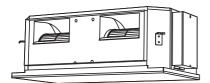
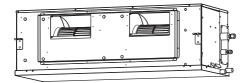
# AIR CONDITIONER (DUCT TYPE)



# OPERATING MANUAL

KEEP THIS MANUAL FOR FUTURE REFERENCE





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PART NO. 9374379613

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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: nark indiaata This .

## SAFETY PRECAUTIONS

- Op not use inflammable gases near the air conditioner.
   A This appliance is not intended for use by persons (included)
  - This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

- If you see lightning or hear thunder, there might be a lightning strike. To prevent electric shock hazard, turn off the air conditioner by using the remote controller, and do not touch the unit or the power plug during thunderstorm.
- Do not place any other electrical products or household belongings under indoor unit or outdoor unit. Dripping condensation from the unit might get them wet, and may cause damage or malfunction of your property.
- Keep clean and tidy around the outdoor unit, and do not place the things around it. If it is covered with fallen leaves, there could be an infiltration of small animals or insects whose contact with the internal electrical components leads to the product malfunction.
- Do not stand on unstable steps when operating or cleaning the air conditioner. It may overturn and can cause the injury.

## FEATURES AND FUNCTIONS

### Energy saving and Comfortable function

### INVERTER

At the start of operation, large amount of power is used to bring the room quickly to the desired temperature. Afterwards, the unit automatically switches to a low power setting for economic and comfortable operation.

### **ECONOMY OPERATION**

When ECONOMY operation mode is operated, the room temperature will be little higher than the set-temp under cooling mode and lower than set-temp under heating mode. Therefore, the ECONOMY mode is able to save more energy than other normal mode.

## AUTO CHANGEOVER

The operation mode (cooling, dry, heating) is switched automatically to maintain the set temperature, and the temperature is kept constant at all times.

### Convenient function

#### WEEKLY TIMER

Use this timer function to set operating times for each day of the week. Use the DAY OFF setting to switch off timed operation for a selected day in the coming week. Because all days can be set together, the weekly timer can be used to repeat the timer settings for all of the days.

### TEMPERATURE SET BACK TIMER

Use this timer function to change the set temperature in the operation times set for each day of the week. This can be used together with other timer settings.

### Remote controller

### WIRED REMOTE CONTROLLER

The wired remote controller allows convenient control of indoor unit operation.

### WIRELESS REMOTE CONTROLLER (OPTION)

The optional wireless remote controller can be used. When you use remote controller, there are following different points as compared with using wired remote controller.

[The additional function for wireless ones]

- SLEEP timer
- TIMER
- 10 °C HEAT operation

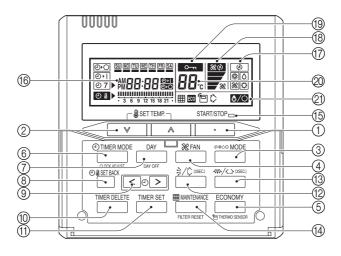
And you can use both wireless and wired remote controller simultaneously. (But function is limited.)

[The restricted functions for wired ones]

- Weekly timer
- Temperature set back timer

## NAME OF PARTS

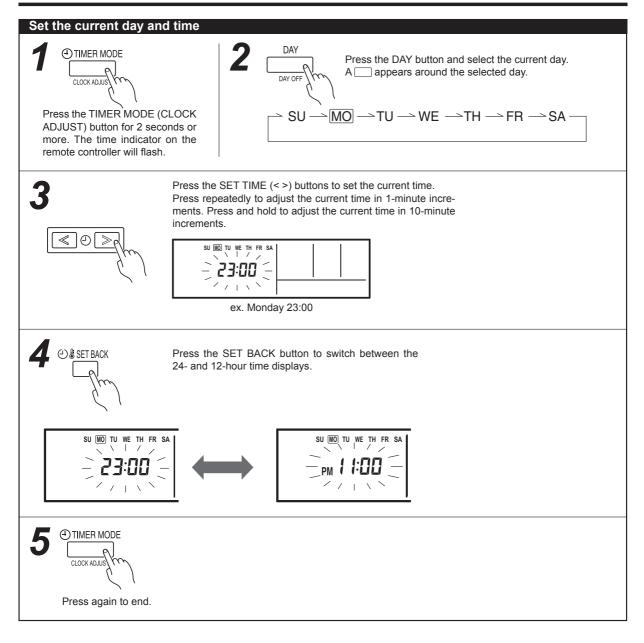
## Remote controller



- ① START/STOP button
- ② SET TEMP. (temperature) button
- **③ MODE button**
- **④ FAN button**
- **5** ECONOMY button
- 6 TIMER MODE (CLOCK ADJUST) button
- ⑦ DAY (DAY OFF) button
- (8) SET BACK button
- 9 SET TIME ( < > ) button
- 10 TIMER DELETE button
- **1 TIMER SET button**
- Vertical airflow direction and Swing button<sup>\*1</sup>
- Horizontal airflow direction and Swing button<sup>2</sup>
- (4) MAINTENANCE (FILTER RESET) button<sup>#1</sup>

