Descriptions

Enables to control multiple air conditioners from a (remote) location by connecting the On/Off contact point. It can also control the operation of the relay with error signals by connecting the MA remote controller.

Applicable Models

- MSZ-RW25,35,50VG
- MSZ-LN18,25,35,50,60VG2W,V,R,B
- MSZ-FT25,35,50VG
- MSZ-AP15,20VG
- MSZ-AP25,35,42,50,60,71VG
- MSZ-EF18,22,25,35,42,50VGW,B,S
- MSZ-BT20,25,35,50VG
- MSZ-HR25,35,42,50,60,71VF
- MSZ-DW25,35,50VF
- MSY-TP35,50VF
- MSZ-FH25,35,50VE2
- MSZ-SF15,20VA
- MSZ-SF25,35,42,50VE3
- MSZ-GF60,71VE2
- MSZ-WN25,35VA
- MSZ-DM25,35VA

Specifications

MF7.	-KT25	35	50	60\	G/

- MFZ-KW25,35,50,60VG
- MLZ-KP25,35,50VF

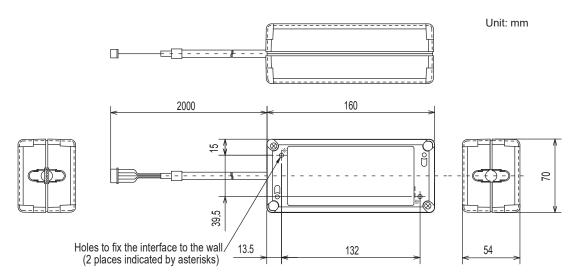
S-series models

- In the case the outdoor unit is SUZ or MXZ,
- P-series models: the indoor of P-series can be connected.

(For grouping SUZ/MXZ outdoor units with P or S series indoor units, interface is required)

Power		12V DC (supplied from indoor unit)
Operating conditions		Indoor only (ambient temperature: 0 to 40°C, no condensation)
Connection of MA smooth remote controller	Communication cable	2-wire (recommended: optional PAC remote controller cable PAC-YT81HC)
/ MA deluxe remote controller	Communication cable distance	Max. 10m
Indoor unit connecting cable	-	Dedicated 5-wire cable
Weight		360 g (including indoor unit connecting cable)

Dimensions



INDOOR UNIT

How to Use / How to Install

1. Before Installation

1.1. How to Use the SYSTEM CONTROL Interface.

Functions

Connecting with M-NET system (Fig. 2-1)

The room air conditioner can be managed centralized or individually by the system controller using M-NET communications control.

Used as wired remote controller (Fig. 2-2)

MA remote controller can be used as a wired remote controller.

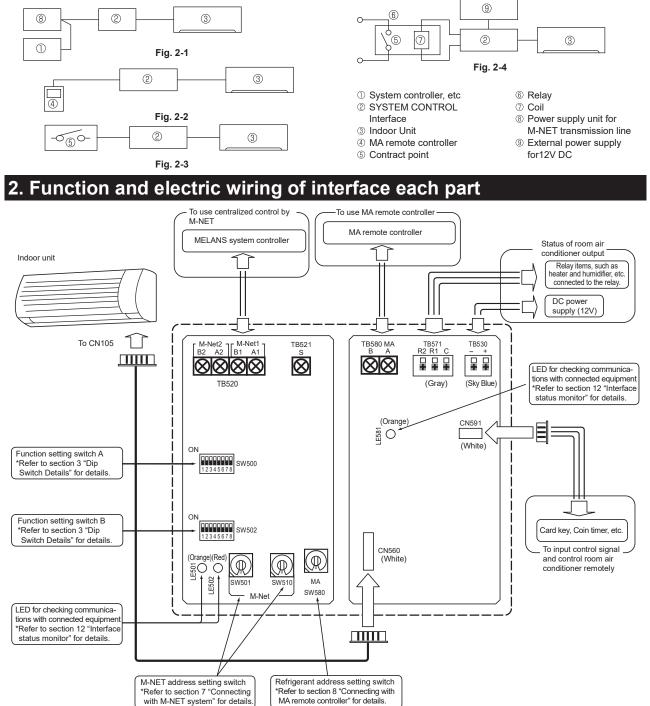
Remote control (Fig. 2-3)

Contact signals enable inputting of ON/OFF, prohibiting/allowing operation, and heating/cooling.

