INSTALLATION INSTRUCTIONS

Single Split System Air Conditioner

Panasonic®

This air conditioner uses the refrigerant R410A.

NOTE External diameter of service port R410A: 5/16"

Model No.

Indoor Units					
Type	**Indoor Unit Type**	**26**	**36**	**42**	**Remarks**
U1	4-Way Cassette	S-26PU1U6 (CZ-24KPU1U)**	S-36PU1U6 (CZ-36KPU1U)**	S-42PU1U6 (CZ-36KPU1U)**	with Wired Remote Controller: CZ-RTC2
K1	Wall Mounted	S-26PK1U6			with Wireless Remote Controller: CZ-RWSK1U
T1	Ceiling	S-26PT1U6	S-36PT1U6	S-42PT1U6	with Wired Remote Controller: CZ-RTC2
F1	Low Silhouette Duct	S-26PF1U6	S-36PF1U6		with Wired Remote Controller: CZ-RTC2

** Panel (optional parts)

Remote Controllers

Timer Remote Controller (wired)	CZ-RTC2	Timer Remote Controller comes with Instructions Manual.
Wireless Remote Controller	CZ-RWSU1U	for U1 and T1 type Indoor units
	CZ-RWSC1U	for F1 type Indoor units
	CZ-RWSK1U	for K1 type Indoor units

Units should be installed by licensed contractor according to local code requirements.

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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.
- Observe all local, state, and national electrical codes.
- Pay close attention to all warning and caution notices given in this manual.

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

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.

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.

Keep the fire alarm and the air outlet at least 5 feet 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

- Ventilate the room well, 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 poisonous gas.
- Keep all tubing runs as short as possible.
- Use the flare method for connecting tubing.
- 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.

- When performing piping work do not mix air except for specifled refrigerant (R410A) in refrigeration cycle. It causes capacity down, and risk of explosion and injury due to high tension inside the refrigerant cycle.
- Refrigerant gas leakage may cause fire.
- 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 being serviced.

WARNING

- 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. Escaped 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 poisonous gas.

Others

CAUTION

- Do not touch the air inlet or the sharp aluminum fins of the outdoor unit. You may get injured.

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

- 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 per 1,000 cubic feet for R410A refrigerant.
For additional guidance and precautions related to refrigerant safety, please refer to the following documents:

International Mechanical Code 2009 (IMC-2009)
(or more recently revised)
ASHRAE 15
ASHRAE 34

Precautions for Installation Using New Refrigerant

1. Care regarding tubing

1-1. Process tubing

- Material: Use C1220 phosphorous deoxidized copper specified in JIS H3300 “Copper and Copper Alloy Seamless Pipes and Tubes.”
- **Tubing size: Be sure to use the sizes indicated in the table below.**
- Use a tube cutter when cutting the tubing, and be sure to remove any flash. This also applies to distribution joints (optional).
- When bending tubing ø5/8" or smaller, use a bending radius that is 4 times the outer diameter of the tubing or larger.

Use sufficient care in handling the tubing. Seal the tubing ends with caps or tape to prevent dirt, moisture, or other foreign substances from entering. These substances can result in system malfunction.

Unit: inch

Material		O			
Copper tube	Outer diameter	1/4	3/8	1/2	5/8
	Wall thickness	t0.032	t0.032	t0.032	t0.04

1-2. Prevent impurities including water, dust and oxide from entering the tubing. Impurities can cause R410A refrigerant deterioration and compressor defects. Due to the features of the refrigerant and refrigerating machine oil, the prevention of water and other impurities becomes more important than ever.

2. Be sure to recharge the refrigerant only in liquid form.

2-1. Since R410A is a non-azeotrope, recharging the refrigerant in gas form can lower performance and cause defects of the unit.

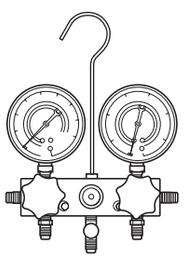
2-2. Since refrigerant composition changes and performance decreases when gas leaks, collect the remaining refrigerant and recharge the required total amount of new refrigerant after fixing the leak.

3. Different tools required

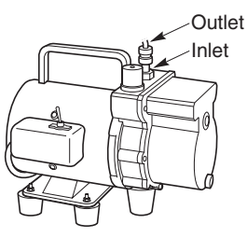
3-1. Tool specifications have been changed due to the characteristics of R410A. Some tools for R22- and R407C-type refrigerant systems cannot be used.

Item	New tool?	R407C tools compatible with R410A?	Remarks
Manifold gauge	Yes	No	Types of refrigerant, refrigerating machine oil, and pressure gauge are different.
Charge hose	Yes	No	To resist higher pressure, material must be changed.
Vacuum pump	Yes	Yes	Use a conventional vacuum pump if it is equipped with a check valve. If it has no check valve, purchase and attach a vacuum pump adapter.
Leak detector	Yes	No	Leak detectors for CFC and HCFC that react to chlorine do not function because R410A contains no chlorine. Leak detector for HFC134a can be used for R410A.
Flaring oil	Yes	No	For systems that use R22, apply mineral oil (Suniso oil) to the flare nuts on the tubing to prevent refrigerant leakage. For machines that use R407C or R410A, apply synthetic oil (ether oil) to the flare nuts.

Manifold gauge



Vacuum pump



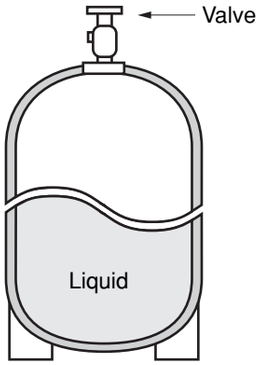
* Using tools for R22 and R407C and new tools for R410A together can cause defects.

3-2. Use R410A exclusive cylinder only.

- When charging with a refrigerant cylinder, use an electronic scale for charging refrigerant. In this case, if the volume of refrigerant in the cylinder becomes less than 20% of the fully-charged amount, the composition of the refrigerant starts to change. Thus, do not use the refrigerant if the amount in the charging cylinder is less than 20%.

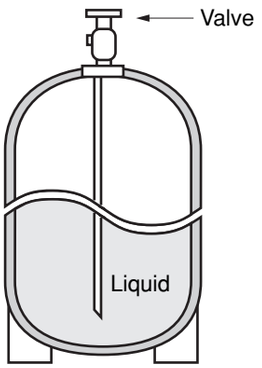
  Also, charge the minimum necessary amount to the charging cylinder before using it to charge the air conditioning unit.

Configuration and characteristics of cylinders



Single valve
Charge liquid refrigerant with cylinder in up-side-down position.

Fig. 1



Single valve (with siphon tube)
Charge with cylinder in normal position.

Fig. 2

CONTENTS

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. Level gauge
6. Sabre saw or key hole 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 Outdoor Unit

See Tables 1-1 to 1-6.

Table	Type
1-1	4-Way Cassette
1-2	Wall Mounted
1-3	Ceiling
1-4	Low Silhouette Ducted
1-5	Wireless Remote Controller
1-6	Timer Wired Remote Controller

1-3. Type of Copper Tube and Insulation Material

Copper tubing for connecting the outdoor unit to the indoor unit is available in kits which contain the liquid and gas tubing, fittings and insulation. Consult your nearest sales outlet or A/C workshop.

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

1. Deoxidized annealed copper tube for refrigerant tubing.
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".
3. Use insulated copper wire for field wiring. Wire size varies with the total length of wiring. Refer to 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

Table 1-1 4-Way Cassette

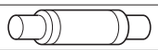
Part Name	Figure	Q'ty	Part Name	Figure	Q'ty
Full-scale installation diagram		1	Drain hose adaptor		1
Flare insulator		2	Sealing putty		1
Washer		8	Wired remote controller (comes with 7-7/8 in. wire)		1
Insulating tape	 (White)	1			
Hose band		2	Wire joint		2
Packing		1			
Drain insulator		1	Wood screw		2
Drain hose		1			

Table 1-2 Wall Mounted

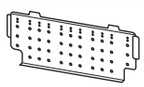
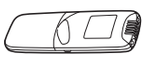
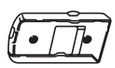
Part Name	Figure	Q'ty	Part Name	Figure	Q'ty
Full-scale diagram		1	Drain hose adaptor		1
Wall fixture		1	Wireless remote controller		1
Tapping screw	Truss-head Phillips 4 × 5/8 in. 	12	Wireless remote controller mounting cradle		1
Rawl plug		12	Truss-head tapping screw 4 × 5/8 in.		2
Cover		1			
Insulator		1	Battery		2

Table 1-3 Ceiling

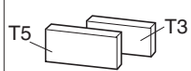
Part Name	Figure	Q'ty	Part Name	Figure	Q'ty
Full-scale installation diagram		1	Insulating tape		2
Special washer		4	Vinyl clamp		8
Drain insulator		1	Sealing putty		1
		1	Drain hose		1
Flare insulator	 T5 T3	1 Set	Wired remote controller (comes with 7-7/8 in. wire)		1
Drain hose adaptor		1	Wood screw		2
Drain hose clamp		6	Wire joint		2

Table1-4 Low Silhouette Ducted

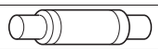
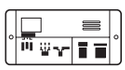
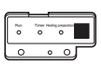
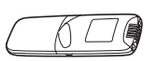
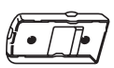
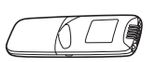
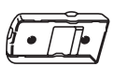
Part Name	Figure	Q'ty	Part Name	Figure	Q'ty
Flare insulator		2	Drain hose adaptor		1
Insulating tape		1	Special washer		8
Jumper cable*		1	Vinyl clamp		8
Hose band		2	Wired remote controller (comes with 7-7/8 in. wire)		1
Packing		1			
Sealing putty		1	Wood screw		2
Drain insulator		1			
Drain hose		1	Wire joint		2

Table 1-5 (Accessories for the Wireless Remote Controller)

<CZ-RWSU1U>

Part Name	Figure	Q'ty	Part Name	Figure	Q'ty
Operation controller		1	Spacers		2
Indicator section		1	Pan-head tapping screws 4 × 13/32 in.		4
Wireless remote controller		1	Truss-head tapping screws 4 × 5/8 in.		2
Wireless remote controller mounting cradle		1	Vinyl clamps L 5-29/32		3
Batteries		2	Wire joints		4

<CZ-RWSK1U>

Part Name	Figure	Q'ty	Part Name	Figure	Q'ty
Wireless remote controller		1	Truss-head tapping screws 4 × 5/8 in.		2
Wireless remote controller mounting cradle		1	Batteries		2

<CZ-RWSC1U>

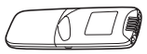
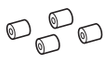
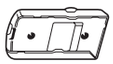
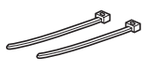
Part Name	Figure	Q'ty	Part Name	Figure	Q'ty
Separate type signal receiving unit (comes with 7-7/8 in. wire)		1	Small screws M4 × 1-9/16 in.		2
Carrier for ceiling installation		1	Wood screws		2
Wireless remote controller		1	Spacers		4
Wireless remote controller mounting cradle		1	Wire joints		4
Batteries		2	Clamp		1
Machine screws M4 × 1 in.		2	Ceiling installation paper pattern (3-3/4 × 2-1/32 in.)		1

Table 1-6 (Accessories for the Timer Wired Remote Controller)

Part Name	Figure	Q'ty	Part Name	Figure	Q'ty
Timer Wired Remote Controller		1	Wood screws		2
Connecting wiring length 4 ft.		1	Spacers		2
Machine screws M4 × 1 in.		2	Clamps		2

CAUTION

1. **This unit requires no additional refrigerant charge up to 100 ft. tubing length. In case of more than 100 ft., additional refrigerant charge is required.**
2. **In case of multi type installation, indoor units should be installed within the same room. If multi type indoor units are installed in different rooms, temperature control may develop problems because thermostat operation must follow the thermostat condition of 1 indoor unit only (the main unit).**

WARNING

Always check the gas density for the room in which the unit is installed.

■ **Check of limit density**

When installing an air conditioner in a room, it is necessary to ensure that even if the refrigerant gas accidentally escapes, its density does not exceed the limit level for that room.

CAUTION

Pay special attention to any location, such as a basement or recessed area, etc. where leaked refrigerant can collect, since refrigerant gas is heavier than air.

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 inverter lamps which may affect the performance of the unit.
- locations near heat sources which may affect the performance of the unit.
- locations where external air may enter the room directly. This may cause “sweating” on the air discharge ports, causing them to spray or drip.
- 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 the receiver in the indoor unit is exposed to the inverter lamp light. Faulty operation of the unit occurs.

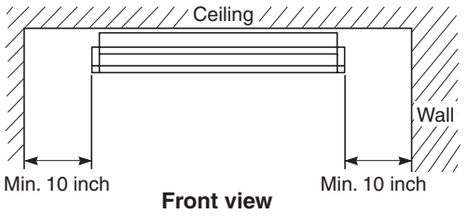
DO:

- 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 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 ft. off the floor, in an area that is not in direct sunlight nor 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 10 ft.

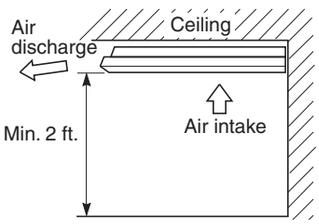
Ceiling Type



Front view

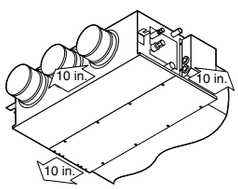
NOTE

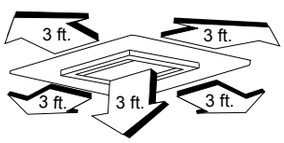
The rear of the indoor unit can be installed flush against the wall.

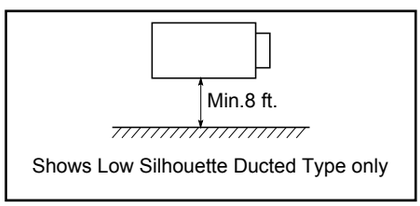


Side view

Low Silhouette Ducted Type
4-Way Cassette Type

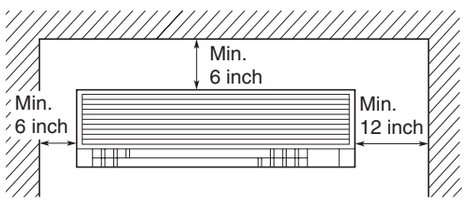






Shows Low Silhouette Ducted Type only

Wall Mounted Type



3. HOW TO INSTALL THE INDOOR UNIT

■ 4-Way Cassette Type (U1 Type)

3-1. Suspending the Indoor Unit

This unit uses a drain pump. Use a level gauge to check that the unit is level.

3-2. Preparation for Suspending

(1) Fix the suspension bolts securely in the ceiling using the method shown in the diagrams (Figs. 3-1 and 3-2), by attaching them to the ceiling support structure, or by any other method that ensures that the unit will be securely and safely suspended.

(2) Follow Fig. 3-2 and Table 3-1 to make the holes in the ceiling.

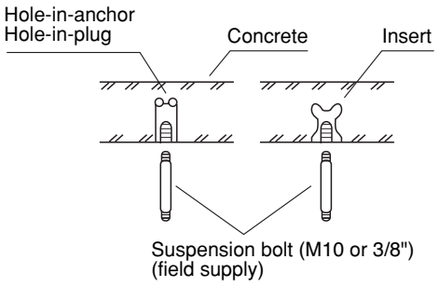


Fig. 3-1

Table 3-1 Unit: inch (mm)

Type \ Length	A	B
S-26PU1U6 (CZ-24KPU1U)	32-9/32 (820)	22-9/32 (566)
S-36PU1U6, S-42PU1U6 (CZ-36KPU1U)	43-11/16 (1,110)	33-11/16 (856)

(3) Determine the pitch of the suspension bolts using the supplied full-scale installation diagram. The diagram and table (Fig. 3-3 and Table 3-2) show the relationship between the positions of the suspension fitting, the unit, and the panel.

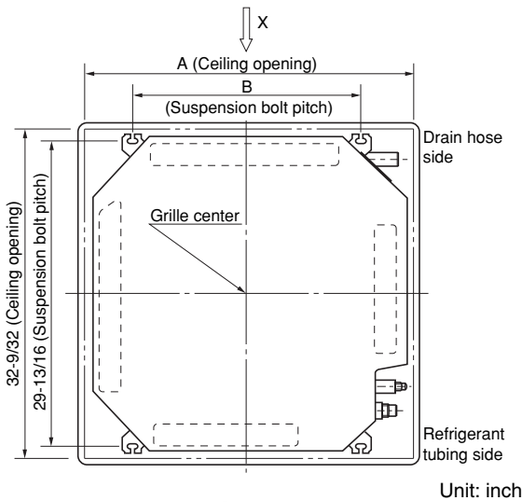


Fig. 3-2

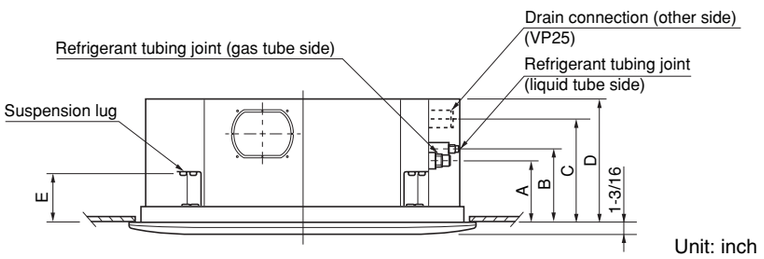


Fig. 3-3

Table 3-2 Unit: inch (mm)

Type \ Length	A	B	C	D	E
S-26PU1U6 (CZ-24KPU1U)	6-3/16 (157)	7-5/32 (182)	10-9/32 (261)	12-1/8 (308)	4-7/8 (124)
S-36PU1U6, S-42PU1U6 (CZ-36KPU1U)	6-3/16 (157)	7-5/32 (182)	11-15/32 (291)	13-1/16 (338)	4-7/8 (124)

3-3. Placing the Unit Inside the Ceiling

(1) When placing the unit inside the ceiling, determine the pitch of the suspension bolts using the supplied full-scale installation diagram. (Fig. 3-4)
The size of the opening for the indoor unit can be confirmed by attaching the full-scale installation diagram beneath the unit. (Fig. 3-4)
Tubing and wiring must be laid inside the ceiling when suspending the unit. If the ceiling is already constructed, lay the tubing and wiring into position for connection to the unit before placing the unit inside the ceiling.

