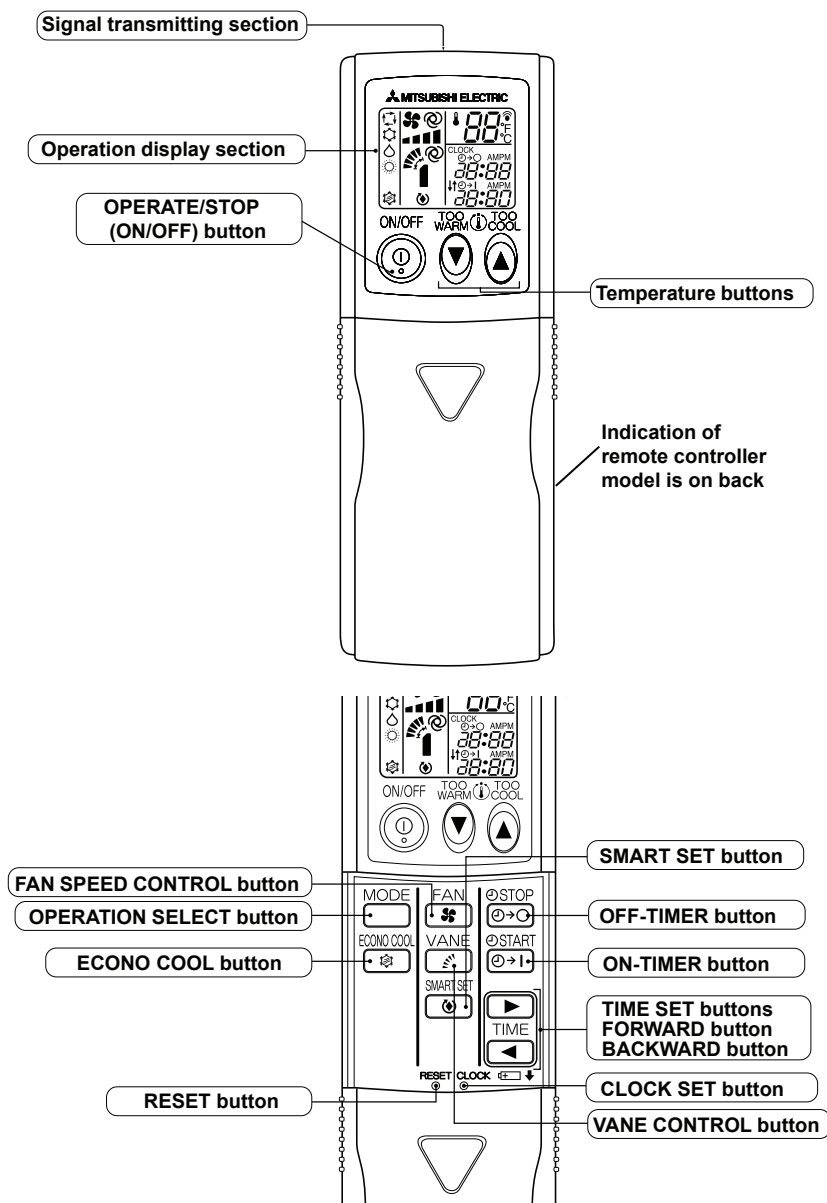


MFZ-KA09NA MFZ-KA12NA MFZ-KA18NA

WIRELESS REMOTE CONTROLLER



Once the operation mode is set, the same operation mode can be repeated by simply turning OPERATE/STOP (ON/OFF) button ON.

Indoor unit receives the signal with a beep tone.

When the system turns OFF, 3-minute time delay will operate to protect system from overload and compressor will not restart for 3 minutes.

8-1. COOL (❄) OPERATION

- (1) Press OPERATE/STOP (ON/OFF) button.
OPERATION INDICATOR lamp of the indoor unit turns ON with a beep tone.
- (2) Select COOL mode with OPERATION SELECT button.
- (3) Press TEMPERATURE buttons (TOO WARM or TOO COOL button) to select the desired temperature.
The setting range is 61 ~ 88°F (16 ~ 31°C).

