

## **INSTALLATION MANUAL** AIR CONDITIONER

- Please read this installation manual completely before installing the product.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.
- Please retain this installation manual for future reference after reading it thoroughly.

TYPE: Convertible



www.lg.com

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		☐ Horizontal meter
Installation	□ Pipes: Gas side3/8", 1/2" Liquid side1/4" □ Insulation materials □ Additional drain pipe (Outer diameter15.5mm) □ Two type "B" screws	□ Flaring tool set □ Specified torque wrenches 1.8kg.m, 4.2kg.m, 5.5kg.m, 6.6kg.m (different depending on model No.) □ SpannerHalf union □ A glass of water □ Screw driver
Bolt(Ceiling Mounting)		□ Hexagonal wrench(4mm) □ Leak detector □ Vacuum pump □ Gauge manifold □ Owner's manual □ Thermometer □ Remote control holder

## **Safety Precautions**

To prevent injury to the user or other people and property damage, the following instructions must be followed.

- Be sure to read before installing the air conditioner.
- Be sure to observe the cautions specified here as they include important items related to safety.
- Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications.

## **▲** WARNING

This symbol indicates the possibility of death or serious injury.

**A**CAUTION

This symbol indicates the possibility of injury or damage to properties only.

■ Meanings of symbols used in this manual are as shown below.

$\bigcirc$	Be sure not to do.	
•	Be sure to follow the instruction.	



#### Installation

Do not use a defective or underrated circuit breaker. Use this appliance on a dedicated circuit.

· There is risk of fire or electric shock.

For electrical work, contact the dealer, seller, a qualified electrician, or an Authorized Service Center.

 Do not disassemble or repair the product. There is risk of fire or electric shock.

Always ground the product.

· There is risk of fire or electric shock.

#### Install the panel and the cover of control box securely.

· There is risk of fire or electric shock.

#### Always install a dedicated circuit and breaker.

· Improper wiring or installation may cause fire or electric shock

#### Use the correctly rated breaker or fuse.

· There is risk of fire or electric shock.

## Do not modify or extend the power cable.

 There is risk of fire or electric shock.

# Do not install, remove, or re-install the unit by yourself (customer).

 There is risk of fire, electric shock, explosion, or injury.

# Be cautious when unpacking and installing the product.

 Sharp edges could cause injury.
 Be especially careful of the case edges and the fins on the condenser and evaporator.

# For installation, always contact the dealer or an Authorized Service Center.

 There is risk of fire, electric shock, explosion, or injury.

# Do not install the product on a defective installation stand.

 It may cause injury, accident, or damage to the product.

# Be sure the installation area does not deteriorate with age.

 If the base collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.

Use a vacuum pump or Inert (nitrogen) gas when doing leakage test or air purge. Do not compress air or oxygen and do not use flammable gases. Otherwise, it may cause fire or explosion.

• There is the risk of death, injury, fire or explosion.

### Operation

Do not let the air conditioner run for a long time when the humidity is very high and a door or a window is left open.

 Moisture may condense and wet or damage furniture. Take care to ensure that power cable could not be pulled out or damaged during operation.

 There is risk of fire or electric shock. Do not place anything on the power cable.

 There is risk of fire or electric shock.

## Do not plug or unplug the power supply plug during operation.

 There is risk of fire or electric shock.

## Do not touch(operate) the product with wet hands.

 There is risk of fire or electrical shock.

## Do not place a heater or other appliances near the power cable.

 There is risk of fire and electric shock.

#### Do not allow water to run into electric parts.

· It may cause There is risk of fire, failure of the product, or electric shock

#### Do not store or use flammable gas or combustibles near the product.

· There is risk of fire or failure of product.

#### Do not use the product in a tightly closed space for a long time.

 Oxvaen deficiency could occur.

#### When flammable gas leaks, turn off the gas and open a window for ventilation before turn the product on.

 Do not use the telephone or turn switches on or off. There is risk of explosion or fire

#### If strange sounds, or small or smoke comes from product. Turn the breaker off or disconnect the power supply cable.

· There is risk of electric shock or fire.

Stop operation and close the window in storm or hurricane. If possible, remove the product from the window before the hurricane arrives.

 There is risk of property damage, failure of product, or electric shock.

