

Refrigerant

R410A

Ceiling Suspension Type

SPLIT TYPE AIR CONDITIONER

INSTALLATION INSTRUCTION SHEET

(PART NO. 9366160038)

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. |

This air conditioner uses new refrigerant HFC (R410A).

The basic installation work procedures are the same as conventional refrigerant models. However, pay careful attention to the following points:

① Since the working pressure is 1.6 times higher than that of conventional refrigerant models, some of the piping and installation and service tools are special. (See the table below.) Especially, when replacing a conventional refrigerant model with a new refrigerant R410A model, always replace the conventional piping and flare nuts with the R410A piping and flare nuts.

② Models that use refrigerant R410A have a different charging port thread diameter to prevent erroneous charging with conventional refrigerant and for safety. Therefore, check beforehand. [The charging port thread diameter for R410A is 1/2 UNF 20 threads per inch.]

③ Be more careful that foreign matter (oil, water, etc.) does not enter the piping than with refrigerant models. Also, when storing the piping, securely seal the openings by pinching, taping, etc.

④ When charging the refrigerant, take into account the slight change in the composition of the gas and liquid phases, and always charge from the liquid phase side whose composition is stable.

Special tools for R410A

| Tool name | Contents of change |
|----------------------|---|
| Gauge manifold | Pressure is high and cannot be measured with a conventional gauge. To prevent erroneous mixing of other refrigerants, the diameter of each port has been changed. It is recommended the gauge with seals -0.1 to 5.3 MPa (-76 cmHg to 53 kgf/cm ²) for high pressure, -0.1 to 3.8 MPa (-76 cmHg to 38 kgf/cm ²) for low pressure. |
| Charge hose | To increase pressure resistance, the hose material and base size were changed. |
| Vacuum pump | A conventional vacuum pump can be used by installing a vacuum pump adapter. |
| Gas leakage detector | Special gas leakage detector for HFC refrigerant R410A. |

Copper pipes

It is necessary to use seamless copper pipes and it is desirable that the amount of residual oil is less than 40 mg/10 m. Do not use copper pipes having a collapsed, deformed or discolored portion (especially on the interior surface). Otherwise, the expansion valve or capillary tube may become blocked with contaminants. As an air conditioner using R410A incurs pressure higher than when using conventional refrigerant, it is necessary to choose adequate materials. Thicknesses of copper pipes used with R410A are as shown in the table. Never use copper pipes thinner than that in the table even when it is available on the market.

| Thicknesses of Annealed Copper Pipes (R410A) | | |
|--|--|-----------|
| Pipe outside diameter | | Thickness |
| 6.35 mm (1/4 in.) | | 0.80 mm |
| 9.52 mm (3/8 in.) | | 0.80 mm |
| 12.70 mm (1/2 in.) | | 0.80 mm |
| 15.88 mm (5/8 in.) | | 1.00 mm |
| 19.05 mm (3/4 in.) | | 1.20 mm |

CONNECTION PIPE REQUIREMENT

CAUTION

The maximum lengths of this product are shown in the following table. If the units are further apart than this, correct operation can not be guaranteed.

| Diameter | | Pipe length | | Maximum height (between indoor and outdoor) |
|-------------------|--------------------|-------------|------|---|
| Liquid | Gas | MAX. | MIN. | |
| 9.52 mm (3/8 in.) | 15.88 mm (5/8 in.) | 30 m | 5 m | 15 m |

• Use pipe with water-resistant heat insulation.

CAUTION

Install heat insulation around both the gas and liquid pipes. Failure to do so may cause water leaks. Use heat insulation with heat resistance above 120 °C. (Reverse cycle model only)
In addition, if the humidity level at the installation location of the refrigerant piping is expected to exceed 70%, install heat insulation around the refrigerant piping. If the expected humidity level is 70-80%, use heat insulation that is 15 mm or thicker and if the expected humidity exceeds 80%, use heat insulation that is 20 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).

ELECTRICAL REQUIREMENT

• Electric wire size and breaker capacity:

| Power supply cord (mm ²) | | Connection cord (mm ²) | | Breaker capacity (A) |
|--------------------------------------|------|------------------------------------|------|----------------------|
| MAX. | MIN. | MAX. | MIN. | |
| 4.0 | 3.5 | 2.5 | 1.5 | 30 |

• Always use H07RN-F or equivalent to the connection cord.
• Install all electrical works in accordance to the standard.
• Install the disconnect device with a contact gap of at least 3 mm in all poles nearby the units. (Both indoor unit and outdoor unit)
• Install the circuit breaker nearby the units.

SELECTING THE MOUNTING POSITION

WARNING

Select installation locations that can properly support the weight of the indoor and outdoor units. Install the units securely so that they do 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 heat 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.

INDOOR UNIT

[FOR HALF CONCEALED INSTALLATION]

(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 air over the room.
(3) Do not install the unit where it will be exposed to direct sunlight.
(4) Install the unit where connection to the outdoor unit is easy.
(5) Install the unit where the drain pipe can be easily installed.
(6) Take servicing, etc., into consideration and leave the spaces shown in the figure. Also install the unit where the filter can be removed.

OUTDOOR UNIT

WARNING

① Install the unit where it will not be tilted by more than 5°.

② When installing the outdoor unit where it may exposed to strong wind, fasten it securely.

(1) Install the outdoor unit in a location which can withstand the weight of the unit and vibration, and which can install horizontally.
(2) Provide the indicated space to ensure good airflow.
(3) 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 airflow.)
(4) Do not install the unit near a source of heat, steam, or flammable gas.
(5) During heating operation, drain water flows from the outdoor unit. Therefore, install the outdoor unit in a place where the drain water flow will not be obstructed. (Reverse cycle model only)
(6) Do not install the unit where strong wind blows or where it is very dusty.
(7) Do not install the unit where people pass.
(8) Install the outdoor unit in a place where it will be free from being dirty or getting wet by rain as much as possible.
(9) Install the unit where connection to the indoor unit is easy.

• When there are obstacles at the back side.

• When there are obstacles at the back and front sides.