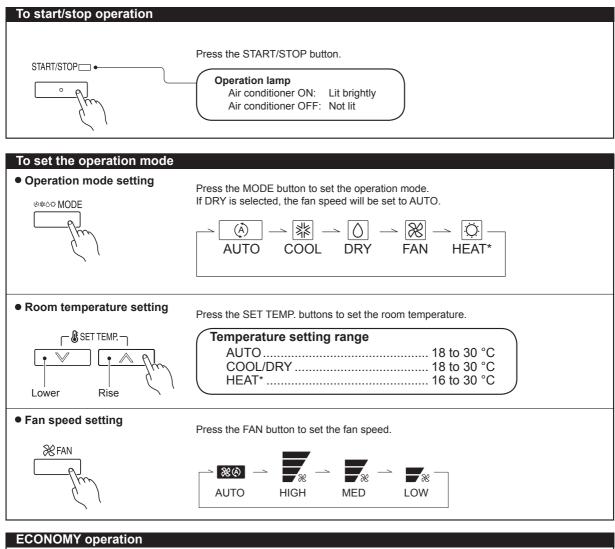
- **15** Operation lamp
- **16** Timer and Clock indicator
- 17 Operation mode indicator
- **18** Fan speed indicator
- **(19) Operation lock indicator**
- **20** Temperature indicator
- Function indicator
   Defrost indicator
  - Thermo sensor indicator
  - **ECONOMY** indicator
  - Vertical swing indicator<sup>\*3</sup>
  - **Filter indicator**<sup>#1</sup>
- \*1~3 These functions cannot be used. (Please also see the operating manual of the option when using it with options, etc.)
- #1 Can be used if set correctly during installation. Please consult authorized service personnel when using this function.

# PREPARATORY OPERATION



## **OPERATION**

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







Press the ECONOMY button to start or stop ECONOMY operation.

For details on the function, refer to page 11.

## OPERATION

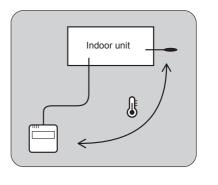
### Room temperature sensor selection

• This function is locked at the factory. In order to detect the room temperature correctly, consult authorized service personnel when using this function.



Press the ECONOMY button for more than 2 seconds to select whether the room temperature is detected at the indoor unit or the remote controller.

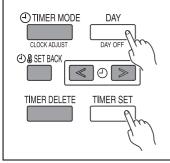
When the room temperature is detected at the remote controller.



## **I** NOTES

• If this function is locked, the location where the room temperature is detected cannot be changed and the o-m mark flashes when the ECONOMY button is pushed for 2 seconds or more.

#### **Child lock function**



Press the DAY (DAY OFF) button and TIMER SET button simultaneously for 2 seconds or more to activate the child lock function and lock all of the buttons on the remote controller except the START/STOP button, SET TEMP. buttons, MODE button, and FAN button. Press the buttons again for 2 seconds or more to deactivate the child lock function.



When the child lock function is activated, the one mark appears. If any button is pressed during the child lock, the *CL* indicator flashes.

# TIMER FUNCTIONS



### OFF timer (See page 7.)

Use this timer function to stop air conditioner operation. The timer operates and air conditioner operation stops after the set time has passed. The timer can be set up to 24 hours in advance.



#### ON timer (See page 7.)

Use this timer function to start air conditioner operation. The timer operates and air conditioner operation starts after the set time has passed. The timer can be set up to 24 hours in advance.



#### WEEKLY timer (See page 8.)

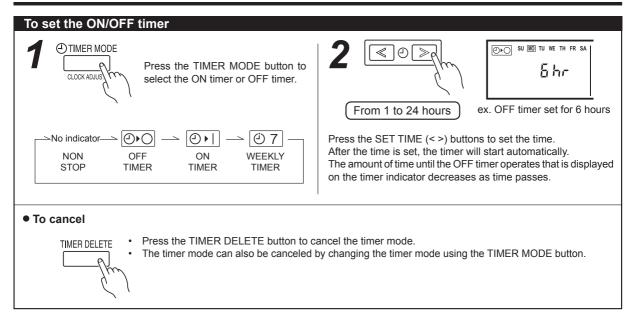
Use this timer function to set operating times for each day of the week. Use the DAY OFF setting to switch off timed operation for a selected day in the coming week. Because all days can be set together, the weekly timer can be used to repeat the timer settings for all of the days.



