



CITY MULTI Control System and Mitsubishi Mr. Slim Air Conditioners

Wireless Remote Controller PAR-SL100A Series Installation Manual

This installation manual contains only the description of how to install the wireless remote controller unit PAR-SL100A. For your safety, first be sure to read "1 Safety Precautions" described below thoroughly and then install the wireless remote controller unit PAR-SL100A correctly.

1 Safety Precautions

The following two symbols are used to denote dangers that may be caused by incorrect use and their degree:

WARNING	This symbol denotes what could lead to serious injury or death if you misuse the PAR-SL100A.
CAUTION	This symbol denotes what could lead to a personal injury or damage to your property if you misuse the PAR-SL100A.

After reading this installation manual, keep it in a place where the final user can see it anytime. When someone moves, repairs or uses the PAR-SL100A, make sure that this manual is forwarded to the final user.

WARNING

<p>Ask your dealer or technical representative to install the unit. Any deficiency caused by your own installation may result in an electric shock or fire.</p>	<p>Ensure that installation work is done correctly following this installation manual. Any deficiency caused by installation may result in an electric shock or fire.</p>
<p>Install in a place which is strong enough to withstand the weight of the PAR-SL100A. Any lack of strength may cause the PAR-SL100A to fall down, resulting in personal injury.</p>	<p>All electrical work must be performed by a licensed technician, according to local regulations and the instructions given in this manual. Any lack of electric circuit or any deficiency caused by installation may result in an electric shock or fire.</p>
<p>Never modify or repair the PAR-SL100A by yourself. Any deficiency caused by your modification or repair may result in an electric shock or fire. Consult with your dealer about repairs.</p>	<p>Do not move and re-install the PAR-SL100A yourself. Any deficiency caused by installation may result in an electric shock or fire. Ask your distributor or special vendor for moving and installation.</p>
	<p>To dispose of this product, consult your dealer.</p>

CAUTION

<p>Do not install in any place exposed to flammable gas leakage. Flammable gases accumulated around the body of PAR-SL100A may cause an explosion.</p>	<p>Do not install in any steamy place such as a bathroom or kitchen. Avoid any place where moisture is condensed into dew. Doing so may cause an electric shock or a malfunction.</p>
<p>Do not use in any special environment. Using in any place exposed to oil (including machine oil), steam and sulfuric gas may deteriorate the performance significantly or give damage to the component parts.</p>	<p>Do not install in any place where acidic or alkaline solution or special spray are often used. Doing so may cause an electric shock or malfunction.</p>
<p>Do not wash with water. Doing so may cause an electric shock or a malfunction.</p>	<p>Do not touch any circuit board with your hands or with tools. Do not allow dust to collect on the circuit board. Doing so may cause fire or an electric shock.</p>
<p>Do not install in any place at a temperature of more than 40 °C (104 °F) or less than 0 °C (32 °F) or exposed to direct sunlight.</p>	<p>Do not touch any control button with your wet hands. Doing so may cause an electric shock or a malfunction.</p>
	<p>Do not press any control button using a sharp object. Doing so may cause an electric shock or a malfunction.</p>

2 Confirming the Supplied Parts

Check that the box includes the following parts in addition to this installation manual:

Parts Name	Quantity
Wireless remote controller	1
Remote controller holder	1
LR6 AA alkaline battery	2
Tapping screws 3.5 × 16	2

*Some models do not include batteries. Only use LR6 AA batteries. Replace low batteries with new LR6 AA batteries. Observe the polarity of the batteries as indicated, and insert the negative end first.

