



OPERATING INSTRUCTIONS

MSZ-G20UV

For customers

Thank you very much for purchasing this Mitsubishi room air conditioner.

- To use this unit correctly and safely, be sure to read this operating instructions before use. Keep this manual carefully for later reference.
- Be sure to receive a guarantee card from your dealer and check that the purchased date and shop name, etc. are entered correctly.
- This air conditioner should not be installed by the customer. (Safety and performance functions cannot be assured.)

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SAFETY PRECAUTIONS

- Since rotating parts and parts which could cause an electric shock are used in this product, be sure to read these "Safety Precautions" before use.
- Since the cautionary items shown here are important for safety, be sure to observe them. Marks and their meanings are as shown below.

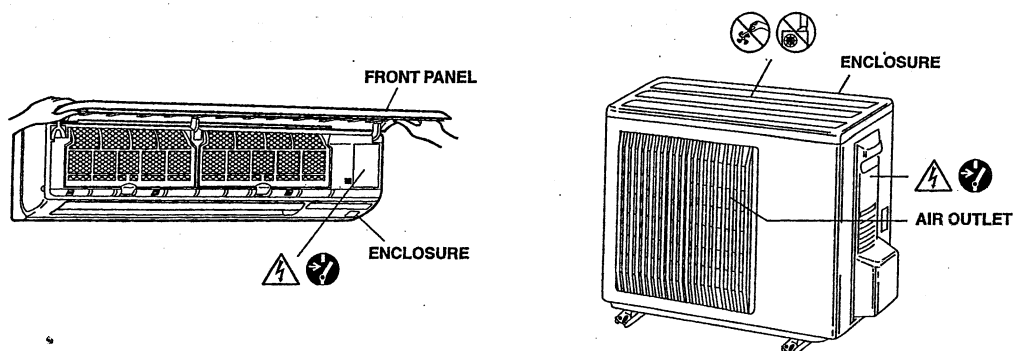
	Incorrect handling could cause a serious hazard, such as death, serious injury, etc. with a high probability.
	Incorrect handling could cause a serious hazard depending on the conditions.

Meanings of symbols used in this manual are as shown below.

	Be sure not to do.
	Be sure to follow the instruction.
	Never insert your finger or stick, etc.
	Never step onto the indoor/outdoor unit and do not put anything on them.
	Danger of electric shock, be careful.
	Be sure to shut off the power.

- After reading this manual, keep it together with the installation manual in a handy place for easy reference.

Warning mark positions and safety devices

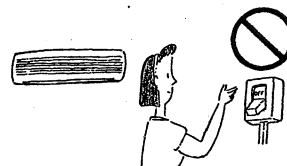


WARNING

- This air conditioner is NOT intended for use by children or infirm persons without supervisions.

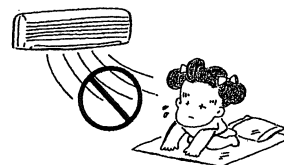
Do not turn the breaker off/on during operation.

- This may cause a fire due to spark, etc.
- Be sure to turn off the breaker absolutely after switching the indoor unit off with the remote controller.



Do not expose your skin directly to cool air for a long time.

- This could damage your health.



When an abnormality (burning smell, etc.) occurs, stop the air conditioner and turn off the breaker.

- If the unit continues to be operated in an abnormal condition, it may cause a fire, trouble, etc. In this case, consult your dealer.



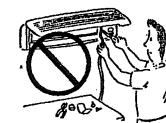
Do not insert your finger or a stick, etc. into the air inlet/outlet.

- Since the fan rotates at high speed, this may cause an injury.
- Young children should be supervised to ensure that they do not play with the air conditioner.



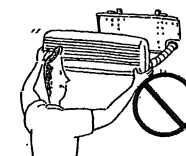
Repairs or relocation should not be done by the customer.

- If this is done incorrectly, it may cause a fire, an electric shock, or injury from the unit falling, water leaking, etc. Consult your dealer.



The customer should not install this unit.

- If this is done incorrectly, it may cause a fire, an electric shock, or injury from the unit falling, water leaking, etc. Consult your dealer.



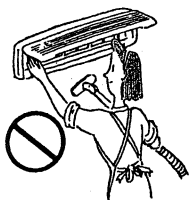


SAFETY PRECAUTIONS

CAUTION

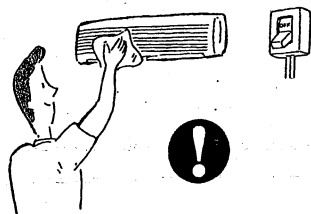
When the air filter is to be removed, do not touch the metal parts of the indoor unit.

- This may cause an injury.



When the unit is to be cleaned, switch it off and turn off the breaker.

- Since the fan rotates at high speed during operation, this may cause an injury.



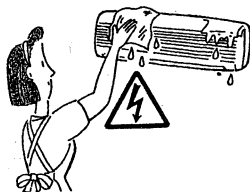
Do not operate switches with wet hands.

- This may cause an electric shock.



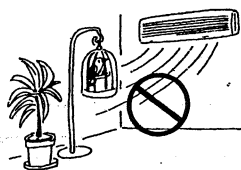
Do not clean the air conditioner with water.

- Water may enter the unit and degrade the insulation. This may cause an electric shock.



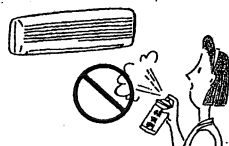
Do not put a pet or houseplant where it will be exposed to direct airflow.

- This could injure the pet or plant.



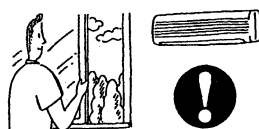
Do not use an insecticide or flammable spray.

- This may cause a fire or deformation of the cabinet.



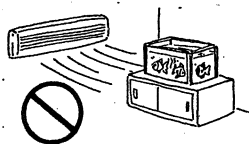
Ventilate well in using the unit with a stove, etc.

- An oxygen shortage may occur.



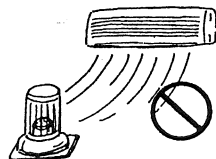
Do not use the unit for special purposes.

- Do not use this air conditioner to preserve precision devices, food, animals, plants and art objects. This may cause deterioration of quality, etc.



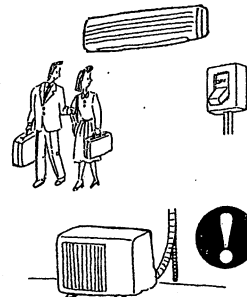
Do not put a stove, etc. where they are exposed to direct airflow.

- This may cause imperfect combustion.



When the unit is not going to be used for a long time, turn off the breaker.

- Otherwise, dirt may collect and this may cause a fire.



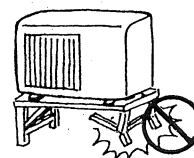
Do not step or put anything on the indoor/outdoor unit.

- This may cause an injury, etc. if you or something falls down.



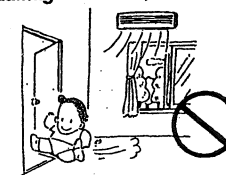
Do not leave the unit on an installation stand which is damaged.