Status indicator output (Fig. 2-4)

Signals of ON/OFF, error/normal, heater ON/OFF, and humidifier ON/OFF are output.

Sample System Configuration



3. Dip Switch Details

		I				
Functions	SW No.	No. Functions		OFF (Factory setting)	ON	
	SW500-1	Output setting		Switching output of heater ON/OFF (single operation)		
	SW500-2	Turn on/off with power		Not available	Available	
	SW500-3	Room temperature detector		Indoor unit	MA remote controller	
	SW500-4 SW500-5	Output se	tting	Switching output of ON/OFF, error/normal, here	ater ON/OFF, and humidifier ON/OFF	
Function setting	SW500-6	Input setti	ng	Input of ON/OFF and prohibiting/allowing operation	Input of ON/OFF and heating/cooling	
Switch A	SW500-7	Interface s switching	status display	LE501: Confirmation of communications with indoor unit LE502: Confirmation of communications with M-NET LE581: Confirmation of supplying power to MA remote controller	LE501: Confirmation of communications with MA remote controller LE502: Extinguished LE581: Confirmation of supplying power to MA remote controller	
	SW500-8	Not in use		- (Set to OFF)	—	
	SW502-1	Output switching		12 VDC output during operation or error, etc	12 VDC output during stop or operating normally, etc	
	SW502-2	Input mode		Level contact	Pulse contact	
	SW502-3	Setting of range of prohibited operations by contact point		M-NET system controller ON/OFF operation allowed	M-NET system controller ON/OFF operation prohibited	
		Input	Input mode when level contact	Running or operating the machine is prohibited, etc by short circuiting the level contact	Running or operating machine is prohibited, etc by level contact opening	
Function setting		switching	Input mode when pulse contact	ON/OFF is inverted by pressing pulse contact	ON or OFF no matter how many times pulse contact is pressed	
Switch B	SW502-5	Behavior contact po	when operation by bint is prohibited	State before prohibition of operation by contact point	Air conditioner running stop	
	SW502-6	Behavior when prohibition of operation by contact point is canceled		State before canceling prohibition of operation by contact point	Running air conditioner	
	SW502-7	Dual auto	mode*	Available	Not available	
	SW502-8	in the sam running gr	nen P series is mixed ne group (only when oup operation using mote controller)	No mixture	Mixed	

* This function cannot be used regardless of the setting of SW502-7 when any of System controller, ME remote controller, or MA remote controller which are not compatible with Dual auto mode are connected to this interface unit.

This function cannot be used regardless of the setting of SW502-7 when the air conditioner which is not compatible with Dual auto mode is set in the same group. When you connect MA remote controller to an indoor unit, Dual auto mode is not available. (Set SW502-7 ON.)

When you use this function, the operation mode cannot be set to automatic by the remote controller attached to the air conditioner.

4. Parts

	Accessory										
0	Interface unit [with connecting cable (5-core)]	in the second se	1	6	Mounting cord clamps (medium)		4	0	Fasteners (for joining the wires)	-	5
0	Screws for mounting 3.5×12	(Jun	2	6	Mounting cord clamps (large)		3	0	Lead wires (3-core)		1
0	Cushioning material (with adhesive)		1	0	Screws for mounting 3.5 × 12 ④, ⑤ and ⑥ (Use when attaching the clamps to the interface unit)	(Chille	4	Ð	Screws for mounting 4 × 10 (Use when fixing near the room air conditioner)	Om	1
0	Mounting cord clamps (small)		2	8	Cable ties		9	Ð	Screws for mounting 4 x 16 (Use when joining room air conditioner parts)	Omm	1

