

# SPLIT TYPE ROOM AIR CONDITIONER INSTALLATION INSTRUCTION SHEET

(PART NO. 9373896012)  
For authorized service personnel only.

**WARNING** This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.  
**CAUTION** This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.

- For the room air conditioner to operate satisfactorily, install it as outlined in this installation instruction sheet.
- Connect the indoor unit and outdoor unit with the room air conditioner piping and cords available standards parts. This installation instruction sheet describes the correct connections using the installation set available from our standard parts.
- Installation work must be performed in accordance with national wiring standards by authorized personnel only.
- If refrigerant leaks while work is being carried out, ventilate the area. If the refrigerant comes in contact with a flame, it produces a toxic gas.
- Do not use an extension cord.
- Do not turn on the power until all installation work is complete.

- Be careful not to scratch the room air conditioner when handling it.
- After installation, explain correct operation to the customer, using the operating manual.
- Let the customer keep this installation instruction sheet because it is used when the air conditioner is serviced or moved.

## SELECTING THE MOUNTING POSITION

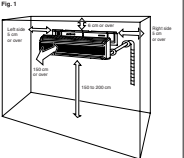
**WARNING** Install at a place that can withstand the weight of the indoor and outdoor units and install positively so that the units will not tip or fall.

**CAUTION** Do not install where there is the danger of condenser gas leakage.  
Do not install near heat sources.

Do not install where children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.

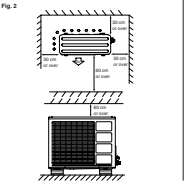
## 1. INDOOR UNIT

- Install the indoor unit level on a strong wall which is not subject to vibration.
- The air conditioner should be installed in a place where it will be able to take full advantage of the room.
- Do not install the unit where there is a danger of condenser gas leakage.
- Do not install the unit where there is a danger of condenser gas leakage.
- Do not install the unit where there is a danger of condenser gas leakage.
- Do not install the unit where there is a danger of condenser gas leakage.



## 2. OUTDOOR UNIT

- If possible, do not install the unit where it will be exposed to direct sunlight. If necessary, install a blind that does not interfere with the air flow.
- Do not install the unit where a strong wind blows or where it is very dusty.
- Do not install the unit where people pass.
- Do not install the unit where there is a danger of condenser gas leakage.
- Do not install the unit where there is a danger of condenser gas leakage.
- Do not install the unit where there is a danger of condenser gas leakage.



## CONNECTION PIPE REQUIREMENT

Dimension	Small	Large	Maximum length	Maximum height (between indoor and outdoor)
Small (58 mm)	1.58 mm (58 in.)	20 m (66 ft.)	30 m (98 ft.)	15 m (49 ft.)
Large (63.5 mm)	1.58 mm (58 in.)	20 m (66 ft.)	30 m (98 ft.)	15 m (49 ft.)

Use 7 mm to 1.2 mm thick pipe.  
Use 1.2 mm to 1.5 mm thick pipe.

Use heat insulation with heat resistance above 0.045 W/m·K.

**CAUTION** Install heat insulation around both the gas and liquid pipes. If there is no air stop groove under the pipes, use heat insulation with heat resistance above 0.045 W/m·K. In addition, if the humidity level at the installation location of the refrigerant piping is expected to exceed 70%, use heat insulation around the refrigerant piping. If the expected humidity level is 70% or higher, use heat insulation that is 15 mm or thicker and if the expected humidity exceeds 80%, use heat insulation that is 25 mm or thicker. If heat insulation is used that is not as thick as specified, condensation may form on the surface of the insulation. In addition, use heat insulation with heat conductivity of 0.045 W/m·K or less (at 20 °C).

## STANDARD ACCESSORIES

The following installation accessories are supplied. Use them as required.

### INDOOR UNIT ACCESSORIES

Name and Shape	Qty	Use
Wall hook bracket	1	For indoor unit installation
Remote control cord	1	Use for air conditioner operation
Battery (optional)	2	For remote control use
Remote control unit with holder	1	Use as remote control unit holder
Drain pipe (3/8" x 1/2")	12	For wall hook bracket installation
Drain pipe (3/8" x 1/2")	2	For remote control unit holder

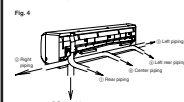
### OUTDOOR UNIT ACCESSORIES

Name and Shape	Qty	Applications
Drain pipe	1	For outdoor unit drain piping
Drain pipe	1	For outdoor unit drain piping
Drain pipe	1	For outdoor unit drain piping

## INSTALLATION PROCEDURE

### 1. INDOOR UNIT INSTALLATION

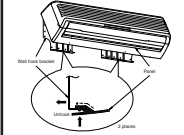
- Install the wall hook bracket at the position shown in Fig. 5. When cutting the wall hole at the center of the installation frame, the hole has a diameter of 120 mm. The hole has a depth of 120 mm. The hole has a diameter of 120 mm. The hole has a depth of 120 mm.
- As the weight of the indoor unit is 15 to 19 kg (33 to 40 lbs.), it should be installed after properly expanding the place where it is installed to be installed. If the place is not strong enough, a plank or girder should be used to make the place sufficiently strong so that the wall can support the weight.



