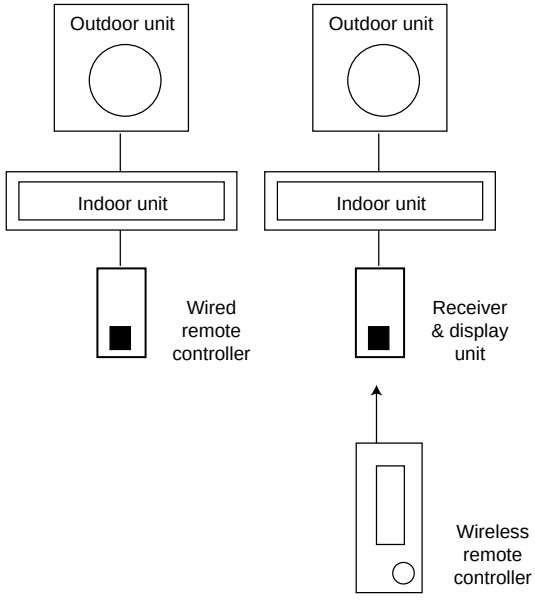
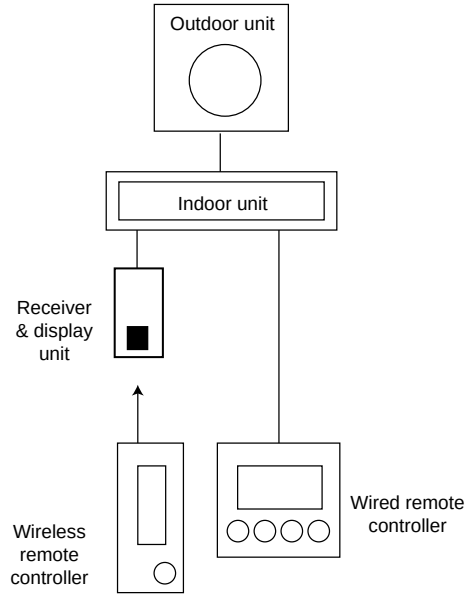
3. Operating Instructions

3-1 Example of Single unit Operation

1 chamber wired, wireless remote controller single operation and 1 chamber wireless remote controller + wired remote controller combination control



Example of 1 chamber single operation (wired or wireless remote controller)



Example of 1 chamber single operation (wireless + wired remote controller)

* In case of 1 chamber single operation (wireless remote controller+wired remote controller), both setting of wired remote controller to MASTER/SLAVE is available.

<To use wired & wireless remote controller simultaneously >

1. Put off the power.
2. For the combined use of wireless remote controller and wireless remote controller, put on the option switch 4 of wired remote controller.
3. Putting off the option switch 4 of wired remote controller disables the control by wireless remote controller.
4. Put on the power.

Caution :
- After resetting the option in the wired remote controller, be sure to put the power on again so that the set option can be applied.

Wired Remote Controller Option Switch

DIP SWITCH NO	OPTION ITEM	SW ON	SW OFF	DEFAULT
1	Type of unit	Cooling only	Heat pump	OFF
2	Indoor unit control	Group control	Indoor unit 1 chamber control	OFF
3	Basic specification	-	-	Fixed to OFF
4	Combined use of wireless remote controller	Able to operate of wired remote controller (SLAVE MODE)	Disable to operate the wireless remote controller (MASTER MODE)	OFF