- The unit may fall and this may cause an injury.



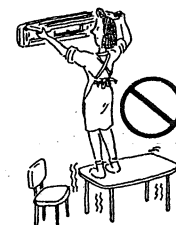
Do not operate the unit for a long time in high humidity, e.g. leaving a door or window open.

- In the cooling mode, if the unit is operated in a room with high humidity (80% RH or more) for a long time, water condensed in the air conditioner may drop and wet or damage furniture, etc.



Do not step onto an unstable bench when maintaining the unit, etc.

- This may cause an injury, etc. if you fall down.



Replace the 2 batteries with new ones of same type.

- Using an old battery together with a new one may result in heat generation, leakage or an explosion.



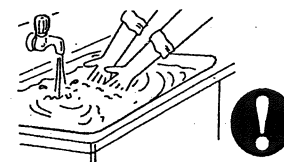
Do not charge or disassemble the batteries and do not throw them into a fire.

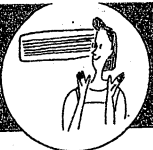
- This may result in leakage, fire or an explosion.



If liquid from the batteries gets onto your skin or clothes, wash it well with clean water.

- If liquid from the batteries gets into your eyes, wash them well with clean water and consult a doctor at once.





SAFETY PRECAUTIONS

For installation

WARNING

- Consult your dealer for installation of the air conditioner.

CAUTION

Earth the unit.

- Do not connect the earth to a gas pipe, water pipe, lightning rod or the earth of a telephone. If the earthing is incorrect, it may cause an electric shock.



Do not install the unit where flammable gas could leak.

- If gas leaks and collects around the unit, it may cause an explosion.



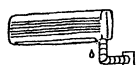
Install an earth leakage breaker depending on the place where the air conditioner is to be installed (humid places, etc.).

- If the earth leakage breaker is not installed, it may cause an electric shock.



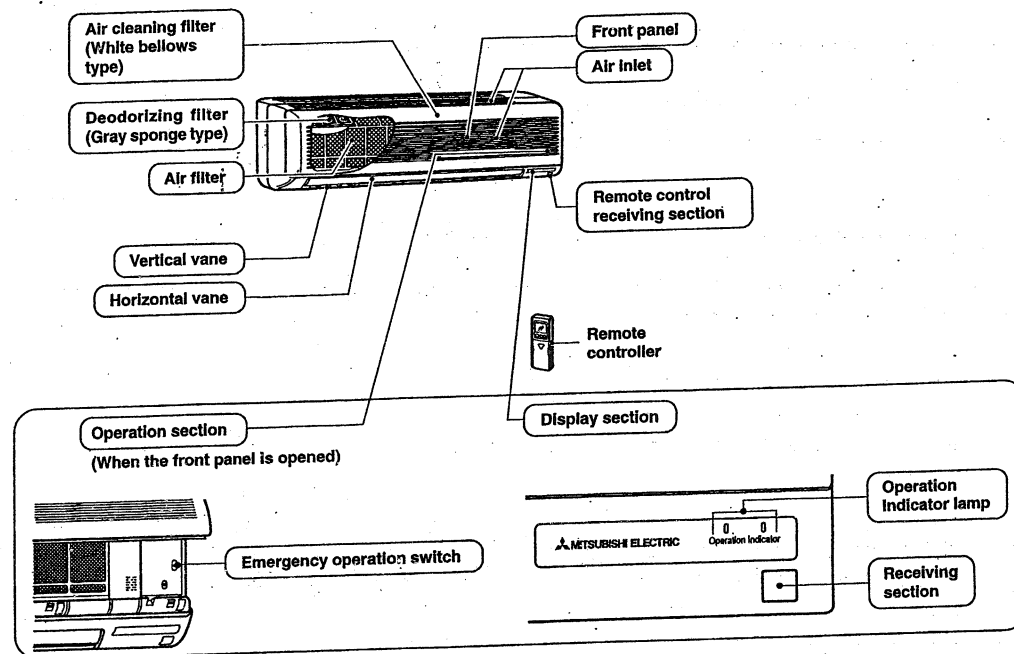
Drain should be fully drained.

- If the drainage route is incomplete, water may drop from the unit. This may wet and damage the furniture.

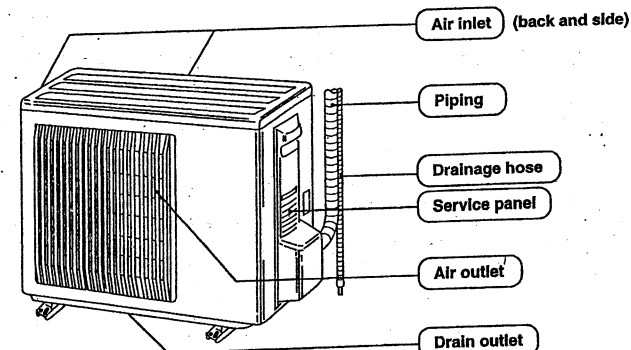


NAME OF EACH PART

Indoor unit



Outdoor unit





NAME OF EACH PART

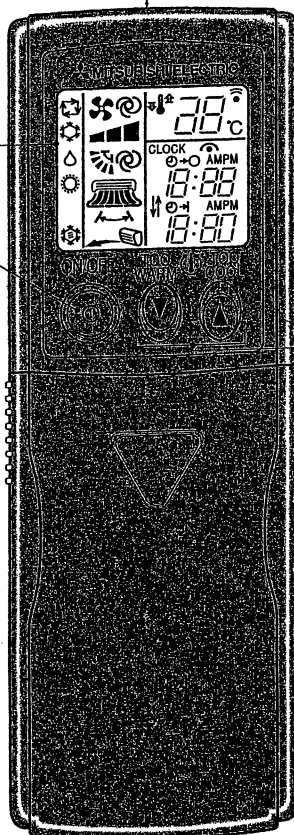
Remote controller

Signal transmitting section

Operation display section

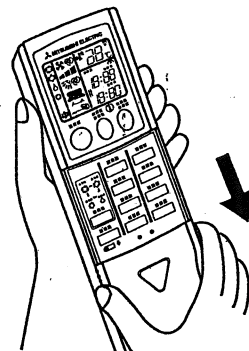
ON/OFF (operate/
stop) button

Temperature buttons



(This diagram shows an overall view.)

Open the front lid.



VANE button
(Horizontal vane button)

Operation select button

ECONO COOL button

WIDE VANE button
(Vertical vane button)

RESET button

Fan speed control button

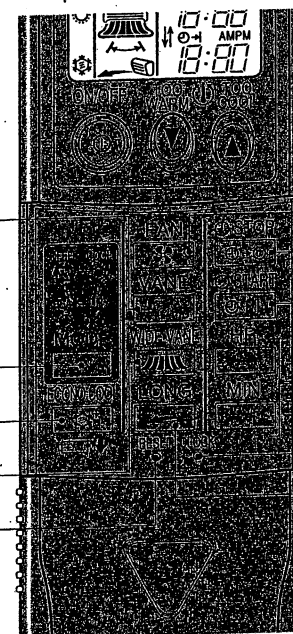
Off-timer button

On-timer button

HR.button
MIN.button
(Time set buttons)

CLOCK set button

LONG button



PREPARATION BEFORE OPERATION

Auto restart function

This model is equipped with an auto restart function, but this function is OFF when the units are shipped from the factory. If you want to use the auto restart function, please consult the service representative because the setting of the unit needs to be changed.