### 1. INSTALLING THE WALL HOOK BRACKET

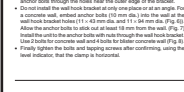
(Removing the wall hook bracket in the following order.)

- Remove the hook inside the panel (Fig. 10).
- Put off the wall hook bracket.



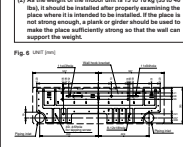
### 2. CUTTING THE HOLE IN THE WALL FOR THE CONNECTING PIPING

If the wall pipe is not used, the case interconnecting the indoor and outdoor units may touch metal and cause electric leakage.



### 2. OUTDOOR UNIT INSTALLATION

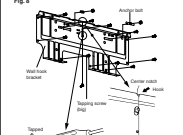
- Install the unit where it will not be filled by more than 5°C.
- When installing the indoor unit where it may be exposed to direct wind, install it securely.



### 3. CONNECTING THE PIPING

The maximum length of this product are shown in Table 1. If the pipe is further longer than this, correct operation can not be guaranteed.

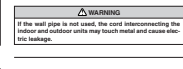
- FLARING
  - Cut the connection pipe to the necessary length with a pipe cutter.
  - Hold the pipe downward so that cutting will enter the pipe and remove the burr.
  - Insert the flare nut into the pipe and flare the pipe with a flaring tool.
- BENDING PIPES
  - When bending the pipe, be careful not to crush it.
  - To prevent bending of the pipe, clamp sharp bends. Bend the pipe with a radius of curvature of 150 mm or more.
  - When bending the pipe, clamp the pipe at the bend. It will become soft if the pipe is bent more than three times in one place.
- CONNECTION
  - Install the outdoor unit and indoor unit piping with the optimal installation set.
  - Connect the outdoor unit and indoor unit piping.
  - After making the center of the surface and tightening the nut hand tight, tighten the nut with the specified tightening torque with a torque wrench.



### 4. VACUUM PROCESS

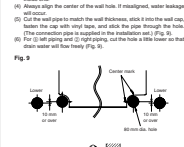
**CAUTION** When moving and installing the room air conditioner, do not mix gas other than the specified refrigerant (R22) inside the refrigerant cycle.

- When moving and installing the room air conditioner, do not mix gas other than the specified refrigerant (R22) inside the refrigerant cycle.
- Charging of additional refrigerant (R22) according to the piping length is unnecessary.



### 4. CUT-OUT FOR PIPING ON FRONT PANEL

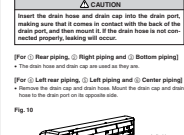
- Right piping
- Bottom piping and
- Left piping



### 5. FORMING THE DRAIN HOSE AND PIPE

**CAUTION** Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.

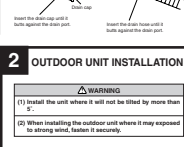
- To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with a radius of curvature of 150 mm or more.
- If the pipe is bent repeatedly at the same place, it will break.



### 6. ATTACH THE DRAIN HOSE

**CAUTION** Insert the drain hose and drain cap into the drain port, making sure that it comes in contact with the back of the drain port, and then mount it. If the drain hose is not connected properly, leaking will occur.

- Remove the drain cap and drain cap.
- Remove the drain cap and drain cap.
- Remove the drain cap and drain cap.



### 7. ELECTRICAL WIRING

Perform ELECTRICAL WIRING before performing the piping.

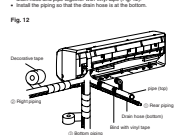
- For left rear piping
- Left piping and
- Center piping



### 8. FORMING THE DRAIN HOSE AND PIPE

**CAUTION** Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.

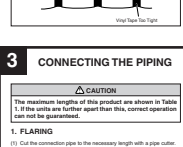
- To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with a radius of curvature of 150 mm or more.
- If the pipe is bent repeatedly at the same place, it will break.



### 9. ATTACH THE DRAIN HOSE

**CAUTION** Insert the drain hose and drain cap into the drain port, making sure that it comes in contact with the back of the drain port, and then mount it. If the drain hose is not connected properly, leaking will occur.

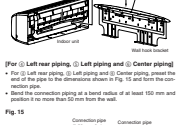
- Remove the drain cap and drain cap.
- Remove the drain cap and drain cap.
- Remove the drain cap and drain cap.



### 10. VACUUM PROCESS

**CAUTION** When moving and installing the room air conditioner, do not mix gas other than the specified refrigerant (R22) inside the refrigerant cycle.

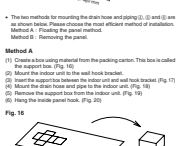
- When moving and installing the room air conditioner, do not mix gas other than the specified refrigerant (R22) inside the refrigerant cycle.
- Charging of additional refrigerant (R22) according to the piping length is unnecessary.



### 11. ELECTRICAL WIRING

Perform ELECTRICAL WIRING before performing the piping.

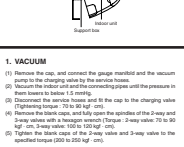
- For left rear piping
- Left piping and
- Center piping



### 12. FORMING THE DRAIN HOSE AND PIPE

**CAUTION** Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.

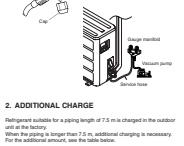
- To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with a radius of curvature of 150 mm or more.
- If the pipe is bent repeatedly at the same place, it will break.



