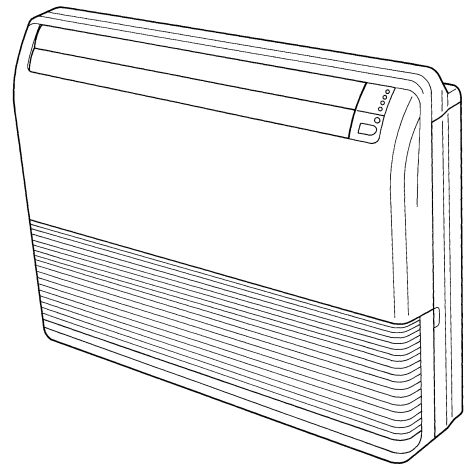
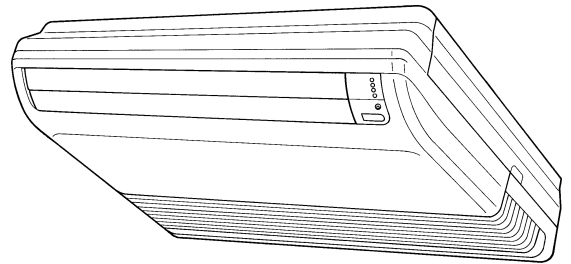




AIR CONDITIONER

## FLOOR CONSOLE/ UNDER CEILING DUAL TYPE

### ABT Series



KEEP THIS MANUAL  
FOR FUTURE REFERENCE

FUJITSU GENERAL LIMITED

**⚠ CAUTION**

**R410A  
REFRIGERANT**

This Air Conditioner contains and operates with refrigerant R410A and Polyol Ester oil.

THIS PRODUCT MUST ONLY BE INSTALLED OR SERVICED BY QUALIFIED PERSONNEL.

Refer to Commonwealth, State, Territory and local legislation, regulations, codes, installation & operation manuals, before the installation, maintenance and/or service of this product.




P/N9375756024

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## SAFETY PRECAUTIONS

- Before using the appliance, read these "SAFETY PRECAUTIONS" thoroughly and operate in the correct way.
- The instructions in this section all relate to safety; be sure to maintain safe operating conditions.
- "DANGER", "WARNING" and "CAUTION" have the following meanings in these instructions:

 <b>DANGER!</b>	This mark indicates procedures which, if improperly performed, are most likely to result in the death of or serious injury to the user or service personnel.
 <b>WARNING!</b>	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.
 <b>CAUTION!</b>	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.

### **DANGER!**

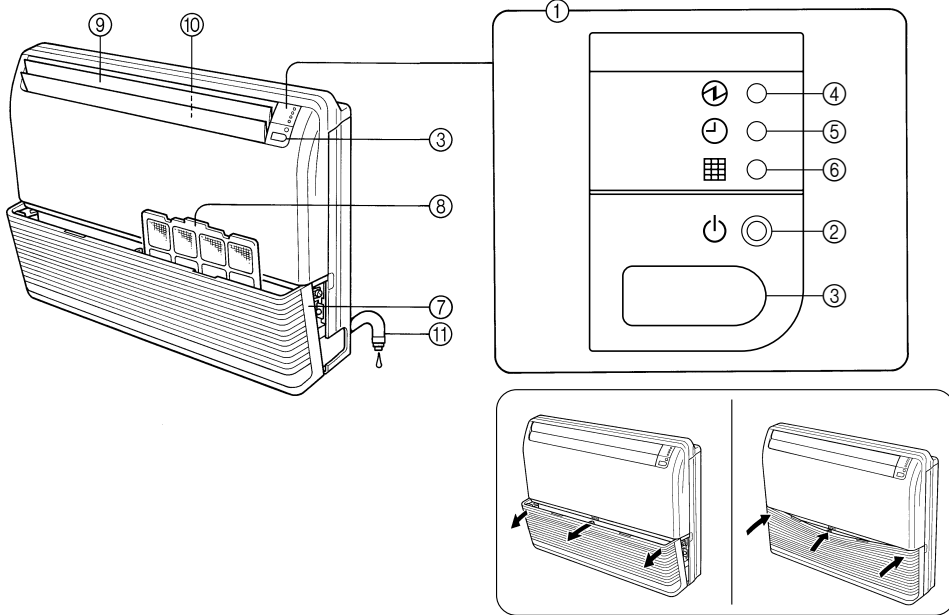
- Do not attempt to install this air conditioner by yourself.
- This unit contains no user-serviceable parts. Always consult authorized service personnel for repairs.
- When moving, consult authorized service personnel for disconnection and installation of the unit.
- Do not become over-exposed to cold air by staying in the direct path of the airflow of the air conditioner for extended periods of time.
- Do not insert fingers or objects into the outlet port or intake grilles.
- Do not start and stop air conditioner operation by disconnecting the power supply cord and so on.
- Take care not to damage the power supply cord.
- In the event of a malfunction (burning smell, etc.), immediately stop operation, turn off the electrical breaker, and consult authorized service personnel.