Auto restart function is ...

When the indoor unit is controlled with the remote controller, the operation mode, the set temperature and the fan speed are stored in the memory. If a power failure occurs or the main power is turned off during operation, "Auto restart function" sets automatically to start operating in the same mode as the one set with the remote controller just before the shutoff of the main power.

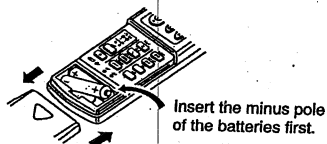
Breaker for the air conditioner

Turn the breaker on.

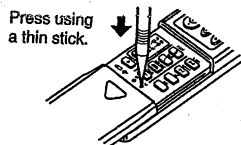
Remote controller (How to set the batteries and the current time)

1 Remove the front lid and insert batteries. Then reattach the front lid.

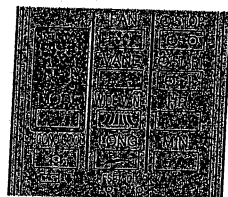
Insert the minus pole of the batteries first. Check if the polarity of the batteries is correct.



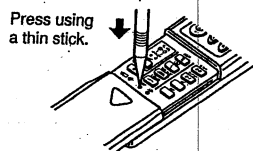
3 Press the CLOCK set button.



4 Press the **HR.** and **MIN.** buttons (TIME SET buttons) to set the current time.



2 Press the RESET button.



■ If the RESET button is not pressed, the remote controller may not operate correctly.

■ Each time the **HR.** button is pressed, the set time increases by 1 hour, and each time the **MIN.** button is pressed, the set time increases by 1 minute.

5 Press the CLOCK set button again and close the front lid.

Handling of the remote controller

- The range that the signal can reach is about 6 m when the remote controller is pointed at the front of the indoor unit.
- When a button is pressed, one or two beeps will be heard from the indoor unit. If no sound is heard, operate again.
- Use the remote controller carefully. If it is dropped, thrown or it gets wet, the remote controller may not operate.

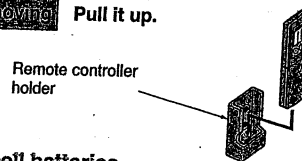
When installing on a wall, etc.

- Install the remote controller holder in a position where the signal reception sound (beep) can be heard from the indoor unit when the **ON/OFF** button is pressed.

How to install/remove the remote controller

Installing Insert the remote controller downward.

Removing Pull it up.



Dry-cell batteries

Replace the batteries with new AAA alkaline batteries in the following cases:

- When the indoor unit does not respond to the remote control signal.
- When the display on the remote controller becomes dim.
- When a button of the remote controller is pressed, all displays appear on the screen, and then disappear immediately.

Do not use manganese batteries. The remote controller could malfunction.

- The service life of an alkaline battery is about 1 year. However, a battery which the time limit is approaching may be exhausted soon. The recommended usable time limit is indicated (month/year) on the bottom of the battery.

CAUTION

If liquid from the batteries gets onto your skin or clothes, wash it well with clean water.

If liquid from the batteries gets into your eyes, wash them well with clean water and consult a doctor at once.

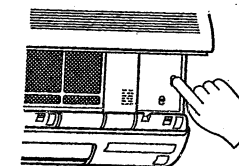
- To prevent liquid leakage, take out all batteries when the remote controller is not going to be used for a long time.
- Do not use rechargeable batteries.
- Replace the 2 batteries with new ones of the same type.
- Dispose of exhausted batteries in the correct manner.

When the remote controller cannot be used (emergency operation)

When the batteries of the remote controller run out or the remote controller malfunctions, the emergency operation can be done using the EMERGENCY OPERATION switch.

1 Press the EMERGENCY OPERATION switch.

- Each time the EMERGENCY OPERATION switch is pressed, the unit will operate in order of EMERGENCY COOL MODE, EMERGENCY HEAT MODE and STOP MODE. However, when the EMERGENCY OPERATION switch is once pressed, the unit will operate in test run for 30 minutes and then the operation mode shifts to EMERGENCY MODE.

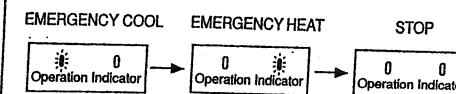


Details of EMERGENCY MODE are as shown below. However, the temperature control does not work for 30 minutes in test run and the unit is set to continuous operation. The fan speed is set to High in test run and shifts to Medium after 30 minutes.

Operation mode	COOL	HEAT
Set temperature	24 °C	24 °C
Fan speed	Medium	Medium
Horizontal vane	Auto	Auto
Vertical vane	Front	Front

The operation mode is indicated by the Operation Indicator lamp on the indoor unit as following figures.

Operation Indicator lamp

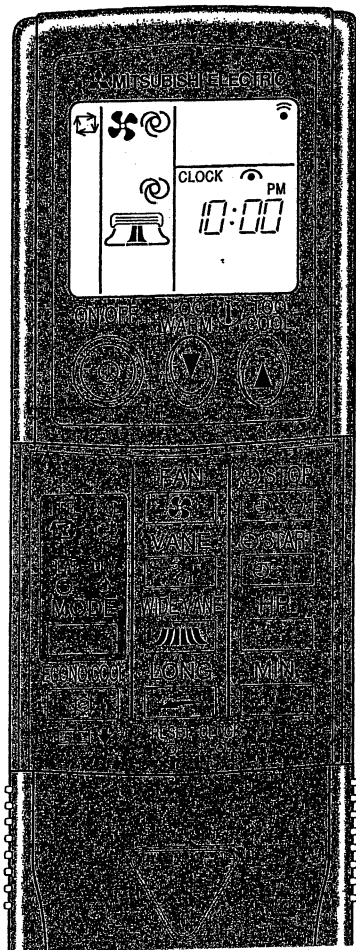


To stop the emergency operation, press the EMERGENCY OPERATION switch once (in case of EMERGENCY HEAT MODE) or twice (in case of EMERGENCY COOL MODE).



I FEEL... AUTO OPERATION

With the "I FEEL..." auto operation mode, the optimum room condition can be set automatically with a one-touch operation.



- To start operation:

Press the  button.

When the "I FEEL..." mode is selected, the air conditioner is automatically controlled at the optimum temperature.

- To stop operation:

Press the  button.

- If you feel slightly warm:


Press the  button to lower the temperature.





One press lowers the temperature by about 1 °C.

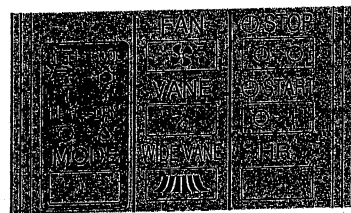
- If you feel slightly cool:

Press the  button to raise the temperature.

