

Air Conditioner

Installation manual

Wired remote controller MWR-WE11N

- Thank you for purchasing this Samsung Product.
- Before operating this unit, please read this installation manual carefully and retain it for future reference.



DB68-06359A-02

SAMSUNG

Safety Information

This installation manual explains how to install a Wired Remote Controller connected to the indoor unit of your Trane system air conditioner.

Please read this manual thoroughly before installing the product.

(Please refer to appropriate installation for any optional product installation.)



WARNING

Hazards or unsafe practices that may result in **severe personal injury or death.**



CAUTION

Hazards or unsafe practices that may result in **minor personal injury or property damage.**



WARNING

Contact a service center for installation.

- ▶ Potential risk of malfunction, water leak, electric shock and fire.

Install the product with proper power supply.

- ▶ Potential risk of fire or product damage.

Consult the place of purchase or a contact center to disassemble or repair the product.

- ▶ Potential risk of malfunction, electric shock, or fire.

The electric work must be done by qualified person according to national wiring regulations and installation guide.

- ▶ If an unauthorized person performs the installation, any resulting defects can cause malfunctions, electrical shocks, or fire accidents.

Install the product on a hard and even place that can support its weight.

- ▶ If the place cannot support its weight, the product may fall down and it may cause product damage.

Do not move or reinstall the product on your discretion.

- ▶ Potential risk of electric shock or fire.

Check if the installation work is done correctly according to the installation manual.

- ▶ Incorrect installation may cause electric shock or fire.

When you want to dispose your Wired Remote Controller, ask the service center.

 **CAUTION**

Do not install the product where there's combustible gas.

- ▶ Potential risk of fire and explosion.

Ensure no water gets into the Wired Remote Controller.

- ▶ Potential risk of electric shock or fire.

Install the air conditioner away from direct exposure to sunlight, in room temperature range of 0 °C(32 °F)~39 °C(102 °F).

- ▶ Potential risk of electric shock or malfunction.

Do not handle the product with sharp objects.

- ▶ Potential risk of electric shock or product damage.

Do not install the product in areas exposed to oil or vapor.

- ▶ Potential risk of product damage or malfunction.

Do not put undue stress on the power cable.

- ▶ Potential risk of broken cable and fire.

Do not install the product in areas with frequent use of acid or alkali spray.

- ▶ Potential risk of electric shock or product malfunction

Do not connect power cable to a communication terminal.








- ▶ Potential risk of fire.

Be cautious not to interfere any other electrical devices if the product is installed in a place such as hospital.

- ▶ Potential risk of product malfunction.

Wired Remote Controller Installation

Optional accessories

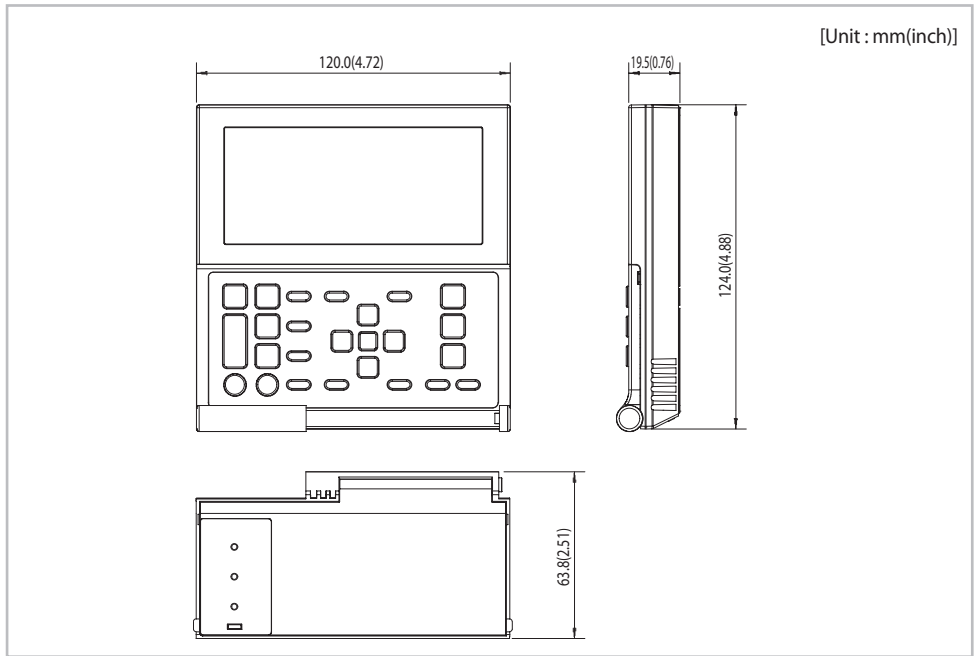
Wired Remote Controller (1)	Cable Tie (2)	Cable Clamp(3)	M4X16 Screw (5)	User Manual (1)	Installation Manual (1)	U Terminal (6)
						



CAUTION

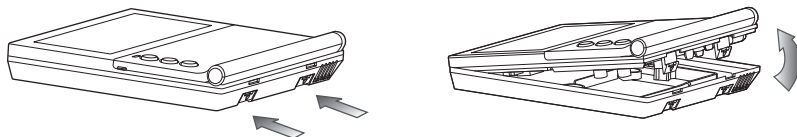
- The Wired Remote Controller should be installed by an installation expert.
- Check and confirm the power is off before installing your Wired Remote Controller.
- Install the Wired Remote Controller cables in accordance with the electrical wiring rules, and allow it to pass through the inner area of the wall so that other people can't reach it.

External Dimensions



Wired Remote Controller Installation

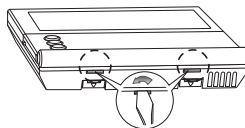
1. Push the two hooks at the bottom of your Wired Remote Controller at the same time, and then pull up the front cover to separate it from the rear cover.



