

Refrigerant
R407C&R22



Wall Mounted Type (VRF System)


INSTALLATION INSTRUCTION SHEET


(PART NO. 9369419010)

This air conditioner uses R407C and R22.

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.

 WARNING	
①	For the air conditioner to operate satisfactorily, install it as outlined in this installation instruction sheet.
②	Connect the indoor unit and outdoor unit with the air conditioner piping and cords available from our standard parts. This installation instruction sheet describes the correct connections using the installation set available from our standard parts.
③	Installation work must be performed in accordance with national wiring standards by authorized personnel only.
④	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.
⑤	Do not turn on the power until all installation work is complete.
⑥	When installing or moving the air conditioner, use care not to charge it with the wrong refrigerant (such as R407C or R22).

 CAUTION	
Observe the following precautions when using R407C refrigerant.	
<ul style="list-style-type: none">Do not use mineral oil on flared part. Prevent mineral oil from getting into the system as this would reduce the lifetime of the unit.Never use piping which has been used for previous installations. Only use parts that are delivered with the unit.	

- Be careful not to scratch the 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.

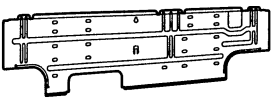
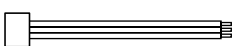
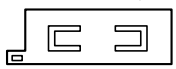
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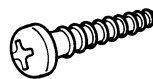
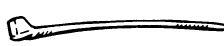
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STANDARD PARTS

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

Name and Shape	Q'ty	Use
Wall hook bracket 	1	For indoor unit installation
Wire assembly 	1	For wired remote controller installation
EMI FILTER (ZCAT1518-0730) 	1	For wire assembly installation

Name and Shape	Q'ty	Use
Tapping screw (big) ($\phi 4 \times 20$) 	12	For wall hook bracket installation
Binder 	1	For wire assembly binding

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 topple or fall.

⚠ CAUTION

- ① Do not install where there is the danger of combustible gas leakage.
- ② Do not install the unit near a source of heat, steam, or flammable gas.
- ③ If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.

Decide the mounting position with the customer as follows:

- (1) Install the indoor unit level on a strong wall which is not subject to vibration.
- (2) The inlet and outlet ports should not be obstructed : the air should be able to blow all over the room.
- (3) Do not install the unit where it will be exposed to direct sunlight.
- (4) Install the unit where the connection pipe can be easily installed.
- (5) Install the unit where the drain pipe can be easily installed.
- (6) Take servicing, etc. into consideration and leave the spaces shown in Fig. 1. Also install the unit where the filter can be removed.

Fig. 1

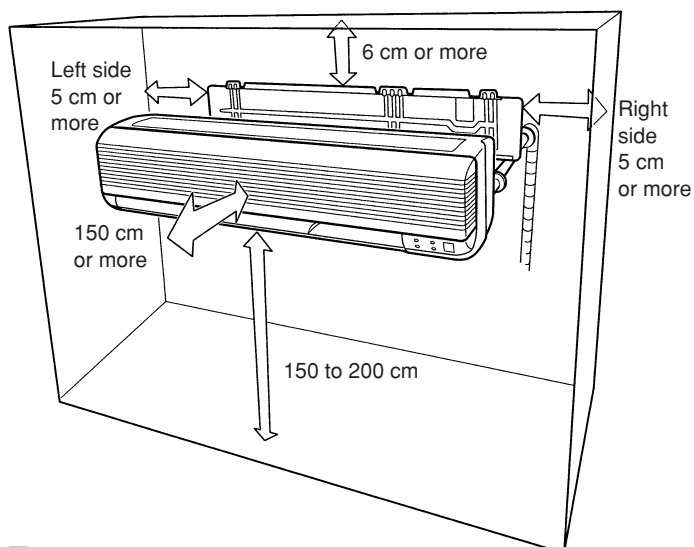
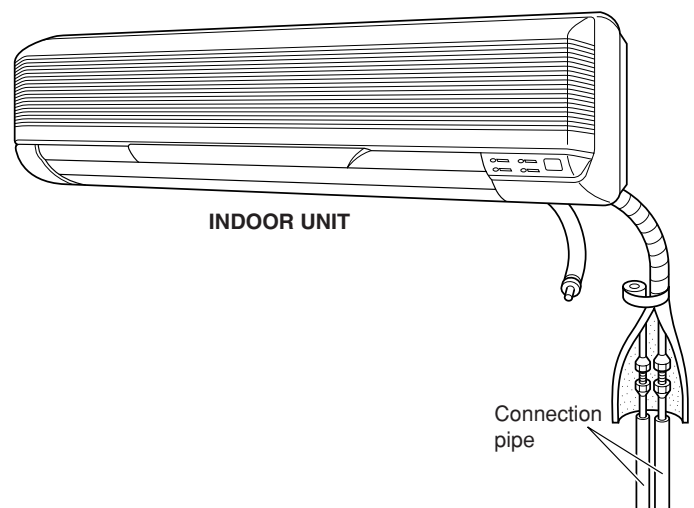


Fig. 2



CONNECTION PIPE REQUIREMENT

(1) Connected to outdoor unit

Table 1

unit : mm

Capacity of outdoor unit	Suction Gas Pipe	Discharge Gas Pipe	Liquid Pipe
90	ø28.58 (1.2)	ø19.05 (1.0)	ø12.7 (0.8)

() : thickness

(2) Connected between two immediately adjacent refrigerant branch kits

Table 2

unit : mm

Total capacity of indoor unit	Suction Gas Pipe	Discharge Gas Pipe	Liquid Pipe
Less than 30	ø15.88 (1.0)	ø12.7 (0.8)	ø9.53 (0.8)
31 or more to 60	ø19.05 (1.0)	ø15.88 (1.0)	ø9.53 (0.8)
61 or more	ø28.58 (1.2)	ø19.05 (1.0)	ø12.7 (0.8)

() : thickness

(3) Connected to indoor unit

Table 3

unit : mm

Capacity of indoor unit	Gas Pipe	Liquid Pipe
7, 9	ø9.53 (0.8)	ø6.35 (0.8)
12, 14	ø12.7 (0.8)	ø6.35 (0.8)
18, 20, 24, 25	ø15.88 (1.0)	ø6.35 (0.8)
30	ø15.88 (1.0)	ø9.53 (0.8)
36, 45, 54, 60	ø19.05 (1.0)	ø9.53 (0.8)

() : thickness

* Capacity: The number displayed on the model name for the indoor and outdoor units.

- Use pipe with water-resistant heat insulation.
- Use pipe that can withstand a pressure of 3,040 kPa.
- The discharge gas pipe is only connected on heat recovery models.

ELECTRICAL REQUIREMENT

Table 4

Power supply cord (mm²)	Maximum	2.5	H07RN-F or equivalent
	Minimum	1.5	
Transmission cord (mm²)	Maximum	1.25	Shield cord (LONWORKS compatible part)
	Minimum	0.75	
Remote control cord (mm²)	Maximum	1.25	Sheathed vinyl cord or cable
	Minimum	0.75	
Fuse capacity (A)		20	

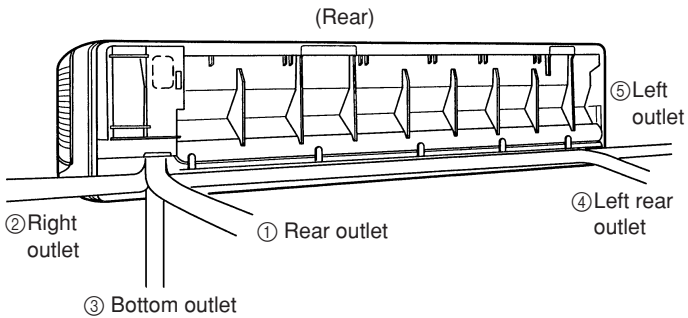
INSTALLATION PROCEDURE

Install the air conditioner as follows.

1. INDOOR UNIT INSTALLATION

The piping can be connected in the five directions indicated by ①, ②, ③, ④, and ⑤ in Fig. 3. When the piping is connected in direction ② or ⑤, cut along the piping groove in the side of the under cover with a hacksaw. When connecting the piping in direction ③, cut a notch in the thin wall at the front bottom of the under cover.

