

INSTALLATION INSTRUCTIONS

Air Conditioner



This air conditioner uses the refrigerant R410A.

Model No.

| Indoor Units | | |
|--------------|------------------|------------------|
| Type | Indoor Unit Type | Nominal Capacity |
| | | 26 |
| K2 | Wall Mounted | S-26PK2U6 |

Read through the Installation Instructions before you proceed with the installation.
In particular, you will need to read under the "IMPORTANT!" section at the top of the page.

IMPORTANT! Please Read Before Starting

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system so it operates safely and efficiently.

For safe installation and trouble-free operation, you must:

- Carefully read this instruction booklet before beginning.
- Follow each installation or repair step exactly as shown.
- This air conditioner shall be installed in accordance with National Wiring Regulations.
- Pay close attention to all warning and caution notices given in this manual.



WARNING

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.



CAUTION

This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.

If Necessary, Get Help

These instructions are all you need for most installation sites and maintenance conditions. If you require help for a special problem, contact our sales/service outlet or your certified dealer for additional instructions.

In Case of Improper Installation

The manufacturer shall in no way be responsible for improper installation or maintenance service, including failure to follow the instructions in this document.

SPECIAL PRECAUTIONS




WARNING

When Wiring



ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH. ONLY A QUALIFIED, EXPERIENCED ELECTRICIAN SHOULD ATTEMPT TO WIRE THIS SYSTEM.

- Do not supply power to the unit until all wiring and tubing are completed or reconnected and checked.
- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate grounding can cause **accidental injury or death**.
- **Ground the unit** following local electrical codes.
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.
- To prevent possible hazards from insulation failure, the unit must be grounded. 
- This equipment is strongly recommended to be installed with Earth Leakage Circuit Breaker (ELCB) or Residual Current Device (RCD). Otherwise, it may cause electrical shock and fire in case of equipment breakdown or insulation breakdown.

When Transporting

Be careful when picking up and moving the indoor and outdoor units. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut your fingers.

When Installing...

Select an installation location which is rigid and strong enough to support or hold the unit, and select a location for easy maintenance.

...In a Room

Properly insulate any tubing run inside a room to prevent "sweating" that can cause dripping and water damage to walls and floors.



CAUTION

Keep the fire alarm and the air outlet at least 5 feet (1.5 m) away from the unit.

...In Moist or Uneven Locations

Use a raised concrete pad or concrete blocks to provide a solid, level foundation for the outdoor unit. This prevents water damage and abnormal vibration.

...In an Area with High Winds

Securely anchor the outdoor unit down with bolts and a metal frame. Provide a suitable air baffle.

...In a Snowy Area (for Heat Pump-type Systems)

Install the outdoor unit on a raised platform that is higher than drifting snow. Provide snow vents.

When Connecting Refrigerant Tubing

- Pay particular attention to refrigerant leakages.
- Ventilate the room immediately, in the event that is refrigerant gas leaks during the installation. Be careful not to allow contact of the refrigerant gas with a flame as this will cause the generation of toxic gas.
- Keep all tubing runs as short as possible.
- Apply refrigerant lubricant to the matching surfaces of the flare and union tubes before connecting them, then tighten the nut with a torque wrench for a leak-free connection.
- Check carefully for leaks before starting the test run.




WARNING

- When performing piping work, do not mix air except for specified refrigerant (R410A) in refrigeration cycle. It causes capacity down, and risk of explosion and injury due to high tension inside the refrigerant cycle.
- If the refrigerant comes in contact with a flame, it produces a toxic gas.
- Do not add or replace refrigerant other than specified type. It may cause product damage, burst and injury, etc.

- Do not leak refrigerant while piping work for an installation or re-installation, and while repairing refrigeration parts.
Handle liquid refrigerant carefully as it may cause frostbite.

When Servicing

- Turn the power OFF at the main power box (mains) before opening the unit to check or repair electrical parts and wiring. 
- Keep your fingers and clothing away from any moving parts.
- Clean up the site after you finish, remembering to check that no metal scraps or bits of wiring have been left inside the unit.




WARNING

- This product must not be modified or disassembled under any circumstances. Modified or disassembled unit may cause fire, electric shock or injury.
- Do not clean inside the indoor and outdoor units by users. Engage authorized dealer or specialist for cleaning.
- In case of malfunction of this appliance, do not repair by yourself. Contact to the sales dealer or service dealer for a repair.




CAUTION

- Do not touch the air inlet or the sharp aluminum fins of the outdoor unit. You may get injured. 
- Ventilate any enclosed areas when installing or testing the refrigeration system. Leaked refrigerant gas, on contact with fire or heat, can produce dangerously toxic gas.
- Confirm after installation that no refrigerant gas is leaking. If the gas comes in contact with a burning stove, gas water heater, electric room heater or other heat source, it can cause the generation of toxic gas.

Others





WARNING

- Do not sit or step on the unit, you may fall down accidentally. 



CAUTION

- Do not touch the air inlet or the sharp aluminum fins of the outdoor unit. You may get injured. 
- Do not stick any object into the FAN CASE. You may be injured and the unit may be damaged. 



NOTICE • This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

• This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- FCC Caution: To assure continued compliance, follow the attached installation instructions. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Check of Density Limit

The room in which the air conditioner is to be installed requires a design that in the event of refrigerant gas leaking out, its density will not exceed a set limit.

The refrigerant (R410A), which is used in the air conditioner, is safe, without the toxicity or combustibility of ammonia, and is not restricted by laws imposed to protect the ozone layer. However, since it contains more than air, it poses the risk of suffocation if its density should rise excessively. Suffocation from leakage of refrigerant is almost non-existent. With the recent increase in the number of high density buildings, however, the installation of multi air conditioner systems is on the increase because of the need for effective use of floor space, individual control, energy conservation by curtailing heat and carrying power, etc.

Most importantly, the multi air conditioner system is able to replenish a large amount of refrigerant compared to conventional individual air conditioners.

If a single unit of the multi air conditioner system is to be installed in a small room, select a suitable model and installation procedure so that if the refrigerant accidentally leaks out, its density does not reach the limit (and in the event of an emergency, measures can be made before injury can occur).

ASHRAE and the International Mechanical Code of the ICC as well as CSA provide guidance and define safeguards related to the use of refrigerants, all of which define a Refrigerant Concentration Level (RCL) of 25 pounds (11.3 kg) per 1,000 cubic feet (28.3 m³) for R410A refrigerant.

For additional guidance and precautions related to refrigerant safety, please refer to the following documents:

International Mechanical Code 2012 (IMC-2012)
(or more recently revised)
ASHRAE 15
ASHRAE 34

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| Refer to the Operating Instructions attached to the optional Timer Remote Controller or optional High-spec Wired Remote Controller. | | | |

1. GENERAL








This booklet briefly outlines where and how to install the air conditioning system. Please read over the entire set of instructions for the indoor and outdoor units and make sure all accessory parts listed are with the system before beginning.

1-1. Tools Required for Installation (not supplied)

1. Flathead screwdriver
2. Phillips head screwdriver
3. Knife or wire stripper
4. Tape measure
5. Carpenter's level
6. Sabre saw or keyhole saw
7. Hacksaw
8. Core bits
9. Hammer
10. Drill
11. Tube cutter
12. Tube flaring tool
13. Torque wrench
14. Adjustable wrench
15. Reamer (for deburring)

1-2. Accessories Supplied with Unit

Table 1-1 (Wall Mounted)

| Part Name | Figure | Q'ty | Remarks |
|---------------------------|---|------|--|
| Tapping screw |  | 8 | Truss-head Phillips 5/32" x 13/16" (4 x 20 mm) |
| Tapping screw |  | 2 | Truss-head Phillips 5/32" x 13/32" (4 x 10 mm) |
| Flare insulation |  | 1 | |
| Drain hose adapter |  | 1 | |
| Operating Instructions |  | 1 | |
| Installation Instructions |  | 1 | |
| Warranty card |  | 1 | |

1-3. Type of Copper Tube and Insulation Material

If you wish to purchase these materials separately from a local source, you will need:

1. Deoxidized annealed copper tube for refrigerant tubing. Cut each tube to the appropriate lengths +11-13/16" (30 cm) to 15-6/8" (40 cm) to dampen vibration between units.
2. Foamed polyethylene insulation for copper tubes as required to precise length of tubing. Wall thickness of the insulation should be not less than 5/16" (8 mm).
3. Use insulated copper wire for field wiring. Wire size varies with the total length of wiring. See the section "4. ELECTRICAL WIRING" for details.

CAUTION

Check local electrical codes and regulations before obtaining wire. Also, check any specified instructions or limitations.

1-4. Additional Materials Required for Installation

1. Refrigeration (armored) tape
2. Insulated staples or clamps for connecting wire (See your local codes.)
3. Putty
4. Refrigeration tubing lubricant
5. Clamps or saddles to secure refrigerant tubing
6. Scale for weighing

2. SELECTING THE INSTALLATION SITE

2-1. Indoor Unit

AVOID:

- areas where leakage of flammable gas may be expected.
- places where large amounts of oil mist exist.
- direct sunlight.
- locations near heat sources which may affect the performance of the unit.
- locations where external air may enter the room directly. This may cause "condensation" on the air discharge ports, causing them to spray or drip water.
- locations where the remote controller will be splashed with water or affected by dampness or humidity.
- installing the remote controller behind curtains or furniture.
- locations where high-frequency emissions are generated.

DO:

- select an appropriate position from which every corner of the room can be uniformly cooled.
- select a location where the ceiling is strong enough to support the weight of the unit.



- select a location which can support a load that is four times the indoor unit weight.
- select a location where tubing and drain pipe have the shortest run to the outdoor unit.
- allow room for operation and maintenance as well as unrestricted air flow around the unit.
- install the unit within the maximum elevation difference above or below the outdoor unit and within a total tubing length (L) from the outdoor unit as detailed in the Installation Instructions packed with the outdoor unit.
- allow room for mounting the remote controller about 3.3 ft. (1 m) off the floor, in an area that is not in direct sunlight or in the flow of cool air from the indoor unit.

NOTE

Air delivery will be degraded if the distance from the floor to the ceiling is greater than 9.8 ft. (3 m).

Wall Mounted

The air inlet and outlet of the indoor unit must be free of any obstructions to allow air to spread throughout the room.

1. The indoor unit must be within a maintenance soace.

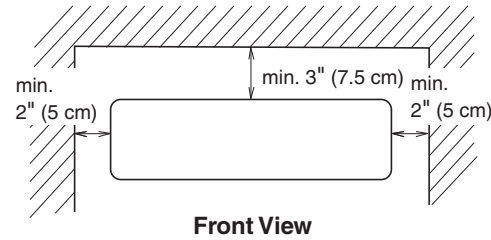
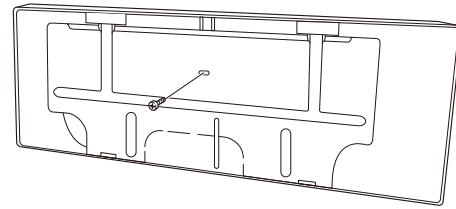


Fig. 2-1

3. HOW TO INSTALL THE INDOOR UNIT

3-1. Remove the Rear Panel from the Unit

- (1) Remove and discard the set screw on the rear panel. (Fig. 3-1)
- (2) Press the 2 Δ marks on the frame cover and disengage the stationary tabs from the frame. (Fig. 3-2)
- (3) Remove the rear panel by grasping the sections shown in Fig. 3-3 and pulling it in the direction shown by the arrow.



Set screw only for transportation

Fig. 3-1

NOTE

Tubing can be extended in 6 directions as shown in Fig. 3-5. Select the direction you need providing the shortest run to the outside unit.

- When left tubing is to be done, switch the drain hose and drain cap. (For details, see the section "Switching drain hose and drain cap" on page 13.)