1. Coil frost prevention

The compressor operational frequency is controlled by the temperature of the indoor heat exchanger to prevent the coil from frosting.

When the temperature of indoor heat exchanger becomes too low, the coil frost prevention mode works.

The indoor fan operates at the set speed and the compressor stops. This mode continues until the temperature of indoor heat exchanger rises.

2. Low outside temperature operation

When the outside temperature is low, low outside temperature operation starts, and the outdoor fan slows or stops.

8-2. DRY (☀) OPERATION

- (1) Press OPERATE/STOP (ON/OFF) button.
OPERATION INDICATOR lamp of the indoor unit turns ON with a beep tone.
- (2) Select DRY mode with OPERATION SELECT button.
- (3) The set temperature is determined from the initial room temperature.

1. Coil frost prevention

Coil frost prevention is as same as COOL mode. (8-1.1.)

The indoor fan maintains the actual speed of the moment.

2. Low outside temperature operation

Low outside temperature operation is as same as COOL mode. (8-1.2.)

NOTE: Even when the damper is closed while cooling or drying operation is performed, the lower fan may rotate intermittently.

8-3. HEAT (🔥) OPERATION

- (1) Press OPERATE/STOP (ON/OFF) button.
OPERATION INDICATOR lamp of the indoor unit turns ON with a beep tone.
- (2) Select HEAT mode with OPERATION SELECT button.
- (3) Press TEMPERATURE buttons (TOO WARM or TOO COOL button) to select the desired temperature.
The setting range is 61 ~ 88°F (16 ~ 31°C).

1. Cold air prevention control

When the compressor is not operating or is starting, and the temperature of indoor heat exchanger and/or the room temperature is low or when defrosting is being done, the indoor fan will stop or rotate in Very Low speed.

2. High pressure protection

The compressor operational frequency is controlled by the temperature of the indoor heat exchanger to prevent the condensing pressure from increasing excessively.

When the temperature of indoor heat exchanger becomes too high, the high pressure protection works.

The indoor fan operates following the cold air prevention control. This mode continues until the temperature of indoor heat exchanger falls.

3. Defrosting

Defrosting starts when the temperature of outdoor heat exchanger becomes too low.

The compressor stops once, the indoor/outdoor fans stop, the 4-way valve reverses and the compressor re-starts.

This mode continues until the temperature of outdoor heat exchanger rises or the fixed time passes.

8-4. AUTO CHANGE OVER ... AUTO MODE OPERATION

Once desired temperature is set, unit operation is switched automatically between COOL and HEAT operation.

Mode selection

(1) Initial mode

When unit starts the operation with AUTO operation from OFF:

- If the room temperature is higher than the set temperature, operation starts in COOL mode.
- If the room temperature is equal to or lower than the set temperature, operation starts in HEAT mode.

(2) Mode change

COOL mode changes to HEAT mode when about 15 minutes have passed with the room temperature 2°F (1°C) below the set temperature.

HEAT mode changes to COOL mode when about 15 minutes have passed with the room temperature 2°F (1°C) above the set temperature.

NOTE1: Mode selection is performed when multi standby (refer to **NOTE2**) is released and the unit starts operation with ON-timer.

NOTE2: If two or more indoor units are operating in multi system, there might be a case that the indoor unit, which is operating in AUTO (□), cannot change over to the other operating mode (COOL ↔ HEAT) and becomes a state of standby.

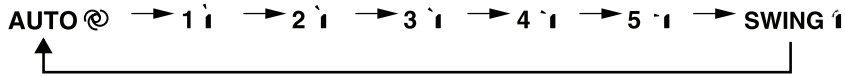
8-5. AUTO VANE OPERATION

Horizontal vane

(1) Vane motor drive

These models are equipped with a stepping motor for the horizontal vane. The rotating direction, speed, and angle of the motor are controlled by pulse signals (approx. 12 V) transmitted from indoor microprocessor.

(2) The horizontal vane angle and mode change as follows by pressing VANE CONTROL button.



(3) Positioning

The vane presses the vane stopper once to confirm the standard position and then moves to the set angle.

Confirming of standard position is performed in case of follows.

