

USER'S MANUAL



Floor Ceiling Inverter Indoor R-410A 50/60HZ

YHFJXH(012-024)BAM(R)- -FX



Read this manual before installation and operation
Make sure that it is well kept for later reference

Contents

Cautions 3

Safety Precautions 4

Parts and Functions 4

Operation 6

Cleaning and Care 8

Operation Tips 8

Troubleshooting 9

Installation Procedure 11

Test Run 17

English

EUROPEAN REGULATIONS CONFORMITY FOR THE MODELS

CE

All the products are in conformity with the following European provision:

- Low Voltage Directive 73/23/EEC
- Low Voltage Directive 2006/95/EC
- Electromagnetic Compatibility 89/336/EEC
- Electromagnetic Compatibility 2004/108/EC

ROHS

The products are fulfilled with the requirements in the directive 2002/95/EEC of the European parliament and of council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (EU RoHS Directive)

WEEE

In accordance with the directive 2002/96/CE of the European parliament, herewith we inform the consumer about the disposal requirements of the electrical and electronic products.

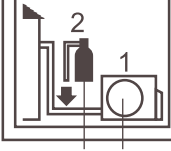
DISPOSAL REQUIREMENTS:



Your air conditioning product is marked with this symbol. This means that electrical and electronic products shall not be mixed with unsorted household waste. Do not try to dismantle the system yourself: the dismantling of the air

conditioning system, treatment of the refrigerant, of oil and of other part must be done by a qualified installer in accordance with relevant local and national legislation. Air conditioners must be treated at a specialized treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. Please contact the installer or local authority for more information. Battery must be removed from the remote controller and disposed of separately in accordance with relevant local and national legislation.

IMPORTANT INFORMATION REGARDING THE REFRIGERANT USED

Contains fluorinated greenhouse gases covered by the Kyoto Protocol		A
R410A	1 = <input type="text"/> kg	B
	2 = <input type="text"/> kg	C
	1+2 = <input type="text"/> kg	D
F	E	

This product contains fluorinated greenhouse gases covered by the Kyoto Protocol. Do not vent into the atmosphere.

Refrigerant type: R410A

GWP* value: 1975

GWP = global warming potential

Please fill in with indelible ink,

- 1 the factory refrigerant charge of the product
- 2 the additional refrigerant amount charged in the field and
- 1+2 the total refrigerant charge

on the refrigerant charge label supplied with the product.

The filled out label must be adhered in the proximity of the product charging port (e.g. onto the inside of the stop valve cover).

A contains fluorinated greenhouse gases covered by the Kyoto Protocol

B factory refrigerant charge of the product: see unit name plate

C additional refrigerant amount charged in the field

D total refrigerant charge

E outdoor unit

F refrigerant cylinder and manifold for charging

Cautions

Disposal of the old air conditioner

Before disposing an old air conditioner that goes out of use, please make sure it's inoperative and safe. Unplug the air conditioner in order to avoid the risk of child entrapment.

It must be noticed that air conditioner system contains refrigerants, which require specialized waste disposal. The valuable materials contained in a air conditioner can be recycled. Contact your local waste disposal center for proper disposal of an old air conditioner and contact your local authority or your dealer if you have any question. Please ensure that the pipework of your air conditioner does not get damaged prior to being picked up by the relevant waste disposal center, and contribute to environmental awareness by insisting on an appropriate, anti-pollution method of disposal.

Disposal of the packaging of your new air conditioner

All the packaging materials employed in the package of your new air conditioner may be disposed without any danger to the environment.

The cardboard box may be broken or cut into smaller pieces and given to a waste paper disposal service. The wrapping bag made of polyethylene and the polyethylene foam pads contain no fluorochloric hydrocarbon.

All these valuable materials may be taken to a waste collecting center and used again after adequate recycling.

Consult your local authorities for the name and address of the waste materials collecting centers and waste paper disposal services nearest to your house.

Safety Instructions and Warnings

Before starting the air conditioner, read the information given in the User's Guide carefully. The User's Guide contains very important observations relating to the assembly, operation and maintenance of the air conditioner.

The manufacturer does not accept responsibility for any damages that may arise due to non-observation of the following instruction.

- Damaged air conditioners are not to be put into operation. In case of doubt, consult your supplier.
- Use of the air conditioner is to be carried out in strict compliance with the relative instructions set forth in the User's Guide.
- Installation shall be done by professional people. Don't install unit by yourself.
- For the purpose of safety, the air conditioner must be properly grounded in accordance with specifications.
- Always remember to unplug the air conditioner before opening inlet grill. Always grip plug firmly and pull straight out from the outlet.
- All electrical repairs must be carried out by qualified electricians. Inadequate repairs may result in a major source of danger for the user of the air conditoiner.
- Do not damage any parts of the air conditioner that carry refrigerant by piercing or perforating the air conditioner's

tubes with sharp or pointed items, crushing or twisting any tubes, or scraping the coatings off the surfaces. If the refrigerant spurts out and gets into eyes, it may result in serious eye injuries.

- Do not obstruct or cover the ventilation grille of the air conditioner. Do not put fingers or any other things into the inlet/outlet and swing louver.
- Do not allow children to play with the air conditioner. In no case should children be allowed to sit on the outdoor unit. When the indoor unit is turned on, the PCB will test if swing motor is O.K., and then fan motor will start up. So there is a few seconds to wait.
- In cooling mode, the flaps will swing automatically to a fixed position for anti-condensating.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

Specifications

The refrigerating circuit is leak-proof.

For all the models in this manual, the all-pole disconnection method should be applied in the power supply. Such means for disconnection must be incorporated in the fixed wiring.

Cooling	Indoor temperature	max. DB/WB min. DB/WB	32/23°C 18/14°C
	Outdoor temperature	max. DB/WB min. DB/WB	46/24°C 18°C
Heating	Indoor temperature	max. DB/WB min. DB/WB	27°C 15°C
	Outdoor temperature	max. DB/WB min. DB/WB	24/18°C -15°C

If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person. If the fuse on PC board is broken please change it with the type of T 3.15A /250VAC.

The wiring method should be in line with the local wiring standard.

The waste battery shall be disposed properly.

The indoor unit installation height is at least 2.5m.

The air breaker and the power switch should be installed in a conveniently reachable place for user.

Safety Precautions

⚠ WARNING!

- If the power supply cord of this air conditioner is damaged, it must be replaced by the manufacturer or its authorized service personnel only.
- Use copper wire only. All the cables shall have got the Local authentication certificate.
- The power cable and connecting cable are self-provided.
- If the fuse on PC board is broken please change it with the type of T3.15A/250VAC.

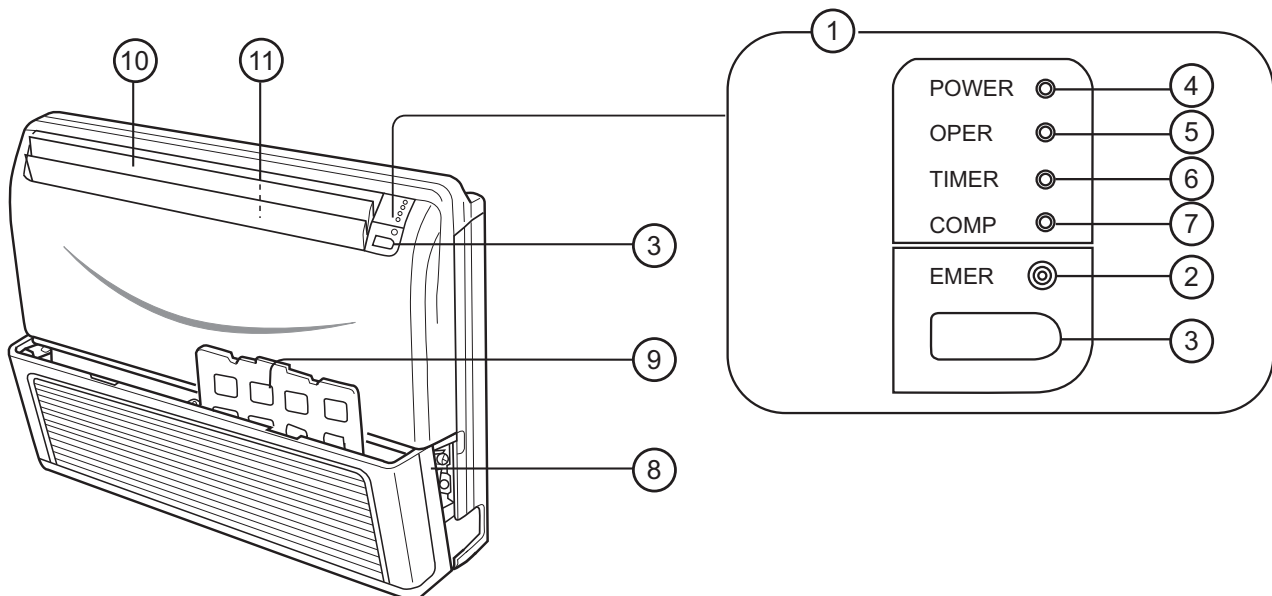
⚠ DANGER!