### **CAUTION!**

- Provide occasional ventilation during use.
- Do not direct air flow at fireplaces or heating apparatus.
- Do not climb on, or place objects on, the air conditioner.
- Do not hang objects from the indoor unit.
- Do not set flower vases or water containers on top of air conditioners.
- Do not expose the air conditioner directly to water.
- Do not operate the air conditioner with wet hands.
- Do not pull power supply cord.
- Turn off power source when not using the unit for extended periods.
- Always turn off the electrical breaker whenever cleaning the air conditioner or changing the air filter.
- Connection valves become hot during Heating; handle with care.
- Check the condition of the installation stand for damage.
- Do not place animals or plants in the direct path of the air flow.
- When restarting after a long period of disuse in the winter, turn the power switch on at least 12 hours before starting the unit.
- Do not drink the water drained from the air conditioner.
- Do not use in applications involving the storage of foods, plants or animals, precision equipment, or art works.
- Do not apply any heavy pressure to radiator fins.
- Operate only with air filters installed.
- Do not block or cover the intake grille and outlet port.
- Ensure that any electronic equipment is at least one metre away from either the indoor or outdoor units.
- Avoid installing the air conditioner near a fireplace or other heating apparatus.
- When installing the indoor and outdoor units, take precautions to prevent access by infants.
- Do not use inflammable gases near the air conditioner.

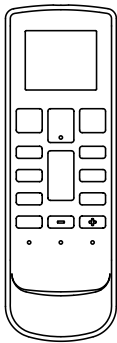
# NAME OF PARTS

Instructions relating to heating (\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).

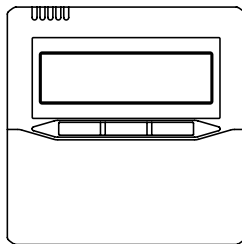


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(OPTION)



WIRELESS TYPE



WIRED TYPE

Either the wireless or wired remote controller can be selected.

## Indoor Unit

- ① Operating Control Panel
- ② MANUAL AUTO button
- ③ Remote Control Signal Receiver
- ④ OPERATION Indicator Lamp (red)
- ⑤ TIMER Indicator Lamp (green)
- ⑥ FILTER Lamp (orange)

● If the TIMER indicator lamp flashes when the timer is operating, it indicates that a fault has occurred with the timer setting (see page 10 AUTO Restart).

- ⑦ Intake Grille
- ⑧ Air Filter
- ⑨ UP/DOWN Air Direction Flaps
- ⑩ RIGHT/LEFT Air Direction Louvers (behind UP/DOWN Air Direction Flaps)
- ⑪ Drain Hose
- ⑫ REMOTE CONTROLLER

# OPERATION

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For operations and timer operations see the operating manual packaged with your remote control unit. Operations depend on the remote control unit selected.

## MANUAL AUTO OPERATION

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Use the MANUAL AUTO operation in the event the remote control unit is lost or otherwise unavailable.

### How To Use the Main Unit Controls

**Press the MANUAL AUTO button on the main unit control panel.**

To stop operation, press the MANUAL AUTO button once again.

- When the air conditioner is operated with the controls on the Main unit, it will operate under the same mode as the AUTO mode selected on the remote control unit.  
However, about Multi-type Air conditioner, the Heat pump model will follow the operating mode of the other indoor unit.
- The fan speed selected will be "AUTO" and the thermostat setting will be 24 °C.

# ADJUSTING THE DIRECTION OF AIR CIRCULATION

Instructions relating to heating (\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).  
Begin air conditioner operation before performing this procedure.

## Vertical Air Direction Adjustment

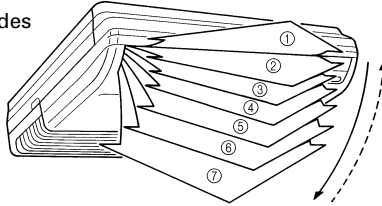
The air direction range will change as follows:



### Types of Air flow Direction Setting:

- ①, ②, ③, ④ : During Cooling/Dry Modes
- ⑤, ⑥, ⑦ : \*During Heating mode

The remote control unit's display does not change.



- Use the air direction adjustments within the ranges shown above.
- The vertical airflow direction is set automatically as shown, in accordance with the type of operation selected.
  - During Cooling/Dry mode : Horizontal flow ①
  - \*During Heating mode : Downward flow ⑦
- During AUTO mode operation, for the first minute after beginning operation, airflow will be horizontal ①; the air direction cannot be adjusted during this period.