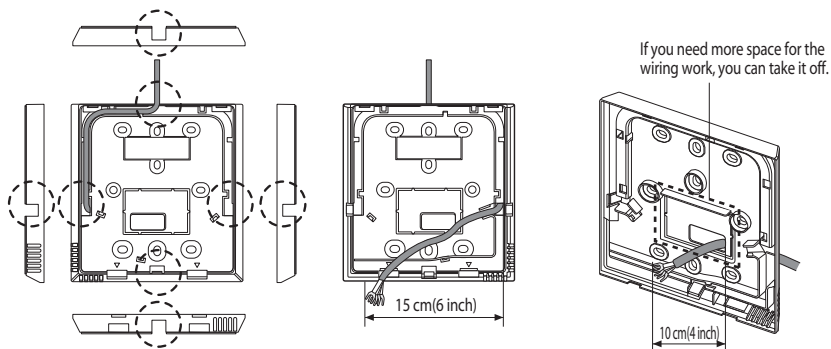
* Push the two hooks at the same time.



- Insert a flat head screwdriver into the square groove in the upper area of the hook to disassemble it easily.



2. Arrange the power cable and the communication cable so that they fit in the housing along the edges of the rear cover.



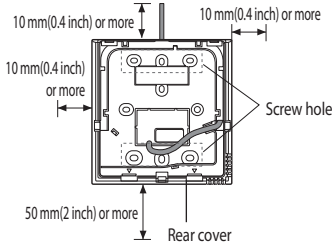
<When the cable is not concealed>

<When the cable is concealed>

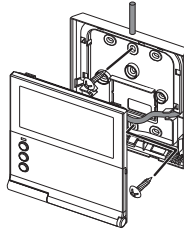
Wired Remote Controller Installation

Wired Remote Controller Installation

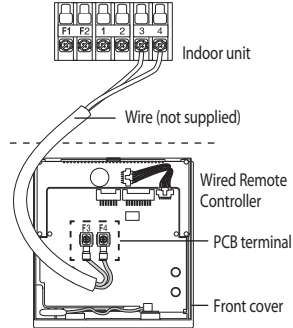
3. Using more than two screws, firmly affix the rear cover of the remote controller to the wall, and then connect the communication & power cable [(F3,F4) or (3, 4)], making sure these cables have reasonable length, to the terminal at the back of the cover.



* Before fixing the rear cover, secure at least 10 mm(0.4 inch) space of upper side, left side, right side, and 50 mm(2 inch) space of bottom side.



* You must fit the screws into the screw holes.

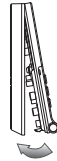


* Do not tighten the screws on the PCB terminal with excessive force.

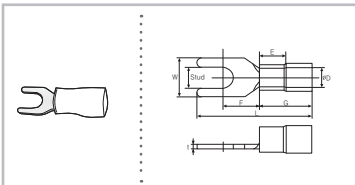
4. Reassemble your Wired Remote Controller.



- Align the controller with the upper groove first, and insert it by turning it downward as shown in the figure. After assembly, check and confirm that no wires are stuck in the gap between the rear and front cover.



- When installing a Wired Remote Controller by using a cable longer than 10 m(32.80 ft), you must install the communication cable and the power cable separately. (Electrical interference can cause your Wired Remote Controller to malfunction.)
- When installing your Wired Remote Controller on the wall, consider the size of the wire hole, and select a wire with a proper thickness.
- Wire that is connectable to Wired Remote Controller PCB.
 - If you install the Wired Remote Controller by reclaiming, install it according to U-terminal cable specification.
 - If you install the Wired Remote Controller by using two pieces of PVC wire, remove the 30 cm(12 inch) of the sheath of the cable and install it only with the two pieces of wires. (Recommended specification: AWG20)
- The following are the specs of the compression ring terminal connected to your Wired Remote Controller PCB.

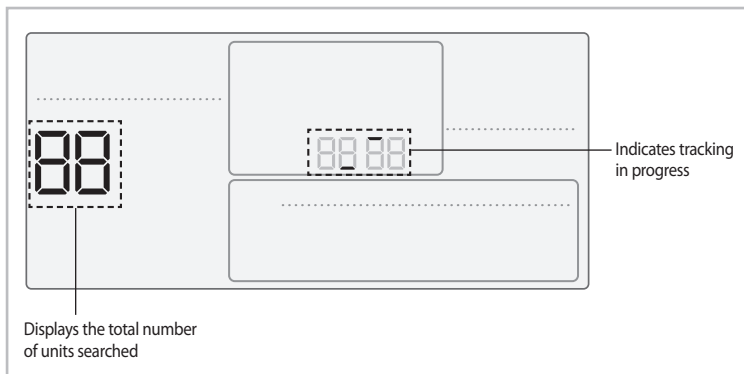


Range of Permitted Wires	Rated Size	Stud Size	Basic Size [mm (inch)]							
			t	øD	G	E	F	W	L	
AWG	mm ² (inch ²)	mm ² (inch ²)	mm (inch)	t	øD	G	E	F	W	L
22~16	0.25~1.65 (0.0003 ~ 0.0025)	1.5 (0.0023)	3 (0.1181)	0.7 (0.0275)	3.8 (0.1496)	10.0 (0.3937)	4.5 (0.1771)	6.5 (0.2559)	6.0 (0.2362)	21.2 (0.8346)

* Maximum distance for connecting communication and power cable: 100 m(3.280 ft)

- Screws on the PCB terminal must be tightened with less than 6N-cm tightening torque. If the tightening torque is greater, it may damage the screw thread.