One press raises the temperature by about 1 °C.


When "I FEEL..." is not selected, press the  button until it is set.

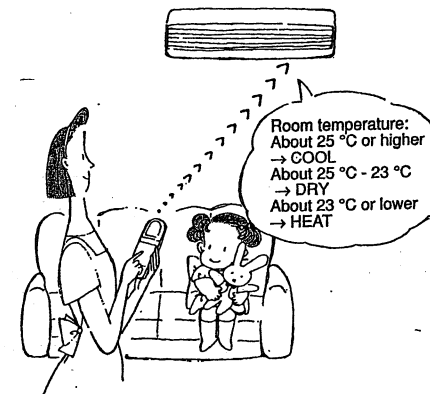
Each time the button is pressed, the operation mode is changed in sequence:  (I FEEL...) →  (COOL) →  (DRY) →  (HEAT)



Description of "I FEEL..." mode

Details of operation

According to the room temperature when the operation starts, the operation mode is automatically set to COOL, DRY or HEAT. However, when operation is started again within 2 hours after it is stopped, the same operation mode before the operation is stopped is selected. The operation mode selected first is not changed even if the room temperature changes. If the operation mode does not match the room condition, select the appropriate operation mode by pressing the  button.



Details of auto operation

Room temperature when started	Operation mode	Target temperature (initial state)
About 25 °C or higher	COOL	About 24 °C
About 25 °C - 23 °C	DRY	—
About 23 °C or lower	HEAT	About 26 °C



NOTE

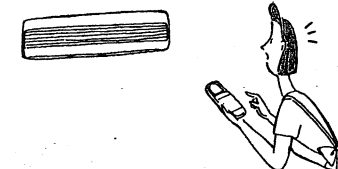
COOL: When the room temperature is 2 °C higher than the set temperature, the set temperature may not be changed since the air conditioner is operating to reach the target (set) temperature. In this case, please wait until the room temperature drops to within 2 °C of the set temperature and then change the set temperature.

HEAT: When the room temperature is 2 °C lower than the set temperature, the set temperature may not be changed since the air conditioner is operating to reach the target (set) temperature. In this case, please wait until the room temperature rises to within 2 °C of the set temperature and then change the set temperature.



Details of display on the indoor unit

The operation indicator at the right side of the indoor unit indicates the operation state.

 0	Lighted
 0	Not lighted

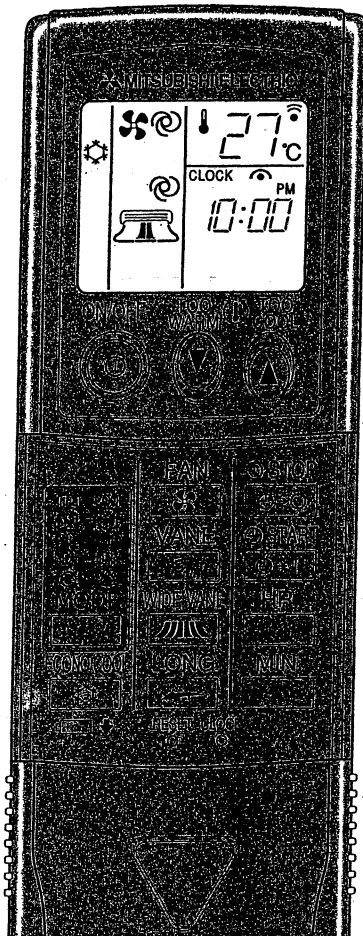


Operation indicator lamp







Indication	Operation state	Difference between target temperature and room temperature
	This shows that the air conditioner is operating to reach the target temperature. Please wait until the target temperature is obtained.	About 2 °C or more
	This shows that the room temperature is approaching the target temperature.	About 2 °C or less





MANUAL OPERATION (COOL, DRY, HEAT)





To select the COOL, DRY or HEAT mode

- 1 Press the  button.
 - 2 Select the operation mode by pressing the  button.
- Each time this button is pressed, the operation mode is changed in sequence:  (I FEEL...) →  (COOL) →  (DRY) →  (HEAT)

To stop operation:

- Press the  button.
- After the operation mode is set once, the operation starts in the same mode as the one set previously from the next time by simply pressing the  button.

When the set temperature is to be changed:

- Press the  button to lower the temperature. One press lowers the temperature by about 1 °C.
- Press the  button to raise the temperature. One press raises the temperature by about 1 °C.

DRY operation

- The temperature control (temperature setting) cannot be done.
- The room temperature is slightly lowered in this operation mode.

The details of the display on the indoor unit are explained on page 7.

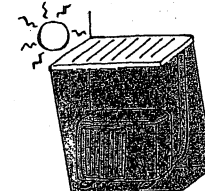
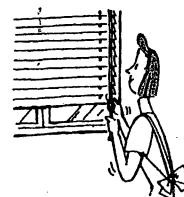
NOTE

When the ambient temperature is too high, the room temperature may not reach the set temperature since the unit operates to cool the room under a high load.

CONVENIENT INFORMATION

COOL For effective cooling

- ① Close the windows and pull down blinds. Sunshine is reduced and cooling efficiency increases.
- ② Paste a heat shield film (generally available) on the window. Heat entering the room is reduced.
- ③ Block the outdoor unit from direct sunlight. This saves energy.



HEAT Comfortable warmth depends on the temperature difference between the indoor and the outdoor.

It is recommended that the set temperature in the heating operation does not differ from the external temperature too much. Though there is a regional difference, as a reference, a set temperature between about 22 °C and 24 °C would be suitable.

DRY The humidity at which people feel comfortable

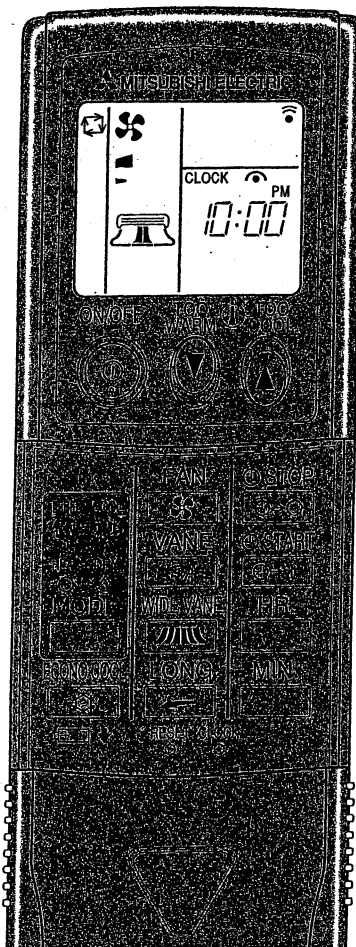
When air contains too much moisture, people feel uncomfortable. Humidity is related to temperature and wind. The humidity at which people feel comfortable is 60 % - 75 % RH in summer, 55 % - 70 % RH in winter.





AIR FLOW VELOCITY AND DIRECTION ADJUSTMENT

AIR FLOW velocity and direction can be selected as required.



To change the AIR FLOW velocity, press the **FAN** button.

