

# CITY MULTI Control System and Mitsubishi 9`YWf]WAir Conditioners Wireless Remote Controller PAR-SL100A-E

# **OPERATION MANUAL**

FOR USER

For safe and correct use, please read this operation manual thoroughly before operating the air-conditioner unit.

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Your MITSUBISHI ELECTRIC product is designed and manufactured with high quality materials and components which can be recycled and/or reused. This symbol means that batteries and accumulators, at their end-of-life, should be disposed of separately from your household waste. If a chemical symbol is printed beneath the symbol (Fig. 1), this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration.

This will be indicated as follows: Hg: mercury (0.0005%), Cd: cadmium (0.002%), Pb: lead (0.004%)

Please, dispose of batteries and accumulators correctly at your local community waste collection/recycling centre.

Please, help us to conserve the environment we live in!

# 1. Safety Precautions

- · Be sure to read these Safety precautions thoroughly and install the remote controller correctly.
- The following two symbols are used to denote dangers that may be caused by incorrect use. They are classified according to the degree of danger.

⚠ WARNING: This symbol denotes what could lead to serious injury or death if you misuse the controller.
 ⚠ CAUTION: This symbol denotes what could lead to personal injury or damage to your property if you misuse the controller.

After reading this manual, be sure to forward it, together with the operation manual accompanying the indoor unit, to the
user

Together with the operation manual for the indoor unit, this manual should be kept in a place where it can be referred to at anytime by the user. When the user changes, be sure to forward the manual to the final user.

### ♠ WARNING

- Check the installation conditions.
  - In order to prevent the controller falling down, make sure that it is installed in a place strong enough to withstand its weight.
- Do not dispose of the controller by yourself.
  - · Consult your dealer in case of disposal.
- Stop operation when an abnormality occurs.
  - Continuing to operate under abnormal conditions can result in breakdown, electric shock or fire. When an abnormality occurs (burning smell etc.), stop operations, turn off the power switch and consult your dealer.

# 1. Safety Precautions

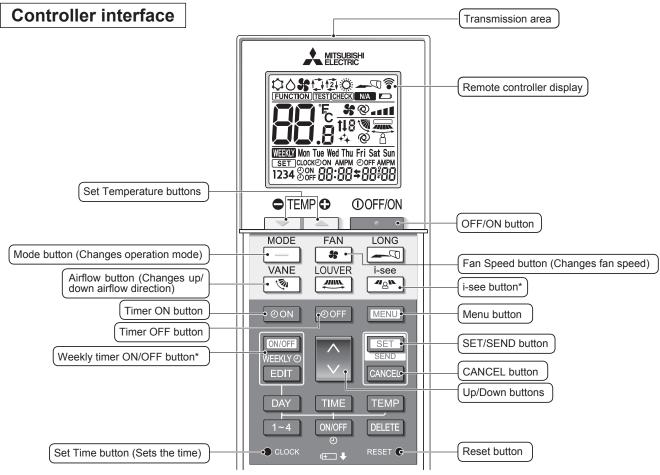
# **⚠ WARNING**

- Never modify or repair the controller by yourself.
  - Any deficiency caused by your modification or repair may result in an electric shock or fire. Consult your dealer about repairs.
- Stop operation if the operation lamp on the controller's receiver blinks or if an abnormality occurs.
  - · Leaving the controller in these conditions can lead to fire or breakdown. Report such conditions to your dealer.
- Never allow the alkaline batteries to short-circuit. Never disassemble, heat or place them in fire.
  - Doing so can cause the strong alkaline liquid to leak and possibly enter your eyes or cause the batteries to explode or heat up, resulting in personal injuries, burning or mechanical breakdowns. If strong alkaline liquid comes in contact with your skin or clothes, wash it off with clean water. If it gets in to your eyes, wash them with clean water and consult a doctor immediately.

