
SPLIT SYSTEM**Air Conditioners**

MODELS

Wall-mounted type

FAQ18TAVJU**FAQ24TAVJU**

Read these instructions carefully before installation.
Keep this manual in a handy place for future reference.
This manual should be left with the equipment owner.

Lire soigneusement ces instructions avant l'installation.
Conserver ce manuel à portée de main pour référence
ultérieure.
Ce manuel doit être donné au propriétaire de l'équipement.

Lea cuidadosamente estas instrucciones antes de instalar.
Guarde este manual en un lugar a mano para leer en caso
de tener alguna duda.
Este manual debe permanecer con el propietario del
equipo.

English

Français

Español

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1. SAFETY CONSIDERATIONS

Read these **SAFETY CONSIDERATIONS for Installation** carefully before installing air conditioning equipment. After completing the installation, make sure that the unit operates properly during the startup operation.

Instruct the customer on how to operate and maintain the unit. Inform customers that they should store this Installation Manual with the Operation Manual for future reference.

Always use a licensed installer or contractor to install this product. Improper installation can result in water or refrigerant leakage, electrical shock, fire, or explosion.

Meanings of **DANGER**, **WARNING**, **CAUTION**, and **NOTE** Symbols:

 **DANGER**Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING**Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION**Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

 **NOTE**Indicates situations that may result in equipment or property damage accidents only.

DANGER

- Refrigerant gas is heavier than air and replaces oxygen. A massive leak can lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.
- Do not ground units to water pipes, gas pipes, telephone wires, or lightning rods as incomplete grounding can cause a severe shock hazard resulting in severe injury or death. Additionally, grounding to gas pipes could cause a gas leak and potential explosion causing severe injury or death.
- If refrigerant gas leaks during installation, ventilate the area immediately. Refrigerant gas may produce toxic gas if it comes in contact with fire. Exposure to this gas could cause severe injury or death.
- After completing the installation work, check that the refrigerant gas does not leak throughout the system.
- Do not install unit in an area where flammable materials are present due to risk of explosions that can cause serious injury or death.
- Safely dispose of all packing and transportation materials in accordance with federal/state/local laws or ordinances. Packing materials such as nails and other metal or wood parts, including plastic packing materials used for transportation, may cause injuries or death by suffocation.

WARNING

- Only qualified personnel must carry out the installation work. Installation must be done in accordance with this installation manual. Improper installation may result in water leakage, electric shock, or fire.
- When installing the unit in a small room, take measures to keep the refrigerant concentration from exceeding allowable safety limits. Excessive refrigerant leaks, in the event of an accident in a closed ambient space, can lead to oxygen deficiency.
- Use only specified accessories and parts for installation work. Failure to use specified parts may result in water leakage, electric shocks, fire, or the unit falling.
- Install the air conditioner on a foundation strong enough that it can withstand the weight of the unit. A foundation of insufficient strength may result in the unit falling and causing injuries.
- Take into account strong winds, typhoons, or earthquakes when installing. Improper installation may result in the unit falling and causing accidents.
- Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local, state and national regulations. An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.
- Make sure that all wiring is secured, that specified wires are used, and that no external forces act on the terminal connections or wires. Improper connections or installation may result in fire.

- When wiring, position the wires so that the control box cover can be securely fastened. Improper positioning of the control box cover may result in electric shocks, fire, or the terminals overheating.
- Before touching electrical parts, turn off the unit.
- This equipment can be installed with a Ground-Fault Circuit Interrupter (GFCI). Although this is a recognized measure for additional protection, with the grounding system in North America, a dedicated GFCI is not necessary.
- When installing or relocating the system, keep the refrigerant circuit free from substances other than the specified refrigerant (R410A) such as air. Any presence of air or other foreign substance in the refrigerant circuit can cause an abnormal pressure rise or rupture, resulting in injury.
- Do not change the setting of the protection devices. If the pressure switch, thermal switch, or other protection device is shorted and operated forcibly, or parts other than those specified by Daikin are used, fire or explosion may occur.

⚠ CAUTION

- Do not touch the switch with wet fingers. Touching a switch with wet fingers can cause electric shock.
- Do not allow children to play on or around the unit to prevent injury.
- Do not touch the refrigerant pipes during and immediately after operation as the refrigerant pipes may be hot or cold, depending on the condition of the refrigerant flowing through the refrigerant piping, compressor, and other refrigerant cycle parts. Your hands may suffer burns or frostbite if you touch the refrigerant pipes. To avoid injury, give the pipes time to return to normal temperature or, if you must touch them, be sure to wear proper gloves.
- Heat exchanger fins are sharp enough to cut. To avoid injury, wear glove or cover the fins when working around them.
- Install drain piping to proper drainage. Improper drain piping may result in water leakage and property damage.
- Insulate piping to prevent condensation.
- Be careful when transporting the product.
- Do not turn off the power supply immediately after stopping operation. Always wait for at least 5 minutes before turning off the power supply. Otherwise, water leakage may occur.
- Do not use a charging cylinder. Using a charging cylinder may cause the refrigerant to deteriorate.
- Refrigerant R410A in the system must be kept clean, dry, and tight.
 - (a) Clean and Dry -- Foreign materials (including mineral oils such as SUNISO oil or moisture) should be prevented from getting into the system.
 - (b) Tight -- R410A does not contain any chlorine, does not destroy the ozone layer, and does not reduce the earth's protection against harmful ultraviolet radiation. R410A can contribute to the greenhouse effect if it is released. Therefore take proper measures to check for the tightness of the refrigerant piping installation. Read the chapter REFRIGERANT PIPING WORK and follow the procedures.

- Since R410A is a blend, the required additional refrigerant must be charged in its liquid state. If the refrigerant is charged in a gaseous state, its composition can change and the system will not work properly.
- The indoor unit is for R410A. See the catalog for indoor models that can be connected. Normal operation is not possible when connected to other units.
- Handheld remote controller transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types). Install the indoor unit far away from fluorescent lamps as much as possible.
- Indoor units are for indoor installation only. Outdoor units can be installed either outdoors or indoors.
- Do not install the air conditioner in the following locations:
 - (a) Where a mineral oil mist or oil spray or vapor is produced, for example, in a kitchen. Plastic parts may deteriorate and fall off or result in water leakage.
 - (b) Where corrosive gas, such as sulfurous acid gas, is produced. Corroding copper pipes or soldered parts may result in refrigerant leakage.
 - (c) Near machinery emitting electromagnetic waves. Electromagnetic waves may disturb the operation of the control system and cause the unit to malfunction.
 - (d) Where flammable gas may leak, where there is carbon fiber, or ignitable dust suspension in the air, or where volatile flammables such as thinner or gasoline are handled. Operating the unit in such conditions can cause a fire.