### 13. ATTACH THE DRAIN HOSE

**CAUTION** Insert the drain hose and drain cap into the drain port, making sure that it comes in contact with the back of the drain port, and then mount it. If the drain hose is not connected properly, leaking will occur.

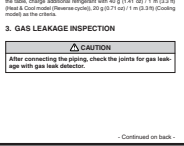
- Remove the drain cap and drain cap.
- Remove the drain cap and drain cap.
- Remove the drain cap and drain cap.



### 14. VACUUM PROCESS

**CAUTION** When moving and installing the room air conditioner, do not mix gas other than the specified refrigerant (R22) inside the refrigerant cycle.

- When moving and installing the room air conditioner, do not mix gas other than the specified refrigerant (R22) inside the refrigerant cycle.
- Charging of additional refrigerant (R22) according to the piping length is unnecessary.



### 15. ELECTRICAL WIRING

Perform ELECTRICAL WIRING before performing the piping.

- For left rear piping
- Left piping and
- Center piping



### 16. FORMING THE DRAIN HOSE AND PIPE

**CAUTION** Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.

- To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with a radius of curvature of 150 mm or more.
- If the pipe is bent repeatedly at the same place, it will break.



### 17. ATTACH THE DRAIN HOSE

**CAUTION** Insert the drain hose and drain cap into the drain port, making sure that it comes in contact with the back of the drain port, and then mount it. If the drain hose is not connected properly, leaking will occur.

- Remove the drain cap and drain cap.
- Remove the drain cap and drain cap.
- Remove the drain cap and drain cap.



# 5 ELECTRICAL WIRING

- WARNING**
- Before starting work, check that power is not being supplied to indoor unit and the outdoor unit.
  - Match the terminal block numbers and connection cord colors of the indoor unit and the outdoor unit. Erroneous wiring may cause burning of the electric parts.
  - Connect the connection cords firmly to the terminal block. Imperfect installation may cause a fire.
  - Always fasten the outside covering of the connection cord with the cord clamp. (If the insulator is chafed, electric leakage may occur.)
  - Always connect the ground wire.

## HOW TO CONNECT WIRING TO THE TERMINALS

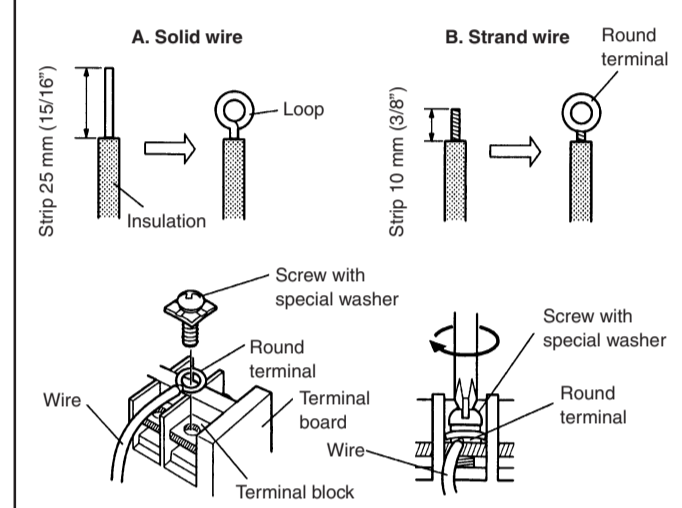
### A. For solid core wiring (or F-cable)

- Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 25 mm (1 5/16") to expose the solid wire.
- Using a screwdriver, remove the terminal screw(s) on the terminal board.
- Using pliers, bend the solid wire to form a loop suitable for the terminal screw.
- Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a screwdriver.

### B. For strand wiring

- Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 10 mm (3/8") to expose the strand wiring.
- Using a screwdriver, remove the terminal screw(s) on the terminal board.
- Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.
- Position the round terminal wire, and replace and tighten the terminal screw using a screwdriver.

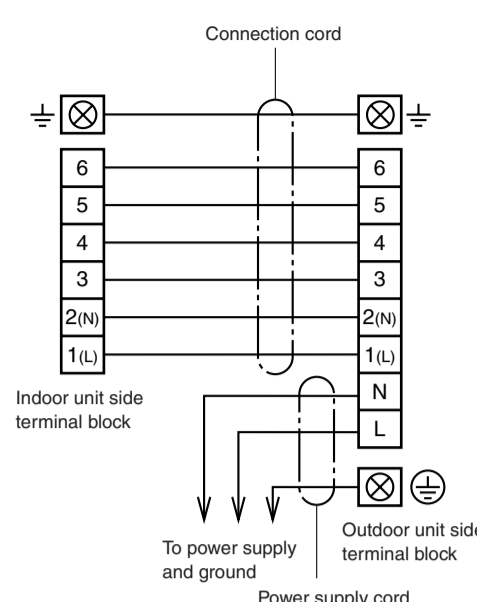
Fig. 30



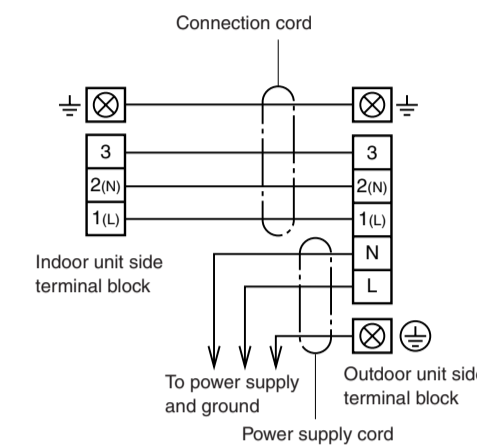
## 1. CONNECTION DIAGRAM

Fig. 31

[Heat & Cool model (Reverse cycle)]



