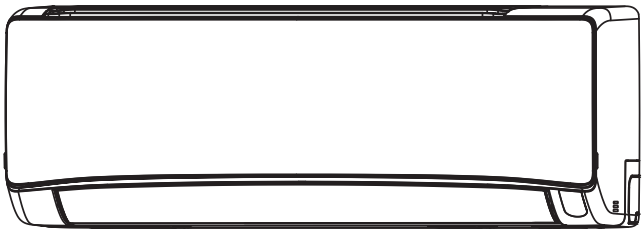
OPERATION MANUAL

HITACHI



airHome 400

ROOM AIR CONDITIONER
SPLIT TYPE
DJ SERIES

HFC R32

(RC-AGU1EA0G)



MODELS
RAK-DJ60PHAT
RAK-DJ70PHAT

EN INSTRUCTION MANUAL Page 2-10

Access the full version of the User Operation Manual by scanning the code. More languages available.

https://docs.hitachiaircon.com/
RAK-DJ-PHAT-RAC-DJ-PHAT

Cooling & Heating

<H1192: Ⓐ>



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.	

WARNING	This symbol shows that this equipment uses a flammable refrigerant. If the refrigerant is leaked, together with an external ignition source, there is a possibility of ignition.
CAUTION	This symbol shows that the Operation Instructions should be read carefully.
CAUTION	This symbol shows that a service personnel should be handling this equipment with reference to the Installation Manual.
CAUTION	This symbol shows that there is information included in the Operation Manual and/or Installation Manual

- 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.
- 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.
- Be sure to use the specified piping set for R32. Otherwise, this may result in broken copper pipes or faults.
- Do not use refrigerant other than the one indicated on the outdoor unit (R32) when installing, moving or repairing. Using other refrigerants may cause trouble or damage to the unit, and personal injury.

CAUTION

- 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.
- Do not install the indoor unit in a machine shop or kitchen where vapor from oil or its mist flows to the indoor unit. The oil will deposit on the heat exchanger, thereby reducing the indoor unit performance and may deform and in the worst case, break the plastic parts of the indoor unit.

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.
- If the supply cord is damaged, it must be replaced by the special cord obtainable at authorized service/parts centers.
- If the air conditioner is not cool, one possible cause could be due to refrigerant leakage, so consult your dealer.
  The refrigerant gas used in the air conditioner is harmless. But if refrigerant gas leaks into the room, harmful products are generated when in contact with fire from appliances such as a stove heater.
  When there is refrigerant gas accumulation in the room, immediately stop the air conditioner. Open the windows for ventilation and contact your agent.

PRECAUTIONS DURING OPERATION

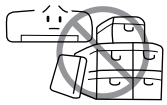
WARNING

- Avoid an extended period of direct air flow for your health.
- Do not insert a finger, a rod or other objects into the air outlet or inlet. As the fan is rotating at a high speed, it will cause injury. Before cleaning, be sure to stop the operation and turn the breaker OFF.
- Do not use any conductor as fuse wire, this could cause fatal accident.
- During thunder storm, disconnect and turn off the circuit breaker.
- Spray cans and other combustibles should not be located within a meter of the air outlets of both indoor and outdoor units. As a spray can’s internal pressure can be increased by hot air, a rupture may result.

PRECAUTIONS DURING OPERATION

CAUTION

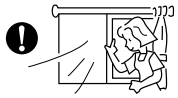
- The product shall be operated under the manufacturer specification and not for any other intended use.





- 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.

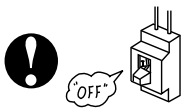




- Do not splash or direct water to the body of the unit when cleaning it as this may cause short circuit.

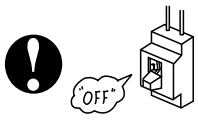
- Do not use any aerosol or hair sprays near the indoor unit. This chemical can adhere on heat exchanger fin and blocked the evaporation water flow to drain pan. The water will drop on tangential fan and cause water splashing out from indoor unit.





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

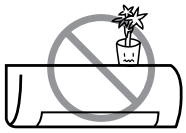
- Turn off the circuit breaker if the unit is not to be operated for a long period.

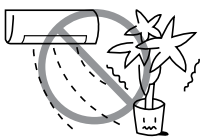




- Do not climb on the outdoor unit or put objects on it.

- 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.

