Application Note: 3048

How to turn the indoor unit fan off when set point is met

Introduction

This application note is to help configure a M-Series or P-Series indoor unit to have the indoor unit fan to turn off when the room temperature is the same as the set point. This is also called turning the fan off during Cooling or Heating thermal off states. There are three methods to achieve this:

1. For most indoor units, function codes 25 (Heating) and 27 (Cooling) need to be change via a remote controller

2. For only the M-series ductless units, jumpers (or resistors) have to be physically cut with cutting pliers.

3. Using the Thermostat Interface

Below is a list of indoor units that are compatible with each method.

Method 1: Indoor Units that use function codes:

M-Series:
- SVZ/MVZ
- SLZ
- SEZ

P-Series:
- PKA
- PCA
- PLA
- PEAD
- PVA

Method 2: Indoor Units that cut jumpers/resisters:

M-Series:
- MSZ (All wall mounts)
- MFZ
- MLZ

Remote controllers that can change indoor unit function codes:

- kumo cloud®
- MHK1
- Touch MA (PAR-CT01MAU-SB)
- Wired MA (PAR-33MAA)
- Simple MA (PAC-YT53CRAU)

Using the thermostat Interface to turn the fan off:

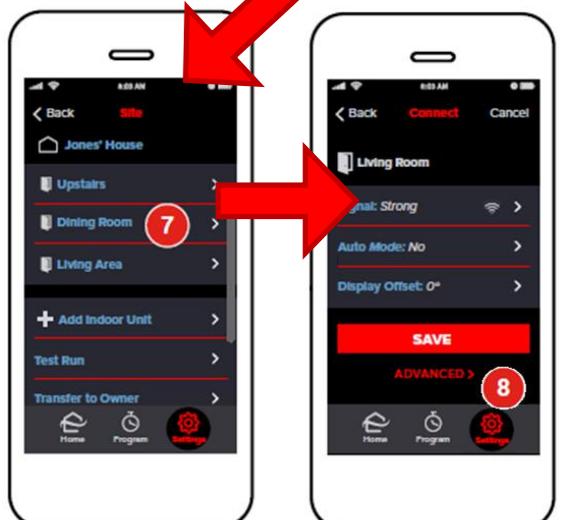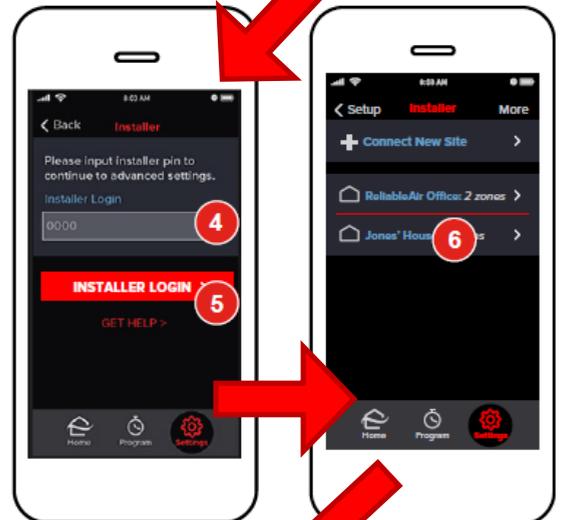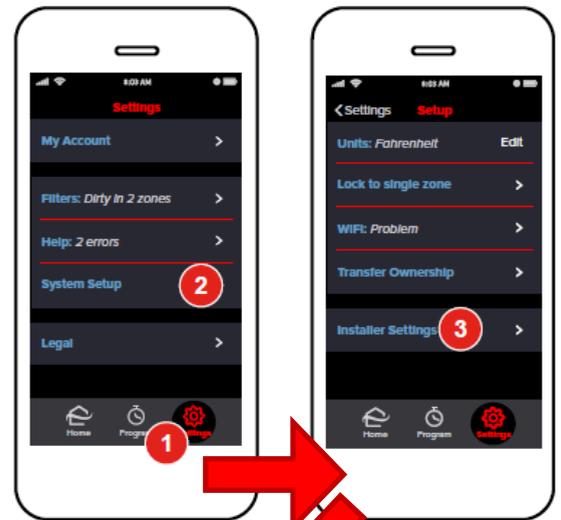- Thermostat Interface (PAC-US444CN-1)