Tracking Your Indoor Unit from the Wired Remote Controller



1. Tracking of your Wired Remote Controller will automatically start when you turn on the power after installation.
2. If you want to perform tracking again after installation, then press the **Delete** and **ESC** buttons at the same time for more than five seconds.
 - ▶ The system will reset, and tracking will start again.
3. During tracking, the total number of currently searched indoor units and ventilator(ERV) will be displayed.
4. It may take about 5 minutes at initial installation or when you re-set the Master setting.



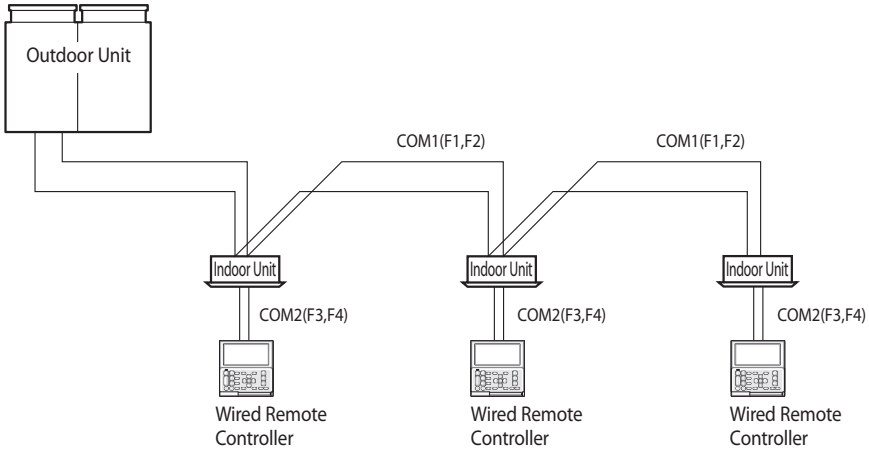
- If you want to perform tracking again after installation, then press the **Delete** and **ESC** buttons at the same time for more than five seconds.

Wired Remote Controller Installation

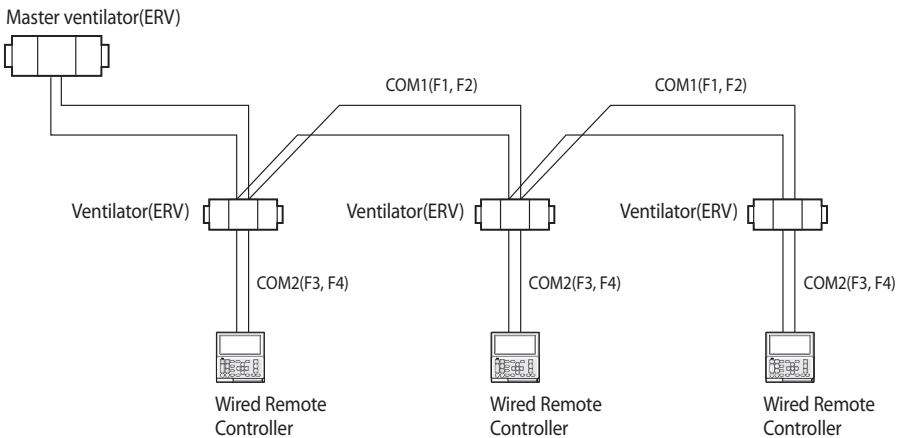
Individual Control with Your Wired Remote Controller

- ▶ Individual control means that you are using one remote controller to control one indoor unit or ventilator(ERV).

When Connected to an Indoor Unit Only



When Connected to an ventilator(ERV) Only



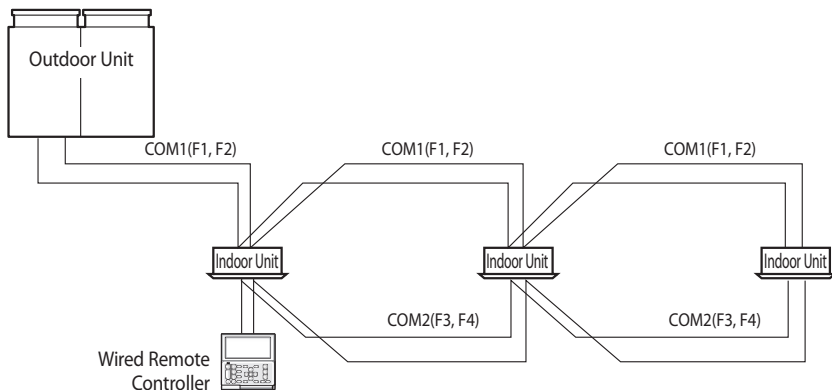
- Regardless of the indoor group address (RMC address) or the ventilator(ERV) group address, only the indoor unit connected to COM2 is individually controlled.

Group Control with Your Wired Remote Controller

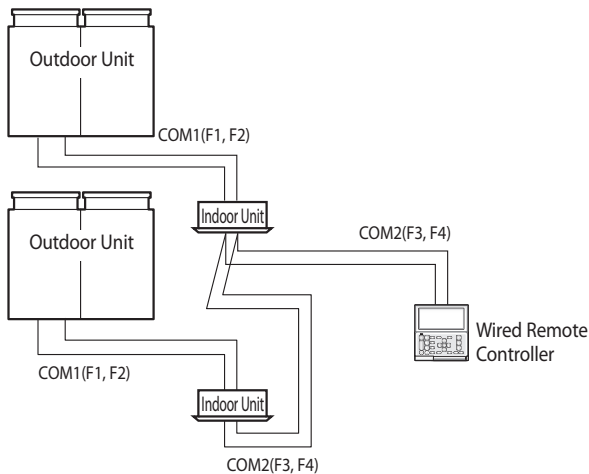
- ▶ Group control means that you are using one Wired Remote Controller to control two or more indoor units and ventilator(ERV) at the same time.

