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Specialized tech, Economical price, Reliable quality, Original idea!

## **OPERATION MANUAL**

# DEHUMIDIFIER

DRY



• Please read this operation manual before using the dehumidifier

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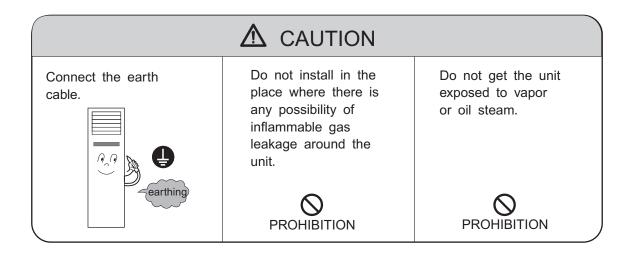
## **Safety Instruction**

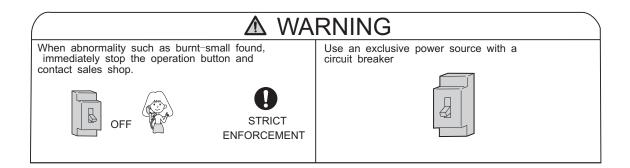
- Please read the following Safety Instructions carefully prior to use.
- The instructions are classified into two levels, WARNING and CAUTION according to the seriousness of possible risks and damages as follows. Compliance to the instructions are strictly required for safety use.

## Installation



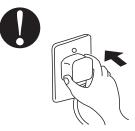
Installation in a inadequate place may cause accidents. Do not install in the following place.





## Attention during Usage

Ensure the power plug is secure If the plug is not secure, it may cause a electric shock, over-heating or a fire.



### 

Never pull out the power plug during operation.

otherwise, it may cause a electric shock or a fire due to over heating.



Do not operate when the hands

due to danger of a electric shock.

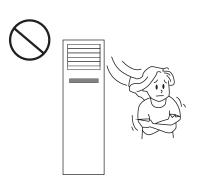
are wet.

Do not use the same socket with other electric appliances or use an extension cord.

otherwise it may cause a electric shock or a fire due to overheating.

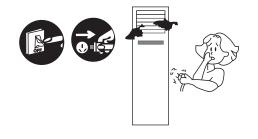


Do not expose yourself to a single directional airflow for a long period to avoid harming to your health.



- In case of abnormal condition (burning smell etc.),pull out the power plug to stop the dehumidifier from running, or disconnect the power supply by means of a electric current protector.

If the abnormal condition persists, it may cause a electric shock or a fire due to over-heating. Please consult the dealer of service centre as soon as possible to arrange for a repair.



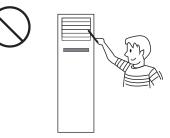
Never use damaged electric wires or unspecified electric wires.

otherwise it may cause a electric shock or a fire.



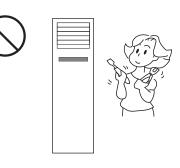
Do not insert a rod or other objects into the inlet or outlet vents.

otherwise, it may cause a electric shock or a fire.



■ Do not attempt to carry out a repair.

Improper repairs may cause a electric shock or a fire. You should contact the dealer of service centre to arrange for a repair.



Do not hold the electric wire to pull out the power plug.

Pulling of the electric wire may cause over-heating of the electric wire of a fire.

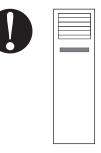


■ If the air-conditioner is not in use for a long time, it is necessary to pull out the power plug. Excessive dust on the power plug may also cause over-heating or a fire.



Switch off the power supply while cleaning the dehumidifier.

Please take care not to damage the internal fan which is rotating at a high speed.



#### Do not use the dehumidifier for other purposes.

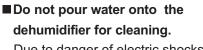
Do not use it for keeping precision instruments, food, plants and artistic items. This may affect the quality of the food.



