

# HITACHI

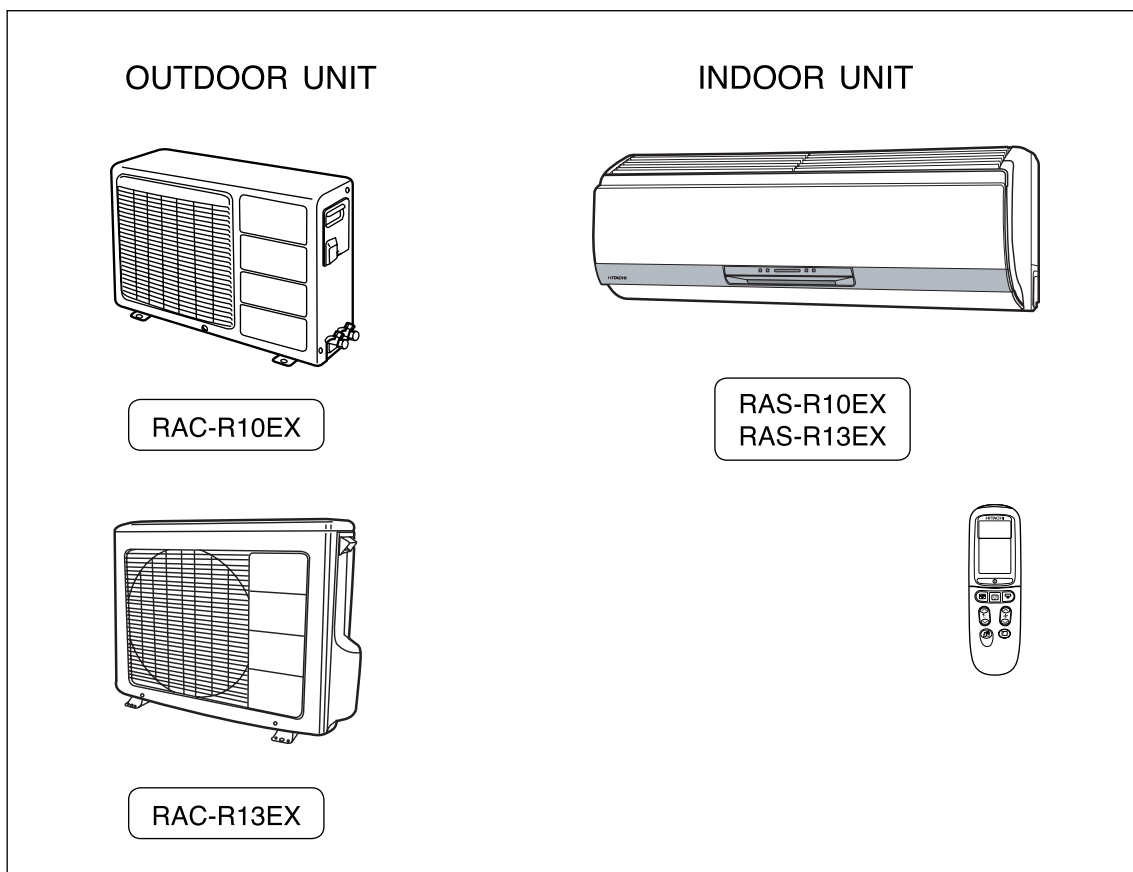
Inspire the Next

**SPLIT TYPE**

## INDOOR UNIT/OUTDOOR UNIT

### MODEL

**RAS-R10EX/RAC-R10EX**  
**RAS-R13EX/RAC-R13EX**



Instruction manual

Page 1~36

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

คู่มือการใช้งาน




หน้า 137-72

เพื่อให้ได้การใช้งานที่ถูกต้อง กรุณาอ่านคู่มือการใช้งานให้เข้าใจอย่างถ่องแท้








# 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.





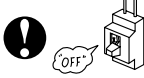

## PRECAUTIONS DURING INSTALLATION

|   |  |   |
|---|--|---|
| <br><b>WARNING</b>   | <ul style="list-style-type: none"> <li>● Do not reconstruct the unit. Water leakage, fault, short circuit or fire may occur if you reconstruct the unit by yourself.</li> </ul>  |    |
|   | <ul style="list-style-type: none"> <li>● 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.</li> </ul>                                 |   |
| <br><b>CAUTION</b> | <ul style="list-style-type: none"> <li>● 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.</li> </ul>             |    |
|   | <ul style="list-style-type: none"> <li>● A circuit breaker should be installed depending on the mounting site of the unit. Without a circuit breaker, the danger of electric shock exists.</li> </ul>  |  |
|   | <ul style="list-style-type: none"> <li>● Do not install near location where there is flammable gas. The outdoor unit may catch fire if flammable gas leaks around it.</li> <li>● Please ensure smooth flow of water when installing the drain hose.</li> </ul> |   |

## PRECAUTIONS DURING SHIFTING OR MAINTENANCE

|   |  |   |
|---|--|---|
| <br><b>WARNING</b> | <ul style="list-style-type: none"> <li>● 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.</li> </ul> |   |
|   | <ul style="list-style-type: none"> <li>● Please contact your agent for maintenance. Improper self maintenance may cause electric shock and fire.</li> </ul>  |   |
|   | <ul style="list-style-type: none"> <li>● 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.</li> </ul>   |   |

## PRECAUTIONS DURING OPERATION

|   |   |   |
|---|---|---|
| <br><b>WARNING</b> | <ul style="list-style-type: none"> <li>● Avoid an extended period of direct air flow for your health.</li> </ul>  |  |
|   | <ul style="list-style-type: none"> <li>● Do not put objects like thin rods into the panel of blower and suction side because the high-speed fan inside may cause danger.</li> </ul> |    |
|   | <ul style="list-style-type: none"> <li>● Do not use any conductor as fuse wire, this could cause fatal accident.</li> </ul>   |  |
|   | <ul style="list-style-type: none"> <li>● During thunder storm, disconnect and turn off the circuit breaker.</li> </ul>  |    |
|   | <ul style="list-style-type: none"> <li>● This unit has UV LED which emits ultra violet light. AVOID DIRECT EYE EXPOSURE.</li> </ul>   |  |

## PRECAUTIONS DURING OPERATION

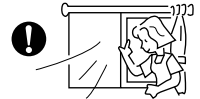
**!**  
**C**  
**A**  
**U**  
**T**  
**I**  
**O**  
**N**

- 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.



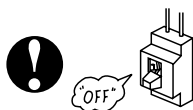
- Do not direct the cool air coming out from the air-conditioner panel to face household heating apparatus as this may affect the working of apparatus such as the electric kettle, oven etc.

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



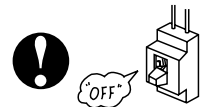
- Do not splash or direct water to the body of the unit when cleaning it as this may cause short circuit.

- 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.

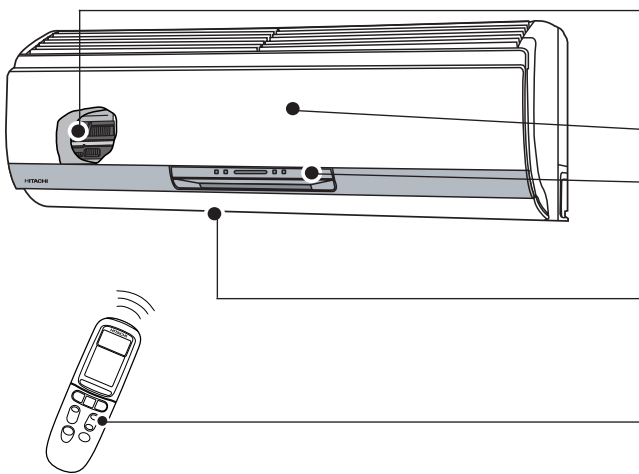


- Do not place plants directly under the air flow as it is bad for the plants.

- 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.

# NAMES AND FUNCTIONS OF EACH PART

## INDOOR UNIT



**AIR FILTER**

To prevent dust from coming into the indoor unit.  
(Refer page 29)

**FRONT PANEL (AIR INLET)**

**INDOOR UNIT INDICATORS**

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

**HORIZONTAL DEFLECTOR • VERTICAL DEFLECTOR (AIR OUTLET)**

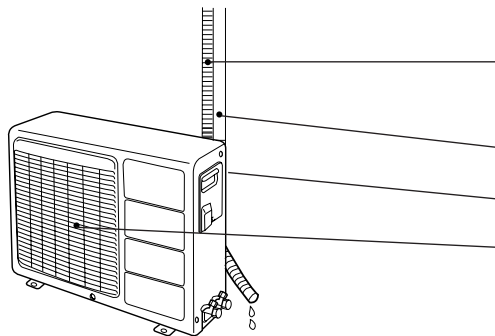
(Refer page 21)

**REMOTE CONTROL**

Send out operation signal to the indoor unit. So as to operate the whole unit.  
(Refer page 7)

## OUTDOOR UNIT

RAC-R10EX



**DRAIN PIPE**

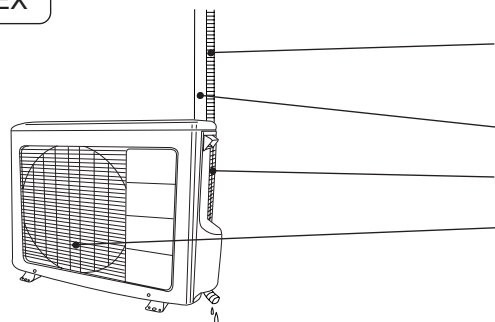
Condensed water drain to outside.

**CONNECTING CORD**

**AIR INLET (BACK)**

**AIR OUTLET**

RAC-R13EX



**DRAIN PIPE**

Condensed water drain to outside.