Kumo cloud®

Kumo cloud configuration requires a Wireless Interface and the kumo cloud app

1. Tap **Settings**

2. Tap **System Setup**

3. Tap **Installer Settings**

4. Enter **9999**

5. Tap **Installer Login**

6. Tap the name of the **Site**

7. Tap the name of the **Zone**

8. Tap **Advanced**

9. Select **Thermal OFF Fan**

10. Select the desired **Stop** function

< Back   Thermal Off

🚪 3-Living Room

Set the fan operation for **Thermal Off** *, when the set temp has been met.*

Extra Low in Heat	✓
Stop in Heat	✓
Stop in Cool and Heat (10)	✓
Stop in Cool	
Selectable in Cool and Heat	✓
Ext Lo in Heat,Stop in Cool	

Settings (1)

My Account	>
Filters: Dirty in 2 zones	>
Help: 2 errors	>
System Setup (2)	
Legal	>

< Settings   Setup (3)

Units: Fahrenheit	Edit
Lock to single zone	>
WiFi: Problem	>
Transfer Ownership	>
Installer Settings (3)	>

< Back   Installer

Please input installer pin to continue to advanced settings.
Installer Login
0000 (4)

INSTALLER LOGIN > (5)
GET HELP >

< Setup   Installer   More

+ Connect New Site	>
🏠 ReliableAir Office: 2 zones	>
🏠 Jones' House (6)	>

< Back   Site

🏠 Jones' House

🚪 Upstairs	>
🚪 Dining Room (7)	>
🚪 Living Area	>
+ Add Indoor Unit	>
Test Run	>
Transfer to Owner	>

< Back   Connect   Cancel

🚪 Living Room

Signal: Strong	📶 >
Auto Mode: No	>
Display Offset: 0°	>

SAVE
ADVANCED > (8)

< Back   Advanced

🚪 4-Garage

Duct Type: Ductless	
Min Cool Setpoint: 61°	>
Max Heat Setpoint: 88°	>
Thermal Off Fan (9)	>
System Type: Cool and Heat	>
Dehumidify/Dry: Yes	>
Refresh Settings	>
Settings by Number	>

MHK1

Figure 1

1. Press and hold the **Fan** and **Up** button simultaneously to enter settings mode. (Figure 1).

2. "**Wait**" will be displayed up to 40 seconds.

3. Press the button that indicates **Next** or **Back** to reach the function setting. (Figure 2)

4. Press the **Up** and **Down** arrows to change the mode (number) of the function setting. (Figure 3)
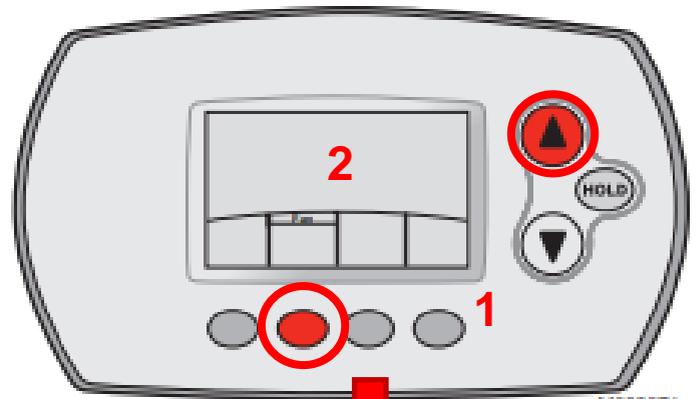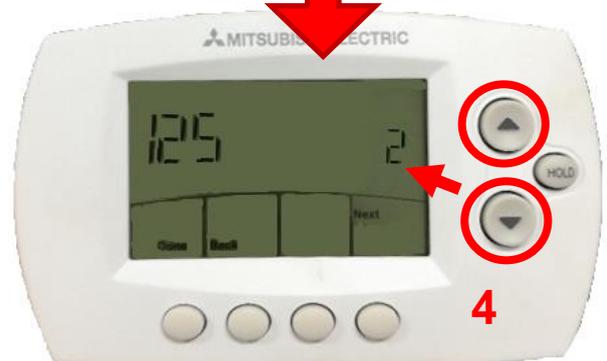
5. Press **Done** when finished.