#### Do not place a heater in front of the dehumidifier.

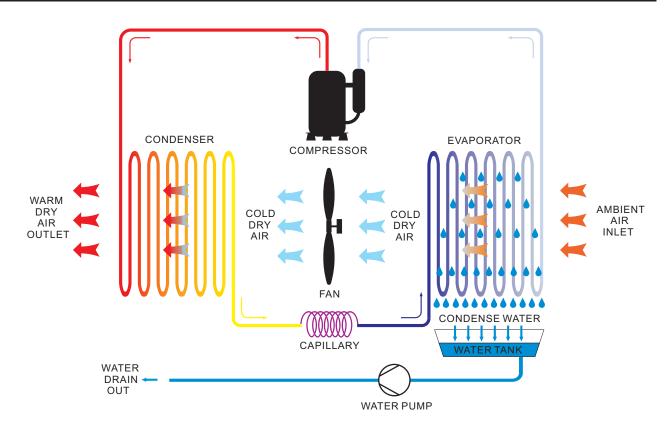
If internal combustion of the heater is not complete, it may give out poisonous carbon monoxide.





Due to danger of electric shocks.



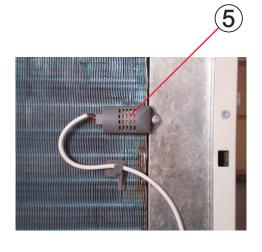


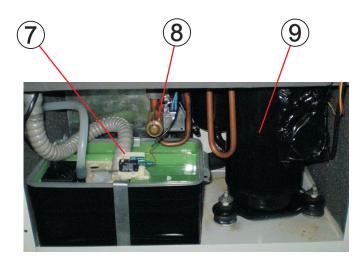
The dehumidifier use the refrigeration circuit to change the damp air warm dry air. When the damp air passes the condenser, the air water will be condensed and the air will become dry.

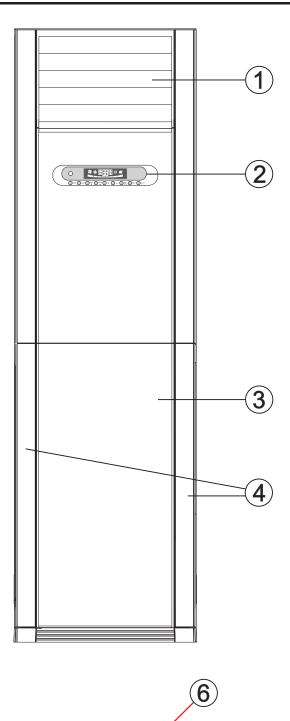
The Specification Of Dehumidifier (R410a)					
Model	DS-045	DS-060	DS-080	DS-011	DS-014
Capacity (L/hr)	4. 5	6	8	11	14
Heating capacity(W)	2400	3200	4200	5700	7400
Power consumption (W)	1200	1700	2200	2800	3400
Air flow (m3/hr)	540	720	920	1300	1500
Refrigerant (g)	960	1250	1600	2150	2540
Power supply	230V/50Hz/1Ph	230V/50Hz/1Ph	230V/50Hz/1Ph	400V/50Hz/3Ph	400V/50Hz/3Ph
Current (A)	6. 2	7.6	9. 8	4	5. 2
Aux electric heater (W) (option)	700	700	700	1500	1500
Compressor type	Rotary	Rotary	Rotary	Rotary or Scroll	Scroll
Compressor (brand name)	Daikin or sanyo	Daikin or sanyo	Daikin or sanyo	Daikin or sanyo	Daikin or sanyo
Water pump	Yes	Yes	Yes	Yes	Yes
Applicable area (m <sup>2</sup> )	100-150	150-200	200–250	250-300	300-400
Noise (dB (A) )	47	48	53	56	60
Drain pipe(mm)	500	500	500	500	500
Packing dimension (mm) (WxHxD	562x1820x480	562x1820x480	562x1820x480	680x2004x540	680x2004x540
Unit dimension (mm) (WxHxD)	482x1724x400	482x1724x400	482x1724x400	600x1900x460	600x1900x460
Weight(net/gross)(kg)	70/80	78/88	85/95	120/134	135/147
Test condition: Dry ball temperature 30 °C. Relative humidity of 80RH%.					