	Item to be Prepare at the Installation Site				
۵	M-NET communication cable	 2-core shield cables CVVS/CPEVS,1.25 mm² [AWG 16] or more.* When cross-wired by same terminal box, 1.25 mm² [AWG 16] is used. CPEVS: PE insulated PVC jacketed shielded communication cable CVVS: PVC insulated PVC jacketed shielded control cable PE: Polyethylene PVC: Polyvinyl chloride 			
6	Remote control cable (for connecting the ME Remote Controller)	 2-core shield cables CVVS/CPEVS* When the distance from the interface unit 1 is less than 10 m: 0.3 mm²[33 ft.: AWG 22] or more.* When the distance from the interface unit 1 is not less than 10 m: 1.25 mm² [33 ft.: AWG 16] or more.* 			
œ	Remote control cable (for connecting the MA Remote Controller)	2-core sheath cable 0.3 mm ² to 1.25 mm ^{2*} [AWG 22 to 16]*			
0	Signal cable (also used as extension cable)	 Sheath cable 0.3 mm² [AWG 22] or more.* When remote control: The extension cable of Lead wires ^① When status signal output: The cable for relay connection, or cable for DC power 			
Ø	Related parts sold separately	Prepare the necessary number of parts sold separately as needed for your system.			

* Please use cable with supplementary insulation.

Use wires which have insulation more than the MAX voltage.

MAX voltage is defined according to the law of the country where the interface is used.

INDOOR UNIT

5. Connecting the SYSTEM CONTROL Interface to a room air conditioner

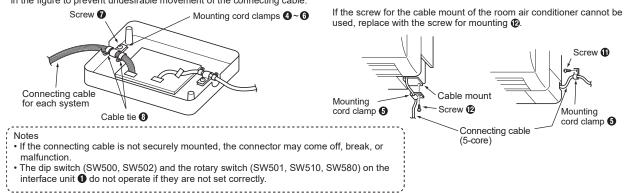
• Connect the interface unit ① and the indoor control board of a room air conditioner using the connecting cable (5-core) that comes with the interface unit ①.

Thin part of the connecting cable Make sure to wire and shield the cable	Interface unit ①		
Room air conditioner so that the customer does not contact it.	Connecting	Warning	
Connect the connecting cable (5-core) that comes with the interface unit 1 to the connector CN105 on the indoor control board of a room air conditioner.	Thick part of the connector	Securely fix the connecting cable in the designated place. Failure to do so may cause an electric shock, fire, or malfunction.	
• The connecting cable (5-core) connected to a room air conditioner shoul	d be wired according to the room air conditioner i	installation manual.	
, Notes	```````````````````````````````````````		

Notes	
• Extending or shortening the connecting cable (5-core) that comes out of the interface unit 1	
cause it to malfunction. Also, keep the connecting cable (5-core) as far as possible away from	n the
electrical wires and ground wire. Do not bundle them together.	
 To prevent the board from being damaged by static electricity, always remove static electricity 	/
before starting work.	

6. Connecting the SYSTEM CONTROL Interface with each system (For details on each system, see the relevant instruction manual.)

- Screw the mounting cord clamp **4** ~ **6** according to the thickness of the connecting cable used for each system. Fasten the cable tie **9** as shown in the figure to prevent undesirable movement of the connecting cable.
- The connecting cable (5-core) connected to a room air conditioner should be mounted at the room air conditioner or its vicinity.