3 Installation

- Use the remote controller holder that is provided to avoid misplacing the remote controller.
- Install the remote controller in a location that meets the following conditions.
 - Out of the direct sun light
 - Away from any heat sources
 - Out of the airflow from the air conditioner (cool or warm)
 - Where the operation of the remote controller can easily be performed and the display is readily visible to the user
 - Out of the reach of small children

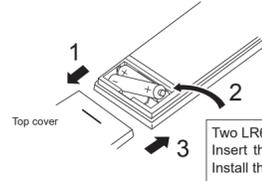
NOTES:

- If there is a fluorescent light in the room in which the air conditioner is to be installed, turn it on and make sure that the signal from the remote controller can be received by the indoor unit from the intended installation location. When the signal receiving unit receives a signal from the remote controller, a short beeping sound will be heard.
- If the air conditioner unit is installed in a room in which a fluorescent light on an electronic lighting control system (i.e., inverter light) is installed, signal interference may occur.
- Maximum signal receiving distance is approximately 7 meters (Approx. 22 feet). Signal receiving angle is approximately 45 degrees to the right and the left from the center.
- Install the unit at least 1 meter (Approx. 3 feet) away from the TV or radio. (If the unit is installed too close to these appliances, signal interference (picture distortion and noise) may occur.)

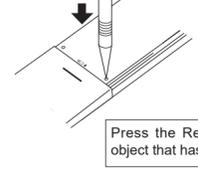
- Use the tapping screws that are provided to mount the remote controller holder on the wall, and then place the remote controller in the holder.

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

2. Press the Reset button.



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



A Remote controller
B Wall
C Display panel

4 Initial Setting

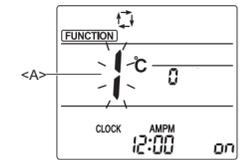
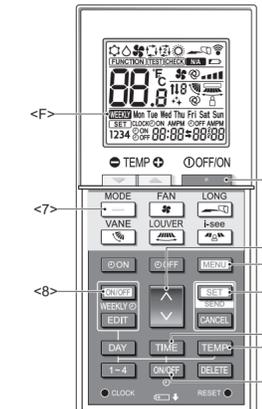


Fig. 4-1

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

Item	Setting	Fig. 4-2
Temperature unit	°C/°F	<A>
Time display	12-hour format/24-hour format	
AUTO mode	Single set point/Dual set point	<C>
Pair No.	0-3	<D>
Backlight	On/Off	<E>

4.1. Switching to the initial setting mode

- Press the **STOP** button <1> to stop the air conditioner.
 - If the weekly timer is enabled, press the **WEEKLY** button <8> to disable the timer. (The **WEEKLY** button <8> disappears.)
- Press the **FUNCTION** button <2>.
 - The Function setting screen will be displayed and the function No. <A> will blink. (Fig. 4-1)
 - Press the **EDIT** button <4> to change the function No.
- Check that function No. "1" is displayed, and then press the **STOP** button <3>.
 - The Screen display setting screen will be displayed. (Fig. 4-2)

4.2. Changing the temperature unit <A> [Factory setting: °C] (Fig. 4-2)

- 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.

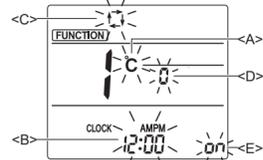


Fig. 4-2

4.3. Changing the time display [Factory setting: 12-hour format]

- Press the **TIME** button <6>.
- Each time the **TIME** button <6> is pressed, the setting switches between 12:00 and 24:00.
 - 12:00: The time is displayed in the 12-hour format.
 - 24:00: The time is displayed in the 24-hour format.

4.4. Changing the AUTO mode <C> [Factory setting: Single set point]

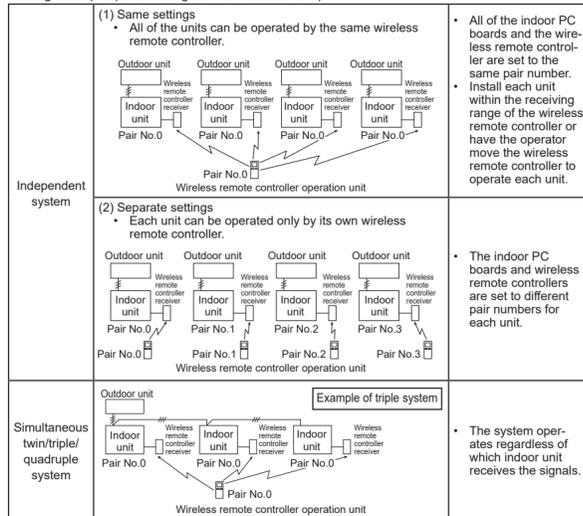
- Press the **AUTO** button <7>.
- Each time the **AUTO** button <7> is pressed, the setting switches between **□** and **□**.
 - : The AUTO mode operates as the usual automatic mode (Single set point).
 - : The AUTO mode operates using dual set points.