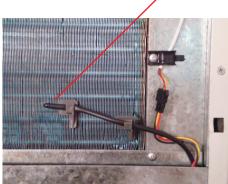
## **Descriptions of Parts**

- 1 Air Outlet
- 2 Control Panel
- ③ Air filter(inside)
- ④ Air Inlet
- 5 Humidity sensor
- (6) Indoor temperature sensor
- ⑦ Water drainage system
- 8 Four way valve
- 9 Compressor

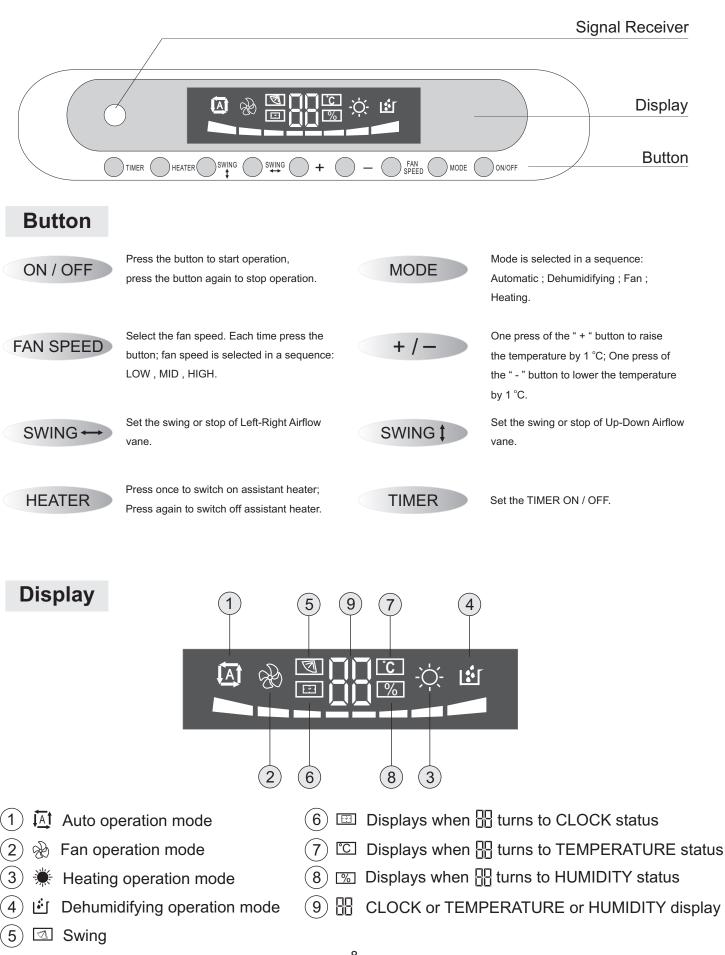




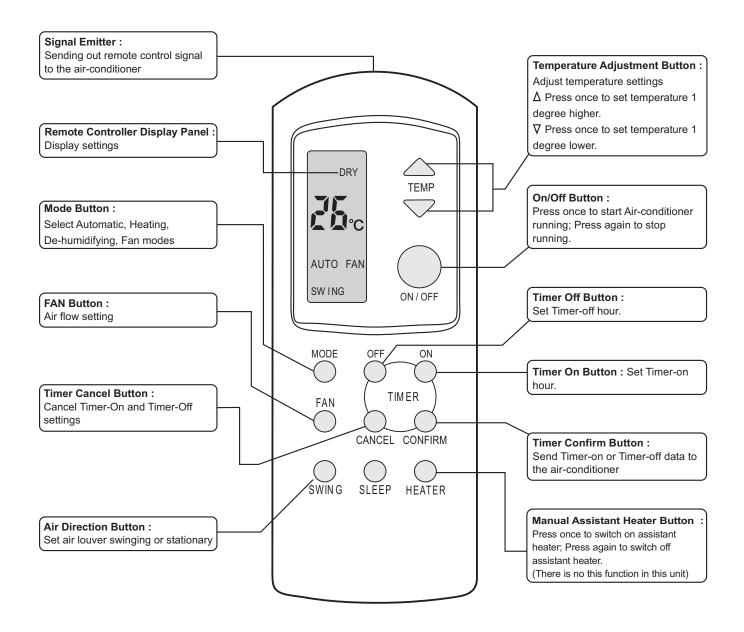




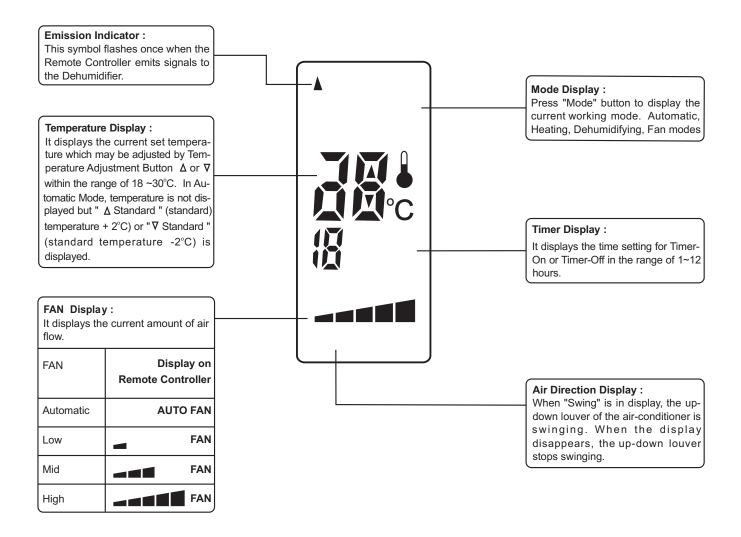
## **Panel Control**



## **Remote Controller**



## **Remote Controller**



#### NOTE:

All Displays on the diagram are listed out for demonstration. During operation, only the relevant Display will appear on the Remote Controller.

## Proper settings of Heating, Dehumidifying and Fan modes

#### Mode Selection (1)

Press "Mode" button to select the required working mode, which is changed in the following sequence when pressed once:

Automatic  $\rightarrow$  Dehumidifying  $\rightarrow$  Fan  $\rightarrow$  Heating

#### NOTE:

- Heating mode is available only on cooling-heating type air conditioner.
- Automatic operation will be explained in detail on next page.

#### Air Flow Selection (2)

Press "FAN" button to select the required amount of air flow, which is changed in the following sequence when pressed once :

Automatic  $\rightarrow$  Low  $\rightarrow$  Mid  $\rightarrow$  High

#### NOTE:

- When Automatic FAN is selected, the air-conditioner will automatically select the suitable amount of air flow according to room temperature.
