

OPERATING INSTRUCTIONS

MS24WN

Mr.SLIM

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.

WARNING	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.

\bigcirc	Be sure not to do.
9	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.
A	Danger of electric shock, be careful.
Ø	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





• 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





SAFETY PRECAUTIONS

For installation



NAME OF EACH PART

Indoor unit



Outdoor unit



Ground the unit.

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

Consult your dealer for installation of the air conditioner.

Do not install the unit where flammable gas could leak.

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





against an electric shock.

from the unit. This may wet and damage the furniture.

If the air conditioner is installed in a high

humidity area or near a water source, a

Ground Fault Interrupt (GFI) circuit

breaker should be installed to protect





Remote controller



(This diagram shows an overall view.)





PREPARATION BEFORE OPERATION

Auto restart function

This model is equipped with an auto restart function. If you do not want to use this 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. (Refer to page 7 for details.)

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Breaker for the air conditioner

Turn the breaker on.

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

Remove the front lid and insert batteries. Then reattach the front lid. Press the CLOCK set button.



Insert the minus pole of the batteries first.

Press the RESET button.



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



Press using a thin stick.

Press the <u>HR.</u> and <u>MN.</u> buttons (TIME SET buttons) to set the current time.



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

> 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 20 ft. 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 pressed.

How to install/remove the remote controller

Installing Insert the remote controller downward.





Dry-cell batteries

Reference for replacing 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 OPERA-TION switch.



Press the EMERGENCY OPERA-TION switch.

* When the EMERGENCY OPERATION switch is pressed, the unit will operate in test run for 30 minutes at first and then the operation mode shifts to EMERGENCY COOL MODE.



Details of EMERGENCY COOL 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
Set temperature	75 °F
Fan speed	Medium
Horizontal vane	Auto
Vertical vane	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 COOL MODE, press the EMERGENCY OP-ERATION switch again.

* Each time the switch is pressed, the operation mode alternates between the EMER-GENCY COOL MODE and STOP MODE.



I FEEL... AUTO OPERATION

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



• To start operation:

Press the obtion.

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

To stop operation:



If you feel slightly warm:

Press the () button to lower the temperature.

One press lowers the temperature by about 2 °F.

If you feel slightly cool:



Press the \bigotimes^{∞} button to raise the tempera-

One press raises the temperature by about 2 °F.

When "⁽¹⁾ (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: \bigcirc (I FEEL...) \rightarrow \bigcirc (COOL) \rightarrow \bigcirc (DRY) → S (FAN)



Description of "I FEEL..." mode

Details of operation

According to the room temperature when the operation starts, the operation mode is automatically set to either COOL or DRY. 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 MODE button.

Details of auto operation

Room temperature when started	Operation mode	Target temperature (initial state)
About 77 °F or higher	COOL	About 75 °F
About 77 °F or lower	DRY	—



NOTE

COOL: When the room temperature is 4 °F 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 4 °F 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.





Operation indicator lamp

Indication	Operation state	Difference between target temperature and room temperature
i	This shows that the air conditioner is operating to reach the target temperature. Please wait until the target temperature is obtained.	About 4 °F or more
÷ 0	This shows that the room temperature is approaching the target temperature.	About 4 °F or less

Description of "AUTO RESTART FUNCTION" -

- This unit is equipped with an auto restart function. When the main power is turned on, the air conditioner will start operation automatically in the same mode as the one set with the remote controller before the shutoff of the main power.
- If the unit was set to off with the remote controller before the shutoff of the main power, it will remain stopped even after the main power is turned on.
- If the unit was in the emergency operation before the shutoff of the main power, it will start operation, when main power comes on, in the same mode as the one set with the remote controller before the emergency operation.
- If the unit is operated in "I FEEL ..." mode before power failure, the operation is not stored in the memory. In "I FEEL ..." mode, the operation is decided by the initial room temperature at (re)start.
- Since the air conditioner has been shipped from the factory with the COOL mode saved in the memory for auto restart function, it starts cooling operation when the user turns on the main power for the first time after installation.



MANUAL OPERATION (COOL, DRY, FAN)



To select the COOL. DRY or FAN mode

Press the o button.

Select the operation mode by pressing the button.

Each time this button is pressed, the operation mode is changed in sequence: \Box (I FEEL...) $\rightarrow \Box$ (COOL) $\rightarrow \land$ (DRY) \rightarrow **\$** (FAN)

To stop operation:

2



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 600% button.

When the set temperature is to be changed:

- Press the D button to lower the temperature. One press lowers the temperature by about 2 °F.
- Press the (A) button to raise the temperature. One press raises the temperature by about 2 °F.

In 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 (2) Paste a heat shield film (gendown blinds. Sunshine is reduced and cooling efficiency increases.



erally available) on the window. Heat entering the room is reduced.

③ Block the outdoor unit from direct sunlight. This saves energy.







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.



Description of "AUTO RESTART FUNCTION"

Refer to page 7.



AIR FLOW VELOCITY AND DIRECTION ADJUSTMENT

AIR FLOW velocity and direction can be selected as required.



To change the AIR FLOW velocity, press the $\frac{FAN}{R}$ button.

Each time the button is pressed, the fan speed is changed in sequence: $_$ (Low) $\rightarrow __$ (Med.) $\rightarrow __$ (High) $\rightarrow \textcircled{O}$ (AUTO)

• Use the and (High) notch to cool 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) \rightarrow • (2) \rightarrow * (3) \rightarrow (4) \rightarrow (5) \rightarrow \Im (SWING) \rightarrow O (AUTO)

SWING OPERATION

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



- 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.