STANDARD PARTS

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

INDOOR UNIT ACCESSORIES

| Name and Shape | Q'ty | Application |
|----------------------------|------|---|
| Remote control unit | 1 | Use for air conditioner operation |
| Battery (penlight) | 2 | For remote control unit |
| Remote control unit holder | 1 | For mounting the remote control unit |
| Tapping screw (ø3 × 12) | 2 | For remote control unit holder installation |
| Drain hose insulation | 1 | Adhesive type 70 × 230 |
| VT wire | 1 | For fixing the drain hose L 280 mm |

| Name and Shape | Q'ty | Application |
|--------------------------------|--------------------|--|
| Coupler heat insulator (large) | 2 | For indoor side pipe joint (Gas pipe) |
| Coupler heat insulator (small) | 1 | For indoor side pipe joint (Liquid pipe) |
| Nylon fastener | Large 4 Small 4 | For fixing the coupler heat insulator |
| Special nut A (large flange) | 4 | For installing indoor unit |
| Special nut B (small flange) | 4 | For installing indoor unit |
| Installation template | 1 | For positioning the indoor unit |
| Auxiliary pipe assembly | 1 | For connecting the piping |

OUTDOOR UNIT ACCESSORIES

| Name and Shape | Q'ty | Application |
|-------------------|------|---|
| Drain pipe | 1 | For outdoor unit drain piping work (May not be supplied, depending on the model.) |
| Drain cap | 2 | |
| Insulation (seal) | 1 | For filling in a gap at the entrance of connection cords |

OPTIONAL PARTS

The following options are available.
• DRAIN PUMP UNIT: UTR-DB241 (P/N 9034087001)

INSTALLATION PROCEDURE

1 PREPARING INDOOR UNIT INSTALLATION

REMOVE THE INTAKE GRILLE AND SIDE COVER

(1) Remove the two Air filters.
(2) Remove the two Intake grilles.
• For ③ Left rear drain and ⑤ Left drain: Remove air filters and intake grilles at three places. (Refer to "INDOOR UNIT INSTALLATION".)
(3) Remove the Side cover A (Right side) and Side cover B (Right and Left side).
• For ③ Left drain : Remove both the Side cover A (Right and Left side). (Refer to "INDOOR UNIT INSTALLATION".)
(4) This air conditioner can be set up to intake fresh air. For information about how to install for fresh-air intake, refer to "FRESH-AIR INTAKE".

2 INDOOR UNIT INSTALLATION

You can use the accessory template to help you install the indoor unit. The template helps you determine the appropriate locations for suspension bolts and pipe opening (drain pipe and connection cord).

1. LOCATION OF CEILING SUSPENSION BOLTS

[For Half-Concealed Installation]

- Suspension-bolt pitch should be as shown in the figure.

2. SELECT PIPING DIRECTION

Select connection piping and drain piping directions.

[For ③ Left rear piping, ⑤ Left piping]

- Transfer the Drain cap and Drain cap seal.

3. DRILLING THE HOLES AND ATTACHING THE SUSPENSION BOLTS

(1) Drill ø25 mm holes at the suspension-bolt locations.
(2) Install the bolts, then temporarily attach Special nuts A and B and a normal M10 nut to each bolt. (The two special nuts are provided with the unit. The M10 nut must be obtained locally.) Refer to the figure.

Bolt Strength 980 to 1470 N (100 to 150 kgf)

4 CONNECTING THE PIPE

CAUTION

① Do not use mineral oil on flared part. Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.

② While welding the pipes, be sure to blow dry nitrogen gas through them.

③ The maximum lengths of this product are shown in the table. If the units are further apart than this, correct operation can not be guaranteed.

1. FLARING

(1) Cut the connection pipe to the necessary length with a pipe cutter.
(2) Hold the pipe downward so that cuttings will not enter the pipe and remove the burrs.
(3) Insert the flare nut (always use the flare nut attached to the indoor and outdoor units respectively) onto the pipe and perform the flare processing with a flare tool.
Use the special R410A flare tool, or the conventional flare tool.

| Pipe outside diameter | Dimension A (mm) |
|-----------------------|------------------|
| 6.35 mm (1/4 in.) | |
| 9.52 mm (3/8 in.) | |
| 12.70 mm (1/2 in.) | |
| 15.88 mm (5/8 in.) | |
| 19.05 mm (3/4 in.) | |

| Pipe outside diameter | Dimension B (mm) |
|-----------------------|------------------|
| 6.35 mm (1/4 in.) | 9.1 |
| 9.52 mm (3/8 in.) | 13.2 |
| 12.70 mm (1/2 in.) | 16.6 |
| 15.88 mm (5/8 in.) | 19.7 |
| 19.05 mm (3/4 in.) | 24.0 |

When using conventional flare tools to flare R410A pipes, the dimension A should be approximately 0.5 mm more than indicated in the table [for flaring with R410A flare tools] to achieve the specified flaring. Use a thickness gauge to measure the dimension A.

Width across flats

| Pipe outside diameter | Width across flats of Flare nut |
|-----------------------|---------------------------------|
| 6.35 mm (1/4 in.) | 17 mm |
| 9.52 mm (3/8 in.) | 22 mm |
| 12.70 mm (1/2 in.) | 26 mm |
| 15.88 mm (5/8 in.) | 29 mm |
| 19.05 mm (3/4 in.) | 36 mm |

[If using anchor bolts]

(1) Drill holes for anchor bolts at the locations at which you will set the suspension bolts. Note that anchor bolts are M10 bolts (to be obtained locally).
(2) Install the anchor bolts, then temporarily attach special nut "B" (included) and a locally-procured M10 nut to each of the bolts.

Anchor-Bolt Strength 980 to 1470 N (100 to 150 kgf)

4. INSTALLING THE INDOOR UNIT

(1) Lift unit so that suspension bolts pass through the suspension fittings at the sides (four places), and slide the unit back.

(2) Fasten the indoor unit into place by tightening-up the special "B" bolts and the M10 nuts. Make sure that unit is secure and will not shift back and forth.

[For Half-Concealed Installation]

When installing the indoor unit in a semi-concealed orientation, make sure to reinforce the insulation of the unit on all sides. Drops of water may fall from the unit if it is not thoroughly insulated.