3-2 Exampe of Group Control Operation

3-2-1 Group Control with wired remote controller

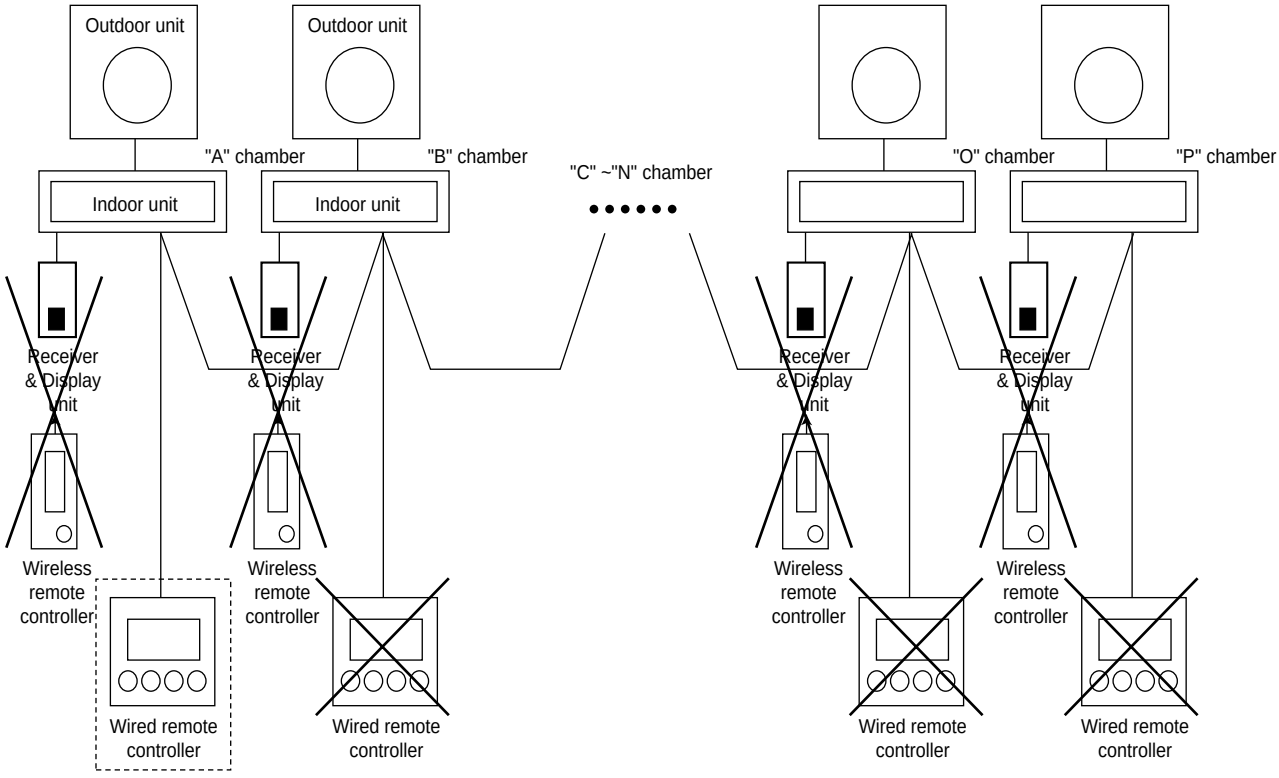


Figure. 16 Chamber Group Control (Wireless remote controller + wired remote controller) System

- The 16 chamber remote controller operation by wired remote controller can be simultaneously performed all for 16 chambers through setting the 16 chambers to one group through one wired remote controller.
- While operated in Group, the control by wireless remote controller installed in all chambers (“A” ~ “P”) is disabled except the wired remote controller installed in the “A” chamber and the simultaneous use with the option item, the centralized controller is also disabled.

3-2-2 The group operation method by wired remote controller

1. Setting of indoor unit Main PCB

- Put off all of set power installed in each room.
- Remove the centralized controller if any is used already.
- Connect the communicating line from “A” chamber to “P” chamber.(R1<->R1, R3<->R3)
- Connect the “R1”, “R2” and “R3” of indoor terminal board installed to the “R1”,”R2”,”R3” of wired remote controller, respectively.
- Adjust the address of rotary switch of indoor unit PCB in “A” chamber to “0”.
- Remove CN20 connector from main PCB of Indoor unit except the one installed in “A” with reference of the figure.
- Adjust the address of rotary switch of indoor unit PCB in “B” chamber to “1”. In such a way, adjust the address of digital switch up to chamber “P”.
- Put on the set power installed in each chamber.