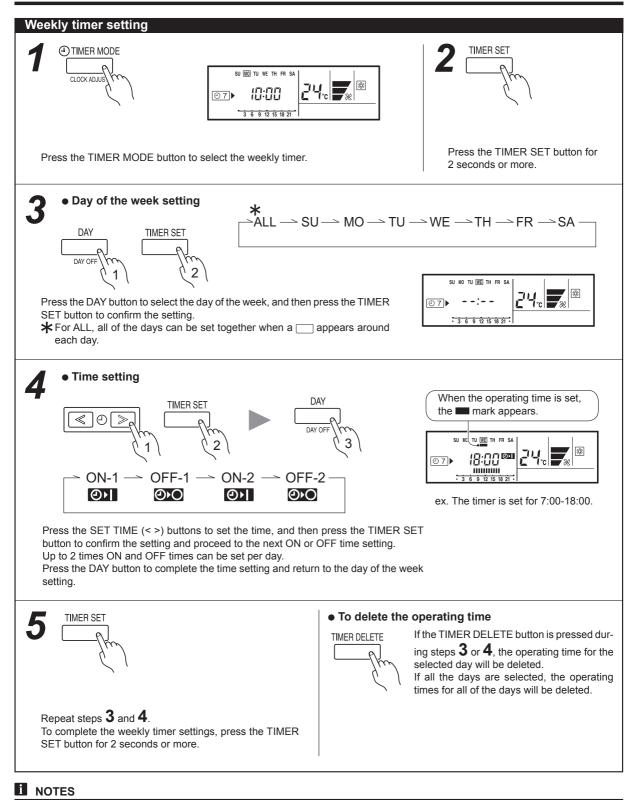
### Temperature SET BACK timer (See page 10.)

Use this timer function to change the set temperature in the operation times set for each day of the week. This can be used together with other timer settings.

## **ON/OFF TIMER**



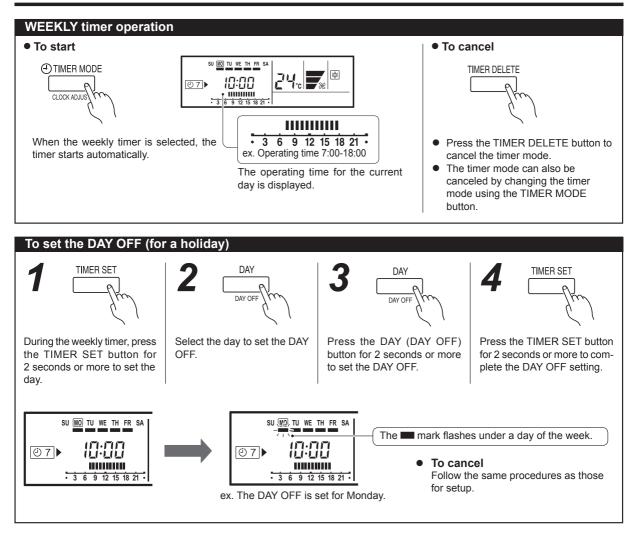
# WEEKLY TIMER



#### • The operating time can be set in 30-minute increments only.

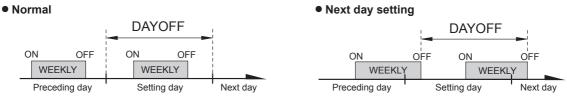
- The OFF time can be carried over to the next day.
- The ON timer and the OFF timer functions cannot be set using the weekly timer. Both an ON and OFF time must be set.