3-2. Make a Hole

- (1) Place the rear panel from the indoor unit on the wall at the location selected. Make sure the panel is horizontal, using a carpenter's level or tape measure to measure down from the ceiling. Wait until after cutting the hole before attaching the rear panel to the wall.
- (2) Determine which side of the unit you should make the hole for tubing and wiring. (Fig. 3-6)

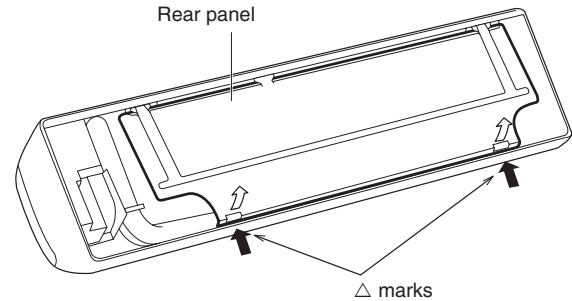


Fig. 3-2

NOTE

In the case of left-rear tubing, use the measurement points 158 mm from the marked position on the rear panel for precise placement of the hose outlet. (Fig. 3-6)

- (3) Before making the hole, check carefully that no studs or pipes are directly run behind the spot to be cut.

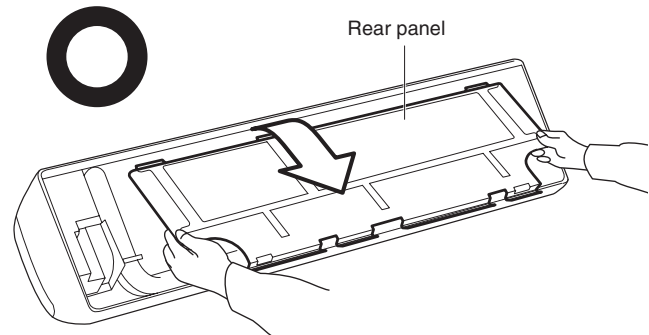


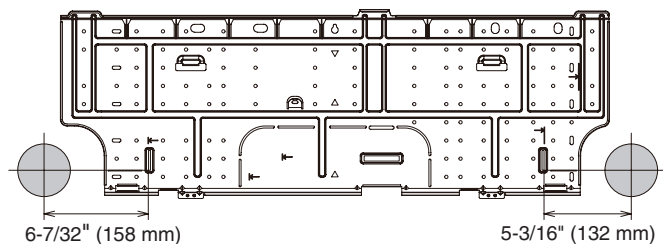
Fig. 3-3



CAUTION

Also avoid areas where electrical wiring or conduits are located.

The above precautions are also applicable if tubing goes through the wall in any other location.



Unit: inch (mm)

Fig. 3-6

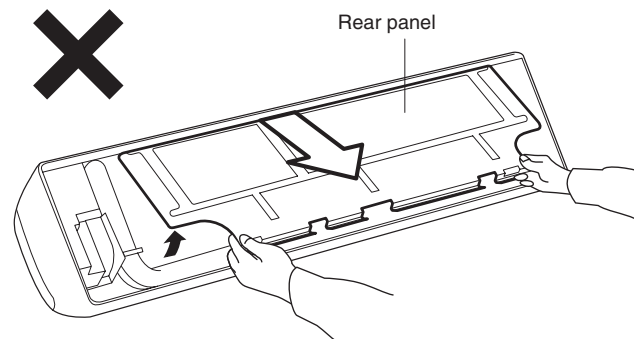


Fig. 3-4

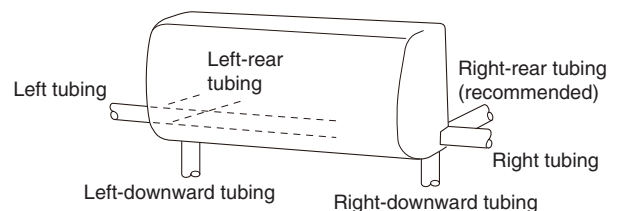


Fig. 3-5

- (4) Using a sabre saw, keyhole saw or hole-cutting drill attachment, cut a hole in the wall. See Table 3-1 and Fig. 3-7.

Table 3-1

| Hole Dia. |
|-----------------|
| 3-5/32" (80 mm) |

- (5) Measure the thickness of the wall from the inside edge to the outside edge and cut PVC pipe at a slight angle 1/4" (6 mm) shorter than the thickness of the wall. (Fig. 3-8)
- (6) Place the plastic cover over the end of the pipe (for indoor side only) and insert the pipe in the wall. (Fig. 3-9)

3-3. Install the Rear Panel on the Wall

Be sure to confirm that the wall is strong enough to suspend the unit.

There are a number of screw holes on the rear panel.

Using the 8 screw holes with ↵ mark is recommended to attach the rear panel securely to the wall.

NOTE

Be sure to install the unit within the range of the wall.

If Wooden Wall

- (1) Attach the rear panel to the wall with the 8 screws provided. (Fig. 3-10)
- If you are not able to line up the holes in the rear panel with the beam locations marked on the wall, use rawl plugs or toggle bolts to go through the holes on the panel or drill 3/16" (5 mm) dia. holes in the panel over the stud locations and then mount the rear panel.
- (2) Double check with a carpenter's level or tape measure that the panel is level. This is important to install the unit properly. (Fig. 3-11)
- (3) Make sure the panel is flush against the wall. Any space between the wall and unit will cause noise and vibration.

NOTE

Hole should be made at a slight downward slant to the outdoor side.

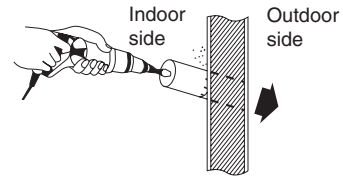
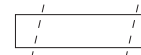
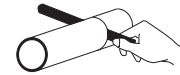


Fig. 3-7

PVC pipe (Locally purchased)



Cut at slight angle

Fig. 3-8

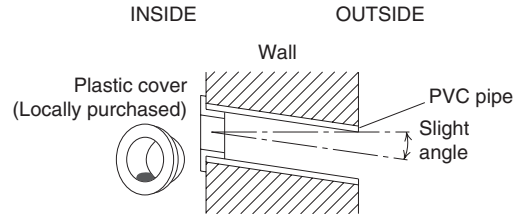


Fig. 3-9

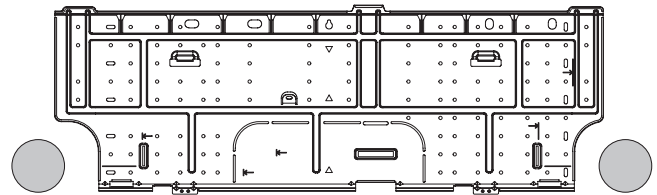


Fig. 3-10

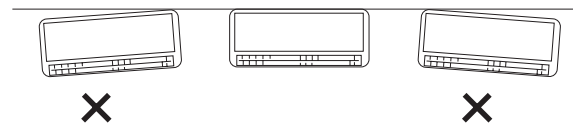


Fig. 3-11

3-4. Removing and Installing the Grille

Basically, these models can be installed and wired without removing the grille. If access to any internal part is needed, follow the steps as given below.

How to remove the grille

- (1) Open the front panel until it is nearly horizontal, grasp the sections near the front panel arms on both sides, and then remove the panel by pushing the arms towards the outside while pulling the panel towards you.
If the front panel is difficult to remove, grasp both ends of it and lift it up slightly. Move it to the left and disengage the left arm, then move it to the right and disengage the right arm. (Fig. 3-12)
- (2) Lift the anti-mold filter up slightly to disengage it from the protrusions on the unit, and then pull downward to remove the filter from the unit. (Fig. 3-12)
- (3) Remove the 3 screws from the front of the unit and remove the screw covers on the bottom surface. Then remove the 2 screws. (Fig. 3-13)
- (4) Remove the screw on the right side cover plate and remove the cover. (Fig. 3-13)
- (5) Remove the lower flap by disengaging 4 pins of the lower flap in order. (Figs. 3-14 and 3-15)
(The flap is so flexible that it can be easily removed.)
- (6) Lift up the grille in the direction shown by the arrow and pull the grille towards you to remove it. (Fig. 3-16)

How to replace the grille

- (1) While aligning the top edge of the grille with the frame, move the grille horizontally and insert the top and bottom into the frame.
- (2) Press the grille firmly with your hand to ensure no gap exists between the frame and grille.
- (3) Tighten the 6 screws. And fix the removed covers in place.
- (4) Grasp the sections near the front panel arms on both sides, and hold the front panel so that it is nearly horizontal. Push the arm shafts towards the outside so that they come into contact with the top of the indentations on the right and left sides of the air conditioner. Then push firmly until the arm shafts click into place. (Fig. 3-17)
- (5) Remount the lower flap.
(In remounting the flap, it cannot be turned end for end because the right and left pins of the flap differ in form. (Fig. 3-15))
- (6) Insert the top of the anti-mold filter, and then secure the bottom of the filter with the protrusions on the unit.
- (7) When closing the front panel, push the central part of the front panel first and then press the bottom right and left corners in place until you feel a click. (Fig. 3-18)

NOTE

Check that no gap exists between the frame and the grille.

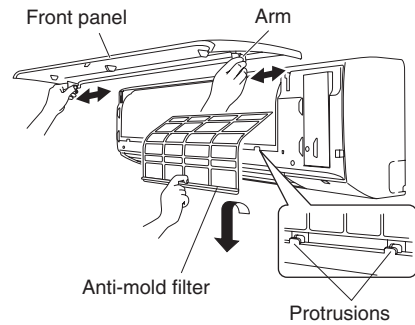


Fig. 3-12

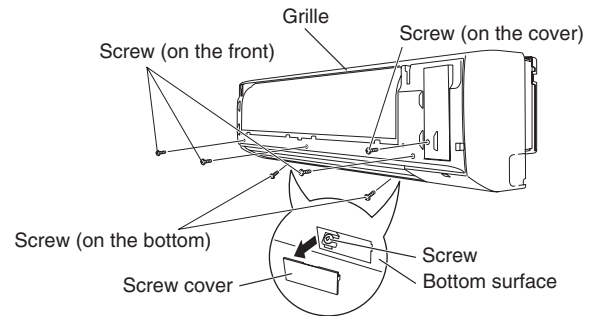


Fig. 3-13

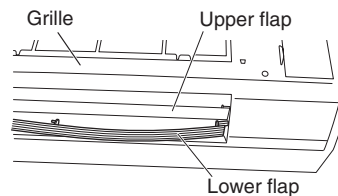


Fig. 3-14

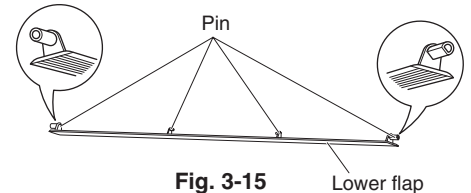


Fig. 3-15

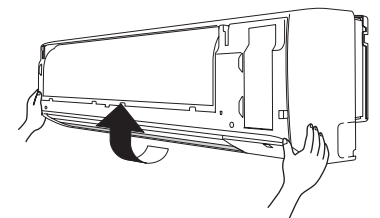


Fig. 3-16

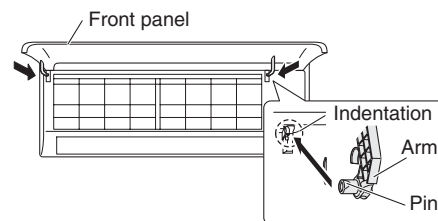


Fig. 3-17

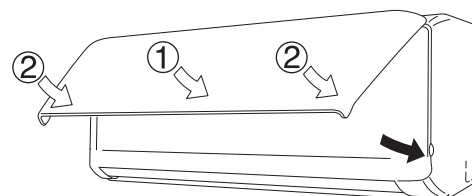


Fig. 3-18

3-5. Shape the Indoor Side Tubing

- (1) Arrangement of tubing by direction
 - a) Right or left tubing
Cut out the corner of the right/left frame with a hacksaw or the like. (Figs. 3-19 and 3-20)
 - b) Right-rear or left-rear tubing
In this case, the corner of the frame need not be cut.
- (2) To mount the indoor unit on the rear panel:
Hang the 3 mounting slots of the unit on the upper tabs of the rear panel. (Fig. 3-21)

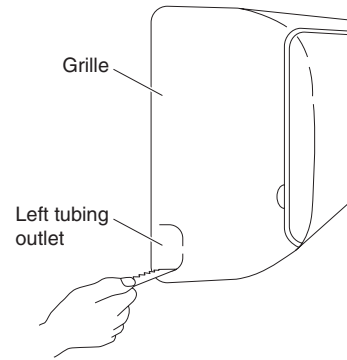


Fig. 3-19

3-6. Wiring Instructions

General precautions on wiring

- (1) Before wiring, confirm the rated voltage of the unit as shown on its nameplate, then carry out the wiring closely following the wiring diagram.
- (2) Provide a power outlet to be used exclusively for each unit, with a power supply disconnect and circuit breaker for overcurrent protection provided in the exclusive line.
- (3) To prevent possible hazards due to insulation failure, the unit must be grounded.
- (4) Each wiring connection must be done tightly and in accordance with the wiring system diagram. Wrong wiring may cause the unit to misoperate or become damaged.
- (5) Do not allow wiring to touch the refrigerant tubing, compressor, or any moving parts of the fan.
- (6) Unauthorized changes in the internal wiring can be very dangerous. The manufacturer will accept no responsibility for any damage or misoperation that occurs as a result of such unauthorized changes.