⚠ NOTE

- Install the power supply and control wires for the indoor and outdoor units at least 3.5 feet (1.0 m) away from televisions or radios to prevent image interference or noise. Depending on the radio waves, a distance of 3.5 feet (1.0 m) may not be sufficient to eliminate the noise.
 - Dismantling the unit, treatment of the refrigerant, oil and additional parts must be done in accordance with the relevant local, state, and national regulations.
 - Do not use the following tools that are used with conventional refrigerants: gauge manifold, charge hose, gas leak detector, reverse flow check valve, refrigerant charge base, vacuum gauge, or refrigerant recovery equipment.
 - If the conventional refrigerant and refrigerator oil are mixed in R410A, the refrigerant may deteriorate.
 - This air conditioner is an appliance that should not be accessible to the general public.
 - As design pressure is 478 psi (3.3 MPa), the wall thickness of field-installed pipes should be selected in accordance with the relevant local, state, and national regulations.
-

2. BEFORE INSTALLATION

- When unpacking the unit or moving the unit after unpacked, be sure to lift it by the four hanger brackets. Avoid putting any pressure on other parts—horizontal flaps, the refrigerant piping, drain piping, and other resin parts.
- Be sure to remove a cushion (corrugated paper) located between the heat exchanger and the right air filter.
- Be sure to check the type of R410A refrigerant to be used before installing the unit. (Using an incorrect refrigerant will prevent normal operation of the unit.)
- The accessories needed for installation must be retained in your custody until the installation work is completed. Do not discard them!
- Decide upon a line of transport.
- Leave the unit inside its packaging while moving, until reaching the installation site. Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, to avoid damage or scratches to the unit.
- For the installation of an outdoor unit, refer to the installation manual attached to the outdoor unit.
- When using the wireless remote controller, refer to the installation manual attached to the wireless remote controller.
- Do not install or operate the unit in rooms mentioned below.
 - **Laden with mineral oil, or filled with oil vapor or spray like in kitchens. (Plastic parts may deteriorate which could eventually cause the unit to fall out of place, or could lead to leaks.)**
 - **Where corrosive gas like sulfurous gas exists. (Copper tubing and brazed spots may corrode which could eventually lead to refrigerant leaks.)**
 - **Where exposed to combustible gases and where volatile flammable gas like thinner or gasoline is used. (Gas in the vicinity of the unit could ignite.)**
 - **Where machines can generate electromagnetic waves. (Control system may malfunction.)**
 - **Where the air contains high levels of salt such as that near the ocean and where voltage fluctuates greatly such as that in factories, vehicles or vessels.**
- This unit, both indoor and outdoor, is suitable for installation in a commercial and light industrial environment. If installed as a household appliance it could cause electromagnetic interference.

WARNING

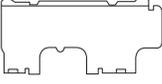
- Entrust installation to the place of purchase or an authorized serviceman. Improper installation could lead to leaks and, in worse cases, electric shock or fire.
- Use of unspecified parts could lead to the unit falling, leaks and, in worse cases, electric shock or fire.

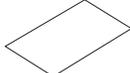
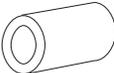
NOTE

- Be sure to read this manual before installing the indoor unit.

2-1 ACCESSORIES

Check if the following accessories are attached to the indoor unit.

Name	(1) Installation panel	(2) Attachment screw for the installation panel
Quantity	1 pc.	9 pcs.
Shape		 M4 × 25L

Name	(3) Paper pattern for installation	(4) Insulating tape	(5) Clamp
Quantity	1 pc.	1 pc.	1 large 4 small
Shape			

Name	(6) Securing screw	(7) Insulating tube	(Other) • Operation manual • Installation manual • Warranty card
Quantity	2 pcs.	1 long 1 short	
Shape	 M4 × 12L		

2-2 OPTIONAL ACCESSORIES

Remote controller	Model
Wired type	BRC1E73
Wireless type	BRC7E818

FOR THE FOLLOWING ITEMS, TAKE SPECIAL CARE DURING CONSTRUCTION AND CHECK AFTER INSTALLATION IS FINISHED.

(1) Items to be checked after completion of work

Items to be checked	If not properly done, what is likely to occur	Check
Are the indoor and outdoor units fixed firmly?	The units may drop, vibrate or make noise.	
Is the gas leak test finished?	It may result in insufficient cooling or heating.	
Is the unit fully insulated?	Condensate water may drip.	
Does drainage flow smoothly?	Condensate water may drip.	
Does the power supply voltage correspond to that shown on the name plate?	The unit may malfunction or the components may burn out.	
Are wiring and piping correct?	The unit may malfunction or the components may burn out.	
Is the unit safely grounded?	It may be dangerous at electric leakage.	
Is wiring size according to specifications?	The unit may malfunction or the components burn out.	
Is something blocking the air outlet or inlet of either the indoor or outdoor unit?	It may result in insufficient cooling.	
Are refrigerant piping length and additional refrigerant charge noted down?	The refrigerant charge in the system is not clear.	
Did you check that no wiring connection screws were loose?	Electric shock or fire.	

Also review the "SAFETY CONSIDERATIONS"

(2) Items to be checked at delivery

Items to be checked	Check
Did you explain how to operate the unit while showing the operation manual to your customer?	
Did you give the operation manual over to your customer?	

2-3 NOTE TO THE INSTALLER

Be sure to instruct customers how to properly operate the unit (especially cleaning filters, operating different functions, and adjusting the temperature) by having them carry out operations themselves while looking at the manual.

3. SELECTING INSTALLATION SITE

(1) Select an installation site where the following conditions are fulfilled and has the customer's approval.

- Where there will be no possible dripping of water from the refrigerant pipe, drain pipe, etc., in the area between the unit and ceiling, and in the attic just above the unit.

- Where the wall is strong enough to bear the indoor unit weight.
- Where sufficient clearance for installation and maintenance can be ensured.

(Refer to Fig. 1 and Fig. 2)

- Where optimum air distribution can be ensured.
- Where nothing blocks the air passage.
- Where condensate can be properly drained.
- Where the wall is not significantly tilted.
- Where piping between indoor and outdoor unit is possible within the allowable limit.
(Refer to the installation manual of the outdoor unit.)
- Install the indoor and outdoor units power supply wiring and connecting wires at least 3.5 ft. (1 m) away from televisions or radios in order to prevent image interference or noise.
(Depending on the radio waves, a distance of 3.5 ft. (1 m) may not be sufficient enough to eliminate the noise.)
- Where the cool (warm) air reaches all across the room.