Figure 2

Setting **125** Thermal OFF Fan (Heating)
1. Extra Low
2. Stop
3. Selectable Fan Speed

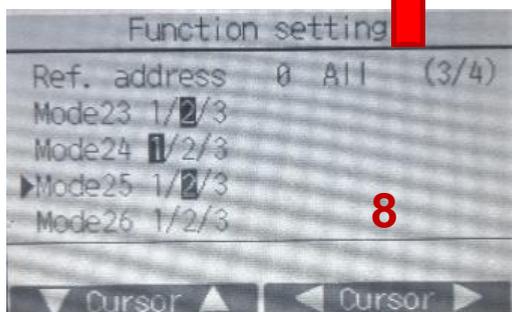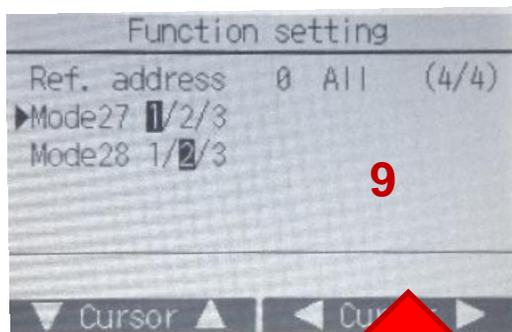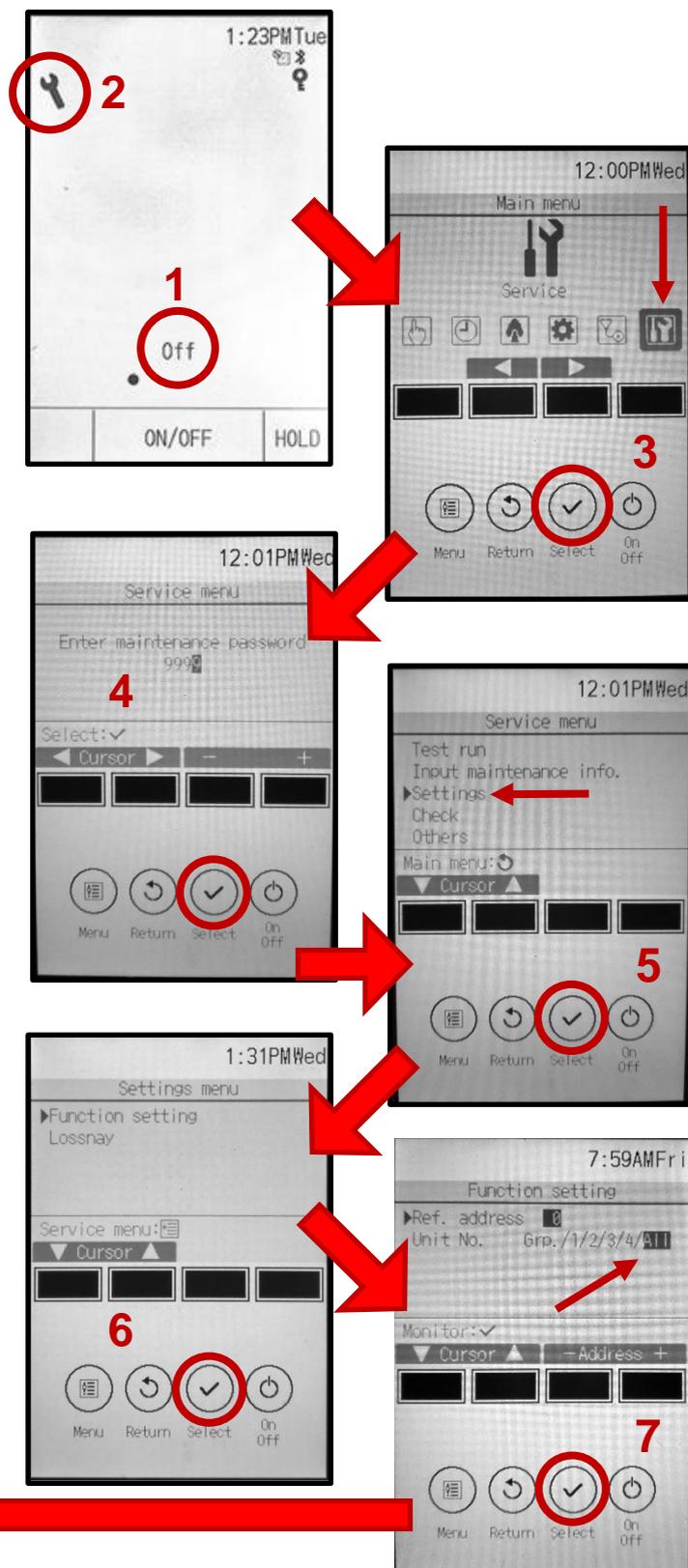Setting **127** Thermal OFF Fan (Cooling)
1. Selectable Fan Speed
2. Stop
3. Not Supported