Caution :

- During the connection, connect the “R1” of indoor unit terminal board installed in each chamber with “R1”.
- During the connection, connect the “R3” of indoor unit terminal board installed in each chamber with “R3”.
- Do not connect the terminal R2 of indoor unit terminal board from “B” to “F” chamber except “A” chamber.
- The option item, centralized controller shall be removed since the simultaneous use with wired remote controller is disable during the group control.
- Adjust the address of indoor unit rotary switch installed in each chamber so that it might not be duplicated.

2. Setting of wired remote controller

- Put off the set power where the wired remote controller is installed.
- Put on the option switch SW 2 of wired remote controller.
- Put on the set power where the wired remote controller is installed.

Caution :

- The option can be applied when the power is put again after resetting the option of wired remote controller. Be sure to keep the set power on/off after option setting.

3-2-3 Group Operation method of wired remote controller

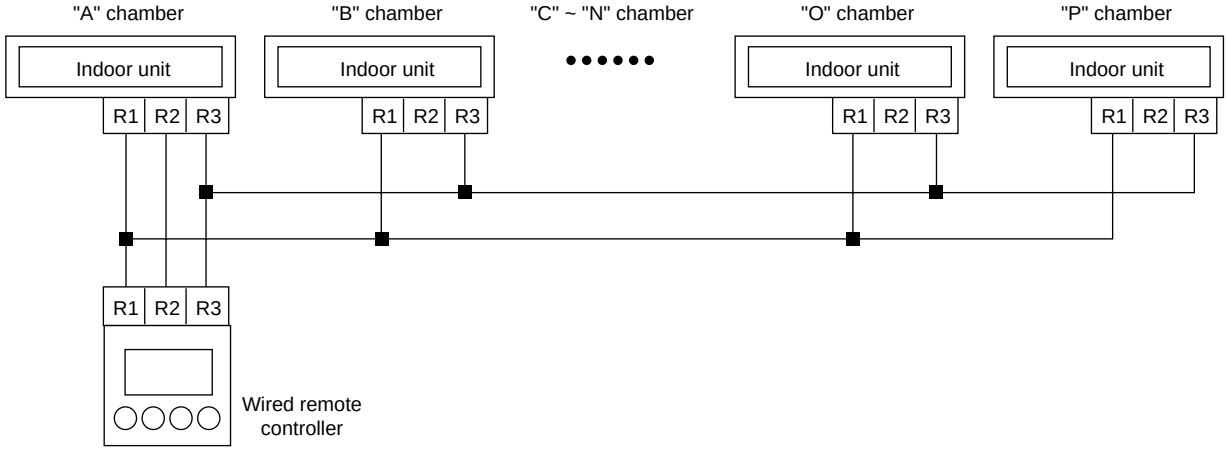
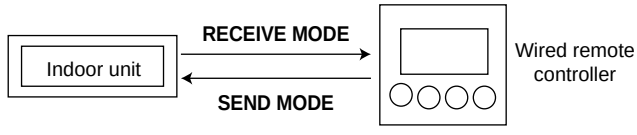


Figure. 16 Chamber Group Control(wired remote controller) Connection Diagram

- Press the ON / OFF button of wired remote controller to be on.
  At the time, the set installed from A chamber to P chamber is getting on in order with the interval of 2 seconds.
- Select the operation of auto / cooling / dehumidi-fying / blowing / heating by pressing MODE BUTTON.
- Select breeze / mild / strong wind by pressing the wind volume button.
- Adjust the temperature set button to set the desired temperature.

✻ For reference

- The communication between wired remote controller and indoor unit is made through the synchronization with the output signal of zero cross detect circuit, and when 50Hz power is used, it has the 50bps transmission speed and when it has 60Hz power it has 60bps transmission speed. The transmission data between the wired remote controller and indoor unit is shown as in the figure.