4.5. Changing the pair No. <D> [Factory setting: 0]

- Press the **PAIR** button <4>.
- Set the pair number <D> to "0"- "3".

Pair No. of wireless remote controller	Indoor unit setting	
	Slim air conditioner (J41 and J42 settings)	Multi air conditioner SW22 settings
0	Do not cut (initial setting)	ON ON
1	Cut only J41	OFF ON
2	Cut only J42	ON OFF
3	Cut both J41 and J42	OFF OFF

Setting example (when using slim air conditioners)



4.6. Changing the backlight setting <E> [Factory setting: ON]

- Press the **ON/OFF** button <9>.
- Each time the **ON/OFF** button <9> is pressed, the setting switches between **on** and **off**.
 - on**: The backlight comes on when a button is pressed.
 - off**: The backlight does not come on when a button is pressed.

4.7. Completing the settings

- Press the **RESET** button <3>.
- The function No. <A> blinks. (Fig. 4-1)
 - Press the **MENU** button <2>.
 - The remote controller exits the initial setting mode. (The air conditioner operation is stopped.)

5 Function settings

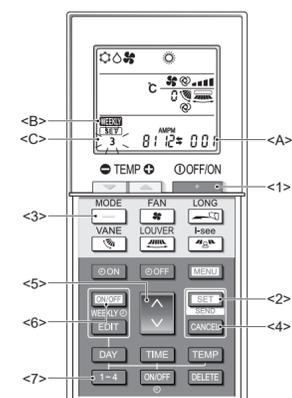


Fig. 5-1

To confirm the functions and settings for the indoor unit you want to set, refer to the operation manual and technical materials for the unit.

5.1. Switching to the function setting mode (Fig. 5-1)

- Press the **STOP** button <1> to stop the air conditioner.
 - If the weekly timer is enabled, press the **WEEKLY** button <6> to disable the timer. (The **WEEKLY** button <6> disappears.)
- Press the **FUNCTION** button <2> for 5 seconds.
 - The remote controller enters the function setting mode. (The group model setting number <A> blinks.)

5.2. Entering the group model setting number

- Press the **EDIT** button <5>.
- Enter the group model setting number for the indoor unit you want to operate. (The factory setting is "001".)
 - To confirm the group model setting number, refer to the indoor unit operation manual.

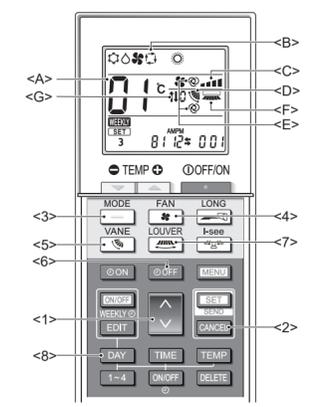


Fig. 5-2

5.3. Separate settings

You can also set the functions as necessary for the indoor unit that you want to operate.

1) Operation mode setting (Fig. 5-2) (The factory setting is "Cool/Dry/Auto/Fan/Heat" [Setting number 01].)

- Press the **FUNCTION** button <3>.
 - The operation mode blinks.
- Press the **PAIR** button <1> to select the setting number <A>.
 - The operation mode display blinks.

Operation mode display 	Setting No. <A>	Operation mode display 	Setting No. <A>
☀ ☁ ☂ ☃ ☄	01	☀ ☁ ☂ ☃ ☄	05
☀ ☁ ☂ ☃ ☄	02	☀ ☁ ☂ ☃ ☄	06
☀ ☁ ☂ ☃ ☄	03	☀ ☁ ☂ ☃ ☄	07
☀ ☁ ☂ ☃ ☄	04		

* If the setting is incorrect, press the **CANCEL** button <2> and repeat the procedure from step 1.

2) Fan speed setting (Fig. 5-2) (The factory setting is "4 speeds" [Setting number 01].)