CAUTION

In order to check the drainage, be sure to use a level during installation of the indoor unit. If the installation site of the indoor unit is not level, water leakage may occur.

5. DRAIN PIPING

CAUTION

Install the drain pipe in accordance with the instructions in this installation instruction sheet and keep the area warm enough to prevent condensation. Problems with the piping may lead to water leaks.

- Install the drain pipe with downward gradient (1/50 to 1/100) and so there are no rises or traps in the pipe.
- Use general hard polyvinyl chloride pipe (VP25) [outside diameter 38 mm].
- During installation of the drain pipe, be careful to avoid applying pressure to the drain port of the indoor unit.
- When the pipe is long, install supporters.
- Do not perform air bleeding.
- Always heat insulate (8 mm or over thick) the indoor side of the drain pipe.

(1) Install insulation for the drain pipe. Cut the included insulation material to an appropriate size and adhere it to the pipe.

(2) If "③ Right rear piping" : fasten the drain pipe with VT wire so that the pipe slopes correctly within the indoor unit.

• For ② Top piping and ③ Right piping connections, use the Auxiliary pipe (Gas pipe) provided.

(5) When the flare nut is tightened properly by your hand, use a torque wrench to finally tighten it.

CAUTION

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

| Flare nut | Tightening torque |
|-------------------------|--------------------------------------|
| 6.35 mm (1/4 in.) dia. | 14 to 18 N·m (140 to 180 kgf·cm) |
| 9.52 mm (3/8 in.) dia. | 33 to 42 N·m (330 to 420 kgf·cm) |
| 12.70 mm (1/2 in.) dia. | 50 to 62 N·m (500 to 620 kgf·cm) |
| 15.88 mm (5/8 in.) dia. | 63 to 77 N·m (630 to 770 kgf·cm) |
| 19.05 mm (3/4 in.) dia. | 100 to 110 N·m (1000 to 1100 kgf·cm) |

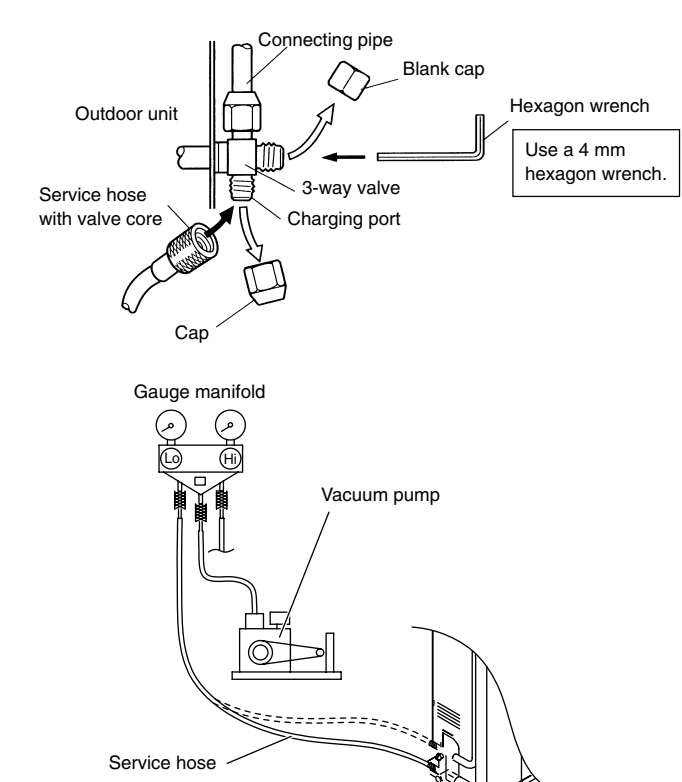
Outdoor unit
Tighten the flare nut of the connection pipe at the outdoor unit valve connector. The tightening method is the same as that as at the indoor side.

- Continued on back -

4. VACUUM

- (1) Remove the cap, and connect the gauge manifold and the vacuum pump to the charging valve by the service hoses.
- (2) Vacuum the indoor unit and the connecting pipes until the pressure gauge indicates -0.1 MPa (-76 cmHg).
- (3) When -0.1 MPa (-76 cmHg) is reached, operate the vacuum pump for at least 30 minutes.
- (4) Disconnect the service hoses and fit the cap to the charging valve to the specified torque.
- (5) Remove the blank caps, and fully open the spindles of the 2-way and 3-way valves with a hexagon wrench [Torque: 6-7 N·m (60 to 70 kgf·cm)].
- (6) Tighten the blank caps of the 2-way valve and 3-way valve to the specified torque.

| Blank cap | Tightening torque | |
|-------------------|--------------------|----------------------------------|
| | 6.35 mm (1/4 in.) | 20 to 25 N·m (200 to 250 kgf·cm) |
| Charging port cap | 9.52 mm (3/8 in.) | 20 to 25 N·m (200 to 250 kgf·cm) |
| | 12.70 mm (1/2 in.) | 25 to 30 N·m (250 to 300 kgf·cm) |
| | 15.88 mm (5/8 in.) | 30 to 35 N·m (300 to 350 kgf·cm) |
| | 19.05 mm (3/4 in.) | 35 to 40 N·m (350 to 400 kgf·cm) |



- CAUTION**
- ① Do not purge the air with refrigerants, but use a vacuum pump to vacuum the installation! There is no extra refrigerant in the outdoor unit for air purging!
 - ② Use a vacuum pump and gauge manifold and charging hose for R410A exclusively. Using the same vacuum for different refrigerants may damage the vacuum pump or the unit.