## ⚠ CAUTION!

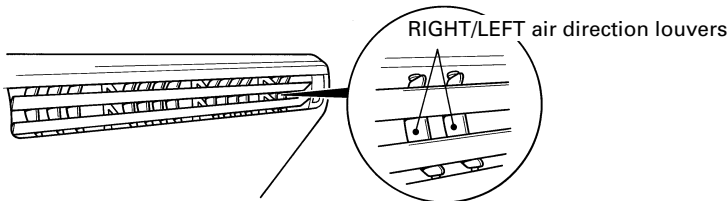
- Attempting to move UP/DOWN air direction flaps or RIGHT/LEFT air direction louvers manually could result in improper operation; in this case, stop operation and restart. The louvers should begin to operate properly again.
- During use of the Cooling and Dry modes, do not set the UP/DOWN air direction flaps in the Heating range (⑤ to ⑦) for long periods of time, since water vapor may condense near the outlet louvers and drops of water may drip from the air conditioner. During the Cooling and Dry modes, if the Air Flow Direction Louvers are left in the heating range for more than 30 minutes, they will automatically return to position ④.
- When used in a room with infants, children, elderly or sick persons, the air direction and room temperature should be considered carefully when making settings.

## Horizontal Air Direction Adjustment

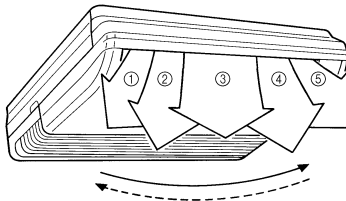
The air direction range will change as follows:



The remote control unit's display does not change.



- Use the air direction adjustments within the ranges shown above.



# SWING OPERATION

Begin air conditioner operation before performing this procedure.

## To select Vertical airflow SWING Operation

In this mode, the UP/DOWN air direction flaps will swing automatically to direct the air flow both up and down.

## To Stop Vertical airflow SWING Operation

Airflow direction will return to the setting before swing was begun.

### About Swing Operation

The type of operation	Range of swing
Cooling/Dry	① to ④
Heating	③ to ⑦
FAN (① ~ ④) <sup>*1</sup>	① to ④
FAN (⑤ ~ ⑦) <sup>*1</sup>	③ to ⑦

- The SWING operation may stop temporarily when the air conditioner's fan is not operating, or when operating at very low speeds.

<sup>\*1</sup> The position of the louvers before swing is given in parenthesis.

## To select Horizontal airflow SWING Operation

In this mode, the RIGHT/LEFT air direction louvers will swing automatically to direct the airflow both right and left.

## To Stop Horizontal airflow SWING Operation

Airflow direction will return to the setting before swing was begun.

### About Swing Operation

The type of operation	Range of swing
Cooling/Dry	① to ⑤ (All range)
Heating	① to ⑤ (All range)
FAN	① to ⑤ (All range)

- The SWING operation may stop temporarily when the air conditioner's fan is not operating, or when operating at very low speeds.

# CLEANING AND CARE

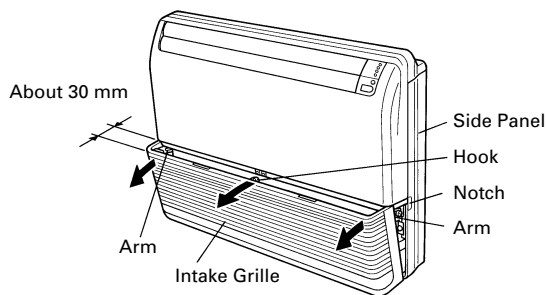
## CAUTION!

- Before cleaning the air conditioner, be sure to turn it off and disconnect the power supply cord.
- Be sure the intake grille is installed securely.
- When removing and replacing the air filters, be sure not to touch the heat exchanger, as personal injury may result.

### Cleaning the Air Filter

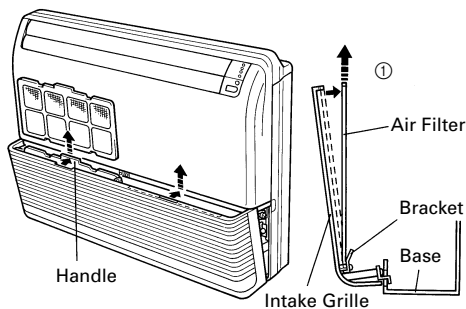
When the **FILTER Lamp** is blinking, remove the filter and clean it.

#### 1. Pull out both sides and the center of the intake grille.



#### 2. Pull the air filters upward to remove them.

Push the air filter handles away from the intake grille in direction ①, then pull out the air filters.