Fig. 3



1. INSTALLING THE WALL HOOK BRACKET

Removing the wall hook bracket

Remove the wall hook bracket in the following order:

- ① Remove one side of under cover B by pulling it forward (arrow direction in Fig. 4).
- ② Remove the other side of under cover B by pulling it forward (arrow direction in Fig. 4).
- ③ Remove the tapping screw installed to under cover A. (Fig. 5)
- ④ While pulling the right side of under cover A forward (releasing the inside stopper), slide under cover A to the left and unhook the two inside hooks. (Fig. 5)
- ⑤ Next, remove under cover A by pulling the left side forward (arrow direction in Fig. 5).
- ⑥ Remove the four tapping screws holding the wall hook bracket. (Fig. 6)

Fig. 4

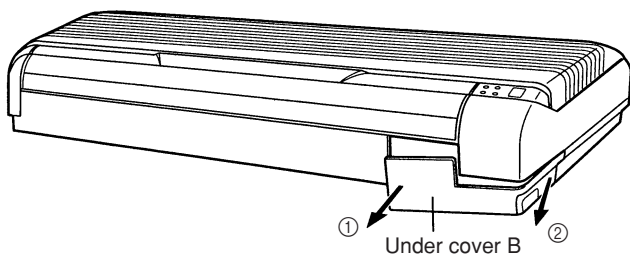


Fig. 5

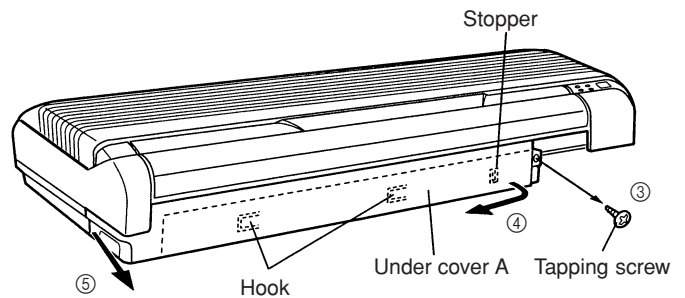
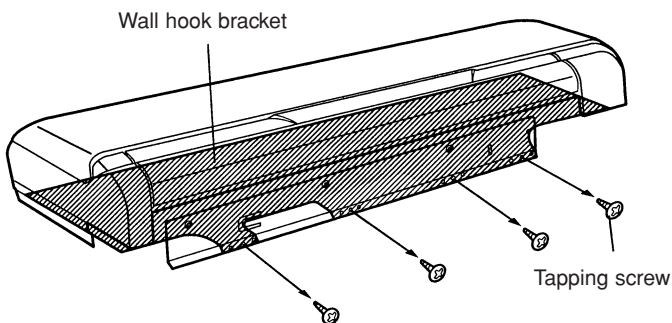


Fig. 6



- (1) Install the wall hook bracket so that it is correctly positioned horizontally and vertically. If the wall hook bracket is tilted, water will drip to the floor.
- (2) As the weight of the indoor unit is 17 to 20 kg (37 to 44 lbs), it should be installed after properly examining the place where it is intended 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.

[Installation directly to a wall]

Before fastening the wall hook bracket to the wall with the screws, level it by tapping the hook at the center of bracket to the wall with the handle of a screwdriver.

- Fasten the wall hook bracket to the wall with 6 or more screws and anchor bolts through the holes near the outer edge of the bracket.
- Do not install the wall hook bracket at only one place or at an angle. For a concrete wall, embed anchor bolts (10 mm dia.) into the wall at the hook bracket holes (12 × 18 mm dia.). Allow the anchor bolts to stick out at least 18 mm from the wall. (Fig. 7) Install the unit to the anchor bolts with nuts through the wall hook bracket. Use 2 bolts for concrete wall and 4 bolts for blister concrete wall.
- Finally tighten the bolts and wood screws after confirming, using the level indicator, that the clamp is horizontal.

⚠ CAUTION

Install the wall hook bracket horizontally and perpendicularly. If the wall hook bracket is tilted, water will drip to the floor.

Fig. 7

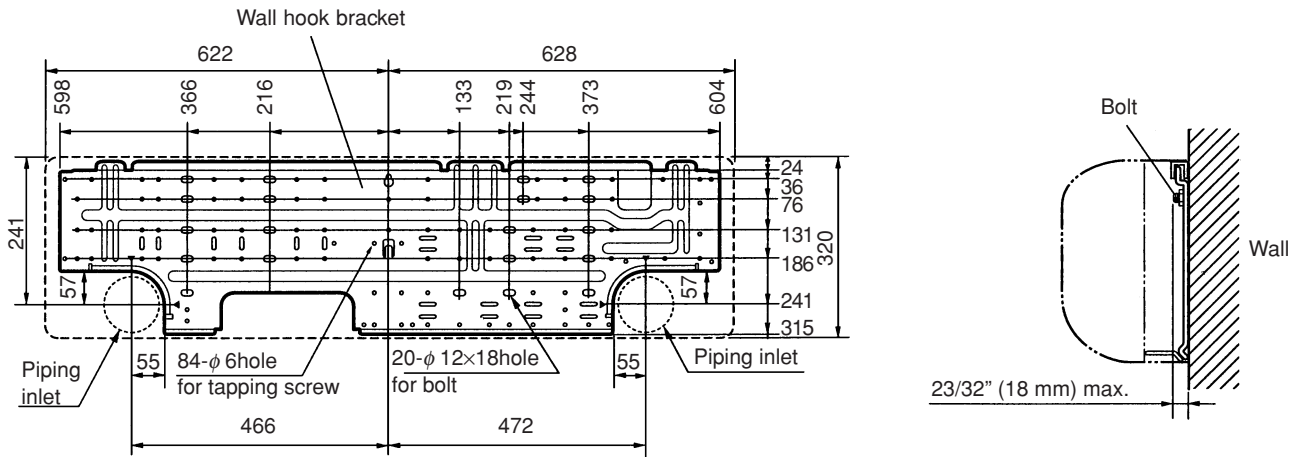
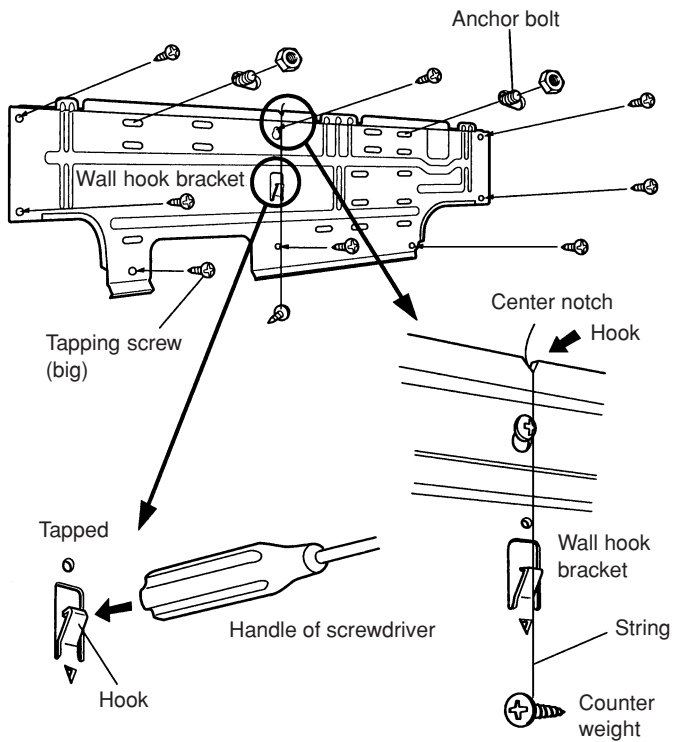


Fig. 8



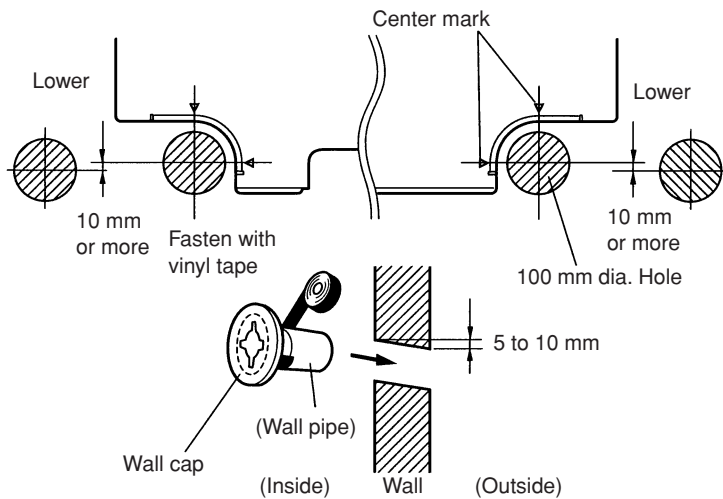
2. CUTTING THE HOLE IN THE WALL FOR THE CONNECTING PIPING