Each time the button is pressed, the fan speed is changed in sequence: (Low) → (Med.) → (High) → (AUTO)

- Use the (High) notch to cool/heat the room more.
- If the operating sound of the air conditioner disturbs your sleep, use the (Low) notch.

To change the AIR FLOW blowing direction vertically, press the **VANE** button.

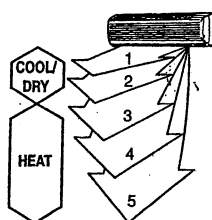
Each time the button is pressed, the angle of the HORIZONTAL VANE is changed in sequence: (1) → (2) → (3) → (4) → (5) → (SWING) → (AUTO)

SWING OPERATION

Use the swing operation for the air flow to reach all corners of the room.

Recommended HORIZONTAL VANE range

Use the (AUTO) position usually. Use position (1) or (2) in COOL or DRY mode and use positions (3) to (5) in HEAT mode when adjusting to your requirements.



NOTE

- In the cooling operation, when the air conditioner is operated with setting the HORIZONTAL VANE to (4) or (5) for 1 hour, the AIR FLOW direction is automatically set to horizontal to prevent condensed water from dropping.
- Adjust the vertical AIR FLOW direction using the remote controller. If the HORIZONTAL VANE is moved manually, it may cause trouble.
- In the heating operation, if the air flow temperature is too low or when defrosting is being done, the HORIZONTAL VANE position is set to (1).

Auto air flow direction control operation

- When the AUTO mode is selected with the **VANE** button, the position of the HORIZONTAL VANE is automatically set to correspond to the operation mode for effective operation.

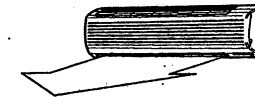
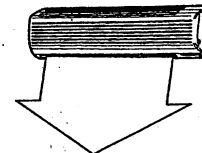
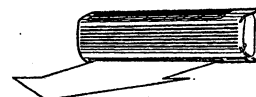
(1) HEAT

When the air flow temperature is too low, the air is blown out horizontally.

When the air flow temperature rises, the air is blown out downwards.

(2) COOL, DRY

The air is blown out horizontally.



To change the AIR FLOW blowing direction horizontally, press the **WIDE VANE** button.

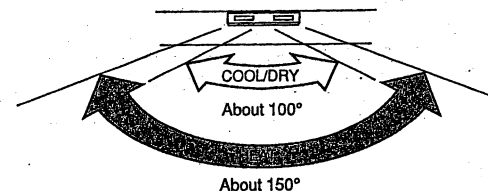
Each time the button is pressed, the angle of the VERTICAL VANE is changed in sequence:



SWING OPERATION

Use the swing operation for the air flow to reach all corners of the room.

Horizontal AIR FLOW blowing range



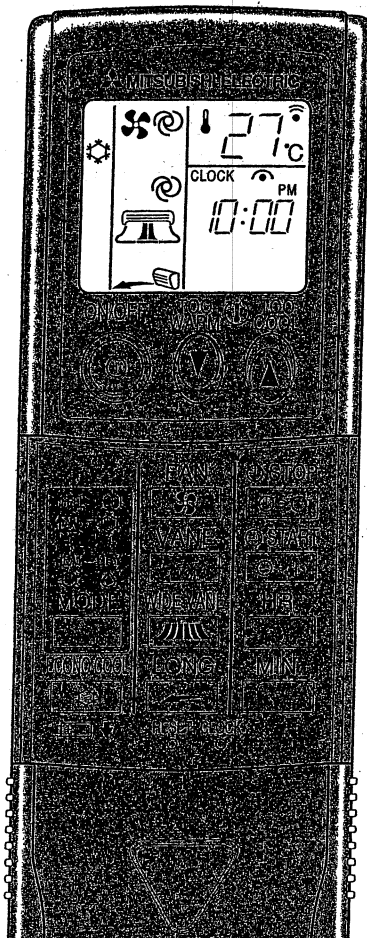
NOTE

Adjust the horizontal AIR FLOW direction using the remote controller. If the VERTICAL VANE is moved manually, it may cause trouble.





LONG OPERATION

Use this operation when you want the air flow to reach a long distance.



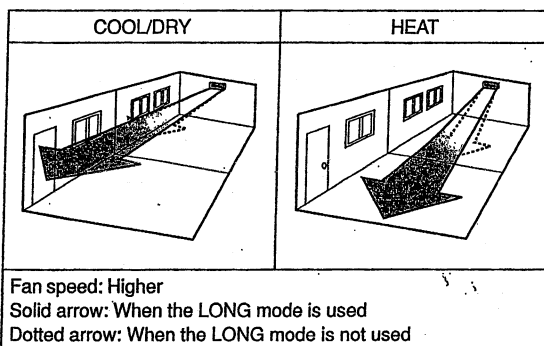
Perform the following operations while the unit is operating.

Press the  button.

The fan speed increases.
When the fan speed is set to  (AUTO), the fan speed is higher than a fan speed determined by the room temperature and the set temperature.
In addition, the HORIZONTAL VANE moves to the position for LONG mode.

Mechanism of the LONG operation.



In the following example, the VERTICAL VANE is set to  (front).






To release the LONG mode:

Press the  button again.

LONG mode is also released in the following ways.

- By pressing the  button
- By pressing the  button (only during COOL mode)

Even when the LONG mode is being used, the air may not reach a long distance due to the installation location of the air conditioner.

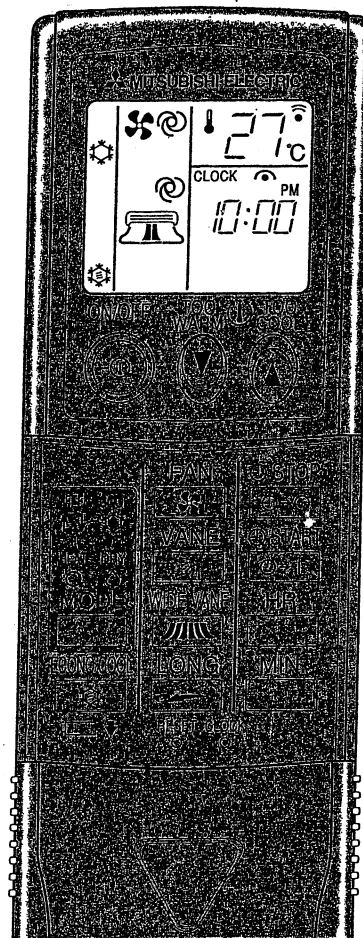
In this case, press the  button to set the fan speed to  (High), and then press the  button.

, , and  buttons, temperature buttons and the ON/OFF timer (page 11) are available.




ECONO COOL OPERATION

Use this operation when you want to be comfortable in COOL mode even with energy saved.



Perform the following operations while the unit is operating in the MANUAL COOL mode.



Press the  button.

When the  (ECONO COOL) operation is selected in COOL mode, the air conditioner performs swing operation in various cycle according to the temperature of air conditioner.
Also SET TEMPERATURE is automatically set 2 °C higher than in COOL mode.

To release the ECONO COOL operation:

Press the  button again.

ECONO COOL operation is also released in the following ways.