# **↑** CAUTION

- Do not drop the controller.
  - · Doing so may cause the case to crack and may disable control.
- Do not place any dangerous substances near the controller.
  - Do not install in any place exposed to leakage of flammable gas. Flammable gases accumulated around the controller may cause fire or an explosion.
- Do not wash with water.
  - · Doing so may cause an electric shock or breakdown.
- Do not touch any control button with wet hands.
  - · Doing so may cause an electric shock or breakdown.
- Do not disassemble the controller.
  - · Contact with internal circuitry may cause fire or breakdown.
- Do not use in special environments.
  - Using in places exposed to oil (including machine oil), steam or sulfur gas can reduce the performance or can cause damage to the components.
- Do not spray insecticide or other flammable sprays.
  - Do not place flammable sprays near the controller or spray directly at the controller. Doing so may result in fire or explosion.
- Do not wipe the controller with benzine, thinner or chemical cloths etc.
  - Doing so may cause discoloration or breakdowns. If the controller becomes extremely dirty, dampen a cloth with water-diluted neutral detergent and wipe the controller with it, then wipe with a dry cloth.
- Do not press any control button with a sharp object.
  - · Doing so may cause an electric shock or breakdown.
- Keep the temperature within the specified range.
  - Use the controller within the specified operating temperature range. Using in temperature outside that range can cause serious breakdowns.
  - For the specified operating temperature range, refer to the specifications given on the operation manual.
- Do not use for other special purposes.
  - The controller has been designed for use with the CITY MULTI Control System and Mitsubishi O/A&d & Air Conditioners only. Do not use for other purposes such as controlling other air conditioners. Doing so may result in breakdown.
- Incorrect use of batteries can cause liquid leakage, explosion or heating and may result in breakdown or personal injury. Adhere to the following.
  - (1) Do not recharge the batteries.
  - (2) Insert the batteries in the correct direction.
  - (3) Do not mix a new battery with an old battery or batteries of different types.
  - (4) Remove the batteries immediately when they have run out.

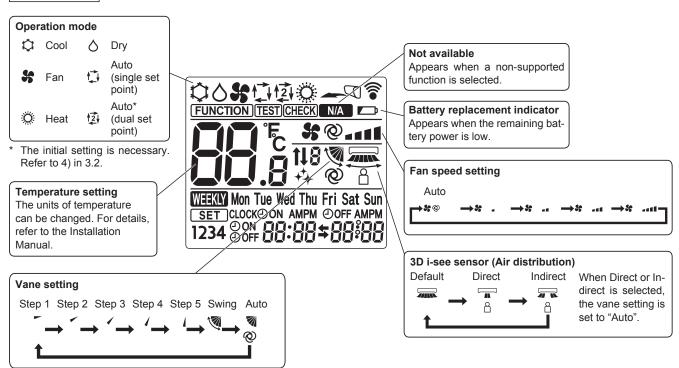
# 2. Names and functions of controller components



### Note:

\* This button is enabled or disabled depending on the model of the indoor unit.

# **Display**



# 2. Names and functions of controller components

### Note:

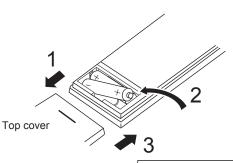
- When using the wireless remote controller, point it towards the receiver on the indoor unit.
- If the remote controller is operated within approximately 2 minutes after power is supplied to the indoor unit, the indoor unit may beep twice as the unit is performing the initial automatic check.
- The indoor unit beeps to confirm that the signal transmitted from the remote controller has been received. Signals can be received up to approximately 7 meters in a direct line from the indoor unit in an area 45° to the left and right of the unit. However, illumination such as fluorescent lights and strong light can affect the ability of the indoor unit to receive signals.
- If the operation lamp near the receiver on the indoor unit is blinking, the unit needs to be inspected. Consult your dealer for service.
- Handle the remote controller carefully! Do not drop the remote controller or subject it to strong shocks. In addition, do not get the remote controller wet or leave it in a location with high humidity.
- To avoid misplacing the remote controller, install the holder included with the remote controller on a wall and be sure to always place the remote controller in the holder after use.
- If the indoor unit beeps 4 times when you are using the wireless remote controller, switch the auto mode setting to the AUTO (single set point) mode or AUTO (dual set point) mode.