⚠ WARNING

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

- (1) Cut a 100 mm diameter hole in the wall at the position shown in Fig. 9.
- (2) When cutting the wall hole at the inside of the installation frame, cut the hole to a point of intersection of center marks. When cutting the wall hole at the outside of the installation frame, cut the hole at least 10 mm below less.
- (3) Cut the hole so that the outside end is lower (5 to 10 mm) than the inside end.
- (4) Always align the center of the wall hole. If misaligned, water leakage will occur.
- (5) Cut the wall pipe to match the wall thickness, stick it into the wall cap fasten the cap, with vinyl tape, and stick the pipe through the hole. (The connection pipe is supplied in the installation set.) (Fig. 9)

Fig. 9



- (6) For ⑤ left piping and ② right piping, cut the hole a little lower so that drain water will flow freely. (Fig. 9)

3. FORMING THE DRAIN HOSE AND PIPE

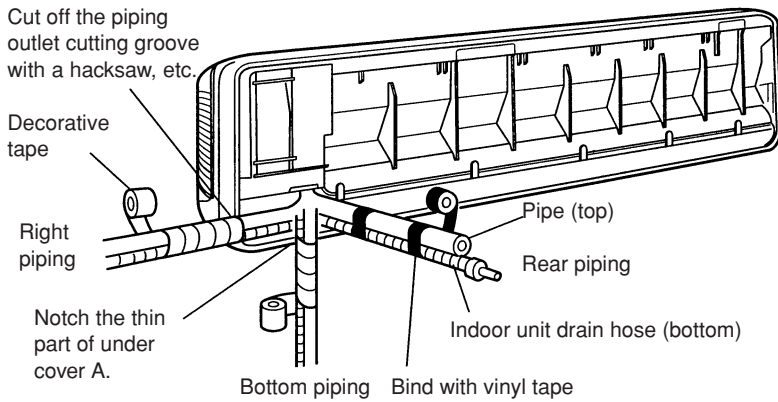
⚠ CAUTION

- ① Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.
- ② To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with a radius of curvature of 100 mm or more.
- ③ If the pipe is bent repeatedly at the same place, it will break.

[① Rear piping, ② Right piping, ③ Bottom piping]

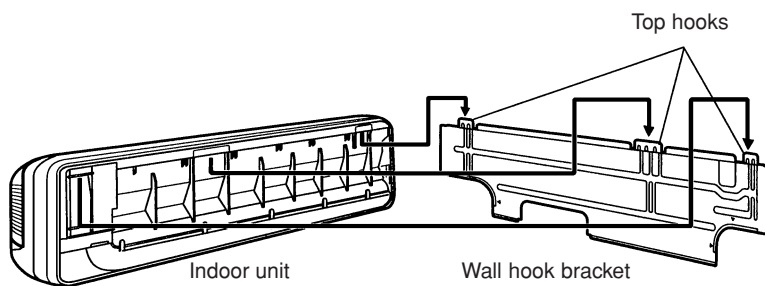
- Install the indoor unit piping in the direction of the wall hole and bind the drain hose and pipe together with vinyl tape. (Fig. 10)
- Install the piping so that the drain hose is at the bottom.

Fig. 10



- Perform "ELECTRICAL WIRING" before performing this piping.
- Wrap the pipes of the indoor unit that are visible from the outside with decorative tape.
- After passing the indoor piping and drain hose through the wall hole, hang the indoor unit on the hooks at the top of the wall hook bracket.

Fig. 11



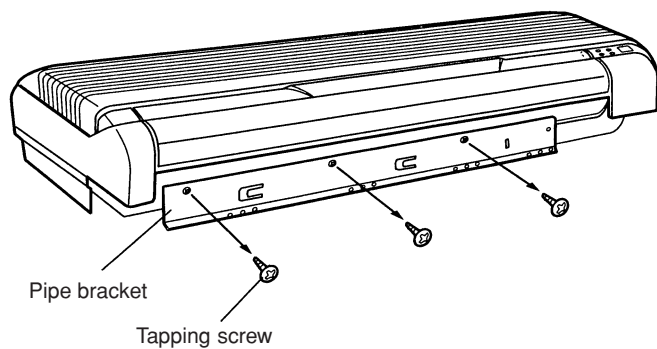
[For ④ Left rear piping, ⑤ Left piping]

- Left piping and left rear piping can be easily installed by removing the pipe bracket.

Removing the pipe bracket

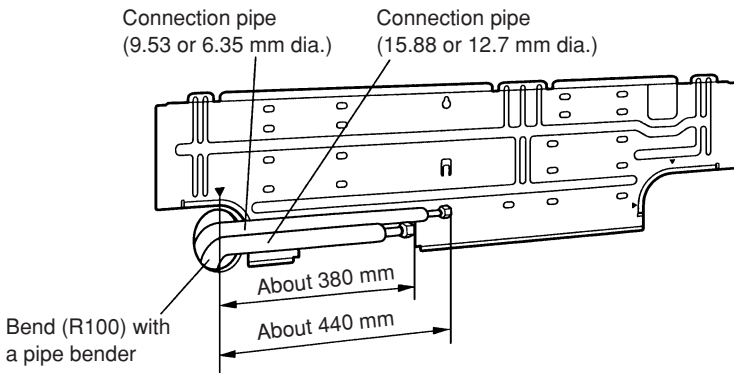
Remove the three tapping screws holding the pipe bracket as shown below.

Fig. 12



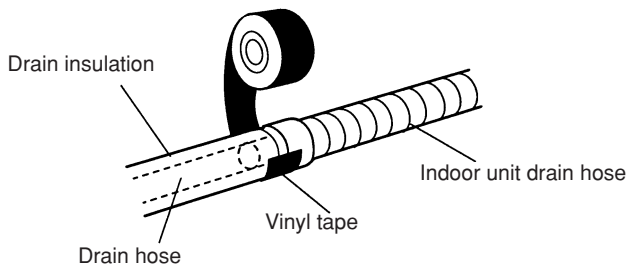
- For left piping and left rear piping, preset the end of the pipe to the dimensions shown in Fig. 13 from the mark on the wall hook bracket and form the connection pipe.
- Bend the connection piping at a bend radius of at least 100 mm and position it no more than 50 mm from the wall.

Fig. 13



- When extending the drain hose at the indoor unit, install the accessory drain insulation.

Fig. 14

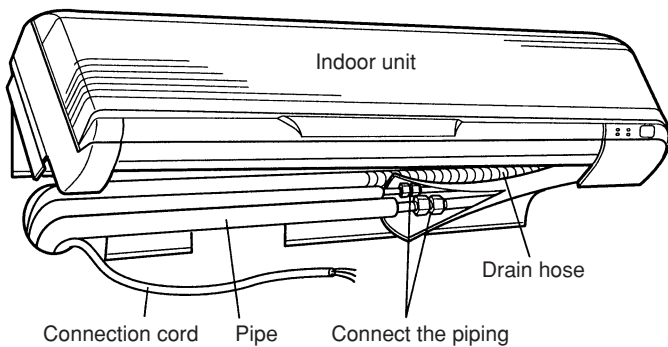


- Place the indoor unit drain hose behind the piping.

[Installing the indoor unit]

- Piping work can be made easier by laying out, shaping, and temporarily fastening the connection pipe, drain hose, and connection cord as shown in Fig. 15 beforehand.

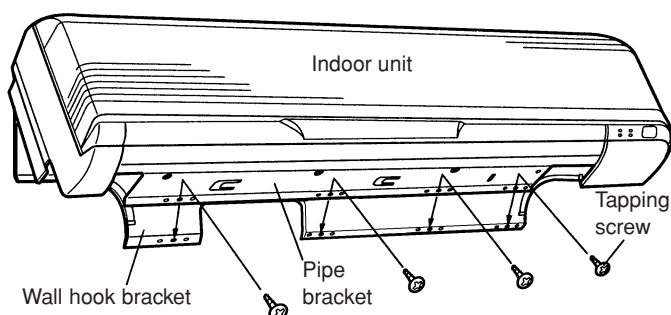
Fig. 15 (Left piping)



4. INSTALLING THE INDOOR UNIT

After connecting the piping, fasten the bottom of the indoor unit and the wall hook bracket with the tapping screws.