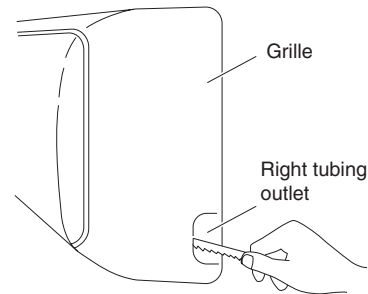


Fig. 3-20

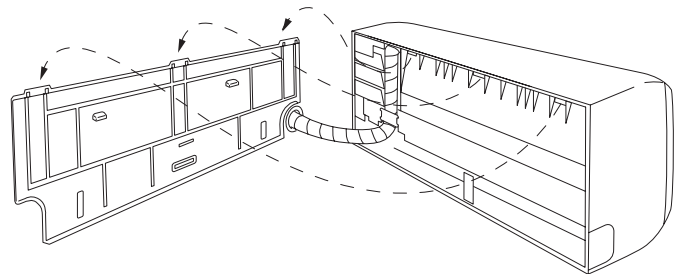


Fig. 3-21

3-7. Mounting

- (1) To install the indoor unit, mount the indoor unit onto the 3 tabs on the upper part of the rear plate.
- (2) Hold down the air discharge outlet and press the lower part of the indoor unit until it clicks to securely fasten to the 2 tabs on the lower part of the rear plate. (Fig. 3-22)

NOTE

For tubing, choose either the right or left tubing direction and follow the steps below. Also, extend the support on the back of the indoor unit as a stand to make your work easier. (Fig. 3-23)

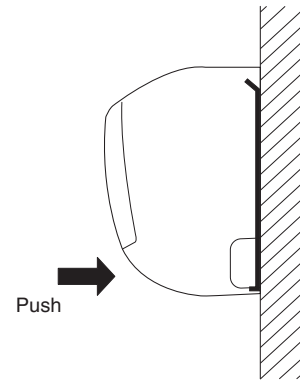


Fig. 3-22

■ Right-side tubing

- (1) Shape the refrigerant tubing so that it can easily go into the wall hole. (Fig. 3-24)
- (2) Push the wiring, refrigerant tubing, and drain hose through the hole in the wall. Adjust the indoor unit so it is securely seated on the rear panel. (Fig. 3-25)
- (3) Carefully bend the tubing (if necessary) to run along the wall in the direction of the outdoor unit and then tape as far as the fittings. The drain hose should come straight down the wall to a point where water runoff won't stain the wall.
- (4) Connect the refrigerant tubing to the outdoor unit. (After performing a leak test on the connecting part, insulate it with the tubing insulation. (Fig. 3-26)).
- (5) Assemble the refrigerant tubing, drain hose, and conduit (including inter-unit wiring) as shown in Fig. 3-27.

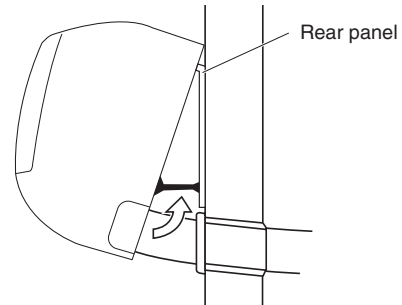


Fig. 3-23

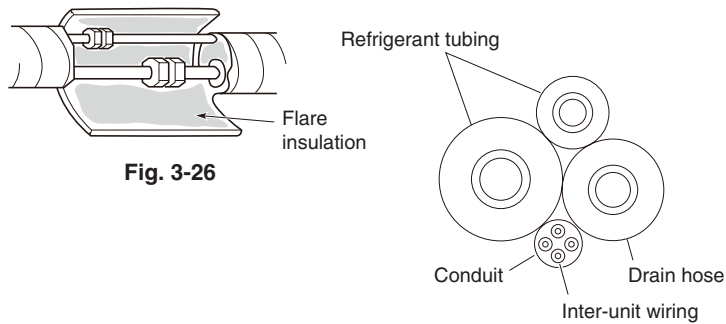


Fig. 3-26

Fig. 3-27

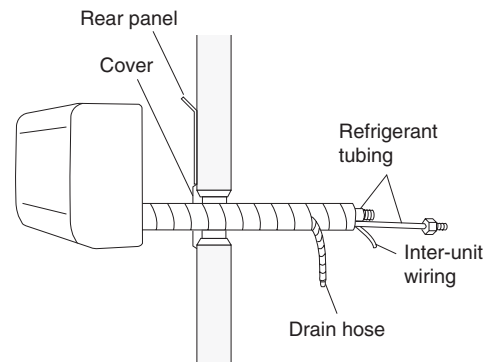


Fig. 3-24

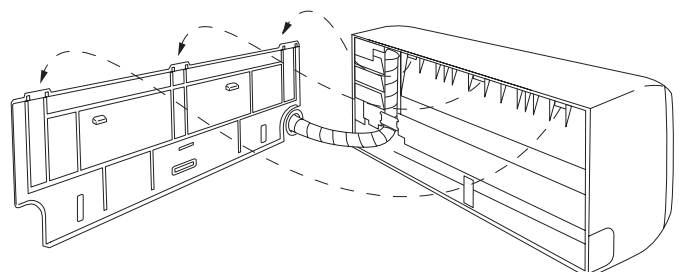


Fig. 3-25

■ Left-side tubing

- (1) Lead the tubing and drain hose through the wall, allowing sufficient length for connection. Then bend the tubing using a tube bender to make the attachment. (Fig. 3-28)
- (2) Switch the drain hose and drain cap.

Switching drain hose and drain cap

- (a) Locate the drain hose and the drain cap. (Fig. 3-29)
- (b) Remove the screw fastening the drain hose on the right side, and pull out the drain hose to remove it. (Fig. 3-29)
- (c) Apply moderate force to pull off the drain cap on the left side. (If you cannot pull it off by hand, use a long-nose pliers.)
- (d) Reattach the drain hose to the left side and the drain cap to the right side. (Fig. 3-30)

Drain hose

Slide the drain hose fully onto the drain pan outlet. (It will be easy to slide when water is added.) Check that the screw holes in the drain bracket and the drain pan outlet are aligned and securely in contact, then fasten them with the screw. (After attaching the drain hose, check that it is attached securely.) (Fig. 3-31)

Drain cap

Use a Phillips head screwdriver to push the drain cap in firmly. (If it is difficult to push in, wet the cap with water first.)

- (3) Install the indoor unit on the rear panel.
- (4) Connect the tubing and wiring led inside from outdoors.
- (5) After completing a leak test, bundle the tubing together with armoring tape and store it inside the tubing storage area at the back of the indoor unit and hold it with clamps. (Figs. 3-30 and 3-32)

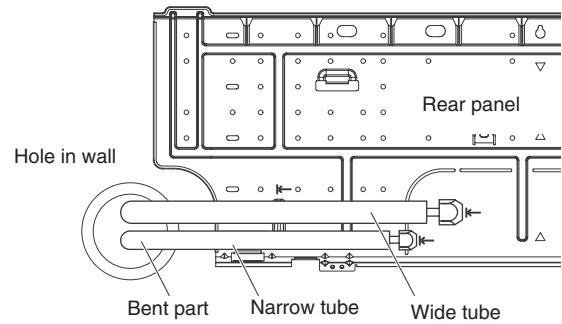


Fig. 3-28

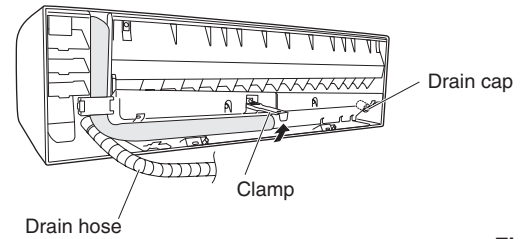


Fig. 3-29

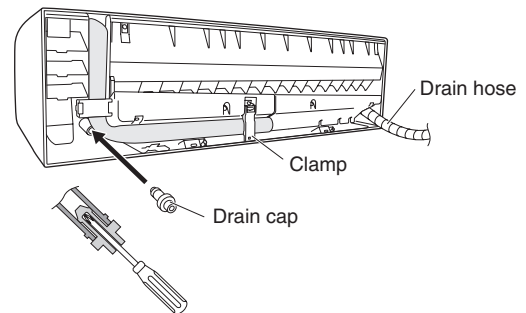


Fig. 3-30

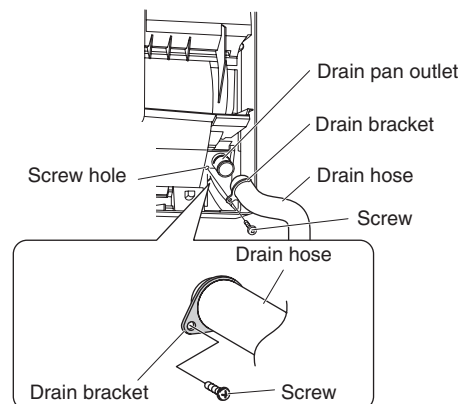


Fig. 3-31

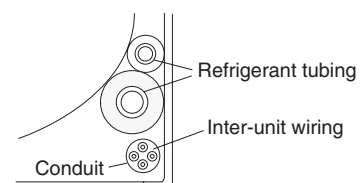


Fig. 3-32

To unmount indoor unit

- (1) Remove the screw cover on the bottom surface.
(Fig. 3-33)
- (2) Fasten the frame to the rear panel using the 2 supplied tapping screws 5/32 × 13/32" (4 × 10 mm). (Fig. 3-33)
- (3) Press the 2 △ marks on the lower part of the indoor unit and unlatch the tabs. Then lift the indoor unit and unmount.
(Fig. 3-34)

NOTE

Under normal conditions, the installation design calls for a less than 2 mm gap between the air conditioner unit and the wall.
Confirm that the gap is appropriate (less than 5/64" (2 mm)).

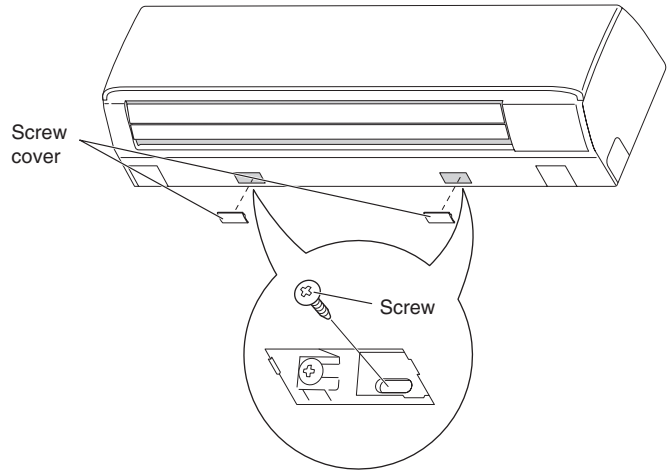


Fig. 3-33

3-8. Drain Hose

- a) The drain hose should be slanted downward to the outdoors. (Fig. 3-35)
- b) Never form a trap in the course of the hose.
- c) If the drain hose will run in the room, insulate the hose with insulation* so that chilled condensation will not damage furniture or floors. (Fig. 3-36)

*Foamed polyethylene or its equivalent is recommended.

WARNING

Do not supply power to the unit or operate it until all tubing and wiring to the outside unit are completed.

