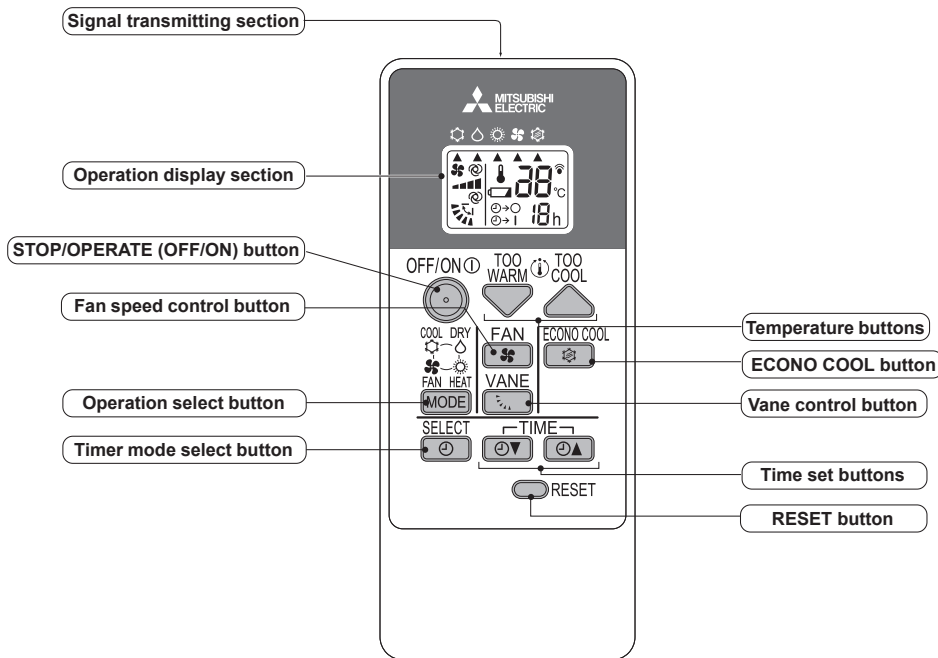# 9 | MICROPROCESSOR CONTROL

MSZ-DM25VA MSZ-DM35VA

WIRELESS REMOTE CONTROLLER

- Signal transmitting section
- Operation display section
- STOP/OPERATE (OFF/ON) button
- Fan speed control button
- Operation select button
- Timer mode select button
- Temperature buttons
- ECONO COOL button
- Vane control button
- Time set buttons
- RESET button

NOTE : Last setting will be stored after the unit is turned OFF with the remote controller. Indoor unit receives the signal of the remote controller with beeps.

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	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
☀️ ☼	Standby mode (Only during multi system operation)	—

- ☀️ Lighted
- ☼ Blinking
- ○ Not lighted

9-1. COOL (☼) OPERATION

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

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9-2. DRY (△) OPERATION

(1) Press STOP/OPERATE/ (OFF/ON) 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 works the same way as that in COOL mode. (9-1.1.)

9-3. HEAT (◎) OPERATION

(1) Press STOP/OPERATE/ (OFF/ON) 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 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
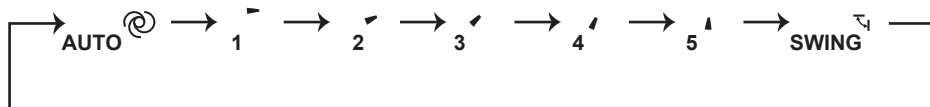Defrosting starts when the temperature of outdoor heat exchanger becomes too low.
The compressor stops once, the indoor/outdoor fans stop, the 4-way valve reverses, and the compressor re-starts.
This mode continues until the temperature of outdoor heat exchanger rises or the fixed time passes.

9-4. 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 (approximately 12 V) transmitted from indoor microprocessor.
(2) The horizontal vane angle and mode change as follows by pressing VANE CONTROL button.

AUTO ◎ → 1 → 2 → 3 → 4 → 5 → SWING

(3) Positioning
  To confirm the standard position, the vane moves until it touches the vane stopper. Then the vane is set to the selected angle.
  Confirmation 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.
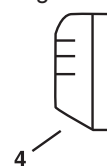   (c) When standby mode (only during multi system operation) starts or finishes.

(4) VANE AUTO (◎) mode
  In VANE AUTO mode, the microprocessor automatically determines the vane angle to make the optimum room temperature distribution.

In COOL and DRY operation
Vane angle is fixed to Horizontal position.

Horizontal position

In HEAT operation
Vane angle is fixed to Angle 4.

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

In the following cases, the horizontal vane returns to the closed position.

(a) When STOP/OPERATE/ (OFF/ON) 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 1 hour, the vane angle automatically changes to Angle 2 for dew prevention.

(7) SWING (⤵) mode

By selecting SWING mode with VANE CONTROL button, the horizontal vane swings vertically.

(8) Cold air prevention in HEAT operation.

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) ECONO COOL (🐚) operation (ECONOmical operation)

When ECONO COOL button is pressed in COOL mode, set temperature is automatically set 2°C higher.

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, 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.

9-5. TIMER OPERATION (ON/OFF TIMER)

1. How to set the timer

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

(2) Select the timer mode by pressing the $\overset{\text{SELECT}}{\boxed{\odot}}$ button during operation.

Each time this button is pressed, the timer mode is changed in sequence:

⊙→○ (OFF TIMER) → ⊙→| (ON TIMER) → TIMER RELEASE

(3) Set the time of the timer using the $\overset{\llcorner\text{TIME}\lrcorner}{\boxed{\odot\blacktriangledown}\ \boxed{\odot\blacktriangle}}$ button.

Each time this button is pressed, the set time increase or decrease by 1 hour to 12 hours.

2. To release the timer

Press the $\overset{\text{SELECT}}{\boxed{\odot}}$ button until ⊙→○ (OFF TIMER) and ⊙→| (ON TIMER) are not displayed.

NOTE :

• The OFF TIMER and the ON TIMER cannot be set at the same time.

• The displayed time is the time remaining and will decrease in 1-hour increments as time passes.

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