5. ADDITIONAL CHARGE

Refrigerant suitable for a piping length of 7.5 m is charged in the outdoor unit at the factory.
When the piping is longer than 7.5 m, additional charging is necessary. For the additional amount, see the table below.

| Pipe length | 7.5 m (25 ft) | 10 m (33 ft) | 15 m (49 ft) | 20 m (66 ft) | 25 m (82 ft) | 30 m (99 ft) |
|------------------------|-----------------------------|--------------|----------------|-----------------|-----------------|-----------------|
| | | None | 100 g (3.5 oz) | 300 g (10.6 oz) | 500 g (17.6 oz) | 700 g (24.7 oz) |
| Additional refrigerant | Heat & Cool (Reverse cycle) | None | 100 g (3.5 oz) | 300 g (10.6 oz) | 500 g (17.6 oz) | 700 g (24.7 oz) |
| Cooling model | None | None | 50 g (1.8 oz) | 150 g (5.3 oz) | 250 g (8.8 oz) | 350 g (12.3 oz) |
| | Cooling model | None | 50 g (1.8 oz) | 150 g (5.3 oz) | 250 g (8.8 oz) | 350 g (12.3 oz) |

Between 7.5 m and 30 m, when using a connection pipe other than that in the table, charge additional refrigerant with 40 g (1.4 oz)/1 m (3.3 ft) (Reverse cycle model), 20 g (0.71 oz)/1 m (3.3 ft) (Cooling model) as the criteria.

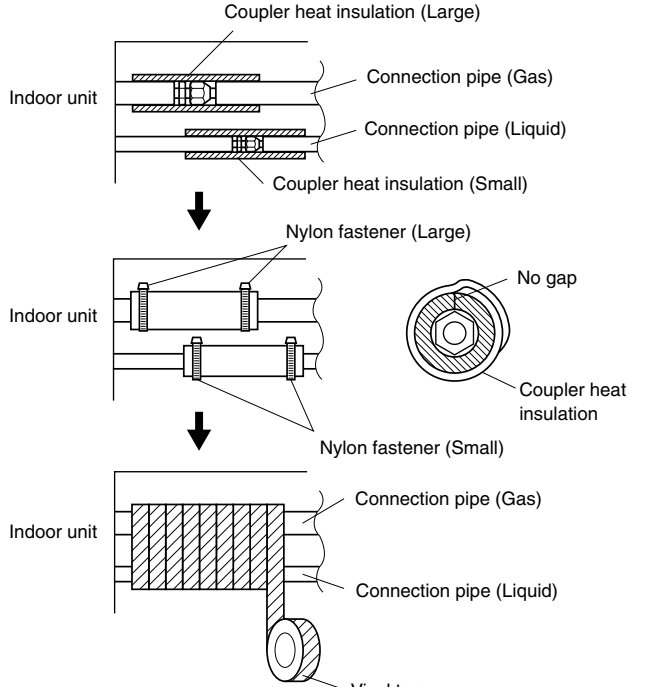
- CAUTION**
- ① When moving and installing the air conditioner, do not mix gas other than the specified refrigerant (R410A) inside the refrigerant cycle.
 - ② When charging the refrigerant R410A, always use an electronic balance for refrigerant charging (to measure the refrigerant by weight).
 - ③ When charging the refrigerant, take into account the slight change in the composition of the gas and liquid phases, and always charge from the liquid phase side whose composition is stable.
 - ④ Add refrigerant from the charging valve after the completion of the work.
 - ⑤ If the units are further apart than the maximum pipe length, correct operation can not be guaranteed.

6. GAS LEAKAGE INSPECTION

- CAUTION**
- ① After connecting the piping, check the all joints for gas leakage with gas leak detector.
 - ② When inspecting gas leakage, always use the vacuum pump for pressure. Do not use nitrogen gas.

7. HEAT INSULATION ON THE PIPE JOINTS (INDOOR SIDE ONLY)

After checking for gas leaks, insulate by wrapping insulation around the two parts (Gas and Liquid) of the indoor unit coupling, using the coupler heat insulation.
After installing the coupler heat insulation, wrap both ends with vinyl tape so that there is no gap.
Secure both ends of the heat insulation material using nylon fasteners. And finally fix connection pipe (Liquid) to connection pipe (Gas) by rolling vinyl tape over coupler heat insulation (Gas) and coupler heat insulation (Liquid).



- When using an auxiliary pipe, make sure that the fastener used is insulated in the same way.

CAUTION

There should be no gaps between the insulation and the product.

5

POWER

- WARNING**
- ① The rated voltage of this product is 230 V A.C. 50 Hz.
 - ② Before turning on verify that the voltage is within the 198 V to 264 V range.
 - ③ Always use a special branch circuit and install a special receptacle to supply power to the air conditioner.
 - ④ Use a special branch circuit breaker and receptacle matched to the capacity of the air conditioner. (Install in accordance with standard.)
 - ⑤ Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.
 - ⑥ Install a leakage special branch circuit breaker in accordance with the related laws and regulations and electric company standards.

- CAUTION**
- ① 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.
 - ② When the voltage is low and the air conditioner is difficult to start, contact the power company the voltage raised.

6

ELECTRICAL WIRING

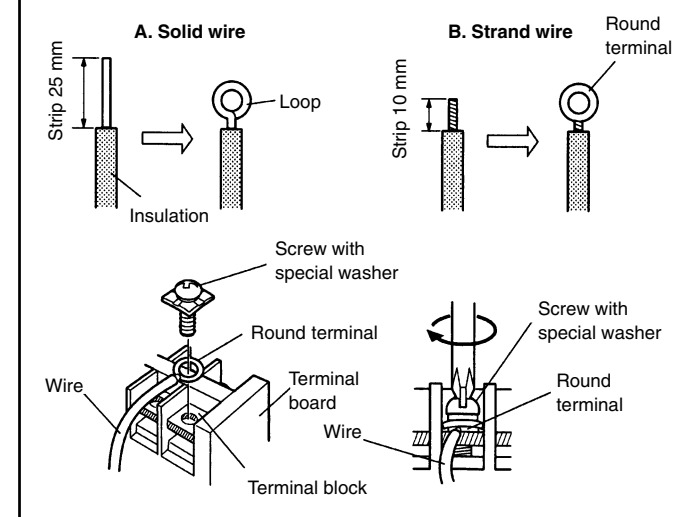
- WARNING**
- ① Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.
 - ② Match the terminal board numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.
 - ③ Connect the connection cords 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.