(2) The length of each suspension bolt must be appropriate for a distance between the bottom of the bolt and the bottom of the ceiling of 5/8" or more as shown in Fig. 3-4.

(3) Thread the 2 hexagonal nuts (field supply) and washers onto the 4 suspension bolts as shown in Fig. 3-5.
Use 2 sets of nuts and washers (upper and lower), so that the unit will not fall off the suspension lugs.

(4) Remove the protective cardboard used to protect the fan parts during transport.

(5) Adjust the distance between the unit and surface of the ceiling. (1-7/8") (Fig. 3-4)

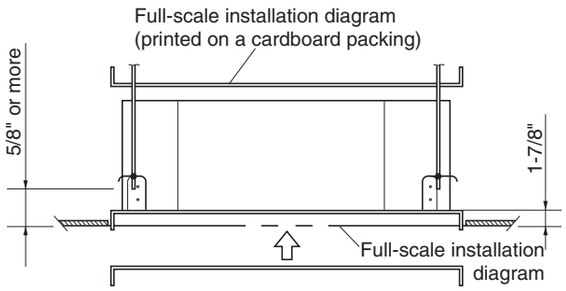


Fig. 3-4

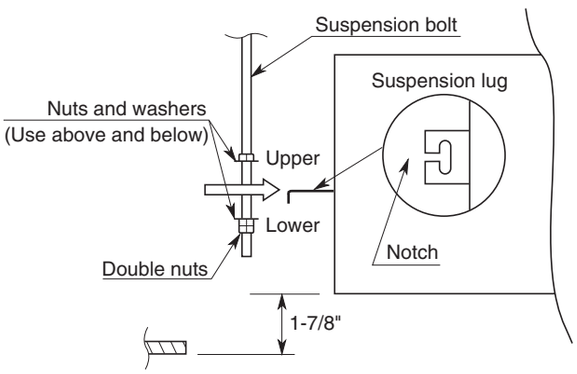


Fig. 3-5

3-4. Installing the Drain Piping

(1) Prepare standard hard PVC pipe for the drain and use the supplied drain hose and hose band to prevent water leaks.
The PVC pipe must be purchased separately. The transparent part allows you to check drainage. (Fig. 3-6)

CAUTION

Tighten the hose clamps so their locking nuts face upward. (Fig. 3-6)

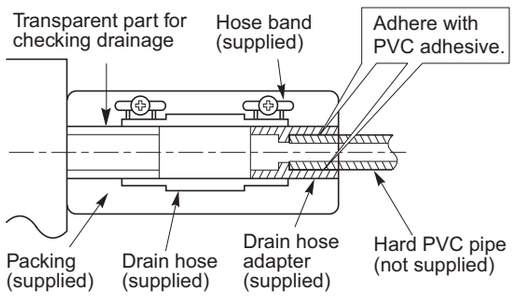


Fig. 3-6

(2) After checking the drainage, wrap the supplied packing and drain pipe insulator around the pipe. (Fig. 3-7)

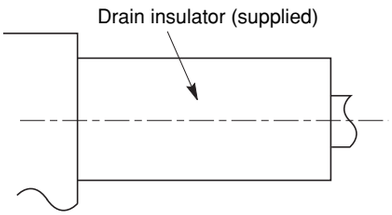


Fig. 3-7

NOTE

Ensure the drain pipe has a downward gradient (1/100 or more) and that there are no water traps.

CAUTION

- **Do not install an air bleeder tube, as this may cause water to spray from the drain tube outlet. (Fig. 3-8)**
- **If it is necessary to increase the height of the drain pipe, the section directly after the connection port can be raised a maximum of 19-1/2". Do not raise it any higher than 19-1/2", as this could result in water leaks. (Fig. 3-9)**
- **Do not install the pipe with an upward gradient from the connection port. This will cause drain water to flow backwards and leak when the unit is stopped. (Fig. 3-10)**
- **Do not apply force to the piping on the unit side when connecting the drain pipe. The pipe should not be allowed to hang unsupported from its connection to the unit. Fasten the pipe to a wall, frame, or other support as close to the unit as possible. (Fig. 3-11)**
- **Provide insulation for any drain pipe that is run indoors.**

Refer to " ■ SUPPLEMENT ON DRAIN PIPING".

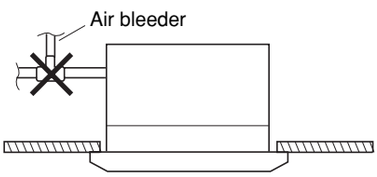


Fig. 3-8

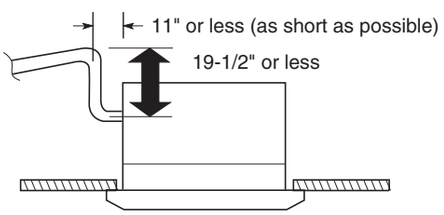


Fig. 3-9

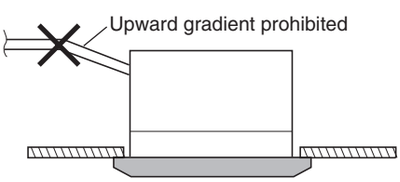


Fig. 3-10

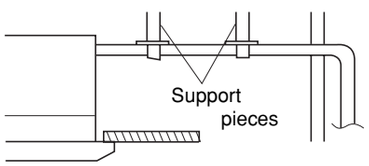


Fig. 3-11

3-5. Checking the Drainage

After wiring and piping are completed, use the following procedure to check that the water will drain smoothly. For this, prepare a bucket and wiping cloth to catch and wipe up spilled water.

WARNING **Do not supply power to the unit until the tubing and wiring to the outdoor unit are completed.**

(1) Take off the tube cover and through the opening, slowly pour about 0.3 gal of water into the drain pan to check drainage.

(2) Do Test Run to check the drainage after completing installation. When performing Test Run, refer to the installation instructions attached to the outdoor unit.

CAUTION **Be careful since the fan will start turning when checking the drainage.**

(3) After drain checking is finished, return the Operation Selector switch to the RUN position (ON position) and remount the tube cover.

WARNING **To mount the tube cover, use 5/16" (4 × 8 mm) tapping screws. Do not use long screws as they may puncture the drain pan and cause water leakage.**

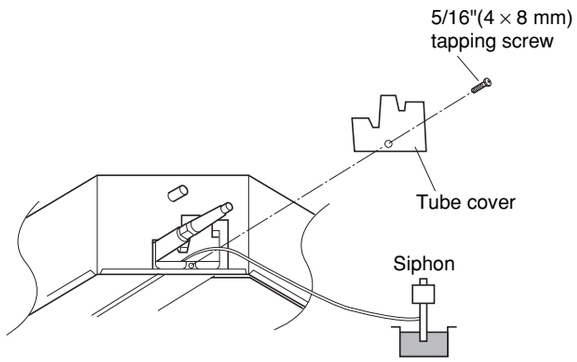


Fig. 3-12

■ Ceiling Panel

CAUTION

Never touch or attempt to move the air direction louver by hand or you may damage the unit. Instead, use the remote controller if you want to change the direction or air flow.

3-6. Before Installing the Ceiling Panel

(1) Remove the air-intake grille and air filter from the ceiling panel. (Figs. 3-13 and 3-14)

(a) Remove the 2 screws on the latch of the air-intake grille. (Fig. 3-13)

(b) Press on the 2 latches of the air-intake grille with your thumbs in the direction of the arrow to open the grille. (Fig. 3-13)

(c) With the air-intake grille open about 45°, remove the safety cord (hook on the grille side). (Fig. 3-14)

(d) Pull the air-intake grille towards you to remove it from the ceiling panel.

(2) Pull down the two panel catches on the body of the indoor unit body. (Fig. 3-15)

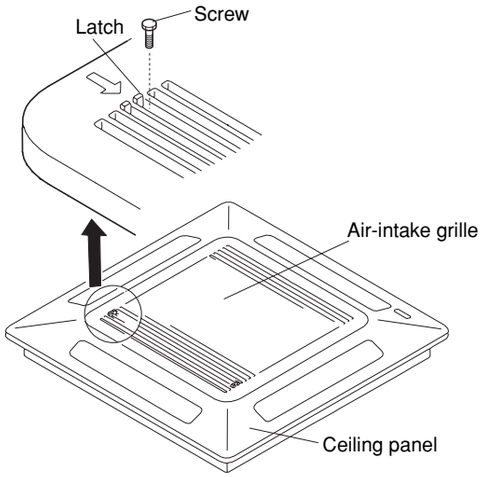


Fig. 3-13

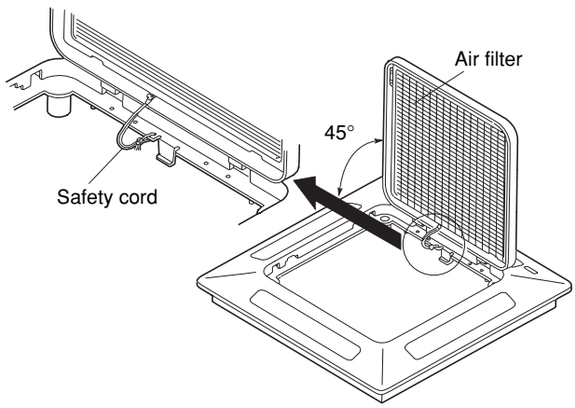


Fig. 3-14

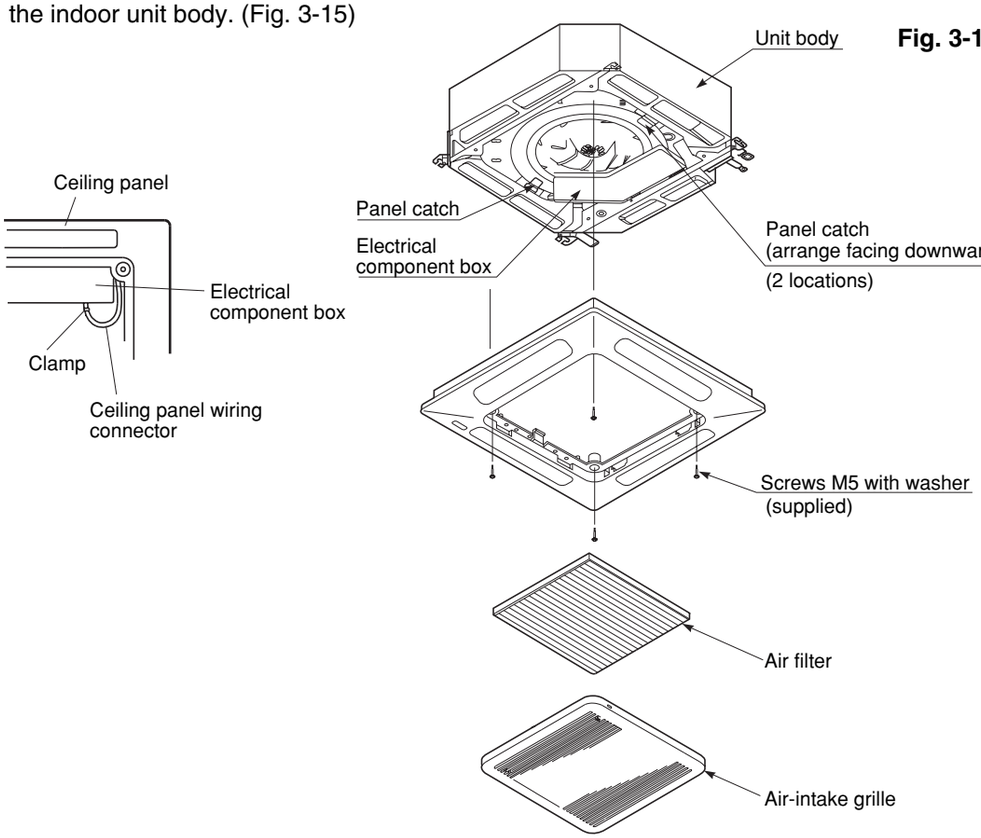


Fig. 3-15

3-7. Installing the Ceiling Panel

(1) Lift the ceiling panel and position it to align the panel hook with the panel catch of the indoor unit.

NOTE

The ceiling panel must be mounted in the correct direction. Note that the 2 catches of the panel differ in size. Confirm that the catches are correctly matched between the ceiling panel and the indoor unit body.

(2) Next, check to see that the ceiling panel is properly aligned with the seamline of the ceiling. If it is not, remove the ceiling panel and slightly readjust the indoor unit body to the proper suspension point.

(3) When the ceiling panel has been properly aligned, use the supplied 4 mounting screws (M5) with washers to permanently fasten the ceiling panel.

(4) Install the wiring connector from the ceiling panel to the connector in the electrical component box of the indoor unit. After installing the connector, use the clamp on the body of the indoor unit to secure the wiring.

(5) Install the air filter and air-intake grille by performing the steps in section 3-6 in reverse.

NOTE

Hook again the safety cord in its original position before closing the air-intake grille.

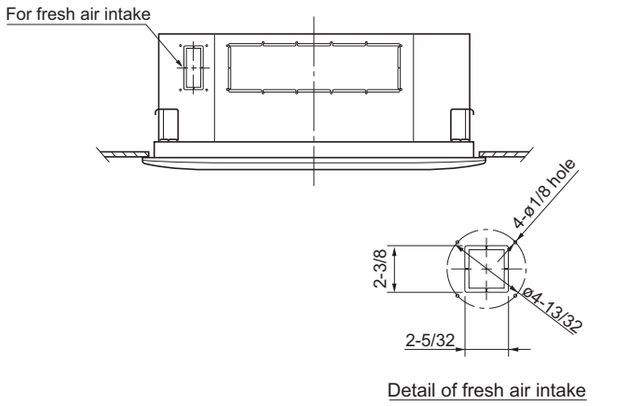
3-8. When Removing the Ceiling Panel for Servicing

When removing the ceiling panel for servicing, remove the air-intake grille and air filter, disconnect the wiring connector inside the electrical component box, and then remove the 4 mounting screws.

3-9. Duct for Fresh Air

- There is a duct connection part on side of the indoor unit. (Fig. 3-16)
- Air-intake plenum (including Duct connection box and flange) are attached to the indoor unit when used to take fresh outdoor air.

Air-intake plenum	Type
CZ-26BCU1U	CZ-24KPU1U (S-26PU1U6)
CZ-42BCU1U	CZ-36KPU1U (S-36PU1U6, S-42PU1U6)



Unit: inch

Fig. 3-16

(1) Accessories

- Check that the following parts are in the box when unpacking.

NAME	Q' ty	REMARKS
Screw (M5xL4-7/8")	4	Air-intake plenum (for fastening)
Screw (M4xL4-1/2")	8	Duct connection flange/box (for fastening)
Duct connection box	1	(for fresh air)
Duct connection flange	1	(for connecting fresh air duct)

(2) Installation

Installation steps (a) to (d) are the same for both the CZ-26BCU1U and the CZ-42BCU1U. The drawing illustrates installation of air-intake plenum to the CZ-26BCU1U

(a) Installing the air-intake plenum

- Set the air-intake plenum to the indoor unit taking care not to set to the incorrect direction.
- Fasten the air-intake plenum with the supplied screws. (M5 × L4-7/8", 4 pcs)

(b) Installing the duct connection box

- Fasten the duct connection flange to the duct connection box with the accessory screws. (M4 × L1/2", 4 pcs)
- Fit the duct connection box into the rectangular hole of the air-intake plenum and fasten it to the side of the air-intake plenum with the accessory screws. (M4 × L1/2", 4 pcs)

(c) Installing the indoor unit

- Install the indoor unit to the ceiling.
  (Install the indoor unit according to instructions enclosed with the outdoor unit.)

CAUTION

When installing in a pre-existing location, install the indoor unit before installing the duct connection box.

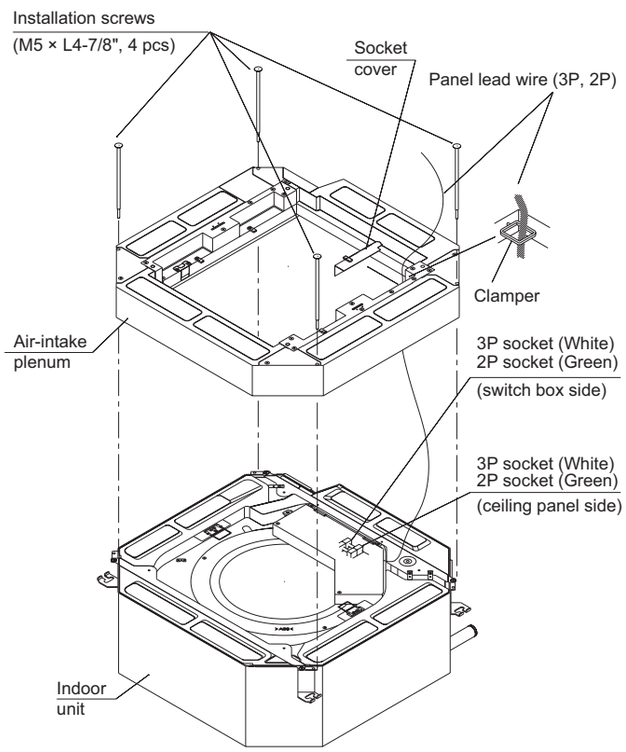


Fig. 3-17

(d) Installing the ceiling panel

- Attach the ceiling panel to the air-intake plenum.
  Drawing the panel downwards sets the panel in position temporarily with the panel catch (at 2 locations).
- Remove the socket cover of the air-intake plenum and pass the 8P sockets through it.
  (Fix the panel lead wire to air-intake plenum side clamper.)
- Connect the 3P socket (white) and 2P socket (green) to the other side of the 3P socket (white) and 2P socket (green) respectively.
- Reattach the socket cover.

Please fix the socket cover located on the switch box after closing the lid for the switch box.

