

# TOSHIBA

## AIR CONDITIONER (SPLIT)

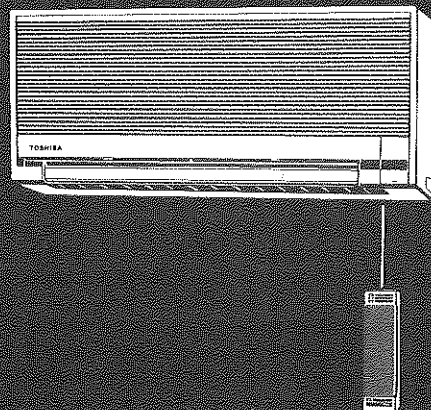
Indoor Unit

**RAS-M22GKHV(W)**

**RAS-M26GKHV(W)**

Outdoor Unit

**RAS-M42GAHV**



Thank you very much for purchasing our TOSHIBA Air Conditioner. Please read this owner's manual carefully before using your Air Conditioner.

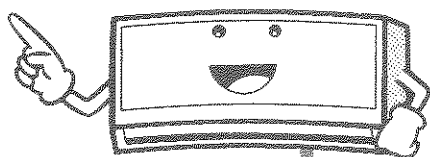
This Equipment complies with EEC directive '82/499/EEC.

# FEATURE AND FUNCTIONS

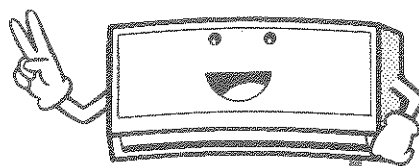
## FEATURE

### INVERTER AIR CONDITIONER

This is split-type multi-system air conditioner which is able to operate 2 indoor units with 1 outdoor unit. This air conditioner operates economically with a built-in inverter (frequency changer). The inverter operates at high power until your room temperature comes to thermo knob temperature, and the unit operates at low power so you can save money.

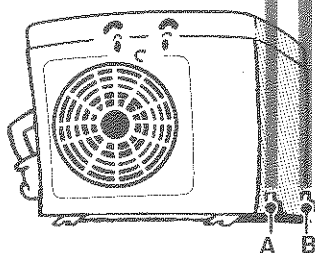


UNIT A  
RAS-M26GKHV



UNIT B  
RAS-M22GKHV

(RAS-M22GKHV  
can be used for  
Unit A.  
Set the selector of  
outdoor unit to "22"  
(downward).



## FUNCTIONS

### SELECTION of OPERATION MODE

The air conditioner has 4 modes: cooling, dry, heating and fan only.

#### COOLING OPERATION

#### HEATING OPERATION

Volume of air flow and temperature setting are adjustable as desired.

#### DRY OPERATION

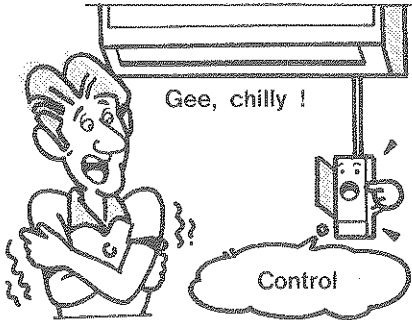
Moisture is removed from the room air without reducing the room temperature very much.

#### FAN ONLY OPERATION

# HINTS FOR ECONOMICAL OPERATION IN COMFORT

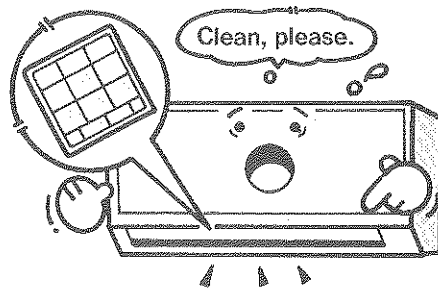
## Maintain room temperature at a Comfortable level.

Overcooling is bad for your health.



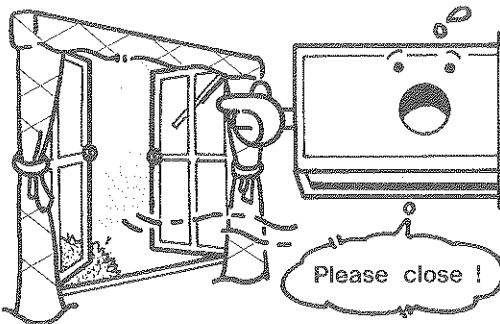
## Clean air filter

A clogged air filter impairs cooling efficiency. Clean it from time to time.



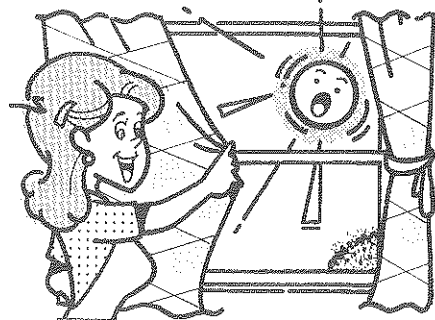
## Never open doors and windows more often than necessary

To keep cooled or heated air in the room, never open doors and windows more often than necessary.