HOW TO CONNECT WIRING TO THE TERMINALS

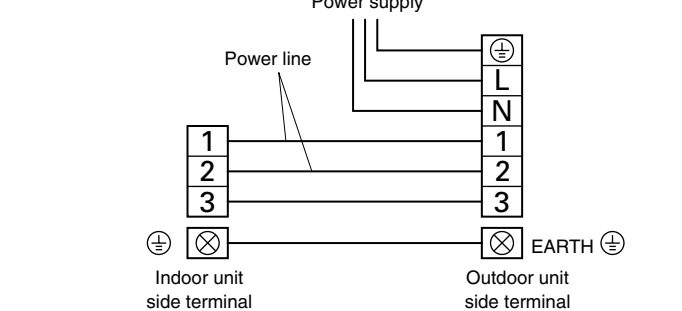
- A. For solid core wiring (or F-cable)**
- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 25 mm to expose the solid wire.
 - (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
 - (3) Using pliers, bend the solid wire to form 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

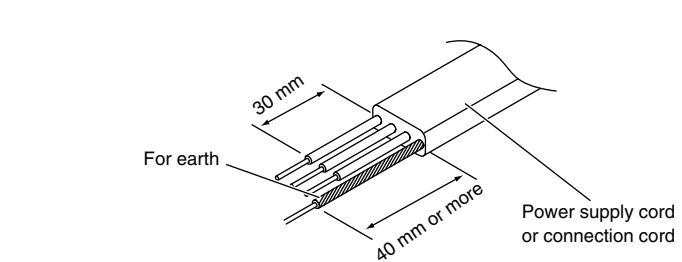
- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 10 mm to expose the strand wiring.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using a round terminal fastener or pliers, securely clamp a round terminal to each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



1. CONNECTION DIA GRAMS



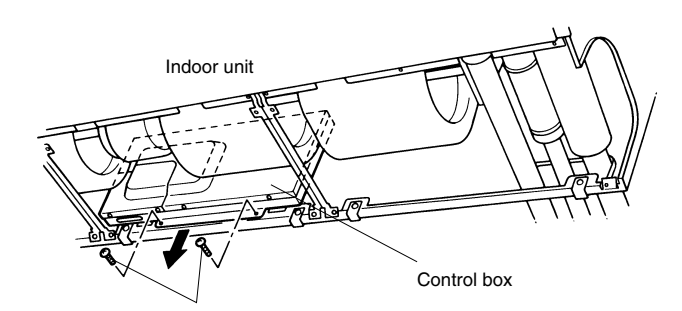
2. CONNECTION CORD PREP ARATION



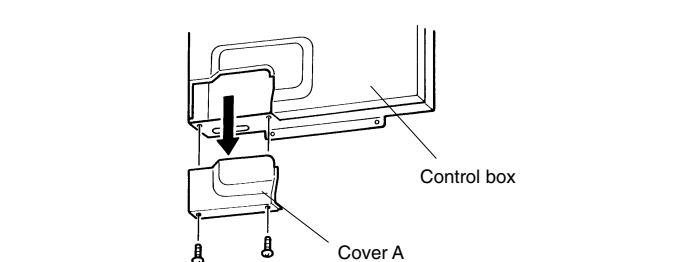
3. INDOOR UNIT

- CAUTION**
- Use care not to mistake the power supply cord and connection wires when installing.

- (1) Remove the two tapping screws and pull the control box downward.

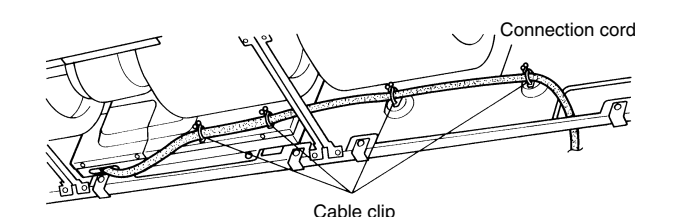
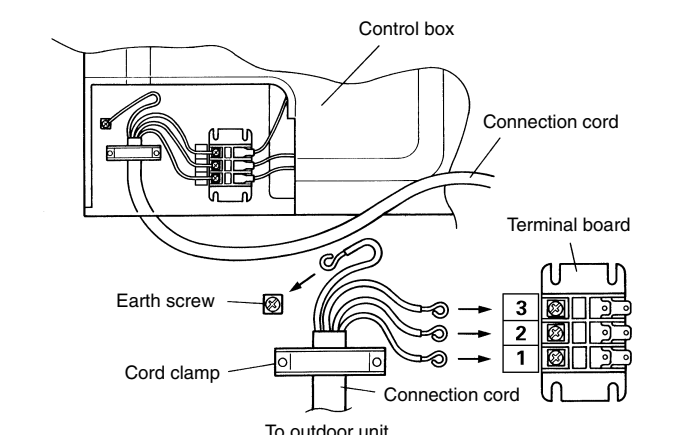


- (2) Remove the Cover A and install the Connection cord.
- (3) Reattach Cover A. Then fasten the control box back into its original position using the two tapping screws.



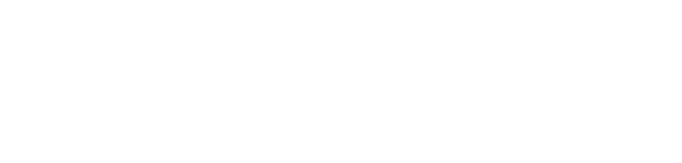
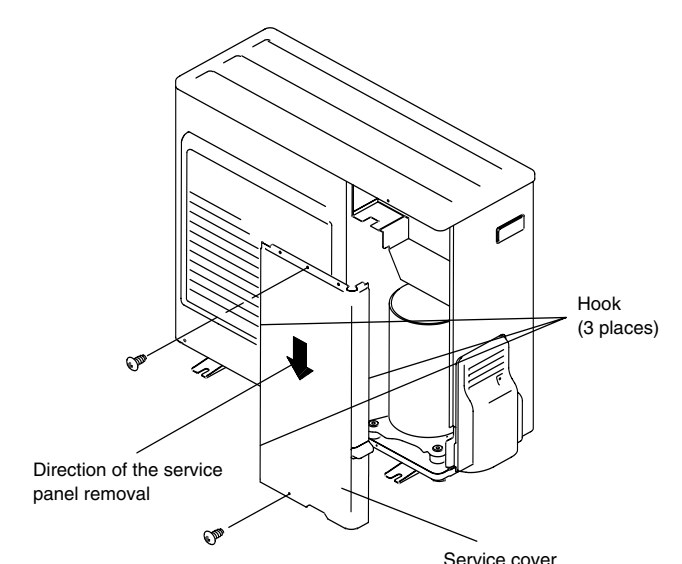
- (4) After wiring is complete, clamp the Connection cord with the Cord clamp.