CAUTION

Take adequate precautions when installing onto the ceiling.
The air-intake plenum is especially prone to rupture if struck on it's side.

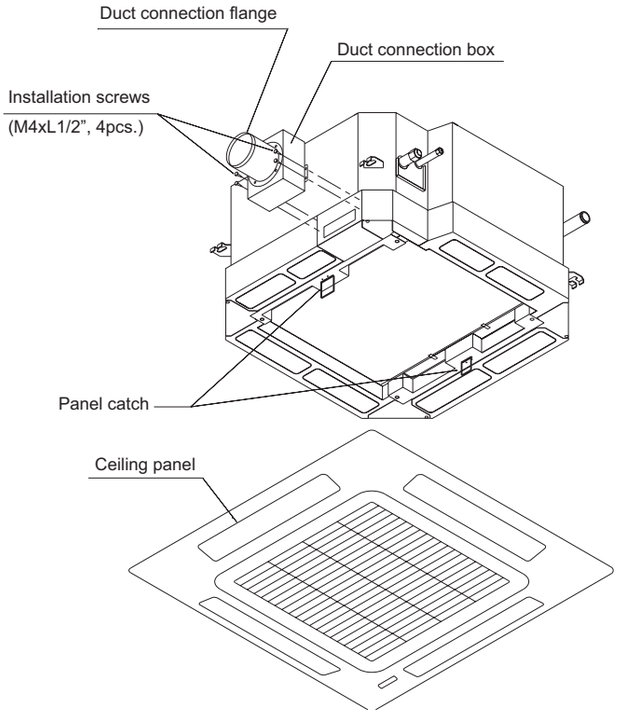


Fig. 3-18

■ Wall Mounted Type (K1 Type)

3-10. Removing the Wall Fixture from the Unit

Remove the set screws and take off the rear panel. (Fig. 3-19)

NOTE

Tubing can be extended in 3 directions as shown in Fig. 3-20. Select the direction that provides the shortest run to the outside unit.

3-11. Selecting and Making a Hole

(1) Remove the rear panel from the indoor unit and place it on the wall at the location selected. Make sure the unit is horizontal using a level gauge or tape measure to measure down from the ceiling.

(2) Determine which side of the unit you should make the hole. (Fig. 3-21)

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

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.

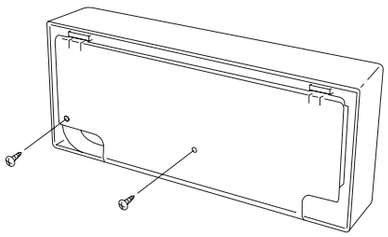
(4) Using a sabre saw, key hole saw or hole-cutting drill attachment, cut a hole in the wall. See Table 3-3 and Fig. 3-22.

Table 3-3

Hole Dia. (inch)
3-3/16"

(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" shorter than the thickness of the wall. (Fig. 3-23)

(6) Place the plastic cover over the end of the pipe (for indoor side only) and insert in the wall. (Fig. 3-24)



Set screws for transportation only

Fig. 3-19

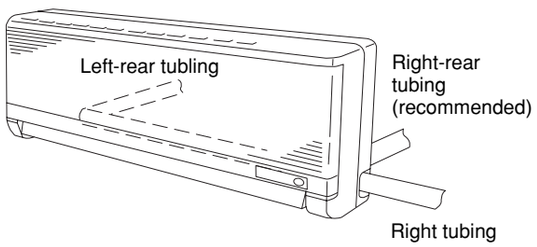


Fig. 3-20

In case of left-rear or right-rear tubing

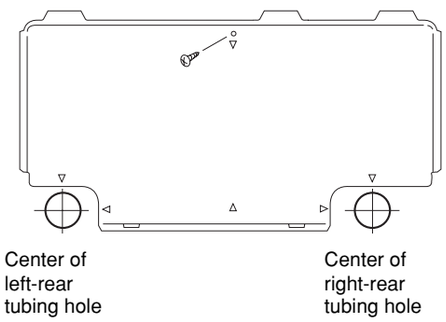


Fig. 3-21

NOTE

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

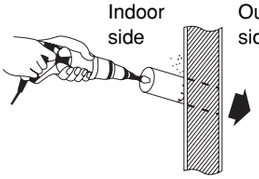


Fig. 3-22

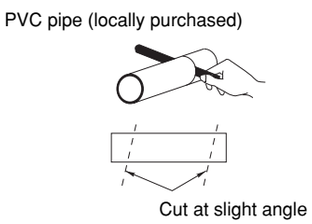


Fig. 3-23

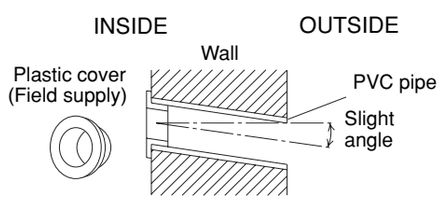


Fig. 3-24

3-12. Installing the Rear Panel on the Wall

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

See either Item a) or b) below depending on the wall type.

a) If Wooden Wall

(1) Attach the rear panel to the wall with the 10 screws provided. (Fig. 3-25)
If you are not able to line up the holes in the rear panel with the beam locations marked on the wall, use toggle bolts to go through the holes on the panel or drill 3/16" dia. holes in the panel over the stud locations and then mount the rear panel.

(2) Double-check with a ruler or level gauge that the panel is level. This is important to install the unit properly. (Fig. 3-26)

(3) Make sure the panel is flush against the wall. Any space between the wall and unit will cause noise and vibration.

b) If Block, Brick, Concrete or Similar Type Wall

Make 3/16" dia. holes in the wall. Insert rawl plugs for appropriate mounting screws. (Fig. 3-27)

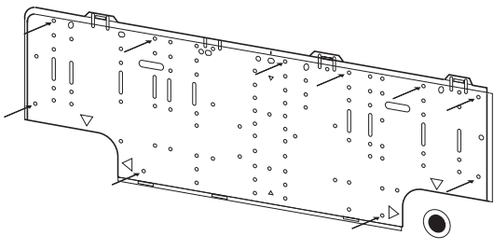


Fig. 3-25

Fig. 3-26

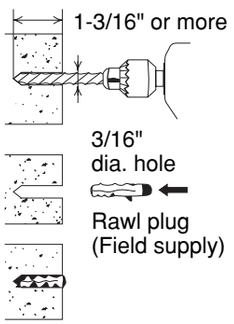


Fig. 3-27

3-13. Removing the Grille to Install the Indoor Unit

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

How to remove the grille

(1) Set the 2 flaps in the horizontal position.

(2) Unscrew the 3 screws. (Fig. 3-28a)

(3) Remove the grille.

(a) Hold both corners of the air-intake grille, then pull out and up to open. (Fig. 3-28b)

(b) Use a flathead screwdriver to push up the 3 tabs to remove the grille. (Fig. 3-28b)

(c) Pull the lower part of the grille toward you to remove. (Fig. 3-28a)

How to replace the grille

(1) Close the flaps.

(2) Reinstall the grille into the lower part while aligning its tabs on the upper part. (Fig. 3-29a) Insert the tabs in the slots and push the lower part of the grille back into position.

(3) Press at each of the 5 tabs to completely close the grille. Make sure that the grille and frame are firmly fitted together. (Fig. 3-29b)

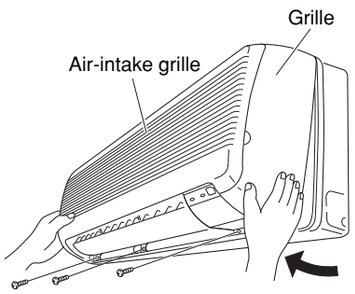


Fig. 3-28a

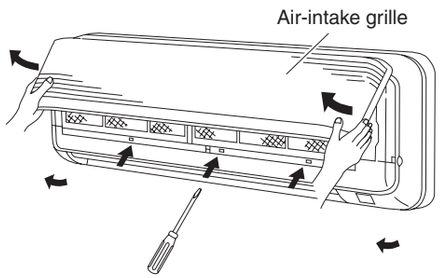


Fig. 3-28b

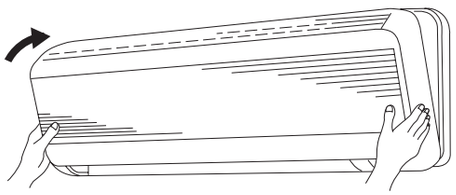


Fig. 3-29a

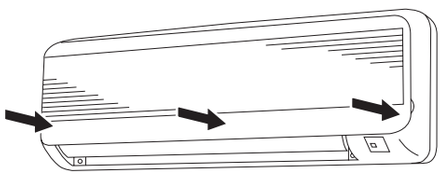


Fig. 3-29b

3-14. Preparing the Indoor Side Tubing

Arrangement of tubing by directions

(a) Right tubing
The corner of the right frame needs to be cut by a hacksaw or the like. (Fig. 3-30)

(b) Right-rear or left-rear tubing
In this case, the corner of the frame needs not be cut.

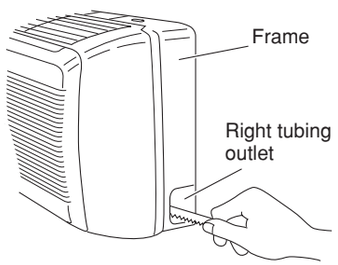


Fig. 3-30

To mount the indoor unit on the rear panel:

(a) Hang the 3 mounting slots of the unit on the upper tabs of the rear panel. (Fig. 3-31)

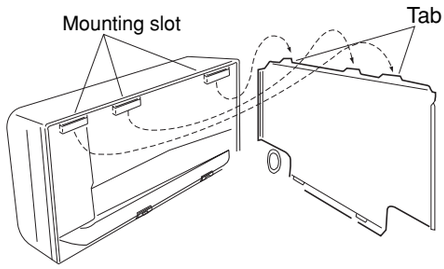


Fig. 3-31

3-15. 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. A power supply disconnect and circuit breaker for overcurrent protection should be provided in the exclusive line.

(3) To prevent possible hazards from insulation failure, the unit must be grounded.

(4) All wiring must be connected tightly.

(5) Do not allow wiring to touch refrigerant tubing, compressor, or any moving parts of the fan.

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.

3-16. Wiring Instructions for Inter-Unit Connections

(1) Insert the inter-unit wiring (according to local electrical codes) into the through-the-wall PVC pipe. Run the wiring toward the indoor side allowing approx. 10 inches to extend from the wall face. (Fig. 3-32)

(2) Route the inter-unit wiring from the back of the indoor unit and pull it toward the front for connection. (Figs. 3-33a and 3-33b)

(3) Connect the inter-unit wiring to the corresponding terminals on the terminal plate (Figs. 3-33a and 3-33b) while referring to the wiring diagram.

(4) Be sure to secure the wiring with the provided clamp.

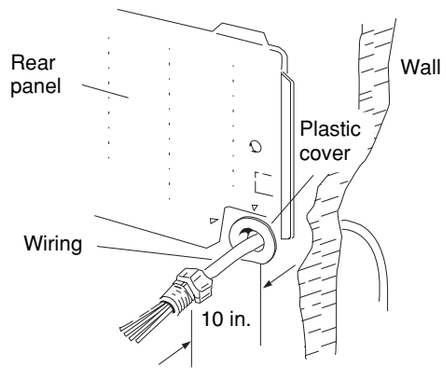


Fig. 3-32

How to remove the cover plate

To access the terminal plate inside the indoor unit, follow these steps.

(1) Using a Phillips head screwdriver, remove the screw on the cover plate. (Figs. 3-33a and 3-33b)

(2) Remove the cover plate.

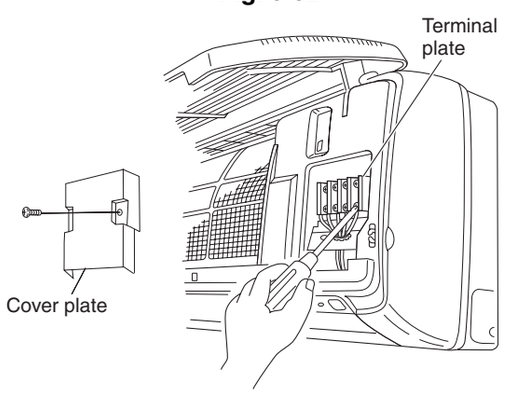


Fig. 3-33a

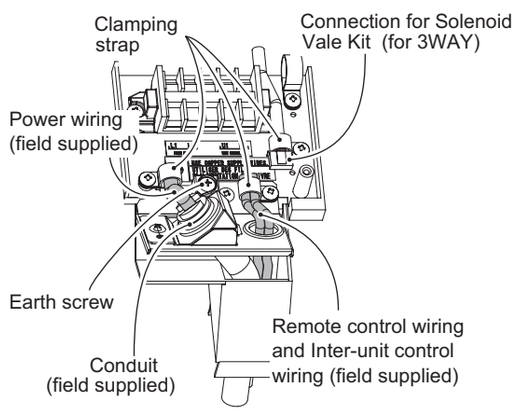


Fig. 3-33b

3-17. Shaping the Tubing

(1) Shape the refrigerant tubing so that it can easily go into the hole. (Fig. 3-34)

(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 wall fixture.

(3) Carefully bend the tubing (if necessary) to run along the wall in the direction of the outdoor unit and then insulate to the end of the fittings. The drain hose should come straight down the wall to a point where water runoff will not stain the wall.

(4) Connect the refrigerant tubing to the outdoor unit.(After performing a leak test on the connection, insulate it with insulating tape. (Fig. 3-35))

(5) Assemble the refrigerant tubing, drain hose and inter-unit wiring as shown in Fig. 3-36.

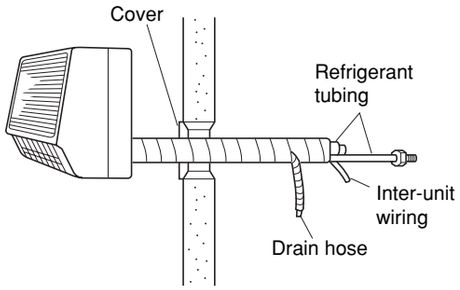


Fig. 3-34

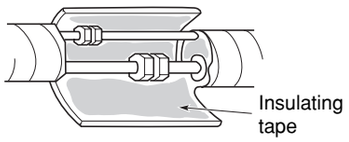


Fig. 3-35

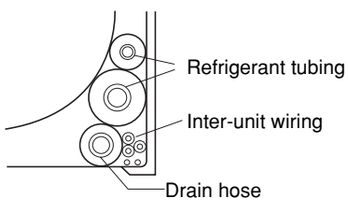


Fig. 3-36

3-18. Installing the Drain Hose

(1) The drain hose should be slanted downward on the outdoor side. (Fig. 3-37)

(2) Never form a trap in the course of the hose.

(3) If the drain hose will run in the room, insulate* the hose so that chilled condensation will not damage furniture or floors. (Fig. 3-38)

* Foamed polyethylene or its equivalent is recommended.

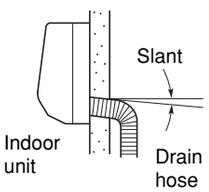


Fig. 3-37

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

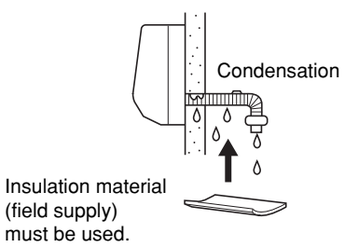


Fig. 3-38

■ Ceiling Type (T1 Type)

3-19. Suspending the Indoor Unit

(1) Place the full-scale diagram (supplied) on the ceiling at the spot where you want to install the indoor unit. Use a pencil to mark the drill holes. (Fig. 3-39).

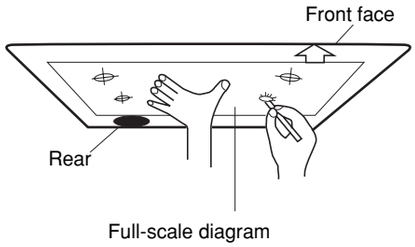


Fig. 3-39

NOTE

Since the diagram is made of paper, it may shrink or stretch slightly because of high temperature or humidity. For this reason, before drilling the holes maintain the correct dimensions between the markings.

(2) Drill holes at the 4 points indicated on the full-scale diagram.

(3) Depending on the ceiling type:

(a) Insert suspension bolts as shown in Fig. 3-40.

or

(b) Use existing ceiling supports or construct a suitable support as shown in Fig. 3-41.

