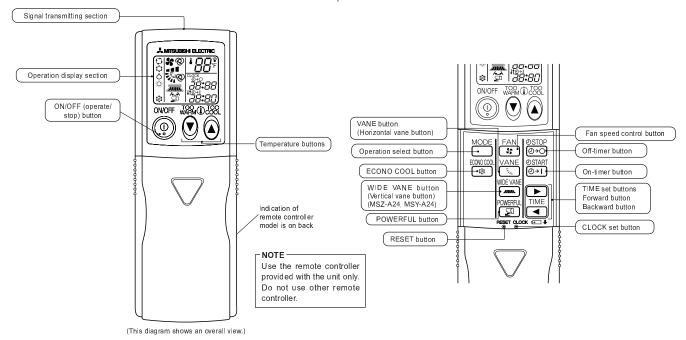
MICROPROCESSOR CONTROL

MSZ-A09NA MSZ-A12NA MSZ-A15NA MSZ-A17NA MSZ-A24NA MSY-A15NA MSY-A17NA MSY-A24NA MSZ-GA24NA MSY-GA24NA

WIRELESS REMOTE CONTROLLER

*These pictures show MSZ-A24.



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.

INDOOR UNIT DISPLAY SECTION

Operation Indicator lamp

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

•The following indication applies regardless of shape of the indication.

Indication	Operation state	Difference between target temperature and room temperature
∳ - ∲ -	This shows that the air conditioner is operating to reach the target temperature. Please wait until the target temperature is obtained.	
₩ 0	This shows that the room temperature is approaching the target temperature.	Approx. 4°F or less
-∳☆-	This shows a state of standby for operation. (For multi system air conditioner)	_

Not lighted

11-1. COOL (tag) OPERATION

(1) Press OPERATE/STOP (ON/OFF) button.

OPERATION INDICATOR lamp of the indoor unit turns on with a beep tone. Select COOL mode with OPERATION SELECT button. Press TEMPERATURE buttons (TOO WARM or TOO COOL button) to select the desired temperature. The setting range is $61 \sim 88^{\circ}F$.

1. Coil frost prevention

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 lowers during cool mode operation, low outside temperature operation starts, and the outdoor fan slows or stops.

11-2. 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. (11-1.1.)

2. Low outside temperature operation

Low outside temperature operation is as same as COOL mode. (11-1.2.)

11-3. HEAT () OPERATION (MSZ)

(1) Press OPERATE/STOP (ON/OFF) button.

OPERATION INDICATOR lamp of the indoor unit turns on with a beep tone.

Select HEAT mode with OPERATION SELECT button.

Press TEMPERATURE buttons (TOO WARM or TOO COOL button) to select the desired temperature. The setting range is $61 \sim 88^{\circ}F$.

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

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

3. Defrosting

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

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

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

11-4. FAN(%)OPERATION (MSY)

(1) Press OPERATE/STOP (ON/OFF) button.

OPERATION INDICATOR lamp of the indoor unit turns ON with a beep tone.

- (2) Select FAN mode with OPERATION SELECT button.
- (3) Select the desired fan speed. When AUTO, it becomes Low.

Only indoor fan operates. Outdoor unit does not operate.

11-5. "I FEEL CONTROL" (□) OPERATION (MSY)

- (1) Press OPERATE/STOP (ON/OFF) button on the remote controller. OPERATION INDICATOR lamp of the indoor unit turns on with a beep tone.
- (2) Select "I FEEL CONTROL" mode with OPERATION SELECT button.
- (3) The operation mode is determined by the room temperature at start-up of the operation.
 - Once the mode is fixed, the mode does not change by room temperature afterwards.
 - Under the ON-TIMER (⊕→|) operation, mode is determined according to the room temperature at the set time the operation starts.

(4) The initial set temperature is decided by the initial room temperature.

Initial room temperature	Model	Initial set temperature	
79°F or more	COOL mode of "I FEEL CONTROL"	75°F	
77 to 79°F	COOL HOUR OF TREEL CONTROL	Initial room temperature minus 4°F	
Less than 77°F	DRY mode of "I FEEL CONTROL"	Initial room temperature minus 4°F	

(5) TEMPERATURE buttons

In "I FEEL CONTROL" (;) mode, set temperature is decided by the microprocessor based on the room temperature. In addition, set temperature can be controlled by TOO WARM or TOO COOL buttons when you feel too cool or too warm. Each time the TOO WARM or TOO COOL button is pressed, the indoor unit receives the signal and emits a beep tone.