Fig. 16



2. HOW TO CONNECT WIRING TO THE TERMINALS

1. IF ONE WIRE IS CONNECTED TO ONE TERMINAL BLOCK

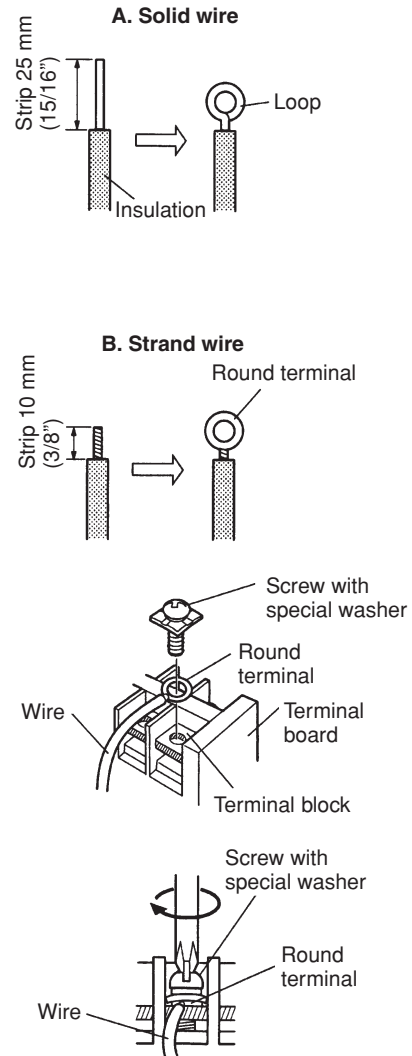
A. For solid core wiring (or F-cable)

- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 25 mm (15/16") to expose the solid wire.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using pliers, bend the solid wire to form a loop suitable for the terminal screw.
- (4) 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

- (1) 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.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.
- (4) Position the round terminal wire, and replace and tighten the terminal screw using a screwdriver.

Fig. 17

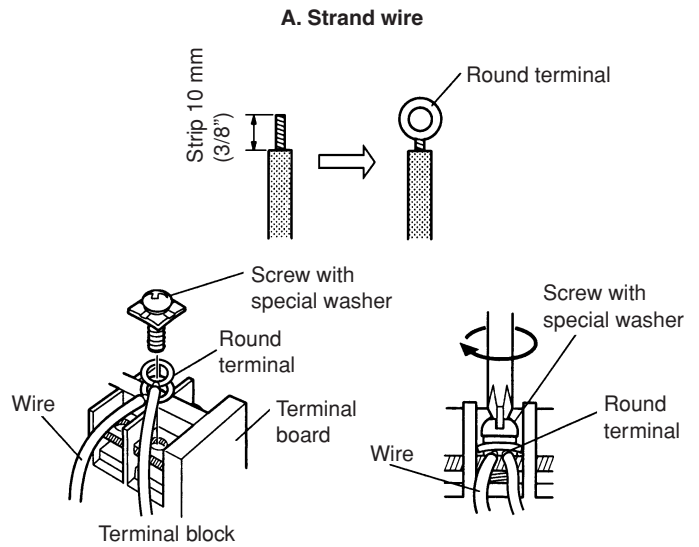


2. IF TWO WIRES ARE CONNECTED TO ONE TERMINAL BLOCK

A. As a rule, round terminal should be used to connect to the terminal block.

- (1) 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.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.
- (4) Position the round terminal wire, and replace and tighten the terminal screw using a screwdriver.

Fig. 18

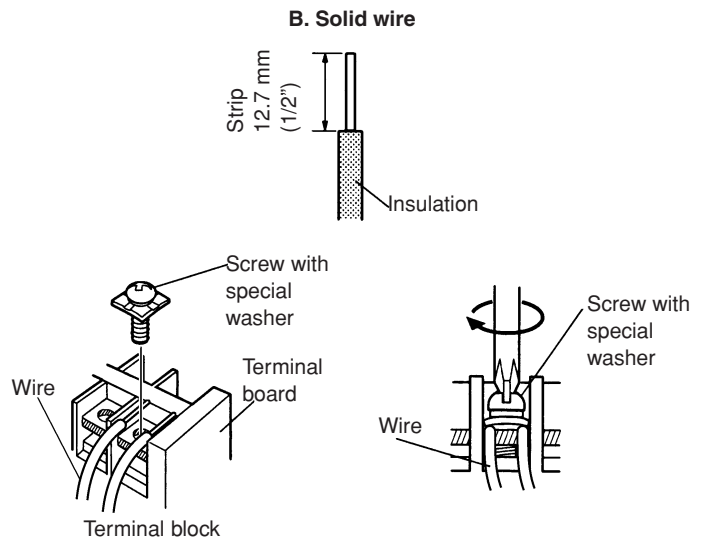


B. If round terminal cannot be used, the following items should be followed.

For solid core wiring (or F-cable)

- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 12.7 mm (1/2") to expose the solid wire.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Wires with the same diameter should be connected on both sides as shown in Fig. 19. Since connecting wires with different diameters causes the wires to heat up due to loose connections, this method should not be used.

Fig. 19

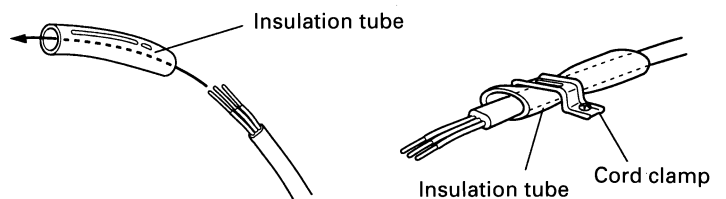


HOW TO FIX THE CONNECTION CORD

After passing the connection cord through the insulation tube, fasten it with the cord clamp.

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

Fig. 20



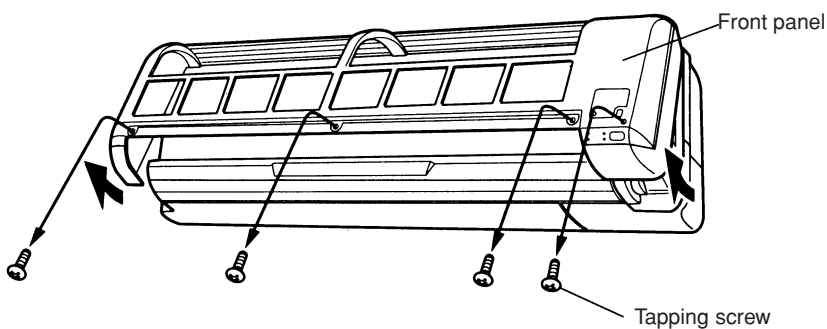
3. ELECTRICAL WIRING

⚠ WARNING

- ① Before starting work, check that power is not being supplied to the indoor unit.
- ② Erroneous wiring may cause burning of the electric parts.
- ③ Connect the connection cord firmly to the terminal board. Imperfect installation may cause a fire.
- ④ Always fasten the outside covering of the connection cord with the cord clamp. (If the insulator is chafed, electric leakage may occur.)
- ⑤ Always connect the ground wire.

- (1) Remove the intake grille.
- (2) Remove the four tapping screws. (Fig. 21)
- (3) Remove the front panel by lifting the bottom of the front panel upward.

Fig. 21



- (4) Remove the cord clamp.
- (5) Remove the control box cover (Fig. 22).
- (6) Process the end of the connection cord to the dimensions shown in Fig. 23.
- (7) Connect the end of the connection cord fully into the terminal block.