[Cooling model]



## 2. INDOOR UNIT SIDE

- Open the intake grille. Remove the tapping screw for the control box cover and remove the control box cover. (Fig. 32)
- Remove the tapping screw and while minding the cord holder hook, remove the cord holder. (Fig. 33)
- Connect the end of the connection cord fully into the terminal block. (Fig. 34 and 35)

Fig. 32

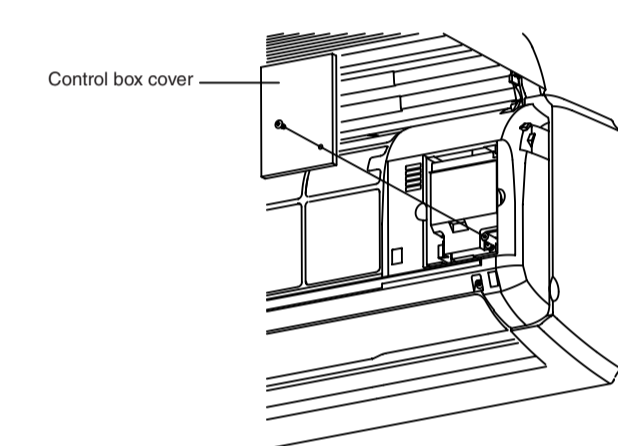
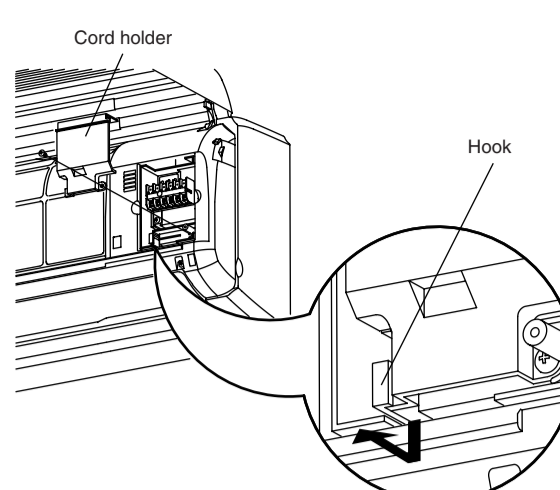
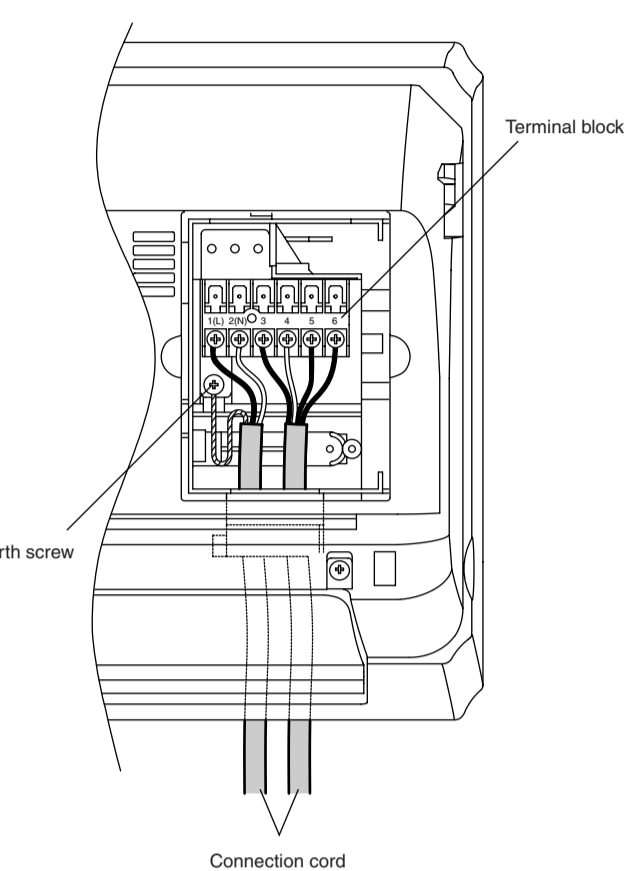