- (a) When the power supply turns ON.
- (b) When the operation starts or finishes (including timer operation).
- (c) When the test run starts.
- (d) When multi-standby starts or finishes.
- (e) When the swing operation finishes.

(4) VANE AUTO (@) mode

The microprocessor automatically determines the vane angle and operation to make the optimum room temperature distribution.

COOL and DRY operation

Vane angle is fixed to Angle 1.

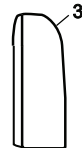


HEAT operation

When the upper air outlet is selected with an air outlet selection switch, vane angle is fixed to Angle 5.



When the upper and lower air outlets are selected with an air outlet selection switch, vane angle is fixed to Angle 3.



(5) STOP (operation OFF) and ON-TIMER standby

When the following cases occur, the horizontal vane returns to the closed position.

- (a) When OPERATE/STOP (ON/OFF) button is pressed (POWER OFF).
- (b) When the operation is stopped by the emergency operation.
- (c) When ON-TIMER is ON standby.

(6) Dew prevention

During COOL or DRY operation with the vane angle at Angle 3 ~ 5 when the compressor cumulative operation time exceeds 30 minutes to 1 hour, the vane angle automatically changes to Angle 1 for dew prevention.

(7) SWING MODE (ㄨ)

By selecting SWING mode with VANE CONTROL button, the horizontal vane swings vertically. The remote controller displays " ㄨ ". SWING mode is cancelled when VANE CONTROL button is pressed once again.

(8) Cold air prevention in HEAT operation

The vane angle changes to Horizontal position automatically to prevent cold air blowing on users.

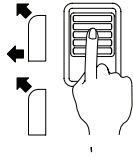
(9) Damper operation

NOTE 1: Be sure to turn OFF the air conditioner before changing the switch setting.

With this function, air comes out simultaneously from the upper and lower air outlets so that the room can be cooled or heated effectively. This function is set using the switch behind the front grille of the indoor unit. (This function is available in cooling and heating operation.)

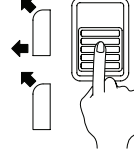
1. How to set to blow out air from the upper and lower air outlets:

Set the air outlet selection switch to



2. How to set to blow out air from the upper air outlet only:

Set the air outlet selection switch to



Air blows out automatically from the upper and lower air outlets as shown in the table below.

NOTE 2: Set the air outlet selection switch to the end correctly. Otherwise, air outlet cannot be selected as intended.

Description of operation

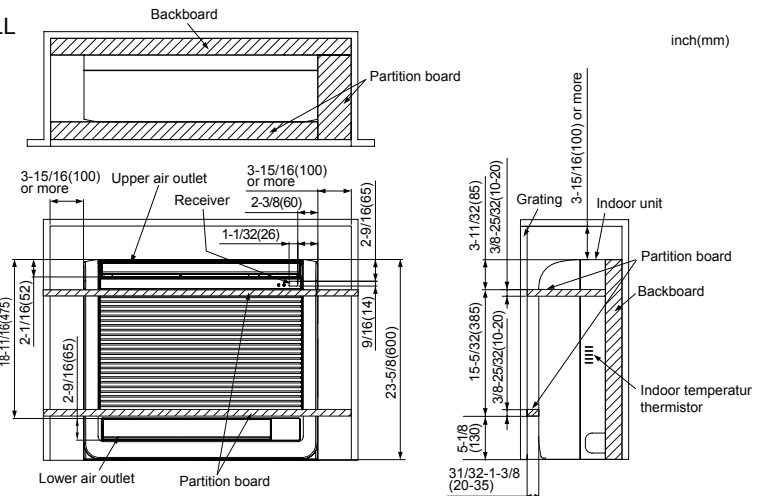
The direction (opening and closing of the damper) and the volume of the airflow from the lower air outlet are controlled automatically.

Operation	COOL		DRY	HEAT	
Air flow					
Conditions	Room temperature and set temperature are different.	Room temperature is close to set temperature, or the air conditioner has operated for 1 hour.	—	Air flow temperature is high.	Air flow temperature is low. (During defrosting operation, start of operation, etc.)