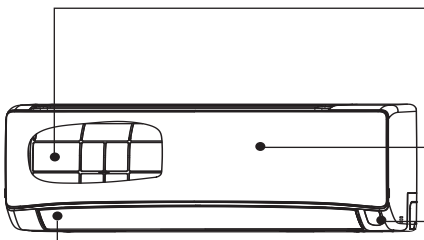
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
  Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Operation Range

Operation mode	Cooling/Dehumidifying	Heating
Outdoor temperature	-10 to 46°C	-15 to 21°C

Names and Functions of Each Part

Indoor Unit



Pre-filter
To prevent dust from coming into the indoor unit. (Refer page 7)

Front panel
(Refer page 8)

Indoor unit indicators
Light indicator showing the operating condition. (Refer page 5)

Horizontal deflector, Vertical deflector (Air Outlet)



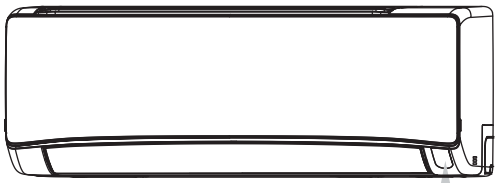
Remote controller
Send out operation signal to the indoor unit. So as to operate the whole unit.

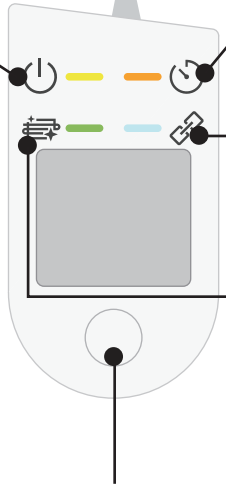
Model Name and Dimensions

MODEL	WIDTH (mm)	HEIGHT (mm)	DEPTH (mm)
RAK-DJ60PHAT	950	294	230
RAK-DJ70PHAT	1050	294	250

Names and Functions of Each Part

Indoor Unit Indications





Operation Lamp (Yellow)
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 (Orange)
This lamp lights when the timer is working.

Wi-Fi Lamp (Blue)

Clean Function Lamp (Green)
This lamp uses for FrostWash, Filter Sign.

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

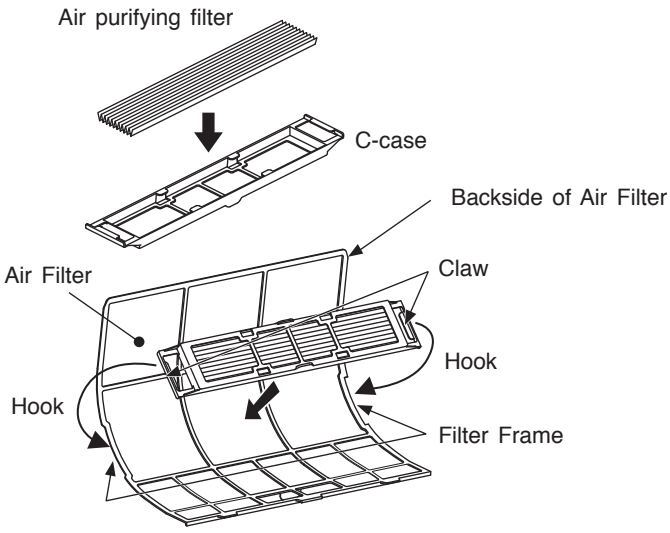
- By pressing the temporary switch, the operation is done in automatic mode.
- When the operation is done using the temporary switch after the power source is turned off and turn on again, the operation is done in automatic mode.

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

☆ If the power stays on and the unit is not operated, power is slightly consumed in the control circuit. The power is saved by turning off the power switch (or the circuit breaker when the power is supplied from the outdoor unit).