- By pressing the  button
- By pressing the  button
- By changing the operation mode

The  button, the  or  button and ON/OFF timer (page 11) are available.

What is "ECONO COOL"?

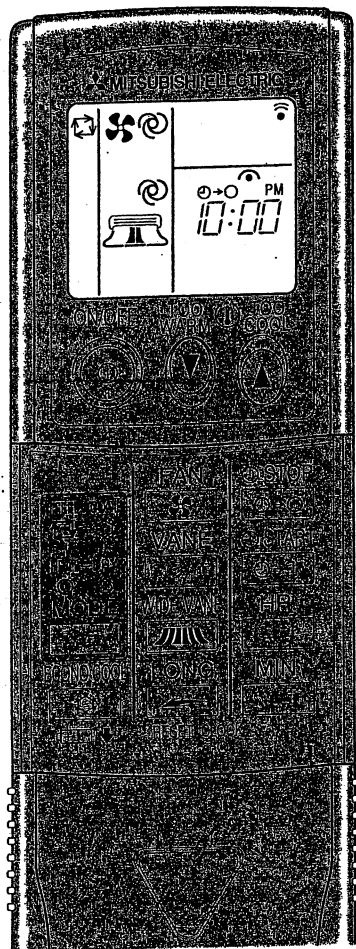
Swing air flow (change of air flow) makes you feel cooler than constant air flow. So, even though the set temperature is automatically set 2 °C higher, it is possible to perform cooling operation with keeping comfort. As a result, energy can be saved.



TIMER OPERATION (ON/OFF TIMER)

TIMER

It is convenient to set the timer when you go to bed, when you get home, when you get up, etc.



How to set the ON timer

- 1 Press the **START** button during operation.
Each time the button is pressed, the ON timer mode alternates between ON and OFF.
- 2 Set the time of the timer using the **HR.** and **MIN.** buttons.
Each time the **HR.** button is pressed, the set time increases by 1 hour; each time the **MIN.** button is pressed, the set time increases by 10 minutes.

To release the ON timer:

- Press the **STOP** button.

How to set the OFF timer

- 1 Press the **STOP** button during operation.
Each time the button is pressed, the OFF timer mode alternates between ON and OFF.
- 2 Set the time of the timer using the **HR.** and **MIN.** buttons.
Each time the **HR.** button is pressed, the set time increases by 1 hour; each time the **MIN.** button is pressed, the set time increases by 10 minutes.

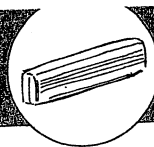
To release the OFF timer:

- Press the **STOP** button.

Programming timer operation

The ON timer and the OFF timer can be used in combination. The timer of the set time that is reached first will operate first. ("H" mark indicates the order of timer operations.)

- If the current time has not been set, the timer operation cannot be used.

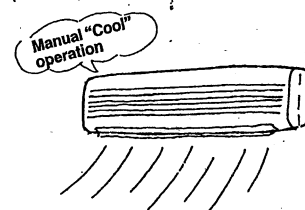


WHEN THE AIR CONDITIONER IS NOT GOING TO BE USED FOR A LONG TIME

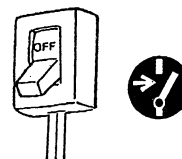
When it is not going to be used for a long time:

- 1 Perform the FAN operation for 3 or 4 hours to dry the inside of the air conditioner.

- To perform FAN operation, set the remote controller to the highest temperature in the MANUAL COOL mode. (Refer to page 8.)



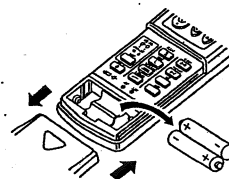
- 2 Turn off the breaker.



CAUTION

Turn off the breaker when the air conditioner is not going to be used for a long time. Dirt may collect and this may cause a fire.

- 3 Remove the batteries from the remote controller.



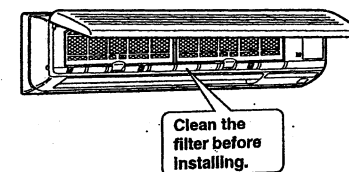
CAUTION

To prevent liquid leakage, take out all batteries when the remote controller is not going to be used for a long time.

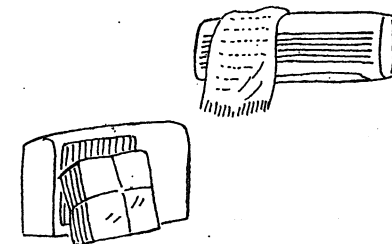
When the air conditioner is to be used again:

- 1 Clean the air filter and install it in the indoor unit.

(Refer to page 12 for cleaning instructions.)



- 2 Check that the air inlet and outlet of the indoor/outdoor units are not blocked.



- 3 Check that the earth is connected correctly.

CAUTION

Earth the unit. Do not connect the earth to a gas pipe, water pipe, lightning rod or the earth of a telephone. If the earthing is incorrect, it may cause an electric shock.



MAINTENANCE



CLEANING THE AIR FILTER AND THE DEODORIZING FILTER

Before starting maintenance

- Turn off the breaker.

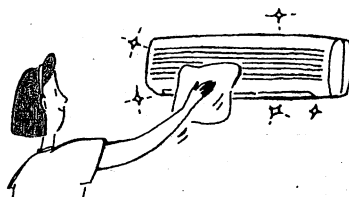


CAUTION

When the unit is to be cleaned, switch it off and turn off the breaker. Since the fan rotates at high speed during operation, it may cause an injury.

Cleaning the indoor unit

- Clean the unit using a soft dry cloth.

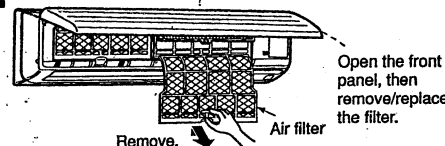


Do not use gasoline, benzine, polishing powder, detergent and insecticide. The unit may be damaged.

Do not open the front panel up past the level position. The panel may come off in order to prevent it from being damaged.

Cleaning the air filter (about once every 2 weeks)

- 1 Remove the air filter.

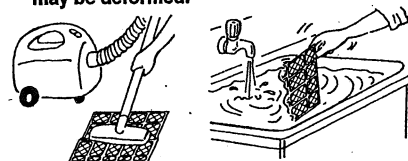


CAUTION

When the air filter is to be removed, do not touch the metal parts of the indoor unit. This may cause an injury.

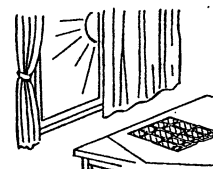
- 2 Remove dirt from the air filter using a vacuum cleaner or by washing the filter with water.

- If dirt is conspicuous, wash the filter with a solution of detergent in lukewarm water.
- If hot water (50 °C or more) is used, the filter may be deformed.

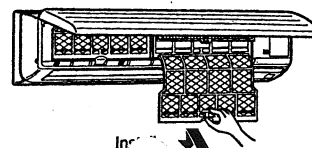


- 3 After washing with water/lukewarm water, dry the air filter well in the shade.

- Do not expose the air filter to direct sunlight or heat from a fire when drying it.