# WEEKLY TIMER



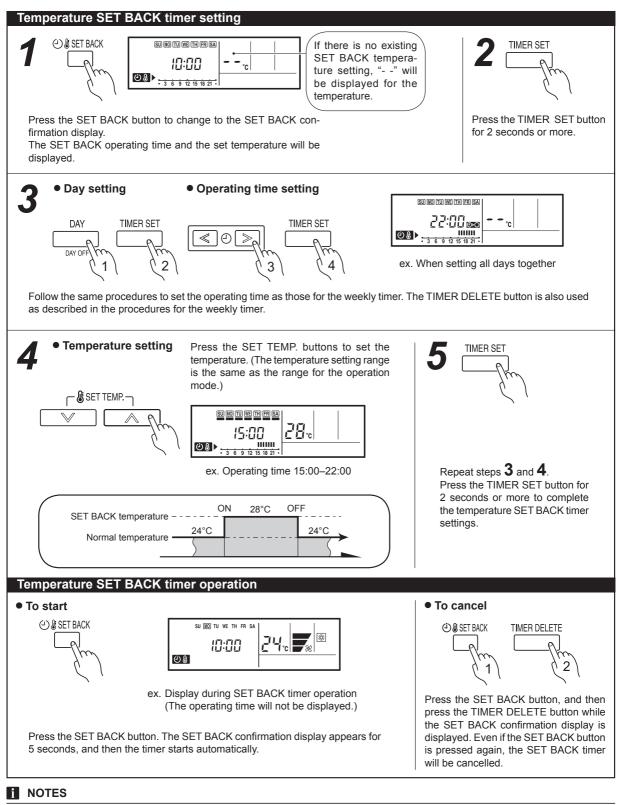
#### **NOTES**

- The DAY OFF setting is only available for days for which weekly settings already exist.
- If the operating time carries over to the next day (during a next day setting), the effective DAY OFF range will be set as shown below.



• The DAY OFF setting can only be set 1 time. The DAY OFF setting is cancelled automatically after the set day has passed.

# **TEMPERATURE SET BACK TIMER**



- The SET BACK timer only changes the set temperature, it cannot be used to start or stop air conditioner operation.
- The SET BACK timer can be set to operate up to 2 times per day but only 1 temperature setting can be used.
- The SET BACK timer can be used together with the ON, OFF, and weekly timer functions.
- The SET BACK operating time is displayed only in the SET BACK confirmation display. (Refer to step 1 for the SET BACK confirmation display.)

## **ECONOMY OPERATION**

Begin air conditioner operation before performing this procedure.

## To Use the ECONOMY Operation

### Press the ECONOMY button.

The ECONOMY indicator will light.

ECONOMY operation begins.

## To Stop the ECONOMY Operation

## Press the ECONOMY button again.

The ECONOMY indicator will go out.

Normal operation begins.

#### About ECONOMY Operation

- At the maximum output, ECONOMY operation is approximately 70% of normal air conditioner operation for cooling and heating.
  - If the room is not cooled (or heated) well during ECONOMY operation, select normal operation.
  - During the monitor period in the AUTO mode, the air conditioner operation will not change to ECONOMY operation even if ECONOMY operation is selected by pressing the ECONOMY operation button.
  - When ECONOMY operation mode is operated, the room temperature will be little higher than the set-temp under cooling mode and lower than set-temp under heating mode. Therefore, the ECONOMY mode is able to save more energy than other normal mode.

## **CLEANING AND CARE**

CAUTION

- Before cleaning the unit, be sure to stop the unit and disconnect the power supply.
- Turn off the electrical breaker.
- A fan operates at high speed inside the unit, and personal injury could result.
- When used for extended periods, the unit may accumulate dust 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 1 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.

#### **Cleaning the Air Filter**

- 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.
- 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 reinstalling.
- If dust is allowed to accumulate on the air filter, air flow will be reduced, lowering operating efficiency and increasing noise.

#### Filter Indicator Reset (Special setting)

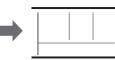
- Can be used if set correctly during installation. Please consult authorized service personnel when using this function.
  - It lights on when it is time to clean the air filters. After turning the power on.

Press the MAINTENANCE button for 2 seconds or more on the remote control. The filter indicator will disappear.



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ECONOM'

## TROUBLESHOOTING

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



In the event of a malfunction (burning smell, etc.), immediately stop operation, turn off the electrical 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 turn off the electrical breaker to ensure that power is completely off. Before requesting service, perform the following checks:

	Symptom	Problem	See Page
NORMAL FUNCTION	Does not operate immedi- ately:	<ul> <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 electrical breaker is turned off then on again, the protection circuit will operate for about 3 minutes, preventing unit operation during that period.</li> </ul>	_
	Noise is heard:	<ul> <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> </ul>	
		*• During heating operation, a sizzling sound may be heard occasionally. This sound is produced by the automatic defrosting operation.	13
	Smells:	<ul> <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> <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 mist- ing.</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.	13
	Airflow is weak or stops:	<ul> <li>When heating operation is started, fan speed is temporarily very low, to allow internal parts to warm up.</li> <li>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.</li> </ul>	_
		*• During heating operation, the unit will temporarily stop operation (be- tween 4 and 15 minutes) as the automatic defrosting mode operates. During the automatic defrosting operation, () will be shown on the remote controller display.	13
		• The fan may operate at very low speed during dry operation or when the unit is monitoring the room's temperature.	
		<ul> <li>In the monitor AUTO operation, the fan will operate at very low speed.</li> </ul>	—
	Water is produced from the outdoor unit:	*• During heating operation, water may be produced from the outdoor unit due to the automatic defrosting operation.	13
	The FILTER indicator blinks:	<ul> <li>Clean the filter. Afterwards, turn the FILTER indicator off.</li> </ul>	11
	thermo sensor display on the remote controller is flashing:	<ul> <li>The room temperature sensor may be malfunctioning. Please consult authorized service personnel.</li> </ul>	_
CHECK ONCE MORE	Does not operate at all:	<ul> <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>	
		Is the timer operating?	7 to 10
	Poor cooling (or Heating*)	Is the air filter dusty?	
	performance:	• Are the air conditioner's intake grille or outlet port blocked?	
		• Did you adjust the room temperature settings (thermostat) correctly?	
		Is there a window or door open?	
		<ul> <li>In the case of cooling operation, is a window allowing bright sunlight to enter? (Close the curtains.)</li> </ul>	
		<ul> <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>	