# 3. Before Operation

# 3.1. Replacing the batteries and how to set the current time

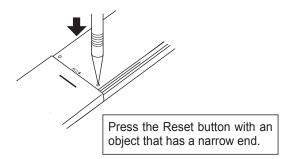
# **Battery installation/replacement**

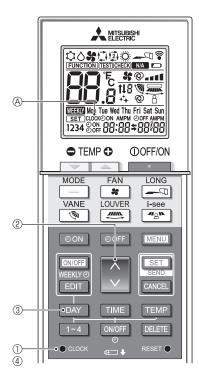
1. Remove the top cover, insert two LR6 AA batteries, and then install the top cover.



Two LR6 AA batteries Insert the negative (–) end of each battery first. Install the batteries in the correct directions (+, –)!

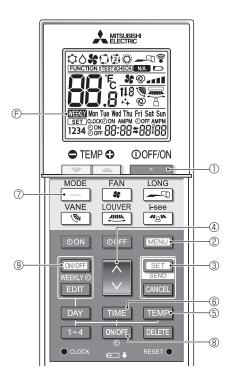
2. Press the Reset button.





### How to set the current time

- The transmission mark \$\hat{\epsilon}\$ appears each time a signal is transmitted.
- The indoor unit beeps to confirm that the signal transmitted from the wireless remote controller has been received by the receiver on the indoor unit. If the indoor unit does not beep, transmit the signal again.
- 1. Press the CLOCK button ①. [CLOCK] Blinks.
- 2. Press the button 2 to set the current time.
  - Press the button to increase the current time. Press the button to decrease the current time.
  - Hold down the button to increase or decrease the time in 10-minute increments.
- 3. Press the DAY button 3 to set the day.
  - Each time the button is pressed, the day changes in the following repeating order: Monday → Tuesday → ... Sunday → Monday → ...
- 4. Press the CLOCK button ④ to confirm the current time settings.



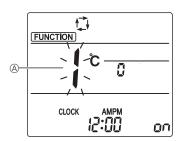


Fig. 3-1

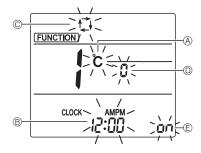


Fig. 3-2

# 3.2. Initial setting

The following settings can be made in the initial setting mode.

Item	Setting	Fig. 3-1, 3-2
Temperature unit	°C/°F	A
Time display	12-hour format/24-hour format	B
AUTO mode	Single set point/Dual set point	0
Pair No.	0–3	0
Backlight	On/Off	(E)

# 1) Switching to the initial setting mode

- 1. Press the \_\_\_\_\_ button ① to stop the air conditioner.
  - If the weekly timer is enabled, press the NOFF button ( ) to disable the timer. ( ) disappears.)
- 2. Press the MENU button 2.

  - Press the button 4 to change the function No.
- 3. Check that function No. "1" is displayed, and then press the SET button 3.
  - The display setting screen will be displayed. (Fig. 3-2)

# 2) Changing the temperature unit (A) (Fig. 3-2)

Press the TEMP button ⑤.

- Each time the TEMP button ⑤ is pressed, the setting switches between °C and °F.
- c: The temperature is displayed in degrees Celsius.
- \*F: The temperature is displayed in degrees Fahrenheit.

# 3) Changing the time display ® (Fig. 3-2)

Press the TIME button 6.

- Each time the TIME button ® is pressed, the setting switches between (2:00) and 24:00.
  - : The time is displayed in the 12-hour format.
  - วิษากา : The time is displayed in the 24-hour format.

# 4) Changing the AUTO mode © (Fig. 3-2)

Press the \_\_\_ button ⑦.

- Each time the \_\_\_\_ button ⑦ is pressed, the setting switches between ♣ and ♣.
  - : The AUTO mode operates as the usual automatic mode.
  - ②: The AUTO mode operates using dual set points.

# 5) Changing the pair No. (Fig. 3-2)

Press the button 4.

Each time the button 4 is pressed, the pair No. 0–3 changes.

# 6) Changing the backlight setting © (Fig. 3-2)

Press the ON/OFF button 8.