[Space required for installation [in. (mm)]]

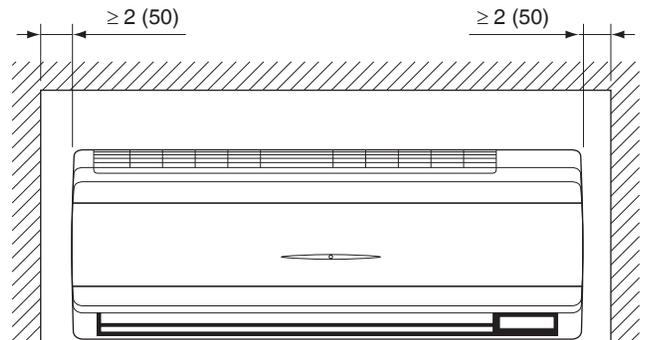


Fig. 1

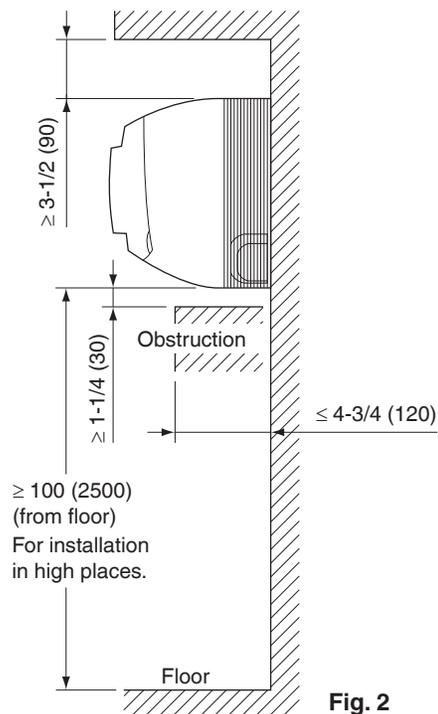


Fig. 2

- (2) Consider whether the place where the unit will be installed can support the full weight of the unit, and reinforce it with boards and beams, etc. if needed before proceeding with the installation. Also, reinforce the area to prevent vibration and noise before installing.
(The installation pitch can be found on the paper pattern for installation (3), so refer to it when considering the necessity for reinforcing the location.)
- (3) The indoor unit may not be directly installed on the wall. Use the attached installation panel (1) before installing the unit.

⚠ DANGER

- Do not install unit in an area where flammable materials are present due to risk of explosion resulting in serious injury or death.

⚠ WARNING

- If the supporting structural members are not strong enough to take the unit's weight, the unit could fall out of place and cause serious injury.

4. INDOOR UNIT INSTALLATION

- Use only accessories and parts which are of the designated specification when installing.

⚠ CAUTION

- Install so that the unit does not tilt to either side or forward.
- Do not hold the unit by the horizontal flaps when lifting it. (This may damage the horizontal flaps.)

(1) Open the piping through-hole.

- The refrigerant pipe and drain pipe can be routed out in one of 5 directions: left, bottom-left, back-left, bottom-right, and back-right. (Refer to Fig. 3)
- Using the paper pattern for installation (3), choose where to route the piping out of the unit, and drill a through-hole ($\phi 3\text{-}1/8"$ ($\phi 80$)) in the wall. Open the hole so that there is a downward slope for the drain piping. (See "6. DRAIN PIPING WORK")

(2) Attach the installation panel (1) to the wall.

- Check the location for the hole using the included paper pattern for installation (3).
 - Choose a location so that there is at least a 3-5/8" (90 mm) gap between the ceiling and the main unit.
- Temporarily attach the installation panel (1) at the temporary-securing position on the paper pattern for installation (3) and use a level to make sure the drain hose is either level or tilted slightly downward.

- Secure the installation panel (1) to the wall using either screws or bolts.
 - If using the attachment screws for the installation panel (2), attach using at least 4 screws on either side, for a total of 9 screws of the recommended installation cleat position on the included paper pattern for installation (3).
 - If using bolts, attach using a M8 - M10 bolt or equivalent (for a total of 2 bolts) on either side.
 - If dealing with concrete, use commercially available foundation bolts (M8 - M10 or equivalent).

(3) If using the left, bottom-left, or bottom-right positions for the piping, cut out the through-hole for the piping in the front grille. (Refer to Fig. 4)

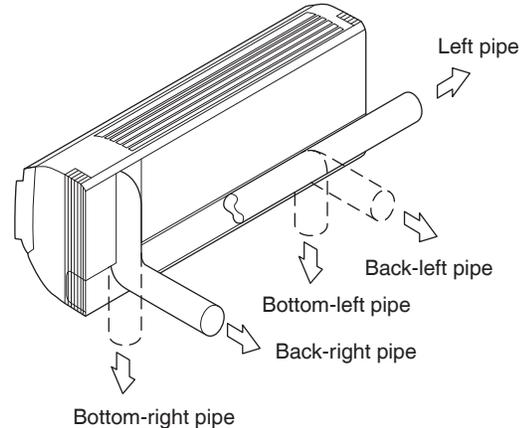


Fig. 3

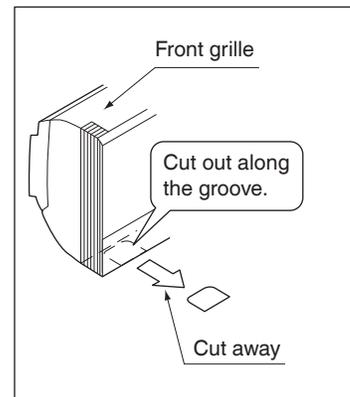


Fig. 4

(4) Remove the front panel and the control box cover. (Refer to Fig. 5)

< How to remove the front panel and control box cover >

- (1) Open the front panel by lifting from the bottom to the point where it stops.
- (2) Push the panel spacers on either side of the front panel towards the center of the main unit and remove.
(You can also remove it by sliding the front panel either to the left or right and pulling it forward.)
- (3) Remove the screw from the control box cover and pull the tab forward.

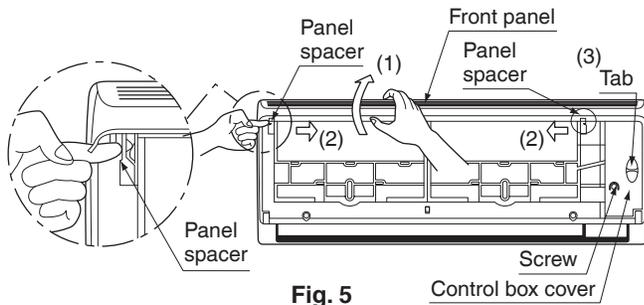


Fig. 5

(5) Point the pipe in the direction it will be routed out of the unit.

For bottom-right and back-right piping (Refer to Fig. 6)

- Wrap the drain hose and the refrigerant piping together with the insulating tape (4) so that the drain hose is below the refrigerant piping.

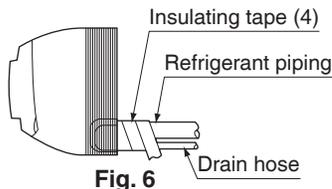


Fig. 6

For left, bottom-left, and back-left piping

- Remove the front grille. (Refer to Fig. 7)

< How to remove the front grille >

Remove the front grille as described below when securing the indoor unit with screws or when attaching Optional Accessories (wireless remote controller, adapter PC board, etc.).

- (1) Remove the front panel.
- (2) Remove the screws (3 places) securing the front grille.
- (3) Remove the tabs (3 places) securing the front grille by pushing them in the direction of the arrows.
- (4) Making sure not to catch the horizontal flaps, remove the front grille by pulling in the direction of the arrow.