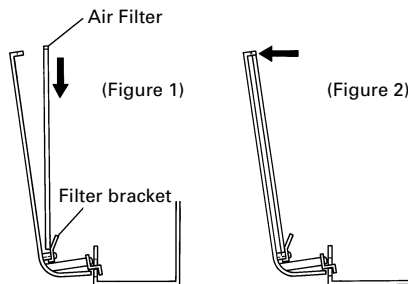


#### 3. Clean the air filters.

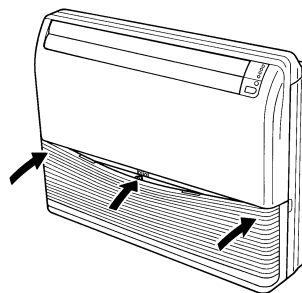
Remove the dust from the air filters by vacuuming or washing them. After washing, allow the air filters to dry thoroughly in an area protected from sunlight.

#### 4. Re-attach the air filters to the intake grille.

- ① The air filters fit onto the inside of the intake grille. (figure 1)
- ② The bottom edges of the air filters should fit into the filter brackets. (figure 1)
- ③ The air filters should be pushed down so that their top edges fit under the projections at the top of the intake grille. (figure 2)



#### 5. Push in both sides and the center of the intake grille.



- Dust can be cleaned from the air filter either with a vacuum cleaner, or by washing the filter in a solution of mild detergent and warm water. If you wash the filter, be sure to allow it to dry thoroughly in a shady place before re-installing.
- If dirt is allowed to accumulate on the air filter, air flow will be reduced, lowering operating efficiency and increasing noise.
- After turning the power on, press the filter button on the remote control to turn off the filter lamp. (Refer to the operation manual packed with remote control unit for details.)

- When used for extended periods, the unit may accumulate dirt inside, reducing its performance. We recommend that the unit be inspected regularly, in addition to your own cleaning and care. For more information, consult authorized service personnel.
- When cleaning the unit's body, do not use water hotter than 40 °C, harsh abrasive cleansers, or volatile agents like benzene or thinner.
- Do not expose the unit body to liquid insecticides or hairsprays.
- If the unit will not be operated for a period of one month or more, be sure to allow the inner parts of the unit to dry thoroughly, in advance, by operating the unit in fan mode for half a day.

# TROUBLESHOOTING

Instructions relating to heating (\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).



## WARNING!

In the event of a malfunction (burning smell, etc.), immediately stop operation, disconnect the power supply plug or turn off the circuit breaker, and consult authorized service personnel. Merely turning off the unit's power switch will not completely disconnect the unit from the power source. Always be sure to disconnect the power supply plug or turn off your circuit breaker to ensure that power is completely off.

Before requesting service, perform the following checks:

	Symptom	Problem	See page
NORMAL FUNCTION	Doesn't operate immediately:	<ul style="list-style-type: none"> <li>● If the unit is stopped and then immediately started again, the compressor will not operate for about 3 minutes, in order to prevent fuse blowouts.</li> <li>● Whenever the power supply plug is disconnected and then reconnected to a power outlet, the protection circuit will operate for about 3 minutes, preventing unit operation during that period.</li> </ul>	—
	Noise is heard:	<ul style="list-style-type: none"> <li>● During operation and immediately after stopping the unit, the sound of water flowing in the air conditioner's piping may be heard. Also, noise may be particularly noticeable for about 2 to 3 minutes after starting operation (sound of coolant flowing).</li> <li>● During operation, a slight squeaking sound may be heard. This is the result of minute expansion and contraction of the front cover due to temperature changes.</li> </ul>	—
		*● During Heating operation, a sizzling sound may be heard occasionally. This sound is produced by the Automatic Defrosting operation.	8
	Smells:	<ul style="list-style-type: none"> <li>● Some smell may be emitted from the indoor unit. This smell is the result of room smells (furniture, tobacco, etc.) which have been taken into the air conditioner.</li> </ul>	—
	Mist or steam are emitted:	<ul style="list-style-type: none"> <li>● During Cooling or Dry operation, a thin mist may be seen emitted from the indoor unit. This results from the sudden Cooling of room air by the air emitted from the air conditioner, resulting in condensation and misting.</li> </ul>	—
		*● During Heating operation, the outdoor unit's fan may stop, and steam may be seen rising from the unit. This is due to the Automatic Defrosting operation.	8
	Airflow is weak or stops:	*● When Heating operation is started, fan speed is temporarily very low, to allow internal parts to warm up.	—
		*● During Heating operation, if the room temperature rises above the thermostat setting, the outdoor unit will stop, and the indoor unit will operate at very low fan speed. If you wish to warm the room further, set the thermostat to a higher setting.	
		*● During Heating operation, the unit will temporarily stop operation (between 4 and 15 minutes) as the Automatic Defrosting mode operates. During the Automatic Defrosting operation, the OPERATION indicator lamp will flash.	8
		● The fan may operate at very low speed during Dry operation or when the unit is monitoring the room's temperature.	—
		● During QUIET operation, the fan will operate at very low speed.	—
		● In the monitor AUTO operation, the fan will operate at very low speed.	—
	Water is produced from the outdoor unit:	*● During Heating operation, water may be produced from the outdoor unit due to the Automatic Defrosting operation.	8
The FILTER lamp blinks:	● Clean the filter. Afterwards, turn the FILTER lamp off. See the operating manual that came with your remote control unit for the method for turning off the FILTER lamp.	6	