Fig. 33



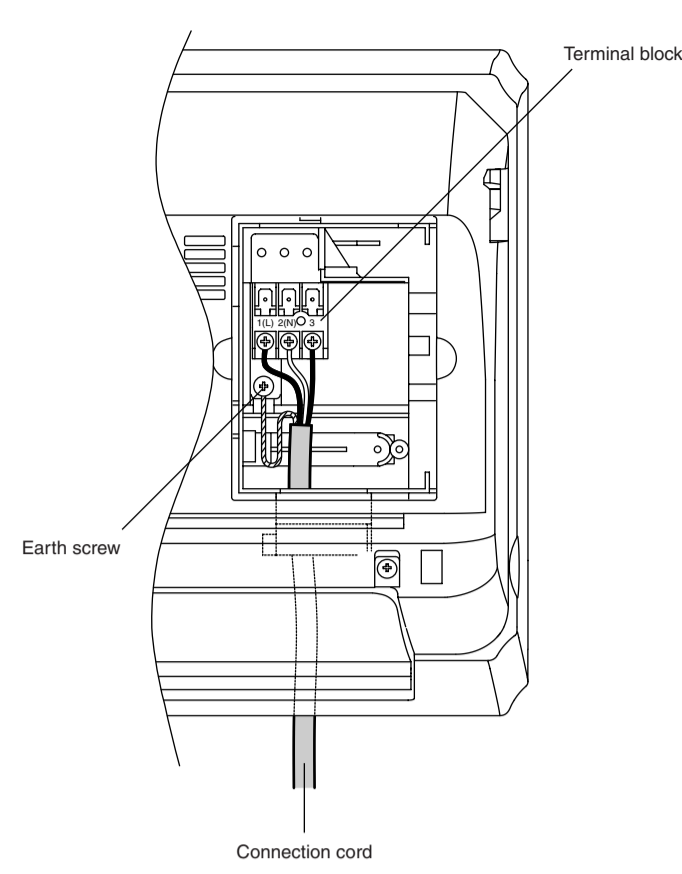
[Heat & Cool model (Reverse cycle)]

Fig. 34



[Cooling model]

Fig. 35



## 3. OUTDOOR UNIT SIDE

### CAUTION

Use VW-1, 12 mm diameter, 0.5 to 1.0 mm thick, connection PVC tube as the insulation tube.

- Remove the outdoor unit terminal cover and cord clamp. (Fig. 36)
- Process the end of the connection cords to the dimensions shown in Fig. 38.
- Connect the end of the connection cord fully into the terminal block and fasten with the screws.
- Fasten the sheath with a cord clamp. (Fig. 37)
- Install the terminal cover. (Fig. 39)

Fig. 36

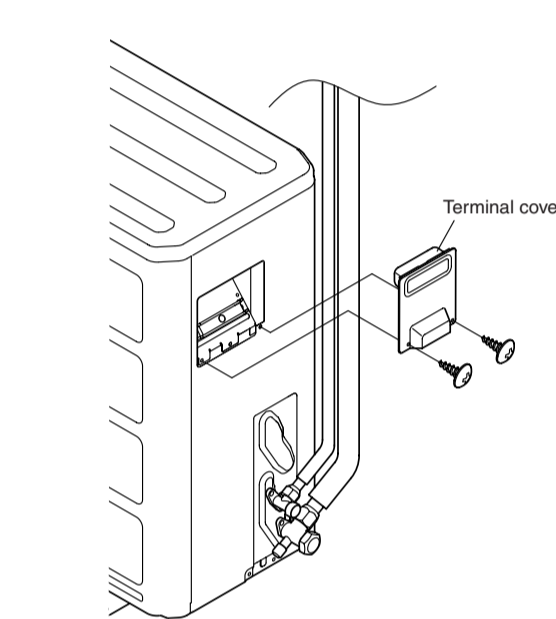
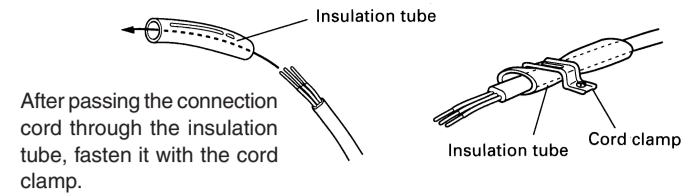
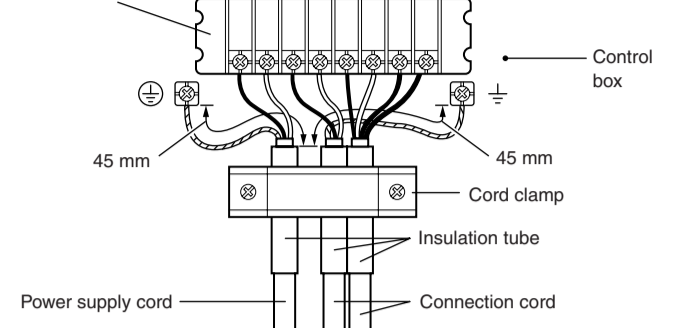


Fig. 37



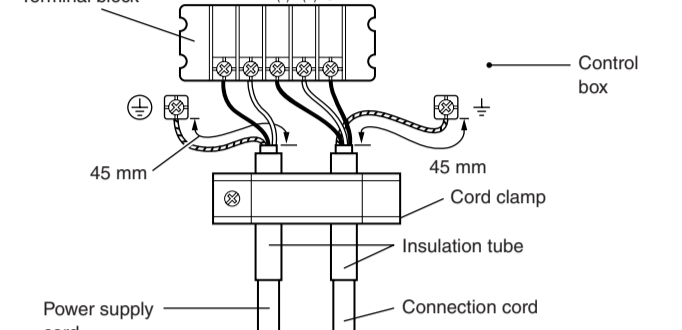
[Heat & Cool model (Reverse cycle)]