**CONNECTING CORD**

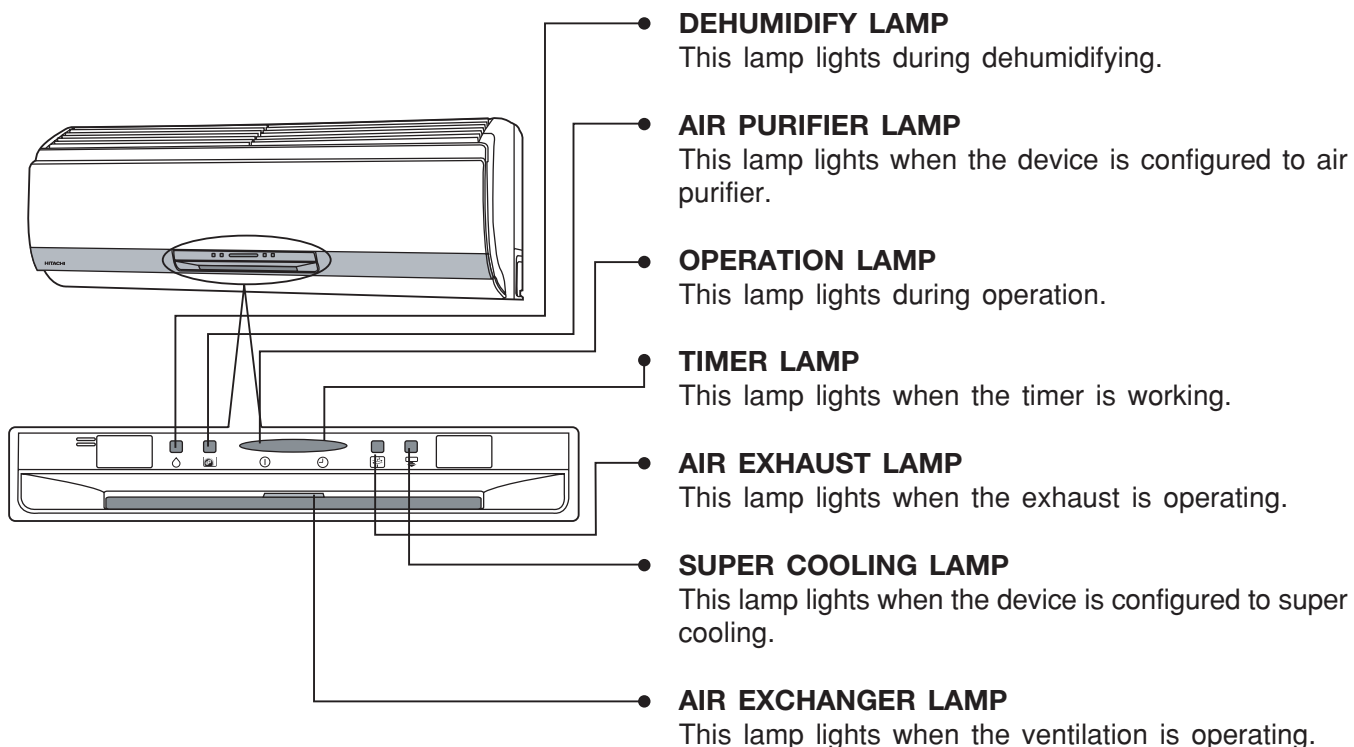
**AIR INLET (BACK)**

**AIR OUTLET**

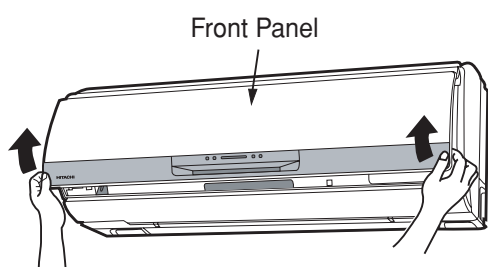
## MODEL NAME AND DIMENSIONS

| MODEL             | WIDTH (mm) | HEIGHT (mm) | DEPTH (mm) |
|-------------------|------------|-------------|------------|
| RAS-R10EX / R13EX | 840        | 298         | 248        |
| RAC-R10EX         | 700        | 570         | 210        |
| RAC-R13EX         | 750        | 570         | 280        |

## INDOOR UNIT INDICATORS



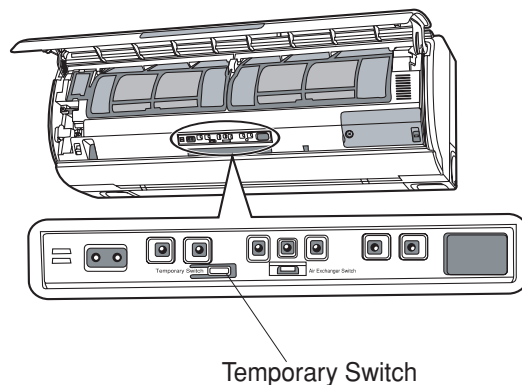
## TEMPORARY SWITCH



- Hold both sides of the front panel and lift up.
- When the works are done, follow the opposite direction to close it. (When the “click” sound is heard, it means the panel is closed properly.)

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

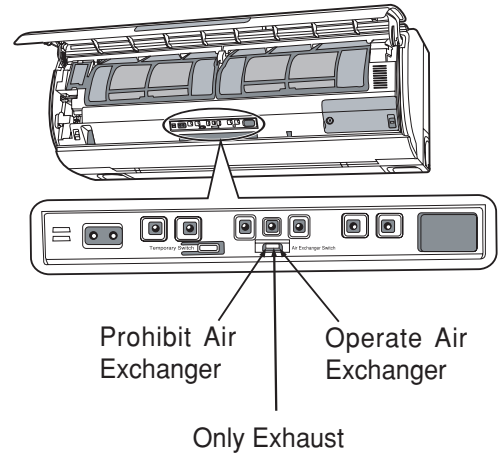
- By setting the temporary switch, the operation is done in previously set operation mode.
- When the operation is done using the temporary switch after the power source is turned off and turn on again, the operation is done in automatic mode.



# NAMES AND FUNCTIONS OF EACH PART

## AIR EXCHANGER SELECTION SWITCH

|                       |  |
|-----------------------|--|
| OPERATE AIR EXCHANGER | Select the switch when using air-exchanger operation. In normal condition, please use this mode. This mode is set initially from manufacturer.   |
| ONLY EXHAUST          | Select the switch when there is no intake operation. This mode is operational when the intake and exhaust hose cannot directly connect to outdoor. The hose outlet is located in a space between inner wall and outer wall, and these space is connected to outdoor.   |
| OPERATE AIR EXCHANGER | Select the switch when air exchanger is prohibited. When the intake and exhaust hose cannot connect directly to the outdoor (installation work specified for the embedded ducting), or even the hose can be connected to the outdoor but there is a source of odor, oil or smoke near the exit of intake and exhaust hose. |



No matter in which mode the air exchanger selection switch is selected, twin air flow operation and air purifier operation can be functioned.

# NAMES AND FUNCTIONS OF REMOTE CONTROL

**REMOTE CONTROL** : This controls the operation of the indoor unit. The range of control is about 7 meters. If indoor lighting is controlled electronically, the range of control may be shorter. Before fixing it, make sure the indoor unit can be controlled from the remote controller.

## Transmission Sign

Point this window toward the indoor unit when controlling it. The transmission sign blinks when a signal is sent.

## Display

This indicates the room temperature selected, current time, timer status, function and intensity of circulation selected.

## START/STOP Button

Press this button to start operation. Press it again to stop operation.

## SILENT Button

Press this button to start silent mode.

## SUPER COOLING Button

Press this button to start super cooling mode.

## AIR EXCHANGER Button

Press this button to start ventilation mode.

## FAN Button

Use this button to increase and decrease fan speed.

## TEMPERATURE Button

Use this button to raise or lower the temperature setting. (Keep pressing and the value will change more quickly.)


## TEMPERATURE Indicator

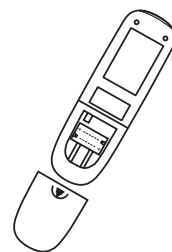
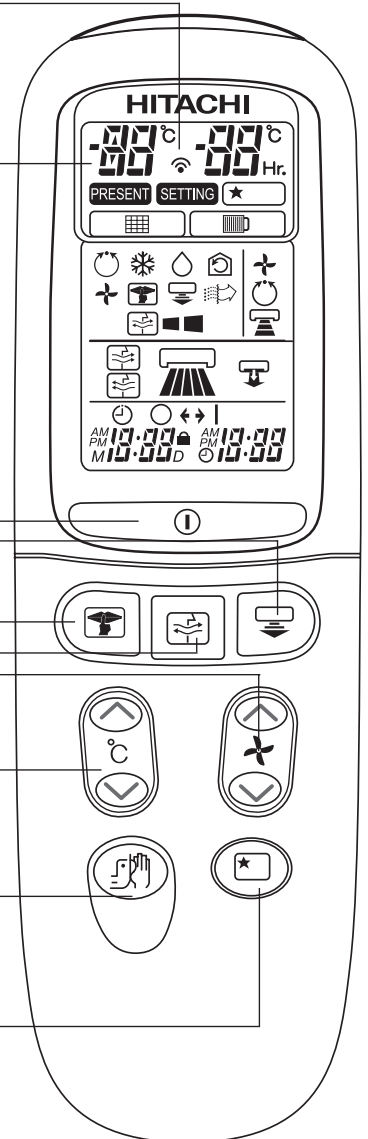
Use this button to indicate temperature of indoor and outdoor.