- Each time the onoff button ® is pressed, the setting switches between on and of FF.
  - on: The backlight comes on when a button is pressed.
    of FF: The backlight does not come on when a button is pressed.

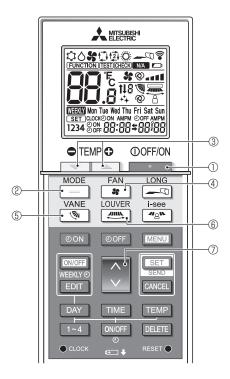
# 7) Completing the settings

Press the **SET** button ③.

• The function No. (A) blinks. (Fig. 3-1)

Press the MENU button 2.

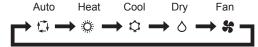
 The remote controller exits the initial setting mode. (The air conditioner operation is stopped.)



- The transmission mark \$\widetilde{\sigma}\$ appears each time a signal is transmitted.
- The indoor unit beeps to confirm that the signal transmitted from the wireless remote controller has been received by the receiver on the indoor unit. If the indoor unit does not beep, transmit the signal again.

# 4.1. Switching the unit on/off

- 1. Press the button ①.
  - The remote controller display turns on.
- 2. Press the \_\_\_ button @.
  - Each time the button is pressed, the setting changes.



\* If the automatic operation is selected, cooling operation starts if the room temperature is higher than the set temperature and heating operation starts if the room temperature is lower than the set temperature.

If the AUTO (dual set point) mode is enabled, 貸 is displayed.

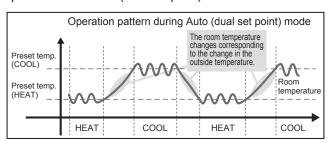
When setting the AUTO (dual set point) mode, you can set 2 temperatures (1 temperature for cooling and 1 temperature for heating).

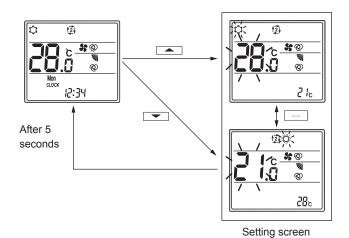
According to the room temperature, the indoor unit operates automatically in the cooling or heating mode to keep the room temperature within the set range.

# Auto operation (dual set point) mode

When the operation mode is set to the Auto (dual set point) mode, two preset temperatures (one each for cooling and heating) can be set. Depending on the room temperature, indoor unit will automatically operate in either the Cool or Heat mode and keep the room temperature within the preset range.

The graph below shows the operation pattern of indoor unit operated in the Auto (dual set point) mode.





# 4.2. Selecting a temperature

To decrease the temperature, press the  $\longrightarrow$  button  $\@3$ .

To increase the temperature, press the button ③.

- Each time the button is pressed, the set temperature changes 0.5°C.
- · The setting ranges for the temperature are as follows.

Cool/Dry	Heat	Auto	Fan
19–30°C	17–28°C	19–28°C	Not settable

# When using the AUTO (dual set point) mode

- The set temperature for the current operation mode, cooling or heating, is displayed.
- When the or button ③ is pressed, the set temperature blinks and the setting screen is displayed.
   To change the upper limit (cooling) for the set temperature range, press the button ③.

To change the lower limit (heating) for the set temperature range, press the button ③.

- In the setting screen, press the \_\_\_\_ button @ to switch the blinking display between the upper limit (cooling) and lower limit (heating).
- Press the or button in the setting screen to change the blinking set temperature.
- If no operations are performed for 5 seconds, the display returns to the previous screen.
- \* The difference between the upper limit (cooling) and lower limit (heating) cannot be set to less than 2°C.

# 4.3. Selecting a fan speed (FAN)

Press the stutton 4.

· Each time the button is pressed, the setting changes.

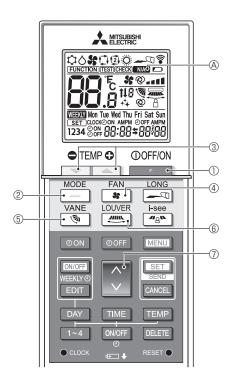


· The available fan speeds depend on the model of the indoor unit.