Fig. 38



[Cooling model]

Fig. 39



# 6 FINISHING

## 1. CONNECTION PIPE, CORD AND DRAIN HOSE

- Insulate between pipes.
  - For ① Rear, ② Right, and ③ Bottom piping, overlap the connection pipe heat insulation and indoor unit pipe heat insulation and bind them with vinyl tape so that there is no gap. (Fig. 39)
  - For ④ Left rear and ⑤ Left piping, butt the connection pipe heat insulation and indoor unit pipe heat insulation together and bind them with vinyl tape so that there is no gap. (Fig. 40)

Fig. 39 ① Rear, ② Right, and ③ Bottom piping

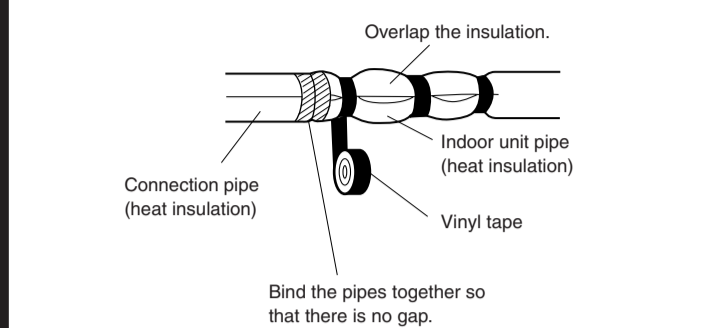


Fig. 40 ④ Left rear piping, ⑤ Left piping and ⑥ Center piping

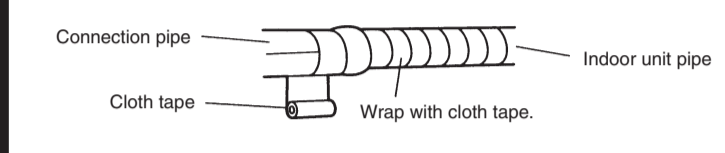
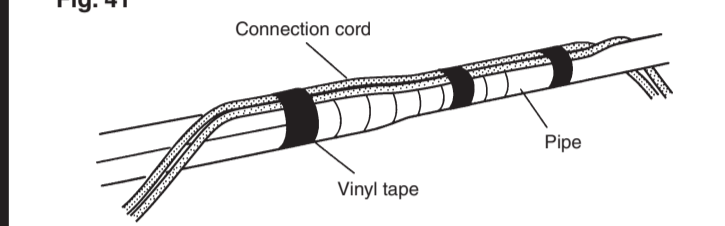


Fig. 41

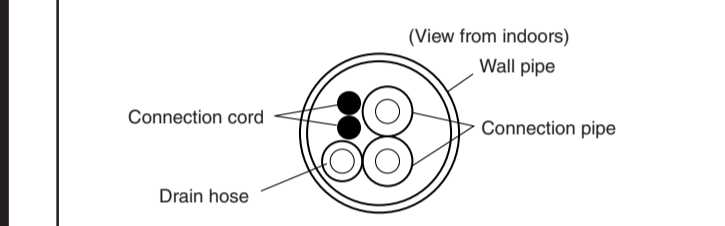


Check that:

- When connected from the left rear, the drain hose is at the bottom left of the wall pipe.

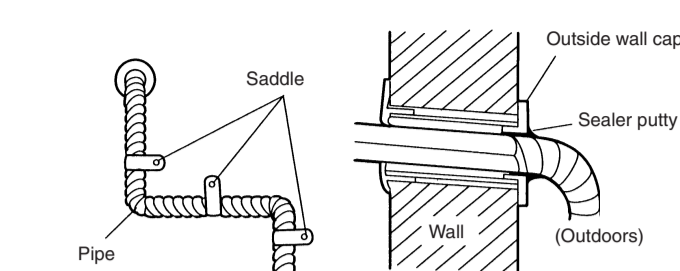
Fig. 42

(For connection from the left rear)



- Temporarily fasten the connection cord along the connection pipe with vinyl tape. (Wrap to about 1/3 the width of the tape from the bottom of the pipe so that water does not enter.)
- Fasten the connection pipe to the outside wall with a saddle, etc.
- Fill the gap between the outside wall pipe hole and the pipe with sealer so that rain water and wind cannot blow in.

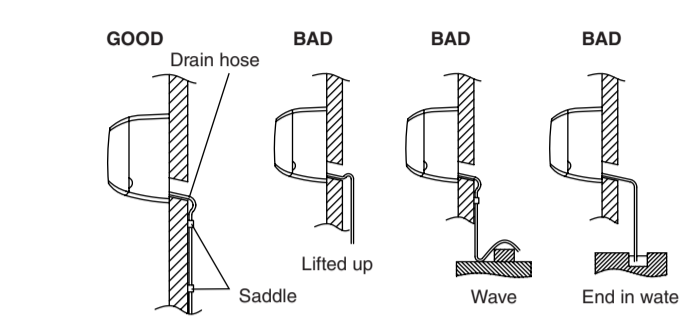
Fig. 43



(5) Fasten the drain hose to the outside wall, etc.