## SLEEP Button

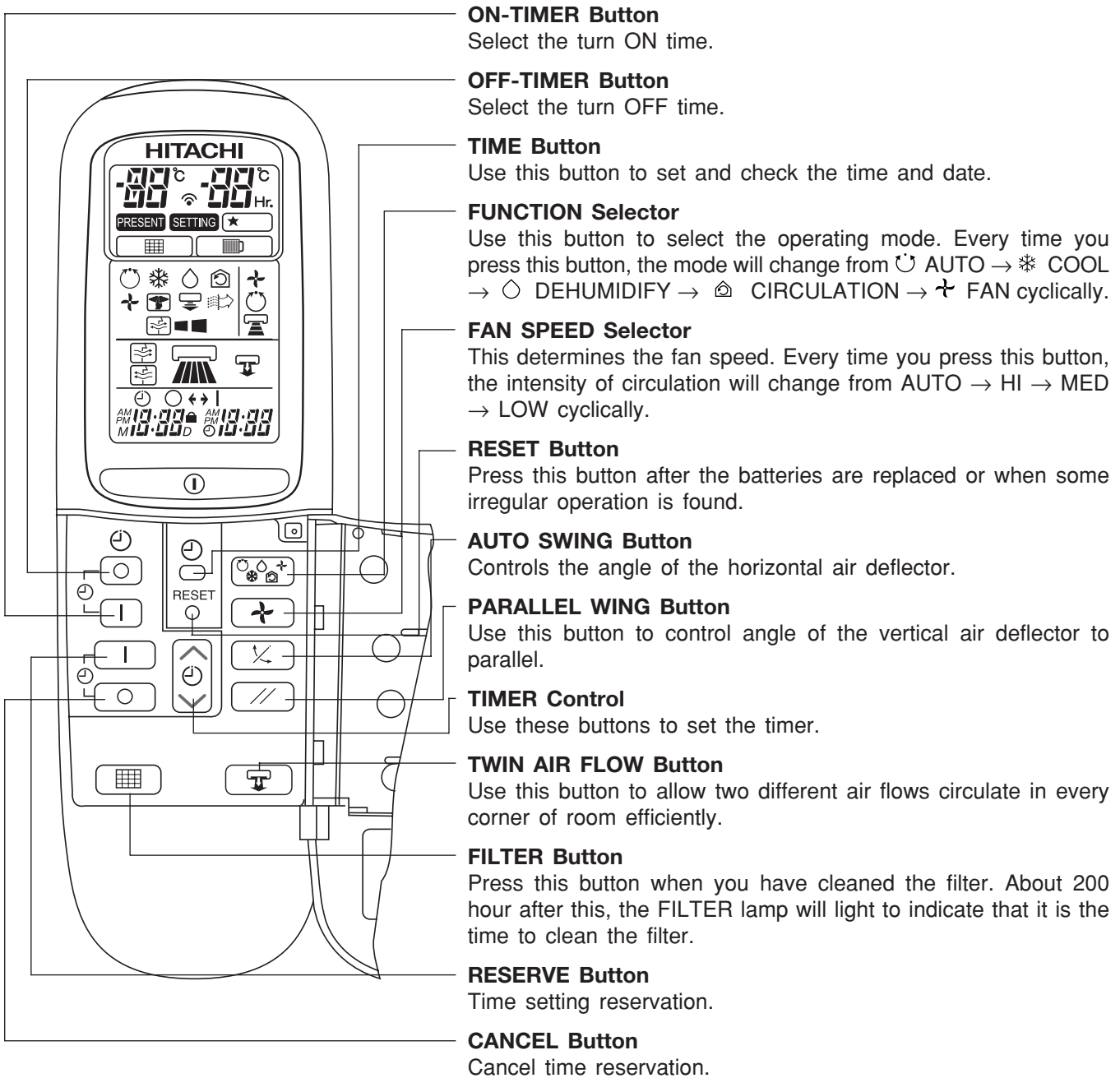
Use this button to set the sleep timer.

## BACK

Press the arrow “” on the back cover and push or pull to the indicated direction, to open or close the battery cover.



# NAMES AND FUNCTIONS OF REMOTE CONTROL

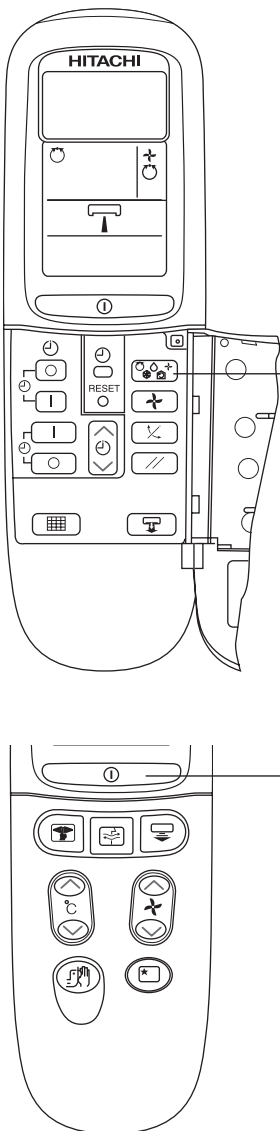


## Precautions for Use


- Do not put the remote controller in the following places.
  - Under direct sunlight.
  - In the vicinity of a heater.
- Handle the remote controller carefully. Do not drop it on the floor, and protect it from water.
- Once the outdoor unit stops, it will not restart for about 3 minutes (unless you turn the power switch off and on or unplug the power cord and plug it in again). This is to protect the device and does not indicate a failure.
- If you press the FUNCTION selector button during operation, the device may stop for about 3 minutes for protection.

# AUTOMATIC OPERATION

The device will automatically determine the mode of operation COOL, or Dehumidify, depending on the initial room temperature. The selected mode of operation will not change when the room temperature varies.



**1**

Press the FUNCTION selector so that the display indicates the  (AUTO) mode of operation.


- When AUTO has been selected, the device will automatically determine the mode of operation COOL or Dehumidify, depending on the initial room temperature and outdoor temperature.

**START STOP**

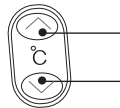
Press the  (START/STOP) button.

Operation starts with a beep.

Press the button again to stop operation.

- As the settings are stored in memory in the remote controller, you only have to press the  (START/STOP) button next time.

You can raise or lower the temperature setting as necessary by maximum of 3°C.



Press the temperature button and the temperature setting will change by 1°C each time.

- The preset temperature and the actual room temperature may vary somewhat depending on conditions.
- The display does not indicate the preset temperature in the AUTO mode. If you change the setting, the indoor unit will produce a beep.

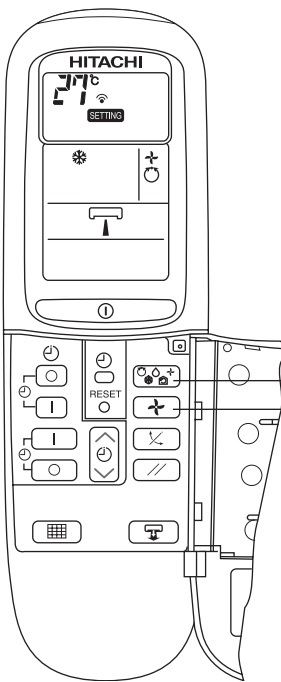
## ■ CONDITION OF AUTOMATIC OPERATION

- The selected mode of operation will not change during the operation even though the room temperature change.

| INITIAL ROOM TEMPERATURE (APPROX.) | FUNCTION     | TEMPERATURE SETTING                      | FAN SPEED   |
|------------------------------------|--------------|--|---|
| Over 27°C                          | ➔ COOL       | 27°C                                     | HIGH at start, LOW after the preset temperature is reached. |
| 16~27°C                            | ➔ DEHUMIDIFY | Slightly lower than the room temperature | LOW   |

# COOLING OPERATION


Use the device for cooling when the outdoor temperature is 21-42°C.  
If humidity is very high (over 80%) indoors, some dew may form on the air outlet grille of the indoor unit.







**1**

Press the FUNCTION selector so that the display indicates ❄️ (COOL).

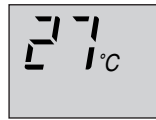
**2**

Set the desired FAN SPEED with the  (FAN SPEED) button (the display indicates the setting).

-  (AUTO): The FAN SPEED is HI at first and varies to MED automatically when the preset temperature has been reached.
-  (HI) : Economical as the room will become cool quickly.
-  (MED) : Fan speed slow.
-  (LOW) : Fan speed slower.

**3**



Set the desired room temperature with the TEMPERATURE button (the display indicates the setting).




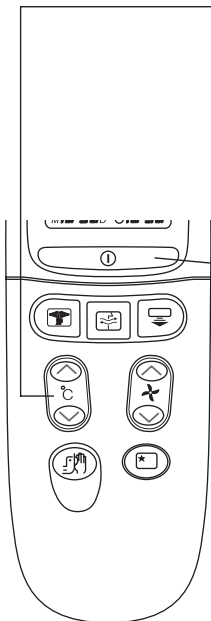
The range of 25-28°C is recommended as the room temperature for cooling.  
If the temperature setting is 27°C, the room temperature will be controlled at around 27°C.

The temperature setting and the actual room temperature may vary somewhat depending on conditions.

**START  
STOP**

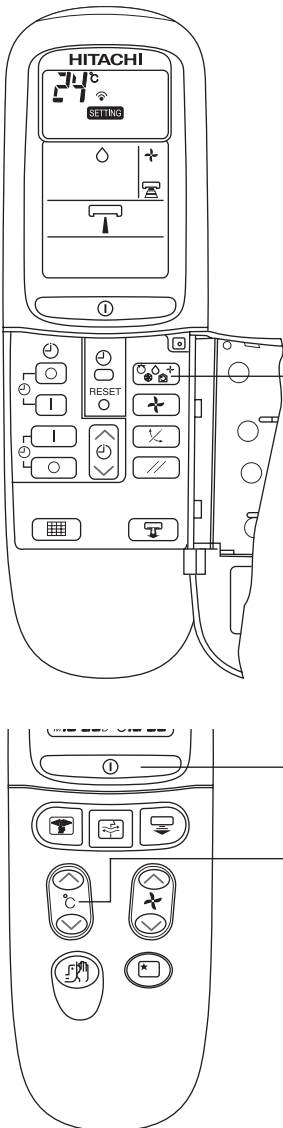
Press the  (START/STOP) button. Cooling operation starts with a beep. Press the button again to stop operation. The cooling function does not start if the temperature setting is higher than the current room temperature (even though the  (OPERATION) lamp lights). The cooling function will start as soon as you set the temperature below the current room temperature.