Risk of Electric Shock

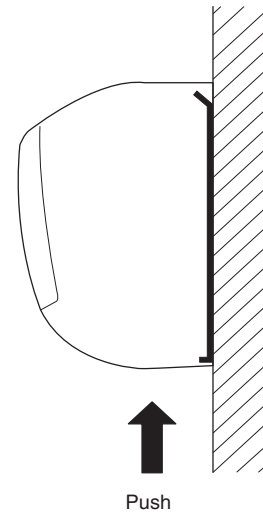


Fig. 3-34

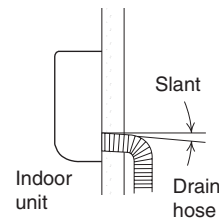


Fig. 3-35

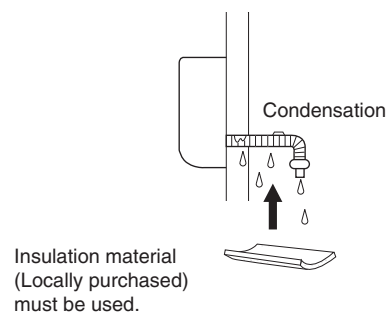


Fig. 3-36

4. ELECTRICAL WIRING

4-1. General Precautions on Wiring

- (1) Before wiring, confirm the rated voltage of the unit as shown on its nameplate, then carry out the wiring closely following the wiring diagram.



- (2) This equipment is strongly recommended to be installed with Earth Leakage Circuit Breaker (ELCB) or Residual Current Device (RCD). Otherwise, it may cause electrical shock and fire in case of equipment breakdown or insulation breakdown. Earth Leakage Circuit Breaker (ELCB) must be incorporated in the fixed wiring in accordance with the wiring regulations. The Earth Leakage Circuit Breaker (ELCB) must be an approved 15 A, having a contact separation in all poles.
- (3) To prevent possible hazards from insulation failure, the unit must be grounded.
- (4) Each wiring connection must be done in accordance with the wiring system diagram. Wrong wiring may cause the unit to misoperate or become damaged.
- (5) Do not allow wiring to touch the refrigerant tubing, compressor, or any moving parts of the fan.
- (6) Unauthorized changes in the internal wiring can be very dangerous. The manufacturer will accept no responsibility for any damage or misoperation that occurs as a result of such unauthorized changes.
- (7) Regulations on wire diameters differ from locality to locality. For field wiring rules, please refer to your LOCAL ELECTRICAL CODES before beginning.
You must ensure that installation complies with all relevant rules and regulations.
- (8) To prevent malfunction of the air conditioner caused by electrical noise, care must be taken when wiring as follows:
- The remote control wiring and the inter-unit control wiring should be wired apart from the inter-unit power wiring.
 - Use shielded wires for inter-unit control wiring between units and ground the shield on single side.
- (9) If the power supply cord of this appliance is damaged, it must be replaced by a repair shop designated by the manufacturer, because special-purpose tools are required.

4-2. Recommended Wire Length and Wire Diameter for Power Supply System

Indoor unit

| Type | Time delay fuse or circuit capacity |
|------|-------------------------------------|
| K2 | 15 A |

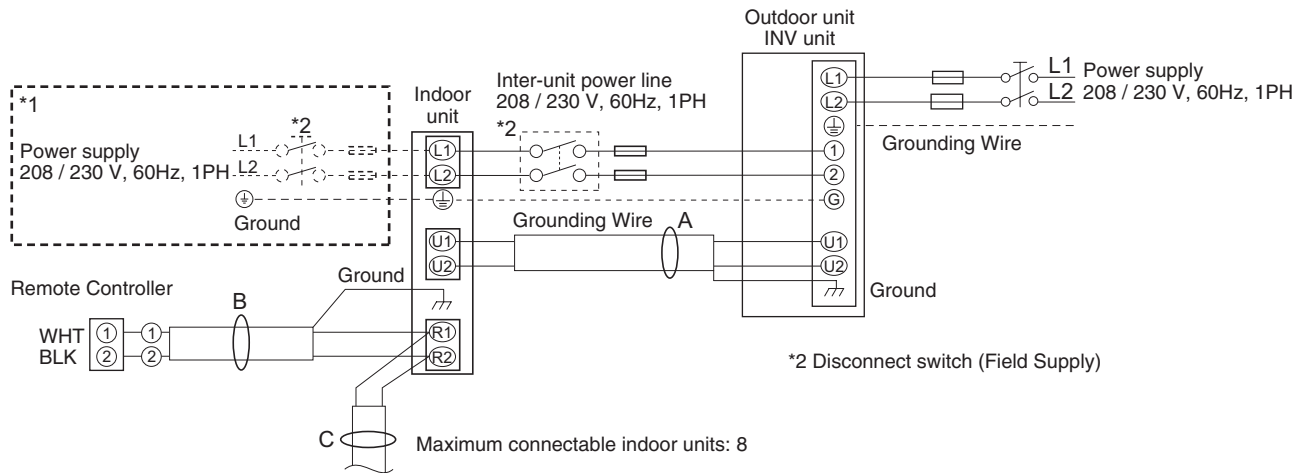
Control wiring

| (A) Inter-unit control wiring (between outdoor and indoor units) | (B) Remote control wiring | (C) Control wiring for group control |
|---|---|---|
| AWG #18 (0.75 mm ²) Use shielded wiring* | AWG #18 (0.75 mm ²) Use shielded wiring* | AWG #18 (0.75 mm ²) Use shielded wiring* |
| Max. 3,280 ft. (Max. 1,000 m) | Max. 1,640 ft. (Max. 500 m) | Max. 650 ft. (Total) (Max. 200 m (Total)) |

NOTE

* With ring-type wire terminal.

4-3. Wiring System Diagrams



NOTE

- *1 When the power source is not supplied from the outdoor unit via the inter-unit power line, provide external power source in the indoor unit.
- *2 Disconnect Switch may be needed by the National/Local code.

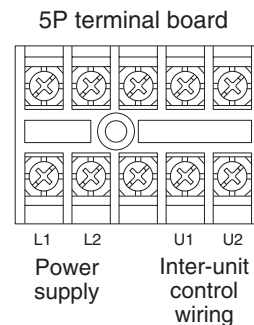


ALWAYS COMPLY WITH NATIONAL AND LOCAL CODE REQUIREMENTS.

Fig. 4-1

NOTE

- (1) See the section “4-2. Recommended Wire Length and Wire Diameter for Power Supply System” for the explanation of “A”, “B” and “C” in the above diagram.
- (2) The basic connection diagram of the indoor unit shows the terminal board, so the terminal boards in your equipment may differ from the diagram.
- (3) Refrigerant Circuit (R.C.) address should be set before turning the power on.
- (4) Regarding R.C. address setting, refer to the installation instructions supplied with the remote controller (optional). Auto address setting can be executed by remote controller automatically. Refer to the installation instructions supplied with the remote controller (optional).
- (5) Ensure that the ground shield cable for inter-unit control wiring between outdoor and indoor units should be connected to the outdoor unit.
- (6) For the inter-unit control wiring between the indoor units, be sure to connect between the shield. Then connect it to the shield of inter-unit control wiring between outdoor and indoor units.
- (7) Ensure that the ground shield cable for a remote controller should be connected only to the indoor unit.



Type K2

Fig. 4-2



CAUTION

Loose wiring may cause the terminal to overheat or result in unit malfunction.

A fire hazard may also occur.

Therefore, ensure that all wiring is tightly connected.

When connecting each power wire to the terminal, follow the instructions on "How to connect wiring to the terminal" and fasten the wire securely with the fixing screw of the terminal board.

How to connect wiring to the terminal

■ For stranded wiring

- (1) Cut the wire end with cutting pliers, then strip the insulation to expose the stranded wiring approx. 3/8" (10 mm) and tightly twist the wire ends. (Fig. 4-3)
- (2) Using a Phillips head screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using a ring connector fastener or pliers, securely clamp each stripped wire end with a ring pressure terminal.
- (4) Place the ring pressure terminal, and replace and tighten the removed terminal screw using a screwdriver. (Fig. 4-4)
- (5) Confirm the "Checkpoint" under the section "7.PRECAUTIONS ON TEST RUN" after installation of indoor and outdoor units, panels and electrical wiring.

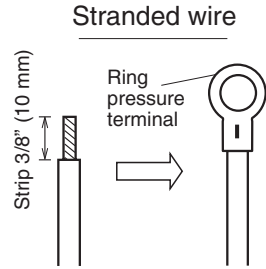


Fig. 4-3

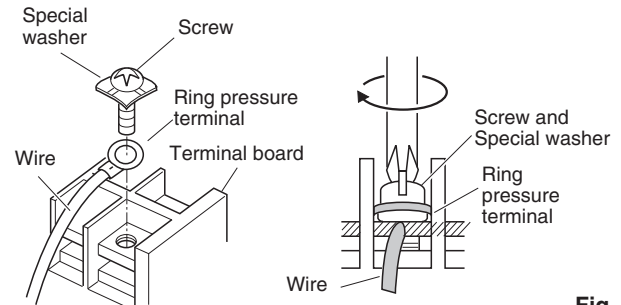
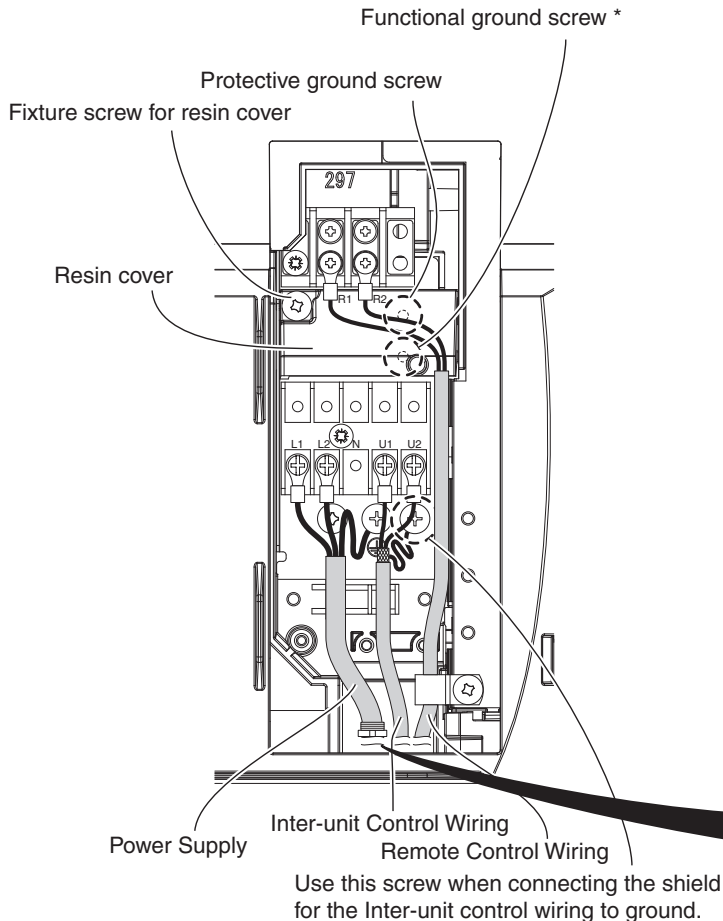


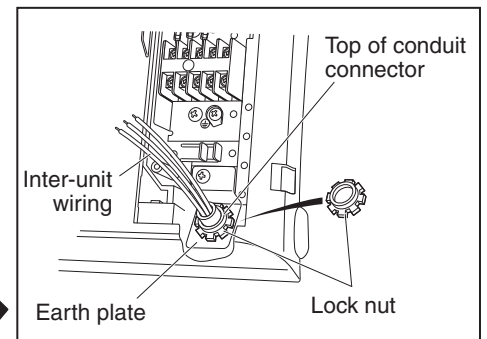
Fig. 4-4

■ Wiring sample

Type K2



Route the inter-unit wiring from the back of the indoor unit and pull it toward the front for connection.



* As to functional ground screw and protective ground screw, remove the fixture screw and resin cover. Then, carry out earth ground work.

5. HOW TO PROCESS TUBING

The liquid tubing side is connected by a flare nut, and the gas tubing side is connected by brazing.

5-1. Connecting the Refrigerant Tubing

Use of the Flaring Method

Many of conventional split system air conditioners employ the flaring method to connect refrigerant tubes which run between indoor and outdoor units. In this method, the copper tubes are flared at each end and connected with flare nuts.