Fig. 44

Check the following:



## 2. INSTALLING FINAL PARTS

- Secure the cord holder with lapping screw. (Fig. 45)
- Secure the control box cover and tapping screw. (Fig. 45)
- Close the intake grille. (Fig. 46)

Fig. 45 ① Rear piping

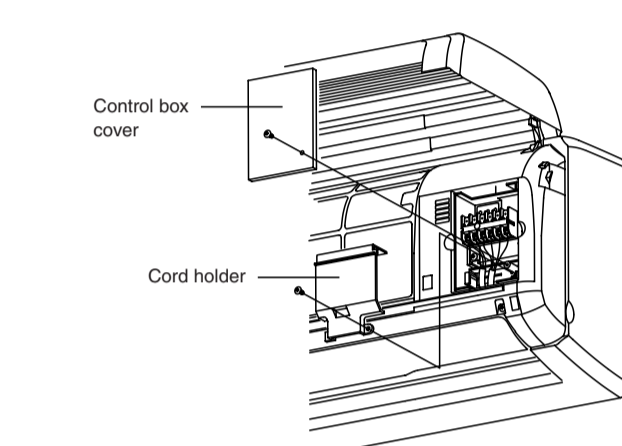
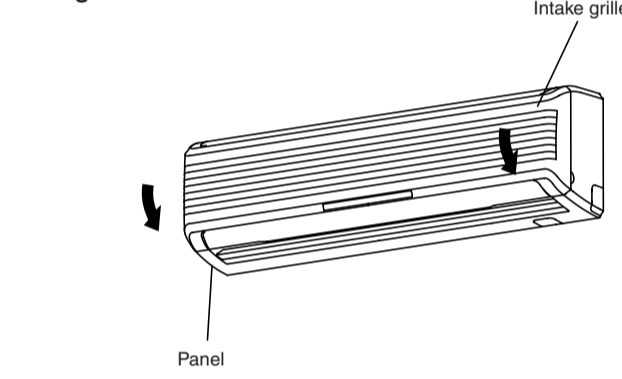


Fig. 46

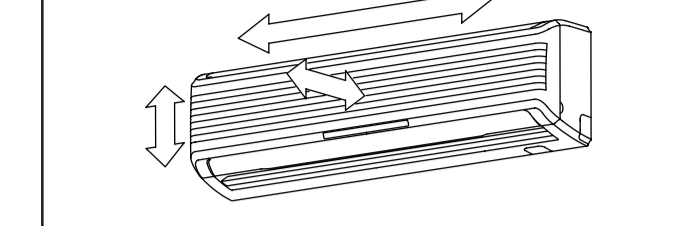


# 7 POWER

Check that:

- The top and bottom hooks are hooked firmly and the indoor unit does not move to the front and rear or left and right.
- The indoor unit is accurately positioned horizontally and vertically.

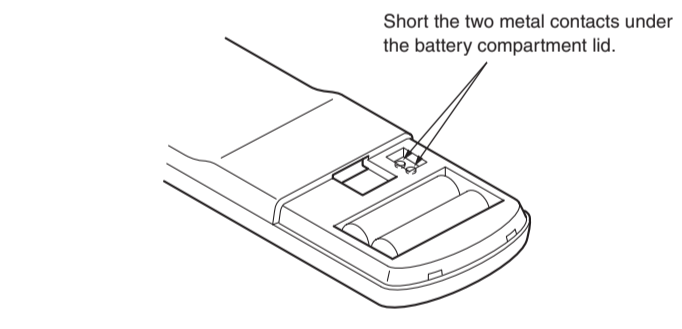
Fig. 47



# 8 TEST RUNNING

- Perform test operation and check items 1 and 2 below.
- For the operation method, refer to the operating manual.
- The outdoor unit may not run, depending on the room temperature. In this case, the 'TEST RUN' signal is received during air conditioner operation (use a metallic object to short the two metal contacts under the battery compartment lid and send the 'TEST RUN' signal from the remote control unit).

Fig. 48



Operation can be checked by lighting and flashing of the display section OPERATION and TIMER lamps. Perform judgement in accordance with the following.

- Test running
  - When the air conditioner is run by pressing the remote control unit test run button, the OPERATION and TIMER lamps flash slowly at the same time.
- Error
  - The OPERATION, TIMER and SWING lamps operate as follows (Table 6) according to the error contents.

Error contents	Error display		
	OPERATION (RED)	TIMER (GREEN)	SWING (ORANGE)
Indoor unit circuit board error	○	○	—
Indoor unit room temperature sensor wire opened	2 times ●	○	—
Indoor unit room temperature sensor wire short circuited	2 times ●	○	○
Indoor unit piping sensor wire opened	3 times ●	○	—
Indoor unit piping sensor short circuited	3 times ●	○	○
Indoor unit fan error	6 times ●	○	—

○ : Fast flashing ● : Slow flashing — : Off

## CHECK ITEMS

- INDOOR UNIT
  - Is operation of each button on the remote control unit normal?
  - Does each lamp light normally?
  - Do not air flow direction louvers operate normally?
  - Is the drain normal?
  - Is there any abnormal noise and vibration during operation?
- OUTDOOR UNIT
  - Is there any abnormal noise and vibration during operation?
  - Will noise, wind, or drain water from the unit disturb the neighbors?
  - Is there any gas leakage?
  - Do not operate the air conditioner in the test running state for a long time.
  - For the operation method, refer to the operating manual and perform operation check.