- When Dehumidifying is selected, the amount of air flow is set by the machine and fan setting is not functional.

#### Temperature Setting Selection (3)

Press "Temperature Adjustment Button  $\Delta$ " to set temperature 1 degree higher.

Press "Temperature Adjustment Button  $\nabla$ " to set temperature 1 degree lower.

Hold down the Button to increase of decrease the temperature settings progressively.

#### NOTE:

• Range of adjustable temperature settings : 16°C ~ 31°C.

#### Starting Operation (4)

Press "On/Off" button, and when the unit receives the signal, it gives out two "beep" tones, the operation light is on and the dehumidifier starts operation.

#### NOTE:

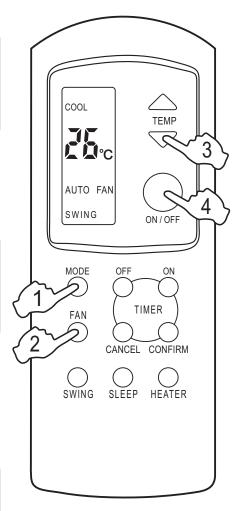
• If it is desired to run the machine at the same settings for mode, air flow and temperature as the last operation, skip Steps 1~3 and start the machine directly.

If the interval is shorter than 3 minutes from last shut down to the present switch-on, the compressor only re-starts after 3 minutes to protect the system.

After switching on and if the mode is changed, the system may delay for 3 minutes before starting operation.

When heating mode is selected, the internal fan will delay operation for a while when the machine is switched on to prevent cool air circulation at the beginning.

After switching on, air flow amount and temperature may be separately adjusted as desired.



## **AUTO Operation Mode**

#### **Automatic operation Mode**

#### Mode Selection (1)

Press "Mode" button to select Automatic Operation mode.