- Be sure to keep the area around the damper of the lower air outlet free of any objects. If any objects block the normal operation of the damper, the left operation indicator lamp may blink.

(10) EMBEDDING THE INDOOR UNIT IN A WALL

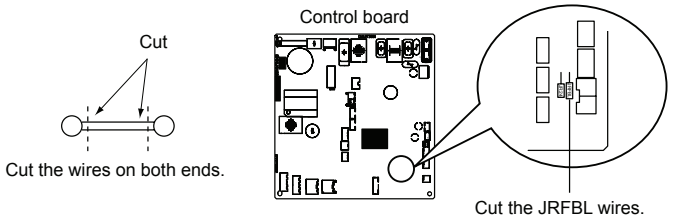
- When installing a grating, use a grating with narrow upper and lower horizontal bars so that the airflow from the upper and lower air outlets does not contact the bars. If the horizontal bars will block the lower air outlet, use a stand, etc., to adjust the height of the indoor unit. If the upper or lower air outlet is blocked, the air conditioner will not be able to cool or warm the room well.
- Do not block the receiver with the grating. Otherwise, the grating will interfere with the remote controller signal and significantly reduce the distance and area (angle) from which the signals can be received.



- Use a grating with vertical bars, etc., that has at least 75 % open area. If the grating has horizontal bars or if the open area is less than 75%, performance could be reduced.
- When the indoor unit is embedded in a wall (built-in), the time it takes for the room temperature to reach the set temperature will increase

EMBEDDED INDOOR UNIT SETTING (MUST BE PERFORMED)

- When embedding the indoor unit in a wall, restrict the movement of the horizontal vane for the upper air outlet so that it only operates horizontally.
- If this setting is not performed, heat will build up in the wall and the room will not be cooled or warmed properly.
- Cut the wires on the left and right sides of JRFBL using a pair of nippers, etc., as shown here.



(11) ECONO COOL () operation (ECONOMical operation)

When ECONO COOL button is pressed in COOL mode, set temperature is automatically set 4°F (2°C) higher. Also the horizontal vane swings in various cycle according to the temperature of indoor heat exchanger (indoor coil thermostat).

SWING operation makes you feel cooler than set temperature. So, even though the set temperature is higher, the air conditioner can keep comfort. As a result, energy can be saved.

ECONO COOL operation is cancelled when ECONO COOL button is pressed once again or VANE CONTROL button is pressed or change to other operation mode.

8-6. TIMER OPERATION

1. How to set the time

(1) Check that the current time is set correctly.

NOTE: Timer operation will not work without setting the current time. Initially "0:00 AM" blinks at the current time display of TIME MONITOR, so set the current time correctly with CLOCK SET button.

How to set the current time

(a) Press the CLOCK set button.

(b) Press the TIME SET buttons () and () to set the current time.

- Each time FORWARD button () is pressed, the set time increases by 1 minute, and each time BACKWARD button () is pressed, the set time decreases by 1 minute.
- Pressing those buttons longer, the set time increases/decreases by 10 minutes.

(c) Press the CLOCK set button.

(2) Press OPERATE/STOP (ON/OFF) button to start the air conditioner.

(3) Set the time of timer.

ON timer setting

(a) Press ON TIMER button () during operation.

(b) Set the time of the timer using TIME SET buttons () and (). *

OFF timer setting

(a) Press OFF TIMER button () during operation. ()

(b) Set the time of the timer using TIME SET buttons () and (). *

* Each time FORWARD button () is pressed, the set time increases by 10 minutes: each time BACKWARD button () is pressed, the set time decreases by 10 minutes.

2. To release the timer

To release ON timer, press ON TIMER button ().

To release OFF timer, press OFF TIMER button ().

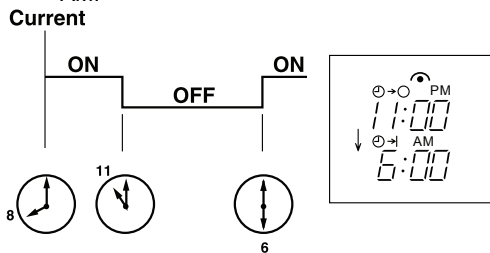
TIMER is cancelled and the display of set time disappears.