- Do not attempt to install this air conditioner by yourself.
- This unit contains no user-serviceable parts. Always consult authorized service personnel for repairs.
- When moving, consult authorized service personnel for disconnection and installation of the unit.
- Do not become excessively chilled by staying for lengthy periods in the direct cooling airflow.
- Do not insert fingers or objects into the outlet port or intake grills.
- Do not start and stop air conditioner operation by connecting and disconnecting the power supply cord and so on.
- Take care not to damage the power supply cord.
- In the event of a malfunction (burning smell, etc.), stop operation immediately, turn off the circuit breaker, and consult authorized service personnel.

⚠ CAUTION!

- Provide occasional ventilation during use.
- Do not direct air flow at fireplaces or heating apparatuses.
- Do not place objects on the air conditioner or climb onto it.
- Do not hang objects from the indoor unit.
- Do not set flower vases or water containers on top of the air conditioner.
- Do not expose the air conditioner directly to water.
- Do not operate the air conditioner with wet hands.
- Do not pull power supply cord.
- Turn off power source when not using the unit for extended periods.
- Check the condition of the installation stand for damage.
- Do not place animals or plants in the direct path of the air flow.
- Do not drink the water drained from the air conditioner.
- Do not use in applications involving the storage of foods, plants or animals, precision equipment or art works.
- Do not apply any heavy pressure to radiator fins.
- Operate only with air filters installed.
- Do not block or cover the intake grill and outlet port.
- Ensure that any electronic equipment is at least one metre away from either the indoor or outdoor unit.
- Avoid installing the air conditioner near a fireplace or other heating apparatuses.
- When installing the indoor and outdoor unit, take precautions to prevent access to infants.
- Do not use inflammable gases near the air conditioner.

Parts and Functions



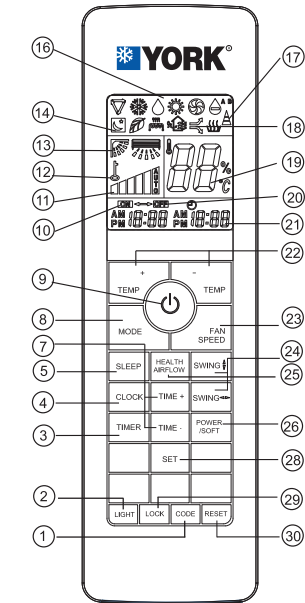
- (1) Operating Control Panel
- (2) Emergency Switch
- (3) Remote Control Signal Receiver
- (4) Power Indicator Lamp (Red)
- (5) Operation Indicator Lamp (Green)
- (6) Timer Indicator Lamp (Yellow)
- (7) Compressor Run Lamp (Green)
- (8) Intake Grill
- (9) Air Filter
- (10) UP/DOWN Air Direction Flaps
- (11) RIGHT/LEFT Air Direction Louvers (behind UP/DOWN Air Direction Flaps)

Note :

For the wired control type unit, the unit state should be checked by the wired controller, instead of the remote receiver. and if you set the TIMER function, the TIMER LED on the remote receiver will not be on.

Parts and Functions

Remote controller



- 1.CODE
Used to select CODE A or B which will be displayed on LCD.Please select A without special explanation.
- 2.LIGHT button
Control the lightening and extinguishing of the indoor LED display board.
3. TIMER button
4. CLOCK button
5. SLEEP button
7. TIME button

8. MODE button
9. ON/OFF button
- 10.TIMER ON display
- 11.FAN SPEED display



12. LOCK display
13. SWING display
14. SLEEP display
16. Operation mode display

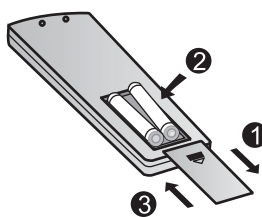
Operation mode	AUTO	COOL	DRY	FAN	HEAT
Remote controller					

- 17.Signal sending display
18. POWER/SOFT display
19. TEMP display
- 20.TIMER OFF display
- 21.CLOCK display
22. TEMP button
23. FAN SPEED button
- 24.SWING button
25. HEALTH AIRFLOW button
- 26.POWER/SOFT button
28. SET button
29. LOCK button
If pressed, the other buttons will be disabled.Press it once again,lock will be cancelled.
30. RESET button
When the remote controller appears abnormal,use a sharp pointed article to press this button to reset the remote controller normal.

NOTE:

Cooling only unit do not have displays and functions related with heating
If the unit which you purchased has healthy function, follow it. If not, please ignore.

Loading of the battery



- 1 Remove the battery cover;
- 2 Load the batteries as illustrated. 2 R-03 batteries, resetting key(cylinder);
- 3 Be sure that the loading is in line with the " + "/" -";

- 4 Load the battery, then put on the cover again.

Note:

The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well. When electronic-started type fluorescent lamp or change-over wireless telephone is installed in the type fluorescent lamp or room, the receiver is apt to be disturbed in receiving the signals, so the distance to the indoor unit should be shorter.

Full display or unclear display during operation indicates the batteries have been used up. Please change batteries.

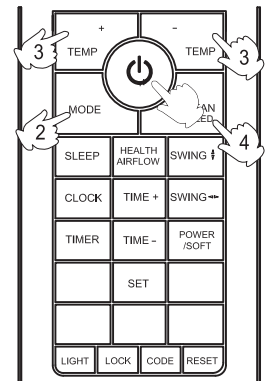
If the remote controller can't run normally during operation, please remove the batteries and reload several minutes later.

Hint:

Remove the batteries in case unit won't be in usage for a long period.
If there are any display after taking-out, just need to press reset key

Base Operation

Remote controller



1. Unit start

Press ON/OFF on the remote controller, unit starts.

2. Select operation mode

Press MODE button. For each press, operation mode changes as follows:

Remote controller:



3. Select temp.setting

Press TEMP+ / TEMP- button

TEMP+ Every time the button is pressed, temp.setting increase 1°C, if kept depressed, it will increase rapidly

TEMP- Every time the button is pressed, temp.setting decrease 1°C, if kept depressed, it will decrease rapidly

Select a desired temperature.

4. Fan speed selection

Press FAN SPEED button. For each press, fan speed changes as follows:

Remote controller:



Air conditioner is running under displayed fan speed. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

Operation Mode	Remote Controller	Display Board	Note
AUTO			Under the mode of auto operation, air conditioner will automatically select Cool or Heat operation according to room temperature. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed
COOL			according to room temperature.
DRY			In DRY mode, when room temperature becomes lower than temp.setting+2°C, unit will run intermittently at LOW speed regardless of FAN setting.
FAN			In FAN operation mode, the unit will not operate in COOL or HEAT mode but only in FAN mode. AUTO is not available in FAN mode. And temp.setting is disabled. In FAN mode, SLEEP operation is not available.
HEAT			

Operation

■ Sleep Operation

Before going to bed, you can simply press the SLEEP button and unit will operate in SLEEP mode and bring you a sound sleep.