Flaring Procedure with a Flare Tool

- (1) Cut the copper tube to the required length with a tube cutter. It is recommended to cut approx. 1 – 2 ft. (30 - 50 cm) longer than the tubing length you estimate.
- (2) Remove burrs at the end of the copper tube with a tube reamer or a similar tool. This process is important and should be done carefully to make a good flare. (Fig. 5-1)

NOTE

When reaming, hold the tube end downward and be sure that no copper scraps fall into the tube. (Fig. 5-2)

- (3) Remove the flare nut from the unit and be sure to mount it on the copper tube.
- (4) Make a flare at the end of the copper tube with a flare tool. (Fig. 5-3)

NOTE

A good flare should have the following characteristics:

- inside surface is glossy and smooth
- edge is smooth
- tapered sides are of uniform length

Caution Before Connecting Tubes Tightly

- (1) Apply a sealing cap or water-proof tape to prevent dust or water from entering the tubes before they are used.
 - (2) Be sure to apply refrigerant lubricant to the matching surfaces of the flare and union before connecting them together. This is effective for reducing gas leaks. (Fig. 5-4)
 - (3) For proper connection, align the union tube and flare tube straight with each other, then screw in the flare nut lightly at first to obtain a smooth match. (Fig. 5-5)
- Adjust the shape of the liquid tube using a tube bender at the installation site and connect it to the liquid tubing side valve using a flare.

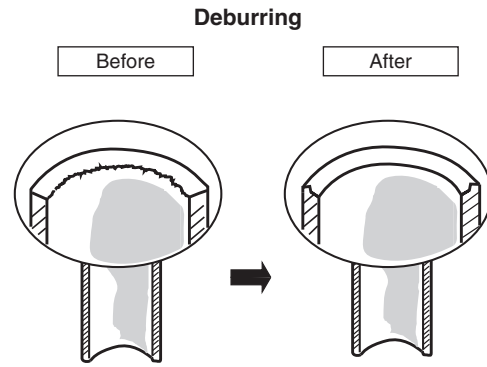


Fig. 5-1

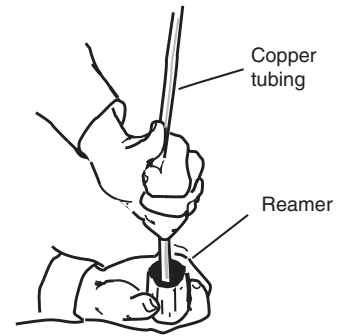


Fig. 5-2

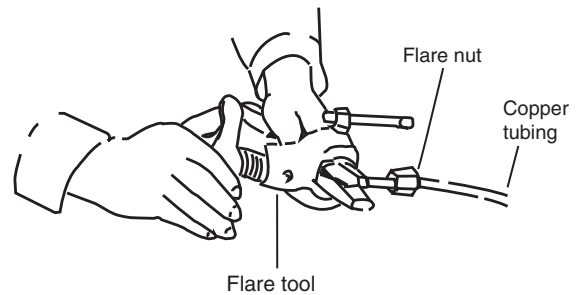


Fig. 5-3

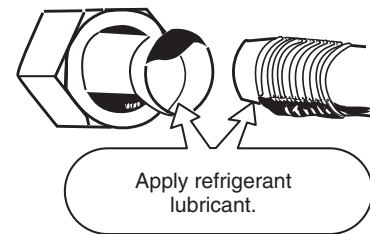


Fig. 5-4

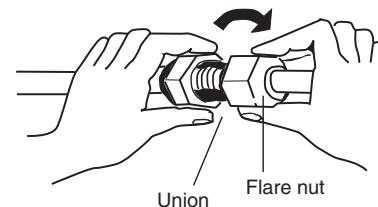


Fig. 5-5

Cautions During Brazing

- Replace air inside the tube with nitrogen gas to prevent copper oxide film from forming during the brazing process. (Oxygen, carbon dioxide and Freon are not acceptable.)
- Do not allow the tubing to get too hot during brazing. The nitrogen gas inside the tubing may overheat, causing refrigerant system valves to become damaged. Therefore allow the tubing to cool when brazing.
- Use a reducing valve for the nitrogen cylinder.
- Do not use agents intended to prevent the formation of oxide film. These agents adversely affect the refrigerant and refrigerant oil, and may cause damage or malfunctions.

5-2. Connecting Tubing Between Indoor and Outdoor Units

- (1) Tightly connect the indoor-side refrigerant tubing extended from the wall with the outdoor-side tubing.

Indoor Unit Tubing Connection ($l_1, l_2 \dots l_{n-1}$)

| Indoor unit type | | 26 |
|------------------|------|--------|
| Gas tubing | inch | ø5/8 |
| | mm | ø15.88 |
| Liquid tubing | inch | ø3/8 |
| | mm | ø9.52 |

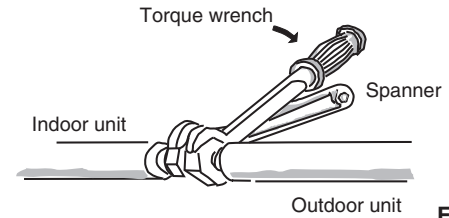


Fig. 5-6

- (2) To fasten the flare nuts, apply specified torque as at right:

- When removing the flare nuts from the tubing connections, or when tightening them after connecting the tubing, be sure to use a torque wrench and a spanner. (Fig. 5-6)
If the flare nuts are over-tightened, the flare may be damaged, which could result in refrigerant leakage and cause injury or asphyxiation to room occupants.

- For the flare nuts at tubing connections, be sure to use the flare nuts that were supplied with the unit, or else flare nuts for R410A (type 2). The refrigerant tubing that is used must be of the correct wall thickness as shown in the table at right.

Because the pressure is approximately 1.6 times higher than conventional refrigerant pressure, the use of ordinary flare nuts (type 1) or thin-walled tubes may result in tube rupture, injury, or asphyxiation caused by refrigerant leakage.

| Tube diameter | | Tightening torque approximate | Tube thickness |
|----------------------|----------|-------------------------------|----------------|
| ø1/4" (ø6.35 mm) | lbf·inch | 120 – 160 lbf·inch | 1/32" |
| | N·m | 14 – 18 N·m | 0.8 mm |
| | {kgf·cm} | {140 – 180 kgf·cm} | |
| ø3/8" (ø9.52 mm) | lbf·inch | 300 – 360 lbf·inch | 1/32" |
| | N·m | 34 – 42 N·m | 0.8 mm |
| | {kgf·cm} | {340 – 420 kgf·cm} | |
| ø1/2" (ø12.7 mm) | lbf·inch | 430 – 540 lbf·inch | 1/32" |
| | N·m | 49 – 61 N·m | 0.8 mm |
| | {kgf·cm} | {490 – 610 kgf·cm} | |
| ø5/8" (ø15.88 mm) | lbf·inch | 590 – 710 lbf·inch | 5/128" |
| | N·m | 68 – 82 N·m | 1.0 mm |
| | {kgf·cm} | {680 – 820 kgf·cm} | |

- In order to prevent damage to the flare caused by over-tightening of the flare nuts, use the table above as a guide when tightening.
- When tightening the flare nut on the liquid tube, use an adjustable wrench with a nominal handle length of 7-7/8 in. (200 mm).

5-3. Insulating the Refrigerant Tubing

Tubing Insulation

- Thermal insulation must be applied to all units tubing, including distribution joint (field supply).
* For gas tubing, the insulation material must be heat resistant to 248°F (120°C) or above. For other tubing, it must be heat resistant to 176°F (80°C) or above. Insulation material thickness must be 13/32" (10 mm) or greater.
If the conditions inside the ceiling exceed DB 86°F (30°C) and RH 70%, increase the thickness of the gas tubing insulation material with one grade higher.

Two tubes arranged together

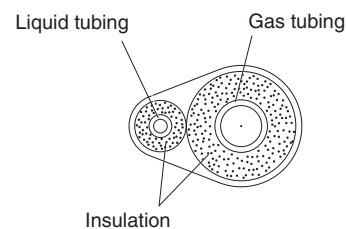


Fig. 5-7



WARNING

If the exterior of the outdoor unit valves has been finished with a square duct covering, make sure you allow sufficient space to access the valves and to allow the panels to be attached and removed.

Taping the flare nuts

Wind the white insulation tape around the flare nuts at the gas tube connections. Then cover up the tubing connections with the flare insulator, and fill the gap at the union with the supplied black insulation tape. Finally, fasten the insulator at both ends with the supplied vinyl clamps. (Fig. 5-8)

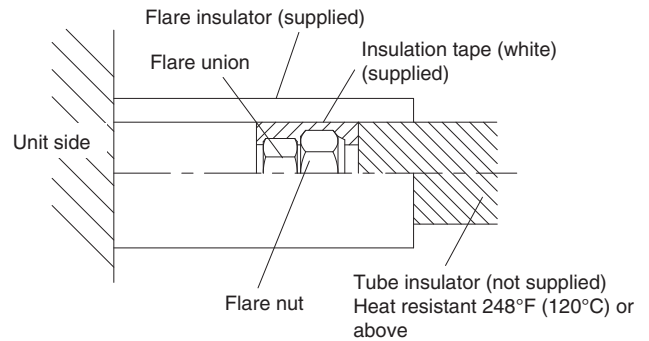


Fig. 5-8

Insulation material

The material used for insulation must have good insulation characteristics, be easy to use, be age resistant, and must not easily absorb moisture.

After a tube has been insulated, never try to bend it into a narrow curve because it can cause the tube to break or crack.

Never grasp the drain or refrigerant connecting outlets when moving the unit.



WARNING

5-4. Taping the Tubes

- (1) At this time, the refrigerant tubes (and electrical wiring if local codes permit) should be taped together with armoring tape in 1 bundle. To prevent condensation from overflowing the drain pan, keep the drain hose separate from the refrigerant tubing.
- (2) Wrap the armoring tape from the bottom of the outdoor unit to the top of the tubing where it enters the wall. As you wrap the tubing, overlap half of each previous tape turn.
- (3) Clamp the tubing bundle to the wall, using 1 clamp approx. each meter. (Fig. 5-9)

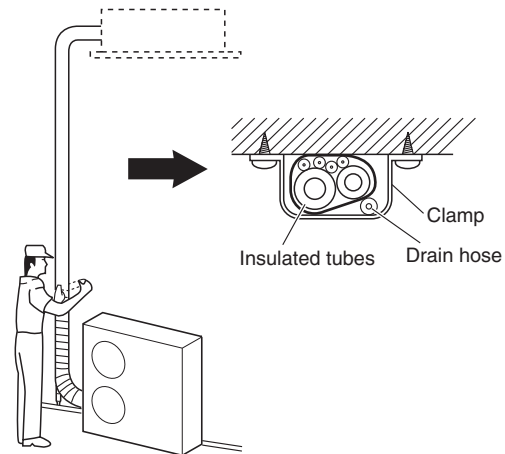


Fig. 5-9

NOTE

Do not wind the armoring tape too tightly since this will decrease the heat insulation effect. Also ensure that the condensation drain hose splits away from the bundle and drips clear of the unit and the tubing.

5-5. Finishing the Installation

After finishing insulating and taping over the tubing, use sealing putty to seal off the hole in the wall to prevent rain and draft from entering. (Fig. 5-10)

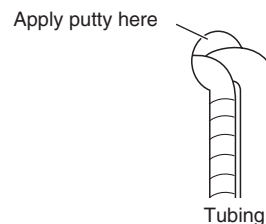


Fig. 5-10

Confirm the “Checkpoint” under the section “8. PRECAUTIONS ON TEST RUN” after installation of indoor and outdoor units, panels and electrical wiring.

6. HOW TO INSTALL THE TIMER REMOTE CONTROLLER OR HIGH-SPEC WIRED REMOTE CONTROLLER (OPTIONAL PART)

NOTE

Refer to the Operating Instructions attached to the optional Timer Remote Controller or optional High-spec Wired Remote Controller.

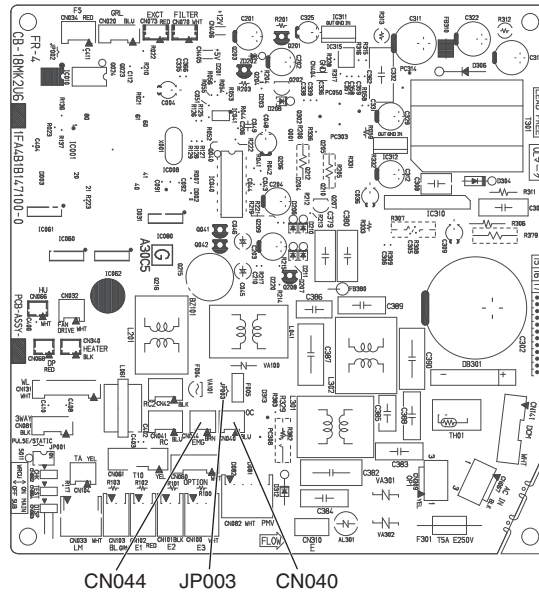
7. PRECAUTIONS ON TEST RUN

- Request that the customer be present at the time the test run is performed. Explain the Operating Instructions to the customer and then have the customer actually operate the system.
- Be sure to pass the manual and warranty certificate to the customer.
- Verify that the AC 208 / 230 V wiring is not connected to the terminal plate which is used to connect the inter-unit control wiring.