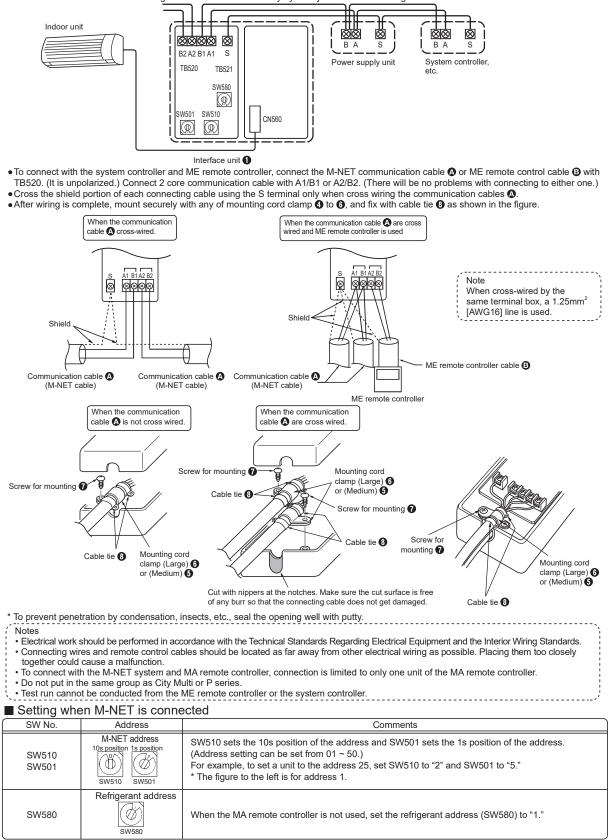


• Conduct the settings of the interface unit 1 dip switch (SW500, SW502) and rotary switch (SW501, SW510, SW580) before turning on the power.

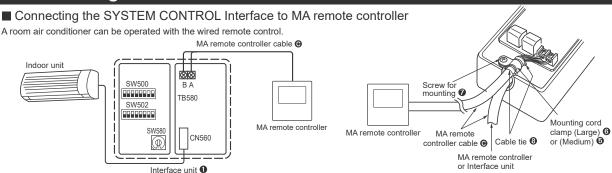
7. Connecting with M-NET system

Connecting the SYSTEM CONTROL Interface to M-NET cable

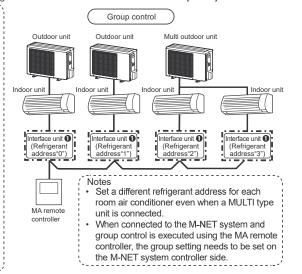
The room air conditioner can be managed centralized or individually by the system controller using M-NET communications control.



8. Connecting with MA remote controller



- To connect with the MA remote controller, connect the MA remote control cable @ with TB580. (It is unpolarized.)
- When more than one unit of room air conditioner is operated in a group, make a cross wire connection at TB580 with the MA remote control cable ().
- The MA remote controller can carry out simultaneous control of up to 16 sets of room air conditioners.
- Up to two MA remote controllers can be connected in one group.
- However, up to one can be connected when using PAR-CT0*MA
- Wiring length from the interface at the refrigerant address "0" to the MA remote controller should be less than 10 m [33 ft.].
- To operate the room air conditioner in a group, make the total length of wiring for the MA remote controller less than 50 m [164 ft.].
- Notes
- Be sure to set the "Auto Heating/Cooling Display Setting" of the MA remote controller OFF before use.
- * For details on the "Auto Heating/Cooling Display Setting", refer to the MA
- remote controller instruction manual. * When the "Auto Heating/Cooling Display Setting" is ON, the remote
- controller display may differ from the actual operating status of the unit.
- A test run cannot be initiated using the test run switch on the MA remote
- controller.
- Group control with CITY MULTI is unable. · When you use the PAR-CT0*MA with M-NET system, follow the
- restrictions below 1. Be sure to set "Brightness setting" of PAR-CT0*MA to "Low".
- 2. The wiring length from the interface at the refrigerant address "0" to the
- PAR-CT0*MA should be less than 7 m [23 ft.].
- 3. Some room air conditioners cannot be used.
- Make sure the room air conditioner can be used before installing it. 4. Do not use the external output (CN104) of the indoor unit
- * If the indoor unit does not have the external output (CN104), you cannot use the PAR-CT0*MA with M-NET system.
- When you use the PAR-4*MA with M-NET system, follow either one of the restrictions below.
- Be sure to set "Brightness setting" of PAR-4*MA to "Low".
 Do not use "Setting Signal Output" of this interface unit.