Instructions relating to heating (\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).

	Symptom	Items to check	See page
CHECK ONCE MORE	Doesn't operate at all:	<ul style="list-style-type: none"> <li>● Has the circuit breaker been turned off?</li> <li>● Has there been a power failure?</li> <li>● Has a fuse blown out, or a circuit breaker been tripped?</li> </ul>	—
		<ul style="list-style-type: none"> <li>● Is the timer operating?</li> </ul>	—
	Poor Cooling (or *Heating) performance:	<ul style="list-style-type: none"> <li>● Is the air filter dirty?</li> <li>● Are the air conditioner's intake grille or outlet port blocked?</li> <li>● Did you adjust the room temperature settings (thermostat) correctly?</li> <li>● Is there a window or door open?</li> <li>● In the case of Cooling operation, is a window allowing bright sunlight to enter? (Close the curtains.)</li> <li>● In the case of Cooling operation, are there heating apparatus and computers inside the room, or are there too many people in the room?</li> </ul>	—
		<ul style="list-style-type: none"> <li>● Is the unit set for QUIET operation?</li> </ul>	—

If the problem persists after performing these checks, or if you notice burning smells, or the TIMER indicator lamp and operation indicator lamp flashes, stop operation immediately, disconnect the power supply plug, and consult with authorized service personnel.

## OPERATING TIPS

Instructions relating to heating (\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).

### \*Heating Performance

- This air conditioner operates on the heat-pump principle, absorbing heat from outdoor air and transferring that heat indoors. As a result, the operating performance is reduced as outdoor air temperature drops. If you feel that insufficient heating performance is being produced, we recommend you use this air conditioner in conjunction with another kind of heating appliance.
- Heat-pump air conditioners heat your entire room by recirculating air throughout the room, with the result that some time may be required after first starting the air conditioner until the room is heated.

### \*When Indoor and Outdoor Temperature are High

- When both indoor and outdoor temperatures are high during use of the heating mode, the outdoor unit's fan may stop at times.

### \*Fan speed: AUTO

Heating: The fan will operate at very low speed when the temperature of the air issued from the indoor unit is low.

Cooling: As the room temperature approaches that of the set temperature, the fan speed becomes slower.

Fan: The fan runs at the low fan speed.

### \*Microcomputer-controlled Automatic Defrosting

- When using the Heating mode under conditions of low outdoor temperature and high humidity, frost may form on the outdoor unit, resulting in reduced operating performance.

In order to prevent this kind of reduced performance, this unit is equipped with a Microcomputer-controlled Automatic Defrosting function. If frost forms, the air conditioner will temporarily stop, and the defrosting circuit will operate briefly (for about 4 to 15 minutes).

During Automatic Defrosting operation, the OPERATION indicator lamp (red) will flash.

### \*Low Ambient Cooling

- When the outdoor temperature drops, the outdoor unit's fans may switch to Low Speed.

### \*Hot start (for heating)

- The indoor unit prevents cold drafts when heating operation begins.

The indoor unit fan will not operate or it will operate at a very low speed until the heat exchanger reaches the set temperature.

# OPERATING TIPS

## Mode operation: AUTO

### COOLING MODEL

- When the room temperature is 2 °C higher than the set temperature, the mode will switch between Cooling and Drying.

### HEAT & COOL MODEL (Reverse Cycle)

#### Auto changeover function

- When AUTO CHANGEOVER is selected, the air conditioner selects the appropriate operation mode (Cooling or Heating) according to your room's present temperature.
- When AUTO CHANGEOVER is first selected, the fan will operate at a very low speed for about 1 minute while the unit determines the current conditions of the room and selects the proper operation mode.

If the difference between thermostat setting and actual room temperature is more than +2 °C

→ Cooling or dry operation.

(Monitor operation may be selected if the outdoor temperature is low.)