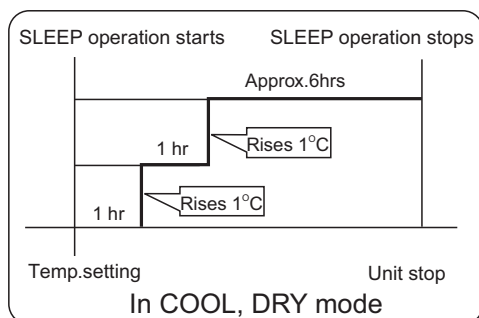
Use of SLEEP function

After the unit starts, set the operation status, then press SLEEP button before which the clock must be adjusted and time being set.

Operation Mode

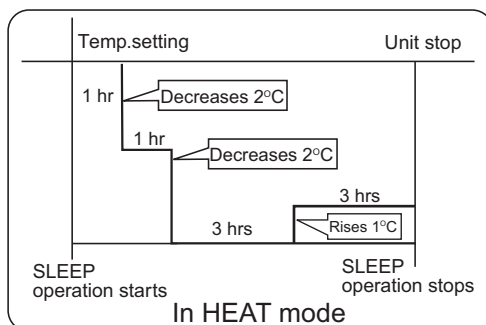
1. In COOL, DRY mode

1 hours after SLEEP mode starts, temp. will become 1°C higher than temp. setting. After another 1 hours, temp. rises by 1°C further. The unit will run for further 6 hours then stops. Temp. is higher than temp. setting so that room temperature won't be too low for your sleep.



2. In HEAT mode

1 hours after SLEEP mode starts, temp will become 2°C lower than temp. setting. After another 1 hours, temp decrease by 2°C further. After more another 3 hours, temp. rises by 1°C further. The unit will run for further 3 hours then stops. Temp. is lower than temp. setting so that room temperature won't be too high for your sleep.



3. In AUTO mode

The unit operates in corresponding sleep mode adapted to the automatically selected operation mode.

4. In FAN mode

It has no SLEEP function.

5. Set the wind speed change when sleeping

If the wind speed is high or middle before setting for the sleep, set for lowering the wind speed after sleeping.

If it is low wind, no change.

Note

When TIMER function is set, the sleeping function can't be set up. After the sleeping function is set up, if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on.

■ POWER/SOFT Operation

(1) POWER Operation

When you need rapid heating or cooling, you can use this function. In COOL mode, fan speed automatically takes high speed of AUTO fan mode. In HEAT mode, fan speed automatically takes medial speed of AUTO fan mode.

(2) SOFT Operation

You can use this function when silence is needed for rest or reading. In SOFT operation mode, fan speed automatically takes low speed of AUTO fan mode.

Note

During POWER operation, in rapid HEAT or COOL mode,

distribution. Long period SOFT operation will cause effect of not too cool or not too warm.

To cancel POWER or SOFT operation

Press POWER/SOFT button again, POWER or SOFT disappears.

NOTE:

Cooling only unit do not have displays and functions related with heating.

Operation

■ Timer On/Off On-Off Operation

Set clock correctly before starting TIMER operation.

1. After unit starts, select your desired operation mode.
2. Press TIMER button to change TIMER mode. Every time the button is pressed, display changes as follows:

Remote controller:



Then select your desired TIMER mode (TIMER ON or TIMER OFF or TIMER ON-OFF). "ON" or "OFF" will flash.

3. Press TIME+ /TIME- button to set time.

It can be adjusted within 24 hours.

4. After setting correct time, press SET button to confirm "ON" or "OFF" on the remote controller stops flashing.

5. Cancel TIMER mode

Just press TIMER button several times until TIMER mode disappears.

Hints:

After replacing batteries or a power failure happens, time setting should be reset.

Remote controller possesses memory function, when use TIMER mode next time, just press SET button after mode selecting if time setting is the same as previous one.

According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

■ Healthy airflow Operation

1. Press ON/OFF to starting

Setting the comfort work conditions.

2. The setting of healthy airflow function

1). Press the button of healthy airflow, appears on the display. Horizontal airflow sending. Avoid the airflow blows direct to the body.

2). Press the button of healthy airflow again, appears on the display. Downward airflow sending. Avoid the airflow blows direct to the body.

3. The cancel of the healthy airflow function

Press the button of healthy airflow again, the unit goes on working under the condition before the setting of healthy airflow function.

Notice: Do not direct the flap by hand. Otherwise, the grille will run incorrectly. If the grille is not run correctly, stop for a minute and then start, adjusting by remote controller.

Note:

1. After setting the healthy airflow function, the position grill is fixed.

2. In heating, it is better to select the mode.

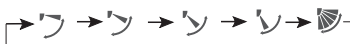
3. In cooling, it is better to select the mode.

4. In cooling and dry, using the air conditioner for a long time under the high air humidity, condensate water may occur at the grille.

■ Air Flow Direction Adjustment

1. Status display of air flow

COOL/DRY:



HEAT:



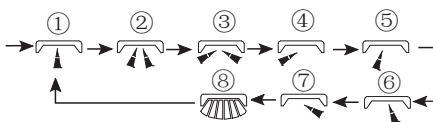
Initial state

2. Left and right air flow adjustment

(available only for convertible unit)

Press button Enter left and right air flow adjustment

to adjust the air flow angle.



Note: Position ② ③ are null for this model.

Cleaning and Care

⚠ CAUTION:

- Before cleaning the air conditioner, be sure to turn it off and disconnect the Power Supply Cord.
- Be sure the Intake Grill is installed securely.
- When removing and replacing the air filters, be sure not to touch the heat exchanger, or personal injury may result.

Cleaning the Air Filter

1. Open the Intake Grill

Pull out both sides and the center of the Intake Grill.

2. Pull the Air Filters upward to remove them

Push the Air Filter handles away from the Intake Grille in the direction as illustrated, then pull out Air Filters.

3. Clean the Air Filters

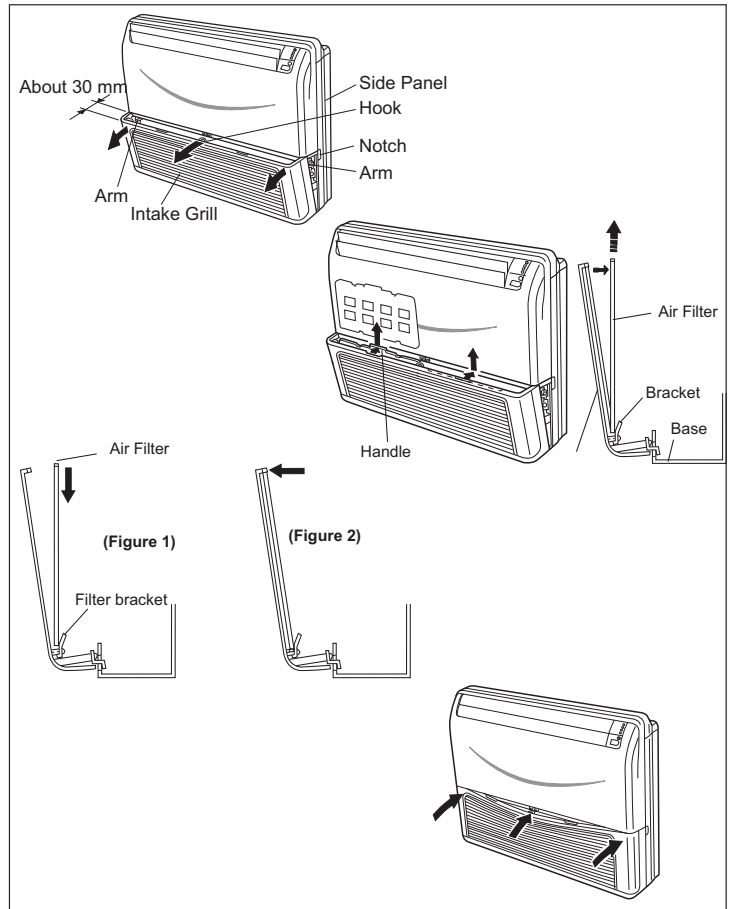
Remove the dust from the Air Filters by vacuum cleaner or washing them. After washing, allow the Air Filters to dry thoroughly in an area protected from sunlight.

