MITSUBISHI ELECTRIC

SPLIT-TYPE AIR CONDITIONERS

INDOOR UNIT

MSZ-AP60VGD2 MSZ-AP71VGD2 MSZ-AP80VGD2
MSZ-AP60VGKD2 MSZ-AP71VGKD2 MSZ-AP80VGKD2



OPERATING INSTRUCTIONS For user

- To use this unit correctly and safely, be sure to read these operating instructions before use.

English

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Safety Precautions

Meanings of symbols displayed on indoor unit and/or outdoor unit

	Warning (Risk of fire)	This unit uses a flammable refrigerant. If refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.
	Read the OPERATING INSTRUCTIONS carefully before operation.	
	Service personnel are required to carefully read the OPERATING INSTRUCTIONS and INSTALLATION MANUAL before operation.	
	Further information is available in the OPERATING INSTRUCTIONS, INSTALLATION MANUAL, and the like.	

- 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.
- After reading this manual, keep it together with the installation manual in a handy place for easy reference.
- Be sure to receive a guarantee card from your dealer and check that the purchased date and shop name, etc. are entered correctly.
- Wi-Fi® is a registered trademark of Wi-Fi Alliance®.

Marks and Their Meanings

⚠ Warning : Incorrect handling could cause serious hazard, such as death, serious injury, etc. with a high probability.

⚠ Caution : Incorrect handling could cause serious hazard depending on the conditions.

Meanings of Symbols Used In This Manual

 : 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 disconnect the power supply plug from the power outlet.

 : Be sure to shut off the power.

 : Risk of fire.

 : Never touch with wet hand.

 : Never splash water on the unit.

⚠ Warning

	**Do not connect the power cord to an intermediate point, use an extension cord, or connect multiple devices to a single AC outlet.** • This may cause overheating, fire, or electric shock.
	Make sure the power plug is free of dirt and insert it securely into the outlet. • A dirty plug may cause fire or electric shock.
	Do not bundle, pull, damage, or modify the power cord, and do not apply heat or place heavy objects on it. • This may cause fire or electric shock.

	**Do not turn the breaker off/on or disconnect/connect the power plug during operation.** • This may create sparks, which can cause fire. • After the indoor unit is switched off with the remote controller, make sure to turn the breaker off or disconnect the power plug.
	Do not expose your body directly to cool air for a prolonged length of time. • This could be detrimental to your health.

Safety Precautions

The unit should not be installed, relocated, disassembled, altered, or repaired by the user.
- An improperly handled air conditioner may cause fire, electric shock, injury, or water leakage, etc. Consult your dealer.
- If the power supply cord is damaged, it must be replaced by the manufacturer or its service agent in order to avoid a hazard.

When installing, relocating, or servicing the unit, make sure that no substance other than the specified refrigerant (R32) enters the refrigerant circuit.
- Any presence of foreign substance such as air can cause abnormal pressure rise and may result in explosion or injury.
- The use of any refrigerant other than that specified for the system will cause mechanical failure, system malfunction, or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.

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

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

Do not insert your finger, a stick, or other objects into the air inlet or outlet.
- This may cause injury, since the fan inside rotates at high speeds during operation.

In case of an abnormal condition (such as a burning smell), stop the air conditioner and disconnect the power plug or turn the breaker off.
- A continued operation in the abnormal state may cause a malfunction, fire, or electric shock. In this case, consult your dealer.

When the air conditioner does not cool or heat, there is a possibility of refrigerant leakage. If any refrigerant leakage is found, stop operations and ventilate the room well and consult your dealer immediately. If a repair involves recharging the unit with refrigerant, ask the service technician for details.
- The refrigerant used in the air conditioner is not harmful. Normally, it does not leak. However, if refrigerant leaks and comes in contact with fire or heating part of such a fan heater, kerosene heater, or cooking stove, it will create harmful gas and there is risk of fire.

The user should never attempt to wash the inside of the indoor unit. Should the inside of the unit require cleaning, contact your dealer.
- Unsuitable detergent may cause damage to plastic material inside the unit, which may result in water leakage. Should detergent come in contact with electrical parts or the motor, it will result in a malfunction, smoke, or fire.
- The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Be aware that refrigerants may not contain an odour.
- Do not use means to accelerate the defrosting process or to clean the appliance, other than those recommended by the manufacturer.
- Do not pierce or burn.

The indoor unit must be installed in rooms which exceed the floor space specified. Please consult your dealer.

This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.

⚠ Caution

Do not touch the air inlet or the aluminum fins of the indoor/outdoor unit.
- This may cause injury.

Do not use insecticides, flammable sprays, air refreshers, or antibacterial agents on the unit.
- This may cause a fire or deformation of the unit.

Do not expose pets or houseplants to direct airflow.
- This may cause injury to the pets or plants.

Do not place other electric appliances or furniture under the indoor/outdoor unit.
- Water may drip down from the unit, which may cause damage or malfunction.

Do not leave the unit on a damaged installation stand.
- The unit may fall and cause injury.

Do not step on an unstable bench to operate or clean the unit.
- This may cause injury if you fall down.

Do not pull the power cord.
- This may cause a portion of the core wire to break, which may cause overheating or fire.

Do not charge or disassemble the batteries, and do not throw them into a fire.
- This may cause the batteries to leak, or cause a fire or explosion.

Do not operate the unit for more than 4 hours at high humidity (80% RH or more) and/or with windows or outside door left open.
- This may cause the water condensation in the air conditioner, which may drip down, wetting or damaging the furniture.
- The water condensation in the air conditioner may contribute to growth of fungi, such as mold.

Do not use the unit for special purposes, such as storing food, raising animals, growing plants, or preserving precision devices or art objects.
- This may cause deterioration of quality, or harm to animals and plants.

Do not expose combustion appliances to direct airflow.
- This may cause incomplete combustion.

Never put batteries in your mouth for any reason to avoid accidental ingestion.
- Battery ingestion may cause choking and/or poisoning.

Before cleaning the unit, switch it off and disconnect the power plug or turn the breaker off.
- This may cause injury, since the fan inside rotates at high speeds during operation.

When the unit will be unused for a long time, disconnect the power plug or turn the breaker off.
- The unit may accumulate dirt, which may cause overheating or fire.

Replace all batteries of the remote controller with new ones of the same type.
- Using an old battery together with a new one may cause overheating, leakage, or explosion.

If the battery fluid comes in contact with your skin or clothes, wash them thoroughly with clean water.
- If the battery fluid comes in contact with your eyes, wash them thoroughly with clean water and immediately seek medical attention.

Ensure that the area is well-ventilated when the unit is operated together with a combustion appliance.
- Inadequate ventilation may cause oxygen starvation.

Do not operate the air conditioner after applying protecting agent on the floor.
- Inadequate ventilation may cause oxygen starvati

Turn the breaker off when you hear thunder and there is a possibility of a lightning strike.
- Components in the protecting agent may attach the inside of the indoor unit, resulting in water leakage or splattering of dew.

After the air conditioner is used for several seasons, perform inspection and maintenance in addition to normal cleaning.
- Dirt or dust in the unit may create an unpleasant odor, contribute to growth of fungi, such as mold, or clog the drain passage, and cause water to leak from the indoor unit. Consult your dealer for inspection and maintenance, which require specialized knowledge and skills.

Do not operate switches with wet hands.
- This may cause electric shock.

Do not clean the air conditioner with water or place an object that contains water, such as a flower vase, on it.
- This may cause fire or electric shock.

Do not step on or place any object on the outdoor unit.
- This may cause injury if you or the object falls down.

Important

Dirty filters cause condensation in the air conditioner which will contribute to the growth of fungi such as mold. It is therefore recommended to clean air filters every 2 weeks.

Before starting the operation, ensure that the horizontal vanes are in the closed position. If operation starts when the horizontal vanes are in the open position, they may not return to the correct position.

Safety Precautions

For Installation

⚠ Warning

Consult your dealer for installing the air conditioner.
- It should not be installed by the user since installation requires specialized knowledge and skills. An improperly installed air conditioner may cause water leakage, fire, or electric shock.

Provide a dedicated power supply for the air conditioner.
- A non-dedicated power supply may cause overheating or fire.

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

Earth the unit correctly.
- Do not connect the earth wire to a gas pipe, water pipe, lightning rod, or a telephone earth wire. Improper earthing may cause electric shock.

⚠ Caution

Install an earth leakage breaker depending on the installation location of the air conditioner (such as highly humid areas).
- If an earth leakage breaker is not installed, it may cause electric shock.

Ensure that the drain water is properly drained.
- If the drain passage is improper, water may drip down from the indoor/outdoor unit, wetting and damaging the furniture.

In case of an abnormal condition

Immediately stop operating the air conditioner and consult your dealer.

For Wi-Fi Interface

⚠ Warning

(Improper handling may have serious consequences, including serious injury or death.)

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Do not use the Wi-Fi interface nearby the medical electrical equipment or people who have a medical device such as a cardiac pacemaker or an implantable cardioverter-defibrillator.
- It can cause an accident due to malfunctions of the medical equipment or device.

Do not install the Wi-Fi interface nearby the automatic control devices such as automatic doors or fire alarms.
- It can cause accidents due to malfunctions.

Do not touch the Wi-Fi interface with wet hands.
- It can cause damage to the device, electric shock, or fire.

Do not splash water on the Wi-Fi interface or use it in a bathroom.
- It can cause damage to the device, electric shock, or fire.

When the Wi-Fi interface is dropped, or the holder or cable is damaged, disconnect the power supply plug or turn the breaker off.
- It may cause fire or electric shock. In this case, consult your dealer.
- This device complies with all Australia and New zealand regulrements for EMC and electrical safety.

⚠ Caution

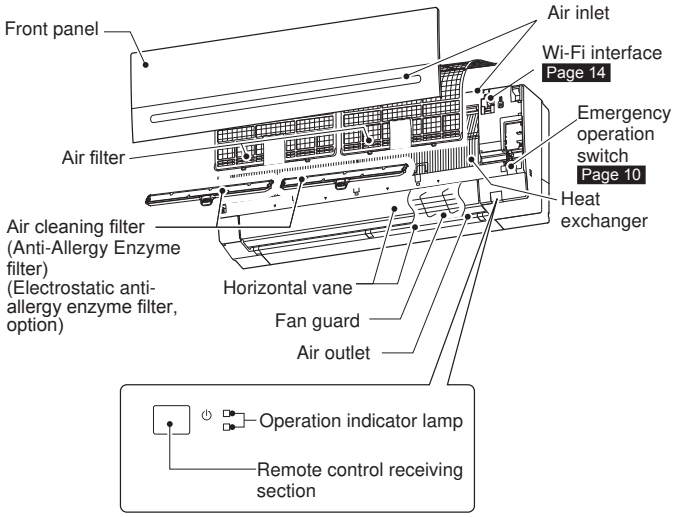
(Improper handling may have consequences, including injury or damage to building.)

Do not step on unstable stepstool to set up or clean the Wi-Fi interface.
- It may cause injury if you fall down.

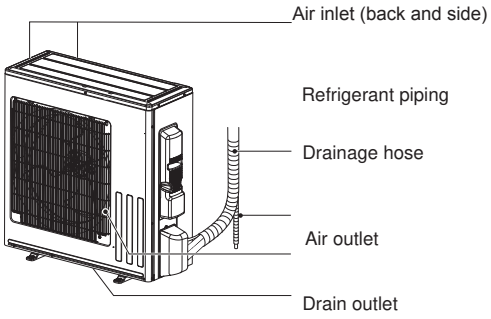
Do not use the Wi-Fi interface nearby other wireless devices, microwaves, cordless phones, or facsimiles.
- It can cause malfunctions.

Name of Each Part

Indoor unit

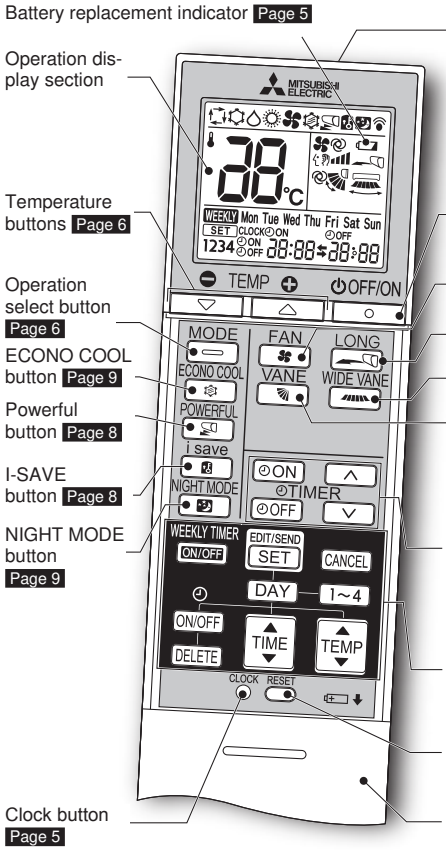


Outdoor unit

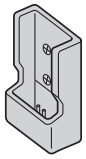


Outdoor units may be different in appearance.

Remote controller



Remote controller holder



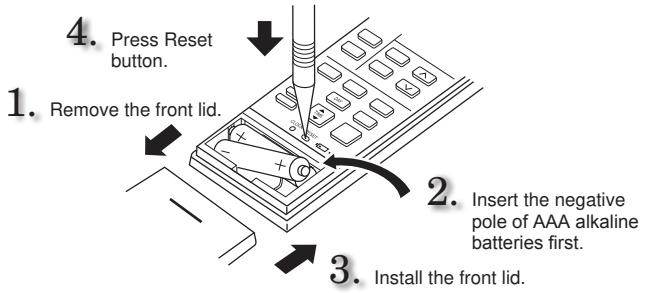
- Install the remote controller holder in a place where the signal can be received by the indoor unit.
- When the remote controller is not used, place it in this holder.

Only use the remote controller provided with the unit.
Do not use other remote controllers.
If 2 or more indoor units are installed in proximity to one another, an indoor unit that is not intended to be operated may respond to the remote controller.

Preparation Before Operation

Before operation: Insert the power supply plug into the power outlet and/or turn the breaker on.