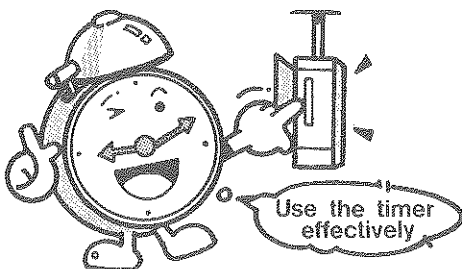
## Window curtains and floor carpet

In cooling, close the curtains to avoid direct sunlight; in heating, lay a carpet on the floor.



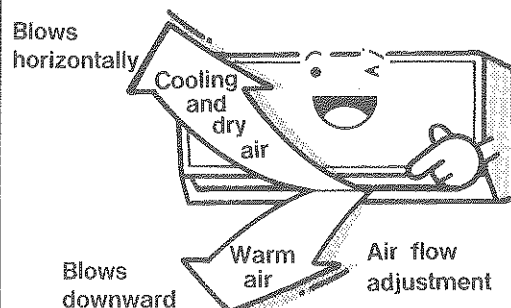
## Use timer to your benefit

Set the timer for the desired duration of operation.



## Get uniform circulation of room air

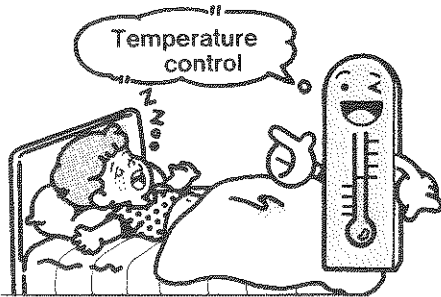
Adjust air flow direction for uniform circulation of room air.



# PRECAUTIONS FOR PROPER USE OF AIR CONDITIONER

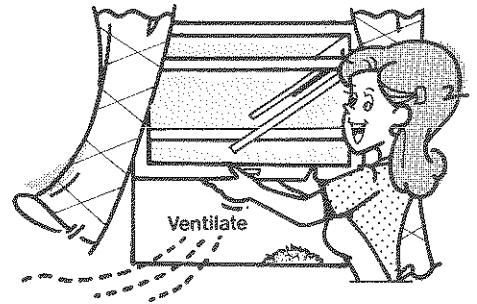
## Control room temperature for maximum comfort

Be careful to keep room temperature comfortable, especially when using the air conditioner for physically handicapped persons, infants, or senior persons.



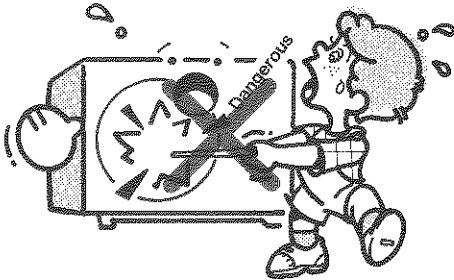
## Ventilate room occasionally.

Ventilate the room occasionally when running the air conditioner. Observe this especially when using a gas apparatus in the room.



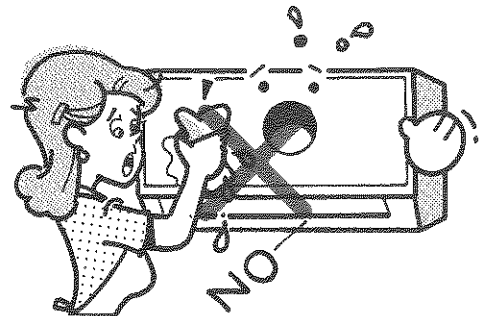
## Never poke a rod or hands into air inlet or outlet

Children are particularly liable to this danger. The fan is running at high speed inside. Covering them may deteriorate air conditioner performance or cause it to become inoperative.



## Never sprinkle water

To avoid electrical shock hazards, never attempt to clean the indoor unit by sprinkling water on it.