If the difference between thermostat setting and actual room temperature is within ±2 °C

→ Monitor operation.

If the difference between thermostat setting and actual room temperature is more than -2 °C

→ Heating operation.

(Monitor operation may be selected if the outdoor temperature is high.)

- During the Drying mode operation, the FAN setting should be switched to LOW for a gently cooling effect during which the fan may temporarily stop rotating.

- When the room temperature is near the thermostat setting, the air conditioner will begin monitor operation. In the monitor operation mode, the fan will operate at a very low speed. If the room temperature subsequently changes, the air conditioner will once again select the appropriate operation (Heating or Cooling) to adjust the temperature to the value set in the thermostat. (The monitor operation range is ±2 °C relative to the thermostat setting.)

### About Mode Operation

**Heating:** ● Use to warm your room.

- When Heating mode is selected, the air conditioner will operate at very low fan speed for about 3 to 5 minutes, after which it will switch to the selected fan setting. This period of time is provided to allow the indoor unit to warm up before beginning full operation.
- When the room temperature is very low, frost may form on the outside unit, and its performance may be reduced. In order to remove such frost, the unit will automatically enter the defrost cycle from time to time. During Automatic Defrosting operation, the OPERATION indicator Lamp will flash, and the heat operation will be interrupted.
- After the start of heating operation, it takes sometime before the room gets warmer.

**Cooling:** ● Use to cool your room.

**Dry:** ● Use for gently cooling while dehumidifying your room.

- You cannot heat the room during Dry mode.
- During Dry mode, the unit will operate at low speed; in order to adjust room humidity, the indoor unit's fan may stop from time to time. Also, the fan may operate at very low speed when adjusting room humidity.
- The fan speed cannot be changed manually when Dry mode has been selected.

**Fan:** ● Use to circulate the air throughout your room.

#### During Heating mode:

Set the thermostat to a temperature setting that is higher than the current room temperature. The Heating mode will not operate if the thermostat is set lower than the actual room temperature.

#### During Cooling/Dry mode:

Set the thermostat to a temperature setting that is lower than the current room temperature. The Cooling and Dry modes will not operate if the thermostat is set higher than the actual room temperature (in Cooling mode, the fan alone will operate).

#### During Fan mode:

You can not use the unit to heat and cool your room.

## AUTO Restart

### In Event of Power Interruption

- Should the power supply to the air conditioner be interrupted by a power failure, the air conditioner will restart automatically in the previously selected mode once the power is restored.
- Should a power failure occur during TIMER operation, the timer will be reset and the unit will begin (or stop) operating under the new timer setting. In this event, the TIMER indicator lamp (green) will flash.
- Use of other electrical appliances (electric shaver, etc.) or nearby use of a wireless radio transmitter may cause the air conditioner to malfunction. In this event, temporarily disconnect the power supply plug, reconnect it, and then use the remote control unit to resume operation.

## Multi-type Air conditioner

This indoor unit can be connected to a multi-type outdoor unit. The multi-type air conditioner allows multiple indoor units to be operated in multiple locations. The indoor units may be operated simultaneously, in accordance with their respective output.

### Simultaneous Use of Multiple Units

Instructions relating to inverter (\*) are applicable only to "INVERTER MODEL".

- When using a multi-type air conditioner, the multiple indoor units can be operated simultaneously, but when two or more indoor units of the same group are operated simultaneously, the heating and cooling efficiency will be less than when a single indoor unit is used alone. Accordingly, when you wish to use more than one indoor unit for cooling at the same time, the use should be concentrated at night and other times when less output is required. In the same way, when multiple units are used simultaneously for heating, it is recommended that they be used in conjunction with other auxiliary space heaters, as required.
- Seasonal and outdoor temperature conditions, the structure of the rooms and the number of persons present may also result in differences of operating efficiency. We recommend that you try various operating patterns in order to confirm the level of heating and cooling output provided by your units, and use the units in the way that best matches your family's lifestyle.
- If you discover that one or more units delivers a low level of cooling or heating during simultaneous operation, we recommend that you stop simultaneous operation of the multiple units.
- \*● Operation cannot be done in the following different operating modes.
  - Cooling mode and dry mode
  - Cooling mode and fan mode
  - Dry mode and fan mode
- \*● The operating mode (heating mode or cooling (dry mode) of the outdoor unit will be determined by the operating mode of the indoor unit that was operated first. If the indoor unit was started in fan mode, the operating mode of the outdoor unit will not be determined.

For example, if indoor unit (A) was started in fan mode and then indoor unit (B) was then operated in heating mode, indoor unit (A) would temporarily start operation in fan mode but when indoor unit (B) started operating in heating mode, the OPERATION indicator lamp (red) for indoor unit (A) would begin to flash (1 second on, 1 second off) and it would go into standby mode. Indoor unit (B) would continue to operate in heating mode.