PROGRAM TIMER

- OFF timer and ON timer can be used in combination. The timer of the set time that is reached first will operate first.
- "↓" and "↑" display shows the order of OFF timer and ON timer operation.

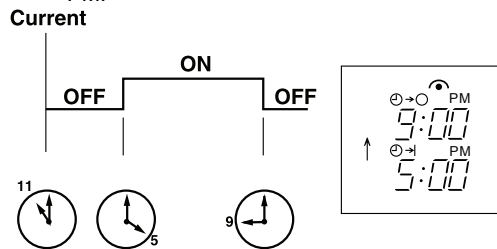
(Example 1) The current time is 8:00 PM.

The unit turns OFF at 11:00 PM, and ON at 6:00 AM.



(Example 2) The current time is 11:00 AM.

The unit turns ON at 5:00 PM, and OFF at 9:00 PM.



NOTE: If the main power is turned OFF or a power failure occurs while ON/OFF timer is active, the timer setting is cancelled. As these models are equipped with an auto restart function, the air conditioner starts operating with timer cancelled when power is restored.

8-7. SMART SET (⊕) OPERATION

1. How to SET SMART SET operation

- (1) Press OPERATE/STOP (ON/OFF) button.
- (2) Select COOL, HEAT or ECONO COOL mode.
- (3) Press SMART SET button.
- (4) Set the temperature, fan speed, and airflow direction for SMART SET operation.

- NOTE:**
- SMART SET operation cannot be selected during DRY or AUTO mode operation.
 - The setting range of HEAT mode in SMART SET operation is 50°F (10°C) and 61 - 88°F (16 - 31°C).
 - 2 settings can be saved. (One for COOL/ECONO COOL, one for HEAT)

2. How to cancel operation

- Press SMART SET button again.
- SMART SET operation can also be cancelled by pressing OPERATION SELECT button to change the operation mode. The same setting is selected from the next time by simply pressing SMART SET button.

8-8. EMERGENCY/TEST OPERATION

In case of test run operation or emergency operation, use EMERGENCY OPERATION switch on the right side of the indoor unit. Emergency operation is available when the remote controller is missing, has failed or the batteries of the remote controller run down. The unit will start and OPERATION INDICATOR lamp will light.

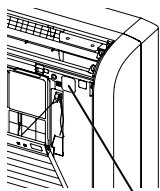
The first 30 minutes of operation is the test run operation. This operation is for servicing. The indoor fan runs at High speed and the system is in continuous operation (The thermostat does not work).

After 30 minutes of test run operation, the system shifts to EMERGENCY COOL/HEAT MODE with a set temperature of 75°F (24°C). The fan speed shifts to Med.

In the test run or emergency operation, the horizontal vane operates in VANE AUTO (⊕) mode.

Emergency operation continues until EMERGENCY OPERATION switch is pressed once or twice or the unit receives any signal from the remote controller. In case of latter, normal operation will start.

NOTE: Do not press EMERGENCY OPERATION switch during normal operation.



EMERGENCY OPERATION switch



Operation mode	COOL	HEAT
Set temperature	24°C	24°C
Fan speed	Med.	Med.
Horizontal vane	Auto	Auto

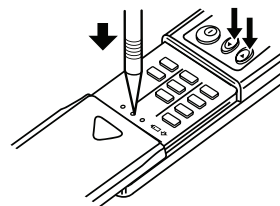
- The following indication does not depend on the shape of lamp.

OPERATION INDICATOR lamp

- | | | | | | |
|-------------------------|--------------------------|--------------------------|--|--------------------------|-------------|
| Press once <Cool> | | <input type="checkbox"/> | | | Lighted |
| Press again <Heat> | <input type="checkbox"/> | | | <input type="checkbox"/> | Not lighted |
| Press once again <Stop> | <input type="checkbox"/> | <input type="checkbox"/> | | | |

8-9. Changing temperature indication (°F/°C)

- The preset unit is °F.
- °F → °C: Press RESET button while the temperature buttons are pressed.
- °C → °F: Press RESET button or remove the batteries .



Press RESET button gently using a thin instrument.