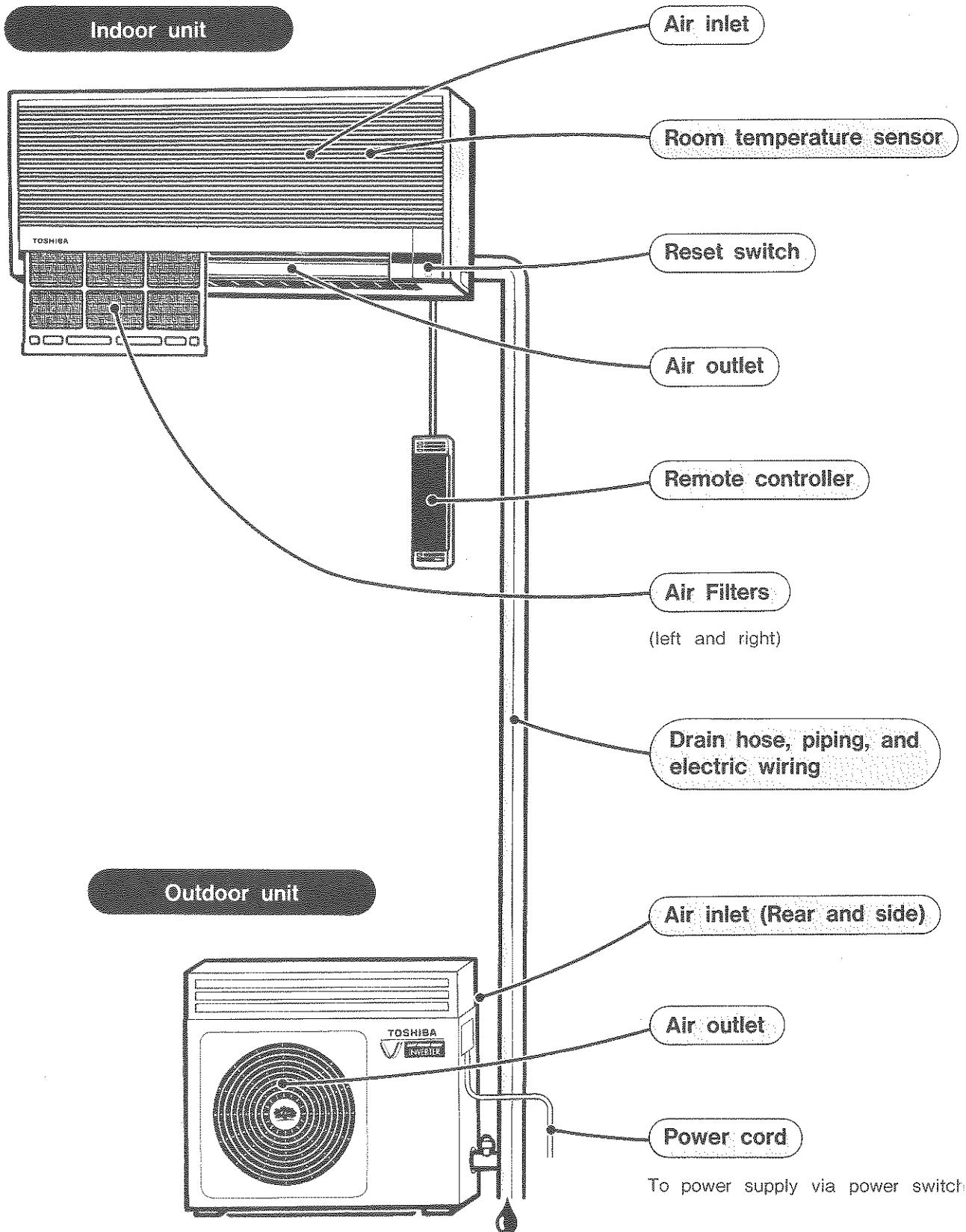
# AIR CONDITIONER OPERATIONS



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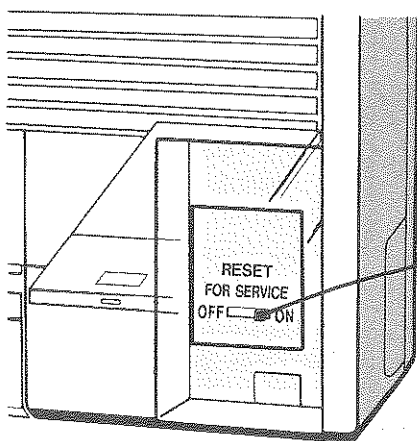
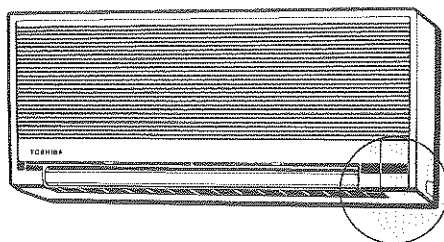
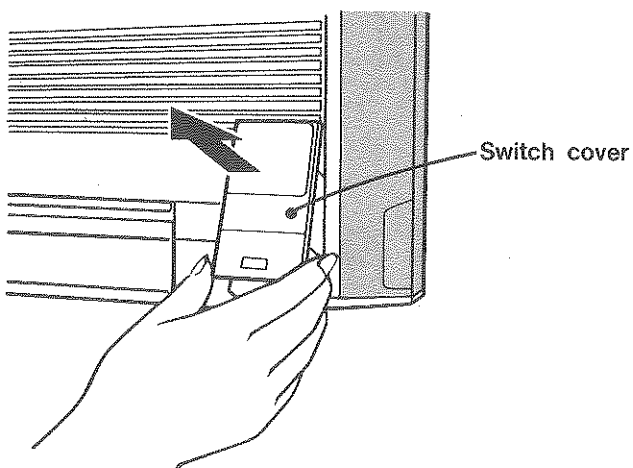
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# PARTS NAME



# RESET SWITCH AND ITS FUNCTION

When handling the RESET switch, push the switch cover, then lift it.



## RESET switch

The RESET switch switches the power of the indoor unit on or off. Usually, set the switch to ON. Set it to OFF when the air conditioner is not operated for a long time.



# REMOTE CONTROLS AND THEIR FUNCTIONS

## OPERATION MODE lamps

- COOL · DRY · HEAT  
The green lamp is on during operation.
- TIMER  
The yellow lamp is on during operation.
- PREHEAT · DEFROST  
The red lamp goes on at the start of the heating operation or during the defrost operation.  
The indoor fan stops for 2 to 10 minutes to prevent a cold draft when the lamp is on.

## TIMER knob

Set to the desired time interval.

## TIMER SELECTOR knob

Upon expiry of the set timer interval, the air conditioner starts operating when this knob is set to ON and stops operating when the knob is set to OFF. With the knob set to CONTINUE, the air conditioner continues operating regardless of the timer setting.

## MODE knob

The MODE knob is used to select cooling, dry, heating or fan only operation.

## OPERATION lamp

The OPERATION lamp is on during operation. It flashes at the time of power failure. See page 14 for power failure.

## THERMO knob

The figure gives a approximate measure of the temperature setting.