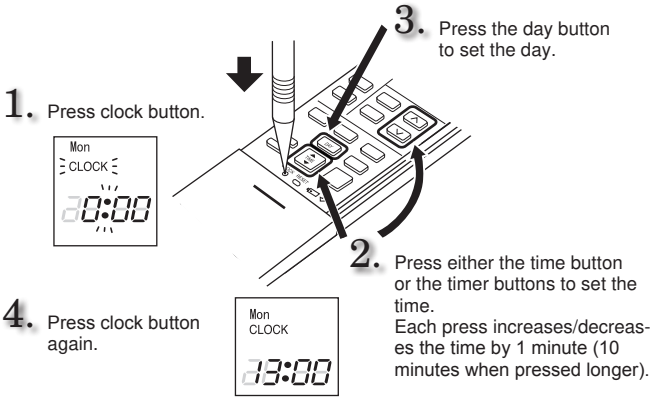
Installing the remote controller batteries



Note:

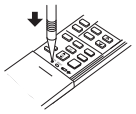
- Make sure the polarity of the batteries is correct.
- Do not use manganese batteries and leaking batteries. The remote controller could malfunction.
- Do not use rechargeable batteries.
- The battery replacement indicator lights up when the battery is running low. In about 7 days after the indicator starts lights up, the remote controller stops working.
- Replace all batteries with new ones of the same type.
- Batteries can be used for approximately 1 year. However, batteries with expired shelf lives last shorter.
- Press reset button gently using a thin instrument.
  If the reset button is not pressed, the remote controller may not operate correctly.

Setting current time



Note:

- Press clock button gently using a thin instrument.



Note:

How to set remote controller exclusively for a particular indoor unit

A maximum of 4 indoor units with wireless remote controllers can be used in a room.

To operate the indoor units individually with each remote controller, assign a number to each remote controller according to the number of the indoor unit.

This setting can be set only when all the following conditions are met:

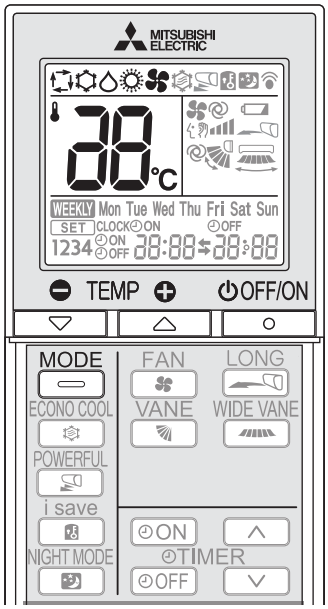
- The remote controller is powered off.

(1) Hold down [1~4] button on the remote controller for 2 seconds to enter the pairing mode.

(2) Press [1~4] button again and assign a number to each remote controller.
Each press of [1~4] button advances the number in the following order: 1 → 2 → 3 → 4.

(3) Press [EDIT/SEND SET] button to complete the pairing setting.
After you turn the breaker on, the remote controller that first sends a signal to an indoor unit will be regarded as the remote controller for the indoor unit. Once they are set, the indoor unit will only receive the signal from the assigned remote controller afterwards.
The setting of indoor unit will be cancelled, if the breaker is turned off or the power supply is shut down.

Selecting Operation Modes



1 Press OFF/ON to start the operation.

2 Press MODE to select operation mode. Each press changes mode in the following order:

(Auto) → (Cool) → (Dry) → (Heat) → (Fan)

3 Press ▲ or ▼ to set the temperature.
Each press raises or lowers the temperature by 1°C.

Press OFF/ON to stop the operation.

Auto Mode (Auto Change Over)

The unit selects the operation mode according to the difference between the room temperature and the set temperature. During auto mode, the unit changes mode (cool↔heat) when the room temperature is about 2°C away from the set temperature for more than 15 minutes.

Note:

Auto mode is not recommended if this indoor unit is connected to a MXZ type outdoor unit. When several indoor units are operated simultaneously, the unit may not be able to switch operation mode between cool and heat mode. In this case, the indoor unit becomes standby mode (Refer to table of Operation indicator lamp).

Cool Mode

Enjoy cool air at your desired temperature.

Note:

Do not operate cool mode at very low outside temperatures (less than -10°C). Water condensed in the unit may drip and wet or damage furniture, etc.

Dry Mode

Dehumidify your room. The room may be cooled slightly.
Temperature cannot be set during dry mode.

Heat Mode

Enjoy warm air at your desired temperature.

Fan Mode

Circulate the air in your room.

Note:

After cool/dry mode operation, it is recommended to operate in the fan mode to dry inside the indoor unit.

Note:

Multi system operation

Two or more indoor units can be operated by one outdoor unit. When several indoor units are operated simultaneously, cooling/dry/fan and heating operations cannot be done at the same time. When cool/dry/fan mode is selected with one unit and heat mode with another or vice versa, the unit selected last goes into standby mode.

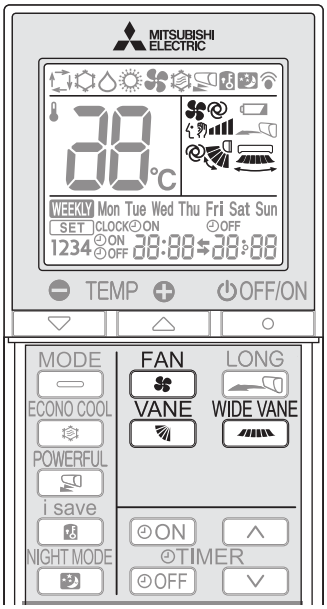
Operation indicator lamp

The operation indicator lamp shows the operation state of the unit.

Indication	Operation state	Room temperature
☀ ☀	The unit is operating to reach the set temperature	About 2°C or more away from set temperature
☀ ○	The room temperature is approaching the set temperature	About 1 to 2°C from set temperature
☀ ☼	Demand Response mode Page 12	—

☀ Lit ☼ Blinking ○ Not lit

Fan Speed and Airflow Direction Adjustment



Fan Speed

1 Press FAN to select fan speed. Each press changes fan speed in the following order:

(Auto) → (Quiet) → (Low) → (Med.) → (High) → (Super high)

- Two short beeps are heard from the indoor unit when set to auto.
- Use higher fan speed to cool/heat the room quicker. It is recommended to lower the fan speed once the room is cool/warm.
- Use lower fan speed for quiet operation.

Note:

Multi system operation

When several indoor units are operated simultaneously by one outdoor unit for heating operation, the temperature of the airflow may be low. In this case, it is recommended to set the fan speed to auto.

Up-Down Airflow Direction

1 Press VANE to select airflow direction. Each press changes airflow direction in the following order:

(Auto) → (1) → (2) → (3) → (4) → (5) → (Swing)

(Auto) .....The vane is set to the most efficient airflow direction. Cool/dry/fan mode: horizontal position. Heat mode: position (4).

(Manual).....For efficient air conditioning, select the upper position for cool/dry mode, and the lower position for heat mode. If the lower position is selected during cool/dry mode, the vane automatically moves to the upward position after 0.5 to 1 hour to prevent any condensation from dripping.

(Swing).....The vane moves up and down intermittently.

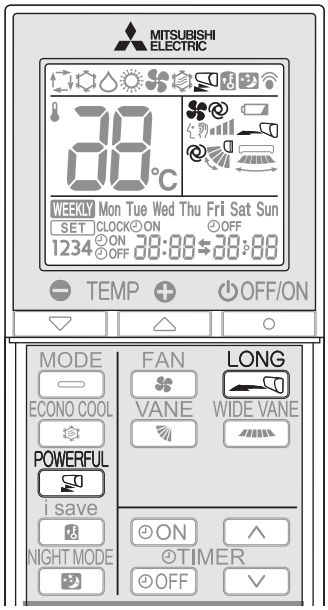
- Two short beeps are heard from the indoor unit when set to auto.
- Always use the remote controller when changing the direction of airflow. Moving the horizontal vanes with your hands causes them to malfunction.
- When the breaker is turned on, the horizontal vanes' position will be reset in about a minute, then the operation will start. The same is true in the emergency cooling operation.
- When the horizontal vanes seem to be in an abnormal position, see page 13 .

Left-Right Airflow Direction

1 Press WIDE VANE to select airflow direction. Each press changes airflow direction in the following order:

→ → → → → → (Swing)

Long Operation



1 Press LONG to start long operation.

- Fan speed increases and the horizontal vane moves to the position for LONG mode.
- Air reaches to longer distance.

Press LONG again to cancel long operation.

- LONG operation is cancelled when the off/on, vane, or ECONO COOL button is pressed.

Powerful Operation

1 Press POWERFUL during cool or heat mode Page 6 to start powerful operation.

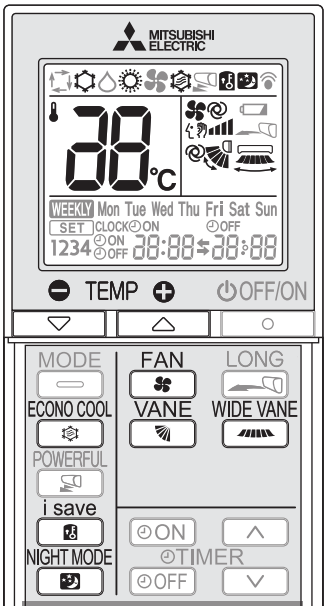
Fan speed : Exclusive speed for powerful mode
Horizontal vane : Set position, or downward airflow position during auto setting

- Temperature cannot be set during powerful operation.

Press POWERFUL again to cancel powerful operation.

- POWERFUL operation also is cancelled automatically in 15 minutes, or when the off/on, fan mode, ECONO COOL, or I-SAVE button is pressed.

I-SAVE Operation



A simplified set back function enables to recall the preferred (preset) setting with a single push of the i save button. Press the button again and you can go back to the previous setting in an instance.

1 Press i save during cool mode, ECONO COOL, NIGHT MODE, or heat mode to select I-SAVE mode.

2 Set the temperature, fan speed, and airflow direction.

- The same setting is selected from the next time by simply pressing i save.
- Two settings can be saved. (one for cool mode/ECONO COOL, one for heat mode)
- Select the appropriate temperature, fan speed, and airflow direction according to your room.
- Normally, the minimum temperature setting in heat mode is 16°C. However, during I-SAVE operation only, the minimum temperature setting is 10°C.

Press i save again to cancel I-SAVE operation.

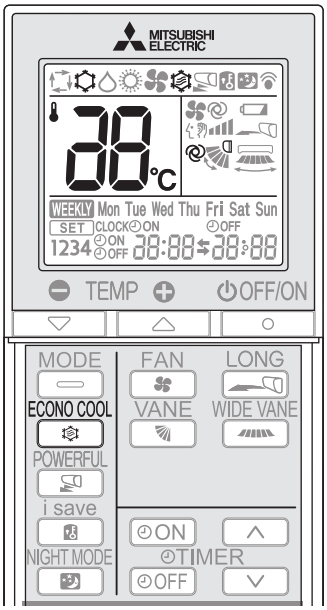
- I-SAVE operation also is cancelled when the Operation select button is pressed.

Note:

Example of use:

1. Low energy mode
   Set the temperature 2°C to 3°C warmer in cool and cooler in heat mode. This setting is suitable for unoccupied room, and while you are sleeping.
2. Saving frequently used settings
   Save your preferred setting for cool mode/ECONO COOL and heat mode. This enables you to select your preferred setting with a single push of the button.

ECONO COOL Operation



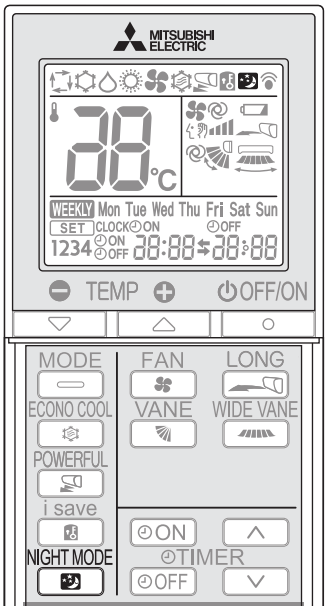
Swing airflow (change of airflow) makes you feel cooler than stationary airflow.
The set temperature and the airflow direction are automatically changed by the microprocessor. It is possible to perform cooling operation with keeping comfort. As a result energy can be saved.

1 Press ECONO COOL during cool mode page 6 to start ECONO COOL operation.
The unit performs swing operation vertically in various cycles according to the temperature airflow.

Press ECONO COOL again to cancel ECONO COOL operation.

- ECONO COOL operation is also cancelled when the VANE button is pressed.

NIGHT MODE Operation



NIGHT MODE changes the brightness of the operation indicator, disables the beep sound and limits the noise level of the outdoor unit.

1 Press NIGHT MODE during operation to activate NIGHT MODE.

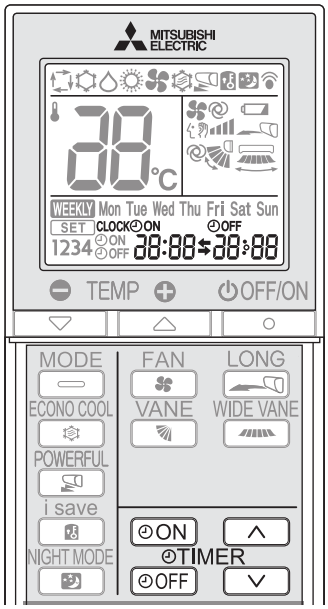
- The operation indicator lamp dims.
- The beep sound will be disabled except that emitted when the operation is started or stopped.
- Noise level of the outdoor unit will be lower than that mentioned in SPECIFICATIONS.

Press NIGHT MODE again to cancel NIGHT MODE.

Note:

- The cooling/heating capacity may drop.
- Noise level of the outdoor unit may not change after start-up of the unit, during the protection operation, or depending on other operating conditions.
- The fan speed of the indoor unit will not change.
- The operation indicator lamp will be hard to be seen in a bright room.
- Noise level of the outdoor unit will not decrease during Multi system operation.

Timer Operation (On/Off Timer)



1 Press ON or OFF during operation to set the timer.

ON (on timer) : The unit turns on at the set time.

OFF (off timer) : The unit turns off at the set time.

* ON or OFF **blinks.**

* **Make sure that the current time and day are set correctly.** Page 5

2 Press (Increase) and (Decrease) to set the time of timer.

Each press increases or decreases the set time by 10 minutes.

- Set the timer while ON or OFF is blinking.

Press ON or OFF again to cancel timer.

Note:

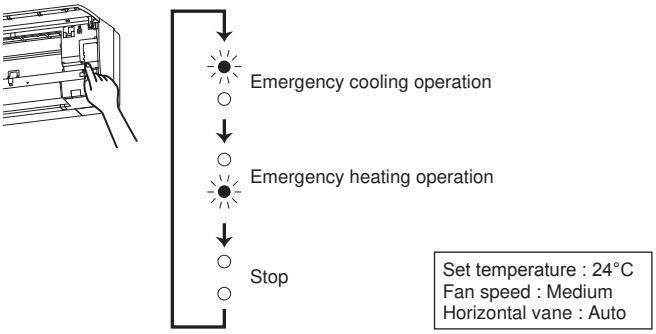
- On and off timers can be set together. ⇆ mark indicates the order of timer operations.
- If power failure occurs while on/off timer is set, see page 10 "Auto restart function".