Setting when MA remote controller is connected

•Setup of an refrigerant address

SW No.	Refrigerant address	Comments
SW580	Address can be set from 0 to 15	 Set the refrigerant address of the unit that supplies electric power to the MA remote controller to "0." When carrying out group operation of two of more room air conditioners, set different refrigerant addresses within the group. *A to F of the rotary switch correspond to refrigerant addresses 10 to 15.

Setup of Room temperature detector position

Functions	SW No.	Operating details
Room temperature detector position		 SW500-3: OFF Temperature detected by suction temperature sensor of the unit is made to be room temperature SW500-3: ON Temperature detected by temperature sensor of the remote controller is made to be room temperature.

Setting when P series is mixed in the same group (only when running group operation using the MA remote controller)

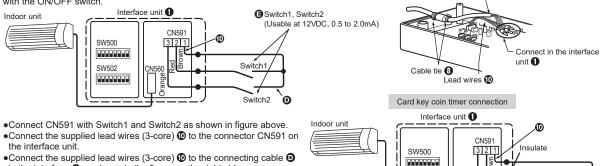
Functions	SW No.	Operating details
P series is mixed in the same group	SW502 ON	SW502-8: OFF • Set to OFF when P series is not mixed in the same group. SW502-8: ON • Set to ON when P series is mixed in the same group.

PARTS

9. Remote Control

Connecting the SYSTEM CONTROL Interface

You can turn room air conditioner on/off, prohibit/allow manual operations, or input of heating/cooling Signal cable D with the ON/OFF switch.



•Connect the supplied lead wires (3-core) (1) to the connecting cable (1) in the interface **()** as shown in the figure on the right side.

•Wiring length from the interface to the Switch1 and Switch2 should be less than 50m [164ft].

•Procure and wire locally the remote control part including the switches.

SW502

ON

OFF

Behavior when

prohibition of

operation is

canceled

7

•For each connection pattern, refer to "Setting when using remote control."

*When using a Card key/Coin timer, make connections shown in the figure to the right.

G Switch2 O

SW502

1560

(Card key/coin timer)

Setting when using remote control (Select one between No.1 through 5 and set.) *Set No.1, No.6, and No.7 when using the card key/coin timer.