## FAN SPEED knob

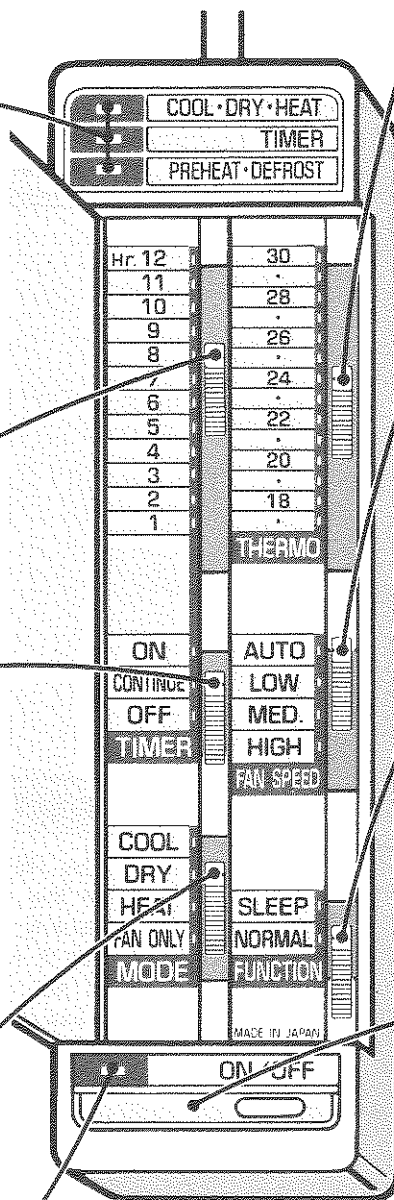
The AUTO position automatically changes the fan speed depending on the room temperature.

## FUNCTION knob

The FUNCTION knob is used to select NORMAL or SLEEP operation. Selecting the SLEEP operation before going to bed, will prevent excessive cooling or heating and also save money.

## ON/OFF button

Push this button to start the air conditioner. Push it again to stop it.





# HEATING/COOLING OPERATION

**Power supply**

## Power switch

Turn ON the power switch.

## Reset switch

Set to ON.

**1**

## MODE knob

Set to HEAT or COOL.

**2**

## THERMO knob

Set to a desired temperature.

**3**

## FAN SPEED knob

Set to AUTO, HIGH, MEDIUM or LOW.

**4**

## FUNCTION knob

Set to NORMAL or SLEEP.

● For sleep operation, see page 15.

**5**

## ON/OFF button

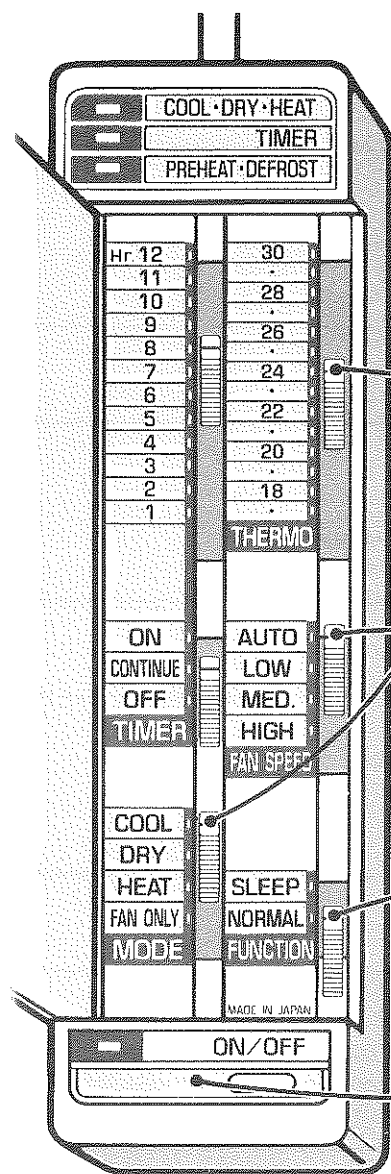
Push this button. The OPERATION lamp goes on and the air conditioner starts operating in about 3 minutes.

**STOP**

## ON/OFF button

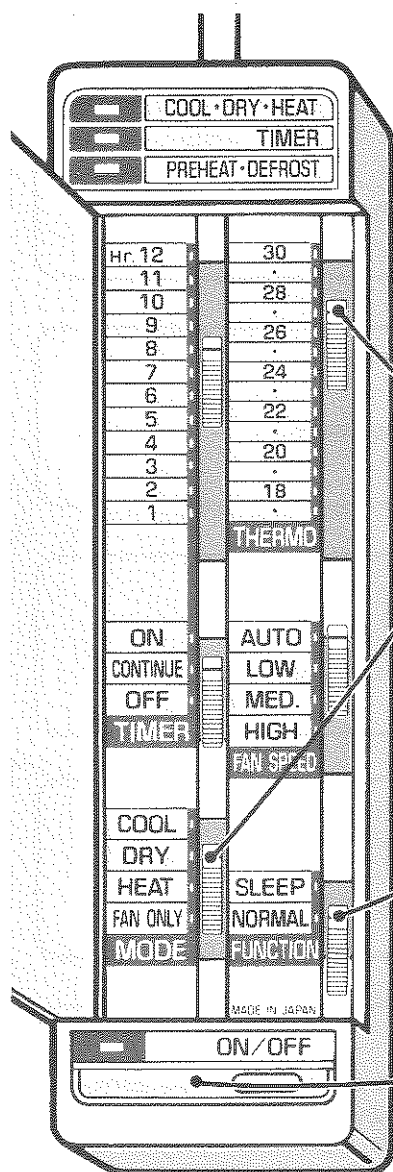
Push this button again. The OPERATION lamp goes off and the air conditioner stops operating.