#### Fan Selection (2)

Press "FAN" button to select the required amount of air flow, which is changed in the following sequence when pressed once :

Automatic  $\rightarrow$  Low  $\rightarrow$  Mid  $\rightarrow$  High

#### NOTE:

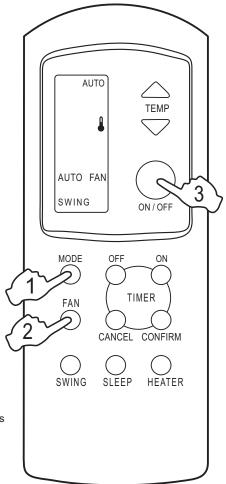
• When Automatic FAN is selected, the unit will automatically select the suitable amount of air flow according to room temperature.

#### **Starting Operation (3)**

Press " On/Off " button, and when the unit receives the signal, it gives out two " beep " tones, the operation light is on and the dehumidifier starts operation is automatic mode.

#### NOTE:

• In automatic mode, the dehumidifier automatically selects "Dehumidifying", "Heating" modes depending on room temperature and the humidity, with details as the follow-ing table:

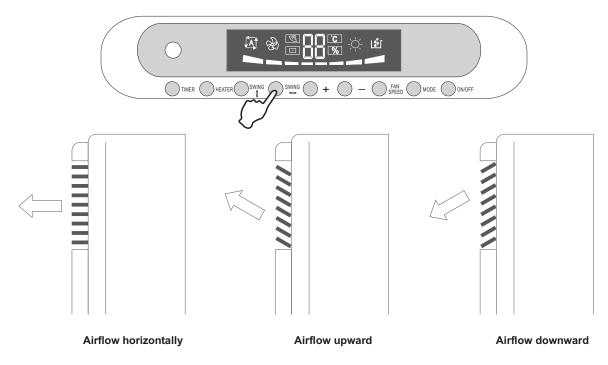


Temperature Model	< 23°C or > 28°C humidity: > 80%	23°C ~ 28°C	< 23°C or > 28°C humidity: < 80%	
Dehumidify	Working	Working	Not Working	
Heating	ting Not Working		Working	

#### Adjustment in Automatic Mode

Feeling	Button	Operation
Unsuitable fan speed	FAN	Press once to change the air flow pro- gressively until the suitable air flow is selected.

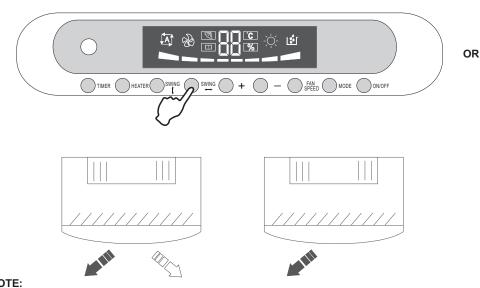
#### **Up-Down Air Direction Adjustment**

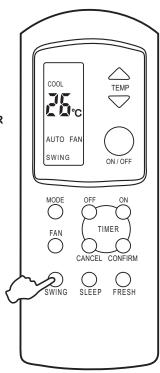


#### NOTE:

- To stop the up-down air louver in a desired position, set the louver to automatic swinging and when it reaches the desired position, stop the louver from swinging. It is necessary to adjust the louver angle by means of the remote controller, Setting of the louver with the hand may affect its normal operation, in which event, switch off the unit temporarily and re-start operation.
- To get the best effect, the up-down air flow is usually set in the following manner : Dehumidifying - Horizontal air direction or upward air direction. Heating -Downward air direction.

#### **Changing Left-Right Air Direction**





#### NOTE:

• Don't move the Left-Right vane directly.

#### **Timer Switch On**

- 1. Press "Timer On" button to set time for timer-on switching. Press the button once to change the time interval of 1 hour in a cyclic manner of 6, 7, 8 ...12..1, 2...5,6 (The display is showing the previous time as the starting time of the present setting) If the button is held down, the time interval will increase progressively by 1 hour unit.
- 2. Point the remote controller towards the receiver on the unit, press "Timer Confirm" button to send the timer setting to the dehumidifier. Then the timer light on the unit lights up, indicating that the unit is in the timer mode. When it reaches the switch-on time, the dehumidifier will operate in the pre-set modes.