#### Do not open the inlet grill of the product during operation. (Do not touch the electrostatic filter, if the unit is so equipped.)

 There is risk of physical injury, electric shock, or product failure.

#### When the product is soaked (flooded or submerged), contact an Authorized Service Center.

· There is risk of fire or electric shock.

#### Be cautious that water could not enter the product.

· There is risk of fire, electric shock, or product damage.

#### Ventilate the product from time to time when operating it together with a stove, etc.

· There is risk of fire or electric shock.

#### Turn the main power off when cleaning or maintaining the product.

· There is risk of electric shock.

When the product is not be used for a long time. disconnect the power supply plug or turn off the breaker.

· There is risk of product damage or failure, or unintended operation.

Take care to ensure that nobody could step on or fall onto the outdoor unit.

 This could result in personal injury and product damage.

## **ACAUTION**

#### ■ Installation

Always check for gas (refrigerant) leakage after installation or repair of product.

 Low refrigerant levels may cause failure of product.

Install the drain hose to ensure that water is drained away properly.

 A bad connection may cause water leakage.

Keep level even when installing the product.

· To avoid vibration or water leakage.

Do not install the product where the noise or hot air from the outdoor unit could damage the neighborhoods.

· It may cause a problem for your neighbors.

Use two or more people to lift and transport the product.

· Avoid personal injury.

Do not install the product where it will be exposed to sea wind (salt spray) directly.

· It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.

### Operation

Do not expose the skin directly to cool air for long periods of time. (Don't sit in the draft.)

· This could harm to your health.

Do not use the product for special purposes, such as preserving foods, works of art, etc. It is a consumer air conditioner, not a precision refrigeration system.

· There is risk of damage or loss of property.

#### Do not block the inlet or outlet of air flow.

It may cause product failure.

#### Use a soft cloth to clean, Do not use harsh detergents. solvents, etc.

· There is risk of fire, electric shock, or damage to the plastic parts of the product.

#### Do not touch the metal parts of the product when removing the air filter. They are very sharp!

· There is risk of personal injury.

#### Do not step on or put anyting on the product. (outdoor units)

 There is risk of personal injury and failure of product.

#### Always insert the filter securely. Clean the filter every two weeks or more often if necessary.

· A dirty filter reduces the efficiency of the air conditioner and could cause product malfunction or damage.

#### Do not insert hands or other objects through the air inlet or outlet while the product is operated.

 There are sharp and moving parts that could cause personal injury.

#### Do not drink the water drained from the product.

· It is not sanitary and could cause serious health issues.

#### Use a firm stool or ladder when cleaning or maintaining the product.

· Be careful and avoid personal injury.

Replace the all batteries in the remote control with new ones of the same type. Do not mix old and new batteries or different types of batteries.

· There is risk of fire or explosion

#### Do not recharge or disassemble the batteries. Do not dispose of batteries in a fire.

· They may burn or explode.

If the liquid from the batteries gets onto your skin or clothes, wash it well with clean water. Do not use the remote if the batteries have leaked.

 The chemicals in batteries could cause burns or other health hazards.

If you eat the liquid from the batteries, brush your teeth and see doctor. Do not use the remote if the batteries have leaked.

 The chemicals in batteries could cause burns or other health hazards.

## Introduction

## Symbols used in this Manual



This symbol alerts you to the risk of electric shock.

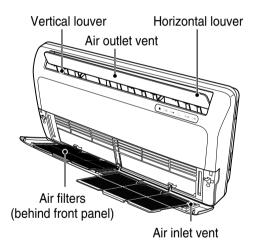


This symbol alerts you to hazards that may cause harm to the air conditioner.

NOTICE

This symbol indicates special notes.

## Features



## Installation

Read carefully, and then follow step by step.

### Installation Parts

#### Standard Accessories

Name	Installation plate	Type "A" screw and plastic anchor	(Other)	
Quantity	1EA	4EA	O	
Shape			Owner's manual     Installation manual	

#### WIRED REMOTE CONTROLLER INSTALLATION

· Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature. Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.

#### Do not install the remote controller where it can be affected by:

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly as shown in Fig.1. (The standard height is 1.2~1.5 m from floor level.)

