operate the air conditioner without the air filter, as dust/dirt particles can contribute to equipment failure.

Remote control operation procedure

Note: This is a general use remote control, it could be used for the air conditioners with multifunction. For some functions which the model doesn't have, the unit will keep the original running status if pressing the corresponding button on the remote control.

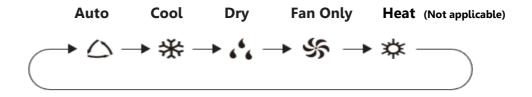


On / Off button

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

2 Mode button

Press this button to select your required operation mode. Corresponding indicator will be on.



- **Auto:** Under this mode, the unit will operate automatically according to default setting. In this case, set temperature cannot be adjusted.
- **Cool:** Under this mode, air conditioner operates under cooling mode. Cooling indicator will be on. Press "Fan" button to adjust the fan speed.

Remote control operation procedure

• Dry: Under this mode, the unit runs in low fan speed for dehumidifying and the

corresponding indicator is on; under dry mode, the fan speed cannot be

adjusted.

• Fan Only: Under this mode, air conditioner will not operate in COOL mode but only

blow wind. Fan indicator will be on. Press "Fan" button to adjust the fan

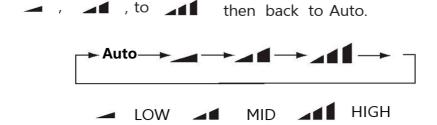
speed.

- 3 + / button
 - Pressing "+" or "-" button once will increase or decrease set temperature by 1°F(°C). Hold "+" or "-" button for 2 seconds, set temperature on remote control will change quickly. Release the button after your required set temperature is reached.
 - Under timer setting status, after each pressing of "+" or "-" button, time will increase or decrease 0.5 hours. Hold "+" or "-" button, 2 seconds later, time displayed on dual-8 nixie tube will change quickly. Unpress the button until the time is reached to your set time.
- 4 Swing button

Press this button to turn "ON" & "OFF" swing.

5 Fan button

This button is used for setting fan speed in the sequence that goes from AUTO,



NOTE: There are 3 fan speeds of this model.

6 Sleep button

Press this button to go into the Sleep operation mode. Press it again to cancel this function. This function is available in COOL mode to maintain the most comfortable temperature for you.

Remote control operation procedure

7 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 pressed timer button, timer setting status will be quitted after 5 seconds. If timer is confirmed, press this button again to cancel timer.

8 Light button

Press the button to activate or deactivate the LED (Light) on control panel.

9 Health button (Not Applicable)

WiFi Function (Not Applicable)

WiFi function are not applicable for models of RAW-VJ07SCASK / RAW-VJ10SCASK / RAW-VJ18SCASK and RAW-VJ24SCASK.

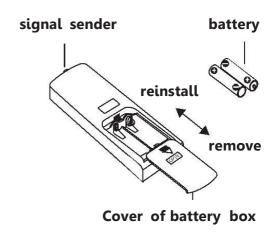
Press "Mode" + "Timer" button together to disappear "WiFi" symbol onto display.

Function introduction for combination buttons Temperature display switchover function

Under OFF status, press "-" and "Mode" buttons simultaneously to switch temperature display between °C and °F

Replacement of batteries in remote control

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

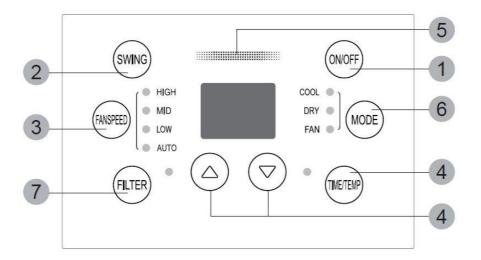


NOTICE:

- The distance between signal sender and receiving window should not be more than 8 meters, and there should be no obstacles between them.
- As the signal will be interferred in the room with electronic fluorescent lamp, conversion fluorescent lamp or wireless phone, please get closer to the air conditioner when using the remote control.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote control for a long period of time, please take out the batteries.

Remote control panel

Note: If wireless remote control is lost, you can use the remote control panel and operate manually.