When Connected to an Indoor Unit Only

(1) Using One Wired Remote Controller to control three indoor Units



(2) Using One Wired Remote Controller to control indoor units connected to different outdoor unit

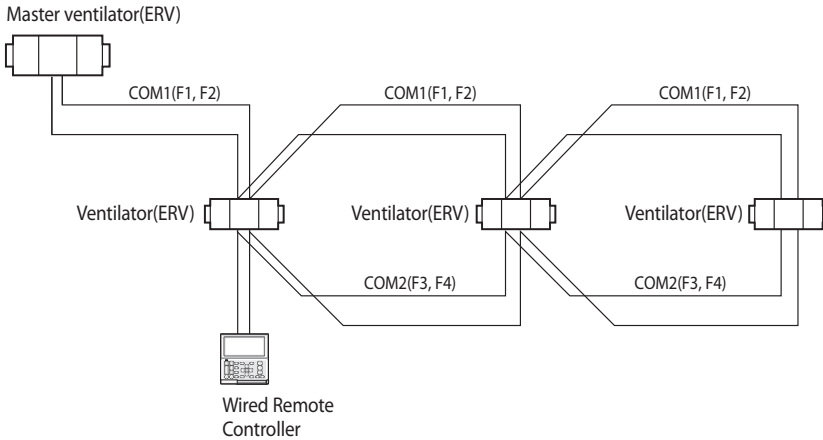


- Regardless of the indoor unit's group address (RMC address), only the indoor units connected to COM2 are controlled in group.
- Regardless of your outdoor units, you can control a maximum of 16 indoor units as a group.
- Address of each outdoor units must be set differently when group control indoor units connected to the other outdoor unit.

Wired Remote Controller Installation

When Connected to an ventilator(ERV) Only

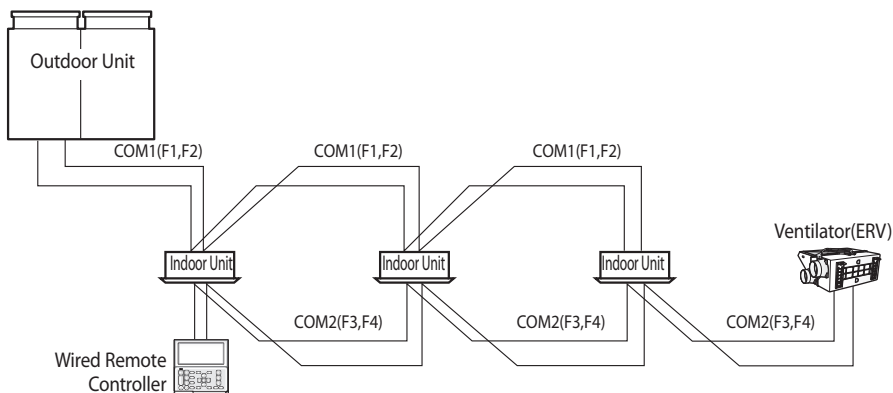
(1) Using One Wired Remote Controller to Control Three ventilator(ERV)



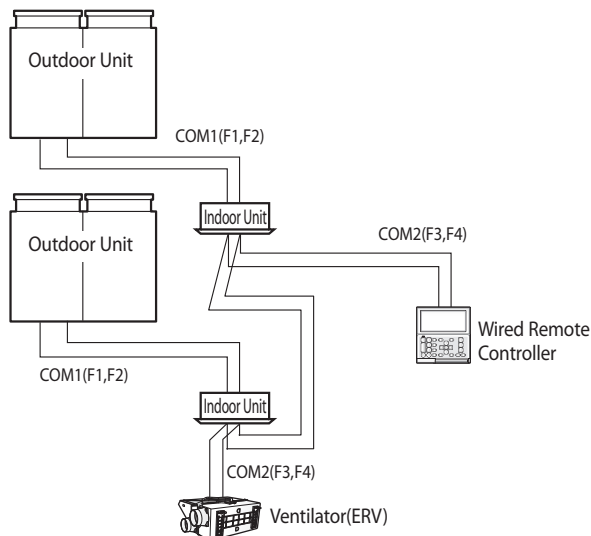
- Regardless of the ventilator(ERV)'s group address (RMC address), only the ventilator(ERV) connected to COM2 controlled in group.

When Connected to an Indoor Unit and an ventilator(ERV) together

(1) Using One Wired Remote Controller to control multiple indoor units and ventilator(ERV)



(2) Using One Wired Remote Controller to control indoor units connected to different outdoor unit and ventilator(ERV)



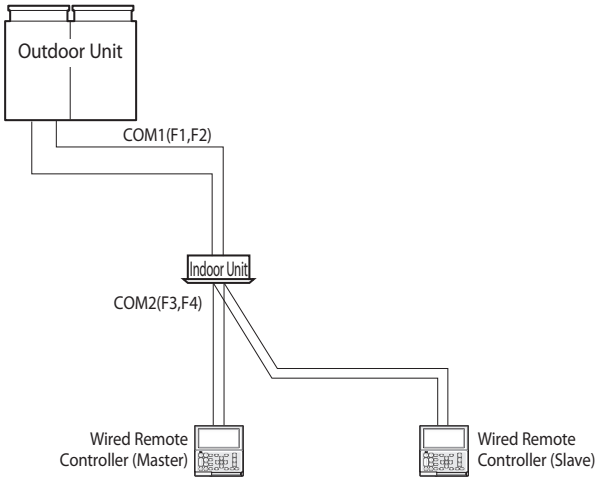
- Regardless of the indoor unit's group address (RMC address), only the indoor units and ventilator(ERV) connected to COM2 are controlled in group.
- When controlling indoor units and ventilator(ERV) together in group, you can control maximum of 16 indoor units and ventilator(ERV).
- If you want to use the power saving function, you have to connect Wired Remote Controller to only one indoor unit and one ventilator(ERV).