Since the communication data between wired remote controller and indoor unit is consisting of total 10Byte, 2 seconds are required when using 50Hz power.

- For the communicating time with 16 chambers during the normal operation, 32 seconds are required and for the time with 16 chamber during the reservation operation, 64 seconds are required due to the increase of communicating data.

3-2-4 Startup method by wired remote controller

Start up of single operation

- Put on the set power.
- Adjust the address of digital switch of indoor unit PCB to “0”.
- Put OFF the option switch 2 of wired remote controller PCB.
- Put on the set power.
- Press the test button of wired remote controller for more than 3 seconds.
- The set is operated for 3 minute by the forced cooling operation and the set is off after 3 minute.
- The error occurring during the test operation is displayed on the wired remote controller windows and it shall be referred to the following table.

Error Code	Meaning	Checking Area
01	Indoor unit room thermistor error	• Indoor unit thermistor available or not and disconnected • Indoor unit PCB
05	Indoor unit pipe thermistor error	• Indoor unit pipe thermistor • Indoor unit PCB
06	Outdoor unit thermistor error	• Outdoor unit thermistor • Outdoor unit PCB
09	Float switch open error	• Drain pump, float switch • Drain system • Dip SW2 of indoor unit main PCB (If the drain pump is not installed, SW2 and SW3 shall be at the Off position.)
0A	Indoor unit ↔ outdoor unit communicating error	• Indoor unit ↔ outdoor unit communicating error • Indoor unit ↔ outdoor unit communicating cable • Indoor unit PCB, Outdoor unit PCB
0C	Wired remote controller ↔ indoor unit communication error	• Wired remote controller ↔ indoor unit communication cable • Indoor unit main PCB
0D	Outdoor unit pipe thermistor error	• Outdoor unit pipe thermistor • Outdoor unit PCB
0L	Three phase power incorrect connecting error	• Three phase power connecting • Outdoor unit PCB

Caution :

- Unless the address of digital switch of indoor unit PCB is set to “0” in case of “A” chamber single operation, the control by the wired remote controller is disabled.
- The power of SET shall be put on again after the resetting of wired remote controller option so that the the set option can be applied. Be sure to keep the power on/off of SET before and after the setting.
- The first digit of error code displayed during the single operation and group operation may be different. The first digit(MSB) stands for the address of the set where the error occurs. Since it is the single operation, the address of SET is “0”.

Startup of group operation

- Put off the power of SET.
- Adjust the addresses of digital switch of indoor unit PCB to "0"~"15", respectively.
- Put ON the option switch SW2 of wired remote controller PCB.
- Put on the power of SET.
- On the wired remote controller display, the digits "00" → "11" → "22" → are displayed up to "FF". After "FF" display, the wired remote controller is automatically set to the preserved operation status of indoor unit of chamber "A".
- If the current SET of chamber "A" is ON, put the set off by pressing the ON / OFF button.

Only at the SET off of chamber "A", the TEST mode is enabled.

- Press the TEST BUTTON of wired remote controller for more than 3 seconds.
- If the SET is operating for 3 minutes through forced cooling operation, the SET is off after 2 minutes.
- The Error occurring in the TEST operation displays in the wired remote controller display window and is referred to the following table.

Error Code	Meaning	Checking Area
*1	Indoor unit room thermistor error	• Indoor unit thermistor exist or not disconnected • Indoor unit PCB
*5	Indoor pipe thermistor error	• Indoor unit pipe thermistor • Indoor unit PCB
*6	Outdoor unit thermistor error	• Outdoor unit thermistor • Outdoor unit PCB
*9	Float switch open error	• Drain pump, float switch • Drain system • Dip SW2 of indoor unit main PCB (If drain pump is not installed, SW2 and SW3 shall be at OFF position.)
*A	Indoor unit ↔ outdoor unit communication error	• Indoor unit ↔ Outdoor unit communication cable • Indoor unit PCB, outdoor unit PCB
*C	Wired remote controller ↔ indoor unit communication error	• Wired remote controller ↔ indoor unit communication cable • Indoor unit main PCB
*D	Outdoor unit pipe thermistor error	• Outdoor unit pipe thermistor • Outdoor unit PCB
*L	Three phase power incorrect connecting error	• Threem phase power connecting • Outdoor unit PCB