1 ON/OFF BUTTON

Operation starts when pressing this button. Pressing this button again to stop the operation.

2 SWING BUTTON

Activate the automatic air swing function.

3 FAN SPEED BUTTON

Select the fan speed LOW, MID, HIGH and AUTO in sequence.

4 TIME/TEMP BUTTON

Press the \triangle keypad to increase the set (operating) temperature of the unit. Press the ∇ keypad to decrease the set (operating) temperature of the unit. The temperature setting range is from 16~30°C.

For the time setting range from $0\sim10$ hours, press the \triangle keypad to increase the selected time on 0.5 hour increment, and press the \bigvee keypad to decrease the selected time in 0.5 hour decrement.

For the time setting range from $10\sim24$ hours, press the \triangle keypad to increase the selected time on 1 hour increment, and press the ∇ keypad to decrease the selected time in 1 hour decrement.

5 SIGNAL RECEIVER

6 MODE BUTTON

Select the operation mode COOL, DRY, FAN (for cooling only model).

7 FILTER BUTTON

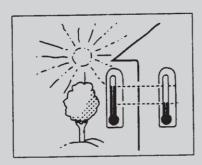
This feature is a reminder to clean the Air Filter (See Care and Cleaning) for more efficient operation and cooling. The LED (Light) will illuminate after 250 hours of operation. To reset after cleaning the filter, press the "Filter" button and the light will go off. Before the LED (Light) illuminate, press the "Filter" button for 3 seconds to clear the accumulated time of operation.

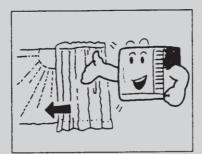
Operation Tips

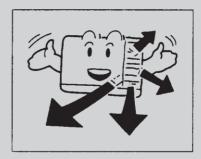
Operation for comfort and economy

Do not overcool the room temperature. This is not good for health and causes wasting of electricity. Keep the blind or curtains closed. Do not let sunshine entering the room directly when the air conditioner is in operation.

Keep the room temperature consistent. Adjust the vertical and horizontal airflow direction to ensure consistent temperature in the room. Air can't be discharged to the direction of air-in.



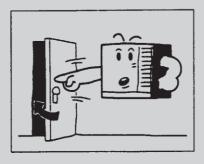


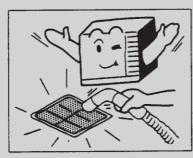


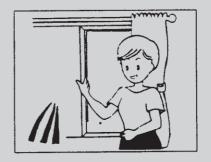
Make sure that the doors and windows are tightly closed. Avoid opening doors and windows frequently in order to keep air conditioning in the room.

Clean the air filter regularly. Blockages of the air filter reduce dehumidifying effects. Clean the air filter at least once every two weeks.

Ventilate the room occasionally. Since windows are kept closed, it is a good idea to open them and ventilate the room. When starting the unit, curtains or windows should be closed to prevent the cool air leakage.



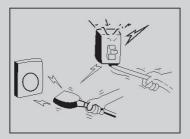




Caution

Operations for safety and health

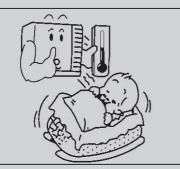
- 1. The plug must be accessible after the appliance is positioned.
- 2. Do not use this appliance in the laundry.
- 3. If the power cord is damaged, it must be replaced by the manufacture or its service agent in avoid of hazard.
- Do not pull out the power cord.
- Damage to the cord may result in serious electric shocks.
- Do not use the air conditioner for other purposes except for cooling the room.
- Do not use the air conditioner for other purposes such as drying clothes, preserving foods, or cultivating vegetables.
- Do not block the air intake and outlet vents. This causes reduced performance and irregular operation.
- Do not insert sticks or other objects into these vents as it is dangerous to touch the electric components and the fan.



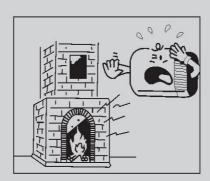




Select the optimal temperature. Pay attention to adjust the temperature to suit the conditions. Rooms occupied by infants, the elderly, or the sick should be kept under an appropriate temperature.