- (5) Attach the connection cord and cable clips. Make sure that they are positioned so that they will not interfere with opening and closing of the intake grille or with removal and installation of the air filters.

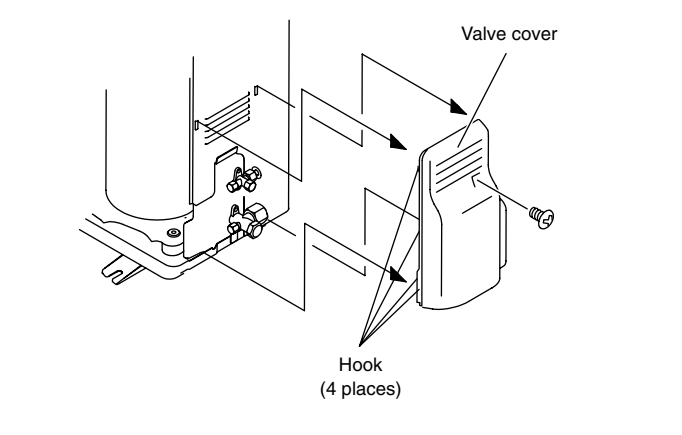


4. OUTDOOR UNIT

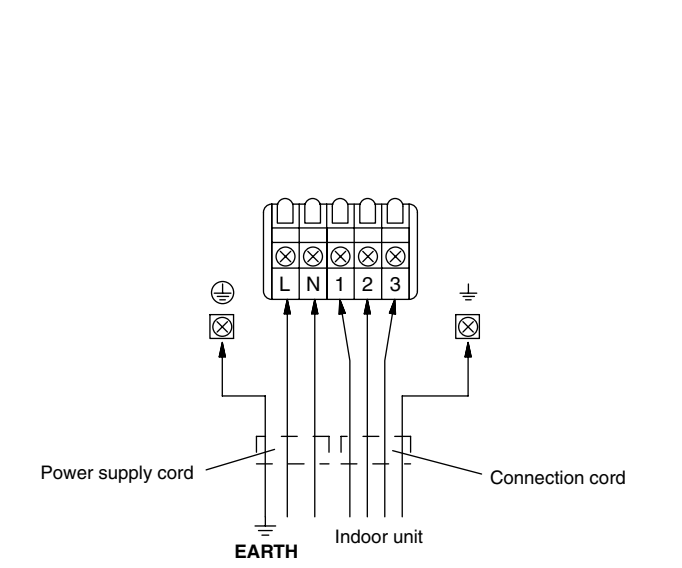
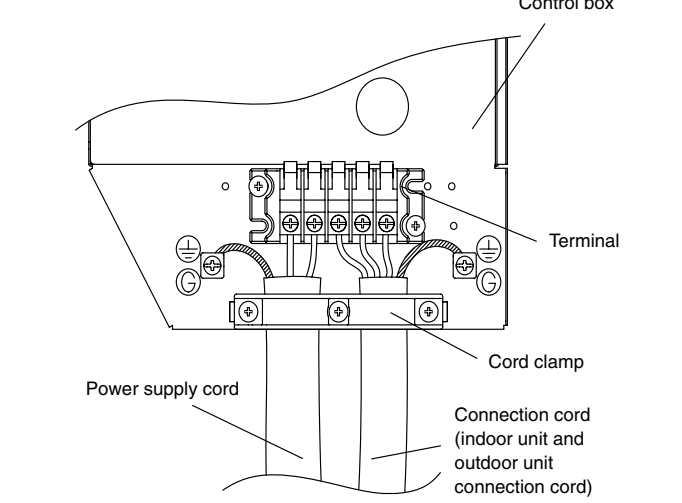
- (1) Service cover removal.
 - Remove the two mounting screws.
 - Remove the service cover by pushing downwards.



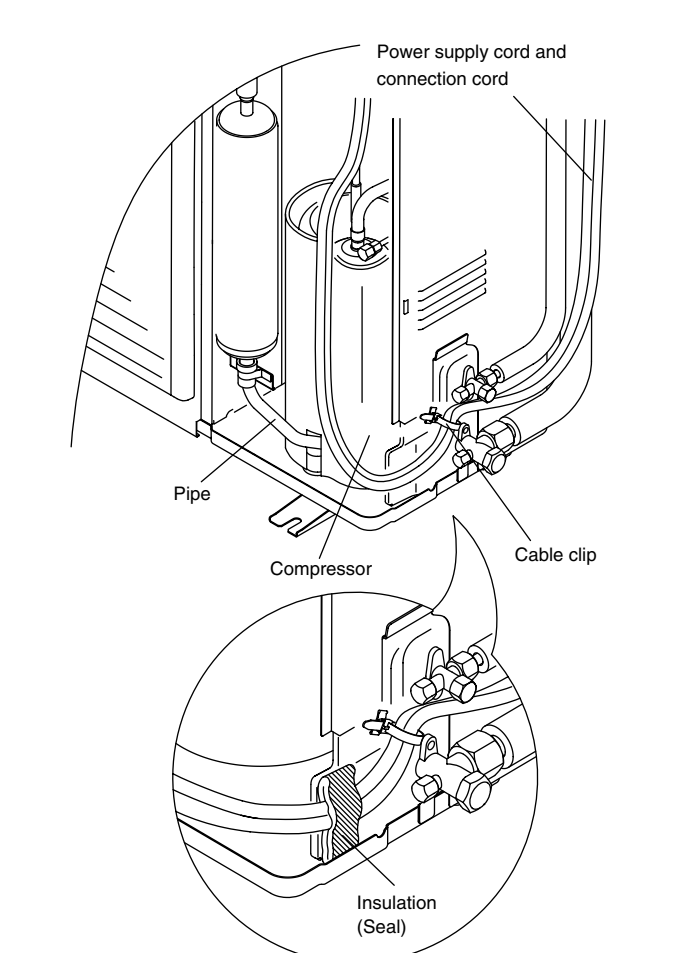
- (2) Valve cover removal.
 - Remove the one mounting screw.
 - Remove the valve cover by sliding upward.