Wired Remote Controller Installation

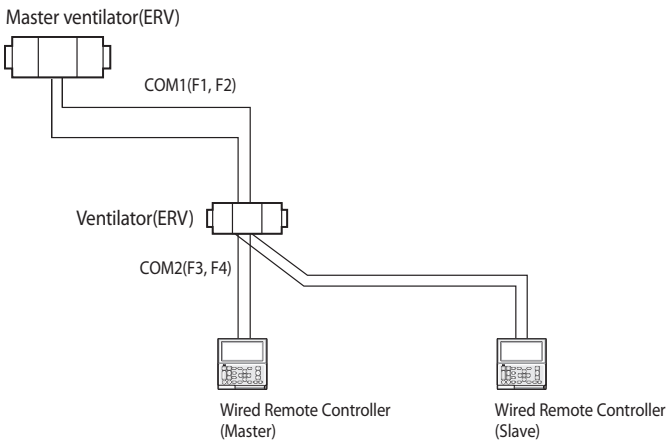
Controlling 2-Remote controller

- ▶ 2-Remote controller is controlling one indoor unit, ventilator(ERV) or one group of indoor units and ventilator(ERV) with two remote controllers.

When Connected to an Indoor Unit Only

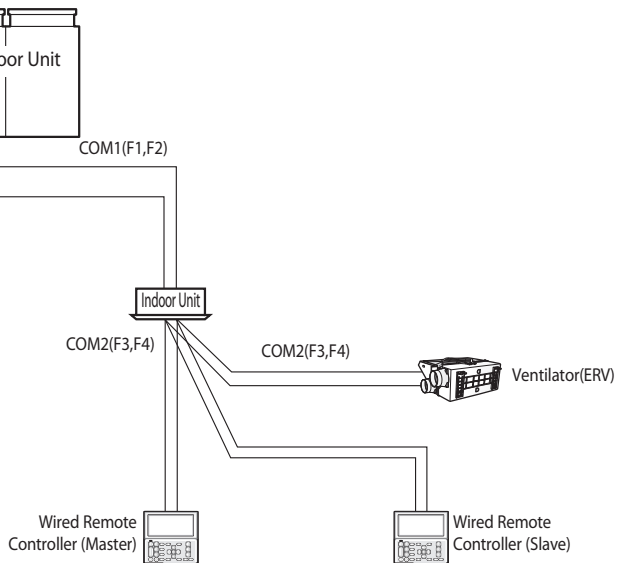


When Connected to an ventilator(ERV) Only



- For the slave Wired Remote Controller settings, please refer to the sections about the additional functions of the Wired Remote Controller. (Refer to page19)
0: Master, 1: Slave

When Connected to an Indoor Unit and an ventilator(ERV) Together



- Regardless of the indoor unit group address (RMC address), only the indoor units connected to COM2 are controlled by 2-remote controller.
- For the slave Wired Remote Controller settings, please refer to the sections about the additional functions of the Wired Remote Controller. (Refer to page19)
0 : Master, 1 : Slave

Wired Remote Controller Installation

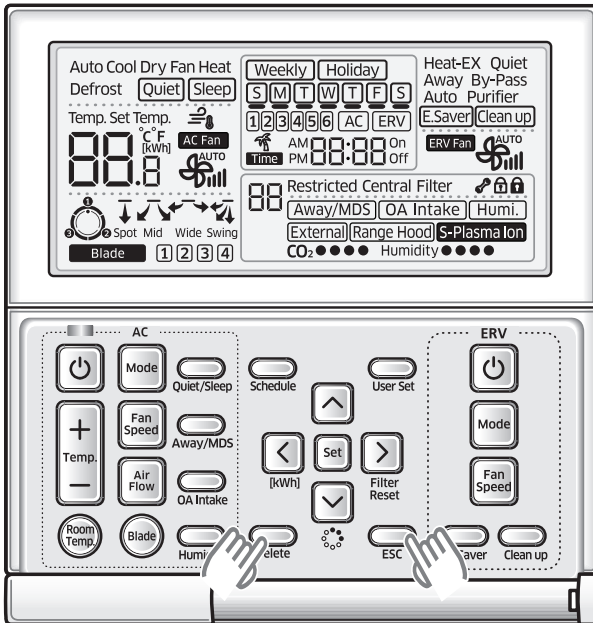
Initializing Your Wired Remote Controller Communication

Wired remote controller must be initialized if installation status changes.

- Changing number of ventilator (ERV)/indoor unit or their address

1. Press the **Delete** and **ESC** buttons at the same time for more than five seconds.

- ▶ Your Wired Remote Controller will be initialized, and the device will search for the indoor units/ventilator(ERV) connected to your Wired Remote Controller again.



Errors Displayed on Your Wired Remote Controller

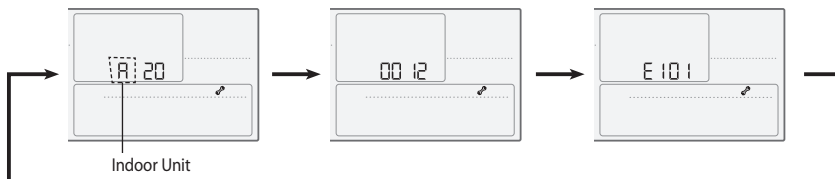
- ▶ Error codes for the Wired Remote Controller and the product connected to your Wired Remote Controller will be displayed in the LCD display.



LCD Display

When an Error Occurs in Your Indoor/Outdoor Units (Product Group Display: A)

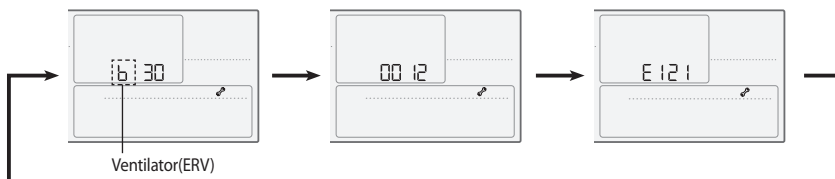
- ▶ The product address for the error will be displayed, followed by the error code.
Example : Error 101 occurs for Indoor Unit No. 200012.