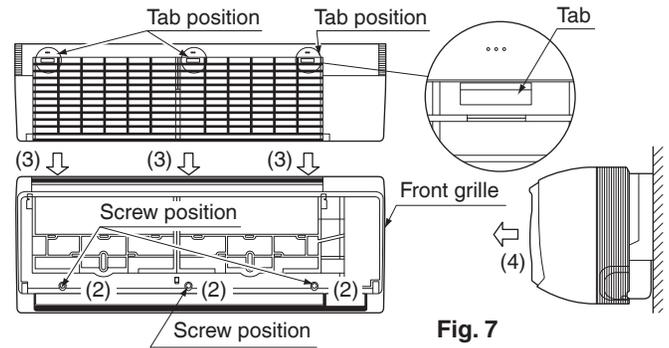


Fig. 7

- Remove the drain plug, the insulating tube, and the drain hose from the drain pan and replace.

(Refer to Fig. 8)

- Connect the field refrigerant piping ahead of time, matching it to the liquid pipe and gas pipe marks engraved on the installation panel (accessory) (1).

< Replacing the drain hose and drain plug >

- (1) Remove the drain plug and insulating tube.
- (2) Remove the drain hose and replace onto the left side.
- (3) Replace the drain plug and the insulating tube onto the right side.

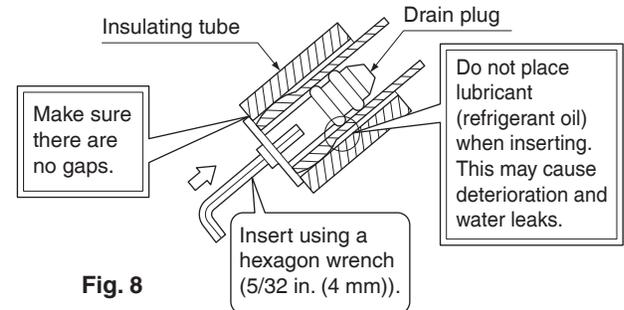


Fig. 8

(6) Hook the indoor unit onto the installation panel.

(Refer to Fig. 9)

- Placing buffering material between the wall and the indoor unit at this time will make work easier.

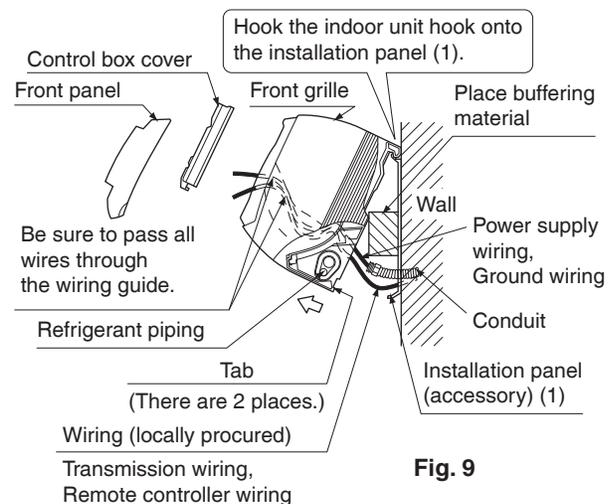
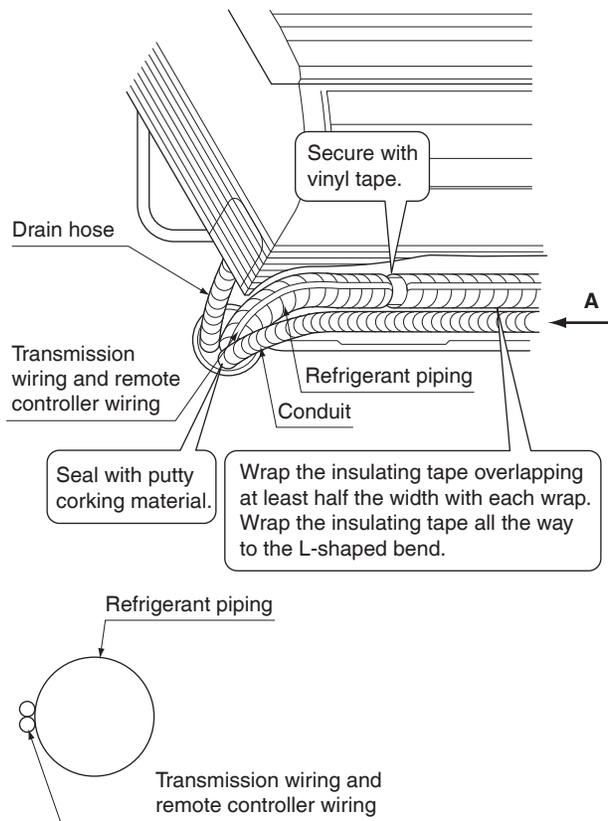


Fig. 9

For bottom-right and back-right piping

- Pass the drain hose and the refrigerant piping to the wall.

- (7) Pass power supply wiring from conduit and control wiring through the wiring guide in the back of the unit, to the front of the unit. (For connecting the power supply wiring to the unit, see “8-1 HOW TO CONNECT WIRINGS”)
- (8) Connect the piping. (See “5. REFRIGERANT PIPING WORK” and Fig. 10)



A arrow view

Fig. 10

- Seal the piping through-hole with putty corking material.

- (9) Push on both bottom edges of the indoor unit using both hands and hook the tab on the back of the indoor unit onto the installation panel (1). (Refer to Fig. 9)
- At this time remove the buffering material placed in step (6).
 - Make sure power supply wiring, transmission wiring, ground wiring and remote controller wiring are not caught inside the indoor unit.

■ When screwing in the indoor unit

- Remove the front grille. (Refer to Fig. 7)
- Secure the indoor unit to the installation panel (1) with the securing screws (6). (Refer to Fig. 11)

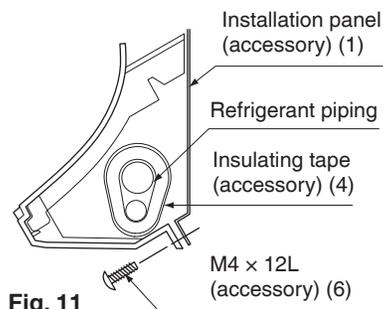


Fig. 11

5. REFRIGERANT PIPING WORK

⟨For refrigerant piping of outdoor unit, see the installation manual attached to the outdoor unit.⟩

⟨Execute thermal insulation work completely on both sides of the gas piping and the liquid piping. Otherwise, a water leak can occur.⟩

⟨Otherwise, a water leak can occur.⟩

(When using a heat pump, the temperature of the gas piping can reach up to approximately 250°F (120°C), so use insulation which is sufficiently resistant.)

⟨Also, in cases where the temperature and humidity of the refrigerant piping sections might exceed 86°F (30°C) or RH80 %, reinforce thermal insulation (13/16 (20 mm) or thicker) for the refrigerant piping. Condensation may form on the surface of the insulating material.⟩

⟨Before refrigerant piping work, check which type of refrigerant is used. Proper operation is not possible if the type of refrigerant is not the same.⟩

⚠ DANGER

- Refrigerant gas may produce toxic gas if it comes in contact with fire such as from a fan, heater, stove or cooking device. Exposure to this gas could result in severe injury or death.