- As the settings are stored in memory in the remote controller, you only have to press the  (START/STOP) button next time.

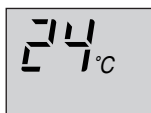


# DEHUMIDIFYING OPERATION

Use the device for dehumidifying when the room temperature is over 16°C.  
When it is under 15°C, the dehumidifying function will not work.



**1** Press the FUNCTION selector so that the display indicates ◊ (DEHUMIDIFY).  
The FAN SPEED is set at LOW automatically.  
The FAN SPEED button does not work.

**2** Set the desired room temperature with the TEMPERATURE button (the display indicates the setting).  
 The range of 20-26°C is recommended as the room temperature for dehumidifying.

**START/STOP** Press the Ⓜ (START/STOP) button. Dehumidifying operation starts with a beep. Press the button again to stop operation.

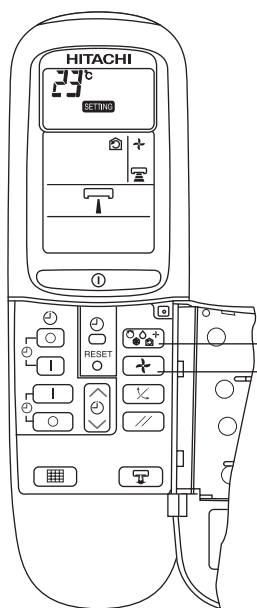
■ As the settings are stored in memory in the remote controller, you only have to press the Ⓜ (START/STOP) button next time.


## ■ Dehumidifying Function


When the room temperature is higher than the temperature setting: The device will dehumidify the room, reducing the room temperature to the preset level.  
When the room temperature is lower than the temperature setting: Dehumidifying will be performed at the temperature setting slightly lower than the current room temperature, regardless of the temperature setting. The function will stop (the indoor unit will stop emitting air) as soon as the room temperature becomes lower than the setting temperature.

# AIR CIRCULATION OPERATION


You can use the device simply as an air circulator. Use this function to dry the interior of the indoor unit at the end of summer.

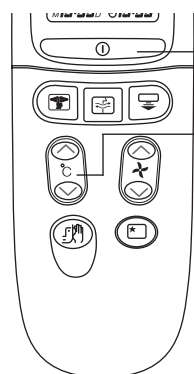


**1** Press the FUNCTION selector so that the display indicates  (CIRCULATE).

**2** Press the  (FAN SPEED) button and select the desired FAN SPEED (the display indicates your choice).

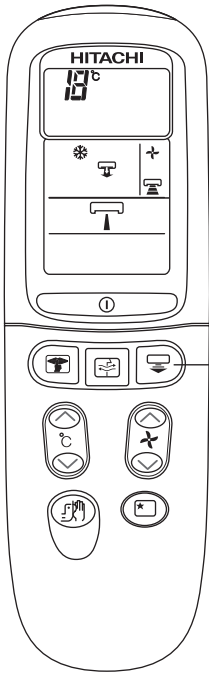
**3** Press the temperature control button to set to the desired temperature.

**START STOP** Press the  (START/STOP) button. Circulating operation starts with a beep. Press the button again to stop operation.












# SUPER COOLING



Press the  button.

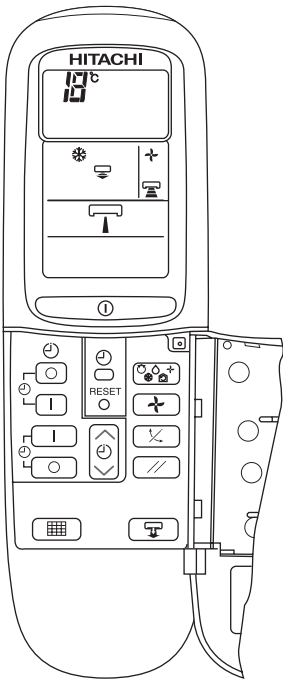
- Operation start with a signal received sound “beep”.
- Unit will be forced operate in ❄️ (COOL) with SUPER HI fan speed for 20 minutes.  Indicator appear during this period while temperature and fan speed setting display remain unchanged. (Operation lamp at indoor unit is ON).
- After 20 minutes, indicator stop blinking on remote controller disappear and unit will be in ❄️ (COOL) mode. Temperature and fan speed will change to previous setting. (Super cooling lamp at indoor unit is OFF).
- Air blow sound will be slightly high due to forced operation.

## CANCELLATION of SUPER COOLING Operation

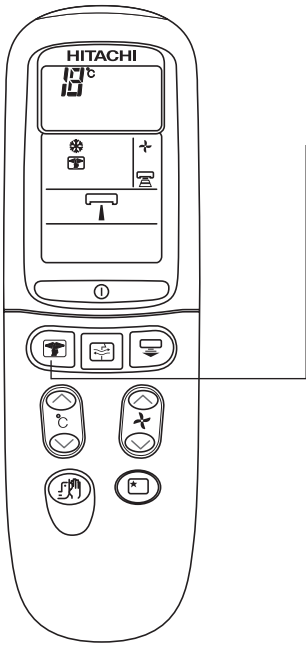
| Cancel Condition  | Operation mode after cancel |
|---|-----------------------------|
| Press  or OFF timer time is up   | Stop operation              |
|  key press   | DEHUMIDIFYING operation     |
| Press  or<br>Press  or<br>Press  or<br>Press  or<br>20 minutes time is up | Normal COOLING operation    |

### NOTE

- (1) OFF TIME setting : OFF timer will be a priority over the SUPER COOLING operation time.
- (2) ON TIME setting : SUPER COOLING operation will be a priority over the ON timer operation time.



# SILENT MODE






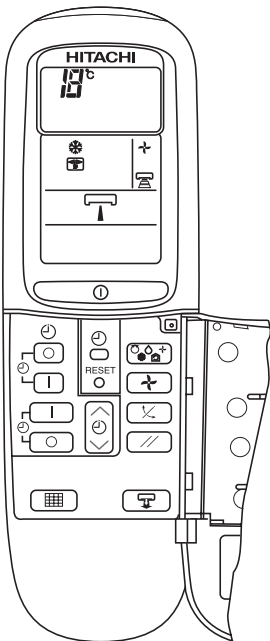
1

Press the  button.

- Operation start with a signal received sound “beep”.
- Unit will be forced operation in ❄️ (COOL) with SILENT fan speed, regardless of previous setting.

## CANCELLATION of SILENT Operation

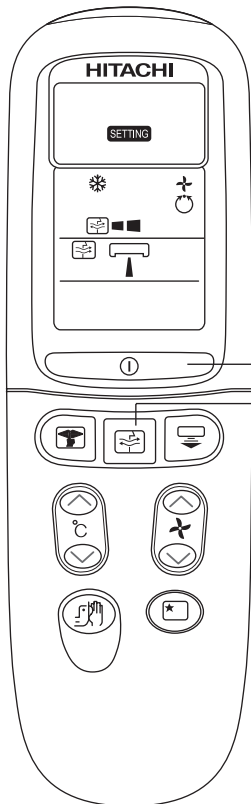
| Cancel Condition   | Operation mode after cancel |
|--|-----------------------------|
| Press  button.<br>OFF timer time is up<br>Sleeping timer time is up | Stop operation              |
| Press  SUPER COOL button  | SUPER COOL operation        |
| Press  button   | Next fan speed operation    |




### NOTE:

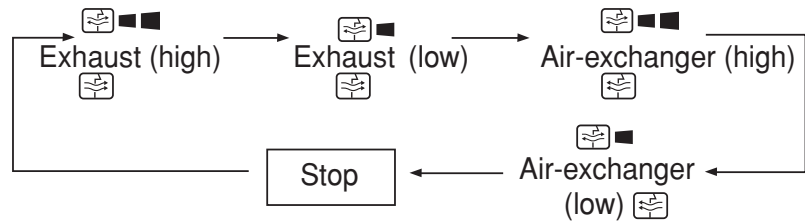
Under SUPER SILENT operation and quiet environment, phenomena like flowing noise of refrigerant in the refrigerating cycle may occur, but this is normal for the operation.

# AIR EXCHANGER OPERATION





**1**

- Air Exchanger fan: Operate the ventilation and exhaust.
- Air Exchanger still can be operated regardless air-cond is ON or OFF.
- Air Exchange operation.  
Press “” button.



- Follow this sequence to select the air exchanger mode.
- Operation lamp and air exchanger at indoor are ON, and air exchanger operation is operating according to the remote control setting.
- During air-cond operation, when setting the air exchanger function, air exchanger fan speed “high” or “low” shall change 10 seconds later.
- If setting air-exchanger operation during twin air flow mode (refer pg 19), twin air flow mode will be cancelled and air-exchanger mode will take place; when the air-exchanger operation is OFF, twin air flow will continue to operate.
- During air-exchanger operation, clean air will be blown to indoor, after passing through the UV-LED and Air Duct Filter. At this moment, the AIR EXCHANGER lamp at the fresh air outlet and air purifier lamp will ON.
- Although the ventilated air is deodorized by the ventilation filter, the odor of the ventilated air may enter the room according to the environment where the filter is utilized. If there is concern regarding any odors, please stop the device.
- Operate the exhaust for about 10 minutes every 2 hours during ventilation to prevent dew condensation on the air exchanger fan and hose. This is to prevent dust from plugging the hose.