#### NOTE:

- Before timer operation, please set the operation mode, temperature, air flow etc. on the remote controller, With timer being set to switch-on mode. the Dehumidifier will operate according to the last setting.
- Usually, timer-on setting is made while the dehumidifier is not in operation. If timer-on is set while the dehumidifier is running, then the unit will shut down immediately and re-start at the pre-set time.
- If the "On-Off" button is pressed while the unit is under timer-on setting, then the unit will start immediately, the timer setting is cancelled and the timer light will be off.

#### **Timer Switch Off**

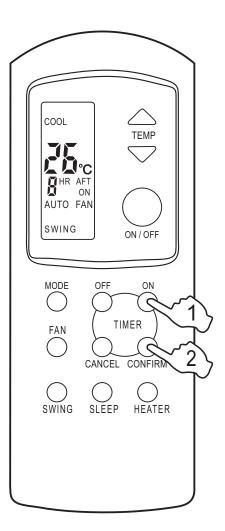
- 1. Press "Timer Off" button to set time for timer-off switching. Press the button once to change the time interval of 1 hour in a cyclic manner of 6, 7, 8 ...12..1, 2...5,6 (The display is showing the previous time as the starting time of the present setting) If the button is held down, the time interval will increase progressively by 1 hour unit.
- 2. Press "Timer Confirm" button to send the timer setting to the Dehumidifier. Then the timer light on the unit lights up, indicating that the unit is in the timer mode. When it reaches the switch-off time, the air-conditioner will automatically shut down.

#### NOTE:

- Timer-Off can only be set when the Dehumidifier is running.
- Timer-On and Timer-Off cannot be set at the same time.
- Timer display on the remote controller : While time passes, the display shows the remaining time.
- If the "On-Off" button is pressed while the unit is under timer-off setting, then the unit will shut down immediately, the timer setting is cancelled and the timer light will be off.

#### **Timer Cancellation**

Press "Timer-Cancel" button to cancel the timer-on or timer-off settings.



## **Defrost system**

Sequences of the defrosting:

1- Start

- The defrosting is engaged if the following conditions are at the same time fulfiled:
  - the compressor and the fan motor run without stopping;

– the defrosting sensor temperature lower than  $3^\circ\text{C}\,,\,$  and the duration of time more than 45 minutes;

- the defrosting sensor temperature goes down to -7°C.

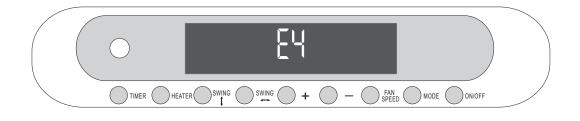
- $2^{-}$  After 15 seconds, the 4 way value shifts.
- 3- Five seconds after its stop, the compressor starts alone ; And the accumulated freeze on the gills becomes melting, what is generally with a steam cloud .
- 4- **Stop**:
- The defrosting stops if one of the following conditions is fulfiled:
- the defrosting operates 20 seconds and the detected temperature by the defrost sensor goes up to 12°C;
  - the compressor had run totally 8 minutes.
- 5-- The compressor runs.
- 6- After 15 seconds the 4 way valve shifts
- 7- Five seconds after its stop the compressor and the fan start for restarting in heating mode.
- 8- The running light is blinking during defrosting.

## Water drainage system

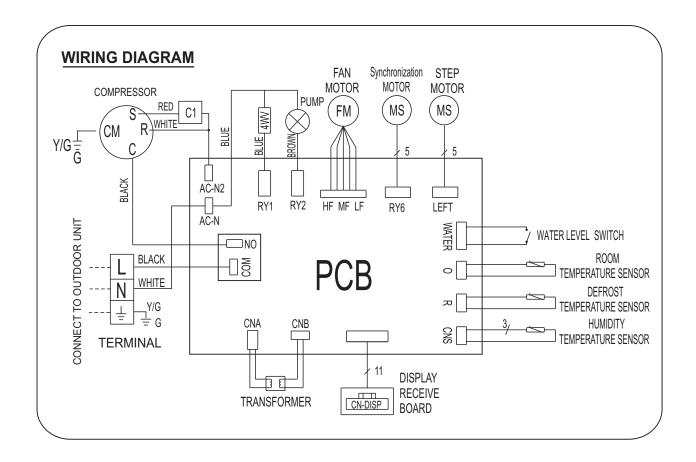
During the dehumidify mode, the condenser water will be drained into the internal water tank .When the water reaches the certain level, the water drain pump will work. If the water can be drained out in 8 mins, the dehumidifier will keep working. If not, the compressor and the motor will stop working. Mean while an error message " E4 " will appear in the control panel to inform you to empty the water. In this instance, you should cut the power off, and then restart the dehumidifier ,and the operation will continue .