4. Re-attach the Air Filters to the Intake Grill

- (1) The Filters fit onto the inside of the intake Grill. (Figure 1)
- (2) The bottom edges of the Air Filters should fit into the filter brackets. (Figure 1)
- (3) The Air Filters should be pushed down so that their top edges fit under the projections at the top of the Intake Grill. (Figure 2)

5. Close the intake grill

Push in both sides and the center of the Intake Grill.



- Dust can be cleaned from the Air Filter either with a vacuum cleaner, or by washing the filter in a solution of mild detergent and warm water. If you wash the filter, be sure to allow it to dry thoroughly in a shady place before reinstalling.
- If dirt is allowed to accumulate on the Air Filter, air flow will be reduced, operating efficiency lowers and noise increases.
- During periods of normal use, the Air Filters should be cleaned every two weeks.

Operation Tips

Instructions relating to heating are applicable only to "HEAT & COOL TYPE"

Heating Performance





- This air conditioner operates on the heat-pump principle, absorbing heat from outdoor air and transferring that heat indoors. As a result, the operating performance is reduced as outdoor air temperature drops. If you feel that insufficient heating performance is being produced, we recommend you use this air conditioner in conjunction with another kind of heating appliance.
- Heat-pump air conditioners heat your entire room by recirculating air throughout the room, with the result that some time may be required after first starting the air conditioner until the room is heated.

Microcomputer-controlled Automatic Defrosting

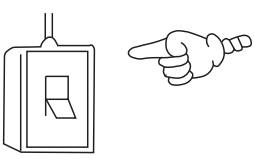
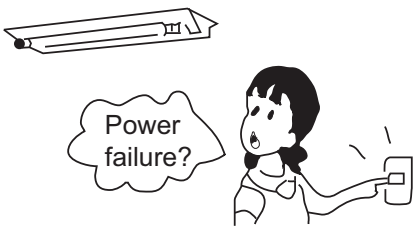
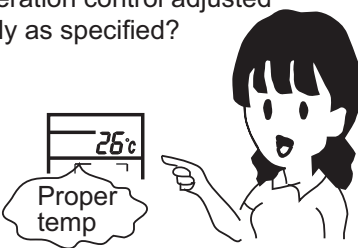
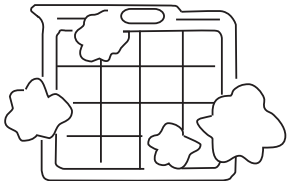
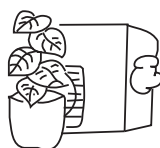
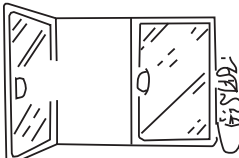
- When using the Heating mode under conditions of low outdoor air temperature high humidity, frost may form on the outdoor unit, resulting in reduced operating performance.
- In order to prevent this kind of reduced performance, this unit is equipped with a Microcomputer-controlled Automatic Defrosting function. If frost forms, the air conditioner will temporarily stop, and the defrosting circuit will operate briefly (for about 7 to 15 minutes).

Troubleshooting

Followings are not problems

Sound of water flowing is not a problem. 	During unit operation or at stop, a swishing or gurgling noise may be heard. This noise is generated by refrigerant flowing in the system.
Sound of cracking is heard.	During unit operation, a cracking noise may be heard. This noise is generated by the casing expanding or shrinking because of temperature changes.
Smell are generated.	This is because the system circulates smells from the interior air such as the smell of cigarettes or the painting on the furniture.
During operation, white fog or steam comes out from the indoor unit.	When unit is running at places like restaurant, etc. where dense edible oil fumes always exist, this will happen.
In cooling operation, unit switches to blowing operation.	To prevent frost from accumulating on indoor heat exchanger, unit will switch to blowing operation for a while then resume cooling operation.
Unit will not restart after stop. Won't start? 	Though ON/OFF button is set to ON, the unit won't resume cooling, dry or heating operation in 3 min after it is stopped, this is because of 3-min-delay protection circuit.  Please wait 3 minutes
No outlet air or fan speed can't be changed in dry mode.	Unit will reduce fan speed repeatedly and automatically if room temp. is too low in dry operation.
In heating operation, water or steam are blown out of outdoor unit. 	This occurs when frost accumulated on the outdoor unit is removed (during defrosting operation).
In heating operation, indoor fan won't stop even if unit is stopped.	After unit stop, indoor fan will go on running until indoor unit cools down.

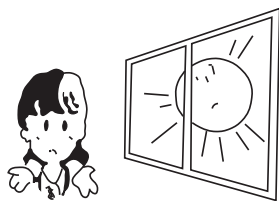
Before ask for services, please first check your unit against the following.

Air conditioner won't start.		
Is power supply switch turned on?  Power supply switch is not set at ON.	Is city power supply normal? 	Is leakage current breaker activated? This is very dangerous, please disconnect power supply immediately and contact your dealer.
Poor cooling or heating		
Are operation control adjusted correctly as specified? 	Is air filter too dirty? 	Are there any obstacles in inlet or outlet grill? 
Are horizontal louvers at up position (in heating mode)?	Any doors or windows left open? 	

Troubleshooting

Poor cooling

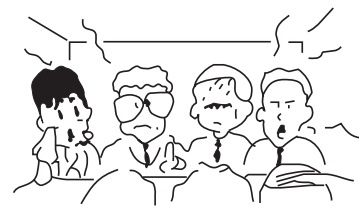
Is there any direct sunlight in the room?



If there are unexpected heat sources in the room?



Too many people in the room?



Cold air blows out (in heating mode). Is air conditioner in standby condition in heating mode?

If your unit still can't work properly after above mentioned checks, or following problems occur, please stop it immediately and contact your dealer.

- Fuses or circuit breakers often blow out.
- Water comes out in cooling/dry operation.
- Operation is abnormal or sound is heard.

When failure happens, the fan of indoor unit stop running.

For indoor failure, only running LED of remote receiver will indicate,

For outdoor failure, timer LED and running LED will indicate. timer LED of remote receiver stands for ten's place, and running LED stands for one's place. Timer LED will flash firstly, 2 seconds later, running LED will flash too. After that finishes, 4 seconds later, they will flash in turns again. Flash times is the failure of outdoor + 20.

For example, failure code that outdoor is 2, so indoor unit should display 22. As a result, timer LED flashes twice firstly, then running LED flashes twice, But when outdoor failure LED flash 20, the indoor unit will flash 42, it's a special.

Ta: ambient temperature sensor

Tm: coil temperature sensor

Trouble shooting	FAILURE CODE(running led of indoor receive board flashes times)	POSSIBLE REASONS
Faulty temperature Ta	1	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty temperature Tm	2	Sensor disconnected, or broken, or at wrong position, or short circuit
Faulty EEPROM on indoor unit PCB	4	Faulty indoor unit PCB
Abnormal communication between indoor and outdoor units	7	Wrong connection, or the wires be disconnected, or wrong address setting of indoor unit, or faulty power supply or faulty PCB
Abnormal communication between indoor wired controller and indoor unit PCB	8	Wrong connection, or the wired controller be disconnected, faulty PCB
Drainage system abnormal	12	Pump motor disconnected, or at wrong position, or the float switch broken down, or the float switch disconnected, or at wrong position
Zero cross signal wrong	13	Zero cross signal detected wrong
Indoor abnormal mode operation	16	Different from outdoor unit mode

For the outdoor failure indicated by the indoor unit please refer to the outdoor failure code list

Installation Procedure

Please ask the dealer or specialist to install, never try by the users themselves. After the installation please be sure of the following conditions.

⚠ WARNING:

• Please call dealer to install the air-conditioner.

Incorrect installation may cause water leaking, shock and fire hazard.

⚠ CAUTION:

• Air-conditioner can't be installed in the environment with inflammable gases because the inflammable gases near air-conditioner may cause fire hazard.

• Installed electrical-leaking circuit breaker.

It easily cause electrical shock without circuit breaker.

• Connect earthing wire.

Earthing wire should not be connected to the gas pipe, water pipe, lightning rod or phone line, incorrect earthing may cause shock.

• Use discharge pipe correctly to ensure efficient discharge.

Incorrect pipe use may cause water leaking.



Earthing

• Wiring

Air-conditioner should be equipped with special power supply wire.