- (3) Connect the power supply cord and the connection cord to terminal.
- (4) Fasten the power supply cord and connection cord with cord clamp.

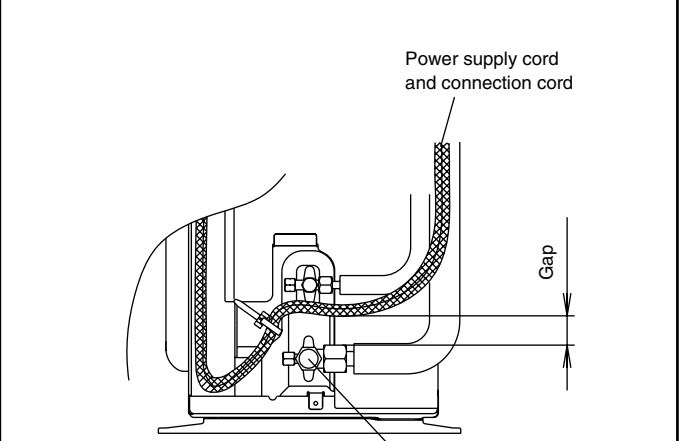


- (5) Fill in a gap at the entrance of the cords with insulation (seal).



CAUTION

Do not make power supply cord and connection cord come in contact with valve (Gas).



- (6) Put the service cover and valve cover back after completion of the work.

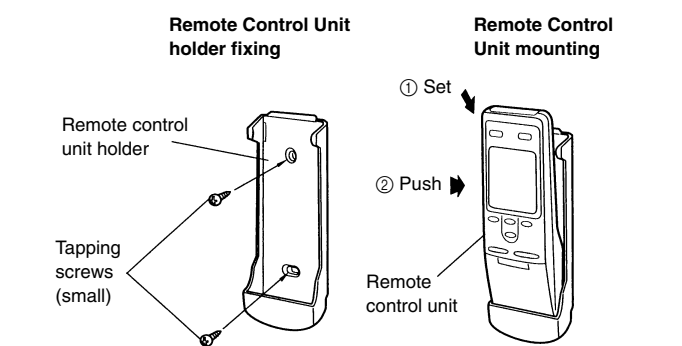
7

REMOTE CONTROL UNIT INSTALLATION

- CAUTION**
- ① Check that the indoor unit correctly receives the signal from the remote control unit, then install the remote control unit holder.
 - ② 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

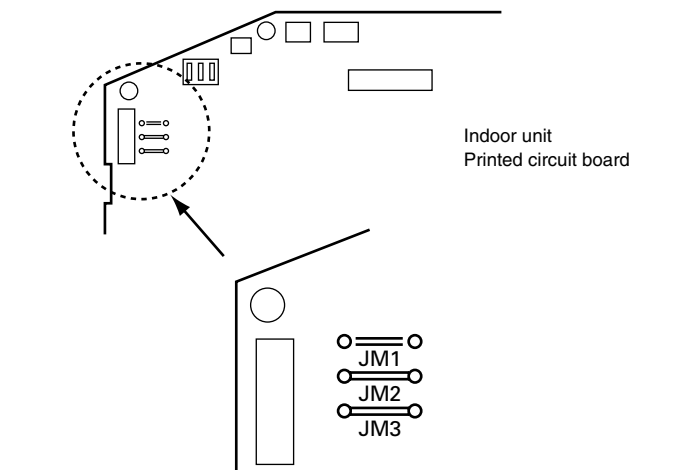
- Install the remote control unit holder to a wall or pillar with the tapping screws.



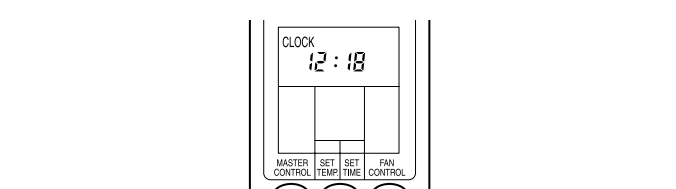
2. SWITCHING REMOTE CONTROL UNIT SIGNAL CODE

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.

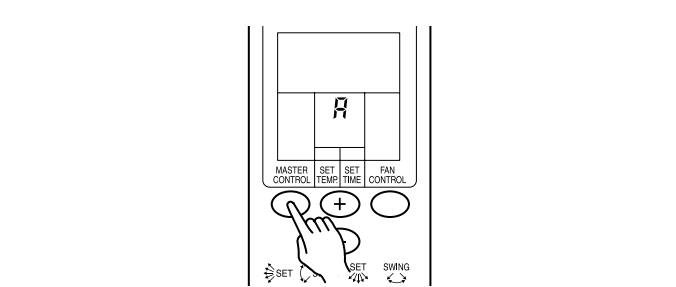
| Jumper wire | | Remote control unit signal code |
|-------------|------------|---------------------------------|
| JM2 | JM3 | |
| Connect | Connect | A (Primary setting) |
| Connect | Disconnect | B |
| Disconnect | Connect | C |
| Disconnect | Disconnect | D |



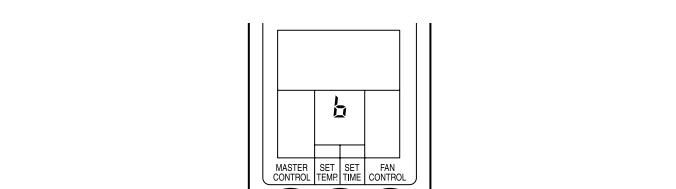
- Remote control unit settings
- (1) Press the START/STOP button and display only the clock.



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



- (3) Change the signal code with the <C>/<D> button (R-b-c-d).



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

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FINISHING

- (1) Install the filter guide.
- (2) Install the intake grilles.
- (3) Install side covers A and B (if the unit is installed in a half-concealed orientation, only install side cover A).
- (4) Install the air filters.