## **Error Codes**

- E1 : Room temperature sensor error;
- E2 : Defrost temperature sensor error;
- E3 : Humidity sensor error;
- E4 : Drain error;

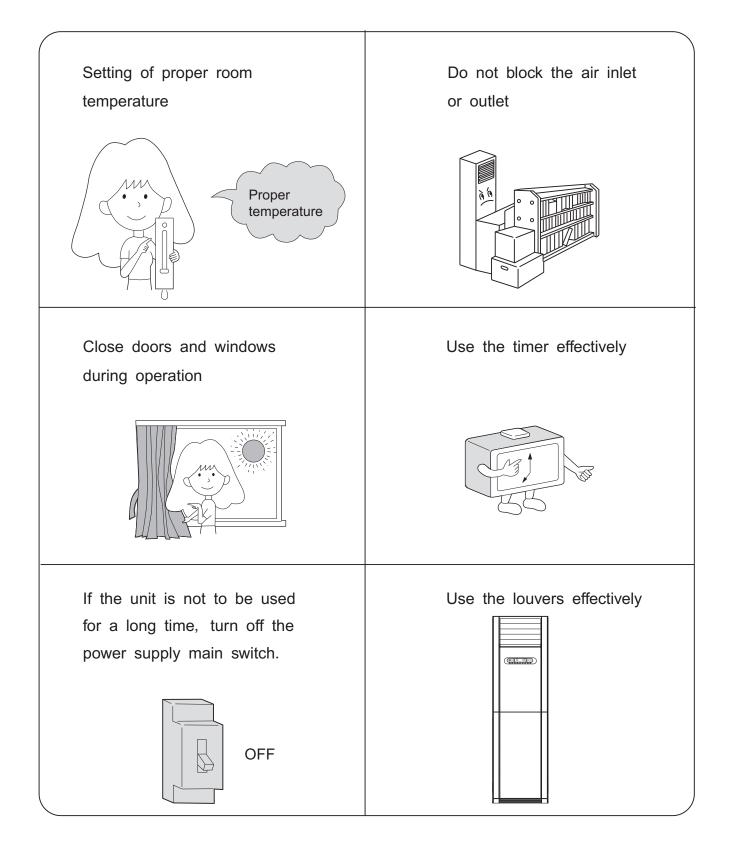


## Wiring diagram



## Maintenance

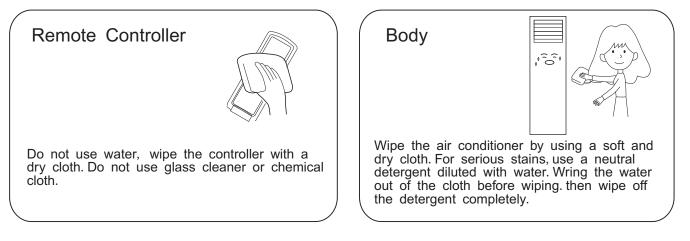
For smart use of the Dehumidifier:

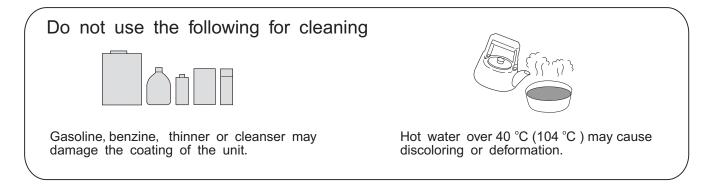


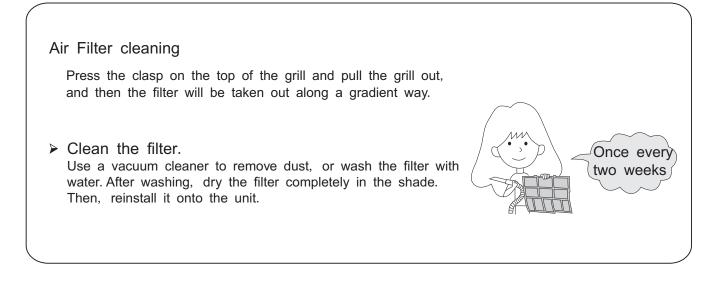
For smart use of the Dehumidifier:

## A WARNING

Before maintenance, be sure to turn off the system and the circuit breaker.

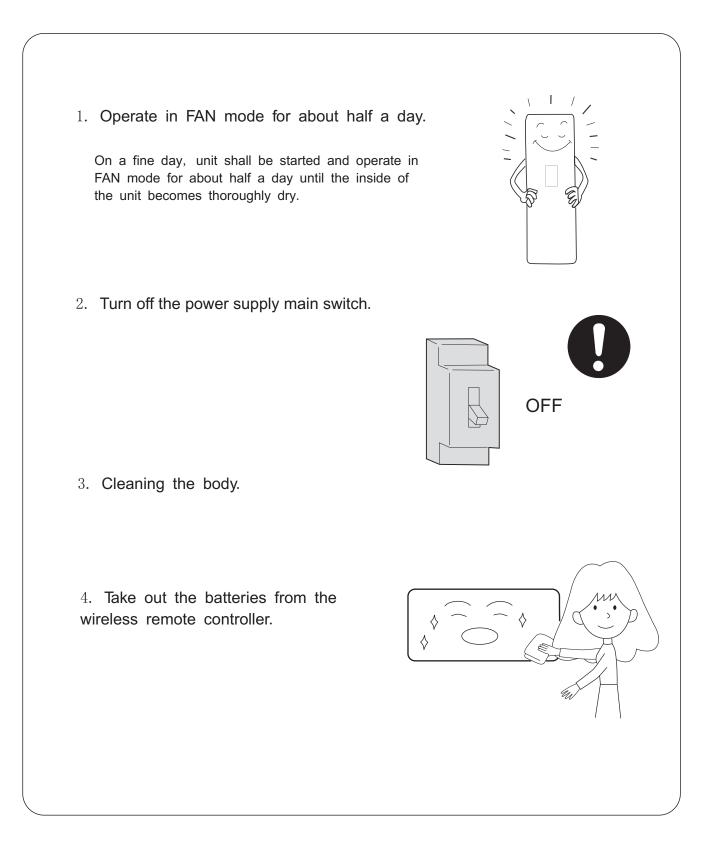






## Maintenance

To keep your Dehumidifier in good condition after season:



## Before asking for service, check the following first.

	Phenomenon	Cause or check points
	The system does not restart immediately.	<ul> <li>When unit is stopped, it won't restart immediately until 3 minutes have elapsed to protect the system.</li> <li>When the electric plug is pulled out and reinserted, the protection circuit will work for 3 minutes to protect the dehumidifier.</li> </ul>
Normal Performance inspection	Noise is heard:	<ul> <li>During unit operation or at stop, a swishing or gurgling noise may be heard. At first 2-3 minutes after unit start, this noise is more noticeable. (This noise is generated by refrigerant flowing in the system.)</li> <li>During unit operation, a cracking noise may be heard. This noise is generated by the casing expanding or shrinking because of temperature changes.</li> <li>Should there be a big noise from air flow in unit operation, air filter may be too dirty.</li> </ul>
	Smells are generated.	<ul> <li>This is because the system circulates smells from the interior air such as the smell of furniture, cigarettes.</li> </ul>
Multiple check	Does not work at all.	<ul> <li>Is power plug inserted?</li> <li>Is there a power failure?</li> <li>Is fuse blown out?</li> </ul>
	Inefficient	<ul> <li>Is the air filter dirty? Normally it should be cleaned every 15 days.</li> <li>Are there any obstacles before inlet and outlet? Is temperature set correctly?</li> <li>Are there some doors or windows left open?</li> </ul>
		• Are there some doors or windows left open?