**STOP**

Press the  (START/STOP) button or  button to cancel.  
(During COOL and DEHUMIDIFY operation)

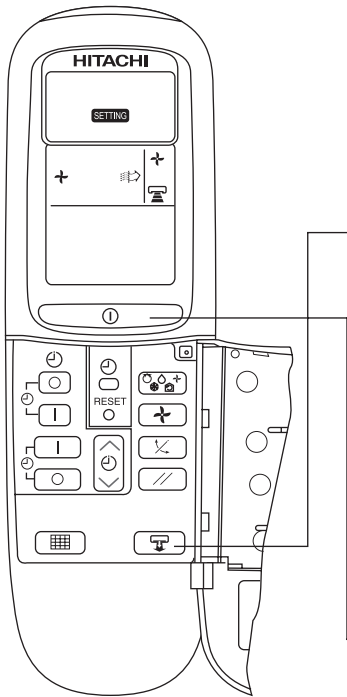
## WARNING

- If the fresh air is insufficient during air conditioning operating in a sealed room or simultaneously with a heating appliance, open a window or ventilate with a fan.
- If fresh air in is insufficient, oxygen deficiency may cause asphyxiation.


# PARENTAL LOCK

- Setting method : When remote controller under “Off mode”, press and hold  button and then press ○ (CANCEL) button. At this moment, except for the , ,  button, other buttons are locked.
- Cancel method : Repeat to cancel.

# TWIN AIR FLOW OPERATION



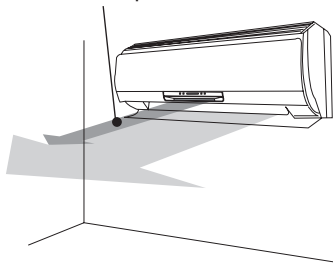
1

- Press “” button. Remote controller sends signal, “twin air flow” will be displayed, twin air flow with same temperature (room air) will be blown from the fresh air outlet by air-exchanger fan operation.
- When the air-cond operation is off, although “twin air flow” is set in remote controller, twin air flow fan for indoor unit will not function.
- During air-cond and air exchanger operation, select twin air flow, air exchanger operation will be cancelled to operate the twin air flow operation.
- Air exchanger fan’s noise level is higher than the air-cond unit, even though the air-cond fan in “HI” fan speed. So the noise level differential between HI, MEDIUM, LOW speed will disappear.
- When the sleep timer is set, twin air flow operation will be cancelled temporary.

**STOP**

Press the ① button until TWIN AIR FLOW on the remote control turns off.


Room temperature air flow




- When using simultaneously with cooling operation, it will direct the air flow from air-cond to upper part of the room, to make the user feel cool.

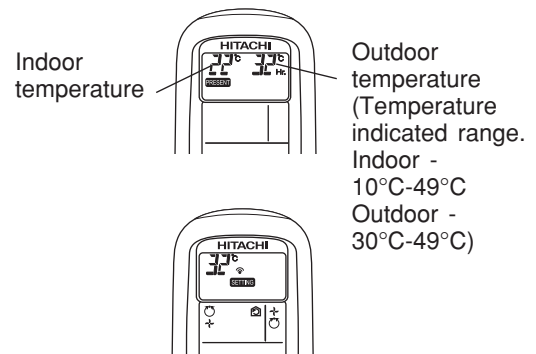
# TEMPERATURE INDICATOR


- Indoor and Outdoor Temperature indicates on remote controller during Operation:

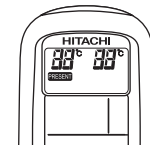
- During operation mode, press “” button.


  - Air-cond unit will make a ‘beep’ sound to indicate signal received. Around 2 seconds after hearing the sound, unit will send a data signal to remote controller. Point the remote controller to the centre part of the air-cond. After the remote controller received the signals, it will display:
- Press again the “” button.

  - After the remote controller received signal from air-cond, it will display the setting temperature.

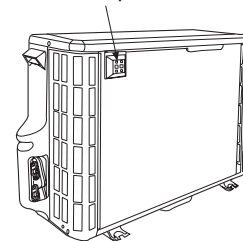


- If the content on the display blinking as shown on the right figure, it means that the remote controller did not receive any signal. Point the remote controller to the centre of the air-cond again and press the “” button.

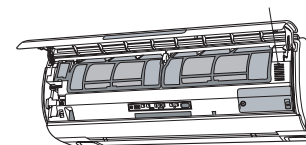


- There is no function when pressing the “” button during operation stop mode.
- Below figure shows the temperature sensor locations to measure the indoor and outdoor temperature.
- The measured value is the approximately value. There is a certain differential between the actual and measured temperature. The differential will be larger especially when the operation is just begin or when the compressor stop after reaching the setting temperature.




Outdoor temperature sensor portion



Indoor temperature sensor portion



# AIR PURIFIER OPERATION

- Press the  button, to execute the air purifier operation.
    - Air purifier operation is an operation in which the air-cond fan motor and air exchanger fan motor operate simultaneously. Air exchanger fan will suck the air and pass through the air exchanger filter, UV-LED and blow out from the air-cond.
    - Operation lamp and air purifier lamp will on.
    - The blue indication lamp on the fresh air nozzle will on.
    - The fan speed for air-cond can be set by remote controller.
- STOP : Press the  (START/STOP) button or  button to cancel.  
(During COOL and DEHUMIDIFY operation)

## CAUTION

When setting air exchanger operation during air purifier operation, the air purifier operation will be cancelled temporary. After the air exchanger operation is stopped, air purifier operation will continue.

## AIR EXCHANGER NOTES

### Ventilation

- When the air temperature outside the room exceeds 38°C or drops below 3°C, the ventilation does not operate to prevent dew condensation on the air exchanger fan and hose and to save energy.
- If the difference in temperature between the inside and outside of the room exceeds 13°C, the fresh air in does not operate to prevent dew condensation on the air exchanger fan and hose, while cooling.
- If the room dehumidify is more than 80%, the intake fresh air will not operate.
- **When the above mentioned operations have stopped, the “Air Exchanger” lamp in the display of the indoor unit blinks (10 seconds on / 1 second off).**

### Exhaust

- When the temperature inside the room exceeds 43°C, the exhaust does not operate to protect the exhaust fan from damage.
- **When the above mentioned operation have stopped, the “Air Exchanger” lamp in the display of the indoor device blinks (1 second on / 10 seconds off).**

## TWIN AIR FLOW NOTES

- When the temperature inside the room exceeds 43°C, the twin air flow and air purifier does not operate to protect the exhaust fan from damage.
- **When the above mentioned operation have stopped, the “Air Exchanger” lamp in the display of the indoor device blinks (1 second on / 10 seconds off).**

| Condition of air exchanger lamp blinking | Time       | Causes   |
|--|------------|--|
| 4 seconds on / 1 second off              | Continuous | Air exchanger's motor abnormal   |
| 1 second on / 1 second off               | 10 seconds | Air exchanger switch is shifted to prohibit fresh air or prohibit air exchanger operation. |
| 10 seconds on / 1 second off             | Continuous | Limit for the air exchanger prohibit condition (temperature, humidify).                    |
| 1 second on / 10 seconds off             | Continuous | Affect of the limitation of twin flow prohibit condition (indoor 43°C and above).          |
| 2 seconds on / 0.5 second off            | Continuous | Air exchanger is operating while the air-cond off.   |

## SOUND OF THE AIR EXCHANGER OPERATION

| Type of operation         | Operating sound                                 |
|---------------------------|---|
| “HI” Ventilation/Exhaust  | About the same when cooling (Fan Speed: “HI”).  |
| “LOW” Ventilation/Exhaust | About the same when cooling (Fan Speed: “LOW”). |

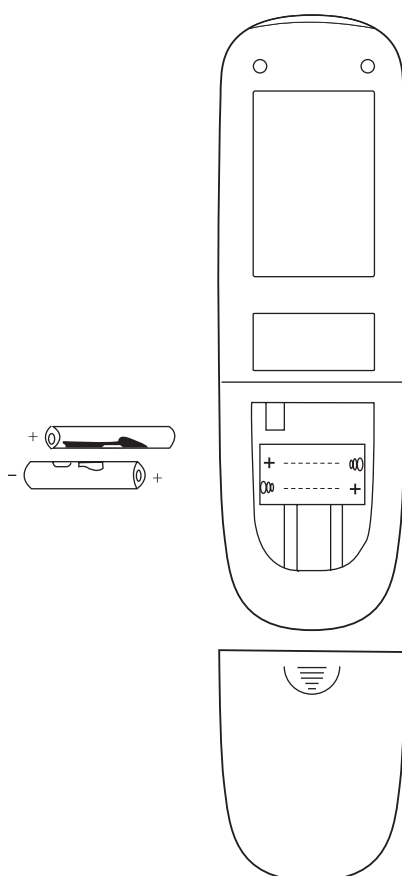
※ The operating volume of the air conditioning changes according to the mounting conditions.

# AIR EXCHANGER SPECIFICATIONS

| Items                 | Specification                       |
|-----------------------|-------------------------------------|
| Air exchanger method  | Air exchanger method                |
| Fresh air volume (Hi) | 12m <sup>3</sup> hour               |
| Exhaust volume (Hi)   | 20m <sup>3</sup> hour               |
| Testing standard      | JIS (Japan Industry standard) B8330 |
| Testing condition     | Pipe length : 0.54m                 |

- Testing Condition
  - Pipe length : ø 0.54m
  - Piping condition : Come out from horizontal and backward.  
Use air exchanger hose.
  - Piping bending time : 1 time.
  - Others : Anti-insect and rain proof ventilate cap.

# HOW TO EXCHANGE THE BATTERIES IN THE REMOTE CONTROLLER



**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

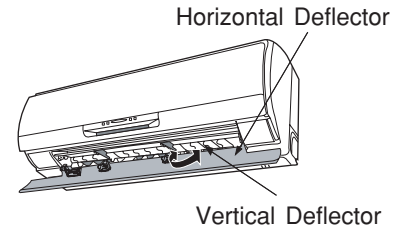
1. Do not use new and old batteries, or different kinds of batteries together.
2. Take out the batteries when you do not use the remote controller for 2 or 3 months.