- Press the **FUNCTION** button <3>.
 - The fan speed <C> blinks.
- Press the **PAIR** button <1> to select the setting number <A>.
 - The fan speed display <C> blinks.

Fan speed display <C>	Setting No. <A>
☀ ☁ ☂ ☃ ☄ (4 speeds)	01
☀ ☁ ☂ ☃ ☄ (3 speeds)	02
☀ ☁ ☂ ☃ ☄ (2 speeds)	03
☀ ☁ ☂ ☃ ☄ (1 speed, none)	04

* If the setting is incorrect, press the **CANCEL** button <2> and repeat the procedure from step 1.

3) Airflow direction setting (Fig. 5-2) (The factory setting is "With vane, swing" [Setting number 01].)

- Press the **FUNCTION** button <3>.
 - The airflow direction <D> blinks.
- Press the **PAIR** button <1> to select the setting number <A>.
 - The airflow direction display <D> blinks.

Airflow direction <D>		Setting No. <A>
☀ ☁ ☂ ☃ ☄ (With vane, swing)	☀ ☁ ☂ ☃ ☄ (Without auto vane)	01
☀ ☁ ☂ ☃ ☄ (With vane, no swing)	☀ ☁ ☂ ☃ ☄ (With vane, swing)	02
No display (no vane)	No display (no vane)	03

* If the setting is incorrect, press the **CANCEL** button <2> and repeat the procedure from step 1.

4) Auto fan speed and airflow direction display setting (Fig. 5-2) (The factory setting is "With auto fan speed and airflow direction" [Setting number 02].)

- Press the **FUNCTION** button <3>.
 - The auto fan speed and airflow direction displays <E> blink. (2 locations)
- Press the **PAIR** button <1> to select the setting number <A>.
 - The auto fan speed and airflow direction displays <E> blink.

Auto fan speed and airflow direction displays <E>	Setting No. <A>
No display (Without)	01
☀ ☁ ☂ ☃ ☄ (With)	02

* If the setting is incorrect, press the **CANCEL** button <2> and repeat the procedure from step 1.

5) Louver display setting (Fig. 5-2) (The factory setting is "Without louver" [Setting number 01].)

- Press the **FUNCTION** button <3>.
 - The louver display <F> blinks.
- Press the **PAIR** button <1> to select the setting number <A>.
 - The louver display <F> blinks.

Louver display <F>	Setting No. <A>
☀ ☁ ☂ ☃ ☄ (Without)	01
☀ ☁ ☂ ☃ ☄ (With)	02

* If the setting is incorrect, press the **CANCEL** button <2> and repeat the procedure from step 1.

5.4. Automatic filter elevation panel operation setting

- Perform the procedure in 5.1., and then press the **EDIT** button <5> for 5 seconds or more. (Fig. 5-1)
 - The pattern number <C> blinks.
- Press the **DAY** button <8>. (Fig. 5-2)
 - The setting number <A> comes on.
- Press the **PAIR** button <1> to select the setting number <A>. (Fig. 5-2)
 - The automatic filter elevation panel operation <G> blinks.

Automatic filter elevation panel operation <G>	Setting No. <A>
No display (Without)	01
☀ ☁ ☂ ☃ ☄ (With)	02

* If the setting is incorrect, press the **CANCEL** button <2> and repeat the procedure from step 1.

5.5. Completing the settings (Fig. 5-1)

- Press the **RESET** button <3> for 5 seconds.
- The remote controller exits the function setting mode.

6 Service

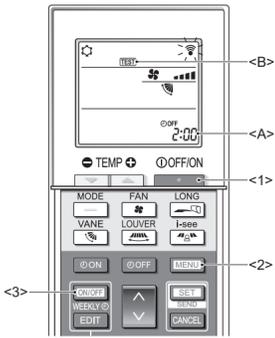


Fig. 6-1

6.1. Test run (Fig. 6-1)

- Press the **TEST** button <1> to stop the air conditioner.
 - If the weekly timer is enabled (**WEEKLY** is on), press the **WEEKLY** button <3> to disable it (**WEEKLY** is off).
- Press the **MODE** button <2> for 5 seconds.
 - TEST** comes on and the unit enters the service mode.
- Press the **MODE** button <2>.
 - TEST** comes on and the unit enters the test run mode.
- Press the following buttons to start the test run.
 - MODE**: Switch the operation mode between cooling and heating and start the test run.
 - FAN**: Switch the fan speed and start the test run.
 - LONG**: Switch the airflow direction and start the test run.
 - VANE**: Switch the louver and start the test run.
 - TEST**: Start the test run.
- Stop the test run.
 - Press the **TEST** button <1> to stop the test run.
 - After 2 hours, the stop signal is transmitted.