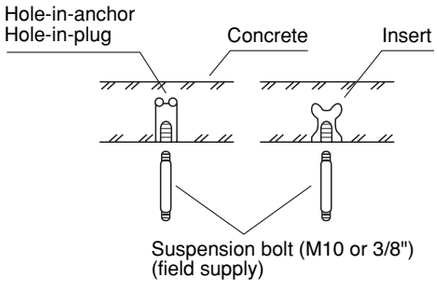


Fig. 3-40

WARNING **It is important that you use extreme care in supporting the indoor unit from the ceiling. Ensure that the ceiling is sufficiently strong enough to support the weight of the unit. Before hanging the ceiling unit, test the strength of each attached suspension bolt.**

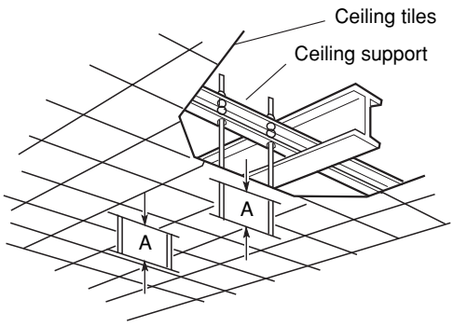


Fig. 3-41

(4) Screw in the suspension bolts, allowing them to protrude from the ceiling as shown in Fig. 3-41. The distance of each exposed bolt must be of equal length within 2 inches. (Fig. 3-42)

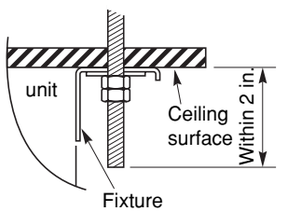


Fig. 3-42

(5) Before suspending the indoor unit, remove the 2 screws on the latch of the air-intake grilles, open the grilles, and remove them by pushing the claws of the hinges as shown in Fig. 3-43. Then remove both side panels sliding them along the unit toward the front after removing the two screws which fix them. (Fig. 3-44)

(6) Preparation for suspending the indoor unit. The suspension method varies depending on whether the unit is next to the ceiling or not.
(Figs. 3-45 and 3-46)

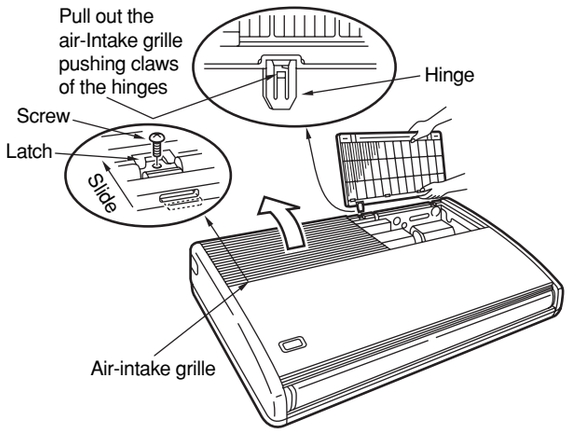


Fig. 3-43

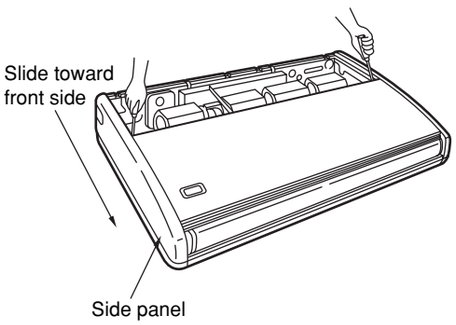


Fig. 3-44

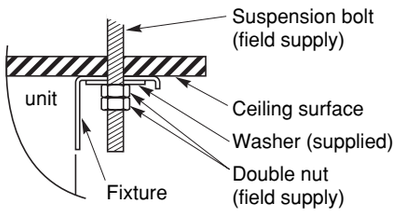


Fig. 3-45

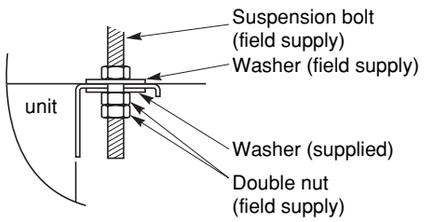


Fig. 3-46

(7) Suspend the indoor unit as follows.

(a) Mount a washer and two hexagonal nuts on each suspension bolt as shown in Fig. 3-47.

(b) Lift the indoor unit with a lifting machine to the ceiling surface, and place it on the washers through the notches, to fix it in place. (Fig. 3-48)

(c) Tighten the two hexagonal nuts on each suspension bolt to suspend the indoor unit as shown in Fig. 3-49.

NOTE

A ceiling surface is not always level. Please confirm that the indoor unit is evenly suspended. For the installation to be correct, leave a clearance of about 3/8" between the ceiling panel and the ceiling surface and fill the gap with an appropriate insulation or filler material.

(8) If the tubing and wiring are to go towards the rear of the unit, make holes in the wall. (Fig. 3-50)

(9) Measure the thickness of the wall from the inside to the outside and cut PVC pipe at a slight angle to fit. Insert the PVC pipe in the wall. (Fig. 3-51)

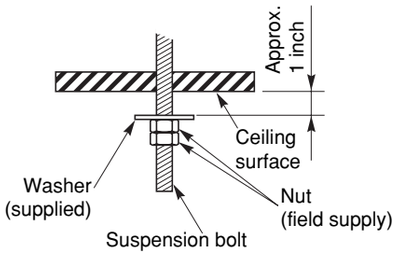


Fig. 3-47

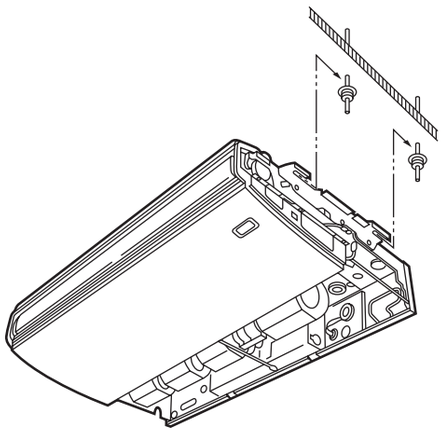


Fig. 3-48

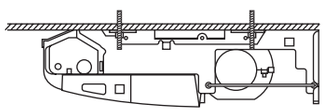


Fig. 3-49

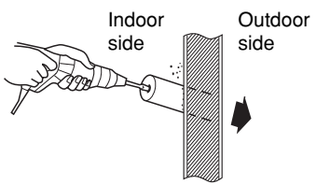


Fig. 3-50

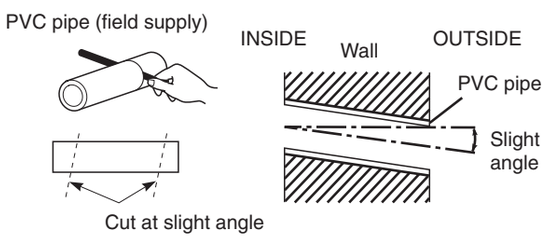


Fig. 3-51

3-20. Duct for Fresh Air

There is a duct connection port (knock-out hole) at the right-rear on the panel top of the indoor unit for drawing in fresh air. If it is necessary to draw in fresh air, remove the cover by knocking it out and connect the duct to the indoor unit through the connection port. (Fig. 3-52)
If connection at the right-rear on the panel top is not appropriate, another duct connection port can be made by cutting an opening on the left side of the rear panel of the indoor unit as shown in Fig. 3-53.

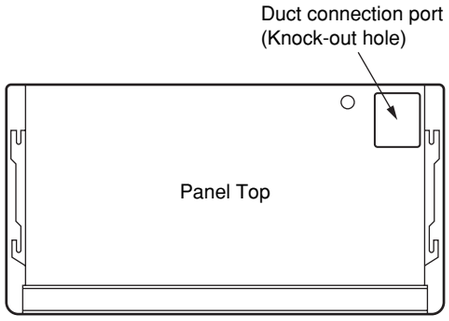
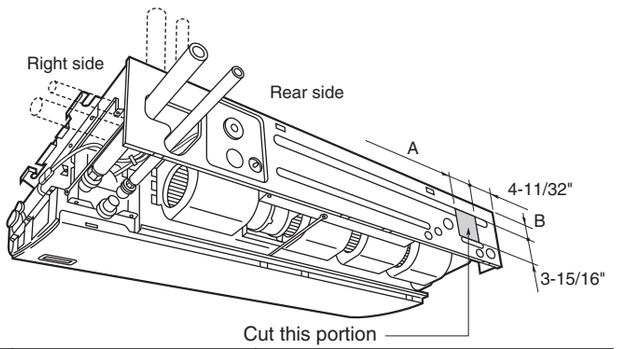


Fig. 3-52



	S-26PT1U6	S-36PT1U6, S-42PT1U6
A	3-15/16"	7-3/32"
B	1-3/8"	1-31/32"

Fig. 3-53

3-21. Installing the Drain Piping

- Prepare a standard PVC pipe for the drain and connect it to the indoor unit drain pipe with the supplied hose clamps to prevent water leaks.
- Connect the drain piping so that it slopes downward from the unit to the outside. (Fig. 3-54)
- Never allow traps to occur in the course of the piping.
- Insulate any piping inside the room to prevent dripping.
- Use the supplied drain pipe to connect the drain pipe with the drain outlet of the indoor unit.
- After connecting the drain pipe securely, wrap the supplied drain pipe insulator around the pipe, seal the gap at the drain socket with the supplied black insulation tape, then secure it with clamps. (Fig. 3-55)
- After the drain piping, pour water into the drain pan to check that the water drains smoothly.

CAUTION

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

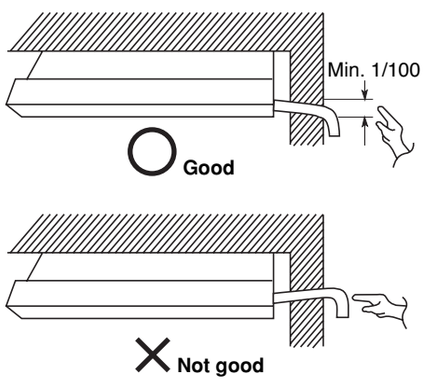


Fig. 3-54

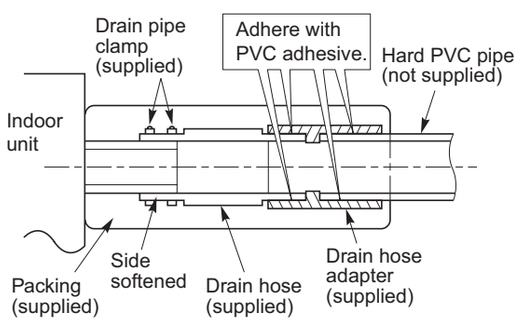
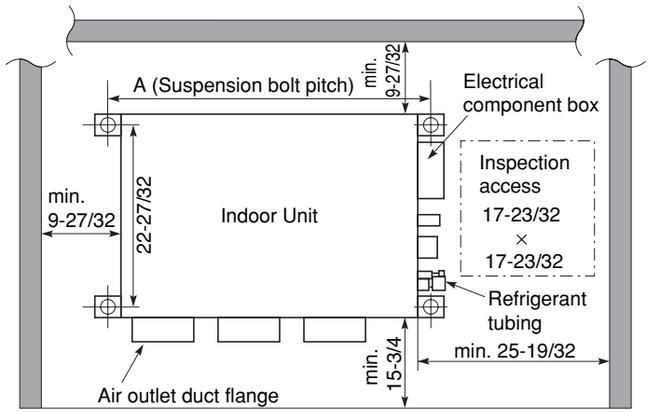


Fig. 3-55

■ Low Silhouette Ducted Type (F1 Type)

3-22. Required Minimum Space for Installation and Service

- This air conditioner is usually installed above the ceiling so that the indoor unit and ducts are not visible. Only the air intake and air outlet ports are visible from below.
- The minimum space for installation and service is shown in Fig. 3-56 and Table 3-4.
- It is recommended that space be provided (17-23/32" × 17-23/32") for checking and servicing the electrical system.
- Fig. 3-57 and Table 3-5 show the detailed dimensions of the indoor unit.



Unit: inch

Fig. 3-56

Table 3-4

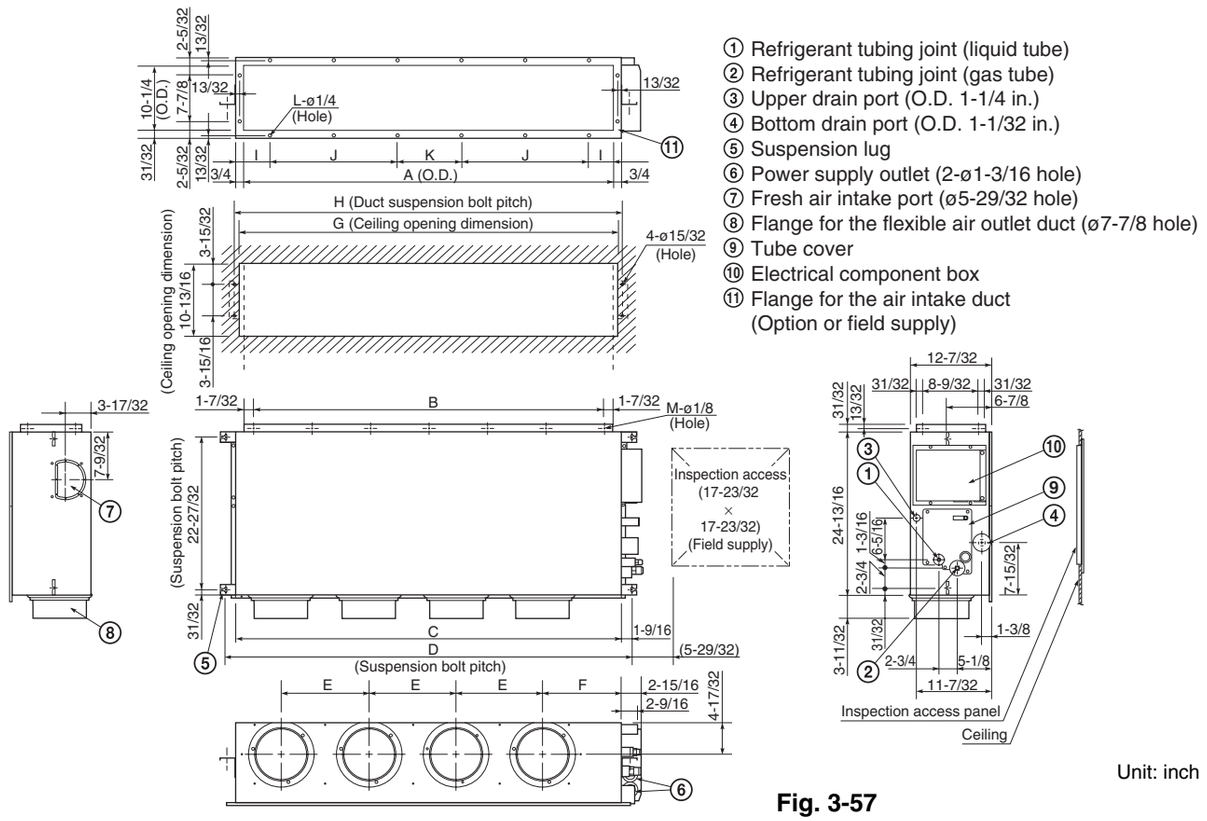
Unit: inch (mm)

Type	26	36
A (Length)	42-17/32 (1,080)	61-13/32 (1,560)
Number of duct flanges	3	4

Table 3-5

Unit: inch (mm)

Type \ Dimension	A	B	C	D	E	F	G	H	I	J	K	No. of holes L	No. of holes M
S-26PF1U6	37-7/8	35-7/16 (7-3/32×5)	39-3/8	42-17/32	11-13/32	2-23/32	38-19/32	39-31/32	5-1/8	9-21/32 (9-21/32×1)	9-27/32	12	16
S-36PF1U6	56-25/32	54-11/32 (9-1/16×6)	58-9/32	61-13/32	13-3/16	12-7/32	57-15/32	58-27/32	5-1/8	19-9/32 (9-21/32×2)	9-7/16	16	18



① Refrigerant tubing joint (liquid tube)
② Refrigerant tubing joint (gas tube)
③ Upper drain port (O.D. 1-1/4 in.)
④ Bottom drain port (O.D. 1-1/32 in.)
⑤ Suspension lug
⑥ Power supply outlet (2-ø1-3/16 hole)
⑦ Fresh air intake port (ø5-29/32 hole)
⑧ Flange for the flexible air outlet duct (ø7-7/8 hole)
⑨ Tube cover
⑩ Electrical component box
⑪ Flange for the air intake duct (Option or field supply)

Unit: inch

Fig. 3-57

3-23. Suspending the Indoor Unit

Depending on the ceiling type:

- Insert suspension bolts as shown in Fig. 3-58
  or
- Use existing ceiling supports or construct a suitable support as shown in Fig. 3-59.

WARNING **It is important that you use extreme care in supporting the indoor unit inside the ceiling. Ensure that the ceiling is strong enough to support the weight of the unit. Before hanging the unit, test the strength of each attached suspension bolt.**

(1) When placing the unit inside the ceiling, determine the pitch of the suspension bolts referring to the dimensional data on the previous page. (Fig. 3-57)
Tubing must be laid and connected inside the ceiling when suspending the unit. If the ceiling is already constructed, lay the tubing into position for connection to the unit before placing the unit inside the ceiling.

(2) Screw in the suspension bolts allowing them to protrude from the ceiling as shown in Fig. 3-58. (Cut the ceiling material, if necessary.)

(3) Thread the 2 hexagonal nuts and washers (field supply) onto the 4 suspension bolts as shown in Figs. 3-60 and 3-61. Use 2 sets of nuts and washers (upper and lower), so that the unit will not fall off the suspension lugs.

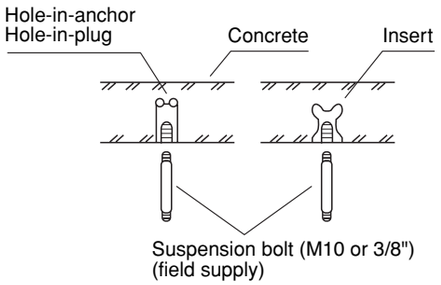


Fig. 3-58

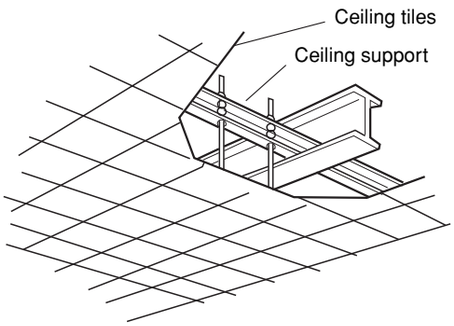


Fig. 3-59

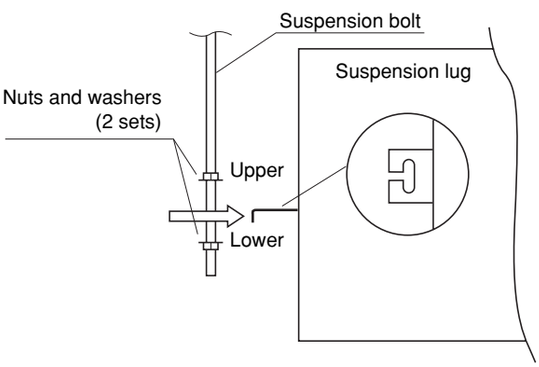


Fig. 3-60

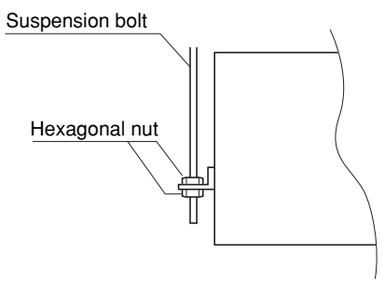


Fig. 3-61

- Fig. 3-62 shows an example of installation.

