A CAUTION R410A REFRIGERANT

Refer to Commonwealth, State, Territory and local legislation

(PART NO. 9374815111-02)

Indoor unit is an appliance not accessible to the general public.

For authorized service personnel only.

<u> </u>	This mark indicates procedures which, if improperly performed, are most likely to result in the death of or serious injury to the user or service personnel.
⚠ 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.

⚠ DANGER

Never touch electrical components immediately after the power supply has been turned off. Electrical shock may occur. After turning off the power, always wait 5 minutes or more before touching electrical components.

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:

) 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.

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.]

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

) 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/cm²) for high pressure. –0.1 to 3.8 MPa (–76 cmHg to 38 kgf/cm²) 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.

! WARNING

For the room air conditioner to operate satisfactorily, install it as outlined in this installation instruction

Connect the indoor unit and outdoor unit with the air conditioner piping and cables available standards

parts. This installation instruction sheet describes the correct connections using the installation set avail-

Installation work must be performed in accordance with national wiring standards by authorized personnel

) If refrigerant leaks while work is being carried out, ventilate the area. If the refrigerant comes in contact with

♠ CAUTION

· Let the customer keep this installation instruction sheet because it is used when the air conditioner is serviced or

To install the outdoor unit, refer to the installation instruction sheet included with the outdoor unit.

After installation, explain correct operation to the customer, using the operating manual.

Copper pipes

available on the market.

only.

able from our standard parts.

a flame, it produces a toxic gas.

Do not use an extension cable.

It is necessary to use seamless copper pipes and it is desirable that the amount of residual oil is less than 40 mg/10m. Do not use copper p having a collapsed, deformed or discolored portion (especially on the rior surface). Otherwise, the expansion valve or capillary tube may become

blocked with contaminants. As an air conditioner using R410A incurs pressure higher than when u conventional refrigerant, it is necessary to choose adequate material Thicknesses of copper pipes used with R410A are as shown in the ta Never use copper pipes thinner than that in the table even when

ha	Thicknesses of Annealed Copper Pipes (R410A)					
he	Pipe outside diameter	Thickness				

oipes inte-	Pipe outside diameter	Thickness	
inte- come	6.35 mm (1/4 in.)	0.80 mm	
	9.52 mm (3/8 in)	0.80 mm	
using s.	12.70 mm (1/2 in.)	0.80 mm	
able.	15.88 mm (5/8 in)	1.00 mm	
it is	19.05 mm (3/4 in.)	1.20 mm	

Name and Shape	Q'ty	Application
Installation template	1	For positioning the indoor unit
Hanger	4	For suspending the indoor unit from ceiling
Tapping screw (Ø4 × 10)	8	For installing the hanger
Special nut A (large flange)	4	For suspending the indoor unit from ceiling
Special nut B (small flange)	4	
Binder	(Small)	For remote controller and remote controller cable binding
	(Large)	For fixing the coupler heat insulation
Remote controller	1	For air conditioner operation
Remote controller cable (*1)	1	For connecting the remote controller
Tapping screw		For installing the remote

STANDARD PARTS

INDOOR LINIT ACCESSORIES

Application	Name and Shape	Q'ty	Application		
sitioning the indoor	Coupler heat insulation (large)	1	For indoor side pipe joint (gas pipe)		
spending the indoor om ceiling	Coupler heat insulation (small)	1	For indoor side pipe joint (liquid pipe)		
stalling the hanger	Filter	3	For protecting air conditioner against dust		
spending the indoor om ceiling	Drain hose insulation	1	Insulates the drain hose and vinyl hose connection		
mote controller	Edge cover	1	For making a wiring hole for connecting optional units. (Refering to g of this installation instruction		
mote controller binding			sheet)		
ing the coupler nsulation	OPTIONAL PARTS The following options are available. Remote sensor:UTD-RS100 (P/N 9072619004) External control set:UTD-ECS5A (P/N 9077359004)				
conditioner ion					
nnecting the					

(*1) Unavailable in ART series.

 $(\emptyset 4 \times 16)$

CONNECTING PIPE REQUIREMENT

!\ CAUTION

Refer to the installation instruction sheet of the outdoor unit for description of the length of connecting pipe or for difference of its elevation.