⚠ NOTE

- Use a pipe cutter and a flaring tool suitable for the type of refrigerant.
- To prevent dust, moisture or other foreign matter from infiltrating the tube, either pinch the end or cover it with tape.
- Do not allow anything other than the designated refrigerant to get mixed into the refrigerant circuit, such as air, etc.
- If refrigerant gas leaks while working on the unit, ventilate the room thoroughly right away.

- The refrigerant is pre-charged in the outdoor unit.
- Use copper alloy seamless pipes.
- Be sure to use both a spanner and a torque wrench together, when connecting or disconnecting pipes to/from the unit. (Refer to Fig. 12)
- Refer to "Table 1" for the dimensions of flare.
- When connecting the flare nut, coat the flared inner surface only with ester oil or ether oil, rotate three or four times first, then screw in. (Refer to Fig. 13)

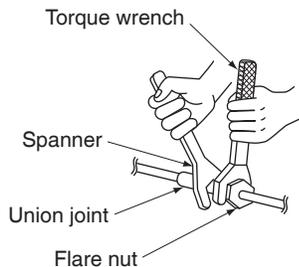


Fig. 12

Coat the flared inner surface only with ester oil or ether oil

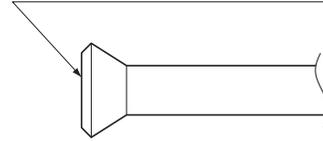


Fig. 13

⚠ CAUTION

- Use the flare nut included with the unit.

- Refer to Table 1 for the corresponding tightening torque.

Table 1

Piping size [in. (mm)]	Tightening torque [lbf-ft. (N-m)]	Dimension for processing flare A [in. (mm)]	Flare shape [in. (mm)]
φ 3/8 (9.5)	24.1 – 29.4 (36.3±3.6)	0.504 – 0.520 (13.0±0.2)	
φ 5/8 (15.9)	45.6 – 55.6 (68.6±6.8)	0.760 – 0.776 (19.5±0.2)	

⚠ CAUTION

- Do not excessively tighten the flare nut.** Doing so will break the flare nut and refrigerant leakage may occur.
- Make sure that all parts around the flare are free of oil.** The drain pan and the resin part may be deteriorated if oil is attached.

⚠ CAUTION

- Do not use flux when brazing refrigerant piping. Therefore, use the phosphor copper brazing filter metal (BCuP) which does not require flux. (Flux has an extremely negative effect on refrigerant piping systems. For instance, if chlorine based flux is used, it will cause pipe corrosion. If the flux contains fluorine, it will damage the refrigerant oil.)

- When brazing the refrigerant piping, carry out nitrogen substitution (inserting nitrogen into the refrigerant piping to substitute air with nitrogen (refer to NOTE below)) and then begin brazing. Once this is done, connect the indoor unit with a flare connection.

! DANGER

- Use of oxygen may cause an explosion resulting in serious injury or death. Only use nitrogen gas.

! NOTE

- Set nitrogen pressure to about 2.9 psi (0.02 Mpa) with a pressure-reducing valve if brazing while inserting nitrogen into the piping. (Refer to Fig. 14)

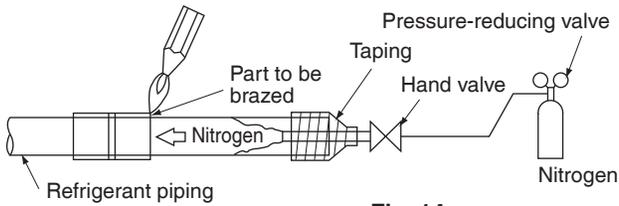


Fig. 14

- After checking for gas leaks, be sure to insulate the pipe connections using the piping insulating tube and insulating tape (4). The insulating tape (4) should be wrapped from the L-shaped bend all the way to the end inside the unit. (Refer to Fig. 15)

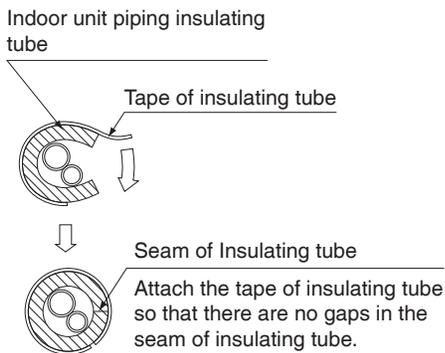
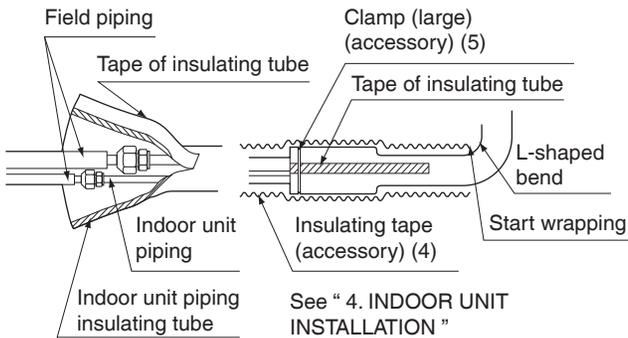


Fig. 15

! CAUTION

- Be sure to insulate the field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensate or burns if touched.

6. DRAIN PIPING WORK

(1) Install the drain piping. (Refer to Fig. 16)

- The drain pipe should be short with a downward slope and should prevent air pockets from forming.
- Watch out for the points in Fig. 16 when performing drain work.

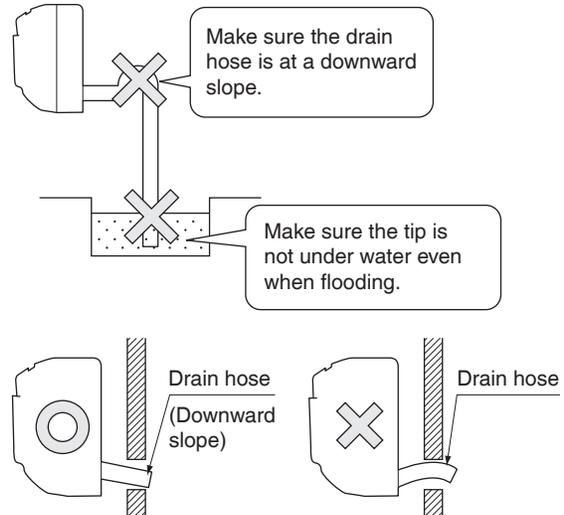


Fig. 16

- When extending the drain hose, use a commercially available drain hose for extension, and be sure to insulate the extended section of the drain hose which is indoors. (Refer to Fig. 17)

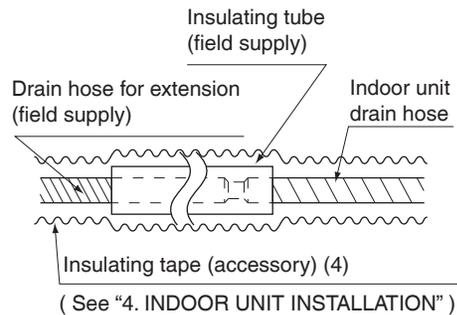


Fig. 17

- Make sure the diameter of the drain hose for extension is the same as the indoor unit drain hose (hard vinyl chloride, I.D. 1/2 in. (13 mm)) or larger.
- In case of converging multiple drain hoses, install them referring to Fig. 18.
- Select diameter of drain hose which adapts to the capacity of the unit connected.