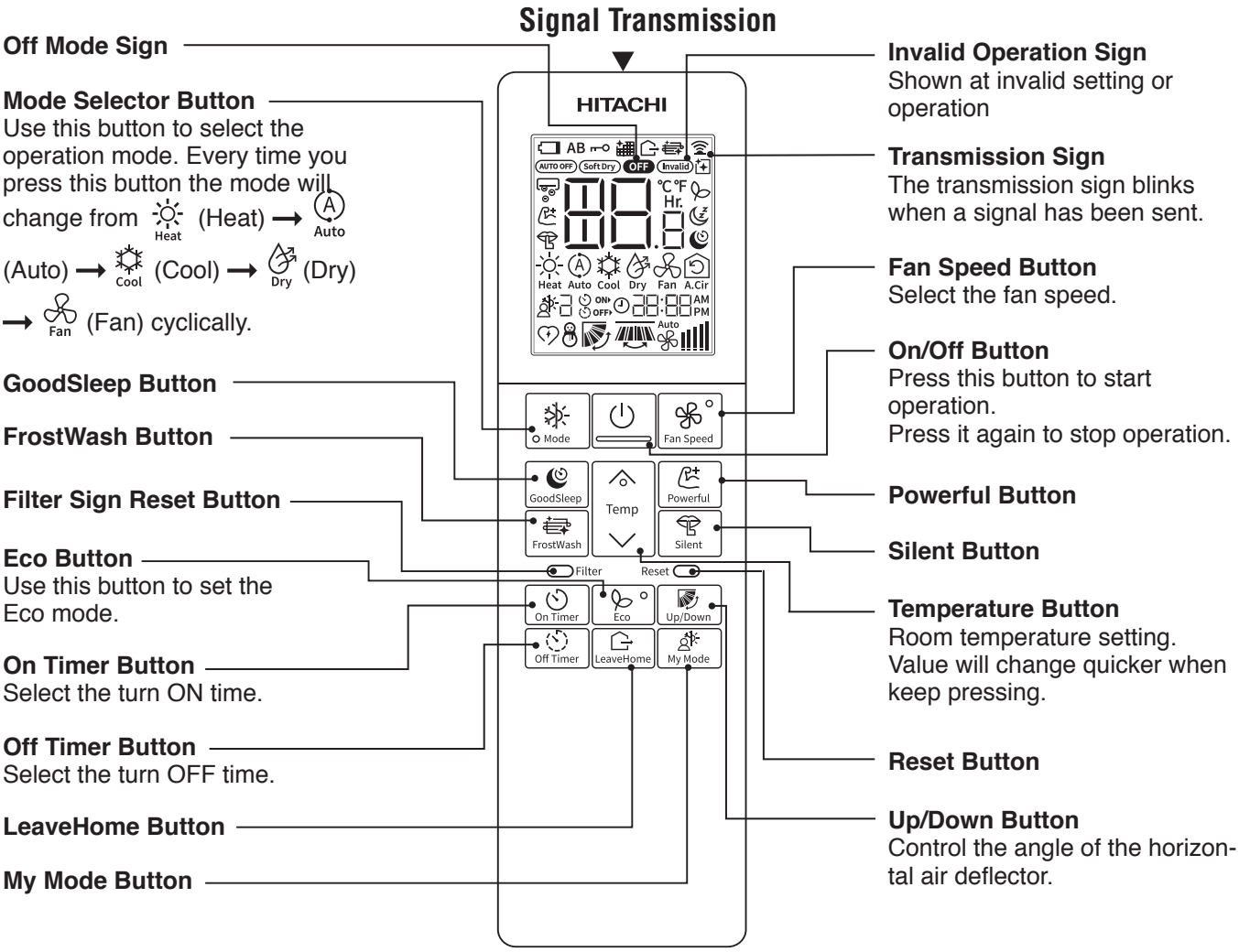
■ **Attaching the air purifying filters (Accessories) to the filter frame.**

- Attach the air purifying filters to the C-case to the designated position.
- The cooling capacity is slightly weakened and the cooling speed becomes slower when the air purifying filters are used.
- The air purifying filters are not washable. It is recommended to use vacuum to clean. It can be used for 1 year. When you want to renew it, please ask your sales agent.



Names and Functions of Remote Controller

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.

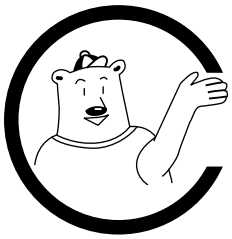


Backlight function

- Backlight is to see the LCD readings in the dark.
- On Pressing any key, the LCD panel lights up for a period of approx. 10 seconds. After approx. 10 seconds the light automatically switches off.
- The function is independent of all other functions of the air conditioner.
- The backlight color is white.

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.



MAINTENANCE

⚠ CAUTION

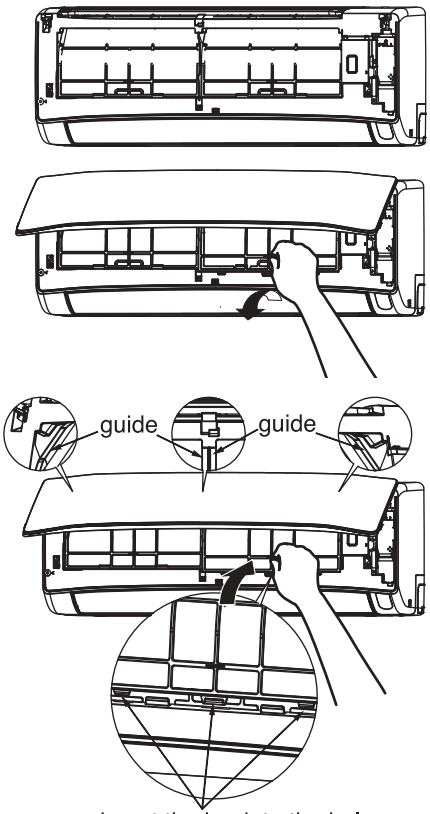
Cleaning and maintenance must be carried out only by qualified service personnel.
Before cleaning, stop operation and switch off the power supply.