Figure 3

Touch MA

1. Turn the controller **OFF**

2. Select the **wrench** icon

3. Scroll to the right and select **Service**

4. Enter the maintenance password **9999** and push "Select"

5. Scroll down and select **Settings**

6. Select **Function setting**

7. Leave "Ref. Address" at **0** then scroll down to "Unit No." and select **All**

8. Scroll down to **Mode 25** (heating) or **27** (cooling)

9. Select setting **2** for thermal off in either mode and push "Select" to save the settings

Wired MA

(7) Backlit LCD

(2) Function buttons
F1, F2, F3, and F4 from the left
(6) Operation indicator
(1) ON/OFF button

(4) RETURN button
(3) MENU button
(5) SELECT button

1. Turn the controller **OFF**

2. Push the **Menu** button

3. Select the **Service** menu
   It is on the 3rd page which can be reached using the page button

4. Enter the password **9999** and push the select button

5. Scroll down and select **Function Setting**

6. Leave "Ref. Address" at **0** then scroll down to **"Unit No."** and select **All**

7. Scroll down to **Mode 25** or **27**

8. Select setting **2** for thermal off in either mode and push "Select" to save the settings
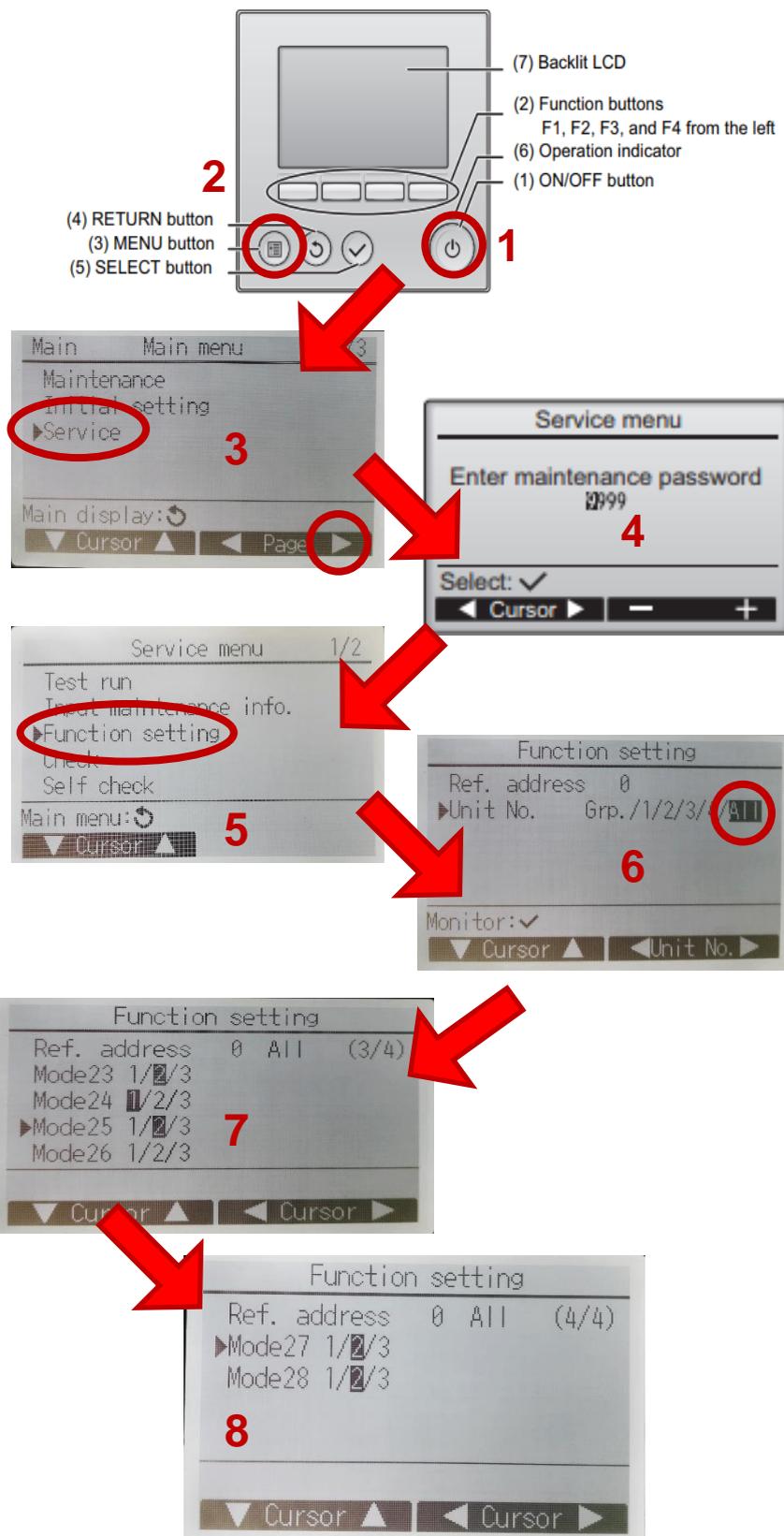   Toggle between settings by using the side arrows

Setting **25** Thermal OFF Fan (Heating)

1. Extra Low
2. **Stop**
3. Selectable Fan Speed

Setting **27** Thermal OFF Fan (Cooling)