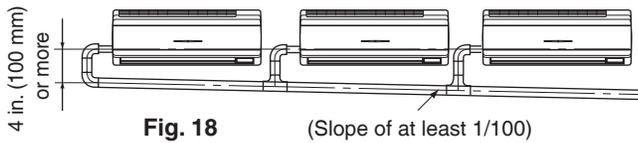


Fig. 18 (Slope of at least 1/100)

(2) Make sure the drain piping works properly.

- After drain piping work is complete, perform a drainage check by opening the front panel, **removing the air filter**, pouring water into the drain pan, and making sure water flows smoothly out of the drain hose. (Refer to Fig. 19)

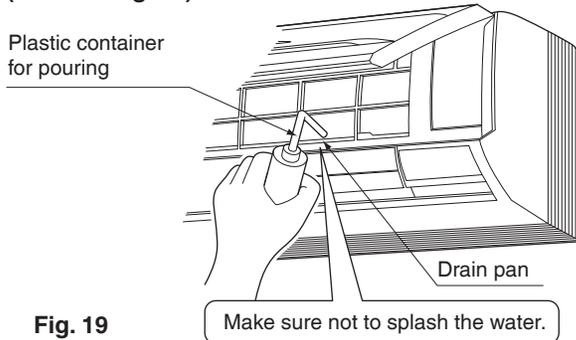


Fig. 19

CAUTION

- Drain piping connections
Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain piping and corrode the heat exchanger.
Keep in mind that it will block the drain pipe and cause water to collect.

7. ELECTRIC WIRING WORK

7-1 GENERAL INSTRUCTIONS

- All field supplied parts and materials and electric works must conform to local codes.
- Use copper wire only.
- For electric wiring work, refer to also "WIRING DIAGRAM" attached to the unit.
- For details of remote controller wiring, refer to the installation manual attached to the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down power supply to the entire system must be installed.
- Refer to the installation manual attached to the outdoor unit for the size of power supply wiring connected to the outdoor unit, the capacity of the circuit breaker and switch, and wiring instructions.
- Be sure to ground the air conditioner.

DANGER

- Do not ground units to water pipes, telephone wires or lightning rods because incomplete grounding could cause a severe shock hazard resulting in severe injury or death, and to gas pipes because a gas leak could result in an explosion which could lead to severe injury or death.

7-2 ELECTRICAL CHARACTERISTICS

Units				Power supply		Fan motor	
Model	Hz	Volts	Voltage range	MCA	MOP	W	FLA
FAQ18TAVJU	60	208/230	Max. 253	0.5	15	43	0.4
FAQ24TAVJU			Min. 187	0.6	15	43	0.5

MCA: Minimum Circuit Ampacity (A)

MOP: Maximum Overcurrent Protective Device (A)

W: Fan Motor Rated Output (W)

FLA: Full Load Ampere (A)

7-3 SPECIFICATIONS FOR FIELD SUPPLIED FUSES AND WIRE

Model	Power supply wiring		Remote controller wiring Transmission wiring	
	Fuse 	Size	Wire	Size
FAQ18TAVJU	15A	Wiring size and length must comply with local codes.	2-conductor, stranded non-shielded copper cable PVC/vinyl jacket (NOTE)	AWG18-16 (0.75-1.25 mm ²)
FAQ24TAVJU				

Allowable lengths of transmission wiring and remote controller wiring are as follows.

- (1) Outdoor unit – Indoor unit:
Max. 3280 ft (1,000 m)
- (2) Indoor unit – Remote controller:
Max. 1640 ft (500 m)

NOTE

- Vinyl cord with sheath or cable (Insulated thickness : 1/16 in. (1 mm) or more)

8. WIRING EXAMPLE AND HOW TO SET THE REMOTE CONTROLLER

8-1 HOW TO CONNECT WIRINGS

- Conduit for power supply wiring
Unscrew and remove the conduit mounting plate from the control box. **(Refer to Fig. 20)**
Fix a conduit to the plate with a lock nut and reattach them at original position.

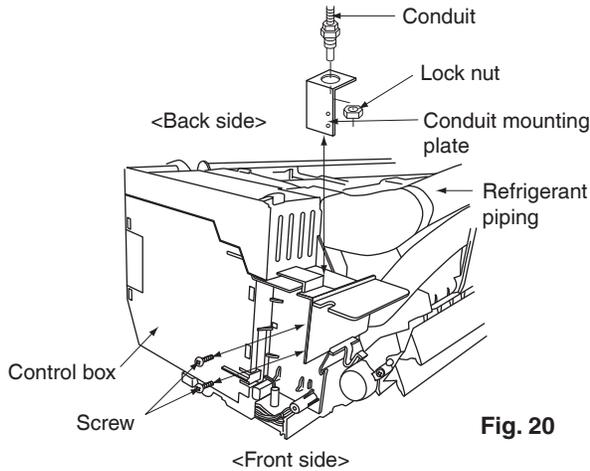


Fig. 20

- Power supply wiring and ground wiring
Unscrew and remove the control box cover. Thread the power supply wiring and ground wiring through the included insulating tube (short) (7) and secure them with the included clamp (small) (5). **(Refer to Fig. 21)**
Connect the power supply wiring and ground wiring to the power supply terminal block (3P). When doing this, firmly secure using the included clamp (small) (5) according to the figure. **(Refer to Fig. 22)**
- Transmission wiring and remote controller wiring
Unscrew and remove the control box cover. Thread the remote controller wiring and transmission wiring through the included insulating tube (long) (7) and secure them with the included clamp (small) (5). **(Refer to Fig. 21)**
Connect the remote controller wiring and the transmission wiring to the terminal block (6P). When doing this, tie the remote controller wiring and the transmission wiring using the included clamp (small) (5) and then firmly secure using the included clamp (small) (5) according to the figure. **(Refer to Fig. 22)**

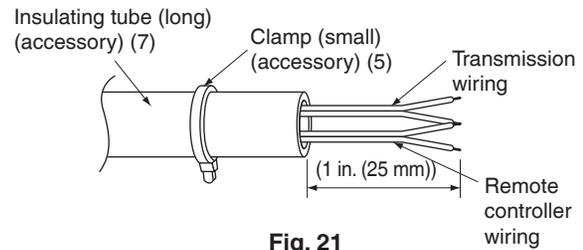
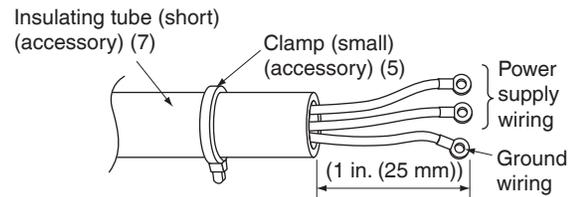