Fuzzy control

When the TOO COOL or TOO WARM button is pressed, the microprocessor changes the set temperature, considering the room temperature, the frequency of pressing TOO COOL or TOO WARM button and the user's preference to heat or cool. So this is called "Fuzzy control", and works only in "I FEEL CONTROL" mode.

In DRY mode of "I FEEL CONTROL", the set temperature does not change.



···To raise the set temperature 2~4°F



···To lower the set temperature 2~4°F

11-6. AUTO CHANGE OVER ··· AUTO MODE OPERATION (MSZ)

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 2~4°F below the set temperature.

HEAT mode changes to COOL mode when about 15 minutes have passed with the room temperature 2~4°F above the set temperature.

NOTE:

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. Refer to 8-1. "INFORMATION FOR MULTI SYSTEM AIR CONDITIONER".

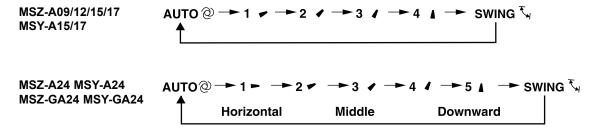
11-7. AUTO VANE OPERATION

1. 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

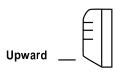
The vane is once pressed to the vane stopper to confirm the standard position and then set to the desired angle. Confirming of standard position is performed in the following cases.

- (a) When the operation starts or finishes (including timer operation).
- (b) When the test run starts.
- (c) When multi-standby starts or finishes.
- (4) VANE AUTO (@) mode

In VANE AUTO mode, the microprocessor automatically determines the vane angle and operation to make the optimum room-temperature distribution.

(1) COOL and DRY operation

Vane angle is fixed to Horizontal position or Angle 1.



(2) HEAT operation (MSZ)

Vane angle is fixed to Angle 4.



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

In the following cases, 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 2 \sim 4 (A09 \sim 17) / Angle 3 \sim 5 (A24) / Angle 4 \sim 5 (GA24) when the compressor cumulative operation time exceeds 1 hour, the vane angle automatically changes to Angle 1 for dew prevention.

(7) SWING MODE (₹)

By selecting SWING mode with VANE CONTROL button, the horizontal vane swings vertically. The remote controller displays " $\frac{\zeta_{i}}{2}$ ".

(8) Cold air prevention in HEAT operation (MSZ)

The horizontal vane position is set to Upward.

NOTE: When 2 or more indoor units are operated with multi outdoor unit, even if any indoor unit turns thermostat OFF, this control does not work in the indoor unit.

(9) To change the airflow direction not to blow directly onto your body. (MSZ-A09/12/15/17, MSY-A15/17)

To change the airflow direction	When to use this function?	COOL/DRY	HEAT (For MSZ)
Pressing and holding VANE CONTROL button for 2 seconds or more, the horizontal vane reverses and moves horizontal position. Horizontal position	Use this function if you do not want the air from the indoor unit to blow directly onto your body. • Depending on the shape of the room, the air may blow directly onto your body. • Press VANE CONTROL button again to return the vane to the previously-set position.	The air conditioner starts the cooling or drying operation approx. 3 minutes after the vane has moved to the horizontal position. • When VANE CONTROL button is pressed again, the vane returns to the previously-set position and the air conditioner starts the cool or dry operation in approx. 3 minutes.	The air conditioner starts heating operation approx. 3 minutes after the vane has moved to the horizontal position. • Sometimes the area around your feet may not get warm. To warm the area around the feet, set the horizontal vane to @(AUTO) or the downward-blowing position. • When VANE CONTROL button is pressed again, the vane returns to the previously-set position and the air conditioner starts the heat operation in approx. 3 minutes.

NOTE:

- If you make the airflow not to blow directly onto your body by pressing VANE CONTROL button, the compressor stops for 3 minutes even during the operation of the air conditioner.
- The air conditioner operates with Very Low speed until the compressor turns on again.
 - (10) ECONO COOL ((10)) operation (ECONOmical operation)

When ECONO COOL button is pressed in COOL mode, set temperature is automatically set 3.6°F higher than that in COOL mode.

Also the horizontal vane swings in various cycle.

SWING operation makes you feel cooler than set temperature. So, even though the set temperature is higher than that in COOL mode, 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.