No.	Functions	SW No.	How to use	Operating details			
1	ON/OFF Manual operation prohibited/allowed (Level Contact)	SW500	Brown Switch1: 2 ON/OFF 3 Orange CN591 prohibited/allowed	Unit is turned on when Switch1 has a short-circuit, and off when open. (Regardless of the Switch1 operation condition, the latest operation is prioritized.) When Switch2 has a short-circuit, manual operation is prohibited,* and when open, manual operation is allowed. When SW502-4 is turned on, the opening and short-circuiting of Switch1 and Switch2 result in their operating in the opposite manner. *When manual operation is prohibited, ON/OFF operation of the wireless remote controller, the MA remote controller, and the ME remote controller is prohibited. (Operation from Switch1 and M-NET system controller is possible.)			
2	ON/OFF Manual operation prohibited/allowed (Pulse Contact)		Brown 2 Red 3 Orange CN591 Switch1: ON/OFF Switch2: Manual operation prohibited/allowed	Every time Switch1 is pressed, ON/OFF is switched over. (Regardless of the Switch1 operation condition, the latest operation is prioritized.) Every time Switch2 is pressed, the manual operation prohibited*/the manual operation allowed is switched over. *When the manual operation is prohibited, ON/OFF operation of the wireless remote controller, the MA remote controller, and the ME remote controller is prohibited. (Operation from Switch1 and M-NET system controller is possible.)			
3	ON/OFF Remote operation/ Manual operation (Level Contact)		Brown Switch1: 1 Red 2 Red 3 Orange CN591 Manual operation	 Unit is turned on when Switch1 has a short-circuit, and off when open. When Switch2 has a short-circuit, only Switch1 is enabled (remote operation)[*], when open, only Switch1 is disabled (manual operation). When SW502-4 is turned on, the opening and short-circuiting of Switch1 and Switch2 result in their operating in the opposite manner. *In remote operation, ON/OFF operation from the wireless remote controller, the ME remote controller, the ME remote controller, and the ME remote controller, and the M-NET system controller cannot be used. 			
4	ON, OFF (Pulse Contact)	SW500 SW502	Brown 2 Red 3 Orange CN591 Switch1: ON Switch2: OFF	 Unit is turned on no matter how many times Switch1 is pressed. Unit is turned off no matter how many times Switch2 is pressed. And regardless of the Switch1, Switch2 operation condition, the latest operation is prioritized. ON/OFF operation from the wireless remote controller, the ME remote controller, the MA remote controller, and the M-NET system controller is enabled. 			
5	Heating/cooling input (Level Contact)		1 Brown 2 Red 3 Orange CN591 Switch1: ON/OFF Switch2: Heating/Cooling	 Unit is turned on when Switch1 has a short circuit, and off when open. Heating runs when Switch2 has a short circuit, and cooling runs when open. When SW502-4 is turned on, the opening and short-circuiting of Switch1 and Switch2 result in their operating in the opposite manner. * As for ON/OFF operation and heating/cooling operation from the wireless remote controller, MA remote controller, Switch1, and Switch2, the latest operation is prioritized. 			
	Setting operation (Valid only for No.1 and No.2. The following 2 functions can be used at the same time.)						
No.	Functions	SW No.	How to use	Operating details			
6	Behavior when operation is prohibited.	SW502 ON ON OFF	Operational status of room air conditioner when manual operation is prohibited can be set.	 SW502-5: OFF When manual operation is prohibited by Switch2, operational status is maintained as that before manual operation is prohibited. SW502-5: ON When manual operation is prohibited by Switch2, the room air conditioner turns off. 			

Operational status of room

. operation is canceled can

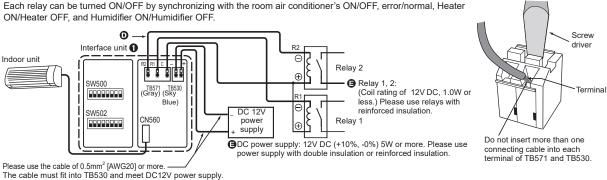
air conditioner when

prohibition of manual

be set.

10. Setting Signal Output

Connecting the SYSTEM CONTROL Interface



Notes

- · Connecting terminal TB530 for power supply is polarized, so confirm proper polarity of the terminals before connecting.
- Do not connect 12V DC from the DC power supply to TB571
- Confirm polarity when using a diode built-in relay. C of TB571 is electropositive potential \oplus , and R1 and R2 are negative potential \ominus .
- For TB571 and TB530, insert wiring after inserting the flathead screwdriver into the terminal.
- Appropriate electric wire for TB571 and TB530 is as follows. Stranded wire: 0.3mm² to 1.25mm² [AWG22 to 16] Solid wire: ø0.4mm to ø1.2mm [ø1/64in. to ø3/64in.]
- Peeling dimension of the electric wire for TB571 and TB530 is 7mm to 10mm [9/32in. to 25/64in.].
- Wiring length from the interface to Relay 1 and Relay 2 should be less than 50m [164ft].