Emergency Operation

When the remote controller cannot be used...

Emergency operation can be activated by pressing the emergency operation switch (E.O.SW) on the indoor unit.

Each time the E.O.SW is pressed, the operation changes in the following order:



Note:

- The first 30 minutes of operation is test run. Temperature control does not work, and fan speed is set to High.
- In the emergency heating operation, the fan speed gradually rises to blow out warm air.
- In the emergency cooling operation, the horizontal vanes' position will be reset in about a minute, then the operation will start.

Auto Restart Function

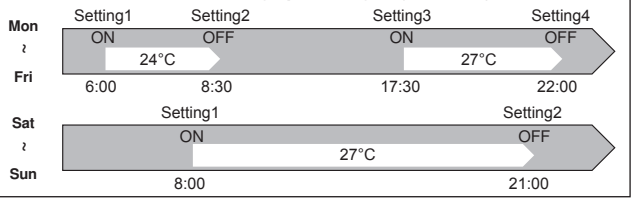
If a power failure occurs or the main power is turned off during operation, "Auto restart function" automatically starts operation in the same mode as the one set with the remote controller just before the shutoff of the main power. When timer is set, timer setting is cancelled and the unit starts operation when power is resumed.

If you do not want to use this function, please consult the service representative because the setting of the unit needs to be changed.

Weekly Timer Operation

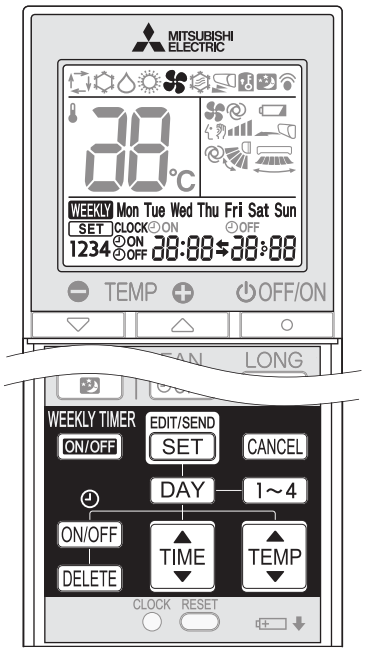
- A maximum of 4 on or off timers can be set for individual days of the week.
- A maximum of 28 on or off timers can be set for a week.

E.g. : Runs at 24°C from waking up to leaving home, and runs at 27°C from getting home to going to bed on weekdays.
Runs at 27°C from waking up late to going bed early on weekends.



Note:

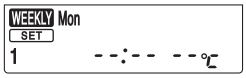
The simple on/off timer setting is available while the weekly timer is on. In this case, the on/off timer has priority over the weekly timer; the weekly timer operation will start again after the simple on/off timer is complete.



Setting The Weekly Timer

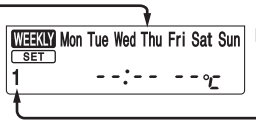
* Make sure that the current time and day are set correctly.

1 Press EDIT/SEND SET to enter the weekly timer setting mode.



* SET blinks.

2 Press DAY and 1~4 to select setting day and number.



E.g. : [Mon Tue ... Sun] and [1] are selected.

Pressing DAY selects the day of the week to be set.

Mon → Tue → Wed → Thu → Fri → Sat → Sun
Mon Tue Wed Thu Fri Sat Sun

* All days can be selected.

Pressing 1~4 selects the setting number.

1 → 2 → 3 → 4

3 Press ON/OFF, TIME, and TEMP to set on/off, time, and temperature.



E.g. : [ON], [6:00] and [24°C] are selected.

Pressing ON/OFF selects on/off timer.
ON → OFF
Pressing DELETE deletes timer setting.

Pressing TIME adjusts the time.

Pressing TEMP adjusts the temperature.

* Hold down the button to change the time quickly.

Press DAY and 1~4 to continue setting the timer for other days and/or numbers.

4 Press EDIT/SEND SET to complete and transmit the weekly timer setting.



* SET which was blinking goes out, and the current time will be displayed.

Note:

- Press EDIT/SEND SET to transmit the setting information of weekly timer to the indoor unit. Point the remote controller toward the indoor unit for 3 seconds.
- When setting the timer for more than one day of the week or one number, EDIT/SEND SET does not have to be pressed per each setting. Press EDIT/SEND SET once after all the settings are complete. All the weekly timer settings will be saved.
- Press EDIT/SEND SET to enter the weekly timer setting mode, and press and hold DELETE for 5 seconds to erase all weekly timer settings. Point the remote controller toward the indoor unit.

5 Press WEEKLY TIMER ON/OFF to turn the weekly timer on. (WEEKLY lights.)

* When the weekly timer is on, the day of the week whose timer setting is complete, will light.

Press WEEKLY TIMER ON/OFF again to turn the weekly timer off. (WEEKLY goes out.)

Note:

The saved settings will not be cleared when the weekly timer is turned off.

Checking Weekly Timer Setting

1 Press EDIT/SEND SET to enter the weekly timer setting mode.

* SET blinks.

2 Press DAY or 1~4 to view the setting of the particular day or number.

Press CANCEL to exit the weekly timer setting.

Note:

When all days of the week are selected to view the settings and a different setting is included among them, --:-- --℃ will be displayed.

Demand Response and Indoor Unit Operation(Demand Type Only)

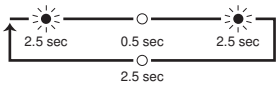
Demand response

This unit has demand response capability which is compliant with AS/NZS 4755.3.1.

To activate this function, you need to make a contract with remote agents such as electric supply company, then this unit should be connected to Demand response enabling devise (DRED). For further information, consult your dealer.

Demand response represents the automated alteration of an electrical product's normal mode of operation in response to an initiating signal originating from or defined by a remote agent.

This unit supports 3 Demand Response Modes (DRMs).

DRM	Description of operation in this mode	Operation indicator lamp ☀ Lit ○ Not lit
DRM 1	Compressor off The air conditioner does not perform cooling or heating operation during the demand response event.	Upper lamp is lit. ☀ Lower lamp blinks. 
DRM 2	The air conditioner continues to perform cooling or heating operation during the demand response event, but the electrical energy consumed by the air conditioner in a half hour period is not more than 50% of the total electrical energy that would be consumed if operating at the rated capacity in a half hour period.	
DRM 3	The air conditioner continues to perform cooling or heating operation during the demand response event, but the electrical energy consumed by the air conditioner in a half hour period is not more than 75% of the total electrical energy that would be consumed if operating at the rated capacity in a half hour period.	

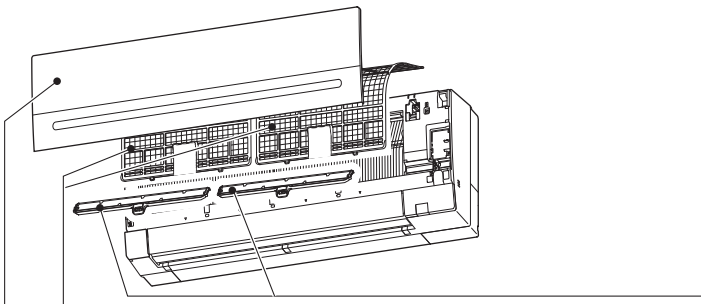
Note:

- DRM is automatically activated or released according to the signals from DRED. DRM cannot be invalidated or changed manually.
- You might feel this unit does not sufficiently perform cooling or heating operation during DRM.
- Operation settings can be changed as usual with the remote controller during DRM. However, you might not feel cool or warm enough as DRM is prioritized.

Cleaning

Instructions:

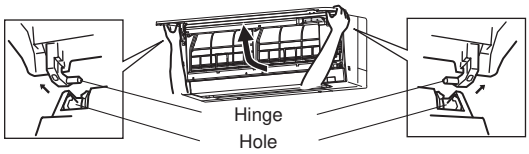
- Switch off the power supply or turn off the breaker before cleaning.
- Be careful not to touch the metal parts with your hands.
- Do not use benzine, thinner, polishing powder, or insecticide.
- When dirt stands out, wash it with kitchen neutral detergent diluted with lukewarm water to the specifi ed concentration, then wipe off the detergent with a damp towel.Use only diluted mild detergents.
- Do not use a scrubbing brush, a hard sponge, or the like.
- Do not soak or rinse the horizontal vane.
- Do not use water hotter than 50°C.
- Do not expose parts to direct sunlight, heat, or fire to dry.
- Do not apply excessive force on the fan as it may cause cracks or breakage.



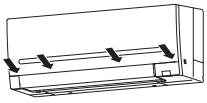
Air filter (Air purifying filter)

- **Clean every 2 weeks**
- Remove dirt by a vacuum cleaner, or rinse with water.
- After washing with water, dry it well in shade.

Front panel



1. Lift the front panel until a “click” is heard.
2. Hold the hinges and pull to remove as shown in the illustration above.
   - Wipe with a soft dry cloth or rinse it with water.
   - Do not soak it in water for more than two hours.
   - Dry it well in shade before installing it.
3. Install the front panel by following the removal procedure in reverse. Close the front panel securely and press the positions indicated by the arrows.



Air cleaning filter (Anti-Allergy Enzyme filter)

Every 3 months:
- Remove dirt by a vacuum cleaner.

When dirt cannot be removed by vacuum cleaning:
- Soak the filter and its frame in lukewarm water before rinsing it.
- After washing, dry it well in shade. Install all tabs of the air filter.

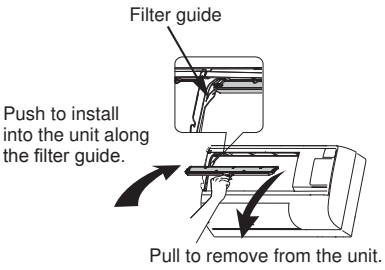
Every year:
- Replace it with a new air cleaning filter for best performance.
- Parts Number MAC-2350FT-E

(Electrostatic anti-allergy enzyme filter, option)

Every 3 months:
- Remove dirt by a vacuum cleaner.

When dirt cannot be removed by vacuum cleaning:
- Soak the filter and its frame in lukewarm water before rinsing it.
- After washing, dry it well in shade.

Every year:
- Replace it with a new air cleaning filter for best performance.
- Parts Number MAC-2310FT-E

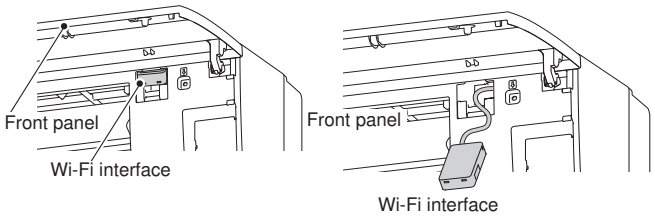


Important

- **Clean the filters regularly for best performance and to reduce power consumption.**
- **Dirty filters cause condensation in the air conditioner which will contribute to the growth of fungi such as mold. It is therefore recommended to clean air filters every 2 weeks.**

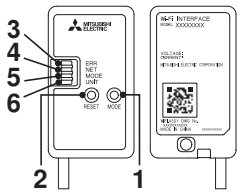
Wi-Fi Interface Setting Up (VGK Type Only)

This Wi-Fi interface, communicates the status information and controls the commands from the server by connecting to the indoor unit.



Wi-Fi Interface Introduction

No	Item	Description
1	Mode Button	Selects modes.
2	Reset Button	Resets the system and all settings.
3	Err LED (Orange)	Shows the network error state.
4	Net LED (Green)	Shows the network state.
5	Mode LED (Orange)	Shows the Access Point mode state.
6	Unit LED (Green)	Shows the indoor unit state.



(1) MODE button

WPS-push
- Hold down the mode button for 2 seconds to start WPS-push Pairing.
- When WPS-push is enabled on the Wi-Fi interface, the Mode LED starts flashing orange (every second) and the pairing can be completed by enabling WPS-push on the Router.

Access Point mode
- Hold down the mode button for 7 seconds to start Access Point mode.
- When Access Point mode is enabled on the Wi-Fi interface, the Mode LED starts flashing orange (every 5 seconds).
- To cancel Access Point mode, hold down the mode button for 7 seconds again and ensure that the Mode LED is no longer flashing.

(2) RESET Button
- Hold down the RESET Button for 2 seconds to reboot the system.
- Hold down the RESET Button for 15 seconds to initialise the Wi-Fi interface to the factory default.

Note:

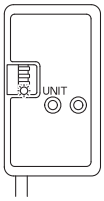
When the Wi-Fi interface is reset to the factory default, ALL the configuration information will be lost. Take great care in implementing this operation.

Information for Users

The following steps explain how to connect the Wi-Fi interface to a Router.

KEY (LED LIGHTS): ☀ : On ○ : Off ☼ : Flashing

1 Ensure the Wi-Fi interface is connected correctly as per the previous section, 'Connecting the Wi-Fi interface'. UNIT LED should be flashing green only.



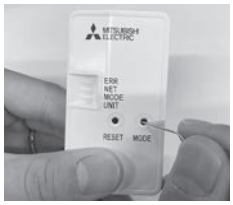
2 Download and install Wi-Fi Control App to your compatible Apple or Android smartphone/tablet (search term: Mitsubishi Wi-Fi Control).

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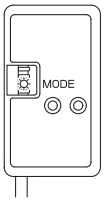
There are two options of connecting

Option 1 - Access Point mode pairing

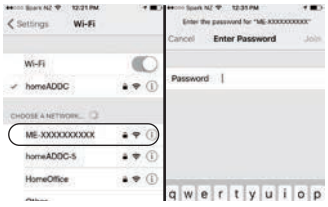
3 Activate Access Point mode on your Wi-Fi interface by using a small object to press and hold the mode button for 7 seconds.



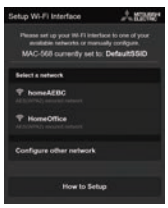
4 When Access Point mode is enabled on the Wi-Fi interface, Mode LED starts flashing orange (every 5 seconds).



5 Check the label on the back of the interface for the SSID. Open the Wi-Fi networks screen on your smartphone/ tablet and connect to the network with the same name as the SSID. The network password, labelled KEY, is just under the SSID on the interface.
You will now be connected to this Wi-Fi interface



6 Open Wi-Fi Control App and follow the 'How to Setup' instructions in the 'Setup Wi-Fi interface' section.
If the app does not go to this section, you are not connected to the Wi-Fi interface's Access Point; please start process again.
You can either select your available Wi-Fi Network, or manually configure a Wi-Fi Network.