• Location

- Air-conditioner should be located in well-vented and easily accessible place.
- Air-conditioner should not be located in the following places:

- (1) Places with machine oils or other oil vapours.
- (2) Seaside with high salt content in the air.
- (3) Near hot spring with high content of sulfide gases.
- (4) Area with frequent fluctuation of voltage e.g. factory, etc.
- (5) In vehicles or ships.
- (6) Kitchen with heavy oil vapour or humidity.
- (7) Near the machine emitting electric-magnetic waves.
- (8) Places with acid, alkali vapour.

• Choose the following locations:

- (1) Capable of supporting air conditioner weight, don't increase operating noise and vibration.
 - (2) Hot vapour from outdoor unit outlet and operating noise don't disturb neighbour.
 - (3) No obstacles around the outdoor unit outlet.
- TV, radio, acoustic appliances etc. are at least 1 m far away from the indoor unit, outdoor unit, power supply wire, connecting wire, pipes, otherwise images may be disturbed or noises be created.
 - As required, take measures against heavy snow.

INSTALLATION PARTS

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

Optional parts

Adhesive tape	Drain hose
Saddle (L.S) with screws	Piping hole cover
Heat insulation material	Plastic clamp
Putty	

SELECTING THE MOUNTING POSITION

Decide the mounting position with the customer as follows:

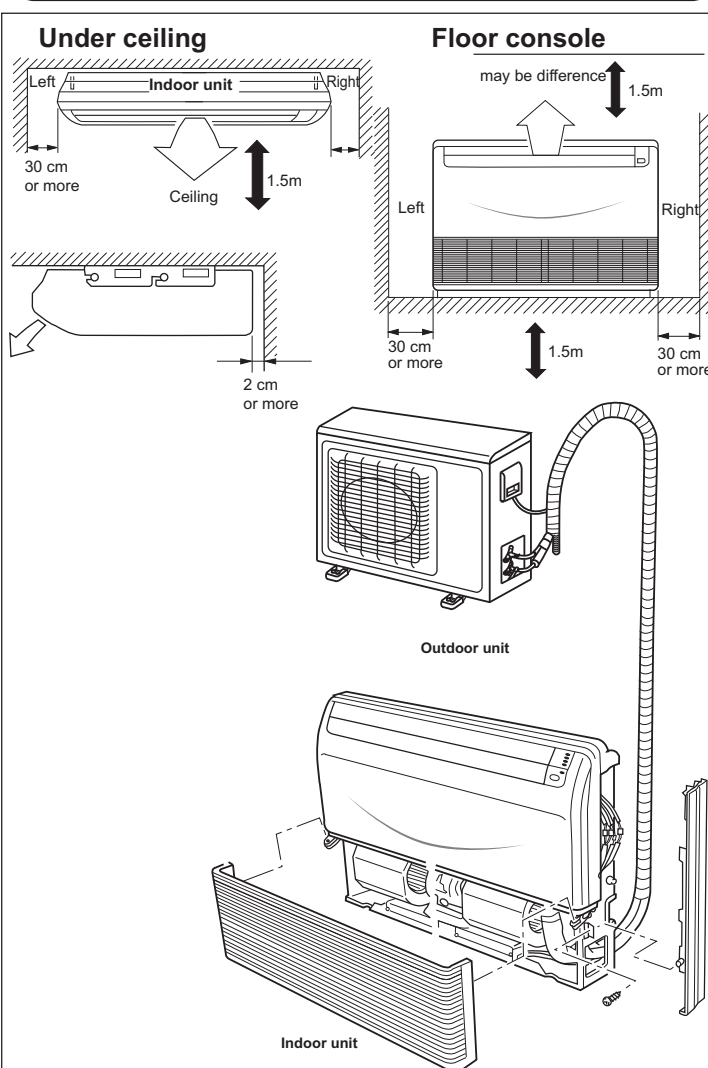
- (1) Install the indoor unit level on a strong wall, floor, ceiling which is not subject to vibration.
- (2) The inlet and outlet ports should not be obstructed. The air should be able to blow all over the room.
- (3) Install the unit near an electric outlet or special branch circuit.
- (4) Do not install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

⚠ 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 near heat sources.
- (3) If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.



Installation Procedure

PREPARING INDOOR UNIT INSTALLATION

Remove the intake grill

Open the intake grill and remove the three or four or six screws.

Note:

The main unit can be wired before the indoor unit is installed.
Select the most appropriate installation order.

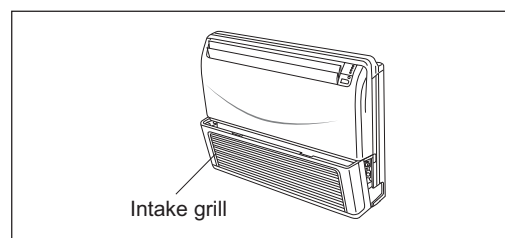
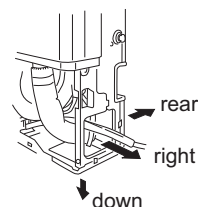


Fig. 1



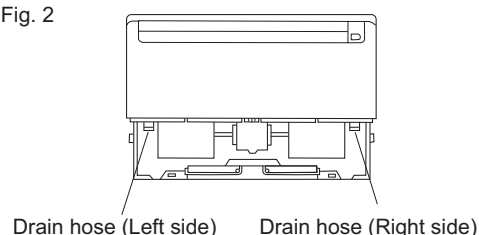
A.FLOOR CONSOLE TYPE

1.Drilling for piping

Select piping and drain directions. The piping and drain can be made in three directions as shown in the Fig.1.

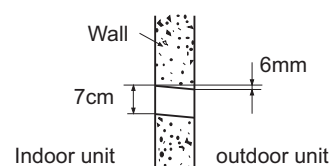
The drain hose can be connected to either the left or right side. (Fig.2)

Fig. 2



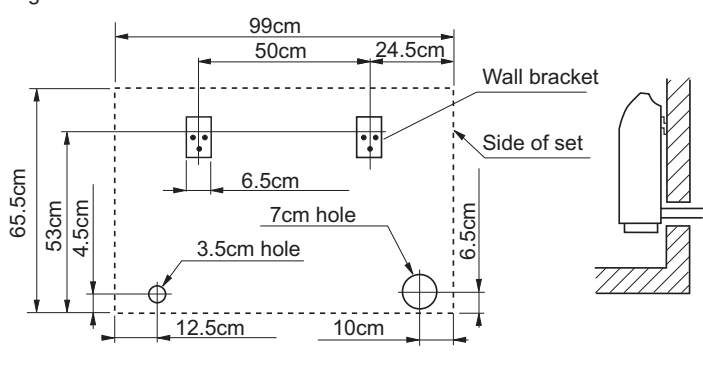
When the directions are selected, drill a 7 cm dia. hole on the wall so that the hole is tilted downward toward the outdoor for smooth water flow. When the pipe is led out from the rear, make a hole at the position shown in Fig.3.

Fig. 3



When installing set to wall, install the accessory wall bracket at the position shown in Fig. 4, and mount the set to it.

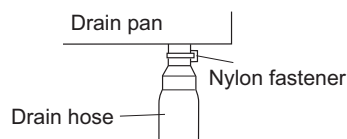
Fig. 4



2. Installing drain hose

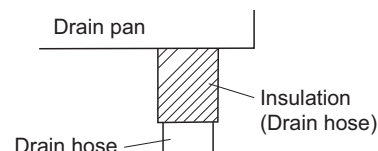
Select whether the drain hose will be connected to the left or right side (Fig.2). Insert the drain hose into the drain pan, then secure the drain hose with a nylon fastener (Fig.5).