Fig. 21

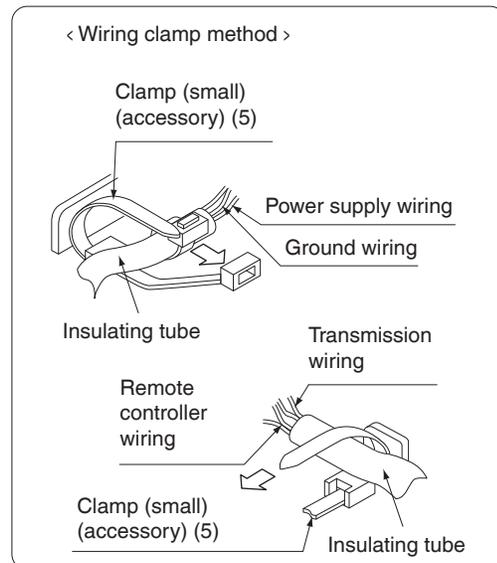
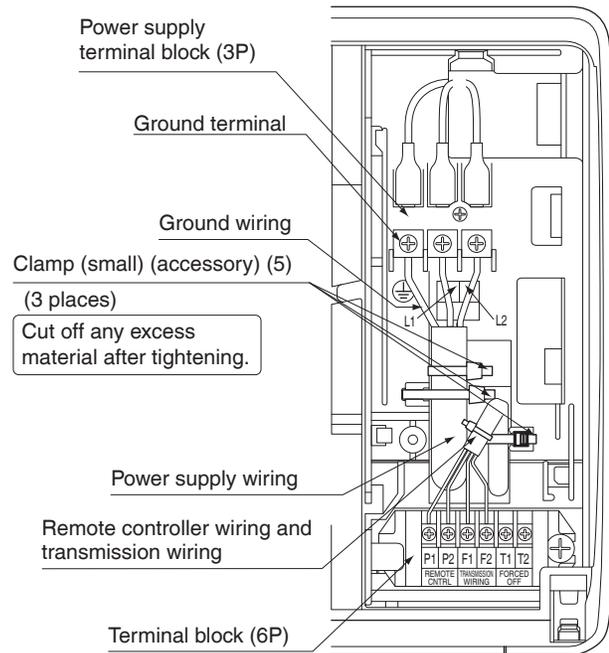


Fig. 22

WARNING

- Never connect power supply wiring to the terminal block for remote controller wiring as this could damage the entire system.
- Use only specified wire and connect wires to the terminal tightly. Be careful wires do not place external stress on terminals. Keep wires in neat order so as not to obstruct other equipment. Make sure that the control box cover fits tightly. Incomplete connections could result in overheating and, in worse case, result in electric shock or fire.
- To avoid a short circuit in the control box, be sure to apply sealing material or putty (not included) to the wiring hole to prevent the infiltration of water as well as insects or other small creatures. Otherwise a short-circuit may occur inside the control box.

CAUTION

- When clamping the wirings, be sure no tension is applied to the wire connections by using the included clamp. Also, when wiring, make sure the cover on the control box fits snugly by arranging the wirings neatly and attaching the control box cover firmly. When attaching the control box cover, make sure no wirings get caught in the edges. Pass wiring through holes to prevent damage to them.
- Make sure the remote controller wiring and transmission wiring between the units, and other electrical wiring do not pass through the same locations outside the unit, separating them by at least 2 in. (50 mm), otherwise electrical noise (external static) could cause incorrect operation or breakage.

[PRECAUTIONS]

1. Use round crimp-style terminals for connecting wires to the power supply terminal block.
(Refer to Fig. 23)
If unavailable, observe the following points when wiring.
 - Do not connect wires of different gauge to the same power supply terminal.
(Looseness in the connection may cause overheating.)
 - Use the specified electric wire. Connect the wire securely to the terminal. Lock the wire down without applying excessive force to the terminal.

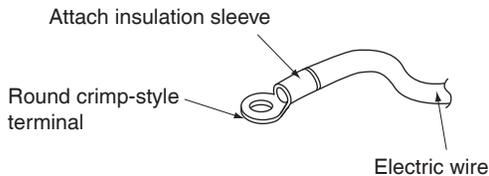


Fig. 23

2. Tightening torque for the terminal screws.

- Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
- If the terminal screws are tightened too hard, screws might be damaged.
- Refer to the table below for the tightening torque of the terminal screws.

Terminal	Size	Tightening torque [lb-ft. (N·m)]
Remote controller, Transmission wiring and Forced off terminal block (6P)	M3.5	0.59 – 0.71 (0.80 – 0.96)
Power supply and Ground terminal block (3P)	M4	0.89 – 1.03 (1.2 – 1.4)

3. Do not connect wires of different gauge to the same ground terminal. Looseness in the connection may lessen protection.
4. Keep transmission wiring at least 2 in. (50 mm) away from power supply wiring. The equipment may malfunction if subjected to electrical (external) noise.
5. For remote controller wiring, refer to the installation manual attached to the remote controller.

8-2 WIRING EXAMPLE

COMPLETE SYSTEM EXAMPLE

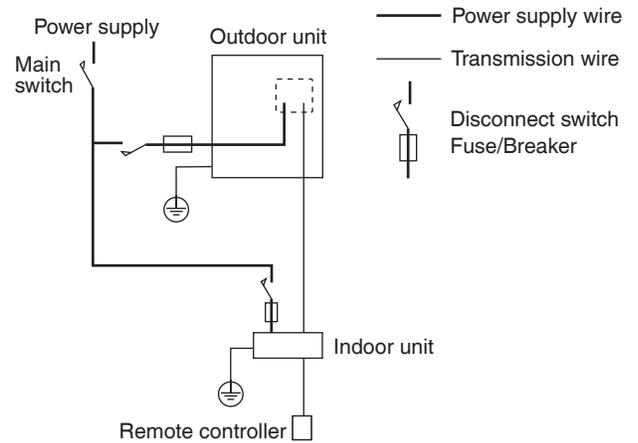


Fig. 24

1. When using 1 remote controller (Normal operation)

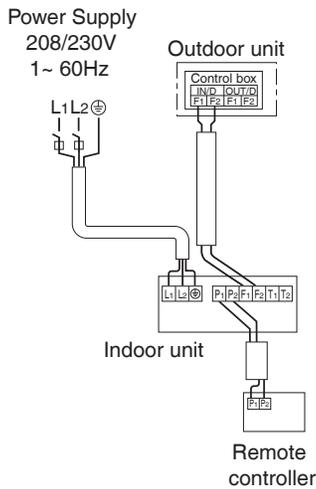


Fig. 25

2. When using 2 remote controllers

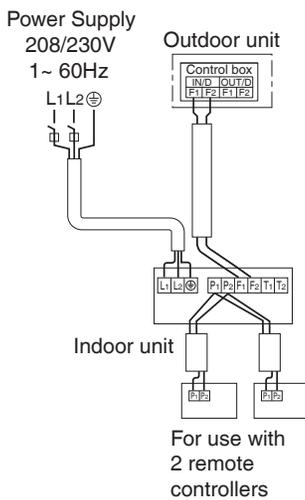


Fig. 26

[PRECAUTIONS]

1. Do not ground the equipment on gas pipes, water pipes or lightning rods, or crossground with telephones. Improper grounding could result in electric shock.
2. The remote controller wiring (P₁ and P₂) and transmission wiring (F₁ and F₂) have no polarity.