Indoor Unit

When an Error Occurs in Your Ventilator(ERV) (Product Group Display: B)

- ▶ The product address for the error will be displayed, followed by the error code.
Example : Error 121 has occurred at ventilator(ERV) No. 300012.



Ventilator(ERV)

When an Error Occurs in Your Wired Remote Controller

- ▶ Only an error code will be displayed. (No address will be displayed.)
Example : Error 601 has occurred at your Wired Remote Controller.



Wired Remote Controller Installation

Wired Remote Controller Error Codes

Display	Description
601	Communication error between wired remote controller and indoor/ERV units after successful communication.
602	No communication between Master(Main) and Slave(Sub) wired remote controllers.
604	When tracking between wired remote controller and indoor unit/ventilator (ERV) is not complete for more than 3 minutes (Including communication error between indoor units and outdoor units)
618	Over 16 indoor/ERV indoor units installed.
627	Two or more wired remote controllers set as Slave(SUB).
653	Temperature sensor Open/Short error.
654	EEPROM error

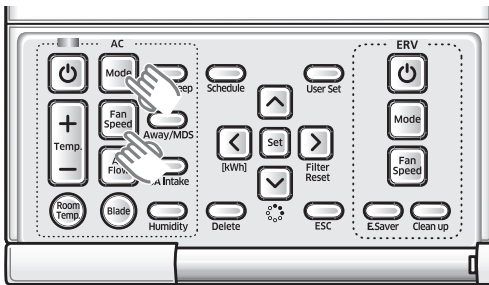


- For the error codes for your indoor/outdoor units and ventilator(ERV), refer to the installation manual of each device.



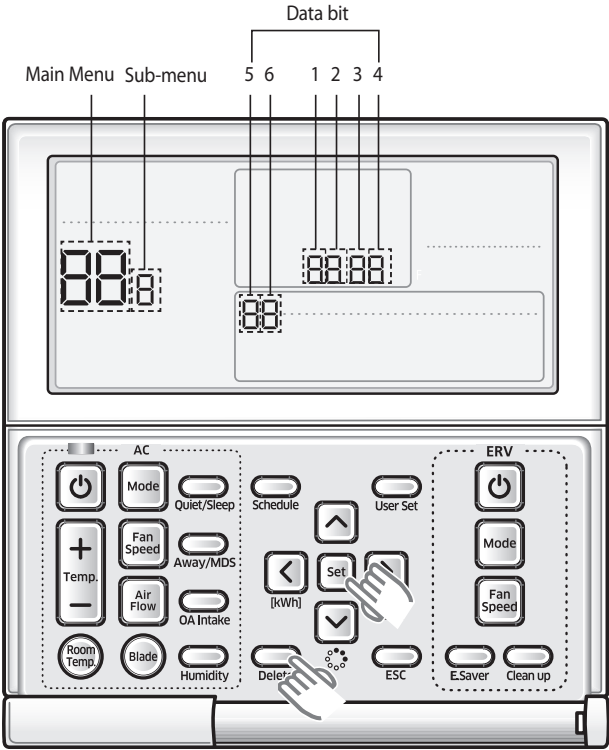
[Setting/Cancelling the Mode master indoor unit]

- Mode master indoor unit setting is simply selecting an indoor unit that will become standard among many indoor units to prevent mixed operation (which one or more indoor units operating in different operation mode).
 - Setting: Connect just 1 indoor unit and stop the operation. Then press and hold the **Mode** button for 5 seconds to set the indoor unit as 'Mode master indoor unit'
 - Cancelling: Connect just 1 indoor unit and stop the operation. Then press and hold the **Fan speed** button for 5 seconds to cancel the 'Mode master indoor unit' setting.



Wired Remote Controller Installation/Service Mode

Additional Functions of Your Wired Remote Controller



Wired Remote Controller Installation/Service Mode

1. If you want to use the various additional functions for your Wired Remote Controller, press the **Delete** and **Set** buttons at the same time for more than three seconds.
 - ▶ You will enter the additional function settings, and the [main menu] will be displayed.
2. Refer to the list of additional functions for your Wired Remote Controller on the next page, and select the desired menu.
 - ▶ Using the [**^**]/[**V**] buttons, select a main menu number and press the [**>**] button to enter the sub-menu setting screen.
 - ▶ Using the [**^**]/[**V**] buttons, select a sub-menu number and press the [**>**] button to enter data setting screen.
 - ▶ When you enter the setting stage, the current setting will be displayed.
 - ▶ Refer to the chart for data settings.
 - ▶ Using the [**^**]/[**V**] buttons, select the settings. Press the [**>**] button to move to the next setting.
 - ▶ Press the **Set** button to save the settings and exit to the sub-menu setting screen.
 - ▶ Press the **ESC** button to exit to normal mode.



NOTE

- While setting the data, you can use the [**<**]/[**>**] buttons to set the range of Data bit.
- While configuring the setting, press the **ESC** button to exit to the setting sub-menu without saving your changes.

Additional Functions of Your Wired Remote Controller



- 'NONE' will be displayed if the indoor unit does not support the function.
In some cases, the setting may not possible or it may be not applied though it is set on the unit.
- If communication initialization is needed after the setting, the system will reset automatically and communication will be initialized.