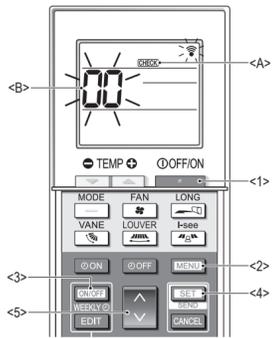
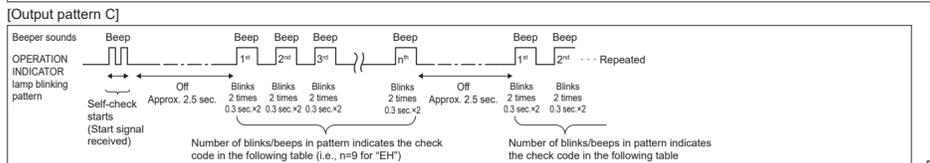
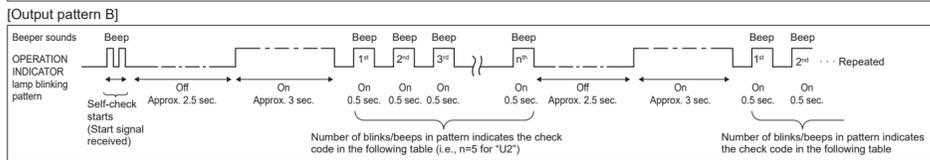
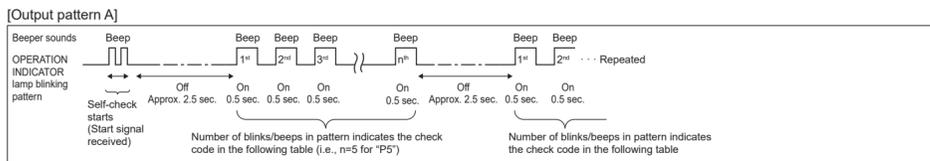


Fig. 6-2

6.2. Self-check (Fig. 6-2)

- Press the **TEST** button 1 to stop the air conditioner.
 - If the weekly timer is enabled (**WEEKLY** is on), press the **WEEKLY** button <3> to disable it (**WEEKLY** is off).
- Press the **MODE** button <2> for 5 seconds.
 - TEST** <A> comes on and the unit enters the self-check mode.
- Press the **MODE** button <5> to select the refrigerant address (M-NET address) of the indoor unit for which you want to perform the self-check.
- Press the **TEST** button <4>.
 - If an error is detected, the check code is indicated by the number of beeps from the indoor unit and the number of blinks of the OPERATION INDICATOR lamp.
- Press the **TEST** button <1>.
 - TEST** <A> and the refrigerant address (M-NET address) go off and the self-check is completed.

Refer to the following tables for details on the check codes.
* A receiver adapter (MA type) cannot be used.



5

6.3. Unit function selection

This setting method is for slim air conditioners. For City multi models, set the DIP switches on the indoor PC board and outdoor PC board. To set the DIP switches, refer to the technical materials for the City multi models.

Set the functions as necessary using the remote controller. The functions for each unit can be set only from the remote controller. Select the functions from table 1 that must be set. Only the refrigerant systems that are connected to indoor units equipped with wireless remote controller receivers can be set from the wireless remote controller operation unit. The refrigerant address cannot be specified using the wireless remote controller operation unit.

Table 1 Function selection settings (For details about the factory settings and modes of each indoor unit, refer to the indoor unit installation manual.)

Note: The items in the following table are representative examples. Because the settings for each mode may vary depending on the model, refer to the indoor unit installation manual for details.