● For timer operation, see page 10.



# DRY OPERATION

The dry operation regulates the room temperature with emphasis on dehumidifying room air. (See page 15 for further details.)



**Power supply**

## Power switch

Turn ON the power switch.

## Reset switch

Set to ON.

**1**

## MODE knob

Set to DRY.

**2**

## THERMO knob

Set to a desired temperature.

**3**

## FUNCTION knob

Set to NORMAL.

**4**

## ON/OFF button

Push this button. The OPERATION lamp goes on and the air conditioner starts operating in about 3 minutes.

**STOP**

## ON/OFF button

Push this button again. The OPERATION lamp goes off and the air conditioner stops operating.

●For timer operation, see page 10.

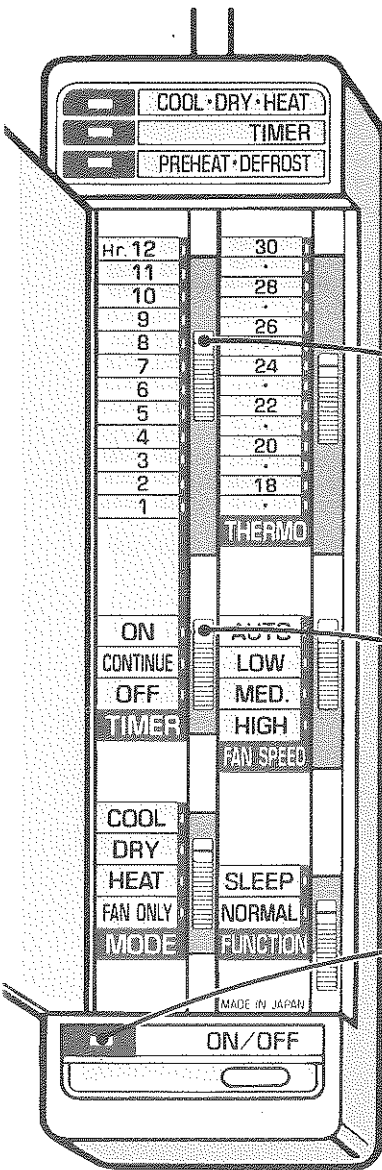
# TIMER OPERATION

**ON**  
(STOP → OPERATION)

Example:  
Operation before getting up  
or coming home.

**OFF**  
(OPERATION → STOP)

Example:  
Set before going to bed.



## TIMER knob

Set the desired time interval.

Example:

It is now 10 p.m. Set to 8 to start the air conditioner at 6 a.m. the next morning (8 hours later).

## TIMER SELECTOR knob

Set the knob to ON to start the air conditioner.  
Set it to OFF to stop operation.

## OPERATION lamp check

Check the OPERATION lamp is on.  
If it is off, push the ON/OFF button.

### To stop operation

- Push the ON/OFF button.

### To change the timer setting

- Set the TIMER knob to the desired time.  
The timer will start from the time the new setting is made.

### To change the timer mode to CONTINUE during timer operation

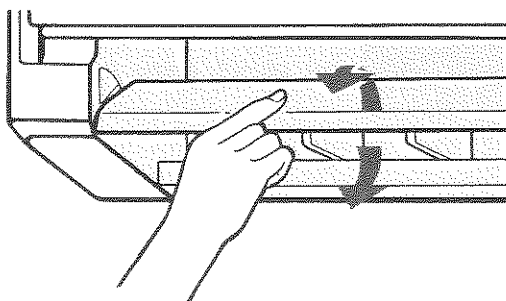
- Changing from OFF to CONTINUE  
Set the TIMER SELECTOR knob to CONTINUE.
- Changing from ON to CONTINUE  
Set the TIMER SELECTOR knob to CONTINUE.

# ADJUSTING AIR FLOW DIRECTION

Cooling or heating effects can be maximized by selective use of the vertical and horizontal flow grilles.

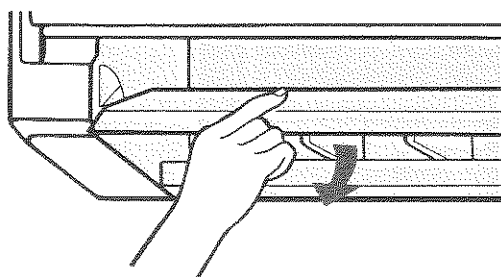
## Vertical flow direction

Adjust the vertical flow grille.



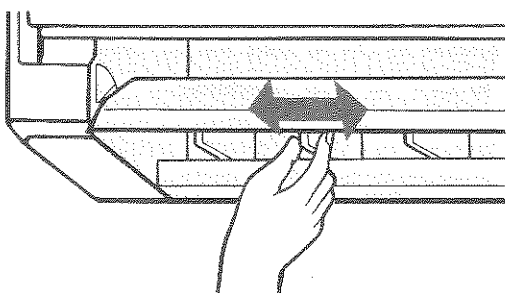
## For cooling or dry operation

Set the vertical flow grille in the range indicated for cooling and dry.