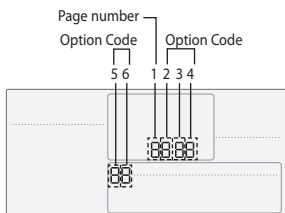
Main menu	Sub menu	Function	Data bit	Factory setting	Description	Unit	
1	1	Wireless remote controller Option setting/checking (1)	Cooling/Heating selection	1	0	0 – Cooling/Heating, 1 – Cooling only	-
			Use of wireless remote controller	2	1	0 – No use, 1 – Use	-
			MAIN/SUB wired remote controller	3	0	0 – MAIN, 1 – SUB	-
			Temperature unit	4	0	0 – Celcius(°C), 1 – Fahrenheit(°F)	-
	2	Wireless remote controller Option setting/checking (2)	Temperature sensor selection	1	0	0 – Indoor unit, 1 – Wired remote controller	-
			Use of average temperature	2	0	0 – No use, 1 – Use	-
			Use of Auto mode	3	1	0 – No use, 1 – Use	-
			Temperature display	4	0	0 – Set temperature, 1 – Room temperature	-
			AC On/Off button function	5	1	0 – Indoor unit + ERV, 1 – Indoor unit only, 2 – ERV only,	-
	3	Blade setting/checking	Lock of Blade1	1	0	0 – Unlock, 1 – lock	-
			Lock of Blade2	2	0	0 – Unlock, 1 – lock	-
			Lock of Blade3	3	0	0 – Unlock, 1 – lock	-
			Lock of Blade4	4	0	0 – Unlock, 1 – lock	-
	4	ERV option Setting/checking	Use of By-Pass mode	1	0	0 – No use, 1 – Use	-
			Use of Auto mode	2	0	0 – No use, 1 – Use	-
			Use of air purification mode	3	0	0 – No use, 1 – Use	-
			Use of external control	4	0	0 – No use, 1 – Use	-
	5	Room Temperature compensation	Temperature control reference	1,2,3	0	-9 ~ 40 °C (15~104 °F)	0.1 °C
			Temperature compensation value	4,5,6	0	-9.9 ~ 9.9 °C	0.1 °C
	6	Number of connected units	Number of indoor units	1,2	-	0 ~ 16	-
Number of ERVs			3,4	-	0 ~ 16	-	
7		Desired temperature increment/decrement (°C only)	1	0	0-1 °C, 1-0.5 °C, 2-0.1 °C	-	
8	Set/Check ERV Energy saving operation	Select individual Energy saving operation	1	0	0-ON/OFF alternating operation, 1-Outdoor air cooling operation for different temperature setting	-	
		Minimum temperature of outdoor air cooling	3,4	15	5 ~ 15 °C (41~59 °F)	°C	
0		Factory option setting	1	0	0 – Unchanged 1 – Factory setting	-	
2	1	Software code	1~6	-	Software code	-	
	2	Software version	1~6	-	Software version	-	

Wired Remote Controller Installation/Service Mode

Main menu	Sub menu	Function	Data bit	Factory setting	Description	Unit	
	1	Indoor unit room temperature	1,2,3	-	Room temperature	°C	
	2	Indoor unit EVA IN temperature	1,2,3	-	EVA IN temperature	°C	
	3	Indoor unit EVA OUT temperature	1,2,3	-	EVA OUT temperature	°C	
	4	Indoor unit EEV step	1,2,3	-	EEV step	-	
3	5	Indoor unit option checking (1)	Use of central control	1	-	0 – No use, 1 - Use	-
			Use of drain pump	2	-	0 – No use, 1 - Use	-
			Use of electric heater	3	-	0 – No use, 1 - Use	-
			Use of hot water coil	4	-	0 – No use, 1 - Use	-
	6	Indoor unit option checking (2)	Use of external control	1	-	0 – No use, 1 - Use	-
			Use of RPM compensation	2	-	0 – No use, 1 - Use	-
			Filter time	3	-	0 – 2000 hours, 1 – 1000 hours	-
			Heating temperature compensation	4	-	0-2 °C, 1-5 °C	-
		EEV stop step in heating	5	-	0 – 1/80 steps, 1 – 80	-	
4	1	Setting/Checking the address	12	-	MAIN address (00H~4FH)	-	
			34	-	MAIN address (00H~4FH)	-	
			56	-	Group address (00H~FEH)	-	
	2	Indoor unit/Ventilator (ERV) option setting 2)*	Setting/Checking the product option	1)*	-	Refer to the installation manual of the connected indoor unit/ventilator (ERV)	-
	3		Setting/Checking the installation option 1	1)*	-		-
	4		Setting/Checking the installation option 2	1)*	-		-
7		MCU/Port address setting	1)*	-	MCU address (00 to 15) Port address (A to F)	-	
5	1	Mini AHU setting/checking	RPM setting/checking	3,4	-	0~31 steps	1 step
			Humidity setting/checking	6	-	0 – 30, 1 - 40, 2 - 50	-
	2	Setting/Checking the discharge temperature of the indoor unit	Use of discharge temperature control	1	-	0 – No use, 1 - Use	-
			Cooling discharge temperature	3,4	-	8~25 °C (46~77 °F)	1 °C
			Heating discharge temperature	5,6	-	18~43 °C (64~109 °F)	1 °C
3	Fresh Duct discharge temperature checking	Cooling discharge temperature	1,2	-	13~25 °C (55.4~77 °F)	1 °C	
		Heating discharge temperature	3,4	-	18~30 °C (64~86 °F)	1 °C	
6	1	ERV Plus setting/checking	Use of cold air prevention	1	-	0 – No use, 1 - Use	-
			Use of humidification when Heating thermo off	2	-	0 – No use, 1 - Use	-
			Use of fan operation in Defrost	3	-	0 – No use, 1 - Use	-
			Use of humidification when Heating	4	-	0 – No use, 1 - Use	-
	2	ERV Plus temperature setting/checking	Cooling	1,2	-	15~30 °C (59~86 °F)	1 °C
			Heating	3,4	-	15~30 °C (59~86 °F)	1 °C
	3	ERV Plus Auto mode temperature setting/checking	Set temperature	1,2	-	15~30 °C (59~86 °F)	1 °C
			Set temperature difference	3,4	-	5~15 °C (41~59 °F)	1 °C
	4		Setting/checking the compensating temperature A under the Heating EEV control for ERV Plus	1,2	-	0~10 °C	1 °C
			Checking the compensating temperature B under the Heating EEV control for ERV Plus	3	-	0 – Non use of humidifier (0 °C/32 °F) 1 – Use humidifier(10 °C/50 °F)	-
5	ERV Plus fan RPM setting/ checking	Air supply RPM	1,2	-	10~27 steps	1 step	
		Air exhaustion RPM	3,4	-	10~27 steps	1 step	
7	1	View master setting/checking (F3F4 line Indoor unit master)	Indoor unit View master setting/ checking	123456	-	address	-
			ERV unit View master setting/ checking	123456	-	address	-
	3	Mode master indoor unit setting/checking (F1F2 line Indoor unit master) 3)*	Mode master indoor unit checking	123456	-	address	-
			Mode master indoor unit setting	1	-	0-No use, 1-Use, 2-Release	-