Mode	Settings	Mode no.	Setting no.	Initial setting	Setting
Power failure automatic recovery	Not available	01	1		
	Available		2		
Indoor temperature detecting	Indoor unit operating average	02	1		Select unit number 00.
	Set by indoor unit's remote controller		2		
	Remote controller's internal sensor		3		
LOSSNAY connectivity	Not Supported	03	1		
	Supported (indoor unit is not equipped with fresh air intake)		2		
	Supported (indoor unit is equipped with fresh air intake)		3		
Filter sign	100Hr	07	1		
	2500Hr		2		
	No filter sign indicator		3		
Fan speed	Silent	08	1		
	Standard		2		
	High ceiling		3		
Number of air outlets	4-directional	09	1		Select unit number 01-04 or AL (all units).
	3-directional		2		
	2-directional		3		
Installed option (high-efficiency filter, etc.)	Without	10	1		
	With		2		
Up/down vane setting *	Not setting/Equipped with vanes (vanes angle setup <3>)	11	1		
	Equipped with vanes (vanes angle setup <1>)		2		
	Equipped with vanes (vanes angle setup <2>)		3		
Built-in humidifier	Not equipped	13	1		
	Equipped		2		

* The setting varies depending on the model.

Note:
• Whenever the function selection is used to change the indoor unit functions after installation, be sure to record all of the settings with a "○" or other mark in the "Initial setting" column of the table.

7

Mr. Slim output contents

[Output pattern A] Errors detected by indoor unit

Wireless remote controller Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Wired remote controller Check code	Symptom	Remark
1	P1	Intake sensor error	
2	P2, P9	Pipe (liquid or 2-phase pipe) sensor error	
3	E6, E7	Indoor/indoor unit communication error	
4	P4	Drain sensor error / Float switch connector open	
5	P5	Drain overflow protection operation	
	PA	Forced compressor error	
6	P6	Freezing (during cooling operation)/Overheating protection operation (during heating operation)	
7	EE	Assembly error (system error)	
8	P8	Pipe temperature error	
9	E4	Communication error between wired remote controller and indoor unit	
10	—	—	
11	Pb	Indoor unit fan motor error	
12	Fb	Indoor unit control system error (memory error, etc.)	
14	PL	Refrigerant circuit abnormal	

[Output pattern B] Errors detected by unit other than indoor unit (outdoor unit, etc.) * The supported check codes may vary depending on the connected outdoor unit.

Wireless remote controller Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Wired remote controller Check code	Symptom	Remark
1	E9	Indoor/outdoor unit communication error	
2	UP	Compressor overcurrent interruption	
3	U3, U4	Open/short of outdoor unit thermistors	
4	UF	Compressor overcurrent interruption (When compressor locked)	
5	U2	Abnormal high discharging temperature/49C worked/insufficient refrigerant	
6	U1, Ud	Abnormal high pressure (63H worked)/Overheating protection operation	
7	U5	Abnormal temperature of heat sink	
8	U8	Outdoor unit fan protection stop	
9	U6	Compressor overcurrent interruption/Abnormal of power module	
10	U7	Abnormality of super heat due to low discharge temperature	
11	U9, UH	Abnormality such as overvoltage or voltage shortage and abnormal synchronous signal to main circuit/Current sensor error	
12	—	—	
13	—	—	
14	Others	Other errors (Refer to the technical manual for the outdoor unit.)	

For details, check the LED display of the outdoor controller board.

[Output pattern C] Errors detected by unit other than indoor unit (outdoor unit, etc.)

Wireless remote controller Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	Wired remote controller Check code	Symptom	Remark
9	EH	Panel communication abnormal (auto ascending/descending panel)	

City multi output contents

[Output pattern A] The abnormal unit (attribute) is an indoor unit, LOSSNAY unit, or outdoor air processing unit.

[Output pattern B] The abnormal unit (attribute) is an outdoor unit or other unit (a unit other than an indoor unit, LOSSNAY unit, or outdoor air processing unit).