Caution :

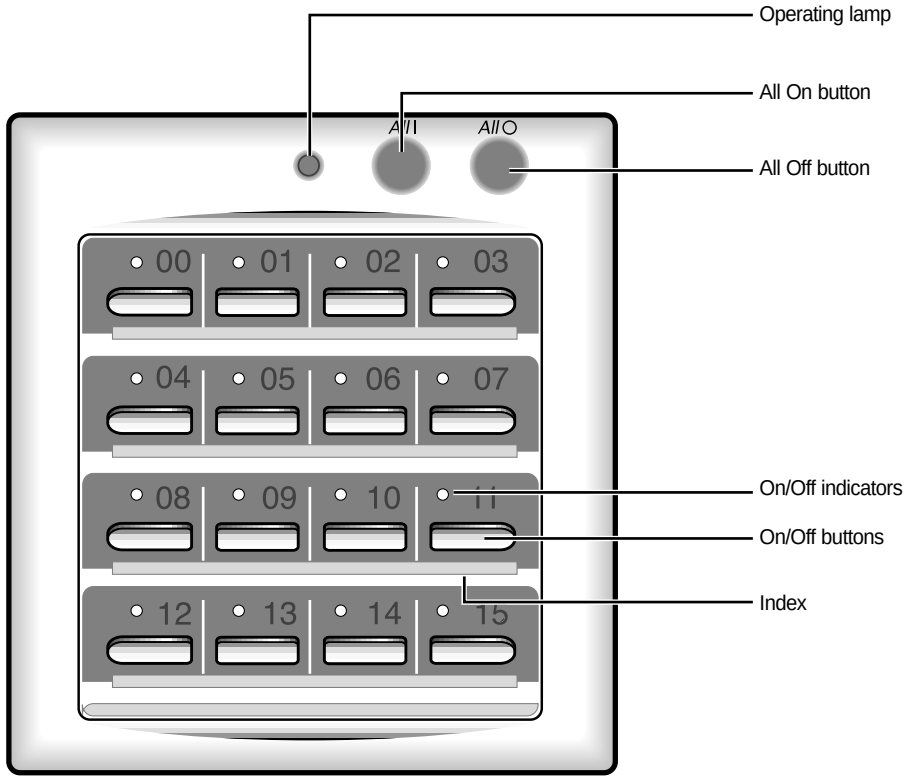
- Test operation is disabled when the chamber "A" is on after initialization of wired remote controller.
- The communication time between wired remote controller and indoor unit is required for 2 seconds. If any one of set is ON, be sure to put it off by pressing the ON/OFF button and start the TEST operation after 35 seconds at minimum.(The communication time with all chambers : 16 x 2 seconds = 32seconds)
- For the reservation operation, the communication time between all 16 chambers is required for 64 seconds due to the increase of communication data.
- The first digit (MSB) of error code displayed during the group operation stands for the address of SET where the error occurs.

3-3 Centralized Controller Operation

3-3-1 Appearance and characteristics of Centralized Controller

The centralized controller is installed on the wall.

The centralized controller is an optional accessory.



NOTE : Operating lamp comes on when at least one air conditioner connected to the centralized controller is operating.

- Since the centralized controller has the relay equipment, the option mounted on the indoor unit, the On / Off can be set for 16 chambers through the modem communication.
- Linkage of wired remote controller to wired remote controller is available by 3 kinds of level.
- The maximum extended distance of 1 Km is possible through modem communication. (the relay equipment is installed at the option item, indoor unit)
- The connection by non-polarity method is easy.