(11) POWERFUL (💂) operation

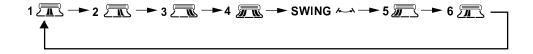
The air conditioner automatically adjusts the fan speed and the set temperature, and operates the POWERFUL mode. The POWERFUL mode is automatically released 15 minutes after operation starts, and the operation mode returns to the mode prior to POWERFUL operation.

2. Vertical vane (MSZ-A24, MSY-A24, MSZ-GA24, MSY-GA24)

(1) Vane motor drive

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

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



(3) Positioning

The vane is once pressed to the vane stopper to confirm the standard position and then set to the desired angle. Confirming of standard position is performed in the following cases.

- (a) When OPERATE/STOP (ON/OFF) button is pressed (POWER ON/OFF).
- (b) When SWING is started or finished.
- (c) When the power supply turns ON.
- (4) SWING MODE (←)

By selecting SWING mode with WIDE VANE button, the vertical vane swings horizontally.

The remote controller displays " ~ ".

(5) WIDE MODE (📠)

NOTE: The position of vane angle 3, angle 4 and angle 5 are different in COOL operation and HEAT operation.

* Indoor fan speed becomes faster than setting fan speed on the remote controller even when or is selected.

11-8. TIMER OPERATION

1. How to set the time

- (1) Press OPERATE/STOP (ON/OFF) button to start the air conditioner.
- (2) Check that the current time is set correctly.

NOTE: Timer operation will not work without setting the current time. Initially "0:00" 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

- (1) Press the CLOCK set button.
- (2) Press the TIME SET buttons (> and <) to set the current time.
 - Each time FORWARD button () is press, the set time increases by 1 minute, and each time BACKWARD button () is press, the set time decreases by 1 minute.
 - Pressing those buttons longer increases / decreases the set time by 10 minutes.
 Press the CLOCK set button.

ON timer setting

- (1) Press ON-TIMER button(ostari) during operation.
- (2) Set the time of the timer using TIME SET buttons (> and) . *

OFF timer setting

- (1) Press OFF-TIMER button (o-o)) during operation.
- (2) 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. Cancel

PROGRAM TIMER

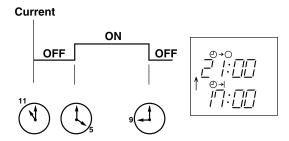
- OFF timer and ON timer can be used in combination. The timer of the set time that is reached first will operate first.
- " + " and " + " display shows the order of OFF timer and ON timer operation.

(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 AUTO START/STOP 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.

11-9. EMERGENCY/TEST OPERATION

In case of test run operation or emergency operation, use EMERGENCY OPERATION switch on the front 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 speed runs at High speed and the system is in continuous operation (with thermostat ON).

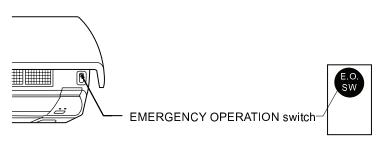
After 30 minutes of test run operation the system shifts to EMERGENCY COOL/HEAT MODE with a set temperature of 75°F. The fan speed shifts to Med.

All protective operations such as the coil frost prevention works even in emergency operation.

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

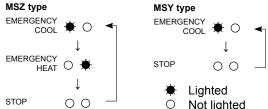
Emergency operation continues until EMERGENCY OPERATION switch is pressed once or twice or the unit receives any signal from the remote controller. In case of latter normal operation will start.

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



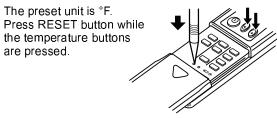
Operation mode	COOL	HEAT (MSZ)
Set temperature	75°F	75°F
Fan speed	Med.	Med.
Horizontal vane	Auto	Auto

The operation mode is indicated by the Operation Indicator lamp as following



11-10. Changing temperature indication (°F/°C)

MSZ-A•NA- T MSY-A•NA- T MSZ-GA MSY-GA



Press RESET button gently using a thin stick.

MITSUBISHI ELECTRIC CORPORATION

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

© Copyright 2006 MITSUBISHI ELECTRIC CO.,LTD

Distributed in Mar. 2009. No. OB450 REVISED EDITION-D 4

Distributed in Jun. 2008. No. OB450 REVISED EDITION-C 6

Distributed in May 2007. No. OB450 REVISED EDITION-B 7

Distributed in Dec. 2006. No. OB450 REVISED EDITION-A 7

Distributed in Apr. 2006. No. OB450 7

Made in Japan

New publication, effective Mar. 2009 Specifications subject to change without notice.