* If AC 208 / 230 V is accidentally applied to this terminal plate, the fuse (0.4A for both indoor and outdoor units) on the inter-unit control PCB will be tripped in order to protect the PCB. Correct the wiring connections, then disconnect the 2P connectors (blue, OC, CN040) which are connected to the PCB and connect the other 2P connectors (brown, EMG, CN044). (See the figure below.)

If operation is still not possible with the brown connectors connected, cut the JP003.

(Be sure to turn OFF the power before performing this work.)



■ Checkpoint

| Checkpoint | Symptom | Check | Remark |
|--|------------------------|-------|--------|
| 1 Make sure whether indoor and outdoor units are correctly installed. | Fall, vibration, noise | | |
| 2 Make sure whether gas leakage is tested. | No cooling, no heating | | |
| 3 Make sure whether insulation is completed. (Refrigerant piping and drain piping) | Water leakage | | |
| 4 Make sure whether drain water is running smoothly. | Water leakage | | |
| 5 Make sure whether the power voltage matches the nameplate. | Inoperative, burnout | | |
| 6 Make sure whether there is miswiring or incorrect connection. | Inoperative, burnout | | |
| 7 Make sure whether the ground construction is completed. | Ground leakage | | |
| 8 Make sure whether the wire gauge is followed by the recommended specifications. | Inoperative, burnout | | |
| 9 Make sure whether the air intake and air outlet of the indoor and outdoor units are sealed by obstacles. | No cooling, no heating | | |

8. HOW TO INSTALL THE WIRELESS REMOTE CONTROLLER

IMPORTANT

When using this air conditioner with the wireless remote controller it may sometimes be impossible to change the operation modes while other indoor unit is running.

- When this happens, a double beep tone sounds, the ☀ (operation lamp) lights up, and the ⏰ (Timer lamp) and ⏻ (Standby lamp) blink alternately.
Operation is the same even during (AUTO mode) automatic cooling or heating.
- A beep tone sounds 5 times and no changes can be made when any of the ON/OFF, MODE, Temperature setting buttons were pressed while set under central control by the system controller.

8-1. Wireless Remote Controller Installation

The remote controller can be operated from either a non-fixed position or a wall-mounted position.

To ensure that the air conditioner operates correctly, do not install the remote controller in the following places:

- In direct sunlight.
- Behind a curtain or other place where it is covered.
- More than 26 ft. (8 m) away from the air conditioner.
- In the path of the air conditioner's airstream.
- Where it may become extremely hot or cold.
- Where it may be subject to electrical or magnetic interference.

(1) If Wall-mounted Fixed Position

Install the remote controller at a convenient location on a nearby wall. However, before attaching the remote controller mounting cradle, check that the remote controller can operate from the desired wall position. (Fig. 8-1)

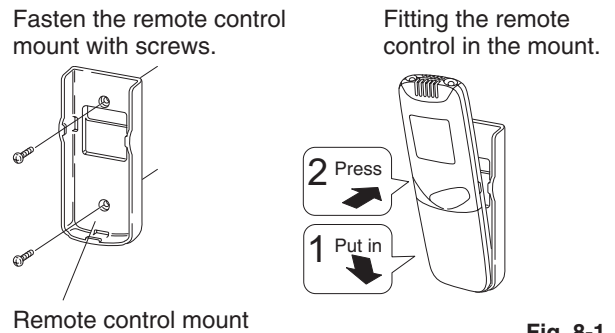


Fig. 8-1

● How to Install Batteries

See Fig. 8-2.

- (1) Press and slide the lid on the back of the remote controller in the direction of the arrow.
- (2) Install two AAA alkaline batteries. Make sure the batteries point in the direction marked in the battery compartment.
- (3) Press the reset hole, then replace the lid. If you press it, the current time, ON time, and OFF time are all reset to 0:00.

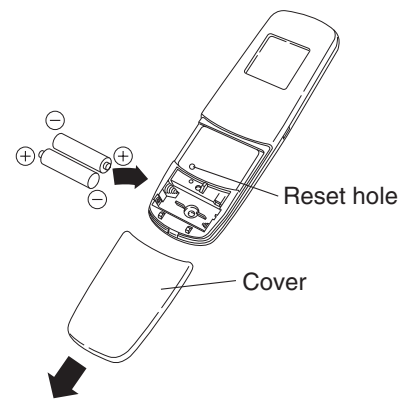


Fig. 8-2

8-2. Room Temperature Sensor Setting

The room temperature sensors are built into the indoor unit and the wireless remote controller. Either of these room temperature sensors can operate.

The system is shipped from the factory set to the indoor unit sensor. To switch to the remote control sensor, press the sensor switching button located inside the remote control cover and check that A/C SENSOR on the LCD display panel goes out.

NOTE

If the sensor switch is set to the remote controller side, but no room temperature data is sent to the main unit for 10 minutes, the sensor is automatically switched to the indoor unit side. As much as possible, install the remote controller facing the unit.

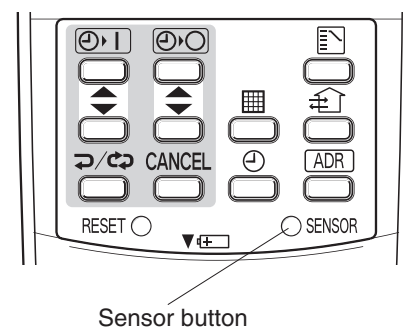


Fig. 8-3

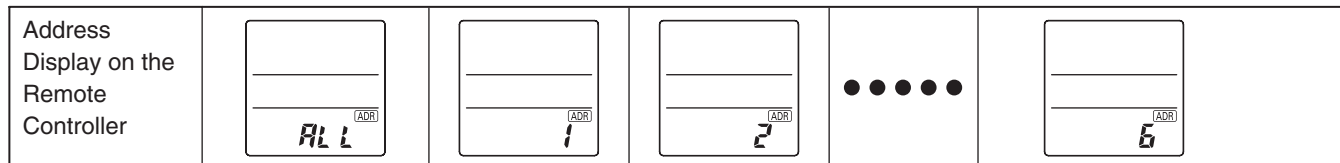
8-3. Address Switches

If you are installing more than 1 indoor unit (up to 6) in the same room, it is necessary for you to assign each unit its own address so they each can be operated by their remote controller.

Up to 6 indoor units can be controlled separately through the address switches. The operating control has the reception address switch and the remote controller has the transmission address switch. This function is utilized by matching the transmission and reception address switches.

Setting Remote Control Addresses

- (1) If you press **ADR** and **↻/↺** at the same time, “SET” will blink.
- (2) While holding **ADR** down, every time you press **↻/↺**, it cycles from **ALL** → 1 → 2 → 3... 6 → **ALL**.
Set it to the receiver address switch of the indoor unit you wish to operate.
- (3) When you release **ADR**, the address that was displayed is set.
When you do this, if it corresponds to the receiver’s address setting, the buzzer sounds.



Setting Addresses

(Setting the address of the indoor unit)

- (1) First of all, set the address for the remote controller with Setting Remote Control Address.
- (2) Press [Emergency Operation] **⏻** button of the indoor unit for four seconds or more.
When you do this, the lamps of the display will blink one after another.
- (3) Press **ADR** on the remote controller.
- (4) The buzzer will sound and the address of the indoor unit will change to the address displayed on the remote controller.
- (5) If you press [Emergency Operation] **⏻** button of the indoor unit once, the lamps on the indoor unit’s display will turn off.

NOTE

- Please do not hold the [Emergency Operation] **⏻** button of the indoor unit down while the indoor unit’s display lamps are blinking one after another.
- Make sure to operate while the indoor unit is stopped.
- The address of indoor unit is set to “ALL” at the time of the shipment.

8-4. Misoperation Alarm Indicators

Alarm indicator lamps on the indoor unit indicate the error cause if the air conditioner fails to operate upon being switched on. The possible alarm indications are given in Table 8-1. Fig. 8-4 shows the location of the alarm lamps on the indoor unit. (See Table 8-1 and Fig. 8-4.)

Table 8-1

ON: ○ Blinking: ⚡ OFF: ●

| Alarm | | | Blinking | Cause of Trouble |
|--------------------|----------------|------------------|----------------|--|
| ⚡ (OPERATION lamp) | ⌚ (TIMER lamp) | ⊙ (STANDBY lamp) | | |
| ● | ● | ● | | No power supply or mis-wiring of signal receiving unit. |
| ⚡ | ● | ● | | S.C.* errors between the indoor unit's controller (PCB) and signal receiving unit. |
| ● | ● | ⚡ | | S.C. errors between indoor and outdoor units. |
| ⚡ | ⚡ | ● | Alternately | Indoor or outdoor thermistor is malfunctioning. |
| ⚡ | ● | ⚡ | Alternately | Outdoor unit protector is activated. |
| ● | ⚡ | ⚡ | Alternately | Indoor unit protector is activated. |
| ● | ⚡ | ● | | Compressor protector is activated. |
| ⚡ | ● | ⚡ | Simultaneously | Mis-setting of indoor unit. |
| ⚡ | ○ | ⚡ | Simultaneously | Mis-setting of outdoor unit. |
| ⚡ | ⚡ | ⚡ | Simultaneously | TEST RUN switch on the operation controller is in ON state. |

* S.C.: Serial communications

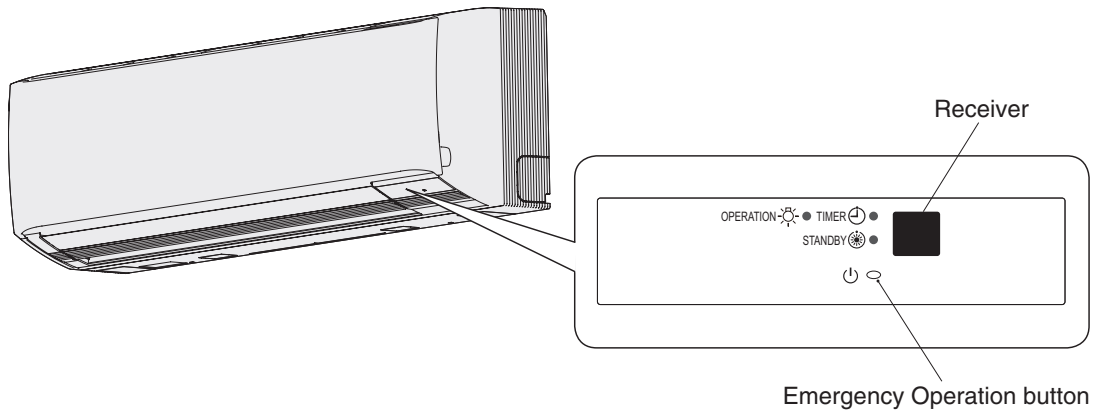


Fig. 8-4

NOTE

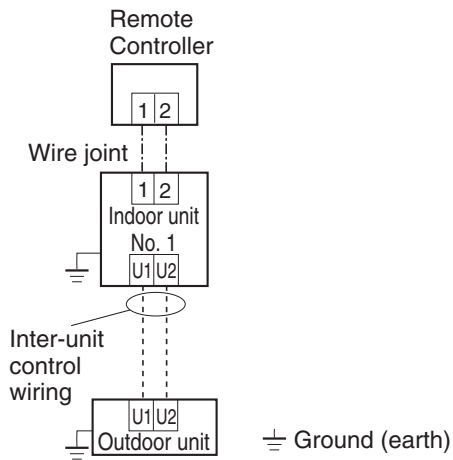
Stick the alarm message label accompanying the wireless remote controller on the electrical component box to indicate the cause of trouble for future reference.

8-5. Basic Wiring Diagram



CAUTION

Be sure to do the wiring correctly (incorrect wiring will damage the equipment).