Fig. 22

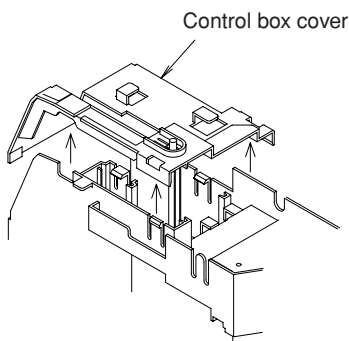
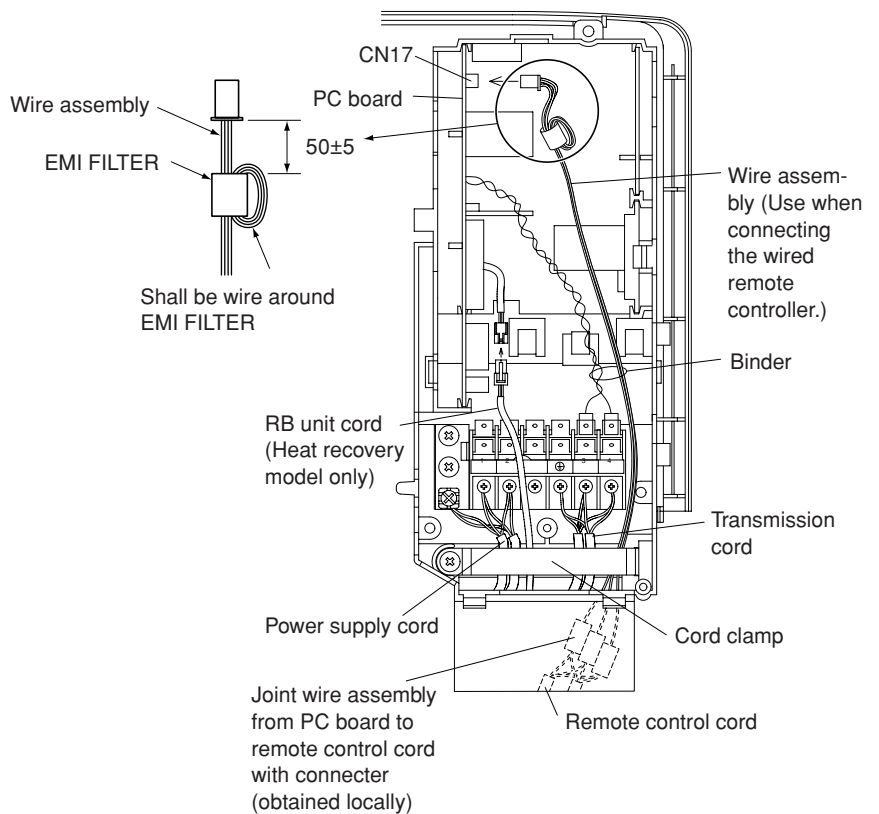
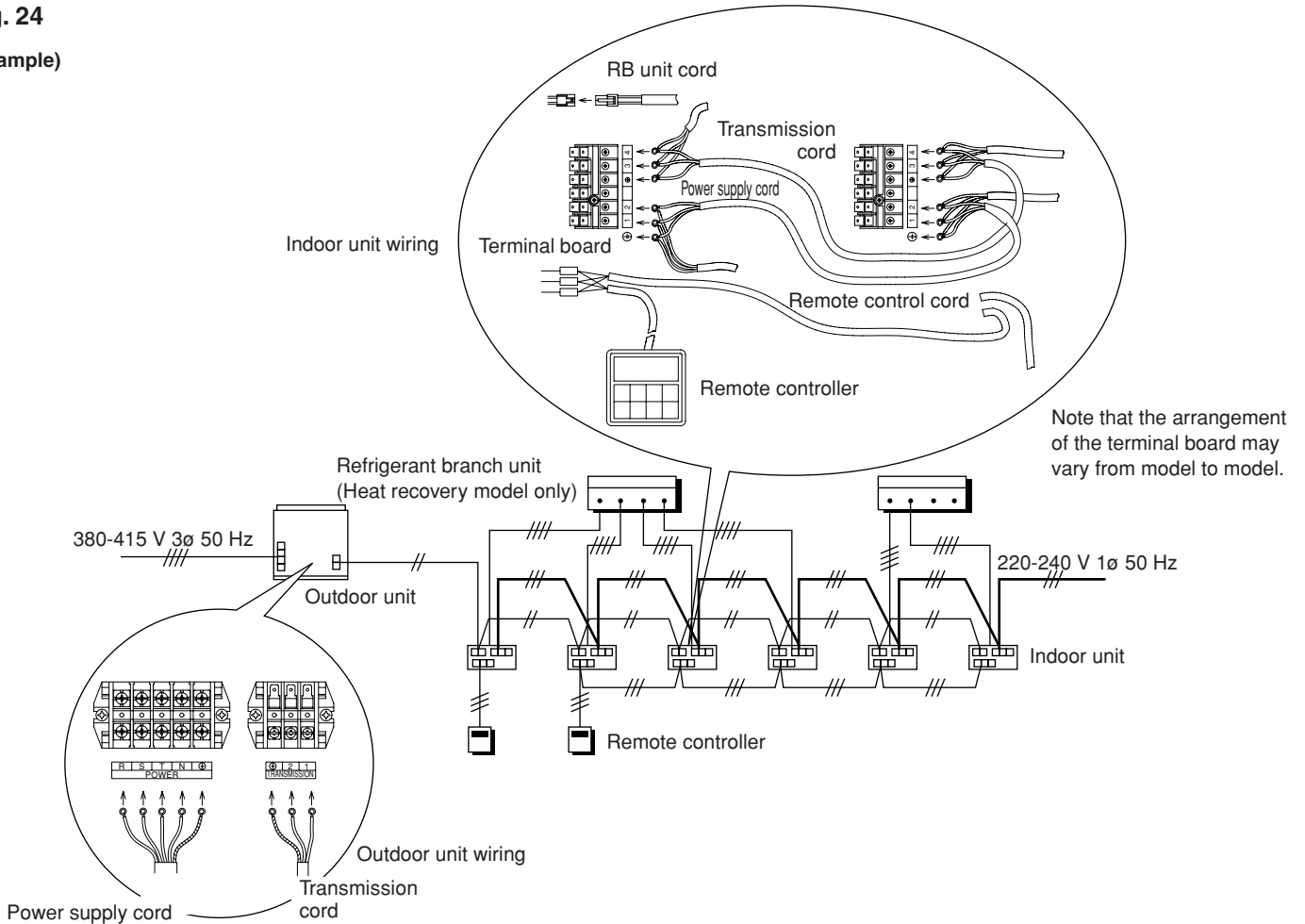


Fig. 23



- (8) Fasten the connection cord with a cord clamp.
- (9) Fasten the control box cover.
- (10) Fasten the front panel with the screw.

Fig. 24
(Example)



⚠ CAUTION	
①	Use care to wire properly. (Miss-wiring will result in damage.)
②	Never bundle the power supply cord, transmission cord and remote controller cord together. Bundling these cords together will cause misoperation.
③	The total length of the transmission cord should not exceed 500 meters. Note that the total length of the transmission cord can be extended to 2,000 meters if the optional signal amplifier is used.
④	The power source capacity must be the sum of the air conditioner current and the current of other electrical appliances. When the current contracted capacity is insufficient, change the contracted capacity.
⑤	When the voltage is low and the air conditioner is difficult to start, contact the power company the voltage raised.

⚠ WARNING	
①	[1 phase TYPE] The rated voltage of this product is 220-240 V A.C. 50 Hz. Before turning on verify that the voltage is within the 198 V to 264 V range. [3 phase TYPE] The rated voltage of this product is 380-415 V 3ø 50 Hz. Before turning on verify that the voltage is within the 342 V to 457 V range.
②	Always use a special branch circuit and install a special receptacle to supply power to the air conditioner.
③	Use a circuit breaker and receptacle matched to the capacity of the air conditioner.
④	Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.
⑤	Install a leakage circuit breaker in accordance with the related laws and regulations and electric company standards.

4. CONNECTING THE PIPING

⚠ CAUTION

While welding the pipes, be sure to blow dry nitrogen gas through them.

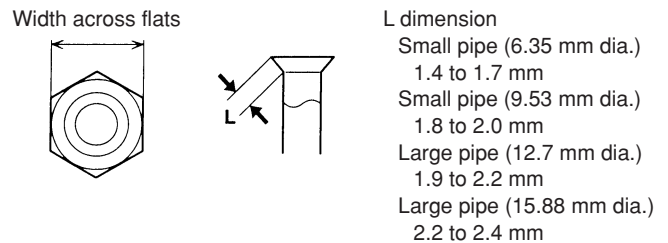
1. FLARE PROCESSING

- (1) Cut the connection pipe with pipe cutters so that the pipe is not deformed.
- (2) Holding the pipe downwards so that cuttings cannot enter the pipe and remove the burrs.
- (3) Remove the flare nut from the indoor unit pipe and outdoor unit and assemble as shown in (Table 5) and insert the flare nut onto the pipe, and flare with a flaring tool.
- (4) Check if the flared part "L" (Fig. 25) is spread uniformly and that there are no cracks.

Table 5

Pipe	Flare nut
Small pipe (6.35 mm dia.)	Small (width across flats 17 mm)
Small pipe (9.53 mm dia.)	Small (width across flats 22 mm)
Large pipe (12.7 mm dia.)	Large (width across flats 24 mm)
Large pipe (15.88 mm dia.)	Large (width across flats 24 mm)

Fig. 25



2. BENDING PIPES

The pipes are shaped by your hands. Be careful not to collapse them.

Do not bend the pipes in an angle more than 90°.

When pipes are repeatedly bent or stretched, the material will harden, making it difficult to bend or stretch them any more. Do not bend or stretch the pipes more than three times.