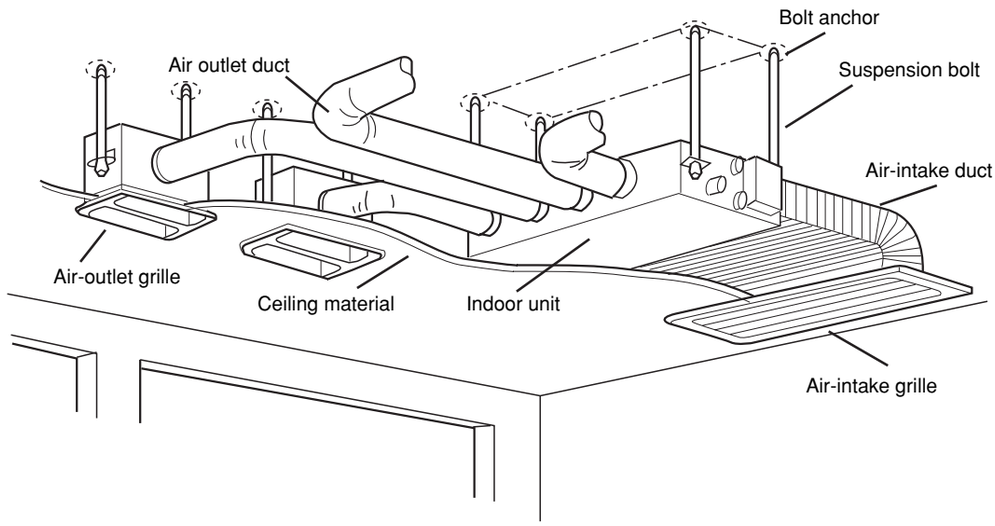


Fig. 3-62

3-24. Installing the Drain Piping

(1) Prepare standard hard PVC pipe for the drain and use the supplied hose band to prevent water leaks. The PVC pipe must be purchased separately. When doing this, leave a gap between the drain socket of the unit and the PVC pipe to allow the drainage to be checked. The transparent drain pipe allows you to check drainage. (Fig. 3-63)

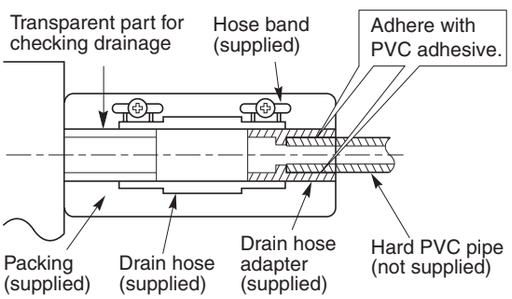


Fig. 3-63

CAUTION **Tighten the hose clamps so their locking nuts face upward. (Fig. 3-63)**

(2) After connecting the drain piping securely, wrap the supplied packing and drain pipe insulator around the pipe, then secure it with the supplied clamps. (Fig. 3-64)

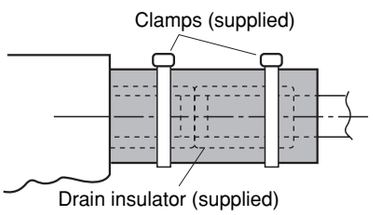


Fig. 3-64

NOTE

Make sure the drain pipe has a downward gradient (1/100 or more) and that there are no water traps.

CAUTION

- **Do not install an air bleeder tube as this may cause water to spray from the drain pipe outlet. (Fig. 3-65)**
- **If it is necessary to increase the height of the drain pipe, the section directly after the connection port can be raised a maximum of 19-11/16". Do not raise it any higher than 19-11/16", as this could result in water leaks. (Fig. 3-66)**
- **Do not install the pipe with an upward gradient from the connection port. This will cause the drain water to flow backward and leak when the unit is not operating. (Fig. 3-67)**
- **Do not apply force to the piping on the unit side when connecting the drain pipe. The pipe should not be allowed to hang unsupported from its connection to the unit. Fasten the pipe to a wall, frame, or other support as close to the unit as possible. (Fig. 3-68)**

Refer to "■ SUPPLEMENT ON DRAIN PIPING".

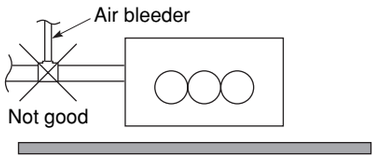


Fig. 3-65

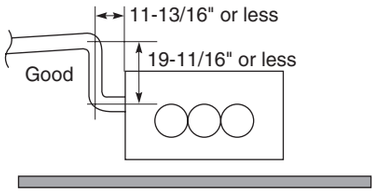


Fig. 3-66

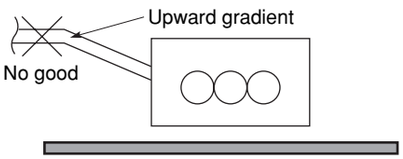


Fig. 3-67

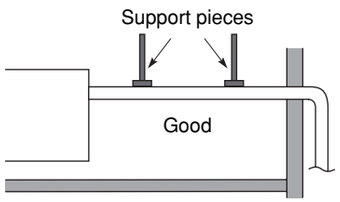


Fig. 3-68

3-25. Checking the Drainage

After wiring and drain piping are completed, use the following procedure to check that the water will drain smoothly. For this, prepare a bucket and wiping cloth to catch and wipe up spilled water.

(1) Connect power to the power terminal board (L1, L2 terminal) inside the electrical component box.

(2) Remove the tube cover and through the opening, slowly pour about 0.3 gal. of water into the drain pan to check drainage.

(3) Short the check pin (CN5 white) on the indoor control board and operate the drain pump. Check the water

CAUTION

Be careful since the fan will start when you short the pin on the indoor control board.

(4) When the check of drainage is complete, open the check pin (CN5 white) and remount the insulator and drain cap onto the drain inspection port.

CAUTION

To mount the tube cover, use 5/16" (4 × 8 mm) tapping screws. Do not use long screws as they may puncture the drain pan and cause water leak-age.

3-26. Increasing the Fan Speed

If external static pressure is too great (due to long extension of ducts, for example), the air flow volume may drop too low at each air outlet. This problem may be solved by increasing the fan speed using the following procedure:

(1) Remove 4 screws on the electrical component box and remove the cover plate.

(2) Disconnect the fan motor sockets in the box.

(3) Take out the booster cable (sockets at both ends) clamped in the box.

(4) Securely connect the booster cable sockets between the disconnected fan motor sockets in step 2 as shown in the Fig. 3-69.

(5) Place the cable neatly in the box and reinstall the cover plate.

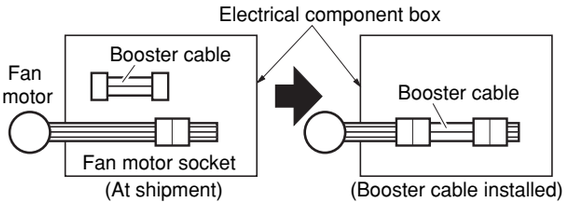


Fig. 3-69

■ How to read the diagram

The vertical axis is the external static pressure (Pa) while the horizontal axis represents the air flow (CFM).
The characteristic curves for “HT”, “H”, “M” and “L” fan speed control are shown.
The nameplate values are shown based on the “H” air flow. For the 26 type, the air flow is 636 CFM, while the external static pressure is 49 Pa at “H” position. If external static pressure is too great (due to long extension of duct, for example), the air flow volume may drop too low at each air outlet.
This problem may be solved by increasing the fan speed as explained above.

Refer to “ ■ SUPPLEMENT ON DRAIN PIPING”.

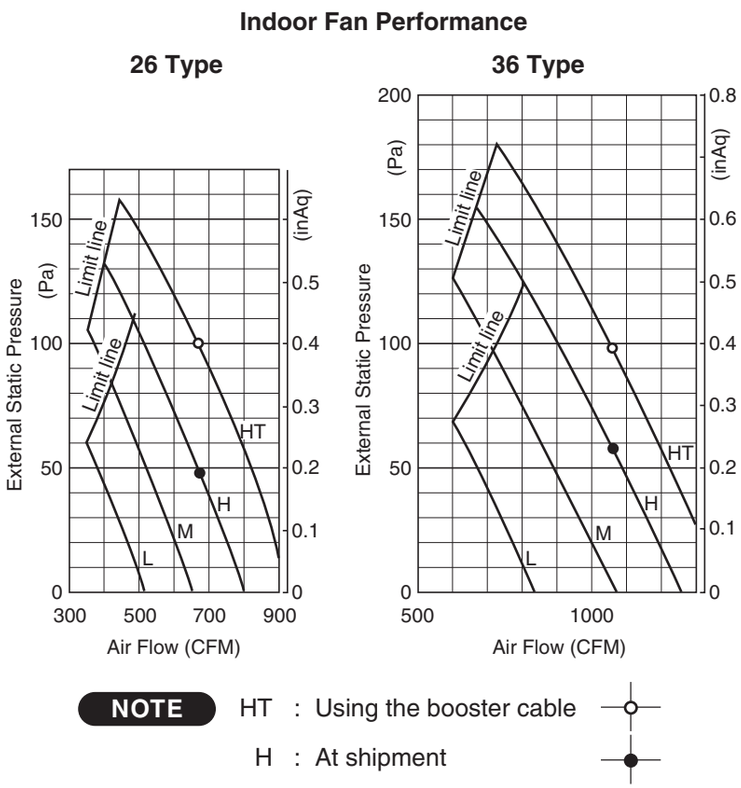


Fig. 3-70

3-27. When Installing the Indoor Unit

Confirm that the indoor unit should be installed in a horizontal position.
Use the level gauge or vinyl tube and check every four corner of the unit is in horizontal.
If the air outlet duct flange is positioned with downward gradient, there is in danger of water splash or drainage.
Also, dust may sometimes be contaminated inside the drain pan caused by the residual drain water.
Install the air outlet duct flange side in horizontal or upward and within the range of 3/8" in the upward direction.
Never install it with a downward gradient against horizontal.

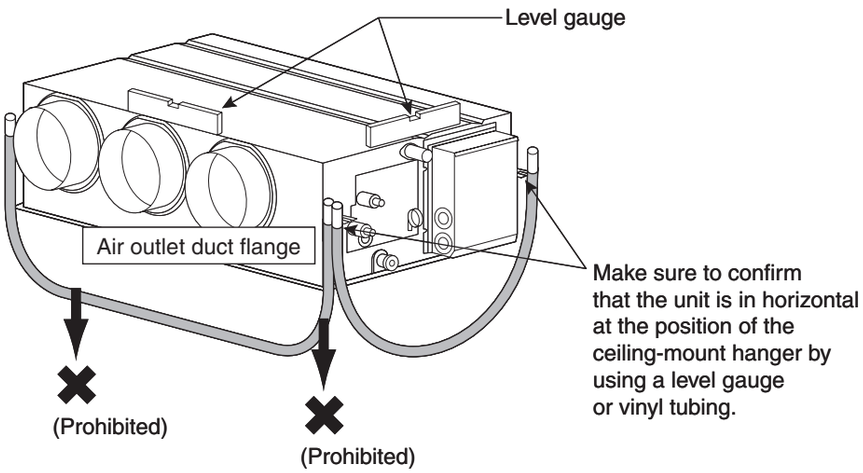


Fig. 3-71

3-28. Required Minimum Space for Installation and Service

If the ceiling tiles cannot be removed, provide the opening holes on the lower side of the indoor unit for removing the unit in order to maintain and clean the drain pan and heat exchanger or provide a minimum of 1.0 ft. or more space.

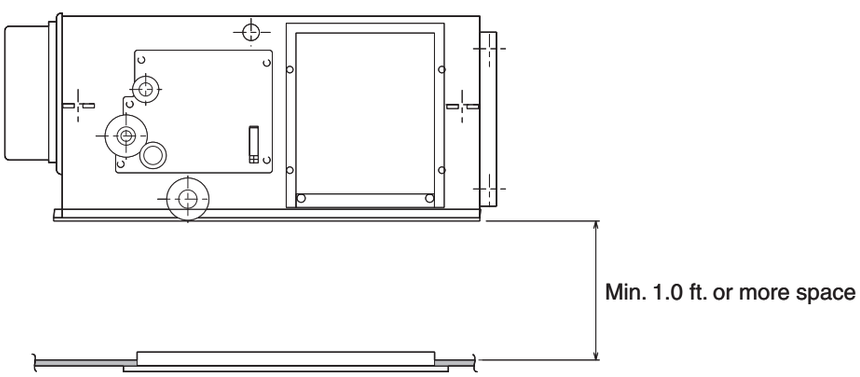


Fig. 3-72

■ SUPPLEMENT ON DRAIN PIPING

Checkpoint after installation

After installation of indoor and outdoor units, panels and electrical wiring, check the following items.

	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		

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) Provide a power outlet to be used exclusively for each unit, and a power supply disconnect and circuit breaker for overcurrent protection should be provided in the exclusive line.

(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 disorder 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 malfunction that occurs as a result of such unauthorized changes.

(7) Regulations on wire diameters differ from locality to locality. For field wiring rules, must follow 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 one side only.

(9) If the power supply cord of this appliance is damaged, it must be replaced by a repair shop appointed by the manufacturer, because special-purpose tools are required.

(10) All wiring used must be Class 1.

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

You must follow LOCAL ELECTRICAL CODES for wiring.

Outdoor Unit

Type	Time delay fuse or circuit capacity
U-26PE1U6	30 A
U-36PE1U6	35 A
U-42PE1U6	40 A

Type	Time delay fuse or circuit capacity
U-26PS1U6	25 A
U-36PS1U6	30 A
U-42PS1U6	35 A

Indoor Unit

Type	Time delay fuse or circuit capacity
U1, K1, T1, F1	15 A

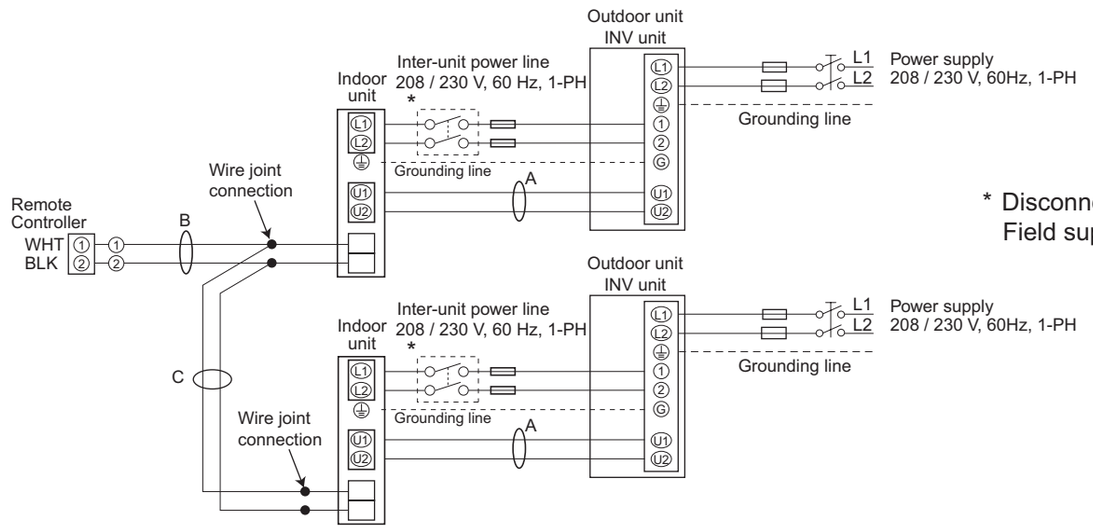
Control Wiring

(A) Inter-Unit Control Wiring	(B) Remote Control Wiring	(C) Control Wiring For Group Control
AWG #18 **Use high voltage wire (300 V)**[*1]	AWG #18[*2] (0.75 mm^2)	AWG #18[*2] - (0.75 mm^2)
Max. 3,300 ft.	Max. 1,650 ft.	Max. 650 - ft. (Total)

AWG=American Wire Gauge
*1 With ring-type wire terminal
*2 Wire joint connection

4-3. Wiring System Diagrams

Basic wiring diagram for standard control



NOTE

Disconnect switch may be needed by the National/Local code.

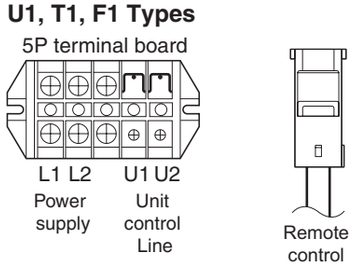
ALWAYS COMPLY WITH NATIONAL AND LOCAL CODE REQUIREMENTS.

NOTE

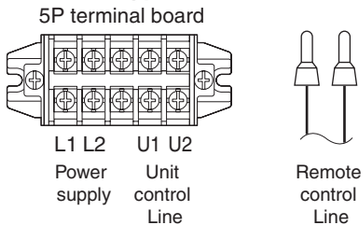
(1) Refer to Section 4-2. Recommended Wire Length and Wire Diameter for Power Supply System for the explanation of “A”, “B” and “C” in the above diagrams.
(2) Inter-Unit Control Wiring (A) and remote control wiring (B), (C) have no polarity. But for other wiring, respect polarity. Be sure to connect as shown in the Wiring System Diagram.
(3) In case of separate supply connection to indoor unit, over current protection must be provided between power source and indoor unit.

MAXIMUM OVER CURRENT PROTECTION 15 A (FUSE OR HACR TYPE CIRCUIT BREAKER)

U1, T1, F1 Types



K1 Type



WARNING

Loose wiring may cause the terminal to overheat or result in unit malfunction. A fire hazard may also exist. Therefore, ensure that all wiring is tightly connected.

When connecting each power wire to the corresponding terminal, follow the instructions on “How to connect wiring to the terminal” and fasten the wire securely with the fixing screw of the terminal plate.

4-4. How to Connect Wiring to the Terminal

■ **For stranded wiring**

(1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to expose the stranded wiring about 3/8". (Fig. 4-1)

(2) Using a Phillips head screwdriver, remove the terminal screw(s) on the terminal plate.