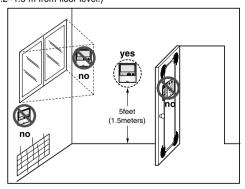
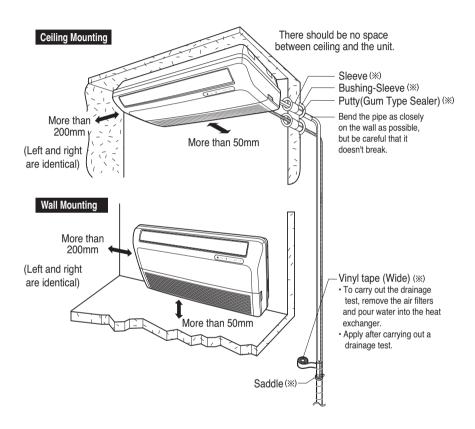


Fig.1 Typical locations for remote controller

## Installation Map

NOTICE Installation parts you should purchase. (%)



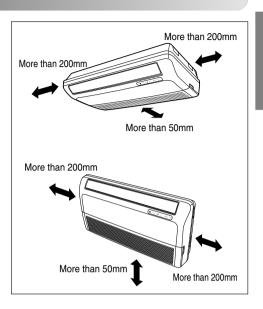
### **A**CAUTION

The Power cord connected to the unit should be selected according to the following specifications.

### Select the best Location

#### Indoor unit

- 1. Do not have any heat or steam near the unit.
- 2. Select a place where there are no obstacles in front of the unit.
- 3. Make sure that condensation drainage can be conveniently routed away.
- 4. Do not install near a doorway.
- 5. Ensure that the interval between a wall and the left (or right) of the unit is more than 20cm. The unit should be installed as low as possible on the wall, allowing a minimum of 5cm from floor.
- 6. Use a stud finder to locate studs to prevent unnecessary damage to the wall.



## Preparing Work for Installation

#### Open panel front

- 1. Remove the five screws.
- 2. Release the claws in the 3 places indicated.
- Pull up the Front Panel.

#### Cover pipe and cover side remove

- 1. Pull up the side cover of desired connecting direction, then cover side is separated.
- Pick the pipe hole of the side cover.

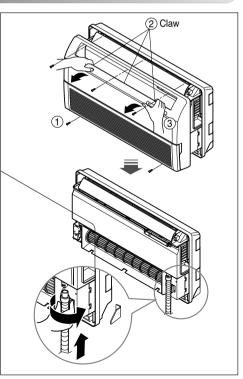


**CAUTION: After removing the** pipe hole, cut the burr for safety.

**NOTICE** When making pipe path through rear wall, you don't need to pick the pipe hole

#### Drain hose junction

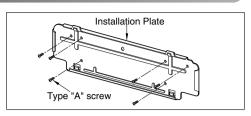
- 1. Remove the rubber stopple in the desired drain direction.
- 2. Insert drain hose into the handle of drain pan, and join drain hose and connecting hose according to the figure by.

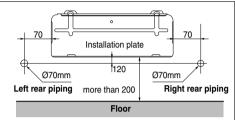


## Mounting the installation plate(Wall Mounting)

The wall you select should be strong and solid enough to prevent vibration

- 1. Mount the installation plate on the wall with type "A" screws. If mounting the unit on a concrete wall, use anchor bolts.
- Mount the installation plate horizontally by aligning the centerline using a level.
- 2. Measure the wall and mark the centerline. It is also important to use caution concerning the location of the installation plate-routing of the wiring to power outlets is through the walls typically. Drilling the hole through the wall for piping connections must be done safely.



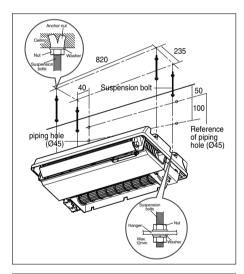


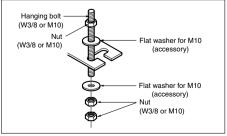
## Mounting the anchor Nut & Bolt(Ceiling Mounting)

- Prepare 4 suspension bolts. (Each bolts) length should be same.)
- Measure and mark the position for the Suspension bolts and the piping hole.
- Drill the hole for anchor nut on the ceiling.
- · Insert the nuts and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
- Mount the suspension bolts to the anchornuts firmly.
- Secure the hangers onto the Suspension bolts (adjust level roughly.) using nuts, washers and spring washers.
- · Adjust a level with a level gauge on the direction of left-right, back-forth by adjusting suspension bolts.
- · Adjust a level on the direction of top-bottom by adjusting supension bolts. Then the unit will be declined to the bottomside so as to drain well.