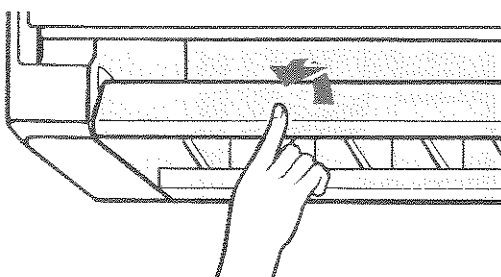
## Horizontal flow direction

Move the grilles left or right to adjust the horizontal air flow as desired or depending on the room state.



## For heating operation

Set the vertical flow grille in the range indicated for heating.



## CAUTION

- Do not run the air conditioner with the grille oriented directly downward for a long time in the cooling or dry operation mode. The surface of the grille may have moisture condensation and drip.

# ENSURING PROPER AIR CONDITIONER USAGE



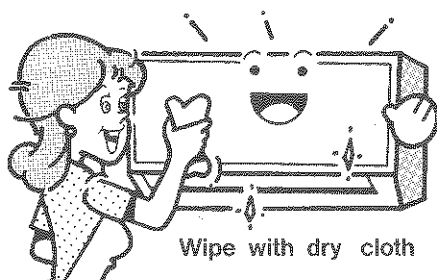
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# FOR MAINTENANCE

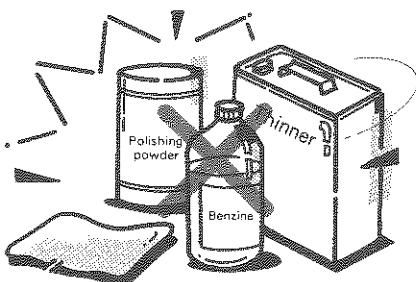
Turn the power switch off before starting to clean your air conditioner.

## Clean the main unit and remote controller.

- Polish it with a soft and dry cloth.
- Clean the dirty main unit with a cloth moistened with water (less than 40°C), and polish it with a dry cloth. (Never use a moist cloth to clean the remote controller. Just polish it with a dry cloth.)



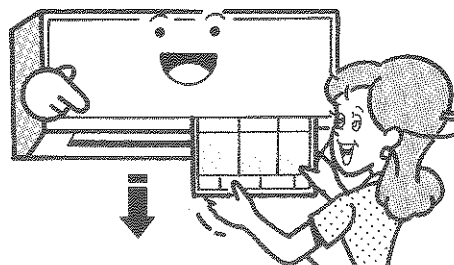
- Never use gasoline, benzine, thinner or similar solvents as cleaning agents. Do not use polishing powder or a chemical duster. These may cause the plastic surface to crack or deform.



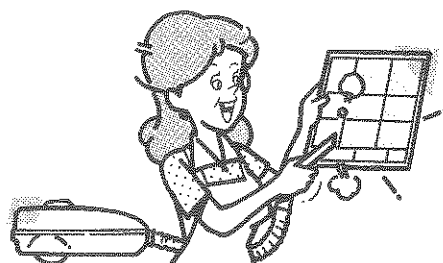
## Clean the air filter.

- Clean the air filters every 2 weeks.

- ① Pull the air filter downward.



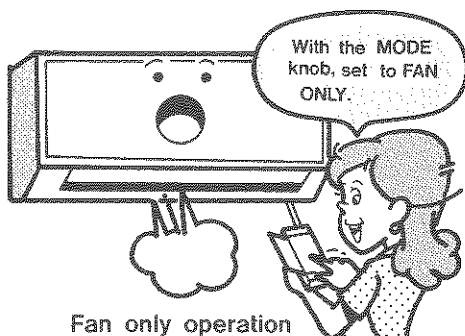
- ② To remove dust from the air filter, use a vacuum cleaner or pat it to dislodge the dust. If the air filter is fouled seriously, immerse it in lukewarm water and shake it up and down. Then, replace the air filter in the indoor unit as it was before.



- ③ Clean the air filter, dry it well, then replace as it was.

## No operation for more than 1 month

- ① Operate the fan for about half a day to dry the machine inside.
- ② Stop the air conditioner and turn the power switch off.



## Check up before operation

- Check that the ground wire is not broken or disconnected.
- Check that the air filter is installed.
- Check that the outdoor unit air outlet or inlet is not blocked.

# AIR CONDITIONER OPERATIONS AND PERFORMANCE

## Three-minute protection feature

A protection feature prevents the air conditioner from being activated for about 3 minutes when it is restarted immediately after operation or when the power switch is turned on.

## Characteristics of heating operation

### Preheating operation

Warm air flow will not be delivered immediately at the start of operation until the indoor heat exchanger warms up. Warm air flow is delivered within 5 minutes. (The PREHEAT·DEFROST lamp is on during this interval, indicating the preheating operation.)

### Warm air control

When the room temperature reaches the set temperature, the fan in the indoor unit will stop at an appropriate time to prevent a cold draft.

### Defrosting

If the outdoor unit is frosted during heating operation, defrost operation is initiated automatically (for about 2 to 10 minutes) to maintain the heating effect.

- The fans in both the indoor and outdoor units are stopped during defrost operation.
- During defrost operation, defrosted water is drained from the bottom plate of the outdoor unit.

## Characteristics of dry operation

The indoor unit blower delivers gentle air at whichever position the FAN SPEED knob is set.