(3) Using a ring connector fastener or pliers, securely clamp each stripped wire end with a ring pressure terminal. (Fig. 4-1)

(4) Place the ring pressure terminal, and replace and tighten the removed terminal screw using a screwdriver. (Fig. 4-2)

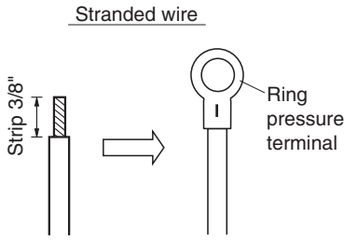


Fig. 4-1

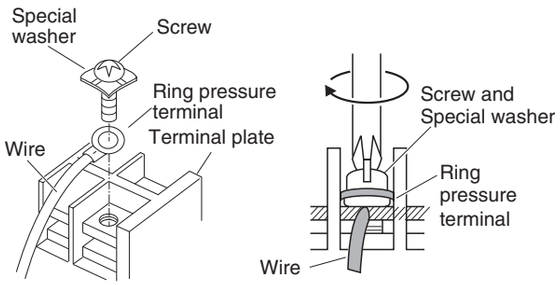


Fig. 4-2

5. 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.

5-1. 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. 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. 5-1)

● How to Install Batteries

See Fig. 5-2.

(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.

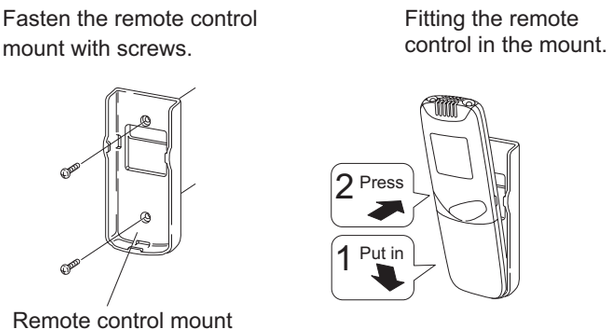


Fig. 5-1

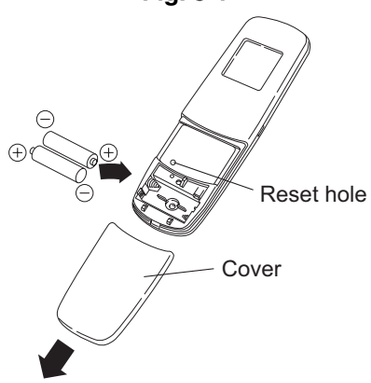


Fig. 5-2

5-2. 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.

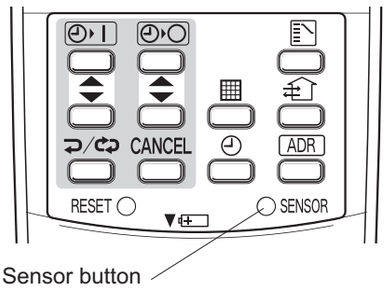


Fig. 5-3

5-3. 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.

Remote control address display	ADR AL L	ADR 1	ADR 2	• • • •	ADR 6
Address switch positions	* Any address switch position available	1 2 3 / 4 5 6	1 2 3 / 4 5 6	• • • •	1 2 3 / 4 5 6

5-4. Setting the Model Code

① Flap display selector switch
Make the slide switch settings in the battery compartment box of the remote controller depending on the type of indoor unit in which the wireless receiving unit is used.

② Operation mode switch
In this Single Split System Air Conditioner set the switch to “A”.

* The switch is factory set to “S” / “A”.
* Always press the reset button after switching the setting.

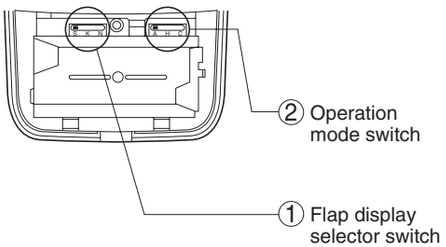


Fig. 5-4

①	S K N U1, T1 types	S K N K1 type	S K N F1 type
②	A H C Heat pump with Auto mode	A H C Heat pump without Auto mode	A H C Cooling only

<CZ-RWSU1U>

■ 4-Way Cassette Type (U1 Type)

5-5. Indicator Section Installation

- **Remove the ceiling panel and indicator cover and install the indicator section.**

(1) Remove the ceiling panel.
(2) Remove the corner cover behind the mark section. (3 screws)
(3) Remove the mark section inside the ceiling panel. (2 screws)
(4) Install the indicator section in the location where the mark section was attached. (2 screws)
(5) Form the wire to match the panel ribs as shown in Fig. 5-6.
(6) Install the corner cover. (Restrain the wire with the corner cover.)

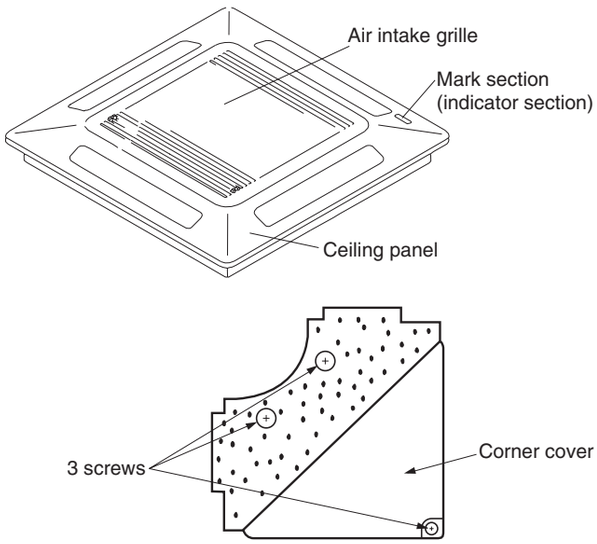


Fig. 5-5

5-6. Operating Controller Installation

CAUTION

- **Do not twist the operating controller wires together with the power supply wires. Doing so can result in malfunction.**
- **If electrical noise is induced in the unit power supply, take appropriate measures, for example installing a noise filter.**

Install the operating controller at the indoor unit intake port section.

(1) Fasten the operating controller to the indoor unit intake port section (electrical component box opposite side) with the 2 accessory screws (4×L13/32").

(2) Connect the operating controller 2 wires (WHT, BLK) to the remote control wire (WHT) in the electrical component box. (For details on wiring, see the section “5-9. Electrical wiring” .)

(3) Install the ceiling panel.

(4) Connect the indicator section and the operating controller with the 6P connector (white).

(5) Form the wires with vinyl clamps and fasten.

(6) Connect the ceiling panel wiring connector (2P, 3P) to the body connector in the electrical component box.

(7) For details on test operation, see “Test Run.”

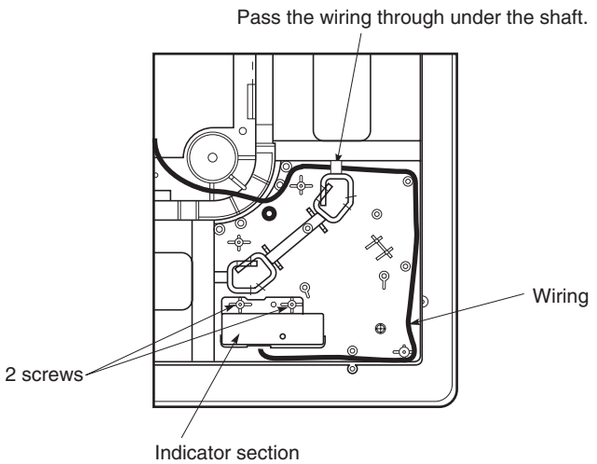


Fig. 5-6

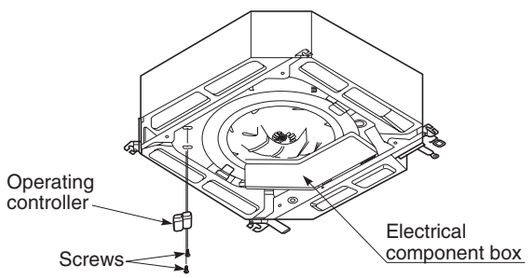


Fig. 5-7

■ Ceiling Type (T1 Type)

5-7. Indicator Section Installation

Remove the side panel to install the indicator section. (Fig. 5-8)

(1) Remove the side panel.
Open the air intake grille, remove the screw at one place and then remove the side panel by sliding it toward the front (arrow direction).
(2) Remove cover A and cover B.
Insert a flathead screwdriver into the grooves of cover A to remove cover A and cover B. (When removing the cover, take care not to scratch the panel.)
(3) Remove cover B from cover A.
(4) Install the indicator section at cover A.
(5) After passing through the lead wires, install cover A and the indicator section at the panel hole. (The protrusion part of cover A is fixed with the panel hole.)
(6) Bundle the lead wires along with the wiring of the louver motor.
(7) Install the side panel.

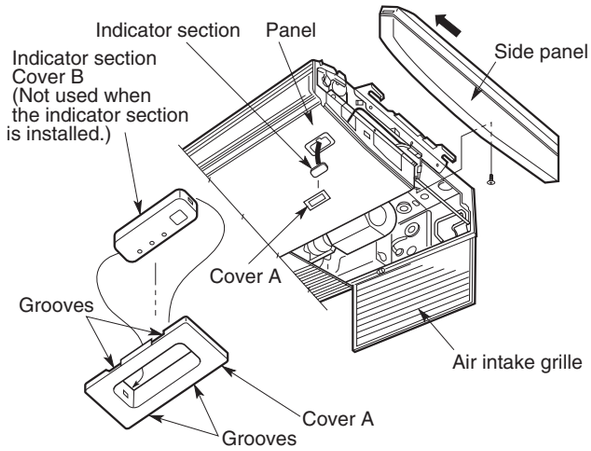


Fig. 5-8

5-8. Operating Controller Installation

CAUTION

- **Do not twist the operating controller wires together with the power supply wires. Doing so can result in malfunction.**
- **If electrical noise is induced in the unit power supply, take appropriate measures, for example installing a noise filter.**

Install the operating controller on the top face of the air intake section (space between the fan motor and the electrical component box). (Fig. 5-9)

(1) Fasten the operating controller to the ceiling panel of the air intake section with the 2 supplied screws (4×L13/32").
(2) Draw the lead wires into the electrical component box and connect the operating controller 2 wires (WHT, BLK) to the remote control wires in the electrical component box.
(3) Connect the indicator section and the operating controller using the 6P connector in the electrical component box.

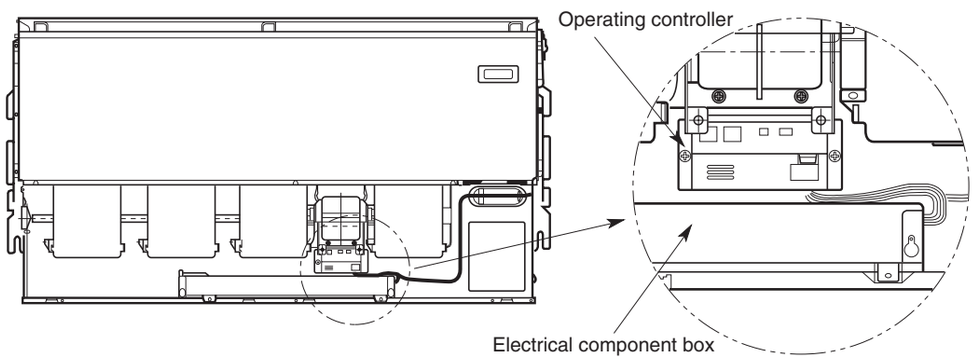


Fig. 5-9

5-9. Electrical Wiring

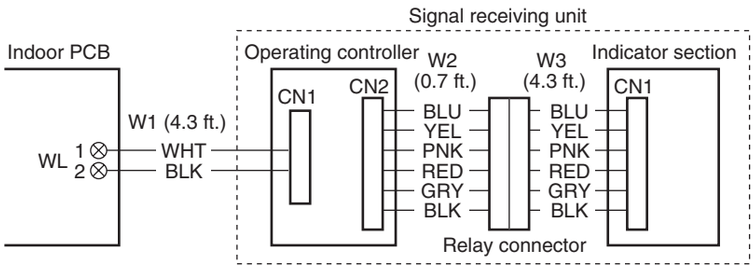


Fig. 5-10

Connection method

(1) Connect W1 to the indoor PCB WL connector.

(2) Connect W3 from the indicator section with W2 from the operating controller using the relay connector.

5-10. Test Run Switch

The test run switch is located in the operating control unit.
See the Installation Instractions attached to the outdoor unit.

5-10-1. How to use the test run setting (U1, T1 Types)

(1) Set DIP switch [DS] No. 1 on the wireless receiver unit PCB from OFF to the ON position.

(2) Press the ON/OFF operation button on the wireless remote controller.

(3) Make a test run using the air conditioner in COOL or HEAT mode.

(4) During the test run, each of the 3 indicator lamps on the indoor unit flash.

(5) During the test run, the air conditioner runs continuously and the thermostat does not control the system.

(6) After the test run, be sure to reset DIP switch No. 1 back to the OFF position and check that no indicator lamps are blinking.
(This receiver includes a 60-minute automatic OFF timer function in order to prevent continuous test run.)

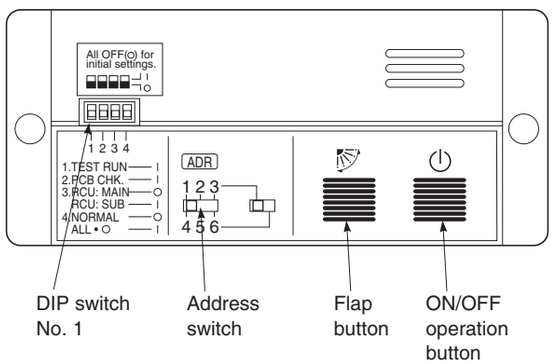


Fig. 5-11

NOTE

- In case of 4-way Cassette type, test run operation is not possible without the ceiling panel installation.
- To protect the air conditioner from overloading, the outdoor unit will not start running for 3 minutes after power is applied or the air conditioner is turned off and then back on.
- When the air conditioner fails to start the test run, 1 or more of the 3 alarm indicator lamps on the indoor unit will flash (See next section).
- When the DIP switch is set to “TEST – ON,” temperature control from the wireless remote controller is disabled. Do not use this setting at any time other than for the test run. Doing so will place an excessive load on the system.
- To avoid placing an excessive load on the equipment, use this function only when conducting the test run.

5-11. 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 5-1. Fig. 5-12 shows the location of the alarm lamps on the indoor unit.
(See Table 5-1 and Fig. 5-12.)

Table 5-1

Alarm			Cause of Trouble
(OPERATION lamp)	(TIMER lamp)	(STANDBY lamp)	
☼	●	●	S.C. errors* between the indoor unit's controller (PCB) and the remote controller.
●	☼	●	Compressor protector is working.
●	●	☼	S.C. errors between indoor and outdoor units.
☼	☼	●	Indoor or outdoor thermistor is malfunctioning.
☼	●	☼	Outdoor unit protector is working.
●	☼	☼	Indoor unit protector is working.
☼	☼	☼	TEST RUN switch on the operation controller is in ON state.

* S.C.: Serial communications

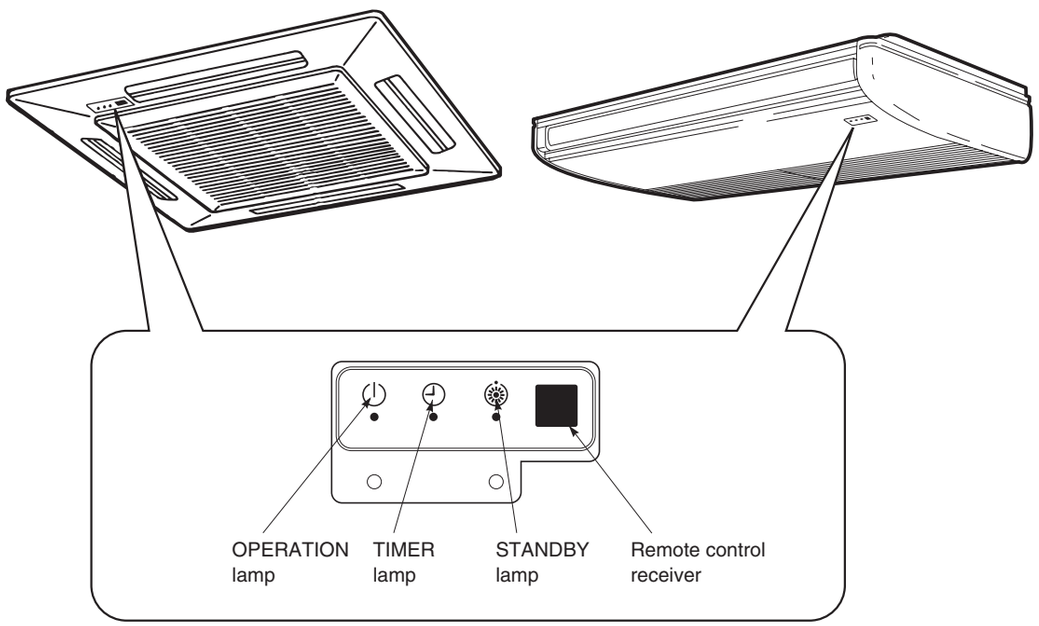


Fig. 5-12

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.

<CZ-RWSC1U>

CAUTION

- **If the signal receiving unit is installed near a rapid-start or inverter type fluorescent lamp (neither one uses glow lamps), it may be impossible to receive signals from the wireless remote controller. To avoid signal interference from fluorescent lamps, install the receiving unit at least 6.6 ft. away from the lamps and install at a location where wireless remote controller signals can be received when the fluorescent lamps are on.**

5-12. Separate Type Signal Receiving Unit Installation

CAUTION

- **Do not twist the operating controller wires together with the power supply wires. Doing so can result in malfunction.**
- **If electrical noise is induced in the unit power supply, take appropriate measures, for example installing a noise filter.**

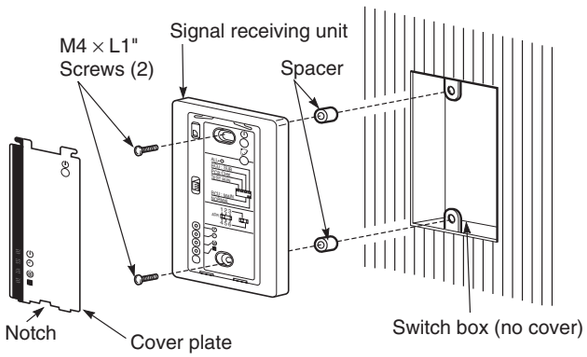


Fig. 5-13

- If local electrical codes allow, this signal receving unit can be mounted using a conventional wall box for flush mounting.