Do not use heating apparatuses in the vicinity. The air conditioner's plastic parts will melt if exposed to excessive heat.



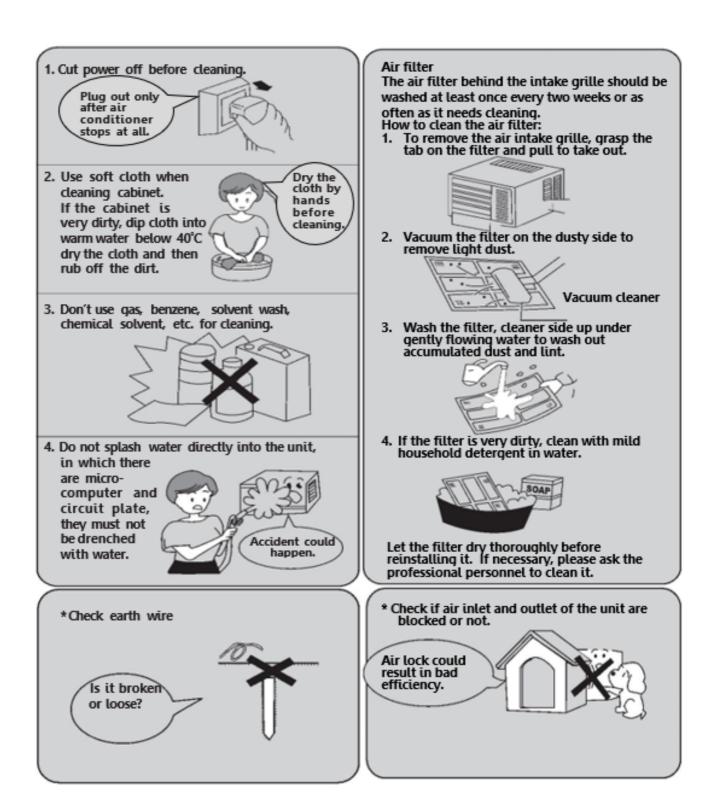
Avoid exposing the body directly to air flow for long periods. This is not recommended for health reason.



Always wait at least 3 minutes before switching the air conditioner on again after you have switched it off during cooling.



• Cleaning and maintenance



Troubleshooting guide

Please check the following items before asking for repair, it saves your time and money.

Fault phenomenon	Trouble - shooting
Air conditioner does not operate at all.	* Is there a power failure? * Is the plug out? * Is power fuse or switch off? * Whether the voltage is too high or too low?
Cooling efficiency is not good.	* Is air inlet or outlet blocked? * Is there any other heat source in room? * Are air filters dirty? * Is the indoor fan speed set at LOW? * Maybe the room is too hot when the unit starts.
Foggy air flows out.	* At COOL mode operation, sometimes there is foggy air flowing out from the unit, this is because the room humid air has been cooling rapidly. * The unit is normal while the indoor outlet is sending out some odor, because the inlet air may be mixed with the smell of furniture and smoke.
The air conditioner operation is noisy.	* For a noise that sounds like water flowing: This is the sound of freon flowing inside the air conditioner unit. * For a noise that sounds like a shower: This is the sound of the dehumidifying water being processed inside the air conditioner unit.
It seems that condensate is leaking from air conditioner.	* Condensate occurs when the airflow from the air conditioner cools the warm room air.
Air conditioner does not operate for about 3 minutes when restart.	* This is to protect the mechanism. * Wait about 3 minutes and operation will begin.

Immediately stop all operations and plug out or isolate power supply, please contact your dealer in the following situations.

- * Operation starts or stops abnormally;
- * Power fuse or switch often breaks;
- * Carelessly splash water or something into air conditioner;
- * Electrical lines are much hot or lines cover breaks;
- * Burning smell or smoke formed.
- *Other strange situations.



Others

Model and rated value of fuse shall be subject to screen print on corresponding controller or protective bushing.

After sales service

If your air conditioner has the questions of quality or malfunctioned, please contact the service center.



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Correct Disposal of this product

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.

Specifications in this document are subject to change without notice, in order that Hitachi-Johnson Controls Air Conditioning, Inc.may bring the latest innovations to their customers

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