BUTTON NAME	FUNCTION
ALL1	• To put on all 16 chambers' set.
ALL0	• To put off all 16 chambers' set.
"01" ~ "16"	• To put on/off set assigned with the number.

3-3-2 Example of the centralized control system configuration

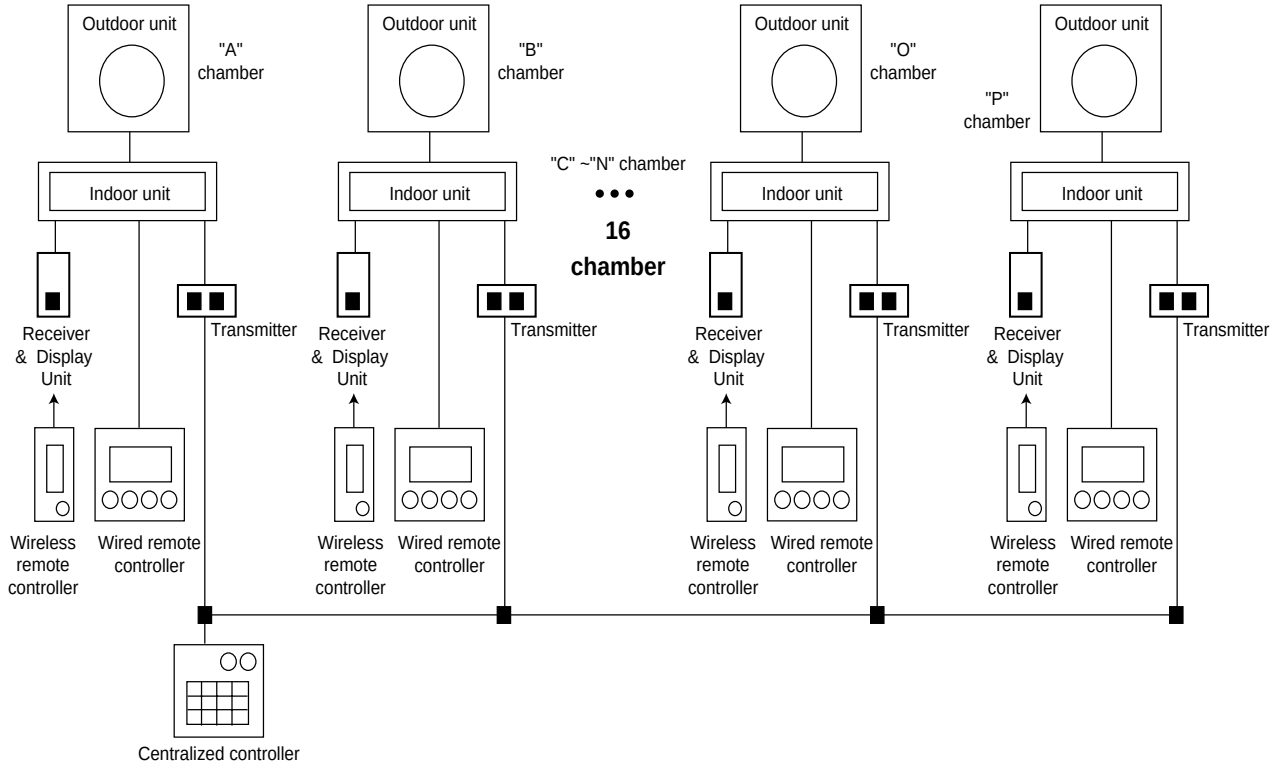
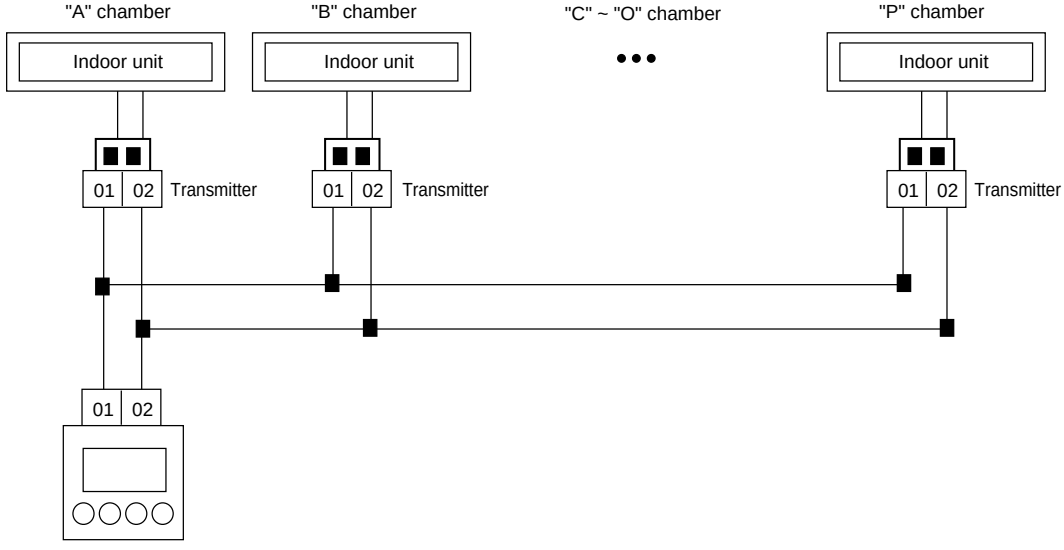