### Note:

In the following cases, the actual fan speed generated by the unit may be different from the speed shown on the remote controller display.

- The unit is performing the warming-up operation or the defrosting operation.
- Immediately after starting the heating operation (while the system is waiting for the mode change to take effect).
- In the heating mode, the room temperature is higher than the temperature setting.
- The unit is in the dry mode.

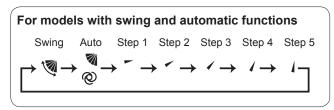


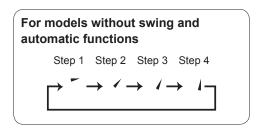
# 4.4. Adjusting airflow direction

# Changing the vertical airflow direction (vane)

Press the button 5.

• Each time the button is pressed, the setting changes.



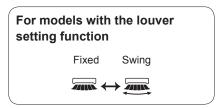


\* For models that are not equipped with a vertical airflow setting function, NA A blinks twice when the vertical airflow direction is set.

# Changing the horizontal airflow direction (louver)

Press the button 6.

• Each time the button is pressed, the setting switches between the swing operation and the fixed operation.



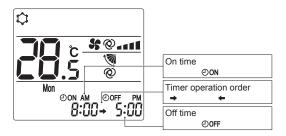
\* For models that are not equipped with a horizontal airflow setting function, NA A blinks twice when the horizontal airflow direction is set.

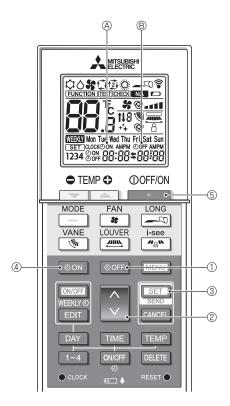
### Note:

In the following cases, the vertical airflow direction of the unit may be different from the direction shown on the remote controller display.

- The unit is performing the warming-up operation or the defrosting operation.
- Immediately after starting the heating operation (while the system is waiting for the mode change to take effect).
- In the heating mode, the room temperature is higher than the temperature setting.

# 4. Operation





# 4.5. Using the on/off timer

- When setting the timer operation, point the transmission area of the wireless remote controller towards the receiver on the indoor unit and confirm that the indoor unit beeps when it receives signals from the remote controller.
- There are 3 types of timer operation.
  - On timer operation: Only the timer to start the operation is set
  - Off timer operation: Only the timer to stop the operation is set.
  - On/off timer operation: The timers to start and stop the operation are both set.
- Only 1 on-timer setting and 1 off-timer setting can be set for the timer operation within a 24-hour period.
- The time setting for the timer operation can be set in 10-minute increments.

### Set the time to start the unit as follows

- 1. Press the OON button 4.
- 2. Press the button 2 to set the on time.
- 3. Press the SET button 3.
  - ON A stops blinking and remains on to indicate that the setting is complete.
    - \* Even if no operations are performed for 10 seconds, 
      On A stops blinking and remains on to indicate that the setting is complete.
  - If the on timer is set while the air conditioner is operating, the air conditioner stops.

# Set the time to stop the unit as follows

- 1. Press the OOFF button ①.
- 2. Press the button 2 to set the off time.
- 3. Press the set button 3.
  - OFF B stops blinking and remains on to indicate that the setting is complete.
    - Even if no operations are performed for 10 seconds,
       OFF 

       \( \text{\text{B}} \) stops blinking and remains on to indicate that the setting is complete.

### Changing the set times

Set both the off timer and on timer.

- In the \$ display, → or ← appears.
  - → : Stops → Operates (on time) → Stops (off time)
  - ← : Operates → Stops (off time) → Operates (on time)

Example 1) The current time is 7:00 A.M.

The air conditioner starts operating at 8:00 A.M. and stops at 6:30 P.M.

②ON AM ②OFF PM

Example 2) The current time is 10:00 A.M.

The air conditioner stops operating at 6:30 P.M. and starts at 8:00 A.M. on the following day.