Wi-Fi Interface Setting Up (VGK Type Only)

7 Once completed, the MAC and ID will be filled in 'Add new unit'. Select 'Add' and then control your heat pump via Wi-Fi.



Option 2 - WPS-push pairing

- Please Note: The WPS and Router reset buttons may be similar on some Routers.
- Please exercise caution as resetting your Router will erase network configuration.

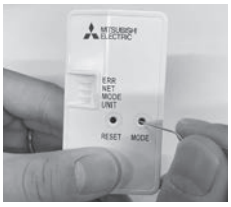
3 Check Wi-Fi and WPS are enabled on your Router. The connection procedure varies depending on your Router – refer to your Router's manual for more information.



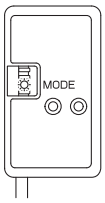
4 Activate WPS mode on your Router. This will be enabled for a set period allowing approximately 2 minutes to complete the next step. To do so, please refer to your Router's manual.



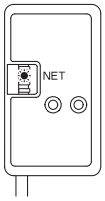
5 Activate WPS on your Wi-Fi interface by using a small object to press and hold the mode button for 2 seconds.



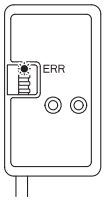
6 When WPS-push is enabled on the Wi-Fi interface, Mode LED starts flashing orange (every second).



7 When pairing process is completed on the Wi-Fi interface, the Net LED lights up solid green for 5 seconds.



8 If Err LED lights up orange for 5 seconds at any stage, there may be a problem; please start process again.



9 Open Wi-Fi Control App. Enter MAC and ID into 'Add new unit' and select 'Add'.



10 Once completed, control your heat pump via Wi-Fi.



LED Pattern

☀ : On ○ : Off ☼ : Flashing

● Software initialising				
Description	ERR (Orange)	NET (Green)	MODE (Orange)	UNIT (Green)
Firmware updating	○	☀	☀	○
Firmware downloading	○	☼ (every second)	☼ (every second)	○
Reset to the factory default	○	○	☀	☀
● Wireless setting				
Description	ERR (Orange)	NET (Green)	MODE (Orange)	UNIT (Green)
Access Point mode activated	○	○	☼ (every 5 sec)	☼ (every 5 sec)
WPS-PUSH mode activated	○	○	☼ (every second)	○
WPS-PIN mode activated	○	○	☼ (every 0.5 sec)	○
Pairing process via WPS completed	○	☀ (5 sec)	○	○
Pairing process via WPS failed	☀ (5 sec)	○	○	○
● Connection to server in progress				
Description	ERR (Orange)	NET (Green)	MODE (Orange)	UNIT (Green)
Communicating with server, and starting up indoor unit communication	○	☼ (*1)	○	☀
Communicating with server, and communicating with indoor unit	○	☼ (*1)	○	☼ (every 5 sec)
● Normal operation				
Description	ERR (Orange)	NET (Green)	MODE (Orange)	UNIT (Green)
Communicating with server, and communicating with indoor unit	○	☼ (every 5 sec)	○	☼ (every 5 sec)

(*1) Details of flash pattern

- Every 0.5 sec: Searching for server.
- Every second: Registering the information of the Wi-Fi interface to server.

Wi-Fi Interface Setting Up (VGK Type Only)

Troubleshooting

☀ : On ○ : Off ☼ : Flashing

Description	ERR (Orange)	NET (Green)	MODE (Orange)	UNIT (Green)
Connection to server established, and connection to indoor unit failed	○	☼	○	○
Connection to Router failed, and connection to indoor unit established	○	○ (*3)	○	☼
Connection to Router failed, and starting up indoor unit connection	○	○ (*3)	○	☀
Connection to Router failed, and connection to indoor unit failed	○	○ (*3)	○	○
Connection to server failed, and connection to indoor unit established	☼ (*2)	☼	○	☼
Connection to server failed, and starting up indoor unit connection	☼ (*2)	☼	○	☀
Connection to server failed, and connection to indoor unit failed	☼ (*2)	☼	○	○

(*2) Details of flash pattern

- Every 0.5 sec: IP address setting is invalid.Check DHCP Settings of the Router, or check IP address settings of the Wi-Fi interface. If both settings are correct but still the problem persists, push RESET Button for more than 15 seconds to retry the pairing.
- Every second: DNS setting is invalid.Check DNS Settings of the Router, or check DNS address settings of the Wi-Fi interface. If both settings are correct but still the problem persists, push RESET Button for more than 15 seconds to retry the pairing.
- Twice every 5 sec: Not connected to server. Check if the Router is connected to the internet.
- Once every 5 sec: Not communicating with server properly. push RESET Button for 2 seconds.

(*3) Details when Net LED is off

The Wi-Fi interface failed to connect to the Router. Check the following, and pair the Wi-Fi interface.

- Make sure that the communication distance is not too far between the Wi-Fi interface and the Router.
- Make sure 2.4GHz is enabled on dual band Routers.
- Make sure that the Router uses WPA2-PSK(AES) encryption.
- Make sure that the number of connected devices to the Router does not exceed the limit.
- Make sure that WPS is working on the Router.
- Make sure that the Router is compatible with the Wi-Fi interface.
- If Static IP has been set - make sure it is correct as per Router network settings.

If a problem regarding connecting your Router and the Wi-Fi interface persists, please contact your local Mitsubishi Electric office, as listed on the back of this guide. A list of compatible Routers is also available.

Note:

- Ensure that the Router supports the WPA2-AES encryption setting before starting the Wi-Fi interface setup.
- The End user should read and accept the terms and conditions of the Wi-Fi service before using this Wi-Fi interface.
- To complete connection of this Wi-Fi interface to the Wi-Fi service, the Router may be required.
- This Wi-Fi interface will not commence transmission of any operational data from the system until the End user registers and accepts the terms and conditions of the Wi-Fi service.
- This Wi-Fi interface should not be installed and connected to any Mitsubishi Electric system which is to provide application critical cooling or heating.
- Please write down the information regarding the Wi-Fi interface setting on the last page of this manual, when you set up this Wi-Fi interface.
- At the time of relocation or disposal, reset the Wi-Fi interface to the factory default.

Mitsubishi Electric's Wi-Fi interface is designed for communication to Mitsubishi Electric's Wi-Fi service. Third party Wi-Fi interfaces cannot connect to Mitsubishi Electric's Wi-Fi service. Mitsubishi Electric is not responsible for any (i) underperformance of a system or any product; (ii) system or product fault; or (iii) loss or damage to any system or product; which is caused by or arises from connection to and/or use of any third party Wi-Fi interface or any third party Wi-Fi service with Mitsubishi Electric equipment.

For the latest information regarding Wi-Fi Control:

New Zealand based enquiries please visit: www.mitsubishi-electric.co.nz/wifi

Australian based enquiries please visit: www.mitsubishielectric.com.au/wifi

Mitsubishi Electric Wi-Fi Heat Pump Control

Register Your Heat Pump(s)

Thank you for choosing a Mitsubishi Electric Heat Pump with Wi-Fi Control. Once your Wi-Fi interface is installed, either download the app (search term: Mitsubishi Wi-Fi Control) or visit our website to register your heat pump(s).

Download on the App Store

GET IT ON Google Play

Once registered you will be able to control your heat pump with your smartphone, tablet or online account using an internet connection.
(For a list of compatible devices, please visit the Mitsubishi Electric website).



User Manual

A copy of the user manual, terms & conditions and privacy policy can be downloaded at any time from the Mitsubishi Electric website.

Mitsubishi Electric New Zealand

www.mitsubishi-electric.co.nz/wifi

Phone: 0800 639 434

Mitsubishi Electric Australia

www.mitsubishielectric.com.au/wifi

Phone: 1300 728 119

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*Google Play and the Google Play logo are trademarks of Google Inc.

When You Think That Trouble Has Occurred

Even if these items are checked, when the unit does not recover from the trouble, stop using the air conditioner and consult your dealer.

Symptom	Explanation & Check Points
Indoor Unit	
The unit cannot be operated.	• Is the breaker turned on? • Is the power supply plug connected? • Is the on timer set? Page 9
The horizontal vane does not move.	• Are the horizontal vane and the vertical vane installed correctly? • Is the fan guard deformed? • When the breaker is turned on, the horizontal vanes' position will be reset in about a minute. After the reset has completed, the normal horizontal vanes' operation resumes. The same is true in the emergency cooling operation.
The unit cannot be operated for about 3 minutes when restarted.	• This protects the unit according to instructions from the microprocessor. Please wait.
Mist is discharged from the air outlet of the indoor unit.	• The cool air from the unit rapidly cools moisture in the air inside the room, and it turns into mist.
White smoke is discharged from the air inlet of the indoor unit.	• When the heating operation starts after the defrosting operation, vapor generated from the condensation on the heat exchanger looks like white smoke.
The swing operation of the horizontal vane is suspended for a while, then restarted.	• This is for the swing operation of the horizontal vane to be performed normally.
When swing is selected in cool/dry/fan mode, the lower horizontal vane does not move.	• It is normal that the lower horizontal vane does not move when swing is selected in cool/dry/fan mode.
The airflow direction changes during operation. The direction of the horizontal vane cannot be adjusted with the remote controller.	• When the unit is operated in cool or dry mode, if the operation continues with air blowing down for 0.5 To 1 hour, the direction of the airflow is automatically set to upward position to prevent water from condensing and dripping. • In the heating operation, if the airflow temperature is too low or when defrosting is being done, the horizontal vane is automatically set to horizontal position. Also the fan speed decreases or the fan stops.
The operation stops for about 10 minutes in the heating operation.	• Outdoor unit is in defrost. Since this is completed in max. 10 minutes, please wait. (When the outside temperature is too low and humidity is too high, frost is formed.)
The unit starts operation by itself when the main power is turned on, though it isn't operated with the remote controller.	• These models are equipped with an auto restart function. When the main power is turned off without stopping the unit with the remote controller and is turned on again, the unit starts operation automatically in the same mode as the one set with the remote controller just before the shutoff of the main power. Refer to "Auto restart function". Page 11
The two horizontal vanes touch each other. The horizontal vanes are in an abnormal position. The horizontal vanes do not return to the correct "close position".	Perform one of the following: • Turn off and on the breaker. Make sure the horizontal vanes move to the correct "close position". • Start and stop the emergency cooling operation and make sure the horizontal vanes move to the correct "close position".
The indoor unit discolors over time.	• Although plastic turns yellow due to the influence of some factors such as ultraviolet light and temperature, this has no effect on the product functions.
The ceiling and the walls around the indoor unit have smudges.	• It is because the ceiling and the walls get dust in the air due to air circulation by the air conditioner.
Water leaks from the indoor unit.	• Is the front panel closed accurately? Page 13 • Does water flow smoothly from the edge of the drain hose?
The operation indicator lamp is dim. The unit does not beep.	• Is the NIGHT MODE set? Page 9
Multi System	
The indoor unit which is not operating becomes warm and a sound, similar to water flowing, is heard from the unit.	• A small amount of refrigerant continues to flow into the indoor unit even though it is not operating.
When heating operation is selected, operation does not start right away.	• When operation is started during defrosting of outdoor unit is done, it takes a few minutes (max. 10 minutes) to blow out warm air.

Symptom	Explanation & Check Points
Outdoor Unit	
The fan of the outdoor unit does not rotate even though the compressor is running. Even if the fan starts to rotate, it stops soon.	• When the outside temperature is low during cooling operation, the fan operates intermittently to maintain sufficient cooling capacity.
Water leaks from the outdoor unit.	• During cool and dry mode operations, pipe or pipe connecting sections are cooled and this causes water to condense. • In the heating operation, water condensed on the heat exchanger drips down. • In the heating operation, the defrosting operation makes ice forming on the outdoor unit melt and drip down.
White smoke is discharged from the outdoor unit.	• In the heating operation, vapor generated by the defrosting operation looks like white smoke.
Remote Controller	
The display on the remote controller does not appear or it is dim. The indoor unit does not respond to the remote control signal.	• Are the batteries exhausted? Page 5 • Is the polarity (+, -) of the batteries correct? Page 5 • Did you press the reset button after replacing the batteries? Page 5 • Is the setting of multiple indoor units' installation the same as before replacing the batteries? Page 5 • Are any buttons on the remote controller of other electric appliances being pressed? • The indoor unit may not receive the signal well depending on the condition in the room. Get close to the indoor unit and operate the remote controller.
Does Not Cool or Heat	
The room cannot be cooled or heated sufficiently.	• Is the temperature setting appropriate? Page 6 • Is the fan setting appropriate? Please change fan speed to High or Super High. Page 7 • Are the filters clean? Page 12 • Is the fan or heat exchanger of the indoor unit clean? Page 12 • Are there any obstacles blocking the air inlet or outlet of the indoor or outdoor unit? • Is a window or door open? • It may take a certain time to reach the setting temperature or may not reach that depending on the size of the room, the ambient temperature, and the like. • Is the NIGHT MODE set? Page 9
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 temperature is high, the cooling effect may not be sufficient.
The room cannot be heated sufficiently.	• When the outside temperature is low, the heating effect may not be sufficient.
Air does not blow out soon in the heating operation.	• Please wait as the unit is preparing to blow out warm air.
Poor cooling or heating performance.	• Do you have an arrangement with your electric company for Demand Response?
Airflow	
The air from the indoor unit smells strange.	• Are the filters clean? Page 12 • Is the fan or heat exchanger of the indoor unit clean? Page 12 • The unit may suck in an odor adhering to the wall, carpet, furniture, cloth, etc. and blow it out with the air.
Sound	
Cracking sound is heard.	• This sound is generated by the expansion/contraction of the front panel, etc. due to change in temperature.
"Burbling" sound is heard.	• This sound is heard when the outside air is absorbed from the drain hose by turning on the range hood or the ventilation fan, making water flowing in the drain hose to spout out. This sound is also heard when the outside air blows into the drain hose in case the outside wind is strong.
Mechanical sound is heard from the indoor unit.	• This is the switching sound in turning on/off the fan or the compressor.
The sound of water flowing is heard.	• This is the sound of refrigerant or condensed water flowing in the unit.
Hissing sound is sometimes heard.	• This is the sound when the flow of refrigerant inside the unit is changed.
Heating operation stops and the sound is heard.	• The outdoor unit is defrosting. • Heating operation starts after the frosy on the outdoor unit has been removed. This can take about 2 to 10 minutes. • Cracking sound, Sound of water flowing ,Hissing sound and Whistling sound are heard.