1. Selectable Fan Speed
2. **Stop**
3. Not Supported

Simple MA

Make sure the unit is turned **OFF**

1. Press and hold the **B C** and **D** buttons simultaneously until the function settings screen appears

2. Press **B** once so that it displays **00** and then press **D**

3. Press **B** until you see **AL** and then press **A**

4. Press **B** until you reach function **25** (heating) or **27** (cooling) and then press **D**

5. Press **B** or **C** to change the setting number to **2** for thermal off in either mode

   1. Press **D** and repeat **Step 4** if you wish to make changes to both modes at the same time

6. Press **A** to save the settings

7. Press and hold the **B C** and **D** buttons simultaneously to exit the function settings screen
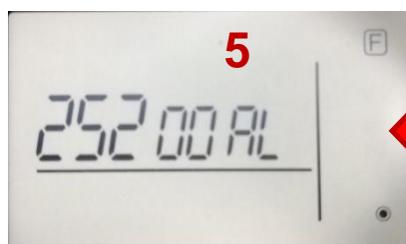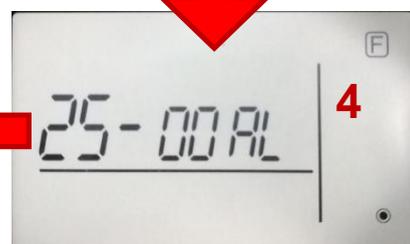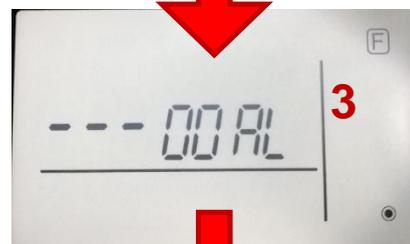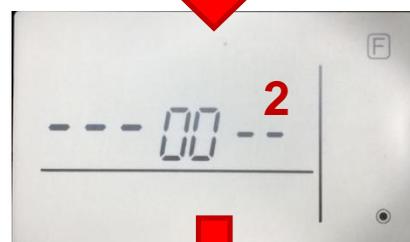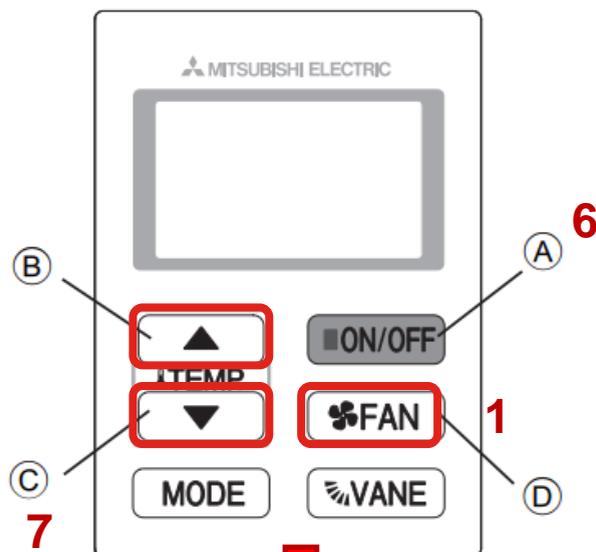
Function Settings lists can be found in the outdoor unit service manuals:

SUZ-KA Service Manual

Function	Settings		Mode No. Wired remote controller (RF thermostat)	Setting No.	● : Initial setting (Factory setting)				Check
					Ceiling concealed SEZ-KD·NA4	Ceiling cassette SLZ-KA·NA	Ceiling suspended PEAD-A·AA	Multi position SVZ-KP·NA	
Filter sign	100h		07 (107)	1					
	2500h			2		●			
	No filter sign indicator			3	●		●	●	
External static pressure	5/15/35/50Pa (0.02/0.06/0.14/0.20in.WG)		08 (108)		Refer to the table below	—	Refer to the table below	Refer to the table below	
			10 (110)		Refer to the table below	—	Refer to the table below	Refer to the table below	
Heater control *2	No heater present		11 (111)	1	—	—	●	●	
	Heater present			2	—	—			
	SEZ, SLZ :Set temp -4.5°F ON PEAD, SVZ :Heater not operation in Defrost/Error		23 (123)	1	●	●	●	●	
	SEZ, SLZ :Set temp -1.8°F ON PEAD, SVZ :Heater not operation in Defrost/Error*4			2					
Set temperature in heating mode *3	Available		24 (124)	1	●	●	●	●	
	Not available			2					
Fan speed during the heating thermo OFF	Extra low		25 (125)	1	●	●	●	●	
	Stop			2					
	Set fan speed			3					
Fan speed during the cooling thermo OFF	Set fan speed		27 (127)	1	●	●	●	●	
	Stop			2					
Detection of abnormality of the pipe temperature (P8)	Available		28 (128)	1	●				
	Not available			2			●	●	