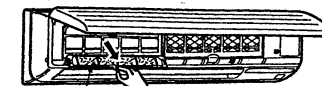
- 4 Install the air filter.



Cleaning the deodorizing filter (about once every 2 weeks)

- 1 Remove the air filter, and then remove the deodorizing filter (Gray sponge type).

- The deodorizing filter is harmless to people. However, to keep its effectiveness, be sure to hold the frame and not to touch the surface of the filter with your hand.



Deodorizing filter

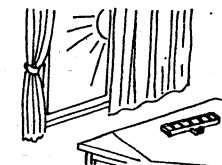
- 2 Soak the filter together with its frame in lukewarm water for about 15 minutes.

- If the dirt is conspicuous, use a solution of detergent in lukewarm water.
- If hot water (50 °C or more) is used, the filter may be deformed.
- Do not use a scrubbing brush or sponge. This may damage the surface of the filter.
- Do not use a chlorine detergent.



- 3 After washing with water/lukewarm water, dry the deodorizing filter well in the shade.

- Do not expose the deodorizing filter to direct sunlight or heat from a fire when drying it.



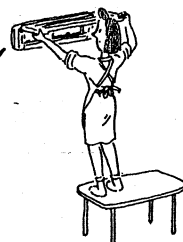
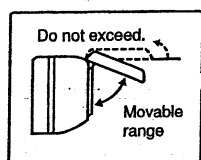
- 4 Install the deodorizing filter, and then install the air filter.



Install.

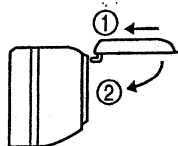
Do not open the front panel up past the level position. The panel may come off in order to prevent it from being damaged.

- The front panel may also come off if the upper part of the front panel is pulled down.



If the front panel comes off, attach it as explained below.

Keeping the front panel level with one hand, insert the hinges one by one with the other hand into the notches at the left, right and center of the top of the indoor unit until they click into place. (1) Then, close the front panel. (2)



Keep the front panel level and insert the hinges into the notches.

- Do not step onto an unstable bench when maintaining the unit, etc. This may cause an injury, etc. if you fall down.



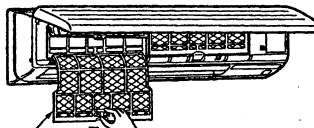
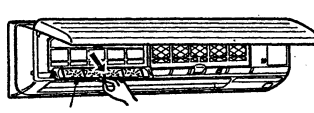
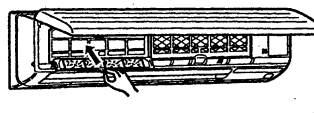
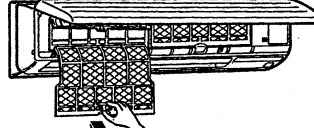
REPLACEMENT OF THE DEODORIZING FILTER/ AIR CLEANING FILTER



BEFORE CONTACTING THE SERVICE REPRESENTATIVE CHECK THE FOLLOWING AGAIN

When the capacity is lowered because of dirt, etc., it is necessary to replace the deodorizing filter/air cleaning filter.

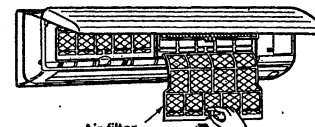
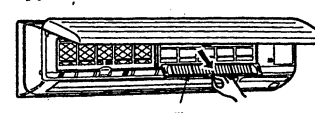
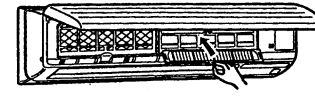
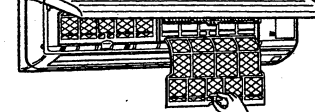
Deodorizing filter replacement (about once a year)

- 1 Remove the air filter.

- 2 Remove the deodorizing filter (Gray sponge type).

- 3 Install a new deodorizing filter.

- 4 Install the air filter and securely close the front panel.


Deodorizing filter

- Cleaning is necessary about once every 2 weeks. However, if dirt is conspicuous, clean more often.
- When the color of the filter is not restored even if the filter is washed as the procedure shown on page 12 or when the filter becomes black, replace the filter with a new one.
- Standard interval for filter replacement is about 1 year.

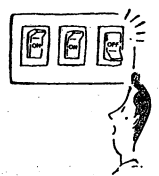

Air cleaning filter replacement (about once every 4 months)

- 1 Remove the air filter.

- 2 Remove the air cleaning filter (White bel-lows type).

- 3 Install a new air cleaning filter.

- 4 Install the air filter and securely close the front panel.



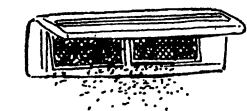
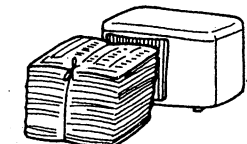
Air cleaning filter

- If the air cleaning filter is clogged, it may lower the unit's capacity or cause condensation at the air outlet.
- The air cleaning filter is disposable. The standard usable term is about 4 months. However, if the color of the filter turns to dark brown, replace the filter at once.

The air conditioner
cannot be operated.
↓
Check the following.



- 1 Is the breaker turned on?

- 2 Isn't the fuse blown?
- 3 Isn't the ON-timer set?


The room cannot be
cooled or heated
sufficiently.
↓
Check the following.

- 1 Is the temperature setting correct?

- 2 Isn't the filter dirty?

- 3 Isn't the outlet of the outdoor unit blocked?


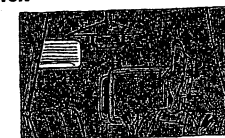
Display of the remote controller does not appear (1, 2). The remote control signal cannot be received if the remote controller is not operated near the air conditioner (1).

↓
Check the following.

- 1 Aren't the batteries exhausted?

- 2 Is the polarity (+, -) of the batteries correct?


When a power failure occurs.

To restart the unit, press the ON/OFF button on the remote controller again after the restoration of the power.



Optional parts

Optional parts are available from your local dealer.

Name of parts	Parts number
DEODORIZING FILTER	MAC-2200DF
AIR CLEANING FILTER	MAC-1700FT

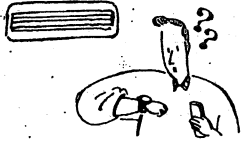
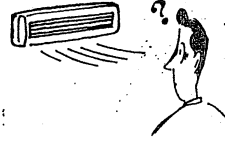
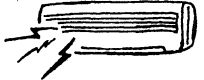
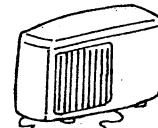
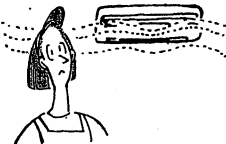
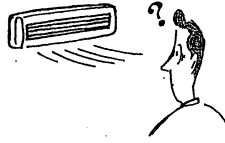

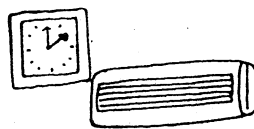
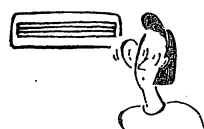
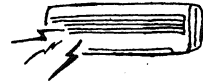
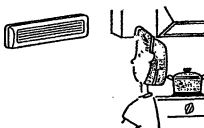
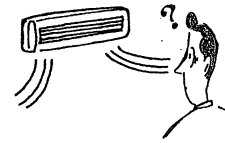
If the above items are checked and the air conditioner does not recover from the trouble, stop the operation and consult your dealer.