# ADJUSTING THE AIR DEFLECTOR

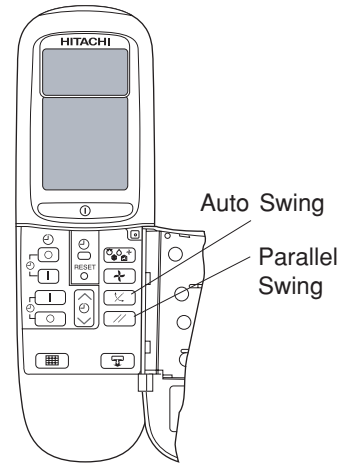
1

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

According to “Dehumidifying” or “Cooling” operation, the horizontal air deflector is automatically set to the proper angle suitable for each operation. The deflector can be swung up and down and also set to the desired angle using the “ (AUTO SWING)” button. (If the angle of the deflector is changed, it will not return to the auto-set position after operations start unless the operation mode is switched.)




- 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.
- 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.



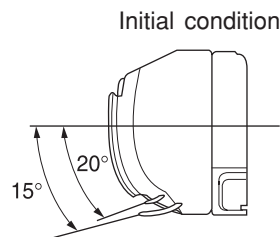
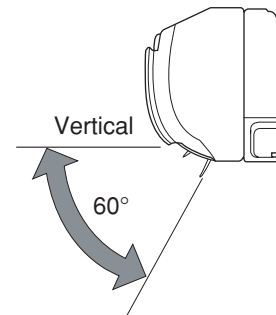
2

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.

- If the “ (PARALLEL SWING)” button is pressed once, the vertical air deflectors swing left and right to parallel. If the button is pressed again, the deflectors stop in their current position. Several second (about 6 seconds) may be required before the deflectors start to move.

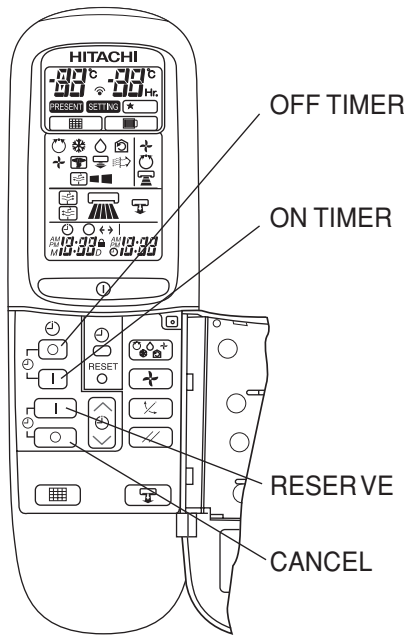
During cooling and dehumidifying operation



## CAUTION

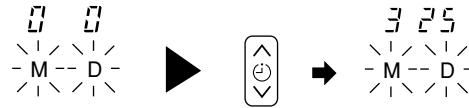
When operating the unit in cooling operation with the air deflector facing down and moving automatically for a long period of time, water will condensed on the air deflector and drips down occasionally. This will wet your furniture.

# HOW TO SET THE TIMER



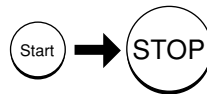
## Time, Day, Month



After you change the batteries;

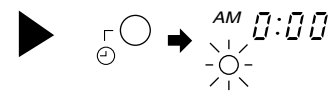


**1** Set the current time with the TIMER control button.

## OFF-Timer



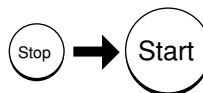
**1** Press the  (OFF-TIMER) button. The  (OFF) mark blinks on the display.





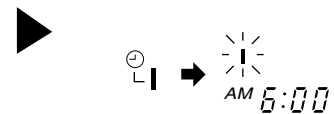
You can set the device to turn off at the present time.

## ON-Timer

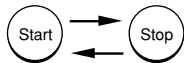
- The device will turn on at the designated times.





**1** Press the  (ON-TIMER) button the  (ON) mark blinks on the display.

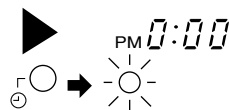



## ON/OFF-Timer

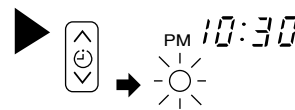





- The device will turn on (off) and off (on) at the designated times.
- The switching occurs first at the preset time that comes earlier.
- The arrow mark appearing on the display indicates the sequence of switching operations.

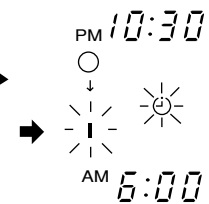
**1** Press the  (OFF-TIMER) button so that the  (OFF) mark blinks.



**2** Set the turn-off time with the TIMER control button. Press the  (RESERVE) button.



**3** Press the  (ON-TIMER) button so that the  (OFF) mark lights and the  (ON) mark blinks.




## How to Cancel Reservation


Press the  (CANCEL) button. The  (RESERVED) sign goes out with a beep and the  (TIMER) lamp turns off on the indoor unit.

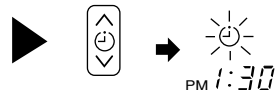
## NOTE


You can set only one of the OFF-timer, ON-timer and ON/OFF-timer.

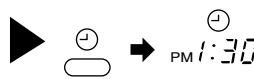
**2** Press the  (TIMER) button.




**3** Set the current time with the  (TIMER) button.



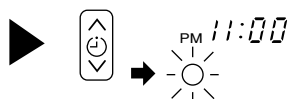
**4** Press the  (TIME) button. The time indication starts lighting instead of blinking.







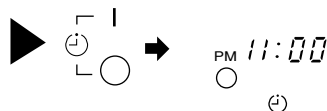
- The time indication will disappear automatically in 10 seconds.
  - To check the current time setting, press the  (TIMER) button twice.
- The setting of the current time is now complete.

Example: The current time is 1:30 p.m.

**2** Set the turn-off time with the TIMER control button.



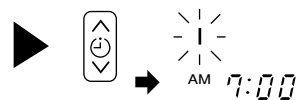
**3** Press the  (RESERVE) button. The  (OFF) mark starts lighting instead of blinking and the  (RESERVED) sign lights. A beep occurs and the  (TIMER) lamp lights on the indoor unit.







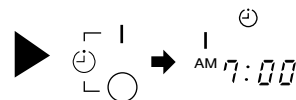
Example: The device will turn off at 11:00p.m.

The setting of turn-off time is now complete.

**2** Set the turn-on time with the TIMER control button.

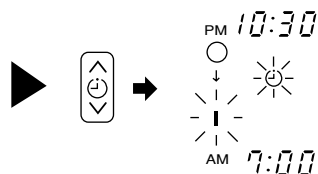






**3** Press the  (RESERVE) button. The  (ON) mark starts lighting instead of blinking and the  (RESERVED) sign lights. A beep occurs and the  (TIMER) lamp lights on the indoor unit.

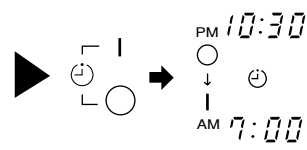


Example:  
The device will automatically turn on earlier so that the preset temperature can be reached at 7:00 a.m.  
The setting of the turn-on time is now complete.


**4** Set the turn-on time with the TIMER control button.




**5** Press the  (RESERVE) button. The  (ON) mark starts lighting instead of blinking and the  (RESERVED) sign lights. A beep occurs and the  (TIMER) lamp lights on the indoor unit.

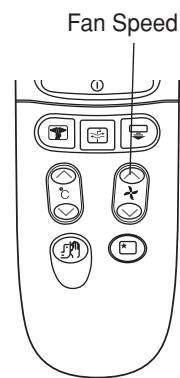
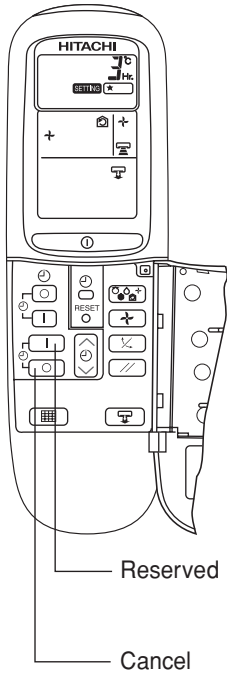


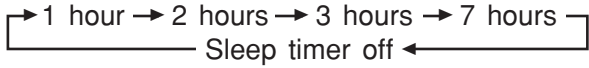
Example:  
For heating, the device will turn off at 10:30 p.m. and then automatically turn on earlier so that the preset temperature be almost reached at 7:00 a.m.; for cooling and dehumidifying, it will simply turned on at 7:00 a.m.  
The settings of the turn-on/off times are now complete.

- The timer may be used in three ways: off-timer, on-timer, and ON/OFF (OFF/ON)-timer. Set the current time at first because it serves as a reference.
- As the time settings are stored in memory in the remote controller, you only have to press the  (RESERVE) button in order to use the same settings next time.



# HOW TO SET THE SLEEP TIMER



Set the current time at first if it is not set before (see the pages for setting the current time). Press the  (SLEEP) button, and the display changes as shown below.



| Mode        | Indication   |
|-------------|--|
| Sleep timer |  |




**Sleep Timer:** 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. When the sleep timer has been set, the display indicates the turn-off time.



 Example: If you set 3 hours sleep time at 11:38 p.m., the turn-off time is 2:38 a.m.




 The device will be turned off by the sleep timer and turned on by on-timer.



**1** Set the ON-timer.

**2** Press the  (SLEEP) button and set the sleep timer.




 In this case, the device will turn off in 2 hours (at 1:38 a.m.) and starts at 6:00 a.m. next morning.

## How to Cancel Reservation

Point the signal window of the remote controller toward the indoor unit, and press the  (CANCEL) button.

The  (RESERVED) sign goes out with a beep and the  (TIMER) lamp turns off on the indoor unit.