When You Think That Trouble Has Occurred

Symptom	Explanation & Check Points
Timer	
Weekly timer does not operate according to settings.	• Is the on/off timer set? Page 9 • Transmit the setting information of the weekly timer to the indoor unit again. When the information is successfully received, a long beep will sound from the indoor unit. If information fails to be received, 3 short beeps will be heard. Ensure information is successfully received. Page 10 • When a power failure occurs and the main power turns off, the indoor unit built-in clock will be incorrect. As a result, the weekly timer may not work normally. Be sure to place the remote controller where the signal can be received by the indoor unit. Page 5
The unit starts/stops the operation by itself.	• Is the weekly timer set? Page 10
Others	
The aluminum fin on the edge of the heat exchanger is discolored as if it is burnt.	• This is the coating resin discolored due to welding heat when the heat exchanger was being produced. • The operation of the air conditioner is not the cause of the discoloration. • It affects neither the performance of the heat exchanger nor the use of the air conditioner.

In the following cases, stop using the air conditioner and consult your dealer.

- When water leaks or drips from the indoor unit.
- When the operation indicator lamp blinks.
- When the breaker trips frequently.
- The remote control signal is not received in a room where an electronic ON/OFF type fluorescent lamp (inverter-type fluorescent lamp, etc.) is used.
- Operation of the air conditioner interferes with radio or TV reception. An amplifier may be required for the affected device.
- When an abnormal sound is heard.
- When any refrigerant leakage is found.

When the Air Conditioner Is Not Going to Be Used for a Long Time

1. Operate by cool mode with the highest temperature set or fan mode for 3 to 4 hours. Page 6
   - This dries the inside of the unit.
   - Moisture in the air conditioner contributes to favorable conditions for growth of fungi, such as mold.
2. Press ⏻OFF/ON ○ to stop the operation.
3. Turn off the breaker and/or disconnect the power supply plug.
4. Remove all batteries from the remote controller.

When using the air conditioner again:

1. Clean the air filter. Page 13
2. Check that the air inlet and outlet of the indoor and outdoor units are not blocked.
3. Check that the earth is connected correctly.
4. Refer to the “PREPARATION BEFORE OPERATION”, and follow the instructions. Page 5

Installation Place and Electrical Work

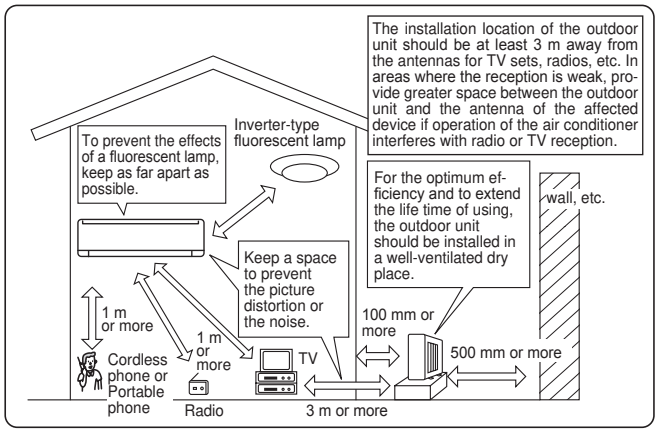
Installation place

Avoid installing the air conditioner in the following places.

- Where there is much machine oil.
- Salty places such as the seaside.
- Where sulfide gas is generated such as hot spring, sewage, waste water.
- Where oil is splashed or where the area is filled with oily smoke (such as cooking areas and factories, in which the properties of plastic could be changed and damaged).
- Where there is high-frequency or wireless equipment.
- Where the air from the outdoor unit air outlet is blocked.
- Where the operation sound or air from the outdoor unit bothers the house next door.
- The mounting height of indoor unit 1.8 m to 2.3 m is recommended. If it is impossible, please consult your dealer.
- Do not operate the air conditioner during interior construction and finishing work, or while waxing the floor. Before operating the air conditioner, ventilate the room well after such work is performed. Otherwise, it may cause volatile elements to adhere inside the air conditioner, resulting in water leakage or scattering of dew.

For Wi-Fi interface

- The indoor unit must be installed in rooms which exceed the floor space specified. Please consult your dealer.
- Do not use the Wi-Fi interface nearby the medical electrical equipment or people who have a medical device such as a cardiac pacemaker or an implantable cardioverter-defibrillator.
  It can cause an accident due to malfunctions of the medical equipment or device.
- This equipment should be installed and operated with a minimum distance of 20 cm between the device and the user or bystanders.
- Do not use the Wi-Fi interface nearby other wireless devices, microwaves, cordless phones, or facsimiles.



Electrical work

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

If you have any questions, consult your dealer.

Specifications

Guaranteed operating range

		Indoor	Outdoor
Cooling	Upper limit	32°C DB 23°C WB	46°C DB —
	Lower limit	21°C DB 15°C WB	-10°C DB —
Heating	Upper limit	27°C DB —	24°C DB 18°C WB
	Lower limit	20°C DB —	-15°C DB -16°C WB

DB : Dry Bulb
WB : Wet Bulb

Wi-Fi interface

Model	MAC-578IF2-E
Input voltage	DC12.7 V (from indoor unit)
Power consumption	MAX 2 W
Size H×W×D (mm)	73.5×41.5×18.5
Weight (g)	46 (including cable)
Transmitter power level (MAX)	20 dBm @IEEE 802.11b
RF channel	1ch ~ 13ch (2412~2472 MHz)
Radio protocol	IEEE 802.11b/g/n (20)
Encryption	AES
Authentication	WPA2-PSK
Software version	xX.00

Wi-Fi interface setting information

Indoor unit model name	
Indoor unit serial number	
Outdoor unit model name	
Outdoor unit serial number	
Wi-Fi interface MAC address (MAC)	
Wi-Fi interface serial number (ID)	
Wi-Fi interface SSID (SSID)	
Wi-Fi interface KEY (KEY)	
System commissioning date	
Wi-Fi interface installation date	

Installer contact details

Name	
Telephone number	

MEMO

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN

VG79Y683H03

ENGLISH

MITSUBISHI ELECTRIC

REFRIGERANT R32

VG79N341H03

SPLIT-TYPE AIR CONDITIONERS

INSTALLATION MANUAL

Model names are indicated in 1-3.
When installing multi units, refer to the installation manual of the multi unit for outdoor unit installation.

Required tools for installation

Phillips screwdriver	4 mm hexagonal wrench
Level	Flare tool for R32, R410A
Scale	Gauge manifold for R32, R410A
Utility knife or scissors	Vacuum pump for R32, R410A
75 mm hole saw	Charge hose for R32, R410A
Torque wrench	Pipe cutter with reamer
Wrench (or spanner)	

Appropriate personal protective equipment
The installer should ensure they check the respective Work Health and Safety (WHS) Act within their jurisdiction as the requirements and obligations may differ.

1. Before Installation

Meanings of symbols displayed on indoor unit and/or outdoor unit

	**Warning** (Risk of fire)	This unit uses a flammable refrigerant. If refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.
	Read the OPERATING INSTRUCTIONS carefully before operation.	
	Service personnel are required to carefully read the OPERATING INSTRUCTIONS and INSTALLATION MANUAL before operation.	
	Further information is available in the OPERATING INSTRUCTIONS, INSTALLATION MANUAL, and the like.	

1-1. The Following Should Always Be Observed For Safety

- Be sure to read “THE FOLLOWING SHOULD ALWAYS BE OBSERVED FOR SAFETY” before installing the air conditioner.
- Before starting the connection setup of the Wi-Fi interface, check the safety precautions in OPERATING INSTRUCTIONS of the room air conditioner. Wi-Fi® is a registered trademark of Wi-Fi Alliance®.
- Be sure to observe the warnings and cautions specified here as they include important items related to safety.
- After reading this manual, be sure to keep it together with the OPERATING INSTRUCTIONS for future reference.
- When using this product in Australia, carefully read the Australian Institute of Refrigeration and Flammable refrigerants Safety Guide in Air conditioning and Heating (AIRAH) as well.

⚠ Warning (Could lead to death, serious injury, etc.)

- **Do not install the unit by yourself (user).**
  Incomplete installation could cause fire, electric shock, injury due to the unit falling, or leakage of water. Consult the dealer from whom you purchased the unit or a qualified installer.
- **Perform the installation securely referring to the installation manual.**
  Incomplete installation could cause fire, electric shock, injury due to the unit falling, or leakage of water.
- **When installing the unit, use appropriate protective equipment and tools for safety.**
  Failure to do so could cause injury.
- **Install the unit securely in a place which can bear the weight of the unit.**
  If the installation location cannot bear the weight of the unit, the unit could fall causing injury.
- **Do not alter the unit.**
  It may cause fire, electric shock, injury or water leakage.
- **Electrical work should be performed by a qualified, experienced electrician, according to the installation manual. Be sure to use an exclusive circuit. Do not connect other electrical appliances to the circuit.**
  If the capacity of the power circuit is insufficient or there is incomplete electrical work, it could result in a fire or an electric shock.
- **Earth the unit correctly.**
  Do not connect the earth to a gas pipe, water pipe, lightning rod, or telephone earth. Defective earthing could cause electric shock.
- **Do not damage the wires by applying excessive pressure with parts or screws.**
  Damaged wires could cause fire or electric shock.
- **Be sure to cut off the main power in case of setting up the indoor P.C. board or wiring works.**
  Failure to do so could cause electric shock.
- **Use the specified wires to connect the indoor and outdoor units securely and attach the wires firmly to the terminal block connecting sections so the stress of the wires is not applied to the sections. Do not extend the wires, or use intermediate connection.**
  Incomplete connecting and securing could cause fire.
- **Do not install the unit in a place where flammable gas may leak.**
  If gas leaks and accumulates in the area around the unit, it could cause an explosion.
- **Do not use intermediate connection of the power cord or the extension cord and do not connect many devices to one AC outlet.**
  It could cause a fire or an electric shock due to defective contact, defective insulation, exceeding the permissible current, etc.
- **Be sure to use the parts provided or specified parts for the installation work.**
  The use of defective parts could cause an injury or leakage of water due to a fire, an electric shock, the unit falling, etc.
- **When plugging the power supply plug into the outlet, make sure that there is no dust, clogging, or loose parts in both the outlet and the plug. Make sure that the power supply plug is pushed completely into the outlet.**
  If there is dust, clogging, or loose parts on the power supply plug or the outlet, it could cause electric shock or fire. If loose parts are found on the power supply plug, replace it.
- **Attach the electrical cover to the indoor unit and the service panel to the outdoor unit securely.**
  If the electrical cover of the indoor unit and/or the service panel of the outdoor unit are not attached securely, it could result in a fire or an electric shock due to dust, water, etc.
- **When installing, relocating, or servicing the unit, make sure that no substance other than the specified refrigerant (R32) enters the refrigerant circuit.**
  Any presence of foreign substance such as air can cause abnormal pressure rise and may result in explosion or injury. The use of any refrigerant other than that specified for the system will cause mechanical failure, system malfunction, or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.
- **Do not discharge the refrigerant into the atmosphere. If refrigerant leaks during installation, ventilate the room. Check that the refrigerant does not leak after installation has been completed.**
  If refrigerant leaks and comes in contact with fire or heating part of such a fan heater, kerosene heater, or cooking stove, it will create harmful gas.
- **Use appropriate tools and piping materials for installation.**
  The pressure of R32 is 1.6 times more than R22. Not using appropriate tools or materials and incomplete installation could cause the pipes to burst or injury.
- **When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes.**
  If the refrigerant pipes are disconnected while the compressor is running and the stop valve is open, air could be drawn in and the pressure in the refrigeration cycle could become abnormally high. This could cause the pipes to burst or injury.
- **When installing the unit, securely connect the refrigerant pipes before starting the compressor.**
  If the compressor is started before the refrigerant pipes are connected and when the stop valve is open, air could be drawn in and the pressure in the refrigeration cycle could become abnormally high. This could cause the pipes to burst or injury.
- **Fasten a flare nut with a torque wrench as specified in this manual.**
  If fastened too tight, a flare nut may break after a long period and cause refrigerant leakage.
- **The unit shall be installed in accordance with national wiring regulations.**
- **When using a gas burner or other flame-producing equipment, completely remove all of the refrigerant from the air conditioner and ensure that the area is well-ventilated.**
  If the refrigerant leaks and comes in contact in fire or heating part, it will create harmful gas and there is risk of fire.
- **Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.**
- **The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).**
- **Do not pierce or burn.**
- **Be aware that refrigerants may not contain an odour.**
- **Pipe-work shall be protected from physical damage.**
- **The installation of pipe-work shall be kept to a minimum.**
- **Compliance with national gas regulations shall be observed.**
- **Keep any required ventilation openings clear of obstruction.**
- **When opening or closing the valve below freezing temperatures, refrigerant may spurt out from the gap between the valve stem and the valve body, resulting in injuries.**

For Wi-Fi interface

- **Do not install the indoor unit equipped with the Wi-Fi interface nearby the automatic control devices such as automatic doors or fire alarms.**
  It can cause accidents due to malfunctions.
- **Do not use the indoor unit equipped with the Wi-Fi interface nearby the medical electrical equipment or people who have a medical device such as a cardiac pacemaker or an implantable cardioverter-defibrillator.**
  It can cause an accident due to malfunctions of the medical equipment or device.
- **This indoor unit equipped with the Wi-Fi interface should be installed and operated with a minimum distance of 20 cm between the device and the user or bystanders.**

- **In Australia, only technicians that possess the appropriate license issued by the Australian Refrigeration Council (ARC) should install this product.**

⚠ Caution (Could lead to serious injury in particular environments when operated incorrectly.)

- **Install an earth leakage breaker depending on the installation place.**
  If an earth leakage breaker is not installed, it could cause electric shock.
- **Perform the drainage/piping work securely according to the installation manual.**
  If there is defect in the drainage/piping work, water could drop from the unit, soaking and damaging household goods.
- **Do not touch the air inlet or the aluminum fins of the outdoor unit.**
  This could cause injury.
- **Please wear protective equipment when you touch the base of the outdoor unit.**
  It could cause injury if you do not wear the protective equipment.
- **Do not install the outdoor unit where small animals may live.**
  If small animals enter and touch the electric parts inside the unit, it could cause a malfunction, smoke emission, or fire. Also, advise user to keep the area around the unit clean.
- **Do not operate the air conditioner during interior construction and finishing work, or while waxing the floor.**
  Before operating the air conditioner, ventilate the room well after such work is performed. Otherwise, it may cause volatile elements to adhere inside the air conditioner, resulting in water leakage or scattering of dew.