When bending the pipe, there is a possibility to collapse. In this case, cut the heat insulating pipe with a sharp cutter as shown in Fig. 27, and bend it after exposing the pipe. After bending the pipe as you want, be sure to put the heat insulating pipe back on the pipe, and secure it with tape.

Fig. 26

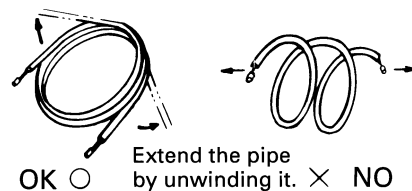
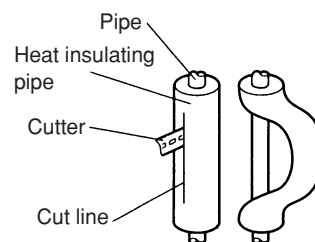


Fig. 27



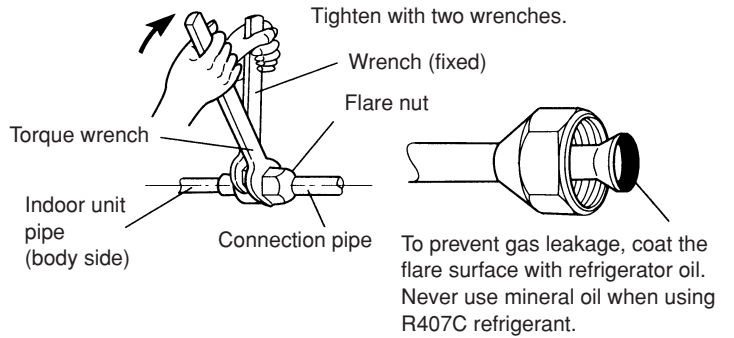
3. CONNECTION PIPES

⚠ CAUTION

- ① Be sure to apply the pipe against the port on the indoor unit correctly. If the centering is improper, the flare nut cannot be tightened smoothly. If the flare nut is forced to turn, the threads will be damaged.
- ② Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.

When the flare nut is tightened properly by your hand, hold the body side coupling with a separate spanner, then tighten with a torque wrench (Fig. 28).

Fig. 28



⚠ CAUTION

Hold the torque wrench at its grip, keeping it in the right angle with the pipe as shown in Fig. 28, in order to tighten the flare nut correctly.

Table 6: Flare nut tightening torque

Pipe	Tightening torque
Small pipe (6.35 mm dia.)	150 to 200 kgf · cm (14.7 to 19.6 N · m)
Small pipe (9.53 mm dia.)	310 to 350 kgf · cm (30.4 to 34.3 N · m)
Large pipe (12.7 mm dia.)	500 to 550 kgf · cm (49.0 to 53.9 N · m)
Large pipe (15.88 mm dia.)	750 to 800 kgf · cm (73.5 to 78.4 N · m)

⚠ CAUTION

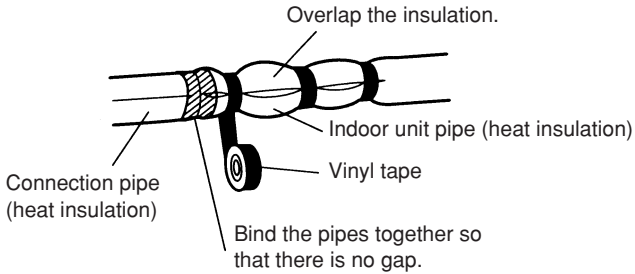
Be sure to connect the large pipe after connecting the small pipe completely.

5. FINISHING

(1) Insulate between pipes.

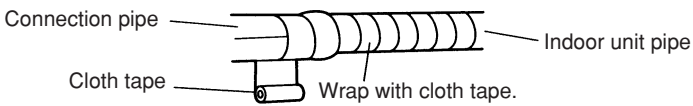
- For rear, right, and bottom piping, overlap the connection pipe heat insulation and indoor unit pipe heat insulation and bind them with vinyl tape so that there is no gap.
- For left and left rear piping, butt the connection pipe heat insulation and indoor unit pipe heat insulation together and bind them with vinyl tape so that there is no gap.

Fig. 29



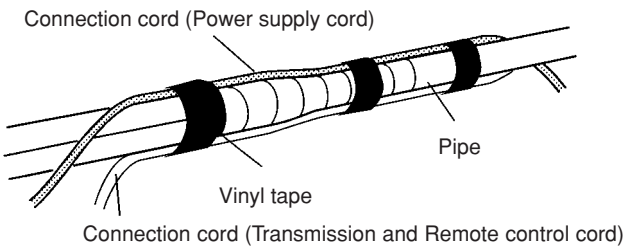
- For left and left rear piping, wrap the area which accommodates the rear piping housing section with cloth tape.

Fig. 30



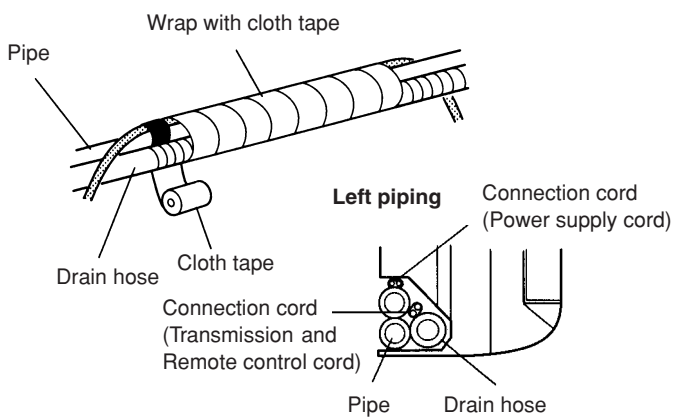
- For left and left rear piping, bind the connection cord to the top of the pipe with vinyl tape.

Fig. 31



- For left and left rear piping, bundle the piping and drain hose together by wrapping them with cloth tape over the range within which they fit into the rear piping housing section.

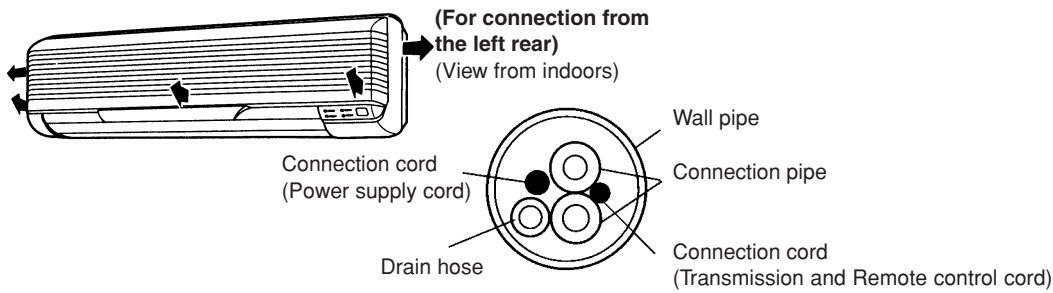
Fig. 32



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

Fig. 33



- (2) 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.)
- (3) Fasten the connection pipe to the outside wall with a saddle, etc.
- (4) Fill the gap between the outside wall pipe hole and the pipe with sealer so that rain water and wind cannot blow in.
- (5) Fasten the drain hose to the outside wall, etc.

Fig. 34

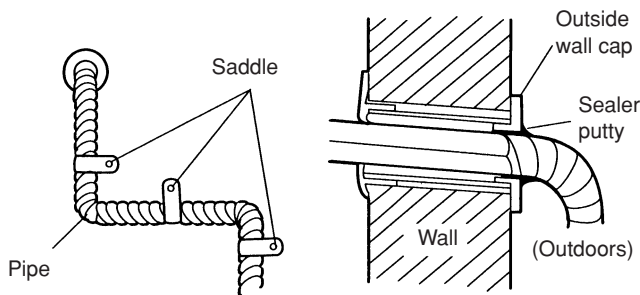
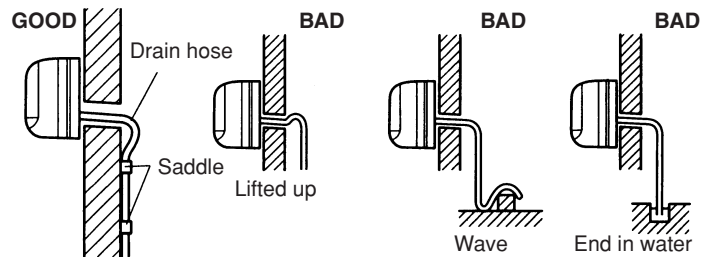


Fig. 35

Check the following:

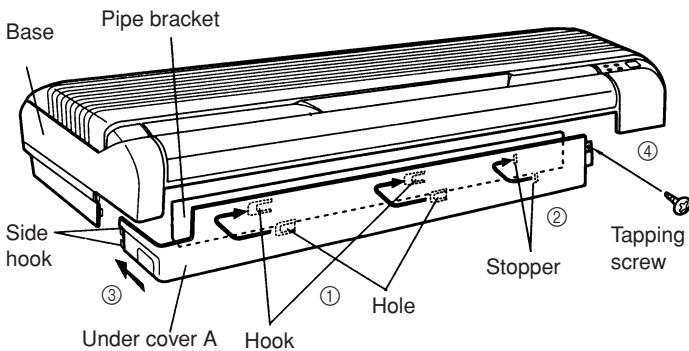


Installing the under covers

(1) Installing under cover A (Fig. 36)

- ① Hook the two pipe bracket hooks to the two holes in the back of under cover A.
- ② While pulling the left side of under cover A forward about 1 cm (at this time, hole hook ① so that it does not come unhooked), slide under cover A to the right and hook the hook.
- ③ Push the left side of under cover A in the arrow direction and hook the two side hooks to the base.
- ④ Install under cover A to the pipe bracket with the tapping screw.