Auto air flow direction control operation

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

(2) FAN

(1) COOL, DRY

The air is blown out horizontally.



The air is blown out downwards.



To change the AIR FLOW blowing direction horizontally, press the web 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.



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).



Fan speed: Higher Solid arrow: When the LONG mode is used Dotted arrow: When the LONG mode is not used

To release the LONG mode:

Press the CONG button again.

- LONG mode is also released by pressing the button.
- 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 $\begin{tabular}{c} \end{tabular}{FAN} \end{tabular}$ button to set the fan speed to

- **(High)**, and then press the button.
- Model, FAN, and Merews buttons, temperature buttons and the ON/ OFF timer (explained on the right) are available.



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 $0 \le 1$ 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 $\overset{\text{HR.}}{\square}$ and $\overset{\text{MN.}}{\square}$ buttons.	
	Each time the $\stackrel{\text{HR}}{\longrightarrow}$ button is pressed, the set time increases by 1 hour; each time the $\stackrel{\text{MR}}{\longrightarrow}$ button is pressed, the set time increases by 10 minutes.	
To rel	ease the ON timer:	
	Press the OSTART button.	
How to set the OFF timer		
1	Press the $\frac{OSTOP}{O+O}$ 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 \square and \square buttons.	
	and buttons.	
	Each time the $\stackrel{\text{HR}}{\longrightarrow}$ button is pressed, the set time increases by 1 hour; each time the $\stackrel{\text{MR}}{\longrightarrow}$ button is pressed, the set time increases by 10 minutes.	
To rel	Each time the $\stackrel{\tiny HR}{\longrightarrow}$ button is pressed, the set time increases by 1 hour; each time the $\stackrel{\tiny MN}{\longrightarrow}$ button is	
To rel	Each time the $\stackrel{\tiny HR}{\longrightarrow}$ button is pressed, the set time increases by 1 hour; each time the $\stackrel{\tiny MN}{\longrightarrow}$ button is pressed, the set time increases by 10 minutes.	

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. ("i]" mark indicates the order of timer operations.)

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

- NOTE

If the main power is turned off or a power failure occurs while AUTO START/STOP timer is active, the timer setting is cancelled. As this model is equipped with an auto restart function, the air conditioner should start operating at the same time that power is restored.



long time:

When it is not going to be used for a

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



When the air conditioner is to be used again:

Clean the air filter and install it in the in-

(Refer to page 12 for cleaning instructions.)



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



Check that the ground is connected correctly.

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

MAINTENANCE

Before starting maintenance

Turn off the breaker.



Cleaning the indoor unit



Do not use gasoline, benzine, polishing powder, or 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.

• 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.



1

REPLACEMENT OF THE DEODORIZING FILTER (OPTION)/AIR CLEANING FILTER (OPTION)

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



MAC-1700FT

AIR CLEANING FILTER

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





Install the air filter. 4





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

- Soak the filter together with its frame in lukewarm water for about 15 minutes.
 - detergent diluted in lukewarm water. ■ If hot water (120°F 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.

After washing with water/lukewarm water. 3 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.



Install the deodorizing filter, and then in-4 stall the air filter.





BEFORE CONTACTING THE SERVICE REPRE-SENTATIVE, CHECK THE FOLLOWING AGAIN



■ The remote control signal may not be received in a room where an electronic ON/OFF type fluo-

rescent lamp (inverter-type fluo-

rescent 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)
The air conditioner cannot be operated for about 3 minutes when restarted.	This protects the air conditioner according to instructions from the microprocessor. Please wait.	The room cannot be cooled sufficiently.	 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.
Cracking sound is heard.	This sound is generated by the expansion/con- traction of the front panel, etc. due to change in temperature.	The air flow direction changes during operation.	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.
The room smells strange.	The air conditioner sucks in an odor adhering to the wall, carpet, furniture, cloth, etc. and blows it out with the air.	Water leaks from the outdoor unit.	During COOL and DRY operations, pipe or pipe connecting sections are cooled and this causes water to condense.
The fan stops during the DRY operation.	In DRY operation, the unit operates using the same refrigerant circuit as in COOL operation. DRY operation time has to be reduced in order to lower humidity without much room temperature decreasing. So the compressor sometimes stops, and at the same time the indoor fan stops. This prevents water condensed on the heat exchanger from evaporating again.	The swing operation of the VERTICAL VANE is suspended for about 15 seconds, then restarted.	This is for the swing operation of the VERTICAL VANE to be performed normally.
The sound of water flowing is heard.	 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. 	The air conditioner starts the operation only with the main power turned on, though you do not operate the unit with the remote controller.	This model is equipped with an auto restart func- tion. When the main power is turned off without stopping the air conditioner with the remote con- troller and is turned on again, the air conditioner will start operation automatically in the same mode as the one set with the remote controller just before the shutoff of the main power.
The sound as burbling is heard.	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.		



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.
- Use the correct power (voltage and frequency) indicated on the unit to operate the air conditioner and use only fuses or breakers with specified capacity. Do not use pieces of wire instead of fuses.

- 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.
- The unit should be installed by licensed contractor according to local code requirements.

Ground the unit.

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

If the air conditioner is installed in a high humidity area or near a water source, a Ground Fault Interrupt (GFI) circuit breaker should be installed to protect against 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.





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