(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. 5-14)

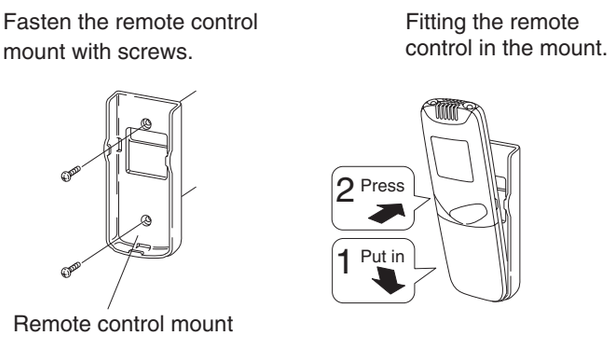


Fig. 5-14

● How to Install Batteries

See Fig. 5-15.

(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.

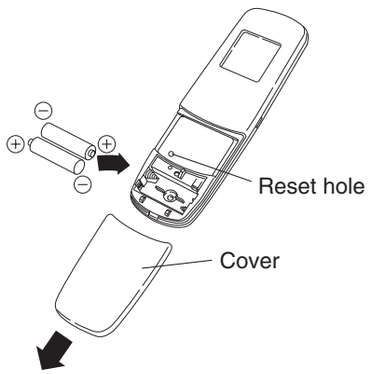


Fig. 5-15

- When using the signal receiving unit on a wall with the front exposed, choose a wall surface that the signal receiving unit can be mounted on.

(1) Insert a flathead screwdriver into the slot on the lower side of the signal receiving unit and pry off the back case.

(2) The wire routing at the signal receiving unit comes out of the upper case (thin portion at upper center) so use nippers or a similar tool to cut out a notch beforehand large enough for the remote control cable (option) to pass through as shown in Fig. 5-16.

(3) Remove the wire, which is connected prior to shipping, from the connector.

(4) Connect the remote control cable (option) to the signal receiving unit connector as shown in Fig. 5-17 after the clamp (supplied) with the unit is installed.

(5) After arranging the wiring on the printed circuit board as shown in Fig. 5-18 so that it is contained within the signal receiving unit, attach the back case. At this time, arrange so that the head of the clamp faces the side.

(6) Remove the cover plate and install the signal receiving unit using the 2 wood screws.

(7) Fasten to the wall using the cord clip (supplied).

(8) Reinstall the cover plate.

- To use the signal receiving unit while mounted on the ceiling, install by using the carrier for ceiling installation supplied with the unit.

(1) Remove the cover plate by inserting a flathead screwdriver into the notch in the lower section and prying it off.

(2) Cut out a section (3-3/4"×2-1/32") on the ceiling using the paper pattern (supplied) as a guide.

(3) Run the wire through the mounting carrier and insert into the installation hole as shown in Fig. 5-20.

(4) Fit securely into the ceiling material at sections (A) and (B) as shown in Fig. 5-21.

(5) Connect the wire (2-wire core) from the signal receiving unit with the wire from the indoor unit. (See section on how to wire the receiving unit.) as shown in Fig. 5-21.

(6) Use the supplied spacers to adjust for a thickness several inches more than the ceiling material and lightly fasten the receiving unit in place with the small screws (M4×1-9/16", 2 pcs.) supplied with the unit.

(7) Tighten the machine screws after fitting sections (A) and (B) into the openings, in the gap between the signal receiving unit and ceiling surface as in Fig. 5-22. Do not apply strong force when tightening the screws. Excessive force might warp or damage the cover. When finished, the signal receiving unit should still be able to move slightly when pressed as shown in Fig. 5-22.

(8) Reinstall the cover plate.

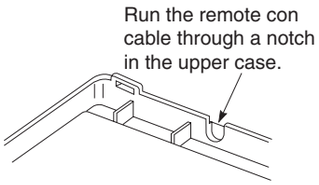


Fig. 5-16

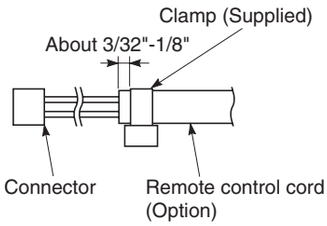


Fig. 5-17

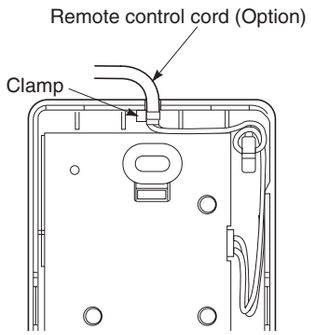


Fig. 5-18

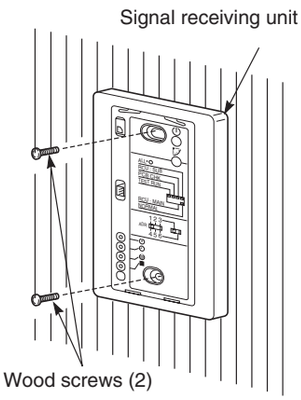


Fig. 5-19

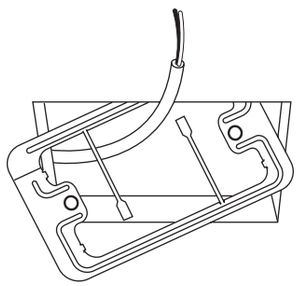


Fig. 5-20

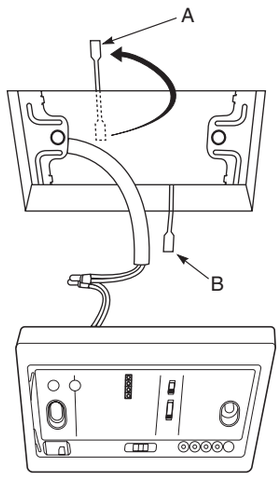


Fig. 5-21

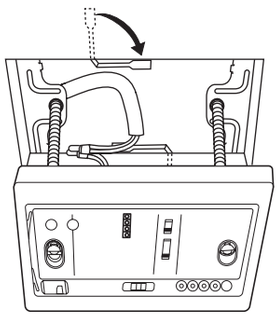


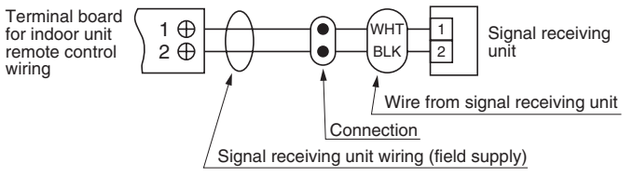
Fig. 5-22

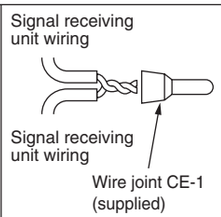
5-13. Electrical Wiring

CAUTION

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

- Recommended wire diameter and allowable length for signal receiving unit wiring and its branch wiring: AWG #18, MAX 1,300 ft.



Wire joint (2 pcs. white, supplied)		(1) Strip the insulation to approximately 9/16" from the ends of the wires that will be connected. (2) Twist together the 2 wires and create a crimp connection at the wire joint. (3) If a special crimping tool is not used, or if the connection is soldered, insulate the wires using insulation tape.

5-14. Test Run Switch

(1) Remove the cover plate of the signal receiving unit. Set the “TEST RUN” switch of the dip switches to the ON position.
(2) Press the ON/OFF operation button on the wireless remote controller.

CAUTION

To avoid placing an excessive load on the equipment, use this function only when conducting the test run.

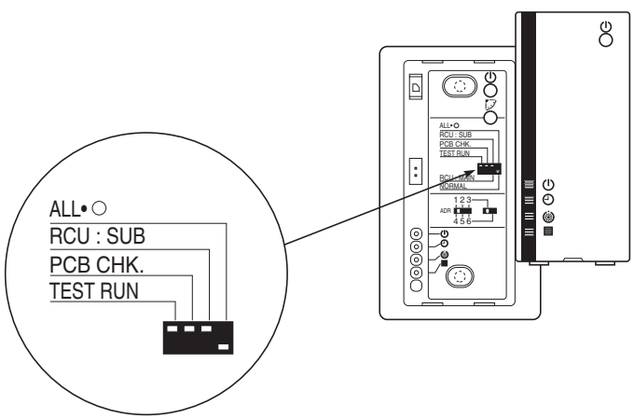


Fig. 5-23

(3) Make a test run using the air conditioner in COOL or HEAT mode.
(4) During the test run, the “OPER.,” “TIMER,” and “STDBY” LED all blink.

- To protect the air conditioner from overloading, the outdoor unit will not start running for approximately 3 minutes after power is applied or the air conditioner is turned off and then back on.
- When the DIP switch is set to “TEST – ON,” temperature control from the wireless remote controller is disabled. Do not use this setting at any time other than for the test run. Doing so will place an excessive load on the system.

(5) After the test run, press the ON/OFF operation button on the wireless remote controller. Then, set the TEST RUN switch back to the OFF position to cancel the test run mode.
(This receiver includes a 60-minute automatic OFF timer function in order to prevent continuous test run.)

5-15. Misoperation Alarm Indicators

A blinking lamp for other than the signal receiving unit filter shows that a problem has occurred in the unit, so make an inspection. (Refer to servicing information in the service manual, etc.) Also, if wired remote controller and dedicated service check lines (CV6380230938: service use) are available, then detailed error information can be obtained by connecting to the service connector as shown in the drawing. For information on how to connect to the signal receiving unit, refer to the instruction manual that came with the dedicated service check lines.

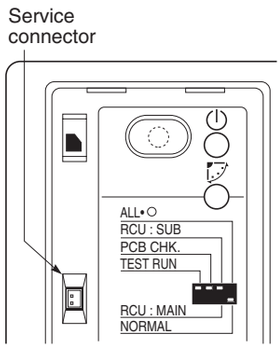


Fig. 5-24

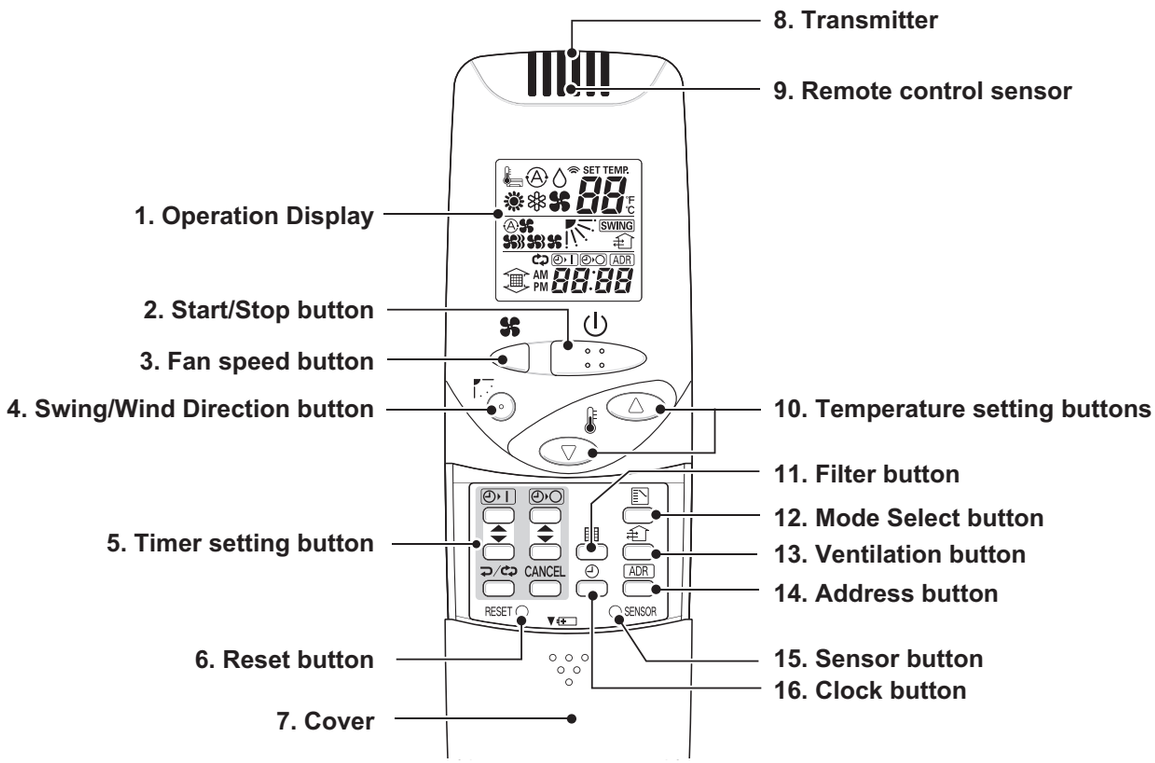


Fig. 5-25

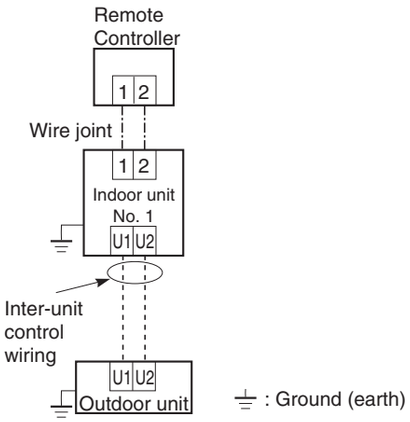
Table 5-2

Lamp			Bright	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 unit protector is activated.
☼	●	☼	Alternately	Outdoor unit protector is activated.
●	☼	●		Compressor protector is activated.
☼	●	☼	Concurrent	Mis-setting of indoor unit.
☼	☼	☼	Concurrent	Mis-setting of outdoor unit.

* S.C.: Serial communications

5-16. 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. 5-26) Otherwise misoperation because of electrical noise may occur.

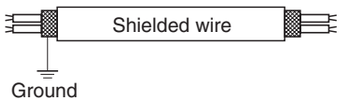


Fig. 5-26

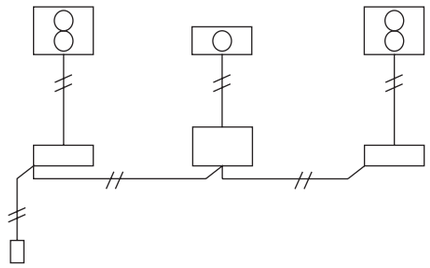
- **Wiring procedure**

  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.

5-17. 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.



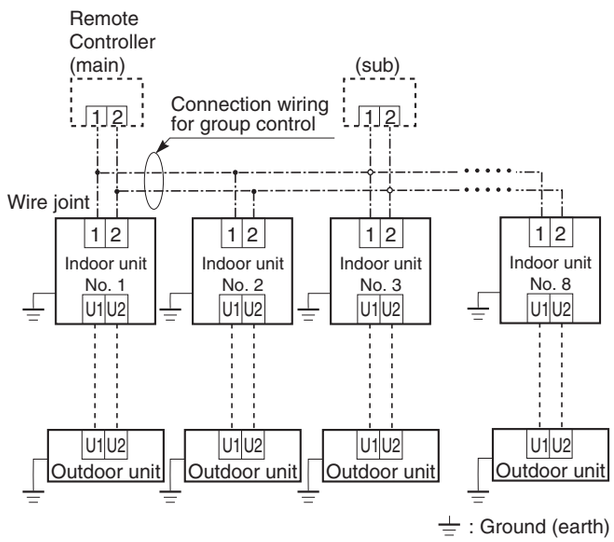
Wiring procedure

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.

● Group control using 2 signal receiving units

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



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).

5-18. 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

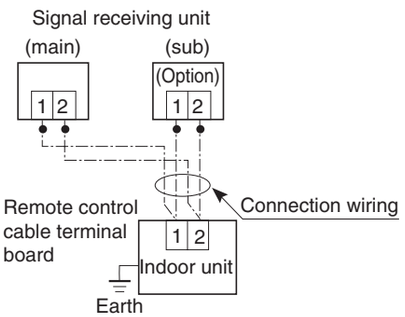
To execute this control, make the setting according to the following procedure.

(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).**

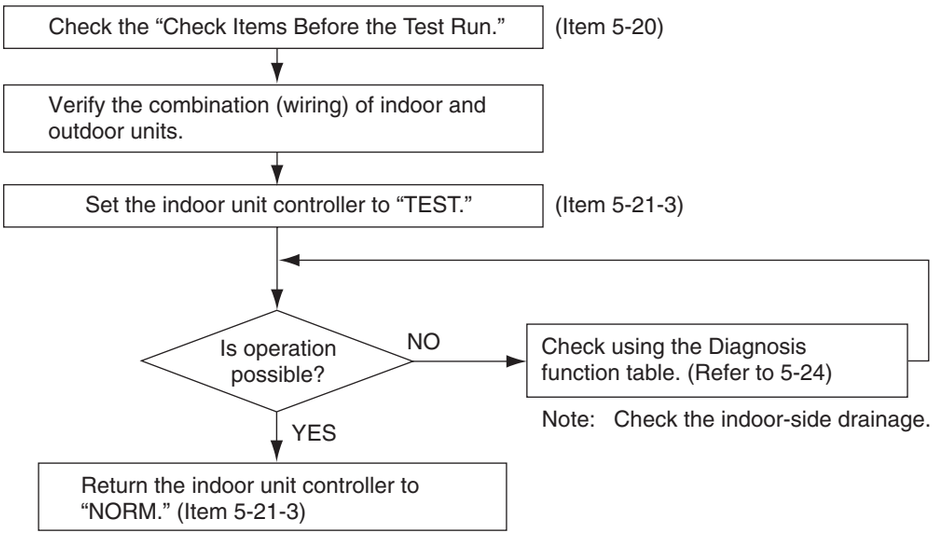
- To operate 1 indoor unit with 2 signal receiving units set at different locations.