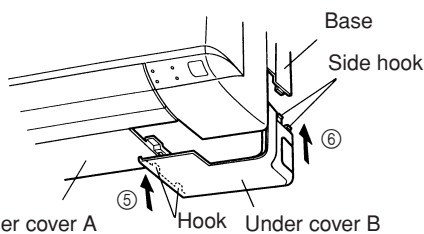
Fig. 36



(2) Installing under cover B (Fig. 37)

- ⑤ Push the left side of under cover B in the arrow direction and hook the two hooks to under cover A.
- ⑥ Push the right side of under cover B in the arrow direction and hook the two side hooks to the base.

Fig. 37



6. CIRCUIT BOARD SETTING

INDOOR UNIT SETTINGS

(1) Indoor unit addresses

Rotary switch (SW5) - - - Factory setting "0"

When connecting multiple indoor units to one refrigerant system, set the address at SW5 in sequence from 0.

(2) Refrigerant circuit address

Rotary switch (SW7) - - - Factory setting "0"

Rotary switch (SW8) - - - Factory setting "0"

In the case of multiple refrigerant systems, set SW7 and SW8 as shown in the Table 7 for each refrigerant system. Set to the same refrigerant circuit address as the outdoor unit.

Example: When SW8 is set to "1" and SW7 is set to "14", the refrigerant circuit address will be "30".

Table 7

Refrigerant circuit address	Rotary Switch Setting		Refrigerant circuit address	Rotary Switch Setting		Refrigerant circuit address	Rotary Switch Setting		Refrigerant circuit address	Rotary Switch Setting		Refrigerant circuit address	Rotary Switch Setting	
	INDOOR UNIT			INDOOR UNIT			INDOOR UNIT			INDOOR UNIT				
	SW8	SW7		SW8	SW7		SW8	SW7		SW8	SW7		SW8	SW7
0	0	0	20	1	4	40	2	8	60	3	12	80	5	0
1	0	1	21	1	5	41	2	9	61	3	13	81	5	1
2	0	2	22	1	6	42	2	10	62	3	14	82	5	2
3	0	3	23	1	7	43	2	11	63	3	15	83	5	3
4	0	4	24	1	8	44	2	12	64	4	0	84	5	4
5	0	5	25	1	9	45	2	13	65	4	1	85	5	5
6	0	6	26	1	10	46	2	14	66	4	2	86	5	6
7	0	7	27	1	11	47	2	15	67	4	3	87	5	7
8	0	8	28	1	12	48	3	0	68	4	4	88	5	8
9	0	9	29	1	13	49	3	1	69	4	5	89	5	9
10	0	10	30	1	14	50	3	2	70	4	6	90	5	10
11	0	11	31	1	15	51	3	3	71	4	7	91	5	11
12	0	12	32	2	0	52	3	4	72	4	8	92	5	12
13	0	13	33	2	1	53	3	5	73	4	9	93	5	13
14	0	14	34	2	2	54	3	6	74	4	10	94	5	14
15	0	15	35	2	3	55	3	7	75	4	11	95	5	15
16	1	0	36	2	4	56	3	8	76	4	12	96	6	0
17	1	1	37	2	5	57	3	9	77	4	13	97	6	1
18	1	2	38	2	6	58	3	10	78	4	14	98	6	2
19	1	3	39	2	7	59	3	11	79	4	15	99	6	3

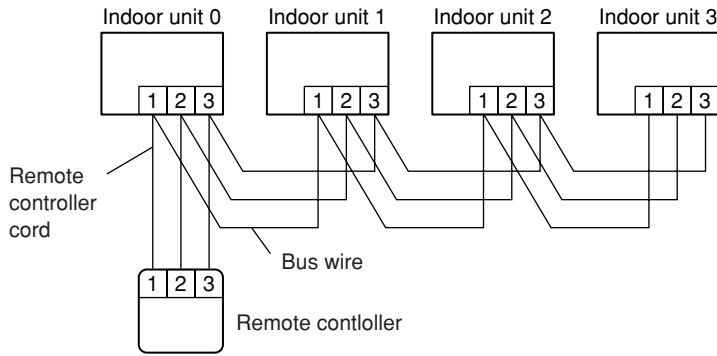
(3) Remote controller address

Rotary switch (SW9) - - - Factory setting "0"

When connecting multiple indoor units to one standard wired remote controller, set the address at SW9 in sequence from 0.

Fig. 38

Example If 4 indoor units are connected.



- (4) Model select switch
SW4, mounted on the circuit board, should be checked.

Table 8

Capacity	30	24	20	14
SW4-1	ON	OFF	ON	ON
SW4-2	ON	ON	OFF	ON
SW4-3	ON	ON	ON	OFF
SW4-4	OFF	OFF	OFF	OFF

⚠ CAUTION

Do not set any switches other than those specified in this sheet. The air conditioner may not operate correctly if any switches other than those specified are changed.

7. CUSTOMER GUIDANCE

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

- (1) Starting and stopping method, operation switching, temperature adjustment, timer, air flow adjustment, and other remote controller operations.
- (2) Air filter removal and cleaning.
- (3) Give the operating and installation manuals to the customer.

8. TEST OPERATION

Supply power to the crankcase heater for 12 hours prior to the start of operation in the winter.
The following is the procedure for the test operation.

1. TEST OPERATION USING CIRCUIT BOARD (OUTDOOR UNIT)

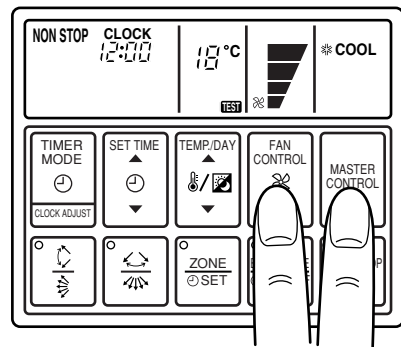
Refer to the Installation Instruction Sheet for the outdoor unit if the circuit board for the outdoor unit is to be used for the test operation.

2. TEST OPERATION USING REMOTE CONTROLLER

(1) Standard wired remote controller

- For test running, when the remote controller FAN CONTROL button and MASTER CONTROL button are pressed simultaneously for more than three seconds when the air conditioner is not running, the air conditioner starts and TEST is displayed on the remote controller display.
However, the SET TEMP./DAY setting button does not function, but all other buttons, displays, and protection functions operate (Fig. 39).

Fig. 39



- When EE : EE blinks at the current time display, there is an error inside the air conditioner. If the SET TIME button (↙) and SET TEMP./DAY button (↘) are pressed simultaneously for more than three seconds, the self diagnosis check will start and the error contents will be displayed at the current time display. In addition, the remote controller address will be displayed below. When the operation lamp lights, press the START/STOP button and after operation lamp goes off, perform the same operation (Fig. 40).