In the following cases, stop operation and consult your dealer.

- The remote control signal may not be received in a room where an electronic ON/OFF type fluorescent lamp (inverter-type fluorescent lamp, etc.) is used.
- In the region where the electric wave is weak, when the air conditioner is operated, noise may be generated in radio reception.
- When thunder is heard, stop operation and turn off the breaker. Otherwise, the electrical parts may be damaged.



WHEN YOU THINK THAT TROUBLE HAS OCCURRED

Question	Answer (not a malfunction)	Question	Answer (not a malfunction)
<p>The air conditioner cannot be operated for about 3 minutes when restarted.</p> 	<ul style="list-style-type: none"> This protects the air conditioner according to instructions from the microprocessor. Please wait. 	<p>The air flow direction changes during operation.</p> 	<ul style="list-style-type: none"> When the air conditioner is operated in COOL or DRY mode, if the operation continues with air blowing down for 1 hour, the direction of the air flow is automatically set to horizontal to prevent condensed water from dropping. In the heating operation, if the air flow temperature is too low or when defrosting is being done, the HORIZONTAL VANE position is automatically set to horizontal.
<p>Cracking sound is heard.</p> 	<ul style="list-style-type: none"> This sound is generated by the expansion/contraction of the front panel, etc. due to change in temperature. 	<p>Water leaks from the outdoor unit.</p> 	<ul style="list-style-type: none"> During COOL and DRY operations, pipe or pipe connecting sections are cooled and this causes water to condense. In the heating operation, the defrosting operation makes water frozen on the outdoor unit melt and drip down. In the heating operation, water condensed on the heat exchanger drips down.
<p>The room smells strange.</p> 	<ul style="list-style-type: none"> The air conditioner sucks in an odor adhering to the wall, carpet, furniture, cloth, etc. and blows it out with the air. 	<p>Air does not blow out soon in the heating operation.</p> 	<ul style="list-style-type: none"> Please wait as the air conditioner is preparing to blow out warm air.
<p>The sound of water flowing is heard.</p> 	<ul style="list-style-type: none"> This is the sound of refrigerant flowing inside the air conditioner. This is the sound of condensed water flowing in the heat exchanger. This is the sound of the heat exchanger defrosting. 	<p>The operation is stopped for about 10 minutes in the heating operation.</p> 	<ul style="list-style-type: none"> Defrosting of the outdoor unit is being done (Defrosting operation). Since this is completed in 10 minutes, please wait. (When the external temperature is too low and humidity is too high, frost is formed.)
<p>The sound as burbling is heard.</p> 	<ul style="list-style-type: none"> This sound is heard when the outside air is absorbed from the drain hose in turning on the range hood or the ventilation fan and that makes water flowing in the drain hose spout out. This sound is also heard when the outside air blows into the drain hose in case the outside wind is strong. 	<p>Hissing sound is sometimes heard.</p> 	<ul style="list-style-type: none"> This is the sound when the flow of refrigerant inside the air conditioner is switched.
<p>The room cannot be cooled sufficiently.</p> 	<ul style="list-style-type: none"> When a ventilation fan or a gas cooker is used in a room, the cooling load increases, resulting in an insufficient cooling effect. When the outside air temperature is high, the cooling effect may not be sufficient. 	<p>The swing operation of the VERTICAL VANE is suspended for about 15 seconds, then restarted.</p> 	<ul style="list-style-type: none"> This is for the swing operation of the VERTICAL VANE to be performed normally.



INSTALLATION, RELOCATION AND INSPECTION

Installation place

Avoid installing the air conditioner in the following places.

- Where flammable gas could leak.

CAUTION

Do not install the unit where flammable gas could leak.
If gas leaks and collects around the unit, it may cause an explosion.

- Where there is much machine oil.
- Salty places such as the seaside.
- Where sulfide gas is generated such as a hot spring.
- Where oil is splashed or where the area is filled with oily smoke.

WARNING

If the air conditioner operates but does not cool or heat (depending on model) the room, consult your dealer since there may be a refrigerant leak. Be sure to ask the service representative whether there is refrigerant leakage or not when repairs are carried out.
The refrigerant charged in the air conditioner is safe. Refrigerant normally does not leak, however, if refrigerant gas leaks indoors, and comes into contact with the fire of a fan heater, space heater, stove, etc., harmful substances will be generated.

Electrical work

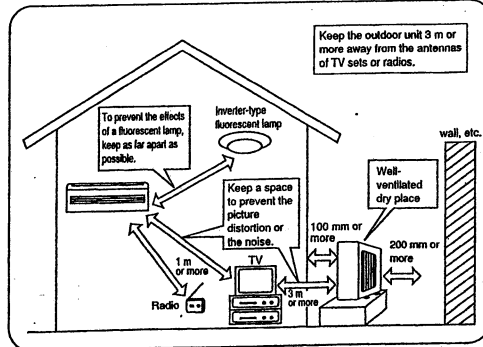
- Provide an exclusive circuit for the power supply of the air conditioner.
- Be sure to observe the breaker capacity.

WARNING

The customer should not install this unit.
If installation is done incorrectly, it may cause a fire, an electric shock, or injury from the unit falling, water leaking, etc.

CAUTION

- Earth the unit.
Do not connect the earth to a gas pipe, water pipe, lightning rod or the earth of a telephone. If the earthing is incorrect, it may cause an electric shock.
- Install an earth leakage breaker depending on the place where the air conditioner is to be installed (humid places, etc.).
If the earth leakage breaker is not installed, it may cause an electric shock.



Inspection and maintenance

- When the air conditioner is used for several seasons, the capacity may be lowered due to dirt inside the unit.
- Depending on the condition, an odor may be generated or dehumidified water may not drain out smoothly due to dirt, dust, etc.
- It is recommended that the unit be inspected and maintained (charged) by specialist in addition to normal maintenance. Consult your dealer.

Operating sound considerations

- Do not put an object around the air outlet of the outdoor unit. This may lower the capacity or increase the volume of the operating sound.
- If an abnormal sound is heard during operation, consult your dealer.

Relocation

- When the air conditioner is to be removed or re-installed because of rebuilding, moving, etc., special techniques and work are required.

WARNING

Repairs or relocation should not be done by the customer.
If this is done incorrectly, it may cause a fire, an electric shock, or an injury from the unit falling, water leaking, etc. Consult your dealer.

Disposal

To dispose of this product, consult your dealer.

If you have any questions, consult your dealer.

Guaranteed operating range

		Indoor	Outdoor
Cooling	Upper limit	32°C DB 23°C WB	43°C DB —
	Lower limit	21°C DB 15°C WB	21°C DB —
Heating	Upper limit	27°C DB —	24°C DB 18°C WB
	Lower limit	20°C DB —	-8.5°C DB -9.5°C WB