Main menu	Sub menu	Function	Data bit	Factory setting	Description	Unit	
8	1	Status of Automatic Air-Volume setting	1	0	0 – OFF (Disabled or Cancelled) 1 – Completion 2 – Running Automatic Air-Volume	-	
	2	Automatic Air-Volume Operation	1	0	0 – Disable, 1 – Enable	-	
	3	Automatic Air-Volume Voltage Setting	1	2	1~3 steps (2 - Default) For the specific voltage of model, please refer to the installation manual of each product.	-	
0	1	Reset	Factory setting	1	0	0-No use, 1-Reset	-
	2		Power Master Reset 4)*	1	0	0-No use, 1-Reset	-
	3		Addressing Reset	1	0	0-No use, 1-Reset	-

1)* The total option codes are 24 digits. You can set six digits at a time and it is distinguished by page number. Press [>] button to go to the next page.



SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	*	*	*	*	*

Page number

SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	*	*	*	*	*

Page number

SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	*	*	*	*	*

Page number

SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	*	*	*	*	*

Page number

* Regardless of Celsius and Fahrenheit setting, service mode setting is available only with Celsius.

- 2)* If you enter Main menu #4, you must select the targeted indoor unit/ventilator (ERV) address and then select the sub menu.
- 3)* Setting is available when there is only 1 indoor unit connection and while the indoor unit operation is not operating.
- 4)* Power Master Reset is a setting needed to supply optimized power to wired remote controller when multiple indoor units are connected to wired remote controller in a group.

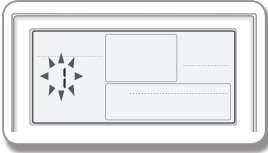


Address is displayed in hexadecimal. Please refer to the following table.

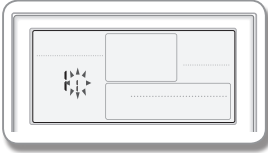
Hexadecimal	Decimal	Hexadecimal	Decimal	Hexadecimal	Decimal	Hexadecimal	Decimal	Hexadecimal	Decimal
00	0	10	16	20	32	30	48	40	64
01	1	11	17	21	33	31	49	41	65
02	2	12	18	22	34	32	50	42	66
03	3	13	19	23	35	33	51	43	67
04	4	14	20	24	36	34	52	44	68
05	5	15	21	25	37	35	53	45	69
06	6	16	22	26	38	36	54	46	70
07	7	17	23	27	39	37	55	47	71
08	8	18	24	28	40	38	56	48	72
09	9	19	25	29	41	39	57	49	73
0A	10	1A	26	2A	42	3A	58	4A	74
0B	11	1B	27	2B	43	3B	59	4B	75
0C	12	1C	28	2C	44	3C	60	4C	76
0D	13	1D	29	2D	45	3D	61	4D	77
0E	14	1E	30	2E	46	3E	62	4E	78
0F	15	1F	31	2F	47	3F	63	4F	79

Wired Remote Controller Installation/Service Mode

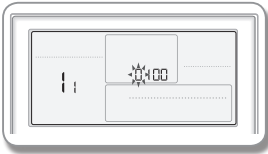
The example of Wired Remote Controller option setting method



1. Press **Delete** and **Set** buttons at the same time for more than 3 seconds.
 - ▶ (Main menu) will be displayed and then press the [**Δ**]/[**V**] button to select no.1.

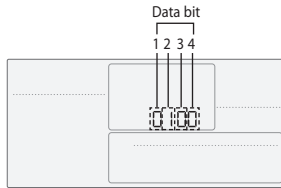


2. Press [**>**] button to select the number you will set.
 - ▶ Press [**Δ**]/[**V**] button and select no.1

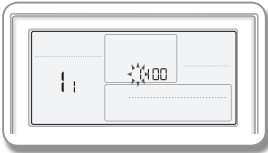


3. Press [**>**] button to enter the data setting stage.
 - ▶ When you enter the setting stage, the current setting value will be displayed.

Example of data setting stage display



- Data1: Both cooling and heating of an indoor unit
- Data2: Use wireless remote controller
- Data3: Master wired remote controller
- Data4: Temperature display – Celsius (°C)



4. Press [**<**]/[**>**] button to select the desired Data1.
 - ▶ Press [**<**]/[**>**] button to select no.1.
 - ▶ The wired remote controller option is set from both cooling and heating to cooling only.

5. Press **Set** button to complete the option setting.
 - ▶ Save the setting value and exit to sub menu.

6. Press **ESC** button to exit to normal mode.

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