Fig. 40

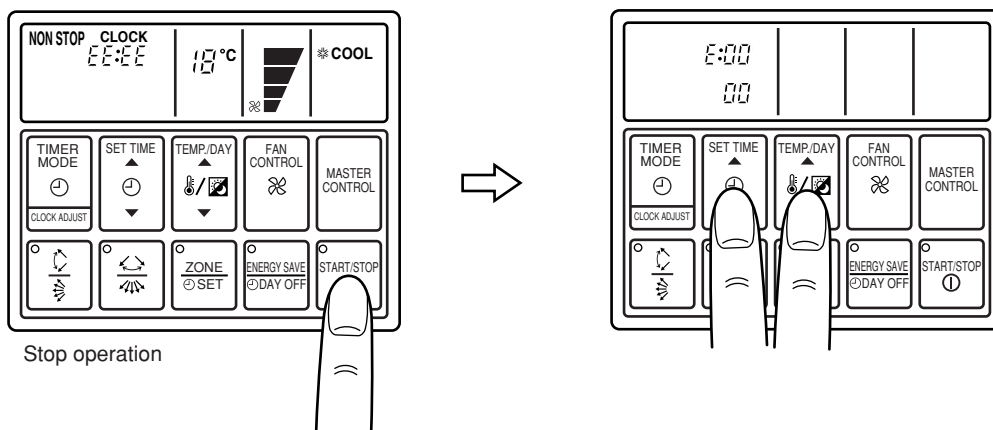


Table 9

Error cord	Error contents
E:00	No error
E:02	Model information abnormal
E:04	Power supply frequency abnormal
E:06	EEPROM access error
E:07	EEPROM deletion error
E:09	Room temperature thermistor error
E:0A	Indoor unit heat exchanger thermistor (middle) error
E:0B	Indoor unit heat exchanger thermistor (inlet) error
E:0C	Indoor unit heat exchanger thermistor (outlet) error

Error cord	Error contents
E:0d	Blower temperature thermistor error
E:11	Drain abnormal
E:12	Room temperature abnormal
E:13	Indoor unit fan error
E:1F	Transmission error
E:20	Node setting error
E:21	Parallel communication error
E:32	Outdoor unit error

- To stop test running, press the START/STOP button.
- For the operation method, refer to the operating manual and perform operation check.
- Check that there are no abnormal sounds or vibration sounds during test running.

(2) Standard wireless remote controller

- Press the remote control unit test run button while the air conditioner is running.
- At the end of test running, press the remote control unit start-stop button (Fig. 41).

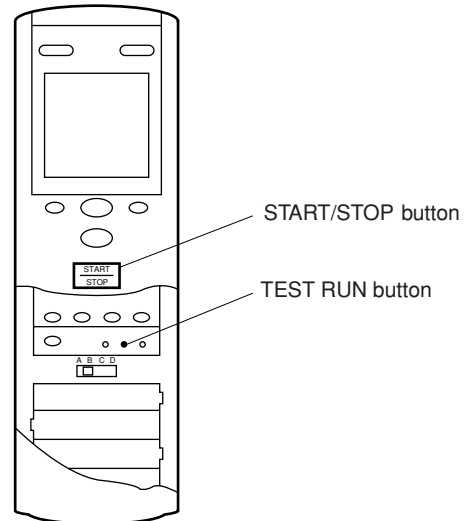
Operation can be checked by lighting and flashing of the display section OPERATION and TIMER lamps.

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.

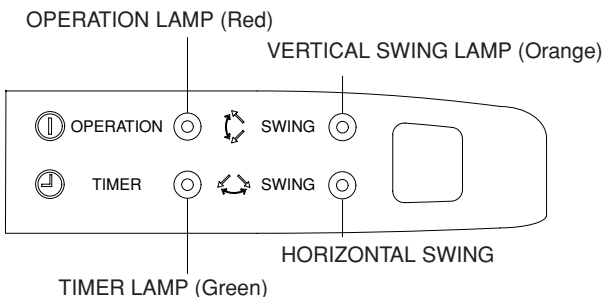
Fig. 41



9. AN ERROR DISPLAY

- Run the air conditioner in accordance with the operating manual.

Fig. 42



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

- Test running

When the air conditioner is run by pressing the remote controller test run button, the OPERATION and TIMER lamps flash slowly at the same time.

- Error

The OPERATION and TIMER lamps operate as follows (Table 10) according to the error contents.

Table 10

Error display				Error contents
OPERATION lamp	TIMER lamp	VERTICAL SWING lamp	HORIZONTAL SWING lamp	
Blinks	Blinks	Goes off	Goes off	Model information abnormal
Blinks	Blinks	Blinks	Blinks	Power supply frequency abnormal
Pulses 2times	Blinks	Goes off	Goes off	Room temperature thermistor error
Pulses 3times	Blinks	Pulses 1time	Goes off	Indoor unit heat exchanger thermistor (inlet) error
Pulses 3times	Blinks	Pulses 2times	Goes off	Indoor unit heat exchanger thermistor (middle) error
Pulses 3times	Blinks	Pulses 3times	Goes off	Indoor unit heat exchanger thermistor (outlet) error
Pulses 4times	Blinks	Goes off	Goes off	Drain abnormal
Pulses 5times	Blinks	Pulses 1time	Goes off	Communication error (Indoor unit ↔ remote controller)
Pulses 5times	Blinks	Pulses 2times	Goes off	Microcomputer error
Pulses 6times	Blinks	Goes off	Goes off	Indoor unit fan error
Pulses 7times	Blinks	Goes off	Goes off	Blower temperature thermistor error
Blinks	Pulses 3times	Pulses 3times	Goes off	Outdoor unit error
Blinks	Pulses 4times	Pulses 1time	Goes off	EEPOM access error
Blinks	Pulses 4times	Pulses 2times	Goes off	EEPROM deletion
Blinks	Pulses 5times	Pulses 1time	Goes off	Transmission error
Blinks	Pulses 5times	Pulses 2times	Goes off	Node setting error
Blinks	Pulses 6times	Goes off	Goes off	Parallel communication error
Blinks	Pulses 7times	Goes off	Goes off	Room temperature abnormal

10. FRONT PANEL REMOVAL

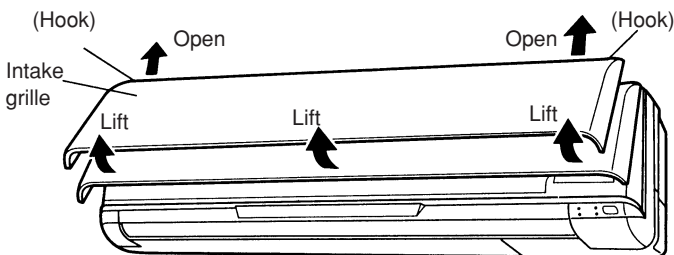
⚠ CAUTION

Install the front panel and intake grille securely. If installation is imperfect, the front panel or intake grille may fall off and cause injury.

1. INTAKE GRILLE REMOVAL

- (1) Open the intake grille.
- (2) Open the intake grille and lift the intake grille upward until the hook at the top of the intake grille is unhooked.

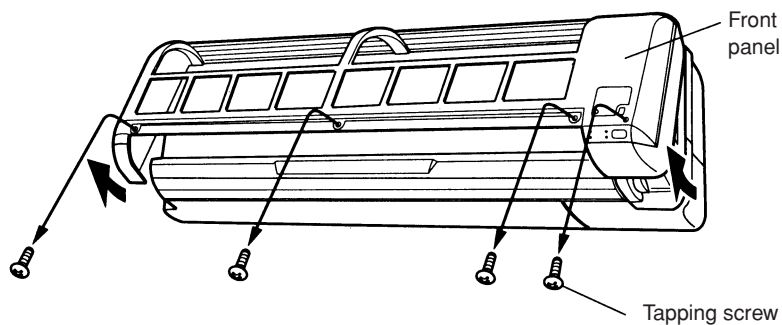
Fig. 43



2. FRONT PANEL REMOVAL

- (1) Remove the four tapping screws.
- (2) Remove the front panel by lifting the bottom of the front panel upward.

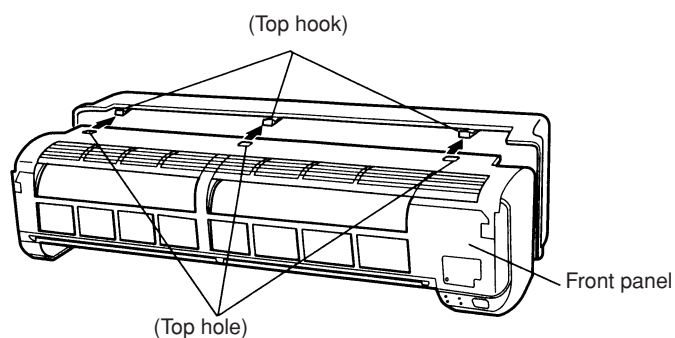
Fig. 44



3. FRONT PANEL INSTALLATION

- (1) Hook the top hole of the front panel to the hook of the base.
- (2) Fasten the front panel with the screw.

Fig. 45



Be sure that the top hole of the front panel is hooked securely to the hook of the base.