For Wi-Fi interface

- **To prevent damage from static electricity, touch a nearby metal body to discharge static electricity from yourself before touching the indoor unit equipped with the Wi-Fi interface.**
  Static electricity from the human body may damage the Wi-Fi interface unit.
- **Do not use the indoor unit equipped with the Wi-Fi interface nearby other wireless devices, microwaves, cordless phones, or facsimiles.**
  It can cause malfunctions.

1-2. Selecting the Installation Location

Indoor Unit

⚠⚠ Warning

The unit should be installed in rooms which have the floor space specified below.
AP60: 3.4 m² AP71, 80: 4.4 m²

- Where airflow is not blocked.
- Where cool (or warm) air spreads over the entire room.
- Rigid wall without vibration.
- Where it is not exposed to direct sunshine. Do not expose to direct sunshine also during the period following unpacking to before use.
- Where easily drained.
- At a distance 1 m or more away from your TV and radio. Operation of the air conditioner may interfere with radio or TV reception. An amplifier may be required for the affected device.
- In a place as far away as possible from fluorescent and incandescent lights. In order to make the infrared remote control operate the air conditioner normally. The heat from the lights may cause deformation or the ultraviolet may cause deterioration.
- Where the air filter can be removed and replaced easily.
- Where it is away from the other heat or steam source.

For Wi-Fi interface

- Please ensure that the Router supports the WPA2-AES encryption setting before commencement of the installation of this indoor unit equipped with the Wi-Fi interface.
- The End user should read and accept the terms and conditions of the Wi-Fi service before commencement of the installation of this indoor unit equipped with the Wi-Fi interface.
- This indoor unit equipped with the Wi-Fi interface should not be installed and connected to any Mitsubishi Electric system which is to provide application critical cooling or heating.

Remote Controller

- Where it is easy to operate and easily visible.
- Where children cannot touch it.
- Select a position about 1.2 m above the floor and check that signals from the remote controller are surely received by the indoor unit from that position (‘beep’ or ‘beep beep’ receiving tone sounds). When the remote controller holder is supplied, install it at a position from which the indoor unit can receive signals.

Note:
In rooms where inverter type fluorescent lamps are used, the signal from the wireless remote controller may not be received.

Outdoor Unit

- Where it is not exposed to strong wind. If the outdoor unit is exposed to a wind during defrosting, the defrosting time will be longer.
- Where airflow is good and dustless.
- Where rain or direct sunlight can be avoided as much as possible.
- Where neighbours are not annoyed by operation sound or hot (or cool) air.
- Where rigid wall or support is available to prevent the increase of operation sound or vibration.
- Where there is no risk of combustible gas leakage.
- When installing the unit at a high level, be sure to secure the unit legs.
- Where it is at least 3 m away from the antenna of TV set or radio. Operation of the air conditioner may interfere with radio or TV reception in areas where reception is weak. An amplifier may be required for the affected device.
- Install the unit horizontally.
- Please install it in an area not affected by snowfall or blowing snow. In areas with heavy snow, please install a canopy, a pedestal and/or some baffle boards.

Note:
It is advisable to make a piping loop near outdoor unit so as to reduce vibration transmitted from there.

Note:
When operating the air conditioner in low outside temperature, be sure to follow the instructions described below.

- Never install the outdoor unit in a place where its air inlet/outlet side may be exposed directly to wind.
- To prevent exposure to wind, install the outdoor unit with its air inlet side facing the wall.
- To prevent exposure to wind, it is recommended to install a baffle board on the air outlet side of the outdoor unit.

Avoid the following places for installation where air conditioner trouble is liable to occur.

- Where flammable gas could leak.
- Where there is much machine oil.
- Where oil is splashed or where the area is filled with oily smoke (such as cooking areas and factories, in which the properties of plastic could be changed and damaged).
- Salty places such as the seaside.
- Where sulfide gas is generated such as hot spring, sewage, waste water.
- Where there is high-frequency or wireless equipment.
- Where there is emission of high levels of VOCs, including phthalate compounds, formaldehyde, etc., which may cause chemical cracking.
- The appliance shall be stored so as to prevent mechanical damage from occurring.

1-3. Specifications

Model		Power supply *1			Wire specifications			Pipe size (thickness *4, *5)	Maximum amount of refrigerant charge
Indoor unit	Outdoor unit	Rated Voltage	Frequency	Breaker capacity	Power supply *2	Indoor/outdoor connecting wire *2	Demand control signal transmission cable *3	Gas / Liquid	
MSZ-AP60VG(K)D2	MUZ-AP60VG(D)2	230 V	50 Hz	16 A	3-core 2.0 mm²	4-core 1.0 mm²	0.5 - 1.5 mm²	ø12.7 / 6.35 mm (0.8 mm)	1360 g
MSZ-AP71VG(K)D2 MSZ-AP80VG(K)D2	MUZ-AP71VG(D)2 MUZ-AP80VG(D)2			20 A	3-core 2.5 mm²				1800 g

*1 Connect to the power switch which has a gap of 3 mm or more when open to interrupt the source power phase. (When the power switch is shut off, it must interrupt all phases.)
*2 Use wires in conformity with design 60245 IEC 57.
*3 Use wires in conformity with design AS/NZS 5000.2.
*4 Never use pipes with thickness less than specified. The pressure resistance will be insufficient.
*5 Use a copper pipe or a copper-alloy seamless pipe.
*6 Be careful not to crush or bend the pipe during pipe bending.
*7 Refrigerant pipe bending radius must be 100 mm or more.
*8 If pipe length exceeds 15 m, additional refrigerant (R32) charge is required. (No additional charge is required for pipe length less than 15 m.)
Additional refrigerant = A × (pipe length (m) – 15)
*9 Insulation material : Heat resisting foam plastic 0.045 specific gravity
*10 Be sure to use the insulation of specified thickness. Excessive thickness may cause incorrect installation of the indoor unit and insufficient thickness may cause dew drippage.

Pipe length and height difference	
Max. pipe length	30 m
Max. height difference	15 m
Max. number of bends *6, *7	10
Refrigerant adjustment A *8	20 g/m
Insulation thickness *9, *10	8 mm

1-4. Installation Diagram

Accessories

Check the following parts before installation.

<Indoor unit>

(1)	Installation plate	1
(2)	Installation plate fixing screw 4 × 25 mm	7
(3)	Wireless remote controller	1
(4)	Felt tape (For left or left-rear piping)	1
(5)	Battery (AAA) for (3)	2
(6)	Remote controller holder	1
(7)	Fixing screw for (5) 3.5 × 16 mm (Black)	2
(8)	Air cleaning filter	2

<Outdoor unit>

(9)	Drain socket	1

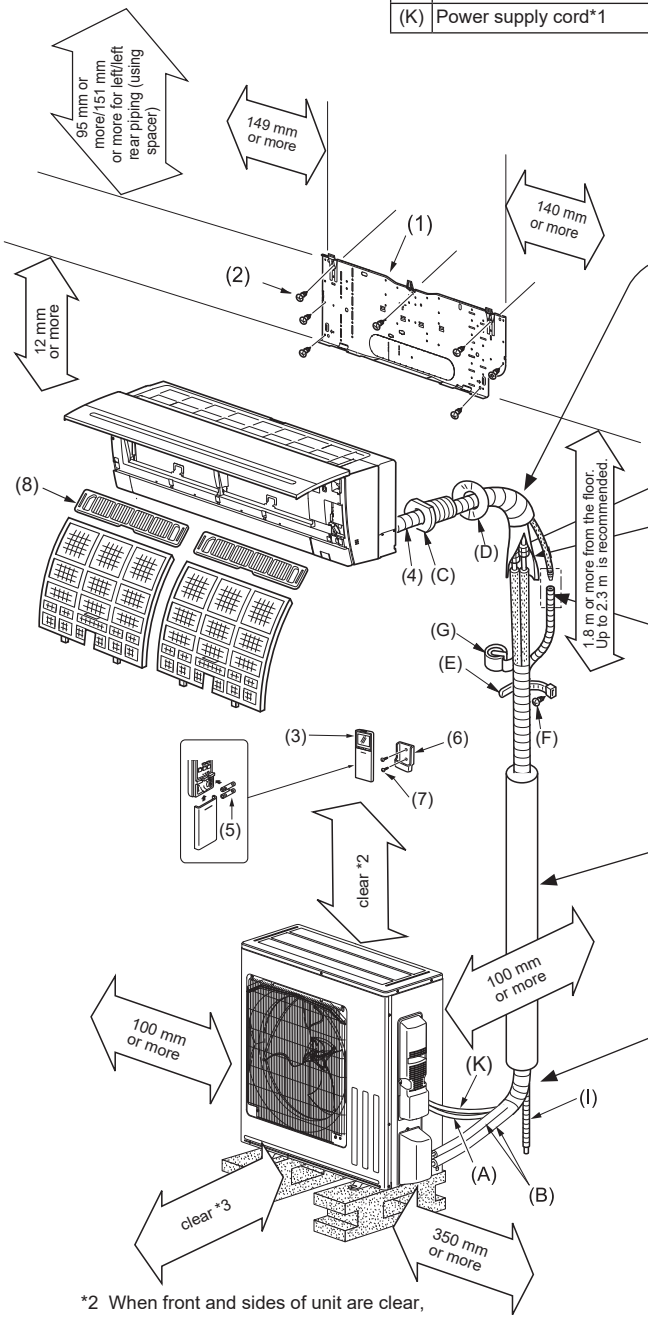
Parts to be provided at your site

(A)	Indoor/outdoor unit connecting wire*1	1
(B)	Extension pipe	1
(C)	Wall hole sleeve	1
(D)	Wall hole cover	1
(E)	Pipe fixing band	2 to 5
(F)	Fixing screw for (E) 4 × 20 mm	2 to 5
(G)	Piping tape	1
(H)	Putty	1
(I)	Drain hose (or soft PVC hose, 15 mm inner diameter or hard PVC pipe VP30)	1
(J)	Drain hose (or soft PVC hose, 15 mm inner diameter or hard PVC pipe VP16)	0 or 1
(K)	Power supply cord*1	1

Note:

*1 Place indoor/outdoor unit connecting wire (A) and power supply cord (K) at least 1 m away from the TV antenna wire.

This indoor unit is equipped with the built-in Wi-Fi interface.

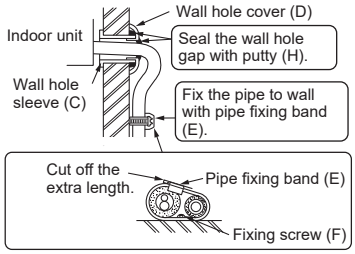


*2 When front and sides of unit are clear,
AP60 : 100 mm or more
AP71, 80 : 500 mm o more

*3 When any 2 sides of left, right and rear of unit are clear,
AP60 : 200 mm or more
AP71, 80 : 500 mm o more

Appearance of the outdoor unit may differ from some models.

Be sure to use wall hole sleeve (C) to prevent indoor/outdoor connecting wire (A) from contacting metal parts in the wall and to prevent damage by rodents in case the wall is hollow.



After the leak test, apply insulating material tightly so that there is no gap.

When the piping is to be attached to a wall containing metals (tin plated) or metal netting, use a chemically treated wooden piece 20 mm or thicker between the wall and the piping or wrap of insulation vinyl tape around the piping.
To use existing piping, perform cooling operation for 30 minutes and pump down before removing the old air conditioner. Remake flare according to the dimension for new refrigerant.

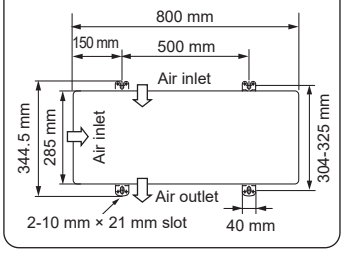
Cover the connection part with tape to prevent water from leaking.

⚠ Warning

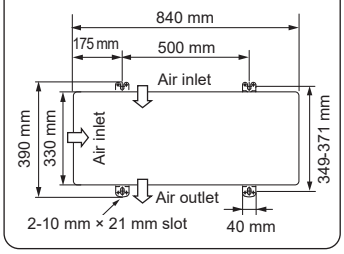
To avoid risk of fire, embed or protect the refrigerant piping.
External damage on the refrigerant piping can be cause of fire.

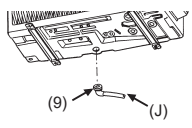
Do not block the inlet of the outdoor unit with the excess part of the pipes.

Outdoor unit installation (AP60)



Outdoor unit installation (AP71, 80)





Drain piping for outdoor unit

- Provide drain piping before indoor and outdoor piping connection.
- Connect drain hose (J) I.D.15 mm as shown in the illustration.
- Make sure to provide drain piping with a downhill grade for easy drain flow.

Note:

Install the unit horizontally.
Do not use drain socket (9) in cold regions. Drain may freeze and make the fan stop.
The outdoor unit produces condensate during the heating operation. Select the installation place to ensure to prevent the outdoor unit and/or the grounds from being wet by drain water or damaged by frozen drain water.

Important notes

- Units should be installed by licensed contractor according to local code requirements.
- To comply with the requirements of Australian standard AS/NZS 3000 electrical installations (wiring rules), the electrical wiring required between the indoor and outdoor units must be installed by a licenced electrical contractor.
- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

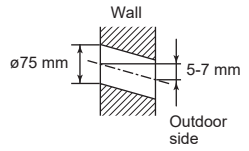
2. Indoor Unit Installation

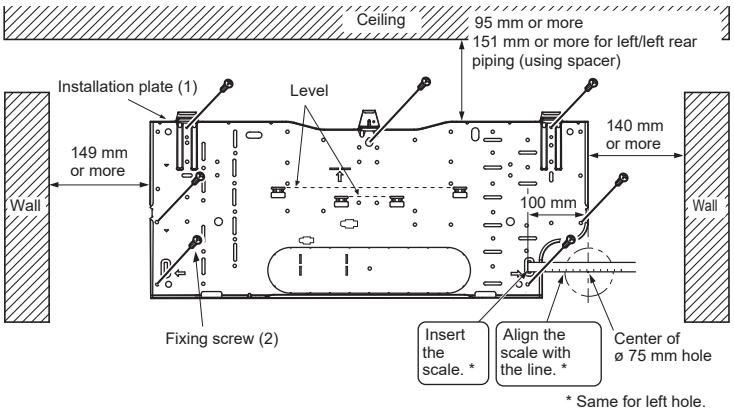
2-1. Fixing Of Installation Plate

- Find a structural material (such as a stud) in the wall and fix installation plate (1) horizontally by tightening the fixing screws (2) firmly.
- To prevent installation plate (1) from vibrating, be sure to install the fixing screws in the holes indicated in the illustration. For added support, fixing screws may also be installed in other holes.
- When the knockout is removed, apply vinyl tape to the knockout edges to prevent damaging the wires.
- When bolts recessed in the concrete wall are to be utilized, secure installation plate (1) using 11 × 20 · 11 × 26 oval hole (450 mm pitch).
- If the recessed bolt is too long, change it for a shorter one available in the market.