1. PRE-FILTER

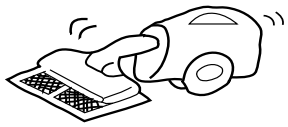
Clean the Pre-filter, as it removes dust inside the room. In case the Pre-filter is full of dust, the air flow will decrease and the cooling capacity will be reduced. Further, noise may occur. Be sure to clean the Pre-filter following the procedure below.

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.

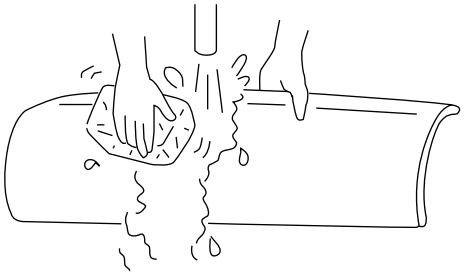
NOTE:
- Air purifying filter should be cleaned every month or sooner if noticeable loading occurs. When used overtime, it may lose its deodorizing function. For maximum performance, it is recommended to replace it every 1 year depending on application requirements.

⚠ CAUTION

- Do not operate the air conditioner without Pre-filter. Dust may enter the air conditioner and fault may occur.

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.

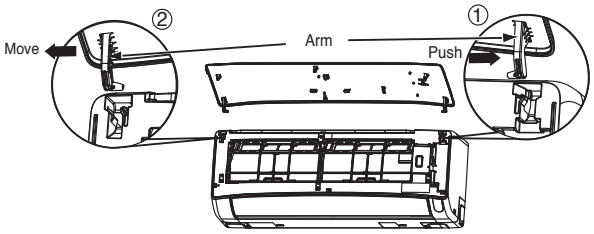


- When front panel is not removed, wipe it with a soft dry cloth. Wipe the remote controller thoroughly with a soft dry cloth.
- Wipe the water thoroughly.
  If water remains at indicators or signal receiver of indoor unit, it causes trouble.



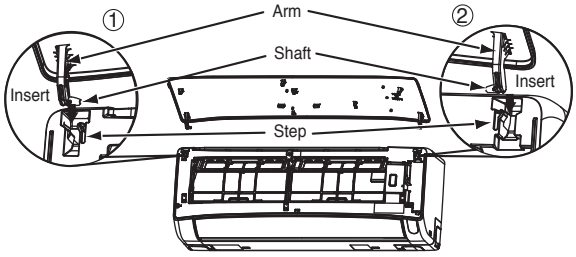
Method of removing the front panel.
Be sure to hold the front panel with both hands to detach and attach it.

Removing the Front Panel



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

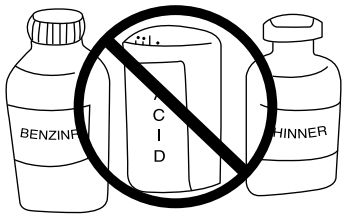
Attaching the Front Panel



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

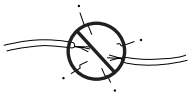
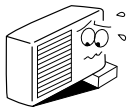
⚠ CAUTION

- Never use hot water (above 40°C), benzine, gasoline, acid, thinner or a brush, because they will damage the plastic surface and the coating.



Regular Inspection

PLEASE CHECK THE FOLLOWING POINTS BY QUALIFIED SERVICE PERSONNEL 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
If the remote controller is not transmitting a signal. (Remote controller display is dim or blank.)	• Do the batteries need replacement? • Is the polarity of the inserted batteries correct?
When it does not operate	• Is the fuse all right? • Is the voltage extremely high or low? • Is the circuit breaker “ON”? • Is the setting of operation mode different from other indoor units?
When it does not cool well When it does not hot well	• Is the pre-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? • Are the air inlets or air outlets of indoor and outdoor units blocked? • Is the fan speed “LOW” or “SILENT”?