# 9 REMOTE CONTROL UNIT INSTALLATION

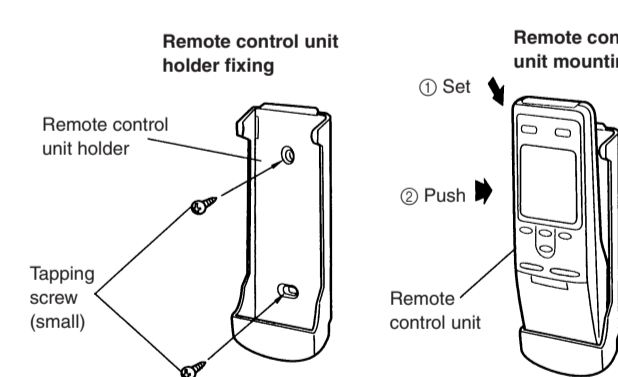
### CAUTION

- Check that the indoor unit correctly receives the signal from the remote control unit, then install the remote control unit holder.
- Select the remote control unit holder selection site by paying careful attention to the following:
  - Avoid places in direct sunlight.
  - Select a place that will not be affected by the heat from a stove, etc.

## 1. REMOTE CONTROL UNIT HOLDER INSTALLATION

- Install the remote control unit with a distance of 7 m between the remote control unit and the photocell as the criteria. However, when installing the remote control unit, check that it operates positively.
- Install the remote control unit holder to a wall, pillar, etc. with the tapping screw (Fig. 49).

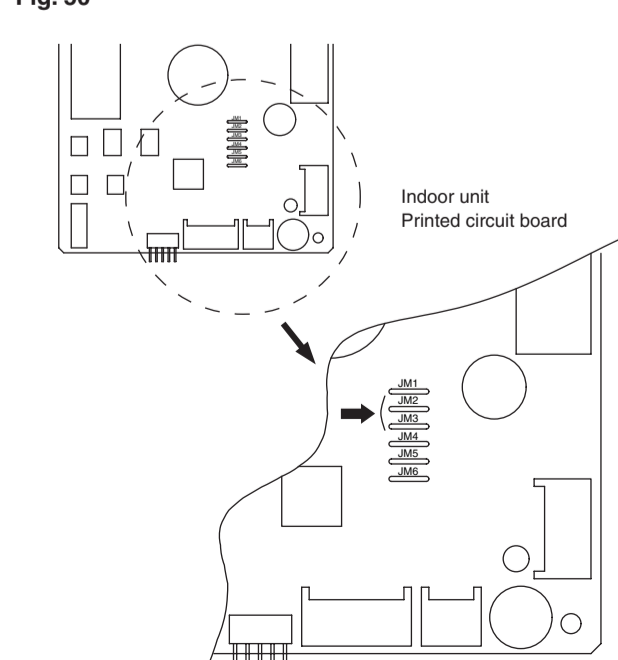
Fig. 49



## 2. SWITCHING REMOTE CONTROL UNIT SIGNAL CODES

### Air conditioner settings

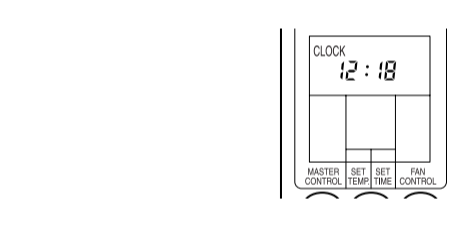
Fig. 50



### Remote control unit settings

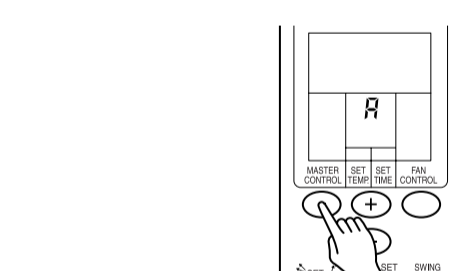
- Press the START/STOP button and display only the clock.

Fig. 51



- Press the MASTER CONTROL button continuously for more than five seconds to display the current signal code.

Fig. 52



- Change the signal code with the C/O button (R-b-c-d).

Fig. 53



- Press the MASTER CONTROL button again to return to the clock display and change the signal code.

- Confirm the setting of the remote control unit signal code and the printed circuit board setting. If these are not confirmed, the remote control unit cannot be used to operate for the air conditioner.

Jumper wire		Remote control unit signal code
JM2	JM3	
Connect	Connect	A (Primary setting)
Connect	Disconnect	B
Disconnect	Connect	C
Disconnect	Disconnect	D

# 10 CUSTOMER GUIDANCE

Explain the following to the customer in accordance with the operating manual:

- Starting and stopping method, operation switching, temperature adjustment, timer, air flow switching, and other remote control unit operations.
- Air filter removal and cleaning, and how to use the air louvers.
- Give the operating manual and installation instruction sheet to the customer.
- If the signal code is changed, explain to the customer how it changed (the system returns to signal code A when the batteries in the remote control unit are replaced).