②ON AM ②OFF PM

### Cancelling the timer operation

- Cancelling the on timer operation Press the OON button 4.
  - · The on time disappears and the on timer is cancelled.
- Cancelling the off timer operation

Press the OOFF button 1.

- · The off time disappears and the off timer is cancelled.
- Cancelling the on/off timer operation

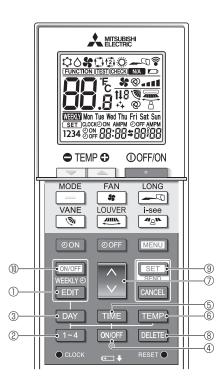
Press the OON button 4 or the OOFF button 1.

The on time and off time disappear and the timer is cancelled.

Cancelling the timer operation and stopping the air conditioner

Press the \_\_\_\_\_ button 5 .

 The air conditioner stops and the set timer operation is cancelled at the same time.



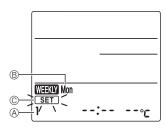


Fig. 4-1

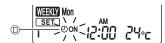


Fig. 4-2



Fig. 4-3



Fig. 4-4



Fig. 4-5

# 4.6. Using the weekly timer

- This function cannot be operated depending on the model of the indoor unit.
- The weekly timer can be set to 4 operation patterns for each day of the week.
- The settings include the on and off times and the set temperature.
- The operation time can be set in 10-minute increments.

# Switching to the editing mode

Press the EDIT button ①.

• SET © blinks. (Fig. 4-1)

# Selecting the setting pattern

Press the 1~4 button 2.

• Each time the 1~4 button ② is pressed, the pattern number ③ changes in the following order:  $1 \rightarrow 2 \rightarrow 3 \rightarrow 4$ . (Fig. 4-1)

# Selecting the day of the week

Press the DAY button 3.

Each time the DAY button ③ is pressed, the day of the week ⑤ changes in the following order: Mon → Tue → Wed → Thu → Fri → Sat → Sun → All days. (Fig. 4-1)

# Selecting the operation settings

- 1. Press the ON/OFF button 4.
  - ②ON □ (②OFF) appears. (Fig. 4-2)
  - Each time the ONOFF button ④ is pressed, the setting switches between ②ON ① and ②OFF.
- 2. Press the TIME button ⑤.
  - The operation time blinks. (Fig. 4-3)
  - Press the button to set the operation time.
- 3. Press the TEMP button 6.
  - The set temperature blinks. (Fig. 4-4)
  - Press the 🗘 button 🗇 to set the temperature.
  - When the AUTO (dual set point) mode is enabled, press
    the TEMP button (a) to switch between the upper limit
    (b) and the lower limit (c). (Fig. 4-5)
- \* When setting the off operation, the temperature cannot be set.

# **Deleting the settings**

Press the DELETE button ®.

 The displayed day of the week and the pattern number settings are deleted.

# Transmitting the settings

Point the transmission area of the wireless remote controller towards the receiver on the indoor unit and operate the controller.

Confirm that the indoor unit beeps 7 times.

Press the set button 9.



# **Enabling the weekly timer**

Point the transmission area of the wireless remote controller towards the receiver on the indoor unit and operate the controller.

Press the ON/OFF button 10.

The weekly timer operates when weekly is on.

- The weekly timer does not function when the on/off timer is enabled.
- The weekly timer operates when all of the on/off timer settings have been executed.

# 4.7. i-See sensor

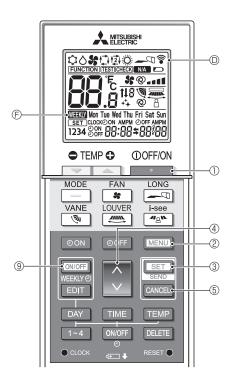
- This function cannot be operated depending on the model of the indoor unit.
- ① Each time is pressed during operation, the setting changes in the following order: OFF → Direct → Indirect.

Display			<b>7</b> 8
Setting	OFF	Direct	Indirect

When the setting is changed from OFF to Direct or Indirect, the vane setting changes to "Auto". This setting is applied collectively to all of the vanes.