## Compressor protective heater

A heater incorporated in the air conditioner helps the compressor to start running.

- Keep the power switch on in winter.
- Turn the power switch on two hours before operation, when winter starts.
- When the air conditioner will not be operated for more than 1 month, turn the power switch off.

## Heating capacity

This air conditioner uses an inverter that raises the rotational speed of the compressor to maintain the heating capacity when the outdoor temperature becomes low. If you still feel chilly, it is recommended to use another heating apparatus in combination with the air conditioner.

## Power failure

A power failure during operation stops the entire operation.

- The OPERATION lamp on the remote controller flashes to indicate when power is restored.
- To restart operation, push the ON/OFF button.

If a malfunction occurs during operation due to lightning or car wireless telephone, set the RESET switch to OFF, set it to ON again, then push the ON/OFF button again.

## Air conditioner operating conditions

For proper performance, run the air conditioner under the following temperature conditions.

Cooling operation	Outdoor temperature: 21–43°C
	Room temperature: 21–32°C
	Room humidity: Less than 80% If the air conditioner runs under more than 80% humidity for a long time, the surface of the machine will have moisture condensation and drip.
Heating operation	Outdoor temperature: Between –5°C and 21°C (Usable outdoor temperature: Between –10°C and 21°C)
	Room temperature: Less than 28°C
Dry operation	Outdoor temperature: 11–43°C
	Room temperature: 11–22°C (under heating dry operation) 17–32°C (under cooling dry operation)

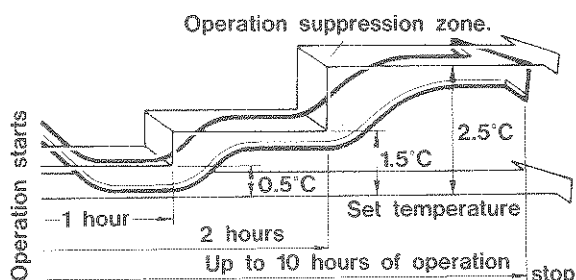


# HOW THE AIR CONDITIONER WORKS

## Sleep operation

Your body temperature drops while sleeping, so the room temperature is controlled to prevent overcooling in summer and overheating in winter, while saving you money.

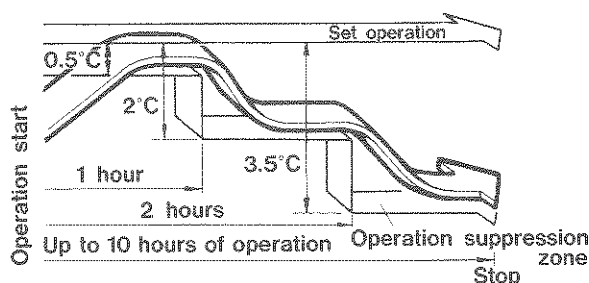
### Cooling operation



In the operation suppression zone, where capacity is kept to the minimum, overcooling is prevented by raising the temperature setting by 1.5°C after 1 hour and by 2.5°C after 2 hours of operation. The room temperature is thus regulated between the operation suppression zone and the set temperature. (It depends on the outdoor temperature.)

This operation continues for up to 10 hours and stops automatically (with the TIMER SELECTOR knob set to CONTINUE).

### Heating operation



In the operation suppression zone, where capacity is kept to the minimum, overheating is prevented by lowering the temperature setting by 2°C after 1 hour and by 3.5°C after 2 hours of operation. The room temperature is thus regulated between the set temperature and the operation suppression zone. This operation continues for up to 10 hours and stops automatically (with the TIMER SELECTOR knob set to CONTINUE).

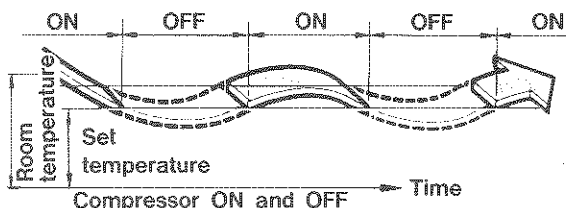
## Dry operation

In the dry operation, the air conditioner regulate the room temperature automatically depending on the difference between the room temperature and set temperature, while dehumidifying room air.

### Dry operation

The dry operation is selected when the room temperature is higher than the set temperature. (It is used when the room temperature is above 17°C)

#### Compressor



Cooling operation and stop are repeated to regulate the room temperature while dehumidifying room air.

The indoor unit fan operates at low speed regardless of the setting of the FAN SPEED knob.

# INSTALLATION

## Location

- Your air conditioner removes moisture from the room air when cooling.  
Arrange a pipe to drain all water from the unit.
- Keep the indoor unit at least 1 m apart from the TV set or radio to protect them against image disturbances or noises.
- Powerful radio transmitters or any other devices radiating high-frequency radio waves can cause the air conditioner to malfunction. Please consult the shop where you purchased the air conditioner before installing it.
- Don't install the unit in a hazardous location where combustible gas or vapor is likely to concentrate in the air.
- If the air conditioner is operated in an atmosphere containing oils (machine oil), salt near a coastal area, sulfide gas near a hot spring, etc, Such substances may lead to failure of the unit.