2-2. Wall Hole Drilling

1) Determine the wall hole position.
2) Drill a ø75 mm hole. The outdoor side should be 5 to 7 mm lower than the indoor side.
3) Insert wall hole sleeve (C).

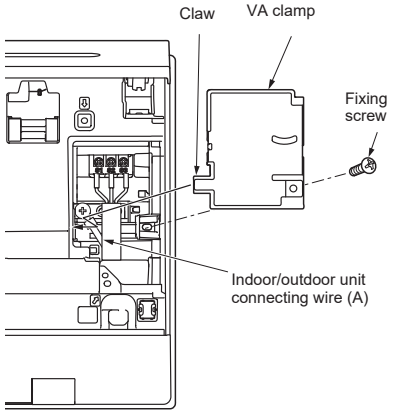


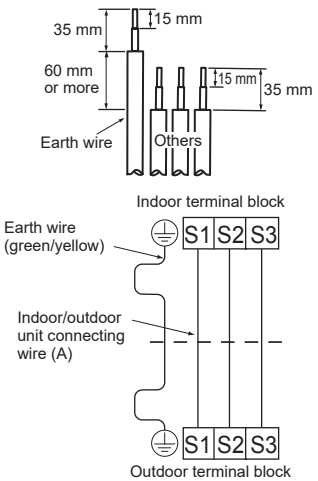


2-3. Connecting Wires for the Indoor Unit

You can connect indoor/outdoor lead wire without removing the front panel.

1) Open the front panel.
2) Remove VA clamp.
3) Pass indoor/outdoor unit connecting wire (A) from the back of the indoor unit and process the end of the wire.
4) Loosen the screw of the earth clamp, then insert the earth wire into it. Make sure that the earth wire does not come off the earth clamp.
5) Loosen terminal screw, and connect indoor/outdoor unit connecting wire (A) to the terminal block. Be careful not to make mis-wiring. Fix the wire to the terminal block securely so that no part of its core is appeared, and no external force is conveyed to the connecting section of the terminal block.
6) Firmly tighten the terminal screws to prevent them from loosening. After tightening, pull the wires lightly to confirm that they do not move.
7) Secure indoor/outdoor unit connecting wire (A) and the earth wire with the VA clamp. Never fail to hook the claw of the VA clamp. Attach the VA clamp securely.



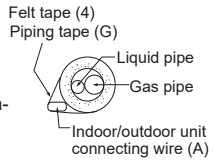


- For future servicing, give extra length to the connecting wires.
- Make earth wire longer than others as picture.
- Do not fold the excess wire, or cram it into small space. Take caution not to damage the wires.
- Be sure to attach each screw to its correspondent terminal when securing the cord and/or the wire to the terminal block.
  Note: Do not place the wires between the indoor unit and the installation plate (1). Damaged wire could cause heat generation or fire.

2-4. Pipe Forming And Drain Piping

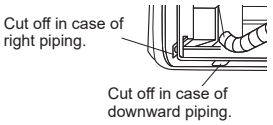
Pipe forming

- Place the drain hose below the refrigerant piping.
- Make sure that the drain hose is not heaved or snaked.
- Do not pull the hose when applying the tape.
- When the drain hose passes the room, be sure to wrap insulation material (obtainable at a store) around it.



Rear, right, or downward piping

1) Put the refrigerant piping and the drain hose together, then firmly apply piping tape (G) from the end.
2) Insert the piping and the drain hose into the wall hole sleeve (C), and hook the upper part of the indoor unit on the installation plate (1).
3) Check if the indoor unit is hooked securely on the installation plate (1) by moving the unit to left and right.
4) Thrust the lower part of the indoor unit into the installation plate (1).



Drain Piping

- Do not cut the drain hose of the unit. (Fig. 1)
- If the extension drain hose has to pass through a room, be sure to wrap it with commercially sold insulation.
- The drain hose should point downward for easy drain flow. (Fig. 2)
- If the drain hose provided with the indoor unit is too short, connect it with drain hose (I) that should be provided at your site. (Fig. 3)
- When connecting the drain hose to the hard vinyl chloride pipe, be sure to insert it securely into the pipe. (Fig. 4)
- Make sure that no stress is applied to the connecting portion of the drain hose after installing the indoor unit. Otherwise, breakage or water leakage may result.
- Be sure to use the drain hose attached to the indoor unit. Otherwise, water leakage or breakage due to chemical may result.
- Do not apply any agent on the drain port. Doing so may cause breakage.

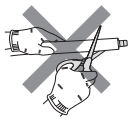


Fig. 1

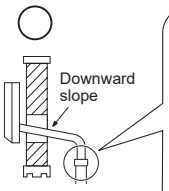


Fig. 2

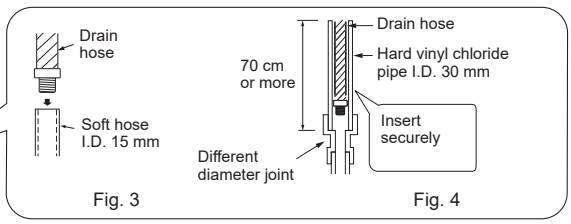
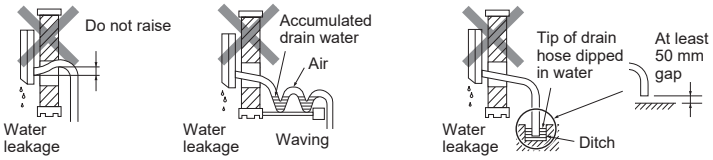


Fig. 3 Fig. 4

Do not make drain piping as shown below.



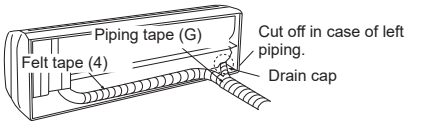
Do not put the drain pipe directly in a drainage ditch where Ammonia or Sulphuric gas may be generated. The evaporated corrosive gas may return to the indoor side through drain pipe and this may cause an unpleasant odor and corrosion on Heat exchanger may occur.

2. Indoor Unit Installation

Left or left-rear piping

Note:

Be sure to reattach the drain hose and the drain cap in case of left or left-rear piping.
Otherwise, it could cause drops of water to drip down from the drain hose.



1) Put the refrigerant piping and the drain hose together, then firmly apply felt tape (4) from the end.
   Felt tape (4) overlap width should be 1/3 the tape width.
   Use a bandage stopper at the end of felt tape (4).
2) Pull out the drain cap at the rear right of the indoor unit. (Fig. 1)
   • Hold the convex section at the end and pull the drain cap.
3) Pull out the drain hose at the rear left of the indoor unit. (Fig. 2)
   • Hold the claw marked by the arrows and pull out the drain hose forward.
4) Put the drain cap into the section to which the drain hose is to be attached at the rear of the indoor unit. (Fig. 3)
   • Insert not sharp-edged tools such as screwdrivers into the hole at the end of the cap and insert the cap fully into the drain pan.
5) Insert the drain hose fully into the drain pan at the rear right of the indoor unit. (Fig. 4)
   • Check if the hose is hooked securely to the projection of its inserting part at the drain pan.
6) Insert the drain hose into wall hole sleeve (C), and hook the upper part of indoor unit on installation plate (1). Then, move the indoor unit completely to the left in order to make placing the piping in the back space of the unit easier.
7) Cut out a piece of cardboard from the shipping box, roll it up, hook it onto the back rib, and use it as a spacer to lift the indoor unit. (Fig. 5)
8) Connect the refrigerant piping with the extension pipe (B).
9) Thrust the lower part of the indoor unit into the installation plate (1).

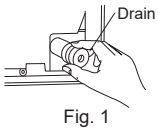


Fig. 1

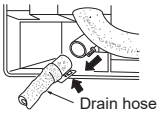


Fig. 2

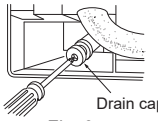
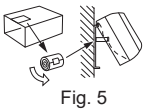


Fig. 3



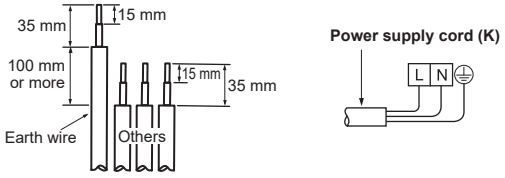
Fig. 4

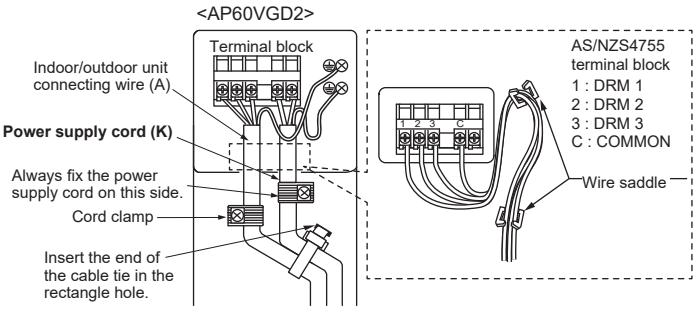

Fig. 5

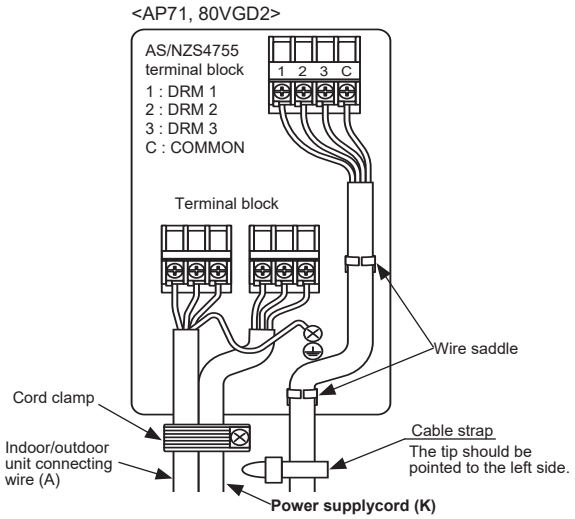
3. Outdoor Unit Installation

3-1. Connecting Wires for the Outdoor Unit

1) Open the service panel.
2) Loosen terminal screw, and connect indoor/outdoor unit connecting wire (A) from the indoor unit correctly on the terminal block. Be careful not to make mis-wiring. Fix the wire to the terminal block securely so that no part of its core is appeared, and no external force is conveyed to the connecting section of the terminal block.
3) Firmly tighten the terminal screws to prevent them from loosening. After tightening, pull the wires lightly to confirm that they do not move.
4) Connect power supply cord (K).
5) Fix indoor/outdoor unit connecting wire (A) and power supply cord (K) with the cord clamp.
6) Close the service panel securely.







This unit has demand response capability which is compliant with AS/NZS 4755.3.1. To activate this function, you need to make a contract with remote agents such as electric supply company, then this unit should be connected to Demand response enabling devise (DRED). For further information, consult your dealer. This unit supports 3 Demand Response Modes (DRMs): DRM1, DRM2 and DRM3.

⚠ Caution

- To prevent malfunction caused by noise, route the cord connecting this unit to DRED and the power supply cord as parallel as possible.
- Do not connect the demand control transmission cable to the terminal block for power supply.
- Do not pull, extremely bend or apply strong pressure on the wire to prevent failure.
- Do not screw DRED to outdoor unit.
- Do not put DRED in outdoor unit.
- Secure electrical wiring above clamp.
- Do not get DRED wire caught in the service panel.

- Make earth wire longer than others as picture.
- For future servicing, give extra length to the connecting wires.
- Be sure to attach each screw to its correspondent terminal when securing the cord and/or the wire to the terminal block.

3. Outdoor Unit Installation

3-2. Flaring Work

1) Cut the copper pipe correctly with pipe cutter. (Fig. 1, 2)
2) Completely remove all burrs from the cut cross section of pipe. (Fig. 3)
   • Put the end of the copper pipe to downward direction as you remove burrs in order to avoid to let burrs drop in the piping.
3) Remove flare nuts attached to indoor and outdoor units, then put them on pipe having completed burr removal. (Not possible to put them on after flaring work.)
4) Flaring work (Fig. 4, 5). Firmly hold copper pipe in the dimension shown in the table. Select A mm from the table according to the tool you use.
5) Check
   • Compare the flared work with Fig. 6.
   • If flare is noted to be defective, cut off the flared section and do flaring work again.



Fig. 1

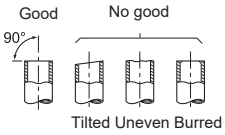


Fig. 2

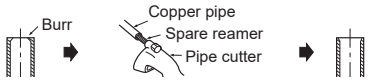


Fig. 3

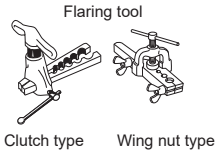


Fig. 4

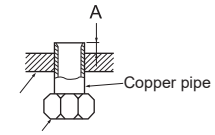


Fig. 5

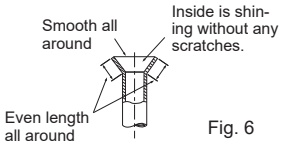


Fig. 6

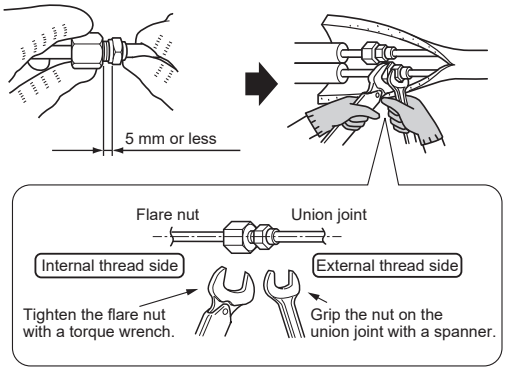
Pipe diameter (mm)	Nut (mm)	A (mm)			Tightening torque	
		Clutch type tool for R32, R410A	Clutch type tool for R22	Wing nut type tool for R22	N•m	kgf•cm
ø6.35 (1/4”)	17	0 to 0.5	1.0 to 1.5	1.5 to 2.0	13.7 to 17.7	140 to 180
ø9.52 (3/8”)	22				34.3 to 41.2	350 to 420
ø12.7 (1/2”)	26			2.0 to 2.5	49.0 to 56.4	500 to 575
ø15.88 (5/8”)	29				73.5 to 78.4	750 to 800

3-3. Pipe Connection

• Fasten flare nut with a torque wrench as specified in the table.
• When fastened too tight, flare nut may break after a long period and cause refrigerant leakage.
• Be sure to wrap insulation around the piping. Direct contact with the bare piping may result in burns or frostbite.
• Use flared nut installed to this indoor unit.