Setting when using Status Signal Output

Functions	SW No.	Operating details
ON/OFF, Error/ Normal Output	SW500	SW502-1: OFF • Relay 1 is on when room air conditioner is on, and off when room air conditioner is off. • Relay 2 is on when room air conditioner is in error, and off when room air conditioner is operating normally. SW502-1: ON • Relay 1 and 2 behavior are opposite of those above.
ON/OFF, Heater Control Output	SW500 SW502 SW502 ON OFF	 SW502-1: OFF Relay 1 is on when room air conditioner is on, and off when room air conditioner is off. When the air conditioner runs in the heating (automatic heating) mode and room temperature becomes the set temperature - 2.5 °C (4.5 °F) or lower, the Relay 2 (heater) turns on. When the air conditioner runs in a mode other than the heating (automatic heating) or it is OFF, or when room temperature becomes the set temperature or higher, the Relay 2 (heater) turns off. SW502-1: ON Relay 1 and 2 behavior are opposite of those above.
ON/OFF, Humidifier Control Output	SW500 SW502 ON OFF	 SW502-1: OFF Relay 1 is on when room air conditioner is on, and off when room air conditioner is off. When the air conditioner runs in the heating (automatic heating) mode, Relay 2 (humidifier) turns on. When the air conditioner runs in a mode other than heating (automatic heating) or it is OFF, Relay 2 (humidifier) turns off. SW502-1: ON Relay 1 and 2 behavior are opposite of those above.
Heater Control, Humidifier Control Output*		 SW502-1: OFF When the air conditioner runs in the heating (automatic heating) mode and room temperature becomes the set temperature - 2.5 °C (4.5 °F) or lower, Relay 1 (heater) turns on. When the air conditioner runs in a mode other than the heating (automatic heating) or it is OFF, or when room temperature becomes the set temperature or higher, Relay 1 (heater) turns off. When the air conditioner runs in the heating (automatic heating) mode, Relay 2 (humidifier) turns off. When the air conditioner runs in a mode other than heating (automatic heating) or OFF, Relay 2 (humidifier) turns off. SW502-1: ON Relay 1 and 2 behavior are opposite of those above.
ON/OFF, Humidifier Control (single operation) Output	SW500	 Relay 1 is on when ON is set by System controller, ME remote controller or MA remote controller, and off when OFF is set by these controllers. When room temperature becomes the set temperature or lower in the heating (automatic heating) mode, the Relay 2 (heater) turns on. When a mode other than heating (automatic heating) or OFF is set by System controller, ME remote controller or MA remote controller, or when room temperature becomes higher than the set temperature + 1 °C (2 °F), the Relay 2 (heater) turns off. * This function is to run the heater instead of the air conditioner in the heating mode. The air conditioner stops in the heating mode. Do not use the remote controller attached to the air conditioner. If you use it, the operation may not reflect the setting. The position of detecting the room temperature is where MA remote controller is put, so make sure to connect it to the interface unit.

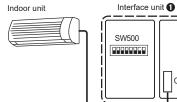
PARTS

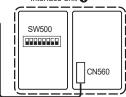
INDOOR UNIT

11. Turn on/off with power

The room air conditioner turns on when power is supplied.

• When using for the first time, set to the operational status of your choice with the remote controller and leave the power off for 1 minute. • When not used for a long period of time, you should set to the operational status of your choice again with the remote controller.





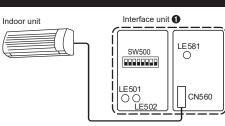
Note	
	e turn on/off with power function cannot be used when
CC	onnected to multiple outdoor units.
• W	hen starting two or more room air conditioners by using
	e turn on/off with power function, make the system so they
	o not recover simultaneously. (To avoid inrush current, star
se	equentially.)

Setting when using Turn on/off with power

Functions	SW No.	Operating details
Turn on/off with power		 SW500-2: OFF After the power is supplied, the room air conditioner resumes working in the previous running condition. When AUTO RESTART FUNCTION is not set to the room air conditioner, it remains off. SW500-2: ON The room air conditioner turns on when power is supplied.