## Be careful with noises or vibrations

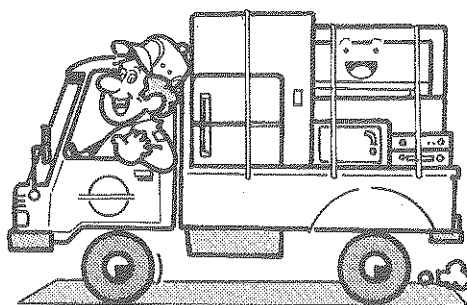
- Install the air conditioner on solid ground to prevent transmission of noises or vibrations to other sites or their amplification.
- Objects placed near the air outlet of the outdoor unit could amplify noises emitted from it.
- Locate the outdoor unit where noise emitted by it or hot air from its air outlet will cause no nuisance to your neighbors.
- If the air conditioner sounds abnormal during operation, contact the shop where you purchased this unit.

## Wiring

- Ground the air conditioner for prevention of electric shock.
- Provide an outlet for exclusive use with your air conditioner.
- Never pull the power cord tight or remote controller cord.
- Ground the air conditioner in accordance with the applicable local regulations.
- Use a fuse with the correct rated ampere, if it is needed.

## Relocation

If you move out or if it is desired to relocate the air conditioner, consult your dealer because the special skills to withdraw Freon, purge air, and perform other operations are required.



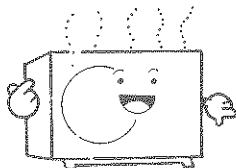
# TROUBLES AND CAUSES

Before requesting servicing, check the following points.

These are not failures.

## Symptoms

## Possible causes



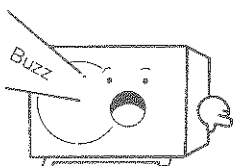
- A white mist of chilled air is generated from the outdoor unit.

- The outdoor unit fan has automatically stopped to defrost.



- Room air is smelly.

- Smells impregnated in the wall, carpet, furniture, clothing, or furs, are coming out.



- A crack is sometimes heard from the outdoor unit.

- The solenoid valve produces this noise when it operates at the start and end of defrost operation.



- OPERATION lamp flashes.

- The lamp flashes when the power is restored after a power failure or the power switch is turned on.

The air conditioner does not start up.

- A protection feature prevents the air conditioner from being activated for about 3 minutes when it is restarted immediately after operation or when the power switch is turned on.

The fan speed not change during dry operation.

- In the dry operation, the indoor unit fan operates at low speed regardless of setting of the FAN SPEED knob.

The fan does not operate when the heating operation is started.  
The PREHEAT · DEFROST lamp lights.

- When starting the heating operation or during defrosting operation, the fan is put into halt to prevent the cool air from discharging, and at the same time the PREHEAT · DEFROST lamp lights. When the heat exchanger becomes warm enough, the fan starts operating.

The compressor some times stops during operation.

- The protective device may operate to stop the compressor, thereby protecting the compressor.

Symptoms	Possible causes
<div data-bbox="13 415 48 656" data-label="Text">Please check again.</div> <div data-bbox="75 289 274 473" data-label="Image"> </div> <div data-bbox="299 376 432 405" data-label="Text"><b>Inoperative.</b></div>	<ul style="list-style-type: none"> <li>● Power failure.</li> <li>● The RESET switch is set to OFF.</li> <li>● The power switch is not ON.</li> <li>● The power fuse is blown or the breaker is tripped.</li> <li>● The TIMER is set.</li> </ul>
<div data-bbox="75 579 274 763" data-label="Image"> </div> <div data-bbox="304 656 521 714" data-label="Text"><b>Does not cool or heat well.</b></div>	<ul style="list-style-type: none"> <li>● The outdoor unit air inlet or outlet is blocked.</li> <li>● Doors or windows are open.</li> <li>● The air filter is clogged with dust.</li> <li>● The FAN SPEED knob is set to LOW.</li> <li>● The THERMO knob is not set to the proper position.</li> </ul>

In any of the following conditions, stop the air conditioner immediately, turn the power switch OFF and call the dealer from whom the air conditioner was purchased:

- OPERATION lamp and one of OPERATION MODE lamps flash quickly.
- Switch operations are erratic.
- The fuse is frequently blown or the circuit breaker is frequently tripped.
- Foreign matter or water has penetrated the interior of the air conditioner.
- The cord is overheated or its covering is broken.
- Any other unusual condition is observed.

# SPECIFICATIONS

Operation		1 Unit		2 Units	
MODEL	Indoor	RAS-M26GKHV (W)	RAS-M22GKHV (W)	RAS-M22GKHV (W) RAS-M26GKHV (W)	RAS-M22GKHV (W) RAS-M22GKHV (W)
	Outdoor	RAS-M42GAHV			
Type		Reverse cycle, Split type			
Power supply		Single phase, 50Hz, 220/240V			
Cooling	Capacity (Btu/h)	10400	9000	17000	16400
	Amps (A)	7.8	6.6	12.4	12.2
	Watts (W)	1620	1370	2570	2530
Heating	Capacity (Btu/h)	16400	15200	22000	21200
	Amps (A)	10.1	9.4	12.5	12.3
	Watts (W)	2100	1950	2580	2550
Net weight (kg)	Indoor	9.5			
	Outdoor	59			
Dimensions (W×H×D) (mm)	Indoor	790×370×155			
	Outdoor	720×675×300+23			
Starting current (A)		7.0			

● The specifications may be subject to change without notice for the purpose of improvement.

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