Fig. 5



Wrap the insulation (drain hose) around the drain hose connection. (Fig.6)

Fig. 6

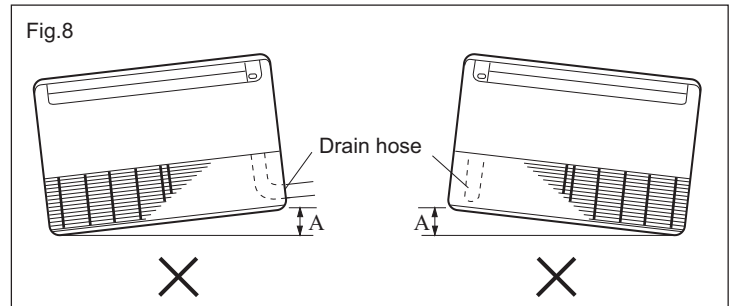
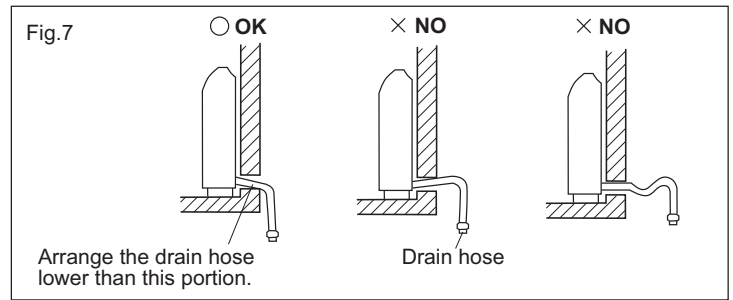


Installation Procedure

Be sure to arrange the drain hose correctly so that it is leveled lower than the drain hose connecting port of the indoor unit. (Fig.7)

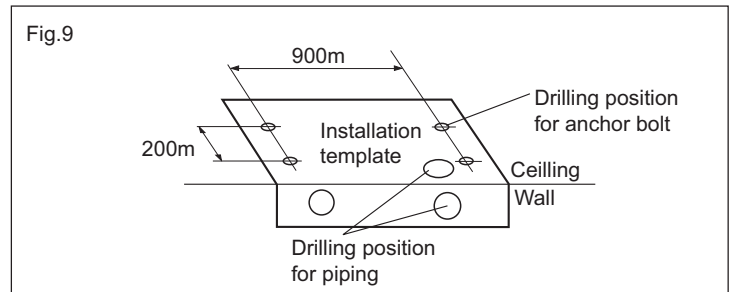
⚠ CAUTION:

Do not install the unit drain hose side is too high. Height A should be less than 5 mm.(Fig.8)



B. UNDER CEILING TYPE

Using the installation template, drill holes for piping and anchor bolts(for holes).(Fig.9)

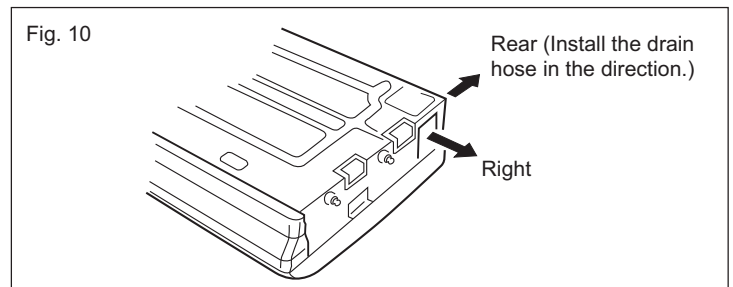


1.Drilling for piping

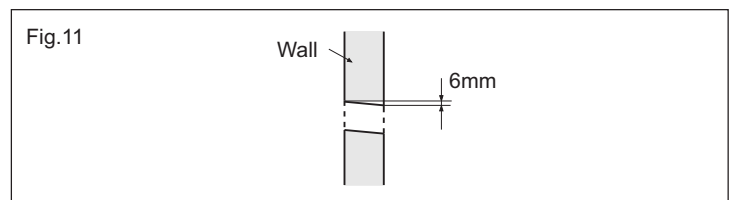
Select piping and drain directions. (Fig.10)

⚠ CAUTION:

Install the drain hose at the rear. It should not be installed on the top or right side.

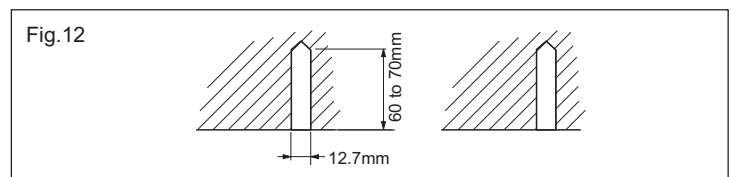


When the directions are selected, drill 80mm and 50mm or 150mm dia. hole on the wall so that the hole is tilted downward toward the outdoor for smooth water flow. (Fig.11)

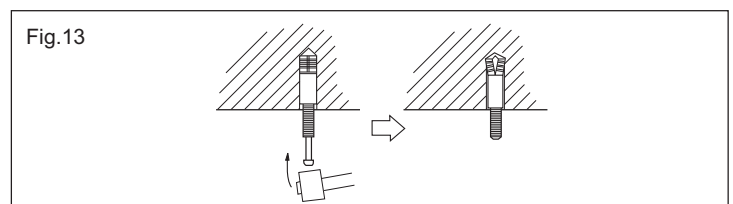


2.Drilling holes for anchor bolts and installing the anchor bolts

With a concrete drill, drill four 12.7 mm dia. Holes. (Fig.12)



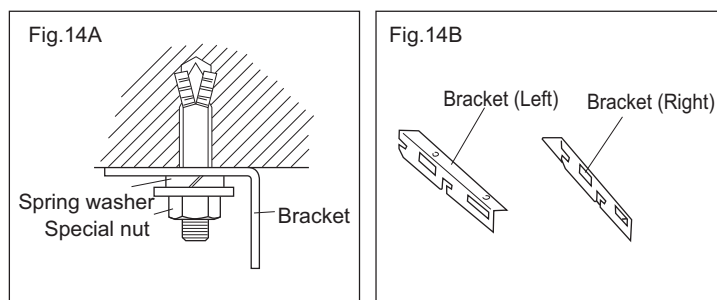
Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer. (Fig.13)



Installation Procedure

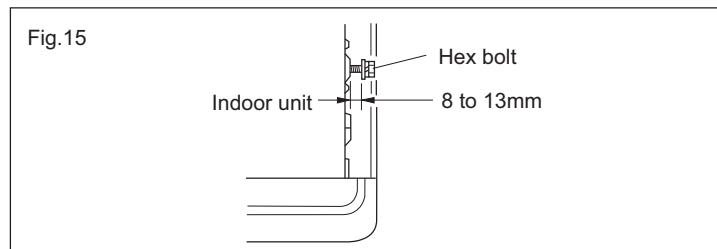
3. Installing brackets

Install the brackets with nuts, washers and spring washers. (Fig.14)

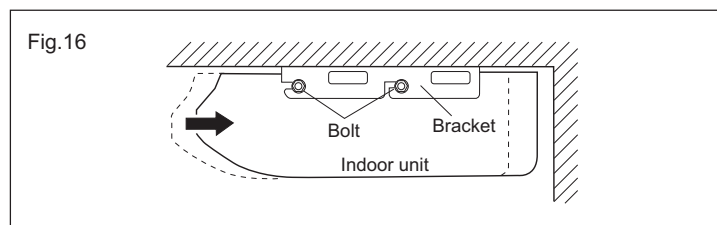


4. Installing indoor unit

Reset the hex bolts as shown in Fig.15.



Apply the indoor unit to the brackets. (Fig.16)
Now, securely tighten the hex bolts in both sides.