- In case of using shielded wires for inter-unit control wiring, ground the shield on one side. (Fig. 8-5)
Otherwise misoperation because of electrical noise may occur.

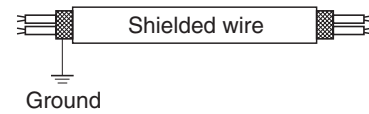


Fig. 8-5

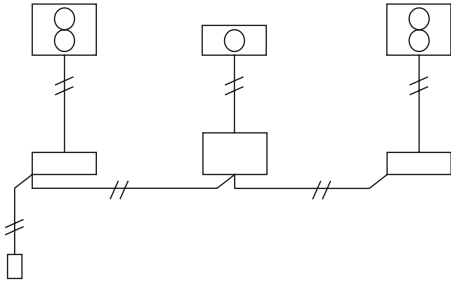
● Wiring procedure

Carry out the wiring according to the above wiring diagram.

- Address setting is automatically executed after turning on the system.
An indoor unit address is assigned to each indoor unit.
- Operation takes place successively at intervals of 1 second, by using combinations of the address setting of each unit.

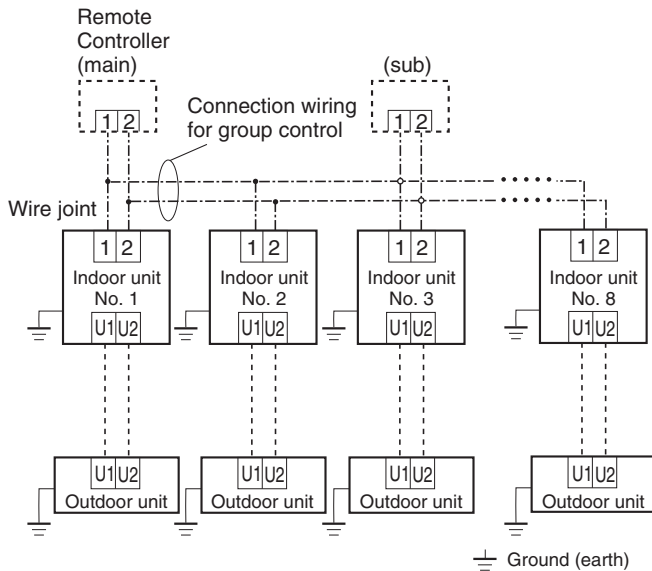
8-6. Wiring System Diagram for Group Control

This diagram shows when several units (maximum of 8) are controlled by a signal receiving unit (main unit). In this case, a signal receiving unit can be connected at any indoor unit.



● Group control using 2 signal receiving units

It does not matter which of the 2 signal receiving units you set as the main controller.



Wiring procedure

Wire according to the diagram at left:

- Address setting is executed automatically when the outdoor unit is turned on.
- Each successive unit will respond at one-second intervals following the order of the group address when the remote controller is operated.

When using multiple signal receiving units (up to 2 can be used), one is the main signal receiving unit and the other is the sub-signal receiving unit.

- To set up a sub-signal receiving unit, change its remote control address connector (RCU. ADR) located on its PCB from main to sub position (main: when shipped from factory).

8-7. Wiring System Diagram for Multiple Remote Controllers

● When installing multiple remote controllers

This multiple system is used for operating the unit(s) at different positions. (A maximum of 2 signal receiving units can be installed.)

● Setting method

To execute this control, make the setting according to the following procedure.

- (1) Of the two installed signal receiving units, make one the main signal receiving unit (factory-shipped state).
- (2) On the other signal receiving unit, change the address connector on the PCB from main to sub position.
In this state, it functions as a sub-signal receiving unit.

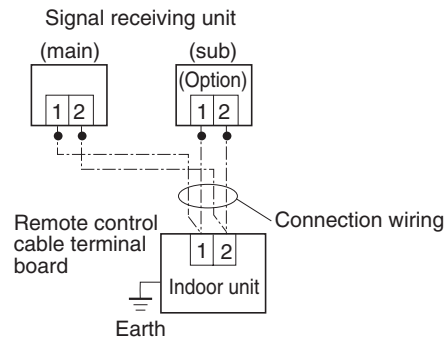
● Basic wiring diagram



CAUTION

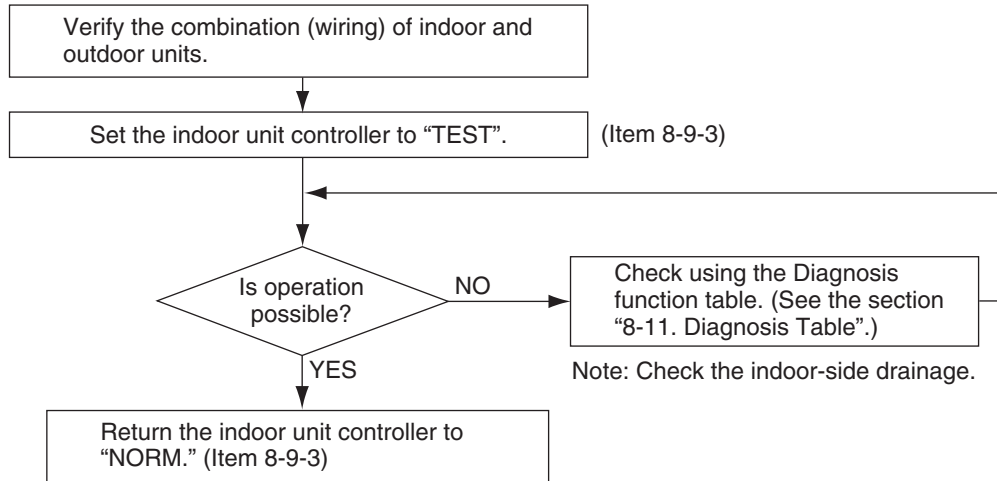
**Carry out the wiring correctly
(incorrect wiring will damage the
equipment).**

- To operate 1 indoor unit with 2 signal receiving units set at different locations.



8-8. Test Run Procedure

● Wall mounted Type



8-9. Preparing for the Test Run

8-9-1. Changing the room temperature sensor

- Room temperature sensors are installed inside the indoor unit and the wireless remote controller. Either room temperature sensor can be used.
- When “Unit Sensor” is indicated on the wireless remote controller’s LCD, the indoor unit sensor is operating as the room temperature sensor.
To change to the remote control sensor, open the remote control cover and press the SENSOR button once. The “Unit Sensor” display disappears, and the remote control sensor becomes the room temperature sensor.



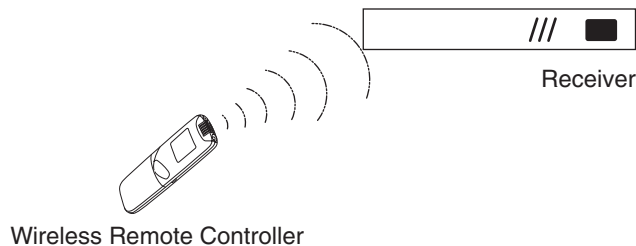
CAUTION

If the temperature data from the remote controller is not communicated to the indoor unit for a period of 10 minutes when the remote control sensor is selected, the unit automatically switches back to the indoor unit sensor.

Install the remote controller in a location where the signal can reliably be received by the indoor unit.

8-9-2. Using the remote controller




- Face the remote controller toward the receiver (indoor unit).
- The maximum distance where the remote controller signal can be received is approximately 26 ft. (8 m), however this distance is only a guide. The actual distance may vary somewhat depending on battery capacity and other conditions.
- Make sure there are no obstructions which can block the signal between the remote controller and the receiver.
- When the remote controller signal is received correctly, the indoor unit beeps.
(It beeps twice only when operation is started.)



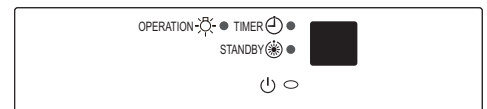
- Do not drop, throw, or wash the remote controller.
- Do not place the remote controller in a location exposed to direct sunlight, or near a stove or similar appliance.

8-9-3. Test run

● Using the controller

- (1) Press and hold [Emergency Operation]  button of the indoor unit for four seconds or more.
- (2) Then the lamps on the display will blink one after another.
- (3) Release the button and again press and hold [Emergency Operation]  button for four seconds or more.
- (4) All indicator lamps on the display blink while test run is in progress.
- (5) Temperature control is not possible during the test run.
- (6) If normal operation is not possible, the lamps on the display will indicate the problem. See the section “8-11. Diagnosis Table”.
- (7) After the test run is completed, press [Emergency Operation]  button and confirm that the indicator lamps stop blinking.
(A 60-minute automatic OFF timer function is included in order to prevent continuous test run.)

Indicator



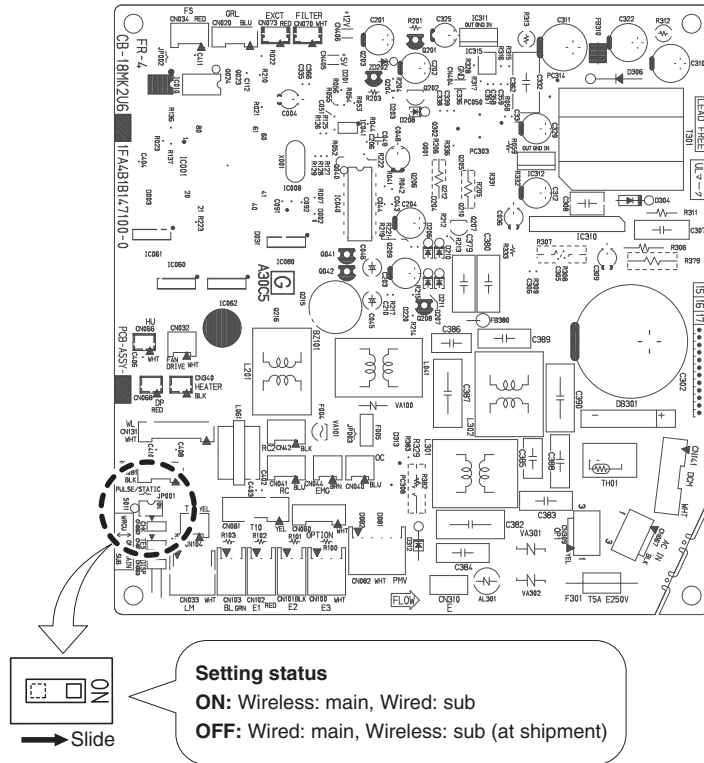
CAUTION

- Do not use this setting at any time other than for the test run. Doing so will place an excessive load on the system.

8-10. When Setting Indoor Unit Control PCB Switch for Wall Mounted Indoor Unit

When the wireless remote controller is to be used, slide the switch (S011) on the indoor unit control PCB to the ON position.

- If this setting is not made, an alarm will occur.
(The operation lamp on the display blinks.)