Figure. 16 Chambers Centralized Control (wireless remote controller + wired remote controller + centralized controller) System

3-3-3 Chambers centralized control system connection diagram



3-3-4 Centralized control operation method

1. Setting of indoor unit
   - Put off the set to be installed.
   - Put off the power of the centralized controller.
   - Mount the transmitter, the option item on the indoor unit set terminal board.
   - Adjust the address of rotary switch of transmitter mounted. (Adjust the address of transmitter mounted in chamber “A” to “0” and “B” to “1”... continue the adjustment up to “P” to “F”)
   - Connect the terminals O1 and O2 of the terminal board mounted on the centralized controller to the O1 and O2 of the terminal board installed in chamber “A”.
   - If the wired remote controller is installed, be sure to put off the SW2 of PCB option switch.
   - Remove the centralized controllers installed at chamber “B” to chamber “P” if any except the A chamber.
   - Adjust the address of rotary switch of indoor unit PCB to “0”.
   - Connect O1 and O2 of terminal board installed in chamber A to O1 and O2 of terminal board installed in chamber B.
   - Continue to connect O1 and O2 of terminal board mounted on indoor unit in chamber B ~ P.

2. Setting at centralized control side
   - Adjust the applicable level of centralized controller with the reference of the table.

3. When the setting is finished at indoor unit and centralized controller,
   - Put on the power of installation completed set of each chamber.
   - Put on the power of centralized controller.

DIP SWITCH	SW1	SW2	SW3	SW4	REMARK
LEVEL 0	OFF	OFF	OFF	OFF	Set operation according to the final controlled one among the centralized controller, wire, and wireless remote controller
LEVEL 1	OFF	OFF	OFF	ON	When centralized controller OFF : disable to control wired and wireless remote controller When centralized controller ON : enable to control wired and wireless remote controller
LEVEL 2	OFF	OFF	ON	OFF	Enable to control only in the centralized controller Disable to control the wired and wireless remote controller

Error Code	Meaning	Checking Area
LED flickering	Communication error between indoor unit and centralized controller	Transmitter, indoor unit, centralized controller

Caution :

- The communication between centralized controller and transmitter is modem method and there is no polarity but connect “O1” terminal to “O1” terminal and “O2” terminal to “O2”terminal.
- The address of transmitter mounted on each indoor unit shall not be duplicated.
- After the resetting of operation level of centralized controller, it is not necessary to reset the power differently from that of wired remote controller. In other words, the operation level can be reset even during the operation if required.

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