### ▲ CAUTION

: Tighten the nut and bolt to prevent unit falling.





## **A**CAUTION

: Installation Information For right piping. Follow the instruction below.

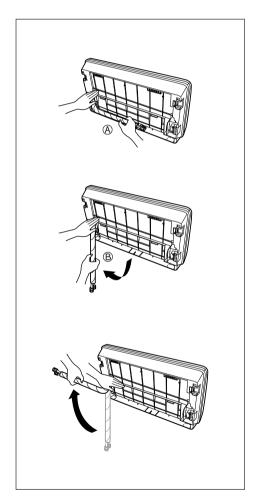
#### Good case

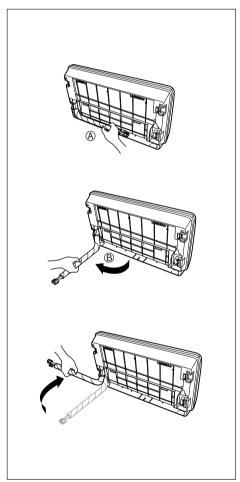
#### For left piping. Follow the instruction below.

- 1. Press on the upper side of clamp. (A)
- 2. Unfold the tubing to downward slowly. (B)
- 3. Bend the tubing to the left side of chassis.

#### **Bad case**

1. Following bending type from right to left could cause problem of pipe damage.





## Checking the Drainage

1. Set the air direction louvers up-and-down to the position(horizontally) by hand.

#### To check the drainage.

- 1. Pour a glass of water on the evaporator using a kettle.
- 2. Ensure the water flows through the drain hose of the indoor unit without any leakage and goes out the drain exit.

#### **■** Checking the Drainage

#### 1. Remove the Air Filter.

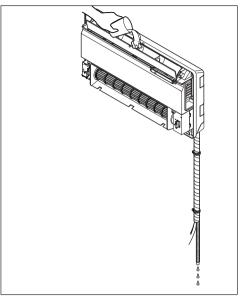
· To remove air filter, take hold of tab and pull slightly upwards.

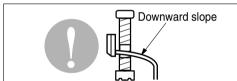
#### 2. Check the drainage.

- · Spray one or two glasses of water upon the evaporator.
- · Ensure that water flows drain hose of indoor unit without any leakage.

#### **Drain piping**

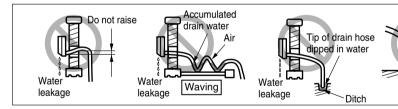
- 1. The drain hose should point downward for easy drain flow.
- 2. Do not make drain piping like the following.





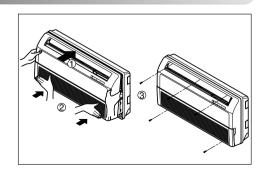
ess than

50mm gap



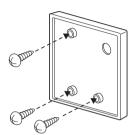
## Panel Front Assembly

- 1. Suspend the hook of panel front in the groove.
- 2. Press the panel front.
- 3. Screw up panel front.



## Installation of Wired Remote Controller

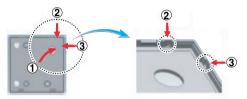
- 1. Please fix tightly using provided screw after placing remote controller setup board on the place where you like to setup.
  - Please set it up not to bend because poor setup could take place if setup board bends. Please set up remote controller board fit to the reclamation box if there is a reclamation box.



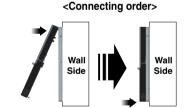
- 2. Can set up Wired remote controller cable into three directions.
  - Setup direction: the surface of wall reclamation, upper, right
  - If setting up remote controller cable into upper and right side, please set up after removing remote controller cable guide groove.
  - \* Remove guide groove with long nose.
- Reclamation to the surface of the wall
- ② Upper part quide groove
- 3 Right part guide groove
- 3. Please fix remote controller upper part into the setup board attached to the surface of the wall, as the picture below, and then, connect with setup board by pressing lower part.
  - Please connect not to make a gap at the remote controller and setup board's upper and lower, right and left part.