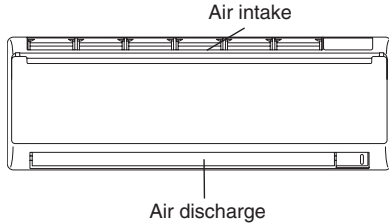


8-11. Diagnosis Table

| | | Cause | | | | | |
|--|---|---|--|---|---|--|--|
| Wired remote controller display | Indoor unit receiver lamp | 1:1 connection (single type) | Group connection | Simultaneous-operation multi system (flexible combination) | Control by main-sub remote controllers | | |
| Nothing is displayed | Nothing is displayed | <ul style="list-style-type: none"> Remote controller is not connected correctly. Indoor unit power is not ON. | <ul style="list-style-type: none"> Remote controller is not connected with indoor unit correctly. Indoor unit power is not ON. | <ul style="list-style-type: none"> Same as at left | <ul style="list-style-type: none"> Same as at left | | |
| E 0 1 displayed | | <ul style="list-style-type: none"> Automatic address setting has not been completed. Inter-unit control wiring is cut or is not connected correctly. Remote controller is not connected correctly (remote controller receiving failure). | <ul style="list-style-type: none"> Automatic address setting has not been completed. Inter-unit control wiring is cut or is not connected correctly. Remote controller is not connected with indoor unit correctly. | <ul style="list-style-type: none"> Same as at left | <ul style="list-style-type: none"> Same as at left | | |
| E 0 2 displayed | Operating lamp is blinking. | <ul style="list-style-type: none"> Remote controller is not connected correctly (failure in transmission from remote controller to indoor unit). | <ul style="list-style-type: none"> Remote controller is not connected with indoor unit correctly. | <ul style="list-style-type: none"> Same as at left | <ul style="list-style-type: none"> Same as at left | | |
| E 0 9 displayed | | _____ | _____ | _____ | <ul style="list-style-type: none"> 2 remote controllers are set as the main remote controller. | | |
| E 1 4 displayed | | _____ | _____ | _____ | <ul style="list-style-type: none"> Control wiring for group control is cut or is not connected correctly. | | |
| E 0 4 displayed | | <ul style="list-style-type: none"> Indoor-outdoor inter-unit wiring is not connected correctly. | <ul style="list-style-type: none"> Same as at left | <ul style="list-style-type: none"> Same as at left | <ul style="list-style-type: none"> Same as at left | | |
| E 0 6 displayed | Standby lamp is blinking. | <ul style="list-style-type: none"> Indoor unit capacity is too low. Indoor unit capacity is too high. | <ul style="list-style-type: none"> Indoor-outdoor inter-unit wiring is cut or is not connected correctly. Same as at left | <ul style="list-style-type: none"> Same as at left | <ul style="list-style-type: none"> Same as at left | | |
| E 1 5 displayed | | <ul style="list-style-type: none"> No serial signal is being received at all from the indoor units. | <ul style="list-style-type: none"> Indoor-outdoor inter-unit wiring is cut or is not connected correctly. | <ul style="list-style-type: none"> Same as at left | <ul style="list-style-type: none"> Same as at left | | |
| E 1 6 displayed | | <ul style="list-style-type: none"> Inter-unit circuit or open phase in the outdoor unit power Insufficient gas | <ul style="list-style-type: none"> Reversed phase or open phase in the 3-phase power at one of the outdoor units in the group | <ul style="list-style-type: none"> Reversed phase or open phase in the outdoor unit 3-phase power | <ul style="list-style-type: none"> Same as at left | | |
| E 2 0 displayed | Operation lamp and Standby lamp are blinking alternately. | <ul style="list-style-type: none"> Indoor-outdoor unit type mismatch | <ul style="list-style-type: none"> Same as at left | <ul style="list-style-type: none"> Same as at left | <ul style="list-style-type: none"> Same as at left | | |
| P 0 5 displayed | Both the Operation lamp and Standby lamp are blinking together. | _____ | _____ | _____ | <ul style="list-style-type: none"> Control wiring for group control is connected to the indoor unit, however it is set for individual operation. | | |
| L 0 2 displayed L 1 3 displayed | Timer lamp and Standby lamp are blinking alternately. | <ul style="list-style-type: none"> The indoor unit ceiling panel connector is not connected correctly. | <ul style="list-style-type: none"> Ceiling panel connector at one of the indoor units in the group is not connected correctly. | <ul style="list-style-type: none"> Indoor unit ceiling panel connector is not connected correctly. | <ul style="list-style-type: none"> Same as at left | | |
| L 0 7 displayed | | _____ | _____ | _____ | <ul style="list-style-type: none"> Same as at left | | |
| P 0 9 displayed | | _____ | _____ | _____ | <ul style="list-style-type: none"> Same as at left | | |

9. APPENDIX

■ Name of Parts



■ Care and Cleaning

⚠ WARNING

- For safety, be sure to turn the air conditioner off and also to disconnect the power before cleaning.
- Do not pour water on the indoor unit to clean it. This will damage the internal components and cause an electric shock hazard.

Air intake and discharge side (Indoor unit)

Clean the air intake and discharge side of the indoor unit with a vacuum cleaner brush, or wipe them with a clean, soft cloth. If these parts are stained, use a clean cloth moistened with water. When cleaning the air discharge side, be careful not to force the vanes out of place.

⚠ CAUTION

- Never use solvents or harsh chemicals when cleaning the indoor unit.
Do not wipe plastic parts using very hot water.
- Some metal edges and the fins are sharp and may cause injury if handled improperly; be especially careful when you clean these parts.
- The internal coil and other components of outdoor unit must be cleaned regularly.
Consult your dealer or service center.

Air filter

The air filter collects dust and other particles from the air and should be cleaned at regular intervals as indicated in the table below or when the filter indication (🌀) on the display of the remote controller (wired type) shows that the filter needs cleaning. If the filter gets blocked, the efficiency of the air conditioner drops greatly.

| | |
|--------|---------|
| Type | K2 |
| Period | 2 weeks |

NOTE

The frequency with which the filter should be cleaned depends on the environment in which the unit is used.

<How to clean the filter>

1. Remove the air filter from the air intake grille.
2. Use a vacuum cleaner to remove light dust. If there is sticky dust on the filter, wash the filter in lukewarm, soapy water, rinse it in clean water, and dry it.

<How to remove the filter>

Casing and Grille (Indoor Unit)

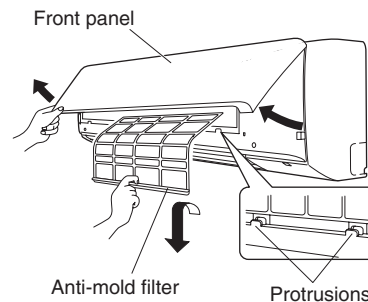
Clean the casing and grille of the indoor unit with a vacuum cleaner brush, or wipe them with a clean, soft cloth. If these parts are stained, use a clean cloth moistened with a mild liquid detergent. When cleaning the grille, be careful not to force the vanes out of place.

Anti-Mold Filter

The anti-mold filter behind the front panel should be checked and cleaned at least once every two weeks.

How to remove the anti-mold filter

1. Grasp both ends of the front panel and pull forward and up to open the front panel.



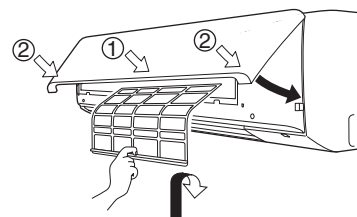
2. Lift the anti-mold filter up slightly to disengage it from the protrusions on the unit.
3. Pull downward to remove the filter from the unit.

Cleaning

Use a vacuum cleaner to remove light dust. If there is sticky dust on the filter, wash the filter in lukewarm, soapy water, rinse it in clean water, and dry it.

How to replace the anti-mold filter

1. Insert the top of the anti-mold filter, and then secure the bottom of the filter with the protrusions on the unit.
2. Close the front panel by pushing the center of the front panel and then pressing both edges until the panel clicks into place.



Cleaning the main unit and remote controller

- Wipe clean using a soft, dry cloth.
- To remove stubborn dirt, moisten a cloth in warm water no hotter than 104 °F (40 °C), wring thoroughly, and then wipe.
- The front panel can be removed in order to wash it with water.

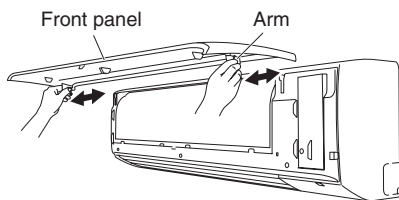
Removing and remounting the front panel

Removing

Open the front panel until it is nearly horizontal, grasp the sections near the front panel arms on both sides, and then remove the panel by pushing the arms towards the outside while pulling the panel towards you.

If the front panel is difficult to remove, grasp both ends of it and lift it up slightly.

Move it to the left and disengage the left arm, then move it to the right and disengage the right arm.



CAUTION

- **Certain metal edges and the condenser fins are sharp and may cause injury if handled improperly; special care should be taken when you clean these parts.**
- **The internal coil and other components must also be cleaned periodically. Consult your dealer or service center.**

Care: After a prolonged idle period

Check the indoor and outdoor unit air intakes and outlets for blockage; if there is a blockage, remove it.

Care: Before a prolonged idle period

- Operate the fan for half a day to dry out the inside.
- Disconnect the power supply and also turn off the circuit breaker.
- Clean the air filter and replace it in its original position.
- Outdoor unit internal components must be checked and cleaned periodically. Contact your local dealer for this service.

■ Troubleshooting


If your air conditioner does not work properly, first check the following points before requesting service. If it still does not work properly, contact your dealer or a service center.

● Indoor unit

| Symptom | | Cause |
|--|--|---|
| Noise | Sound like streaming water during operation or after operation. | <ul style="list-style-type: none"> ● Sound of refrigerant liquid flowing inside unit ● Sound of drainage water through drain pipe |
| | Cracking noise during operation or when operation stops. | Cracking sound due to temperature changes of parts |
| Odor | Discharged air is smelled during operation. | Indoor odor components, cigarette odor and cosmetic odor accumulated in the air conditioner and its air is discharged. Unit inside is dusty. Consult your dealer. |
| Dewdrop | Dewdrop gets accumulated near air discharge during operation. | Indoor moisture is cooled by cool wind and accumulated by dewdrop. |
| Fog | Fog occurs during operation in cooling mode. (Places where large amounts of oil mist exist at restaurants.) | <ul style="list-style-type: none"> ● Cleaning is necessary because unit inside (heat exchanger) is dirty. Consult your dealer as technical engineering is required. ● During defrost operation |
| Fan is rotating for a while even though operation stops. | | <ul style="list-style-type: none"> ● Fan rotating makes operation smoothly. ● Fan may sometimes rotates because of drying heat exchanger due to settings. |
| Wind-direction changes while operating. Wind-direction setting cannot be made. Wind-direction cannot be changed. | | <ul style="list-style-type: none"> ● When air discharge temperature is low or during defrost operation, horizontal wind flow is made automatically. ● Flap position is occasionally set up individually. |
| When wind-direction is changed, flap operates several times and stops at designated position. | | When wind-direction is changed, flap operates after searching for standard position. |
| Dust | | Dust accumulation inside indoor unit is discharged. |
| Poor cooling or heating performance | | <p>The indoor unit is initially designed to control the indoor temperature detected by the built-in room sensor inside the indoor unit.</p> <p>Due to indoor unit installation position, however, the built-in sensor may occasionally sense temperature improperly; for example, temperature difference between the ceiling and floor, lighting apparatus, electric fan, windows or waist-high partition walls, etc.</p> <p>In this case, the unit does not operate properly at the desired temperature. You may change the use of the temperature sensor inside the indoor unit to that of the remote controller.</p> <p>Then the desired room temperature can be controlled properly.</p> <p>For details, consult your dealer.</p> |

● Check Before Requiring Services

| Symptom | Cause | Remedy |
|--|---|--|
| Air conditioner does not run at all although power is turned on. | Power failure or after power failure | Press ON/OFF operation button on remote controller again. |
| | Operation button is turned off. | <ul style="list-style-type: none"> ● Switch on power if breaker is turned off. ● If breaker has been tripped, consult your dealer without turning it on. |
| | Fuse blow out. | If blown out, consult your dealer. |
| Poor cooling or heating performance. | Air intake or air discharge port of indoor and outdoor units is clogged with dust or obstacles. | Remove dust or obstruction. |
| | Wind speed switch is set to "Low". | Change to "High" or "Strong". |
| | Improper temperature settings | See the section "■ Tips for Energy Saving". |
| | Room is exposed to direct sunlight in cooling mode. | |
| | Doors and /or windows are open. | |
| | Air filter is clogged. | See the section "■ Care and Cleaning". |
| | Too much heat sources in room in cooling mode | Use minimum heat sources and in a short time. |
| Too many people in room in cooling mode | Reduce temperature settings or change to "High" or "Strong". | |

If your air conditioner still does not work properly although you checked the points as described above, first stop the operation and turn off the power switch. Then contact your dealer and report the serial number and symptom. Never repair your air conditioner by yourself since it is very dangerous for you to do so. You also report if the inspection mark  and the letters E, F, H, L, P in combination with the numbers appear on the LCD of the remote controller.

■ Tips for Energy Saving

Avoid

- **Do not block the air intake and outlet of the unit. If either is obstructed, the unit will not work well, and may be damaged.**
- Do not let direct sunlight into the room. Use sunshades, blinds or curtains.
If the walls and ceiling of the room are warmed by the sun, it will take longer to cool the room.

Do

- Always try to keep the air filter clean. (See the section "■ Care and Cleaning".) A clogged filter will impair the performance of the unit.
- To prevent conditioned air from escaping, keep windows, doors and any other openings closed.

NOTE

Should the power fail while the unit is running

If the power supply for this unit is temporarily cut off, the unit will automatically resume operation once power is restored using the same settings before the power was interrupted.