FrostWash Operation

FrostWash Operation does not start	It does not wash when outside temperature is less than about 1 degrees Celsius or more than 43 degrees Celsius. It does not wash when the humidity in the room is about 30% or less or about 70% or more. When “FrostWash” is done by operating a remote controller, it does not wash when the room temperature is less than about 10 degrees Celsius or more than about 32 degrees Celsius.
	When 60 minutes after the end of “FrostWash”, “FrostWash” is not operated for product protection.
Noise occurred during FrostWash operation	It is the sound that the internal machine is inflated and contracted by the temperature change and the fin of the heat exchanger is frozen and thawed
(Clean Function Lamp) blinks	Repeat for 1 second on and 1 second off for 10 seconds Because “FrostWash” can not work when operating the “FrostWash” with remote controller. • The air conditioner is operating • Outside air temperature, room temperature and room humidity are not suitable for “FrostWash” • It has not been over 60 minutes since the end of “FrostWash”
	Repeat for 4 seconds on and 1 second off for 15 seconds Because FrostWash has not been done for a long time. → Operate the remote controller to operate “FrostWash”.

Information

Capabilities

Heating Capability

- This room air conditioner utilizes a heat pump system that absorbs exterior heat and brings it into a room to be heated. As the ambient temperature gets lower, heating capability will also lower. In such a situation, the inverter work to increase compressor rpm to keep the unit’s heating capability from decreasing. If the unit’s heating performance is still unsatisfactory, other heating appliances should be used to augment this unit’s performance.

CAUTION

Do not use a stove or any other high temperature devices in proximity to the indoor unit.


PROHIBITION

- The air conditioner is designed to heat an entire room so that it may take some time before you feel warm. Timer operation is recommended for effective preheating ahead of the desired time.

Cooling and Dehumidifying Capabilities

- If the heat present in a room exceeds the unit's cooling capacity (for example, if there are many people in the room or other heating appliances are used), the preset room temperature may not be reached.

Refrigerant Information

- For the refrigerant charge information, please refer to the outdoor unit installation manual or specification label.

■ The following phenomena do not indicate unit failure.

During heating, the operation indicator blinks and air blow stops	<Operation start> The unit is preparing to blow warm air. Please wait. <In operation> The outdoor unit is defrosting. Please wait.
Hissing or fizzy sounds	Refrigerant flow noise in the pipe or valve sound generated when flow rate is adjusted.
	Refrigerant flow noise occur during changes of maximum fan speed to lowest speed.
Squeaking noise	Noise generated when the unit expands or contracts due to temperature changes.
Rustling noise	Noise generated with the indoor unit fan's rpm changing such as operation start times.
Clicking noise	Noise of the motorized valve when the unit is switched on.
Perking noise	Noise of the ventilation fan sucking in air present in the drain hose and blowing out dehumidifying water that had accumulated in the condensed water collector. For details, consult your sales agent.
Changing operation noise	Operation noise changes due to power variations according to room temperature changes.
Mist emission	Mist is generated as the air within the room is suddenly cooled by conditioned air.
Steam emitted from the outdoor unit	Water generated during defrosting operation evaporates and steam is emitted.
Odors	Caused as the smells and particles of smoke, food, cosmetics, etc. present in room air become attached the unit and blown off into the room again.
The outdoor unit continues to operate even if operation is stopped.	Defrosting is underway (as the heating operation is stopped, the microcomputer checks frost accumulated in the outdoor unit and instructs the unit to perform automatic defrosting if necessary).
The OPERATION lamp is flashing	Shows preheating or defrosting operation is underway. As the protective circuit or preheat sensor operates when unit operation is stopped during preheating and then restarted, or when operation mode is switched from cooling to heating, the lamp continues to blink.
Does not reach the temperature setting	Actual room temperature may deviate slightly from the remote controller's temperature setting depending on the number of people in the room, indoor or outdoor conditions.

If the unit still fails to operate normally after performing the above inspections, turn the circuit breaker off and contact your sales agent immediately.

Contact your sales agent immediately if the following phenomena should occur



- The circuit breaker switches off or the fuse blows frequently.
- The switch operation is not stable.
- Foreign matter or water accidentally enters the unit interior.
- The power cord gets excessively hot or its insulation is torn or stripped.
- TIMER lamp on the indoor unit display blinks. (As the nature of the failure can be identified by the blinking cycle, check the blinking cycle before turning off the circuit breaker.)



Notes

- In quiet or stop operation, the following phenomena may occassionally occur, but they are not abnormal for the operation.
  (1) Slight flowing noise of refrigerant in the refrigerating cycle.
  (2) 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 the pre-filter and the evaporator regularly must be cleaned 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.

Please note:
On switching on the equipment, particularly when the room light is dimmed, a slight brightness fluctuation may occur. This is of no consequence.
The conditions of the local Power Supply Companies are to be observed.