② The vanes automatically move relative to the areas where persons are detected. When a person is detected, the vanes operate as indicated in the following table.

	Vane setting	
	Direct Indirect	
Cooling	horizontal → swing	keep horizontal
Heating	keep downward	downward → horizontal



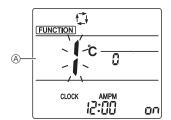


Fig. 5-1

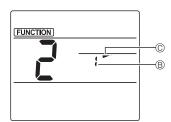


Fig. 5-2

Some functions cannot be operated depending on the air conditioner.

Confirm whether the air conditioner supports each function, and then operate the air conditioner.

# Switching to the special operation mode

- 1. Press the \_\_\_\_ button ① to stop the air conditioner.
  - If the weekly timer is enabled, press the weekly timer is enabled.
- 2. Press the MENU button 2.

### Transmitting the settings

• When you perform each operation, © ① on the remote controller display blinks to indicate that the SET button ③ must be pressed to transmit the settings. Point the transmission area of the wireless remote controller towards the receiver on the indoor unit and press the SET button ③ to transmit the settings. Confirm that the indoor unit beeps at this time.

# Exiting the special operation mode

- 1. While the operation screen for each function is displayed, press the MENU button ② or the CANCEL button ⑤.
- 2. Press the MENU button 2.
  - The display returns to the normal screen.

# 5.1. Setting the fixed airflow direction

- 1. In the Function setting screen, press the button 4 and select function No. "2".
- 2. Press the set button 3.
  - The vane number ® blinks. (Fig. 5-2)
- 3. Press the button 4 to select the vane number.
  - For information about the vane numbers, refer to the indoor unit operation manual.
- 4. Press the SET button 3.
  - · The airflow direction setting © blinks. (Fig. 5-2)
- 5. Press the button 4 to select the airflow direction at which you want to fix the vane.

Step 1	Step 2	Step 3	Step 4	Step 5
-	-	1	1	1
Draft reduction		No setting		
(No display)		Ø		

6. Press the settings.

### Note:

### Dra\* \* @Áxeduction

The airflow direction for this setting is more horizontal than the airflow direction for the "Step 1" setting in order to reduce a dra\*\* @f feeling. The dræ\*\* @reduction can be set for only 1 vane. The setting is enabled only for the last vane that was set.

# 5. Special Operation

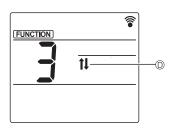


Fig. 5-3

# 5.2. Operating the ascending/descending panel

- 1. In the Function setting screen, press the button ④ and select function No. "3".
- 2 Press the SET button 3.
  - The ascending/descending mark © blinks. (Fig. 5-3)
- 3. Press the button 4 or the CANCEL button 5.
  - Descending operation
  - Ascending operation
  - CANCEL: Stop operation

# 6. Centrally Controlled

# When remote operation by other remote controllers is prohibited

When remote operation is prohibited by a central remote controller, the operations for stopping and starting operation and the settings for the operation mode, temperature setting, vane setting, and fan speed cannot be performed from this remote controller according to the prohibited settings.

# When a wireless remote controller is operated during central control

The receiver of the wireless remote controller operates as follows.

Reception confirmation sound: 2 beeps

Operation lamp during operation: Turns off 3 times in 0.5-second intervals

Operation lamp when operation is stopped: Turns on 3 times in 0.5-second intervals

# 7. Troubleshooting

### When the operation lamp of the wireless remote controller receiver is blinking

The blinking lamp indicates an air conditioner malfunction has occurred.

If this occurs, turn off the power switch immediately and consult your dealer.

Do not attempt to repair this equipment by yourself.

# When the indoor unit beeps 4 times and the operations are ineffective

The auto mode setting (single set point or dual set point) is different for the remote controller and the system to which the indoor unit is connected. Change the current setting according to the procedure in 4) in 3.2.

This product is designed and intended for use in the residential, commercial and light-industrial environment.
Please be sure to put the contact address/telephone number on this manual before handing it to the customer.

# MITSUBISHI ELECTRIC CORPORATION

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