Beeper sounds/OPERATION INDICATOR lamp blinks (Number of times)	M-NET check code	Remarks
1	1000 - 1999	If the wired remote controller and system controller are not used together, the details of the check codes in the error history can be checked using the LED display of the outdoor PC board. To check the error history of the outdoor unit, refer to the outdoor unit service handbook.
2	2000 - 2999	
3	3000 - 3999	
4	4000 - 4999	
5	5000 - 5999	
6	6000 - 6999	
7	7000 - 7999	
8	0 - 999	

Notes:

- If the beeper does not sound and the OPERATION INDICATOR lamp remains off after the signal was received when the self-check starts, there is no error history.
- If the beeper sounds 3 times continuously "beep, beep, beep (0.4 + 0.4 + 0.4 seconds)" after the signal was received when the self-check starts, the specified refrigerant address (M-NET address) is incorrect.

6

Function selection procedure

First, it is important to understand the procedure for the function selection. The following procedure explains how to set "LOSSNAY connectivity" in table 1 to "Supported (indoor unit is not equipped with outdoor-air intake)" as an example. For the actual operations, refer to the following procedure.

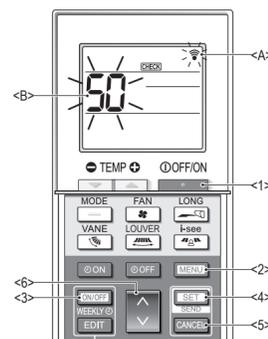


Fig. 6-3

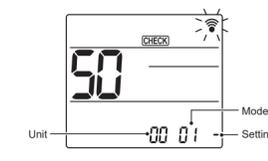


Fig. 6-4

- Press the **TEST** button <1> to stop the air conditioner.
 - If the weekly timer is enabled (**WEEKLY** is on), press the **WEEKLY** button <3> to disable it (**WEEKLY** is off).
- Press the **MODE** button <2> for 5 seconds.
 - TEST** <A> comes on and the unit enters the self-check mode.
- Press the **MODE** button <6> to set the displayed number to "50".
 - While pointing the wireless remote controller toward the receiver, press the **TEST** button <4>. (The unit number blinks.)
- Press the **MODE** button <6> to set the unit number of the indoor unit. (Fig. 6-3)
 - While pointing the wireless remote controller toward the receiver, press the **TEST** button <4>. (The mode number blinks.)
 - When the unit number is transmitted, the selected indoor unit starts operating in the fan mode. You can use this step to confirm which indoor unit corresponds to the unit number you selected to change the functions. However, if you set the unit number to "00" or "AL", all of the indoor units in the same refrigerant system will start operating in the fan mode.
 - If you transmit a unit number that cannot be selected, the beeper sounds 3 times continuously "beep, beep, beep (0.4 + 0.4 + 0.4 sec.)". If this occurs, press the **CANCEL** button <5>, and then set the unit number again while the unit number display is blinking.
 - If the signal was not received correctly, the beeper will not sound or it will beep twice. If this occurs, press the **CANCEL** button <5>, and then set the unit number again while the unit number display is blinking.
- Press the **MODE** button <6> to set the mode number. (Fig. 6-3)
 - While pointing the wireless remote controller toward the receiver, press the **TEST** button <4>. (The setting number blinks.)
 - At this time, the beeper sound and OPERATION INDICATOR lamp blinking pattern indicate the current setting number for the selected mode number. Current setting value = 1: Beep (1 sec.) × 1 time = 2: Beep (1 sec.) × 2 times = 3: Beep (1 sec.) × 3 times
 - If you enter a number that cannot be set, the originally set number will be used. If the signal was not received correctly, the beeper will not sound or it will beep twice. If this occurs, repeat the procedure from step 5.
- To set another mode without changing the unit number of the indoor unit, repeat steps 5 and 6.
- To change the unit number of the indoor unit and perform the function selection, repeat steps 4-6.
- Press the **TEST** button <1> to complete the function selection.

Note:
• After the function selection is complete, do not operate the wireless remote controller for 30 seconds.
• Whenever the function selection is used to change the indoor unit functions after installation, be sure to record all of the settings with a "○" or other mark in the "Initial setting" column of the table.

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