### Notice

Instructions relating to heating (\*) are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).

- \*● During use of the heating mode, the outdoor unit will occasionally commence the defrost operation for brief periods. During the defrosting operation, if the user sets the indoor unit for heating again, the defrosting mode will continue, and the heating operation will begin after completion of defrosting, with the result that some time may be required before warm air is emitted.
- \*● During use of the heating mode, the top of the indoor unit may become warm, but this is due to the fact that coolant is circulated through the indoor unit even when it is stopped; it is not a malfunction.

# TEMPERATURE AND HUMIDITY RANGE

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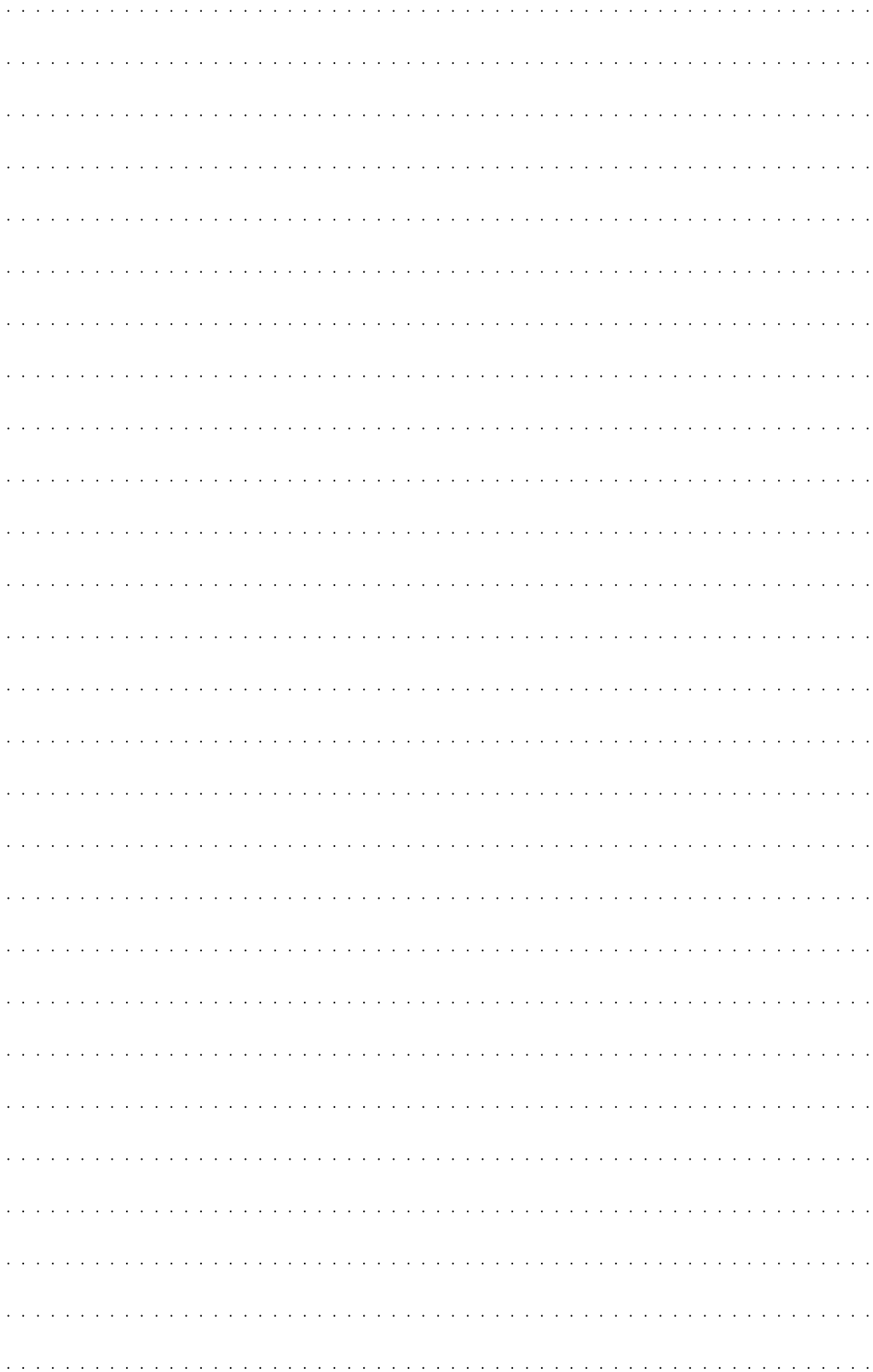
Permissible ranges of temperature and humidity are as follows:

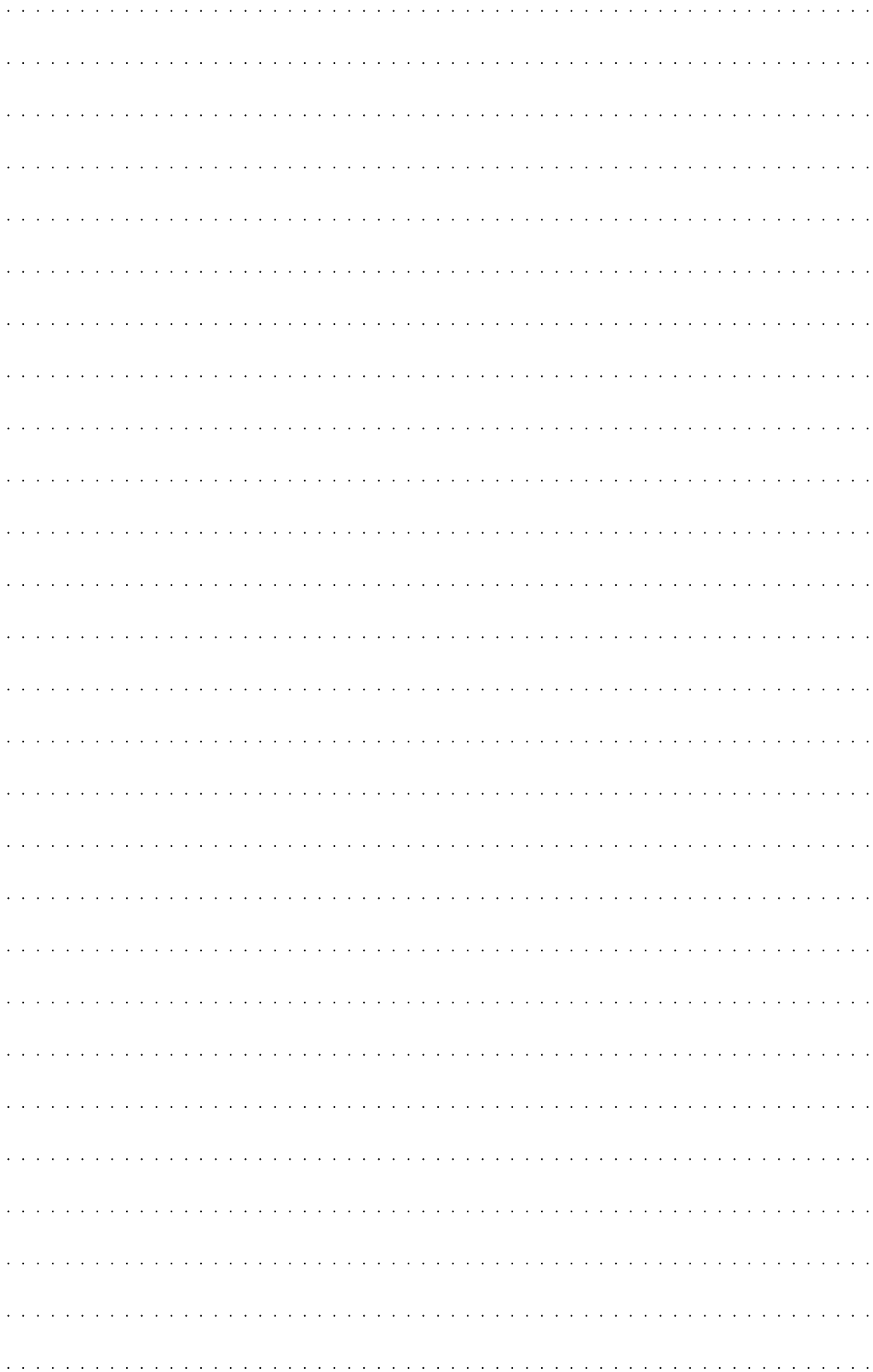
Cooling/Dry Operation	Outdoor temperature	About -10 °C to 46 °C
	Indoor temperature	About 18 °C to 32 °C
	Indoor humidity	Below approximately 80%. If the air conditioner is used continuously for many hours, water may condense on the surface and drip.
Heating	Outdoor temperature	About -15 °C to 24 °C
	Indoor temperature	About below 30 °C

If the unit is used under higher temperature conditions than those noted here, the automatic protection circuit may operate, interrupting the operation.

If the unit is used under lower temperature conditions than those noted here, the heat exchanger may freeze, causing water leakage or other malfunction.

- Do not use the air conditioner for any purpose other than room cooling/dry, room heating or fan.









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