<CZ-RWSK1U>

5-19. Test Run Procedure

- **Wall mounted Type (K1 Type)**



5-20. Check Items Before the Test Run

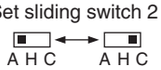
(1) Turn ON the remote power switch at least 12 hours before the test run in order to charge the crankcase heater.

(2) Fully open the service valves on the gas-tube and liquid-tube sides.

(3) Set the sliding switches on the inside of the wireless remote controller cover to the correct settings for that model. After changing the settings, press the RESET hole.

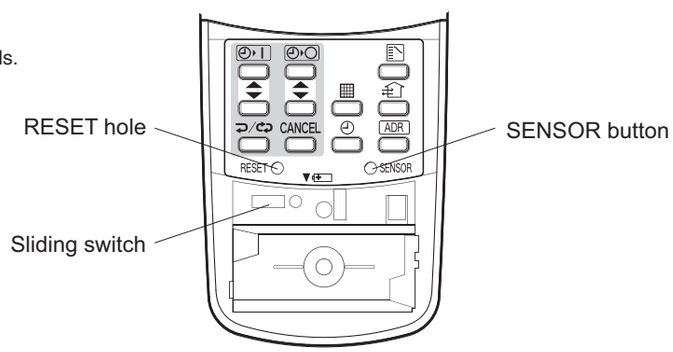
Verify that sliding switch 1 is in the “S” position.

- Set sliding switch 2 to the correct setting for these models.



A: Heat pump model
(H: Heat pump, no auto heating/cooling)
C: Cooling-only model

Wireless remote controller transmitter



5-21. Preparing for the Test Run

5-21-1. Changing the room temperature sensor

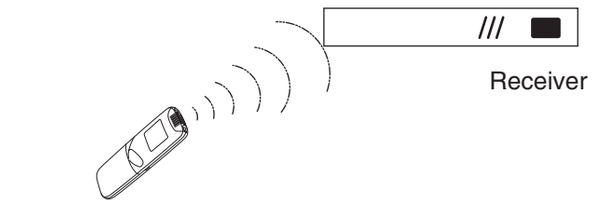
- Room temperature sensors are installed inside the indoor unit and the wireless remote controller. Either room temperature sensor can be used.
- When “Unit Sensor” is indicated on the wireless remote controller’s LCD, the indoor unit sensor is operating as the room temperature sensor.
  To change to 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.

5-21-2. 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., 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.)

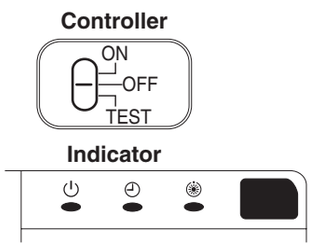


- Do not drop, throw, or wash the remote controller.
- Do not place the remote controller in a location exposed to direct sunlight, or near a stove or similar appliance.

5-21-3. Test run

● Using the controller

For S-26PK1U6



(1) Slide the main unit controller switch from “ON” to “TEST”.
  (The outdoor unit will not operate for approximately 3 minutes after the power is turned ON, or after operation is stopped.)
(2) All indicator lamps on the display blink while test run is in progress.
(3) Temperature control is not possible during the test run.
(4) If normal operation is not possible, the lamps on the display will indicate the problem. Refer to “5-24. Diagnosis Table”.
(5) After the test run is completed, move the controller switch from “TEST” to “ON” and verify that the indicator lamps stop blinking.
  (A 60-minute automatic OFF timer function is included in order to prevent continuous test run.)

CAUTION

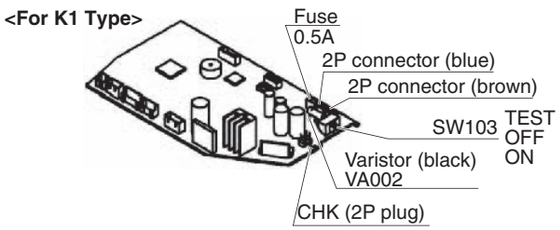
- **Do not use this setting at any time other than for the test run. Doing so will place an excessive load on the system.**
- **Test run is not possible if the power was turned ON when the controller switch was in the “TEST” position. Leave the power ON and move the switch to “OFF,” then move the switch back to “TEST.”**

5-22. Precautions

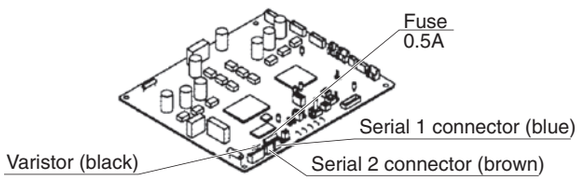
- Request that the customer be present at the time the test run is performed. Explain the Operating Instructions to the customer, and then have the customer actually operate the system.
- Be sure to pass the manual and warranty certificate to the customer.
- Verify that the AC 208 / 230 V wiring is not 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 (0.5A 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 (indoor unit: blue, OC, CN40; outdoor unit: blue, OC) which are connected to the PCB and connect the other 2P connectors (indoor unit: brown, EMG, CN44; outdoor unit: brown, EMG). (See the figure below.)
  If operation is still not possible with the brown connectors connected, cut the varistor (black) (for both the indoor and outdoor units).
  (Be sure to turn OFF the power before performing this work.)

Indoor unit control PCB

<For K1 Type>



Outdoor unit control PCB

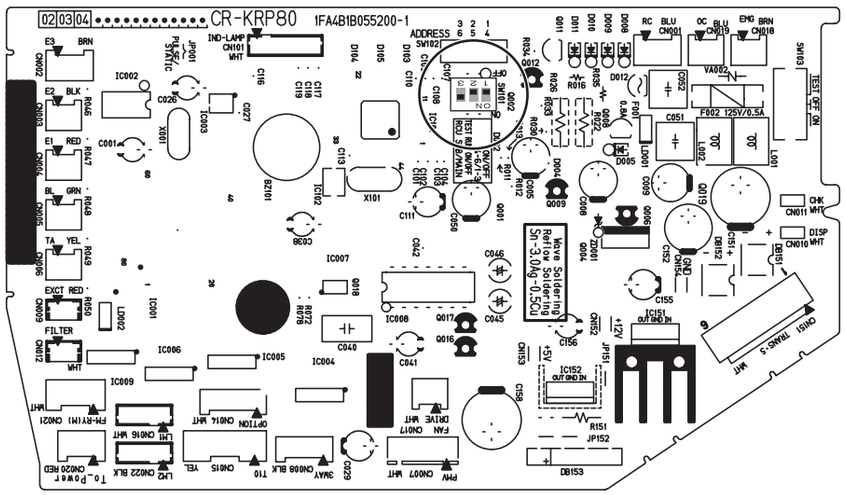


5-23. When Setting Indoor Unit Control PCB Switch for Wall Mounted Indoor Unit

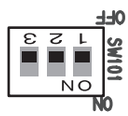
When using both the wired and wireless remote controller, refer to the procedure below.

- If this setting is not made correctly an alarm will occur. (The operation lamp on the display blinks.)
- This setting is not necessary for the case of using wireless remote controller only.
- The slide switch setting at the time of factory shipment for model K1 type is “B.”

● S-26PK1U6



- When using wired remote controller as “sub”, to set its data to “sub” in remote controller setting mode.
- When using wireless remote controller as “sub”, set the switch on the indoor unit control PCS to A.

A	When using wireless remote controller as “sub”	 **Nos. 1, 2 OFF, No. 3 ON.**
B	When using wireless remote controller as “main”	 **Nos. 1, 2, 3 all OFF**

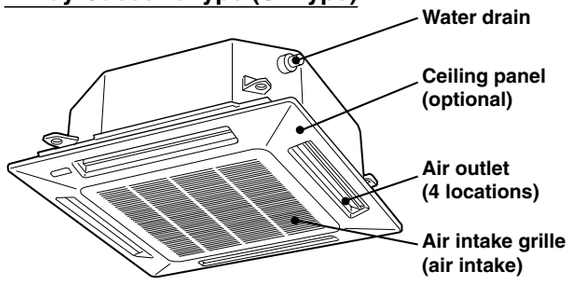
5-24. Diagnosis Table

Wired remote spcontroller dilay	Indoor unit receiver lamp	Cause			
		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	● Remote controller is not connected correctly. ● Indoor unit power is not ON.	● Remote controller is not connected with indoor unit correctly ● Indoor unit power is not ON.	● Same as at left	● Same as at left
E 0 1 displayed	Operating lamp is blinking.	● 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).	● 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	● Same as at left	● Same as at left
E 0 2 displayed		●Remote controller is not connected correctly (failure in transmission from remote controller to indoor unit).	● Remote controller is not connected with indoor unit correctly	● Same as at left	● Same as at left
E 0 9 displayed		———	———	———	● 2 remote controllers are set as the main remote controller.
E 1 4 displayed		———	———	● Control wiring for group control is cut or is not connected correctly.	● Same as at left
E 0 4 displayed	Standby lamp is blinking.	● Indoor-outdoor inter-unit wiring is not connected correctly.	● Same as at left	● Same as at left	● Same as at left
E 0 6 displayed			● Indoor-outdoor inter-unit wiring is cut or is not connected correctly.	● Same as at left	● Same as at left
E 1 5 displayed		● Indoor unit capacity is too low.	● Same as at left	● Same as at left	● Same as at left
E 1 6 displayed		● Indoor unit capacity is too high.			
E 2 0 displayed		● No serial signal is being received at all from the indoor units.			
P 0 5 displayed	Operation lamp and Standby lamp are blinking alternately.	● Inter-unit circuit or open phase in the outdoor unit power ● Insufficient gas	● Reversed phase or open phase in the 3-phase power at one of the outdoor units in the group	● Reversed phase or open phase in the outdoor unit 3-phase power	● Same as at left
L 0 2 displayed **L 1 3** displayed	Both the Operation lamp and Standby lamp are blinking together.	● Indoor-outdoor unit type mismatch	● Same as at left	● Same as at left	
L 0 7 displayed		———	———	● Control wiring for group control is connected to the indoor unit, however it is set for individual operation.	● Same as at left
P 0 9 displayed	Timer lamp and Standby lamp are blinking alternately.	● The indoor unit ceiling panel connector is not connected correctly.	● Ceiling panel connector at one of the indoor units in the group is not connected correctly.	● Indoor unit ceiling panel connector is not connected correctly.	● Same as at left

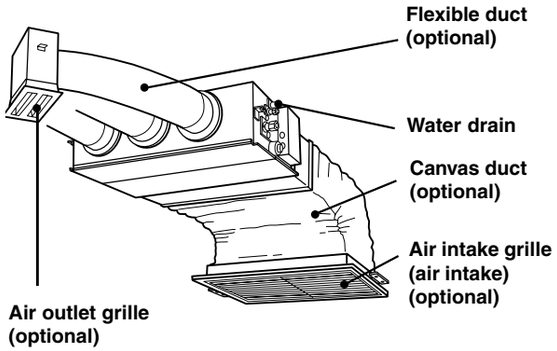
6. APPENDIX

■ Name of Parts

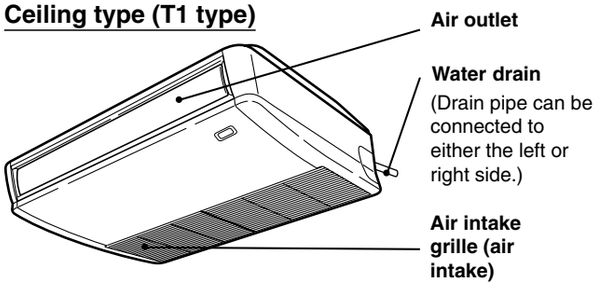
4-Way Cassette type (U1 type)



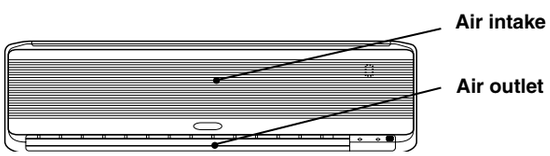
Low Silhouette Ducted type (F1 type)



Ceiling type (T1 type)



Wall Mounted type (K1 type)



■ Care and Cleaning

WARNING

1. **For safety, be sure to turn the air conditioner off and also to disconnect the power before cleaning.**
2. **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 outlet side (Indoor unit)

Clean the air intake and outlet 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 a mild liquid detergent. When cleaning the air outlet side, be careful not to force the vanes out of place.

CAUTION

1. **Never use solvents or harsh chemicals when cleaning the indoor unit. Do not wipe plastic parts using very hot water.**
2. **Some metal edges and the fins are sharp and may cause injury if handled improperly; be especially careful when you clean these parts.**
3. **The internal coil and other components of the outdoor unit must be cleaned every year. 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	U1	F1*	T1	K1
Period	Six months	(Depending on filter specifications)	Two weeks	Two weeks

***Low Silhouette Ducted type (F1) :**
An air filter is not provided with this air conditioner at the time of shipment. To get clean air and to extend the service life of the air conditioner, an air filter must be installed in the air intake. For installation and cleaning the air filter, consult your dealer or service center.

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.

■ Care and Cleaning (continued)

How to remove the filter

4-Way Cassette type (U1) :

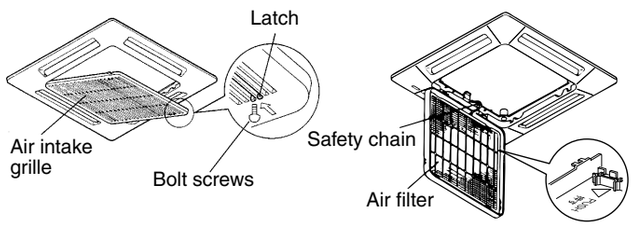
1. Use a screwdriver to remove the bolt screw on each side for the two latches. (Be sure to reattach the two bolt screws after cleaning.)
2. Press on the two latches of the air intake grille with your thumbs in the direction of the arrow to open the grille.
3. Open the air intake grille downward.

CAUTION

- **When cleaning the air filter, never remove the safety chain. If it is necessary to remove it for servicing and maintenance inside, be sure to reinstall the safety chain securely (hook on the grille side) after the work.**
- **When the filter has been removed, rotating parts (such as the fan), electrically charged areas, etc. will be exposed in the unit's opening. Bear in mind the dangers that these parts and areas pose, and proceed with the work carefully.**

4. Remove the air filter attached to the air intake grille.

U1 type



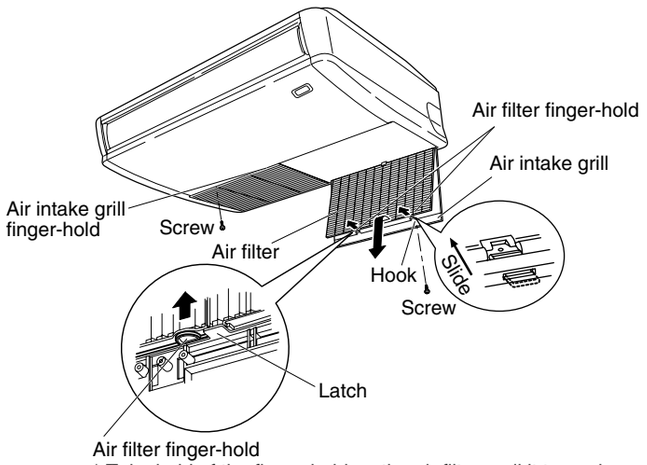
■ Care and Cleaning (continued)

How to remove the filter (continued)

Ceiling type (T1) :

1. Take hold of the finger-hold on the air intake grille and press it to the rear, and the grille will open downward.

2. Take hold of the finger-hold on the air filter, pull it toward you.

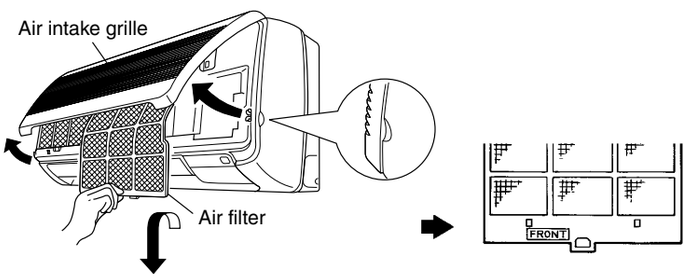


* Take hold of the finger-hold on the air filter, pull it toward you.

Wall mounted type (K1):

1. Move the flap on the air outlet grille to its lowest position with the remote controller.

2. The filter is disengaged by pushing the tab up gently. Hold the air filter by the tab at the bottom, and pull downward.



When replacing the filter, make sure that the FRONT mark is facing you. Push it up until you hear it click back into position.

1. **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.**
2. **Periodically check the outdoor unit to see if the air outlet or air intake is clogged with dirt or soot.**
3. **The internal coil and other components of the outdoor unit 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.

Trouble	Possible Cause	Remedy
Air conditioner does not run at all.	1. Power failure.	1. Restore power.
	2. Leakage circuit breaker has tripped.	2. Contact service center.
	3. Line voltage is too low.	3. Consult your electrician or dealer.
	4. Operation button is turned off.	4. Press the button again.
	5. The wireless remote controller or heat pump is malfunctioning.	5. Consult your dealer.
	6. Batteries in wireless remote controller have run down.	6. Replace batteries.
Compressor runs but soon stops.	1. Obstruction in front of condenser coil.	1. Remove obstruction.
Poor cooling (or heating) performance.	1. Dirty or clogged air filter.	1. Clean air filter to improve the airflow.
	2. Heat source or many people in room.	2. Eliminate heat source if possible.
	3. Doors and/or windows are open.	3. Shut them to keep the heat (or cold) out.
	4. Obstacle near air intake or air discharge port.	4. Remove it to ensure good airflow.
	5. Thermostat is set too high for cooling (or too low for heating).	5. Set the temperature lower (or higher).
	6. (Outdoor temperature is too low).	6. (Consult your dealer.)
	7. (Defrosting system does not work.)	7. (Consult your dealer.)
Lamps on the indoor unit are flashing.	1. Trouble in wiring system	1. Contact service center.

■ 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. (Refer to “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 cut off.

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