### NOTE

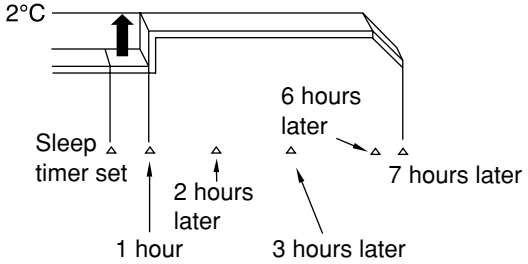
If you set the sleep timer when the off-time or on/off-timer as been set earlier, the sleep timer becomes effective instead of the off- or on/off-timer set earlier.

# 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

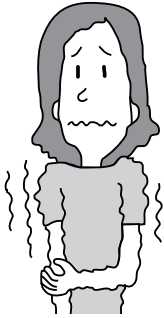
| Function  | Operation   |
|---|---|
| Cooling<br>“ ❄ ”<br>and<br>dehumidifying<br>“ 💧 ” | <p>The room temperature will be controlled 2°C above the temperature and the FAN SPEED will be set to LOW setting 1 hour after the setting of the sleep timer.</p>  |
| Fan<br>“ 🌀 ”                                      | <p>The settings of room temperature and circulation are varied.</p>   |

### NOTE

- If date or current time is not set, sleep timer can not be set.
- If you set the sleep timer after the off-, on/off- or off/on-timer has been set, the sleep timer becomes effective instead of the off-, on/off- or off/on-timer set.
- You can not set other timer during sleep timer operation.
- The angle of horizontal air deflector shifts up automatically after three hours on sleep timer operation.
- Fan will stop for a while if room temperature reaches setting temperature.

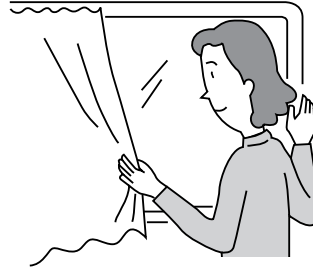
# THE IDEAL WAYS OF OPERATION

## 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.

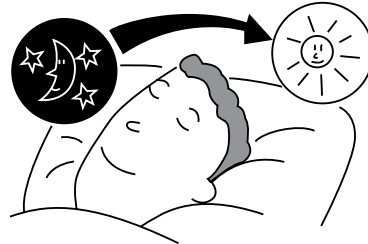
## Ventilation

**⚠ 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.



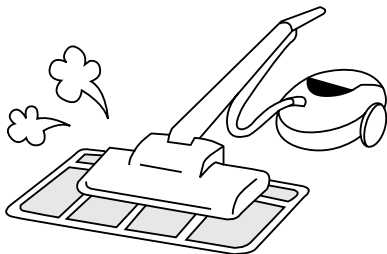
## Effective Usage Of Timer

At night, please use the “sleep 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.



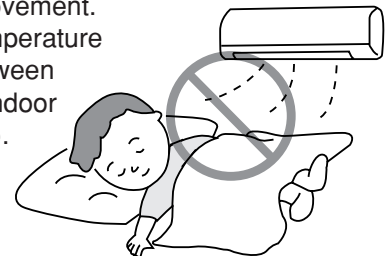
## Do Not Forget To Clean The Air Filter

Dusty air 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

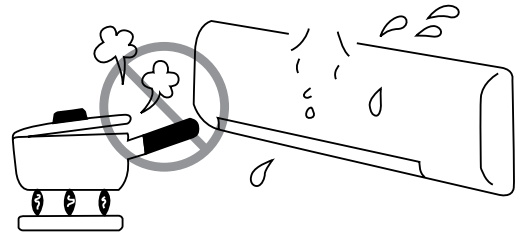
Please pay attention to the room temperature and air flow direction when operating the unit for baby, children and old folks who have difficulty in movement. (The ideal temperature difference between outdoor and indoor is about  $\pm 5^{\circ}\text{C}$ ).



## The Air Conditioner And The Heat Source In The Room

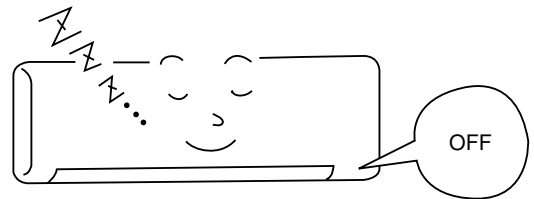
### **Caution**

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.



## Not Operating For A Long Time

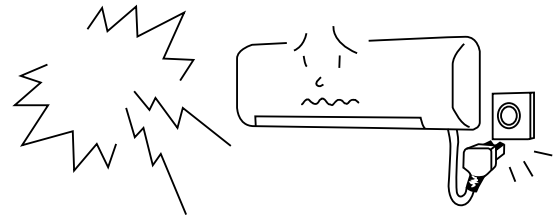
When the indoor unit is not to be used for a long period of time, please switch off the power from the mains. If the power from mains remains "ON", the indoor unit still consumes about 8W in the operation control circuit even if it is in "OFF" mode.



## When Lightning Occurs

### **Warning**

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



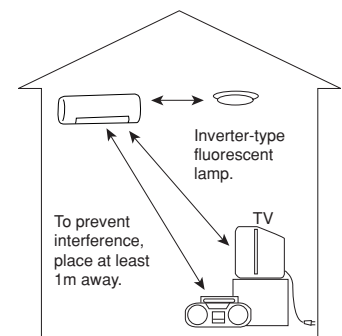
## UV-LED

UV-LED will be "ON" when the START/STOP button is pressed except for FAN only operation. During selected operation, this UV-LED will be "ON" and "OFF". Light UV glare is visible when the UV-LED is "ON" and this is normal (not malfunction).

## Interference From Electrical Products

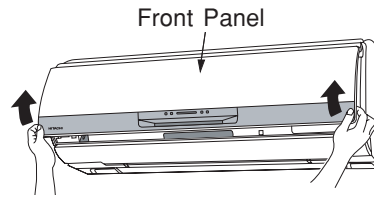
### **Caution**

To avoid noise interference, please place the indoor unit and its remote controller at least 1m away from electrical products.



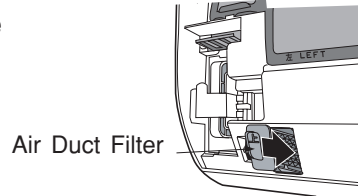
# INSTALLATION FOR AIR DUCT FILTER, AIR EXCHANGER FILTER

Hold both sides of the front panel and lift up.



## Installation For Air Duct Filter

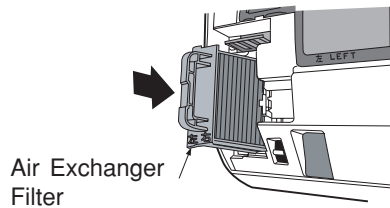
Following the “up” mark on the air duct filter and the arrow in the right figure to install the filter.



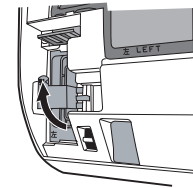
## Installation For Air Exchanger Filter



Clip Lock For Air Exchanger



Air Exchanger Filter



**1** Pull the left side of the clip lock forward the installer to open the clip.

**2** Follow the arrow on above diagram to install the filter.

**3** Push the clip lock after fixing the filter by pushing it along the inner grooves until the clip clicks.

### **CAUTION**

- Do not operate the unit with the duct filter removed. Dust or odors may infiltrate the room and may cause the device to malfunction.
- Please never operate the unit without install those filters, it may cause the device malfunctions.

## MAINTENANCE

### **CAUTION**

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

### Air Filter

- Air filter is used to filter out the dust from indoor, so it need to be cleaned every time. If the “air filter”, “air exchanger filter” display on the remote controller, it means that the filter need to be cleaned. If quantity of the dust is more than the acceptable level, air flow will be blocked, cooling capacity will decrease, and noise level may increase. Normally when the device operates around 200 hours and above, the “air filter” indication light will “on” and 1000 hours and above, “air exchanger filter” indication light will “on” depending on the environment and using condition and pollution level. It is not necessary to wait for “air filter” and “air exchanger filter” display to be “on”. If the filter is dirty, it should be cleaned at once.

## CLEANING PROCEDURE

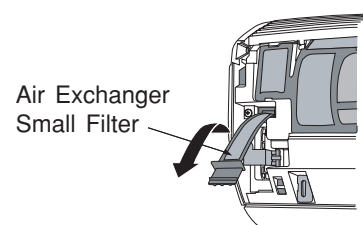
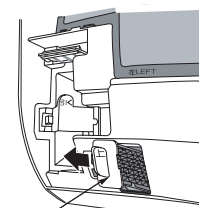
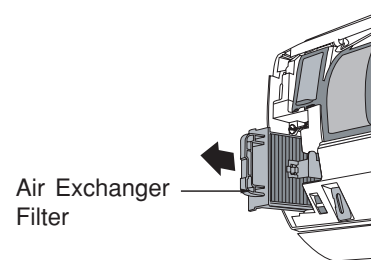
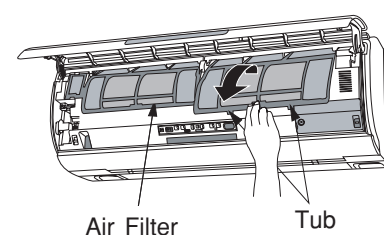
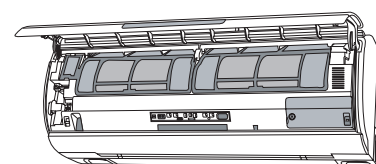
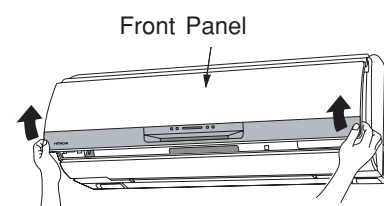
- 1** Take out the air filter

  - Hold both sides of the front panel and lift up.
- 2** Take out the air exchanger filter

  - Pull the left side of the clip lock forward the installer, hold the handle of the filter and pull follow the arrow direction in the diagram.
- 3** Take out the air duct filter

  - Pull out the air duct filter base on the arrow direction on the diagram.
- 4** Take out the air exchanger small filter

  - Lift up the handle of the filter, then pull out the filter follow the arrow direction.
- 5** Vacuum dust from the air filter using vacuum cleaner. If there is too much dust, wash the filter with detergent and rinse it thoroughly. After that, dry it in the shade.
- 6** Reverse the above procedure to assemble back all the filter.
- 7** Please clean the heat exchanger annually, use soft tooth brush and vacuum cleaner to clean, but avoid the fin from broken.