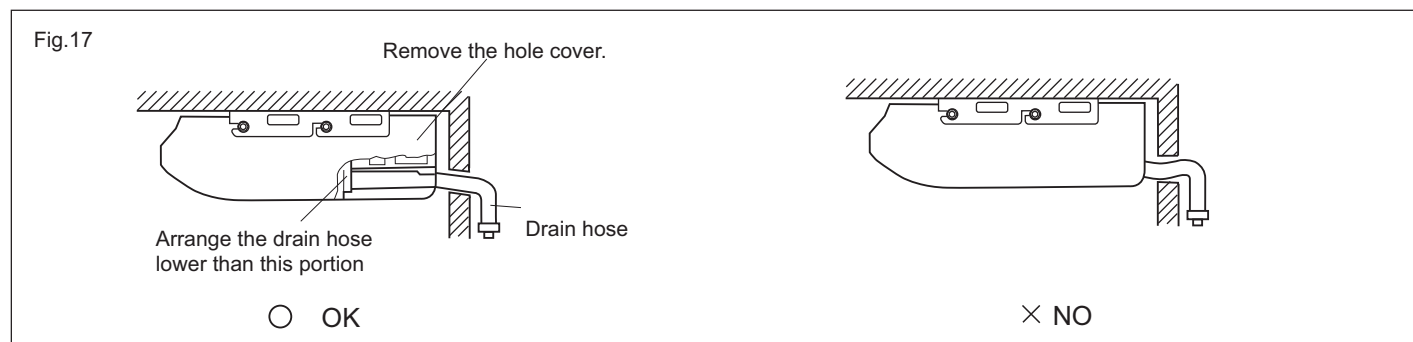
5. Installing the drain hose

Select whether the drain hose will be connected to the left or right side.(Fig.2)

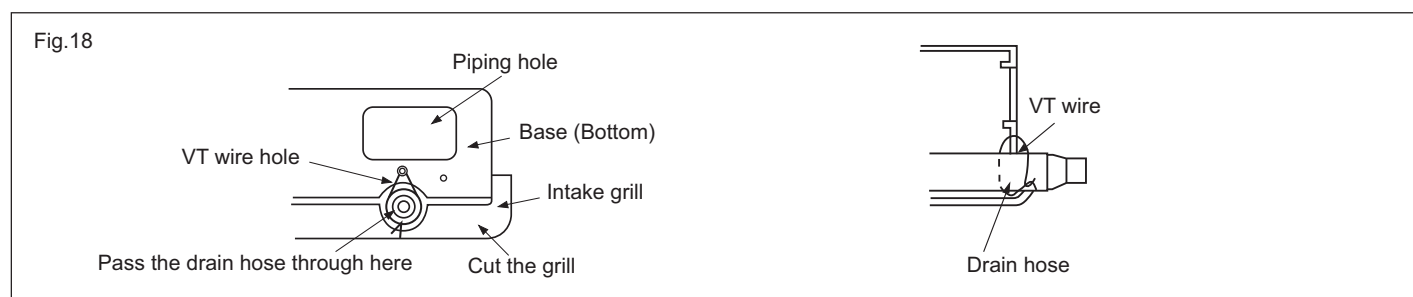
Insert the drain hose into the drain pan, then secure the drain hose with a nylon fastener.(Fig.5)

Wrap the insulation (drain hose) around the drain hose connection. (Fig.6)

Be sure to arrange the drain hose correctly so that it is leveled lower than the drain hose connecting port of the indoor unit. (Fig.17)



When drain hose is arranged backward. Secure the drain hose with the VT wire. (Fig.18)



Installation Procedure

CONNECTING THE PIPING

1. Flare processing

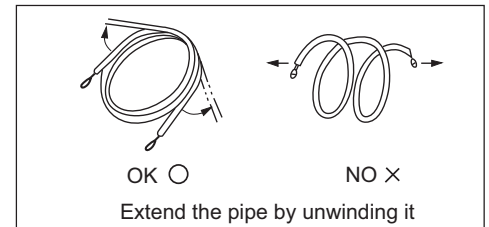
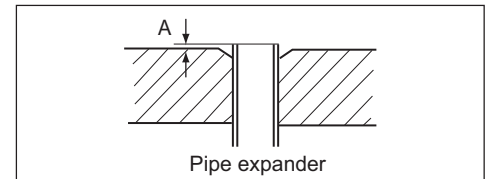
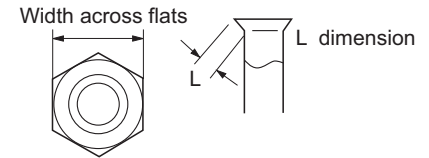
- (1) Cut the connection pipe with pipe cutters so that the pipe is not deformed.
- (2) Holding the pipe downward so that cuttings cannot enter the pipe, remove the burrs.
- (3) Remove the flare nut from the indoor unit pipe and outdoor unit and assemble as shown in Table 1 and insert the flare nut onto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

Model	Pipe	Diameter of pipe	Dimension A (mm)
12K	Liquid pipe	Ø 6.35mm (1/4")	1.0~1.2
	Gas pipe	Ø 9.52mm (3/8")	
18K	Liquid pipe	Ø 6.35mm (1/4")	1.0~1.2
	Gas pipe	Ø 12.7mm (1/2")	
24K	Liquid pipe	Ø 9.52mm (3/8")	1.4~2.2
	Gas pipe	Ø 15.88mm (5/8")	

Table 1

Pipe	Flare nut
Small pipe	Small (width across flats 22mm)
Large pipe	Large (width across flats 24mm)

Fig.1



2. Bending pipes

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

ELECTRICAL WIRING

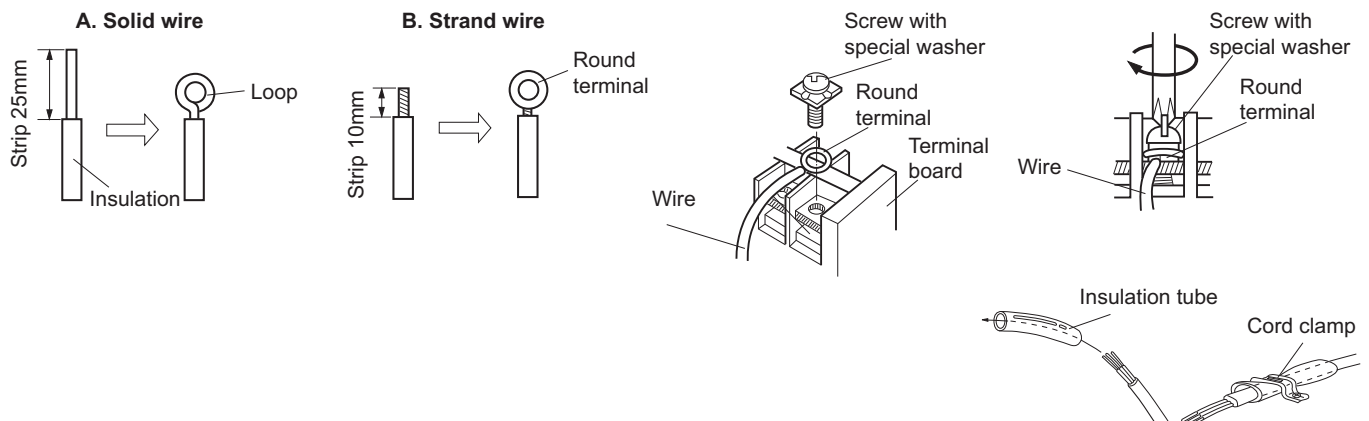
Connect wiring to the terminal blocks

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

- (1) Cut the wire with a wire cutter or wire-cutting pliers, then strip the insulation to about 25mm of the exposed 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 screw driver.

B. For strand wiring (Fig.B)

- (1) Cut the wire with a wire cutter or wire-cutting pliers, then strip the insulation to about 10mm of the exposed 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 screw driver.



Fix connection cord and power cable at the cord clamp

After passing the connection cord and power cable through the insulation tube, fasten it with the cord clamp, as shown right.

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

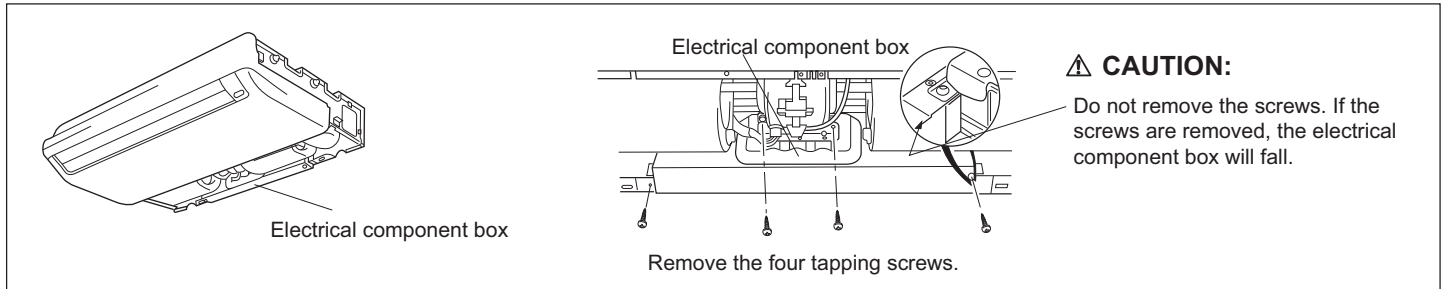
Installation Procedure

⚠ CAUTION:

- Match the terminal block numbers and connection cord colors with those of 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.