PUZ-NHA6 Service Manual

Function	Settings		Mode No. Wired remote controller (RF thermistor)	Setting No.	●: Initial setting (Factory setting) - : Not available			
					4-Way cassette PLA-BA	Ceiling suspended PCA-KA	Wall mounted	
							PKA-HA(L)	PKA-KA(L)
Filter sign	100h		07 (107)	1			●	●
	2500h			2	●	●		
	"Clean the filter" indicator is not displayed			3				
Air flow (Fan speed)	Quiet		08 (108)	1			-	
	Standard			2	●	●	●	●
	High ceiling			3				-
No.of air outlets	4 directions		09 (109)	1	●	-	-	-
	3 directions			2	-	-	-	-
	2 directions			3	-	-	-	-
Optional high efficiency filter	Not supported		10 (110)	1	●	●	-	-
	Supported			2	-	-	-	-
Vane setting	No vanes (Vane No.3 setting : PLA only)		11 (111)	1			-	-
	Vane No.1 setting			2	●	●	-	-
	Vane No.2 setting			3			-	-
Optional humidifier (PLA only)	Not supported		13 (113)	1	●	-	-	-
	Supported			2	-	-	-	-
Vane differential setting in heating mode (cold wind prevention)	No.1 setting (TH5: 75-82°F (24-28℃))		14 (114)	1				
	No.2 setting (Standard, TH5: 82-90°F (28-32℃))			2	●	●	●	●
	No.3 setting (TH5: 90-100°F (32-38℃))			3				
Swing	Not available : Swing ⎤PLA-BA		23 (123)	1				
	Available : Wave air flow ⎦			2	●	●	●	●
Set temperature in heating mode (4 deg up) *1	Available		24 (124)	1	●	●	●	●
	Not available			2				
Fan speed when the heating thermostat is OFF	Extra low		25 (125)	1	●	●	●	●
	Stop			2				
	Keeping fan speed set by remote controller			3				
Fan speed when the cooling thermostat is OFF	Keeping fan speed set by remote controller		27 (127)	1	●	●	●	●
	Stop			2				
Detection of abnormality of the pipe temperature (P8)	Detect		28 (128)	1	●	●	●	●
	Neglect			2				

Indoor Units with Jumpers

The indoor units that require cutting jumpers/resistors are the following:

- MSZ (All wall mounts)
- MFZ (All floor mounts)
- MLZ (One-way cassettes)

The jumper/resistor labeled:

- **JR01***: Fan speed while thermal off in heating (*or **JRTU** for **MSZ-FH**)
    - Jumper on: Very Low
    - Jumper cut: Stop

- **JRRE**: Fan speed while thermal off in cooling
    - Jumper on: Determined by the remote controller
    - Jumper cut: Stop

*For **MSZ-FH** models the jumper that determines thermal off in heating is **JRTU**

The diagrams for the location of the jumpers can be found in the Indoor Unit Service manuals. The best diagrams are found in the Troubleshooting section under Test point diagram section.

To remove the jumper simply cut both ends using a pair of small cutting pliers.

MSZ-GL: JR01

MSZ-GL: JRRE

Thermostat Interface

The Thermostat Interface can be configured to turn off the indoor unit fan OFF when the third party 24VAC thermostat senses the room temp has met the thermostat's set point.

The Thermostat Interface has two dipswitches SW1-1 & SW1-2 that need to be change from default OFF to ON to have a Delayed Off function set to 0 minutes. This will cause the system to turn OFF, which the indoor unit fan will also turn OFF, when the thermostat is satisfied.

Delayed Off

SW1-1/2: After reaching thermostat set point, the unit will continue to run for a set period of time in order to improve efficiency. The period of time is set by adjusting SW1-1 and SW1-2 according to the following table:

SW1-1	SW1-2	Result
OFF	OFF	5 minutes (Default)
ON	OFF	10 minutes
OFF	ON	30 minutes
ON	ON	0 minutes