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CUSTOMER GUIDANCE

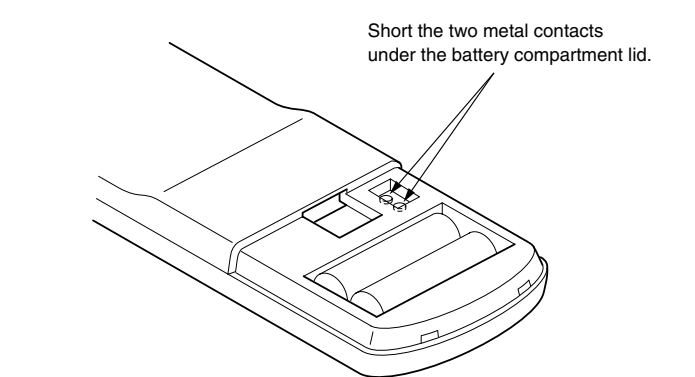
Explain the following to the customer in accordance with the operating manual:

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

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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).



- To end test operation, press the remote control unit START/STOP button.
(When the air conditioner is run by pressing the remote control unit TEST RUN button, the OPERATION and TIMER lamps will simultaneously flash slowly.)

1. INDOOR UNIT

- (1) Is operation of each button on the remote control unit normal?
- (2) Does each lamp light normally?
- (3) Do not air flow direction flap and louvers operate normally?
- (4) Is the drain normal?

2. OUTDOOR UNIT

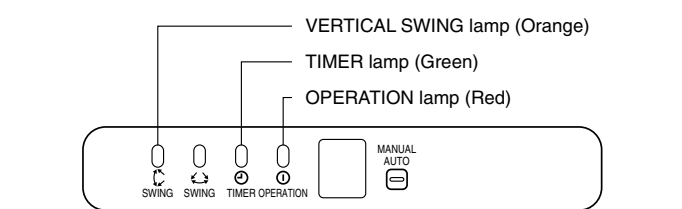
- (1) Is there any abnormal noise and vibration during operation?
- (2) Will noise, wind, or drain water from the unit disturb the neighbors?
- (3) Is there any gas leakage?

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AN ERROR DISPLAY

1. INDOOR UNIT

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



- Test running
When the air conditioner is run by pressing the remote control unit test run button, the OPERATION, TIMER and VERTICAL SWING lamps flash slowly at the same time.

- Error
The OPERATION, TIMER and VERTICAL SWING lamps operate as follows according to the error contents.

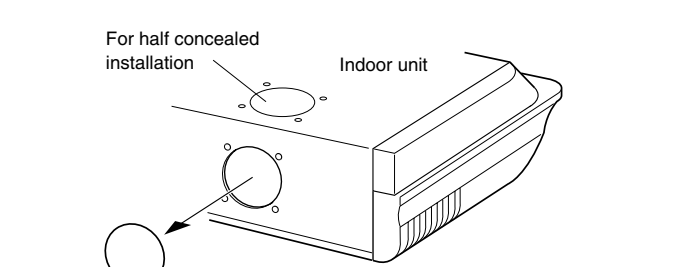
| OPERATION lamp (RED) | TIMER lamp (GREEN) | SWING lamp (ORANGE) | Error contents |
|----------------------|--------------------|---------------------|--|
| ○ | ○ | × | Indoor EEPROM abnormal |
| ○ | ○ | ○ | Outdoor EEPROM abnormal |
| (2 times) ● | ○ | × | Indoor room temperature sensor open |
| (2 times) ● | ○ | ○ | Indoor room temperature sensor shortcircuited |
| (3 times) ● | ○ | × | Indoor heat exchanger temperature sensor shortcircuited |
| (3 times) ● | ○ | ○ | Indoor heat exchanger temperature sensor shortcircuited |
| (4 times) ● | ○ | × | Float switch operated |
| (5 times) ● | ○ | × | Indoor signal abnormal |
| (5 times) ● | ○ | ○ | Outdoor signal abnormal |
| (6 times) ● | ○ | × | Indoor fan abnormal |
| ○ | (2 times) ● | × | Outdoor power source connection abnormal |
| ○ | (3 times) ● | × | Outdoor heat exchanger temperature sensor open |
| ○ | (3 times) ● | ○ | Outdoor heat exchanger temperature sensor shortcircuited |
| ○ | (4 times) ● | × | Outdoor temperature sensor open |
| ○ | (4 times) ● | ○ | Outdoor temperature sensor shortcircuited |
| ○ | (5 times) ● | × | Outdoor discharge pipe temperature sensor open |
| ○ | (5 times) ● | ○ | Outdoor discharge pipe temperature sensor shortcircuited |
| ○ | (6 times) ● | × | Outdoor high pressure abnormal |
| ○ | (7 times) ● | × | Outdoor discharge pipe temperature abnormal |

- : 0.1s ON/0.1s OFF (flash) × : OFF
- : 0.5s ON/0.5s OFF (flash)

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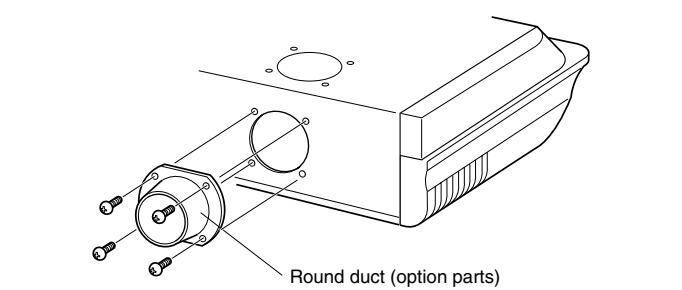
FRESH-AIR INTAKE

- (1) Open up the knockout hole for the fresh-air intake, as shown in the figure. (If using half-concealed installation, open up the top knockout hole instead.)



- CAUTION**
- ① When removing the cabinet (iron plate), be careful not to damage the indoor unit internal parts and surrounding area (outer case).
 - ② When processing the cabinet (iron plate), be careful not to injure yourself with burrs, etc.

- (2) Fasten the round flange (optional) to the fresh-air intake, as shown in the figure. (If using half-concealed installation, attach to the top.)



[After completing "1 INDOOR UNIT INSTALLATION" ...]

- (3) Connect the duct to the round flange.
- (4) Seal with a band and vinyl tape, etc. so that air does not leak from the connection.