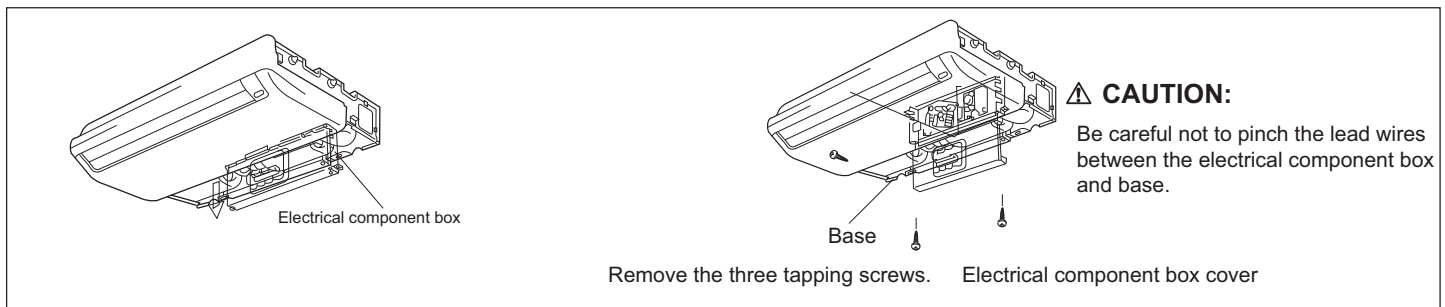
Wiring of indoor unit

(1) Remove the electrical component box.



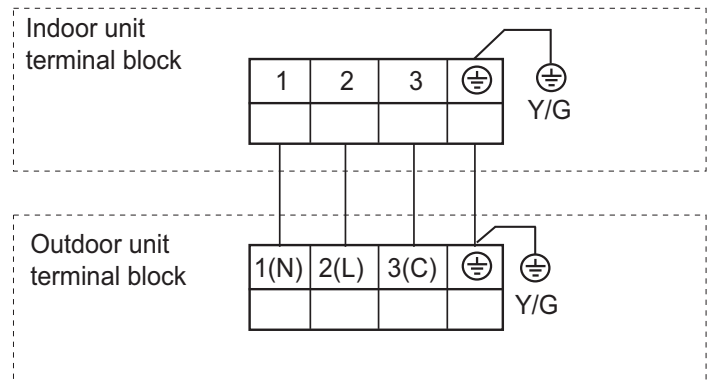
(2) Pull out the electrical component box.

(3) Remove the electrical component box cover.



(4) Wiring

1. Remove the cord clamp.
2. Process the end of the connection cords to the dimensions shown in the right figure.
3. Connect the end of the connection cord fully into the terminal block.
4. Fasten the connection cord with a cord clamp.
5. Fasten the end of the connection cord with the screw.



⚠ WARNING:

- (1) Always use a special branch circuit and install a special receptacle to supply power to the room air conditioner.
- (2) Use a circuit breaker and receptacle matched to the capacity of the room air conditioner.
- (3) The circuit breaker is installed in the permanent wiring. Always use a circuit that can trip all the poles of the wiring and has an isolation distance of at least 3mm between the contacts of each pole.
- (4) Perform wiring work in accordance with standards so that the room 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.

⚠ CAUTION:

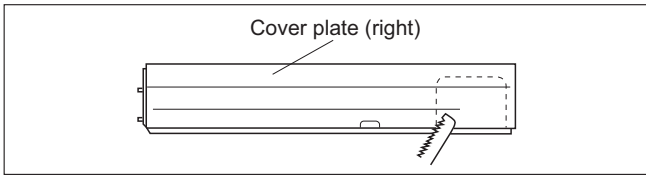
- (1) The power source capacity must be the sum of the room air conditioner current and the current of other electrical appliances. When the current contracted capacity is insufficient, change the contracted capacity.
- (2) When the voltage is too low and the air conditioner is difficult to start, contact the power company the voltage raised.
- (3) The Unit has default temperature compensation setting, pls. cancel it when floor standing installation.

Installation Procedure

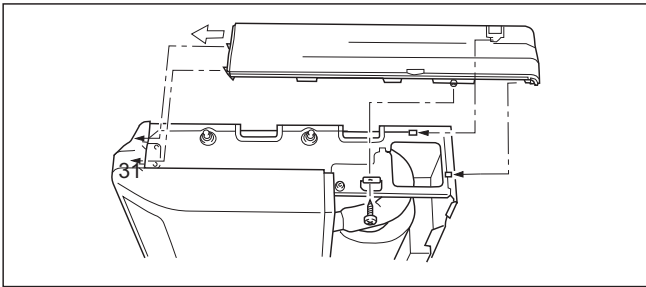
MOUNT THE COVER PLATE AND THE INTAKE GRILL

1. Mount the cover plate (right)

(1) Cut a pipe exit hole in the right plate. This is only when the pipe exits from the right side. This operation is not required when the protrusion is on the top or rear.

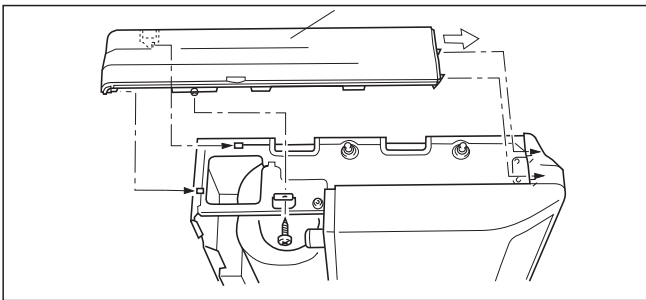


(2) Join the cover plate (right) and mount with screws.

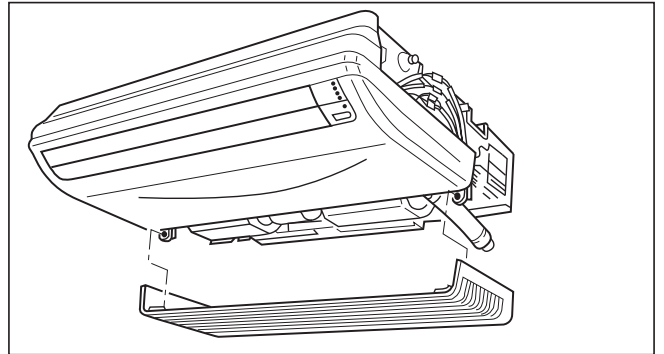


2. Mount the cover plate (left)

Join the cover plate (left) and mount with screws.

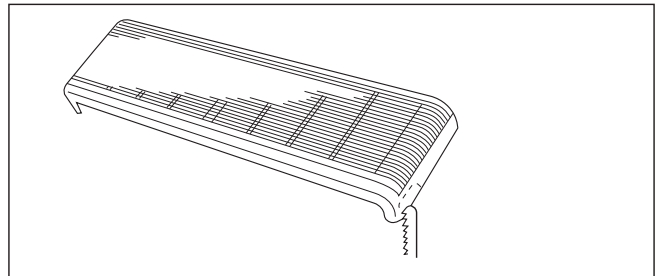


(2) Insert the hinges on the bottom of the intake grill into the holes in the base assembly. Then mount the arms to the three areas on the top of the intake grill.



3. Mount the intake grill.

(1) Cut the right side of the intake grill. This is only when the pipe exits from the right side



Test Run

Check items

1. 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?

2. 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?

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 switching and other remote control unit operations.
- (2) Air filter removal and cleaning, and how to use air louvers.
- (3) Give the operation and installation manuals to the customer.