8-3 CONTROL BY 2 REMOTE CONTROLLERS (Controlling 1 indoor unit by 2 remote controllers)

- When using 2 remote controllers, one must be set to "MAIN" and the other to "SUB".

⟨Main/sub changeover⟩

- Refer to the installation manual supplied with the remote controller.

⟨Wiring method⟩

- (1) Remove the control box cover.
- (2) Add the remote controller 2 (SUB) to the terminal block for remote controller (P₁, P₂) in the control box. (There is no polarity.)

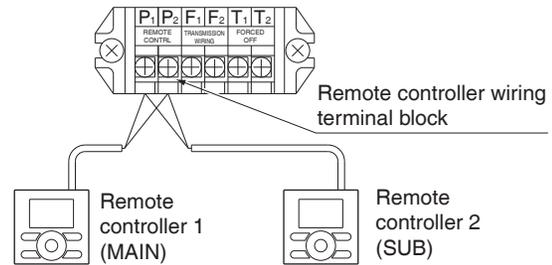


Fig. 27

8-4 REMOTE CONTROL (FORCED OFF AND ON/OFF OPERATION)

- Connect input lines from the outside to the terminals T₁ and T₂ on the terminal block (6P) for remote controller to achieve remote control.
- See "9. FIELD SETTING" for details on operation.

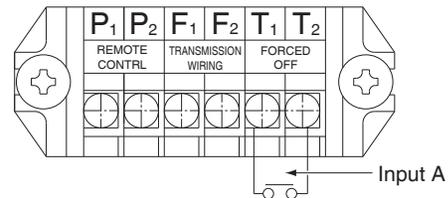


Fig. 28

Wire specification	Sheathed vinyl cord or 2 core cable
Gauge	AWG18 – 16 (0.75-1.25 mm ²)
Length	Max. 328 ft. (100 m)
External terminal	Contact that can ensure the minimum applicable load of 15 V DC, 1 mA.

8-5 CENTRALIZED CONTROL

- For centralized control, it is necessary to designate the group No. For details, refer to the manual of each optional controllers for centralized control.

9. FIELD SETTING

⟨Field settings may have to be performed using the remote controller, depending on the type of installation.⟩

- (1) Make sure the control box covers are closed on the indoor and outdoor units.
- (2) Depending on the type of installation, make the field settings from the remote controller after the power is turned on, following the installation manual attached to the remote controller.
 - The settings can select “Mode No.,” “FIRST CODE NO.” and “SECOND CODE NO.”.
 - The “Field Settings” included with the remote controller lists the order of the settings and method of operation.

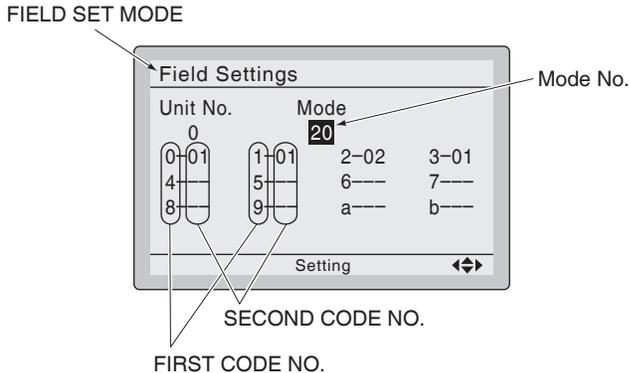


Fig. 29

- Lastly, make sure the customer keeps the installation manual, along with the operating manual, in a safe place.

⟨When using wireless remote controllers⟩

- When using wireless remote controllers, wireless remote controller address setting is necessary. Refer to the installation manual attached to the wireless remote controller for setting instructions.

9-1 SETTING FILTER SIGN

- Remote controllers are equipped with display air filter signs to display the time to clean air filters.
- Change the SECOND CODE NO. according to Table 2 depending on the amount of dirt or dust in the room. (SECOND CODE NO. is factory set to “01” for air filter contamination-light)

Table 2

Setting	Spacing time of display air filter sign	Mode No.	FIRST CODE NO.	SECOND CODE NO.
Air filter contamination-light	Approx. 200 hours	20	0	01
Air filter contamination-heavy	Approx. 100 hours			02

9-2 SETTING AIRFLOW RATE INCREASE MODE

- It is possible to raise set airflow (HIGH and LOW) from the field. Change the SECOND CODE NO. as shown in Table 3 to suit your needs. (SECOND CODE NO. is factory set to “01” for Standard.)

Table 3

Setting	Mode No.	FIRST CODE NO.	SECOND CODE NO.
Standard	23	0	01
A little increase			02
Increase			02

9-3 REMOTE CONTROL SETTING

- Forced off and ON/OFF operation should be selected by selecting the SECOND CODE NO. as shown in Table 4.

Table 4

External ON/OFF input	Mode No.	FIRST CODE NO.	SECOND CODE NO.
Forced off	22	1	01*
ON/OFF operation			02

* Factory set

- Input A of forced off and ON/OFF operation work as shown in Table 5.

Table 5

Forced off	ON/OFF operation
Input A “on” to force a stop (remote controller reception prohibited)	Unit operated by changing input A from “off” to “on”
Input A “off” to allow remote controller	Unit stopped by changing input A from “on” to “off”

10. TEST OPERATION

- The operation lamp of the remote controller will flash when a malfunction occurs. Check the malfunction code on the display to identify the point of trouble. An explanation of malfunction codes and the corresponding trouble is provided in “Service precautions” of the outdoor unit. If the display shows any of the following, there is a possibility that the wiring was done incorrectly or that the power is not on, so check again.

Remote controller display	Contents
“A8”	<ul style="list-style-type: none"> Error in power supply voltage to indoor unit.
“U3”	<ul style="list-style-type: none"> Test operation of outdoor unit has not been finished.
“  ”	<ul style="list-style-type: none"> There is a short circuit at the FORCED OFF terminals (T₁, T₂)
“U4” “UH”	<ul style="list-style-type: none"> The power on the outdoor unit is off. The outdoor unit has not been wired for power supply. Incorrect wiring for the transmission wiring and / or FORCED OFF wiring.
None	<ul style="list-style-type: none"> The power on the indoor unit is off. The indoor unit has not been wired for power supply. Incorrect wiring for the remote controller wiring, the transmission wiring and / or the FORCED OFF wiring.

— CAUTION —

- After the test operation is completed, check the items mentioned in **2. BEFORE INSTALLATION (2) Items to be checked at delivery** on page 4.
If the interior finish work is not completed when the test operation is finished, for protection of the air conditioner, ask the customer not to operate the air conditioner until the interior finish work is completed.
If the air conditioner is operated, the inside of the indoor unit may be polluted by substances generated from the coating and adhesives used for the interior finish work and cause water splash and leakage.

— To the operator carrying out test operation —

- After the test operation is completed, before delivering the air conditioner to the customer, confirm that the control box cover, the air filter and suction grille are attached. In addition, explain the power supply status (power supply ON/OFF) to the customer.

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