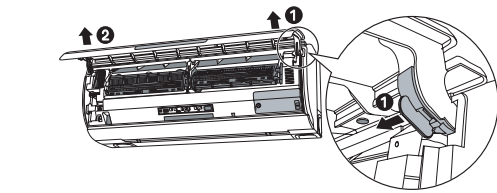
### CAUTION

- Do not wash with hot water at more than 40°C. The filter may shrink.
- When washing it, shake off moisture completely and dry it in the shade; do not expose it directly to the sun. The filter may shrink.
- Do not operate the unit without filter. Fault may occur if you continue.

# DISMANTLE PROCEDURE FOR FRONT PANEL, GRILL AND DEFLECTOR

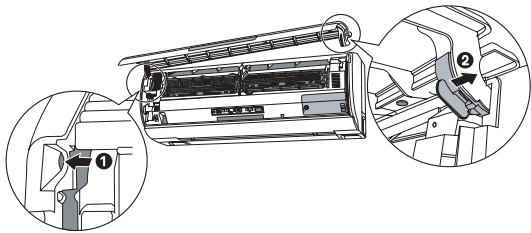
The front panel, grill and deflector for this device can be dismantled for cleaning.

## 1. Assemble and dismantle for front panel



**Dismantle:**

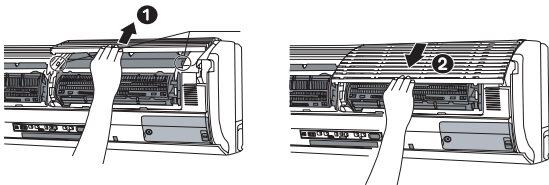
- 1 First open the front panel as shown in diagram, then push the hook on the right ① and pull the front panel to the right follow the direction of the arrow ②.
- 2 Remove the front panel.



**Assemble:**

- 1 Fix the left of the front panel to the hole indicated by the arrow ①.
- 2 When the panel is fixed well, lock the hook by pushing it to the right as shown by the arrow ② to lock the panel.

## 2. Assemble and dismantle for the grill



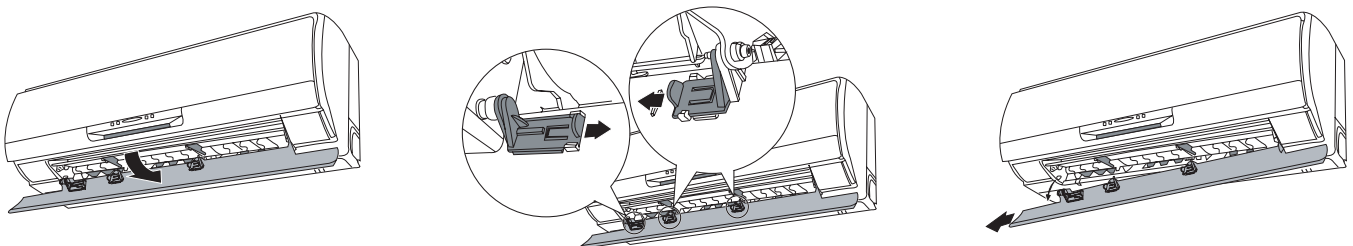
**Dismantle:**

- 1 Follow the direction shown by arrow ① ② to take out the grill.

**Assemble:**

- 1 Follow the reverse way to assemble the grill.

## 3. Assemble and dismantle for horizontal deflector (big)



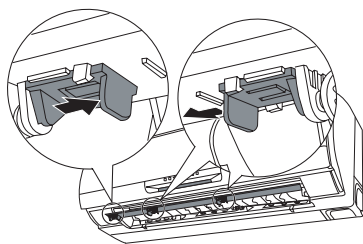
**Dismantle:**

- 1 Open the horizontal deflector (big) downward with both hands.
- 2 Shift the locking shaft to the direction shown by arrow to the remove the shaft from unit.
- 3 Follow the direction shown by the arrow to dismantle the horizontal deflector.

**Assemble:**

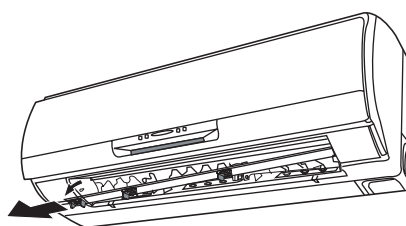
Follow the reverse procedure to assemble the horizontal deflector (big).

#### 4. Assemble and dismantle for horizontal deflector (small)



##### Dismantle:

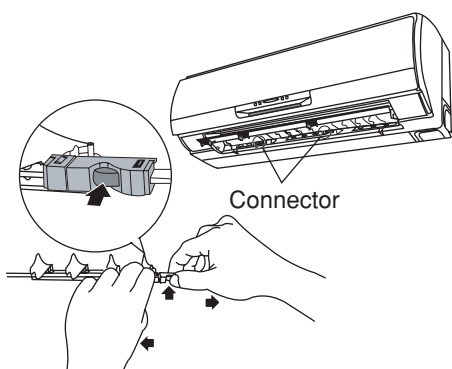
- ① Shift the locking shaft of the horizontal deflector (small) follow the arrow direction.



##### Assemble:

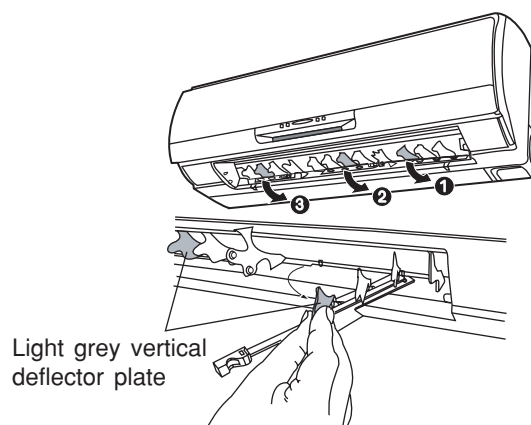
- ① Follow the reverse procedure to assemble the horizontal deflector (small).

#### 5. Assemble and dismantle for vertical deflector



##### Dismantle:

- ① Follow the diagram to release the connector, then pull to the left and right (2 places).
- ② Hold the light grey colour deflector plate, and pull to the front. (Please follow the ① ② ③ sequence to pull).

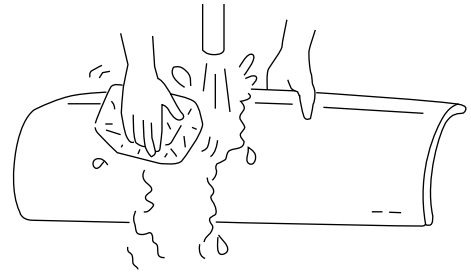


##### Assemble:

- ① Follow the reverse procedure to assemble the vertical deflector.

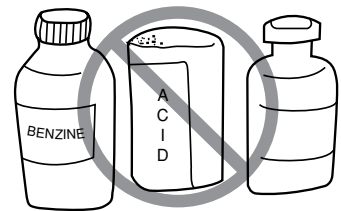
## CLEANING OF FRONT PANEL

- Wipe it with a soft dry cloth.
- When it is excessively dirty, wipe with a soft cloth soaked in lukewarm water or neutral detergent. Then wipe thoroughly with a soft dry cloth.
- Wipe the remote controller thoroughly with a soft dry cloth.




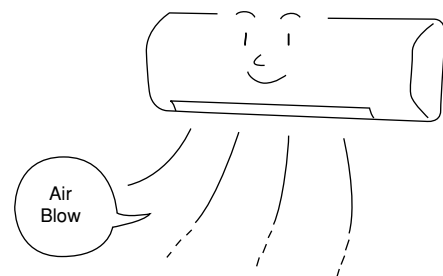
### CAUTION

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



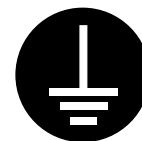
## MAINTENANCE AT BEGINNING OF LONG OFF PERIOD

- Running the unit setting the operation mode to  (FAN) 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.



**⚠ 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.



**IMPORTANT**

The wires in this mains lead are coloured in accordance with the following code:

- Green-and-yellow : Earth
- Blue : Neutral
- Brown : Live

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 plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol (⏏) or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

**NOTE**

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.

**⚠ CAUTION**

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

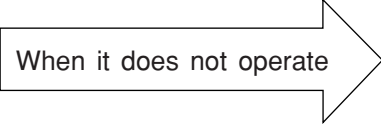
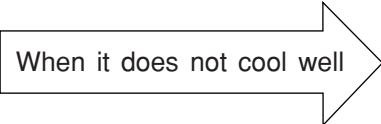
**REGULAR INSPECTION**

PLEASE CHECK THE FOLLOWING POINTS EITHER EVERY HALF YEARLY OR YEARLY. CONTACT YOUR SALES AGENT SHOULD YOU NEED ANY HELP.

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

# AFTER SALE SERVICE AND WARRANTY

## WHEN ASKING FOR SERVICE, CHECK THE FOLLOWING POINTS.

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



### Notes

- In quiet operation or stopping the operation, the following phenomena may occasionally 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 air 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.
- Power supply shall be connected at the rated voltage, otherwise the unit will be broken or could not reach the specified capacity.

### NOTE:

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.