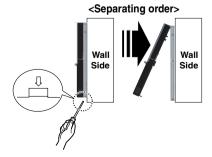
When separating remote controller from setup board, as the picture below, after inserting into the lower separating hole using screw driver and then, spinning clockwise, remote controller is separated.

- There are two separating holes. Please individually separate one at a time.
- Please be careful not to damage the inside components when separating.

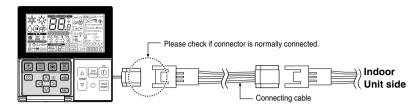


<Wire guide grooves>





4. Please connect indoor unit and remote controller using connection cable.



5. Please use extension cable if the distance between wired remote controller and indoor unit is more than 10m.



When installing the wired remote controller, do not bury it in the wall.

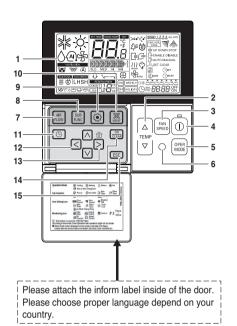
(It can cause damage in the temperature sensor.)

Do not install the cable to be 50m or above.

(It can cause communication error.)

- · When installing the extension cable, check the connecting direction of the connector of the remote controller side and the product side for correct installation.
- If you install the extension cable in the opposite direction, the connector will not be connected.
- Specification of extension cable: 2547 1007 22# 2 core 3 shield 5 or above.

### Name and function of wired remote controller(Accessory)



- 1. Operation indication screen
- 2. Set temperature button
  - It will set not room temperature but outlet air temperature.
- 3. Fan speed button
  - · Fan Speed have 3 Steps.
  - · Middle and Low step is same
- 4. ON/OFF button
- 5. Opration mode selection button
- 6. Wireless remote controller receiver
  - · Some products don't receive the wireless signals.
- 7. Air flow button
- 8. Subfunction button
- 9. Function setting button
- 10. Ventilation button
- 11. Reservation
- 12. Up,down,left,right button
  - To check the indoor temperature, press button.
- 13. Room temperature button
  - Displays only the room temperature of the remote controller perception.
  - There is no control of room temperature.
  - · In case of fresh air intake unit, displays only the temperature around remote controller.
- 14. Setting/Cancel button
- 15. Exit button
- \* Some functions may not be operated and displayed depending on the product type.
- \* It will display strange value to the room temperature if wired remote controller is not connected.

Model: PQRCVSL0 (Black Color) PQRCVSL0QW (White Color)

## Dip Switch Setting

	Function	Description	Setting Off	Setting On	Default
SW1	Communication	N/A (Default)	-	-	Off
SW2	Cycle	N/A (Default)	-	-	Off
SW3	Group Control	Selection of Master or Slave	Master	Slave	Off
SW4	Dry Contact Mode	Selection of Dry Contact Mode	Wired/Wireless remote controller Selection of Manual or Auto operation Mode	Auto	Off
SW5	Installation	Fan continuous operation	Continuous operation Removall	-	Off
SW6	Heater linkage	N/A	-	-	Off
SW7	Ventilator linkage	Selection of Ventilator linkage	Linkage Removal	Working	
	Vane selection (Console)	Selection of up/down side Vane	Up side + Down side Vane	Up side Vane Only	Off
	Region selection	Selection tropical region	General model	Tropical model	
SW8	Etc.	Spare	-	-	Off

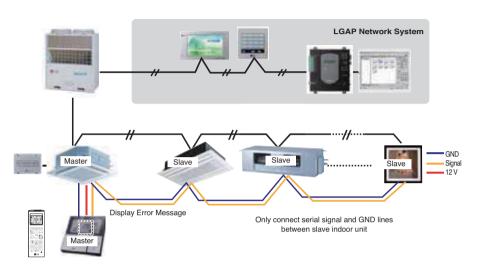


For Multi V Models, Dip switch 1, 2, 6, 8 must be set OFF.