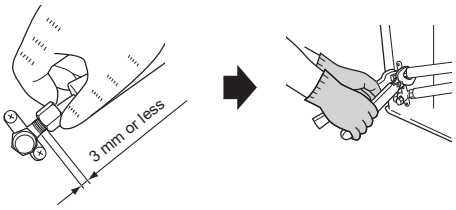
Indoor unit connection

Connect both liquid and gas pipings to indoor unit.
• Do not apply refrigeration oil on screw threads. Excessive tightening torque will result in damage on the screw.
• For connection, first align the center, then tighten the first 3 to 4 turns of flare nut by hand.
• Use tightening torque table above as a guideline for indoor unit side union joint section, and tighten using two wrenches. Excessive tightening damages the flare section.



Outdoor unit connection

Connect pipes to stop valve pipe joint of the outdoor unit in the same manner applied for indoor unit.
• For tightening, use a torque wrench or spanner and use the same tightening torque applied for indoor unit.



⚠ Warning

When installing the unit, securely connect the refrigerant pipes before starting the compressor.

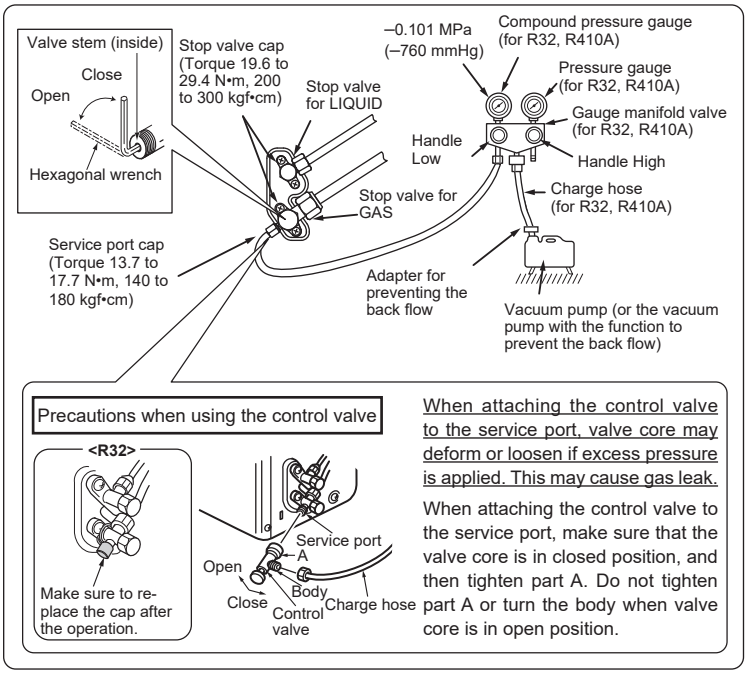
3-4. Insulation And Taping

1) Cover piping joints with pipe cover.
2) For outdoor unit side, surely insulate every piping including valves.
3) Using piping tape (G), apply taping starting from the entry of outdoor unit.
   • Stop the end of piping tape (G) with tape (with adhesive agent attached).
   • When piping have to be arranged through above ceiling, closet or where the temperature and humidity are high, wind additional commercially sold insulation to prevent condensation.

4. Purging Procedures, Leak Test, and Test Run

4-1. Purging Procedures and Leak Test

1) Remove service port cap of stop valve on the side of the outdoor unit gas pipe. (The stop valves are fully closed and covered in caps in initial state.)
2) Connect gauge manifold valve and vacuum pump to service port of stop valve on the gas pipe side of the outdoor unit.



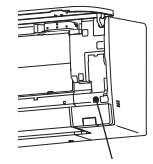
3) Run the vacuum pump. (Vacuumize until 500 microns is achieved.)
4) Check the vacuum with gauge manifold valve, then close gauge manifold valve, and stop the vacuum pump.
5) Leave as it is for one or two minutes. Make sure pointer gauge manifold valve remains in the same position. Confirm that pressure gauge shows –0.101 MPa [Gauge] (–760 mmHg).
6) Remove gauge manifold valve quickly from service port of stop valve.

⚠ Warning

To avoid risk of fire, make sure that there are no flammable hazards or ignition risks before opening the stop valves.

7) After refrigerant pipes are connected and evacuated, fully open the valve stem of all stop valves on both sides of gas pipe and liquid pipe by the hexagonal wrench. If the valve stem hits the stopper, do not turn it any further. Operating without fully opening lowers the performance and this causes trouble.
8) Refer to 1-3., and charge the prescribed amount of refrigerant if needed. Be sure to charge slowly with liquid refrigerant. Otherwise, composition of the refrigerant in the system may be changed and affect performance of the air conditioner.
9) Tighten cap of service port to obtain the initial status.
10) Leak test

4-2. Test Run



1) Insert power supply plug into the power outlet and/or turn on the breaker.
2) Pressing the E.O. SW will perform a test run for 30 minutes. (For MSZ, pressing the switch once will perform cooling operation and twice will perform heating operation.) If the upper lamp of the operation indicator blinks every 0.5 seconds, inspect the indoor/outdoor unit connecting wire (A) for mis-wiring. After the test run, emergency mode (set temperature 24ºC) will start.
3) To stop operation, press the E.O. SW several times until all LED lamps turn off. Refer to operating instructions for details.
4) Checking the remote (infrared) signal reception
   - Press the OFF/ON button on the remote controller (3) and check that an electronic sound is heard from the indoor unit. Press the OFF/ON button again to turn the air conditioner off.
   - Once the compressor stops, the restart preventive device operates so the compressor will not operate for 3 minutes to protect the air conditioner.

4-3. Auto Restart Function

This product is equipped with an auto restart function. When the power supply is stopped during operation, such as during blackouts, the function automatically starts operation in the previous setting once the power supply is resumed. (Refer to the operating instructions for details.)

Caution:
- After test run or remote signal reception check, turn off the unit with the E.O. SW or the remote controller before turning off the power supply. Not doing so will cause the unit to start operation automatically when power supply is resumed.

To the user
- After installing the unit, make sure to explain the user about auto restart function.
- If auto restart function is unnecessary, it can be deactivated. Consult the service representative to deactivate the function. Refer to the service manual for details.

4-4. Explanation to the User

- Using the OPERATING INSTRUCTIONS, explain to the user how to use the air conditioner (how to use the remote controller, how to remove the air filters, how to clean, precautions for operation, etc.).
- Recommend the user to read the OPERATING INSTRUCTIONS carefully.

5. Connection Setup Of the Wi-Fi Interface

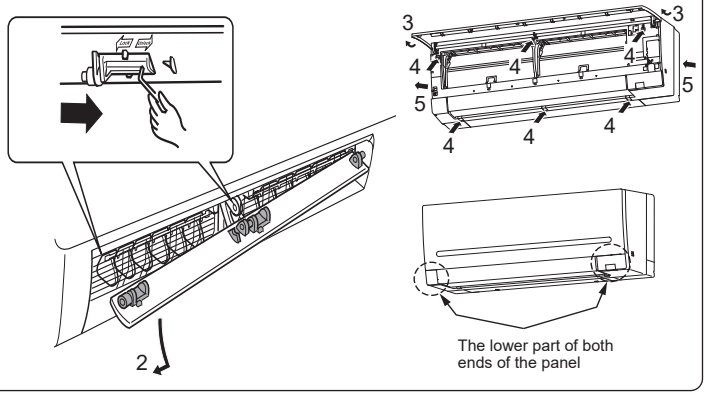
This product is equipped with the Wi-Fi Interface as standard.
Refer to the SETUP QUICK REFERENCE GUIDE and OPERATING INSTRUCTIONS provided with the indoor unit for connection with the router.

6. Relocation and Maintenance

6-1. Removing and Installing the Panel Assembly

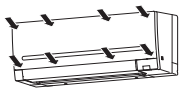
Removal procedure

1) Turn the horizontal vane downward.
2) Remove the horizontal vane.
3) Remove the front panel.
4) Remove the 6 screws which fix the panel assembly.
5) The panel assembly consists of 2 components.Remove them in the following order: panel and top panel. To remove the panel, pull out the right and left side. To remove the top panel, pull out the right and left side.
6) Hold the lower part of both ends of the panel and pull it slightly toward you, and then remove the panel.

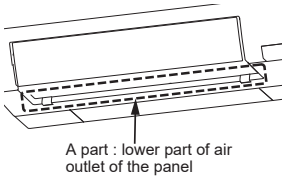


Installation procedure

1) Install the panel assembly following the removal procedure in reverse.
2) Be sure to press the positions as indicated by the arrows in order to attach the assembly completely to the unit.

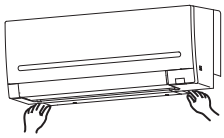


*Do not hold the A part when installing/removing or carrying the panel, or the panel might be damaged.



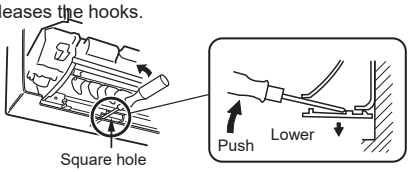
6-2. Removing the Indoor Unit

Remove the bottom of the indoor unit from the installation plate.
When releasing the corner part, release both left and right bottom corner part of indoor unit and pull it downward and forward as shown in the figure on the right.



If the above method cannot be used

Remove the panel. Then, insert hexagonal wrenches into the square holes on the left and right sides of the unit and push them up as shown in the following figure. The bottom of the indoor unit lowers and releases the hooks.



6-3. Pumping Down

When relocating or disposing of the air conditioner, pump down the system following the procedure below so that no refrigerant is released into the atmosphere.

1) Connect the gauge manifold valve to the service port of the stop valve on the gas pipe side of the outdoor unit.
2) Fully close the stop valve on the liquid pipe side of the outdoor unit.
3) Close the stop valve on the gas pipe side of the outdoor unit almost completely so that it can be easily closed fully when the pressure gauge shows 0 MPa [Gauge] (0 kgf/cm²).
4) Start the emergency cooling operation.
   To start the emergency operation in cool mode, disconnect the power supply plug and/or turn off the breaker. After 15 seconds, connect the power supply plug and/or turn on the breaker, and then press the E.O. SW once. (The emergency cooling operation can be performed continuously for up to 30 minutes.)
5) Fully close the stop valve on the gas pipe side of the outdoor unit when the pressure gauge shows 0.05 to 0 MPa [Gauge] (approx. 0.5 to 0 kgf/cm²).
6) Stop the emergency cooling operation.
   Press the E.O. SW several times until all LED lamps turn off. Refer to operating instructions for details.

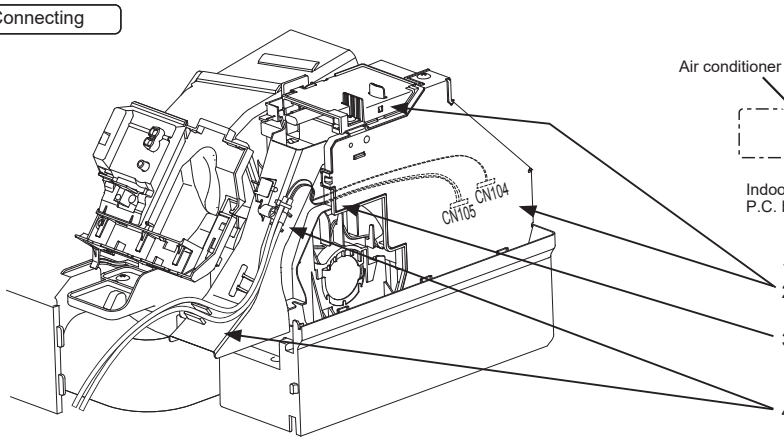
⚠ Warning

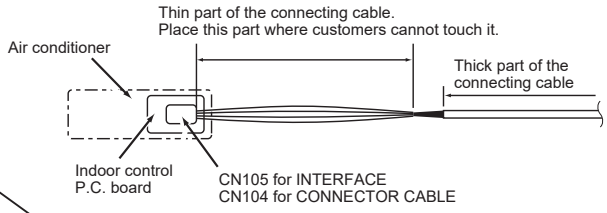
When the refrigeration circuit has a leak, do not execute pump down with the compressor.
When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes. The compressor may burst if air etc. get into it.

7. Connecting the Interface/Connector Cable To The Air Conditioner

- Connect the INTERFACE/CONNECTOR CABLE to the indoor control P.C. board of the air conditioner with the connecting cable.
- Cutting or extending the connecting cable of the INTERFACE/CONNECTOR CABLE results in defects in connecting.
  Do not bundle the connecting cable together with power supply cord, indoor/outdoor connecting wire, and/or earth wire. Keep as much distance as possible between the connecting cable and those wires.
- The thin part of the connecting cable should be stored and placed where customers cannot touch it.

Connecting

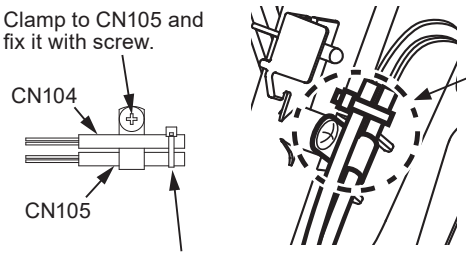




1) Remove the panel and the lower right corner box.
2) Open the cover of the indoor control P.C. board. Join the connecting cable to CN105 or CN104 on the indoor control P.C. board.
3) Hook the connecting cable as shown in the figure. Attach the cable clamp provided with interface to the thick part of the connecting cable with a screw 4×16 as shown in the figure.
4) Install the indoor control P.C. board holder, the lower right corner box, and the panel to the original.
5) Close the cover of the indoor control P.C. board.
6) Be careful not to catch the thin part of the connecting cable in the cover. Reinstall the panel and the lower right corner part.

In case of simultaneous connection of CN104 and CN105

Clamp to CN105 and fix it with screw.



Bundle CN105 and CN104 cables with Cable tie.

⚠ Warning

Fix the connecting cable at the prescribed position securely. Incorrect installation may cause electric shock, fire, and/or malfunction.

This product is designed and intended for use in the residential, commercial and light-industrial environment.

MITSUBISHI ELECTRIC CORPORATION

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