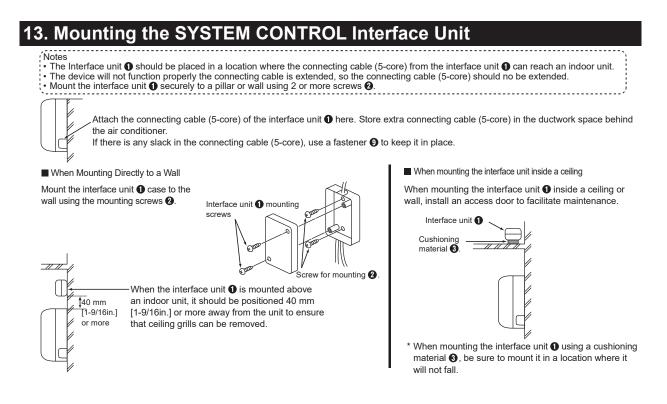
12. Interface status monitor

You can check the status of the interface unit by the LED lamp on the interface unit 1 board.



• Use the table below to check communications. If communications cannot be carried out normally, check that the relevant communications line is not disconnected from the connector or terminal box.

Functions	SW No.	Operating details
Interface status monitor	SW500 ON OFF	 SW500-7: OFF LE501 (Orange): When blinking at an interval of about 1 second, the Interface unit is communicating normally with the room air conditioner. When the lamp is off, the Interface unit is not communicating normally with the room air conditioner. LE502 (Red): When blinking at an interval of about 1 minute, the Interface unit is communicating normally with the M-NET controller. When the lamp is off, the Interface unit is not communicating normally with the M-NET controller. SW500-7: ON LE501 (Orange): When blinking at an interval of about 10 second, the Interface unit is communicating normally with the MA remote controller. When the lamp is off, the Interface unit is not communicating normally with the MA remote controller. When the lamp is off, the Interface unit is not communicating normally with the MA remote controller. When the lamp is off, the Interface unit is not communicating normally with the MA remote controller. When the lamp is off, the Interface unit is not communicating normally with the MA remote controller. LE502 (Red): Extinguished * LE581 (Orange) displays the following status irrespective whether SW500-7 is on or off. When lit, power is supplied to the MA remote controller from the Interface unit ①. When extinguished, power is not supplied.



14. Notes Regarding Use

The following control information should be thoroughly explained and provided to the users of this device. (Please provide these instructions to the user once the installation is complete.)

- This Interface unit **()** operates room air conditioners using the controls of a City-Multi or P series, but there are several limitations imposed as a result of the functional differences between room air conditioners and packaged air conditioners.
- 1. When operating the system using a System Controller, MA Remote Controller, or ME Remote Controller these operations will not appear on the display of the wireless remote controller.
- 2. When original dehumidification mode is set with the remote controller attached to the room air conditioner, "Dry" is displayed because there is no mode corresponding to dehumidification on the MA remote controller, ME remote controller, and the system controller.
- 3. Because the temperature range of the room air conditioners is broader than a System Controller, MA Remote Controller, or ME Remote Controller, when the room air conditioners is set to lower than 17°C (63°F) or higher than 30°C (87°F), the temperature display on the a System Controller, MA Remote Controller, or ME Remote Controller will show the minimum or maximum temperature that can be set. (For example, even if the room air conditioner is set to cool a room to 16°C (61°F), the display on a System Controller, MA Remote controller, or ME Remote Controller may read "17°C" (63°F)).
- 4. Timer operations should be set using only the remote controller that came with the room air conditioners or the a System Controller, MA Remote Controller, or ME Remote Controller. If both are used to set the timer to the same time, the timer will not function properly.
- 5. When "Manual operation prohibited" (ON/OFF, setting temperature, operation mode) is set with the system controller, the corresponding operation by the remote controller attached to the room air conditioner is not accepted, but allowed operation is reflected. A beep sounds during operation to confirm reception.
- 6. A part of functions including the operation of horizontal air blow direction cannot be used from the ME remote controller, the system controller, and the MA remote controller.
- 7. "Manual operation prohibited" (filter sign, air direction, fan speed, timer) cannot be set by system controller.

15. Specifications

	Input voltage	12V
Indoor unit side	Power consumption	1.8W
	Input current	0.15A
	Input voltage	12V
Power supply unit side	Power consumption	4.8W
	Input current	0.4A

OPTIONAL PARTS