### Group Control Setting

#### 1. Group Control 1

#### ■ Wired remote controller 1 + Indoor units



■ Dip Switch in PCB (Cassette and Duct Type indoor units)





- 1. It is possible to 16 indoor units(Max) by one wired remote controller. Set only one indoor unit to Master, set the others to Slave.
- 2. It is possible to connect with every type of indoor units.
- 3. It is possible to use wireless remote controller at the same time.
- 4. It is possible to connect with Dry Contact and Central controller at the same time.
  - The Master indoor unit is possible to recognize Dry Contact and Central Controller only.
  - In case of Central controller and Group controller at the same time, it is possible to connect standard 2series indoor units or later since Feb. 2009.
  - In case of Central controller setting, the Central controller can control indoor units after setting only the address of master indoor unit.
  - Slave indoor unit will be operated like master indoor unit.
  - Slave indoor unit can not be individually controlled by Central controller.
  - Some remote controller can't perform with Dry Contact and Central controller at the same time. So contact us further information about it.

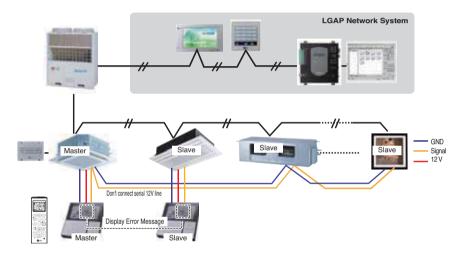
#### 5. In case of any error occurs at indoor unit, display on the wired remote controller.

Exception of the error indoor unit, an individual indoor unit control possibility.

#### 6. In case of Group Control, it is possible to use following functions.

- Selection of operation options (operation/stop/mode/set temperature)
- Control of flow rate (High/Middle/Low)
- It is not possible at some functions.
- \* Master/Slave setting of indoor units be set possible using a PCB Dip Switch.
- # It is possible to connect indoor units since Feb. 2009. In the other cases, please contact LGE.
- \* It can be the cause of malfuctions when there is no setting of master and slave.

#### 2. Group Control 2



#### # It is possible to control N indoor units by wired remote controller M units. (M + N ≤ 17 Units)

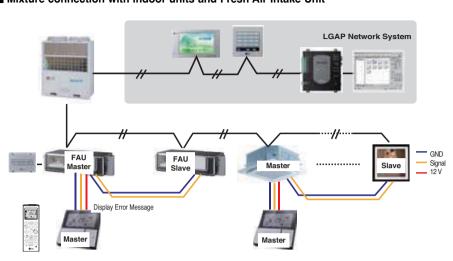
Set only one indoor unit to Master, set the others to Slave.

Set only one wired remote controller to Master, set the others to Slave.

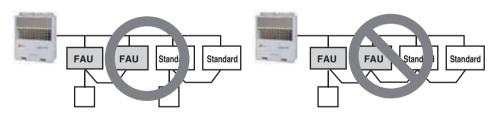
Other than those, it is same with the Group Control 1.

#### 3. Group Control 3

■ Mixture connection with indoor units and Fresh Air Intake Unit



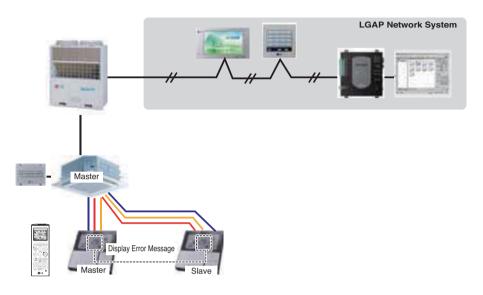
- ★ In case of connecting with standard indoor unit and Fresh Intake Unit, separate Fresh Air **Intake Unit with standard units.** (Because setting temperature are different.)
- \* Other than those, it is same with Group Control 1.



\* FAU: Fresh Air Intake Unit Standard: Standard Indoor Unit

#### 4. 2 Remote Control

■ Wired remote controller 2 + Indoor unit 1



- 1. It is possible to connect two wired remote controllers with one indoor unit.
- 2. Every types of indoor unit is possible to connect two remote controller.
- 3. It is possible to use wireless remote controller at the same time.
- 4. It is possible to connect with Dry Contact and Central controller at the same time.
- 5. In case of any error occurs at indoor unit, display on the wired remote controller.
- 6. There isn't limits of indoor unit function.
- \* Maximum 2wired remote controllers can be connected with 1 indoor unit.

#### 5. Accessories for group control setting

It is possible to set group control by using below accessories.