If the problem persists after performing these checks, or if you notice burning smells, stop operation immediately, disconnect the power supply, 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 type 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 to protect the unit.

### 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. During the defrost cycle, the indoor fan will shutdown and www will be displayed on the remote controller. It will take anywhere from 4 to 15 minutes before the air conditioner starts up again.
- After heating operation stops, if frost forms on the outdoor unit, the unit will start automatic defrosting operation. At this time, the outdoor unit will automatically stop after operating for a few minutes.

### Low Ambient Cooling

When the outdoor temperature drops, the outdoor unit's fans may switch to low speed, or one of the fans may stop intermittently.

### Hot Start\*

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.

### **Dual Remote Controllers (optional)**

An additional remove controller can be added up to the maximum of two remote controllers. Either remote controller can control the air conditioner. However, the timer functions cannot be used at the slave unit.

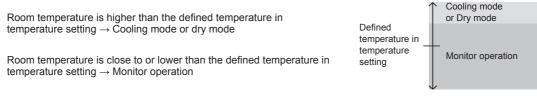
#### **Group Control**

1 remote controller can control up to 16 air conditioners. All of the air conditioners will be operated with the same settings.

#### Mode operation

#### AUTO (in COOLING model):

• When AUTO (automatic changeover) operation first selected, the fan will operate at very low speed for about a few minutes, during which time the indoor unit detects the room conditions and selects the proper mode.



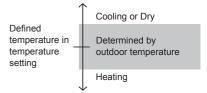
- When the indoor unit has adjusted your room's temperature to near the temperature setting, it will begin monitor operation. In the monitor operation mode, the fan will operate at low speed. If the room temperature subsequently changes, the indoor unit will once again select the appropriate operation (cooling) to adjust the temperature to the value set in the temperature setting.
- If the mode automatically selected by the unit is not what you wish, select one of the mode operation (COOL, DRY, FAN).

#### AUTO [in HEAT & COOL (Reverse Cycle) model]:

- When AUTO (automatic changeover) is selected, the air conditioner selects the appropriate operation mode (cooling or heating) according to your room's present temperature.
- When AUTO operation first selected, the fan will operate at low speed for about a few minute, during which time the indoor unit detects the room conditions and selects the proper operation mode.

Room temperature is higher than the defined temperature in temperature setting  $\rightarrow$  Cooling mode or dry mode

Room temperature is close to the defined temperature in temperature setting  $\rightarrow$  Determined by outdoor temperature



Room temperature is lower than the defined temperature in temperature setting  $\rightarrow$  Heating mode

- When the air conditioner has adjusted your room's temperature to near the thermostat setting, it will begin monitor operation. In the monitor operation mode, the fan will operate at low speed. If the room temperature subsequently changes, the air conditioner will once again select the appropriate operation (heating, cooling) to adjust the temperature to the value set in the thermostat.
- If the mode automatically selected by the unit is not what you wish, select one of the mode operation (HEAT, COOL, DRY, FAN).
- HEAT\*: 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 outdoor temperature is very low, frost may form on the outdoor 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 heat operation will be interrupted.
  - After the start of heating operation, it takes sometime before the room gets warmer.
- COOL: 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

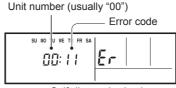
 If the power supply to the air conditioner is interrupted by a power failure, the air conditioner will restart automatically in the previously selected mode once the power is restored.

#### Notices

- 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.
- 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, reconnect it, and then use the remote controller to resume operation.
- \*• 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.

## **SELF-DIAGNOSIS**

When "Er" in temperature indicator is displayed, inspection of the air conditioning system is necessary. Please consult authorized service personnel.



ex. Self-diagnosis check