	MODEL		9000 and 12000 BTU/h models	14000 - 22000 BTU/h models	
Γ.	Diameter	Small	6.35 mm (1/4 in.)	6.35 mm (1/4 in.)	
	Diameter	Large	9.52 mm (3/8 in.)	12.70 mm (1/2 in.)	

Use pipe with water-resistant heat insulation

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)

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).

SELECTING THE MOUNTING POSITION

This installation instruction sheet describes how to install the indoor unit only.

Do not turn on the power until all installation work is complete.

• Be careful not to scratch the room air conditioner when handling it.

↑ WARNING

Install at a place that can withstand the weight of the indoor and outdoor units and install positively so that the

inits 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.			

If children under 10 years old may approach the unit, take preventive measures so that they cannot reach

the unit. Take precautions to prevent the unit from falling.

Decide the mounting position with the customer as follows:

INDOOR UNIT (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) 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 on the right. Also install the unit where the filter can be (7) Install the indoor unit where vibrations and noise are not ampli-
- (8) When installing the unit on the floor, provide an opening that will allow sufficient air to reach the air inlet panel.

Strong and durable ceiling 100 mm or more (PIPE side) Strong and durable floor 100 mm or more 300 mm or more

MODEL		9000 and 12000 BTU/h models	14000 - 22000 BTU/h models	
	Diameter	Small	6.35 mm (1/4 in.)	6.35 mm (1/4 in.)
		Large	9.52 mm (3/8 in.)	12.70 mm (1/2 in.)
The configuration of the confi				

CAUTION

In addition, if the humidity level at the installation location of the refrigerant piping is expected to exceed 70%,

ELECTRICAL REQUIREMENT

Connection cable (mm²)		
MAX.	MIN.	
2.5	1.5	

- Use conformed cable with Type 245 IEC57.
- 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)

INSTALLATION PROCEDURE

Install the air conditioner as follows:

INDOOR UNIT INSTALLATION

! WARNING

Install the air conditioner in a location which can withstand a load of at least five times the weight of the main unit and which will not amplify sound or vibration. If the installation location is not strong enough, the

indoor unit may fall and cause injuries.

CAUTION

To prevent people from touching the parts inside the unit, be sure to install grilles on the inlet

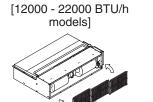
and outlet ports. The grilles must be designed

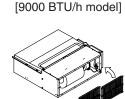
in such a way that cannot be removed without

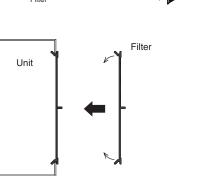
For installation, refer to the technical data

A. CONCEALED CEILING TYPE

1. INSTALL THE FILTERS • Install the filters to the unit.







This unit may also be installed with the air inlet facing down. See also 1 - B - 1 for such cases.

B. CONCEALED FLOOR STANDING

Install the cover with the 4 tapping screws as shown in the

Remove the 4 tapping screws, and then remove cover.

TYPE

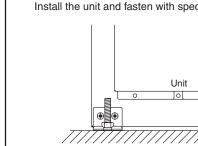
illustration below.

1. INSTALL THE FILTERS

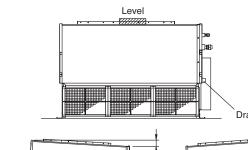
[12000 - 22000 BTU/h

[12000 - 22000 BTU/h

[9000 BTU/h model] Fix the unit.



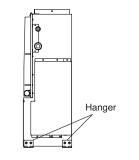
5. LEVELING



2. INSTALLING THE HANGERS • Install the hangers to the unit (4 places).

Install the filters to the unit referring to 11 - A -1.

[9000 BTU/h model]



3. DRILLING HOLES FOR BOLTS AND IN-STALLING THE BOLTS

· Drilling position for bolts [9000 BTU/h model] 59.6 cm (23-1/2') [12000 - 22000 BTU/h models] 88.6 cm (34-7/8')

∴ CAUTION

Secure with an M10 anchor bolts. If securing the unit to the floor is difficult, first build a stand or platform.

30 to 50 mm

⚠ CAUTION

Fasten the unit securely with special nuts A and B

Pass the hanging bolts through the hangers (4 places).

2. DRILLING HOLES FOR BOLTS AND IN-

Using the installation template, drill holes for bolts (4 holes)

Fasten the hanging bolts to the ceiling and install special nuts

- M10 Hanging bolt

Special nut A

- Special nut B

STALLING THE BOLTS

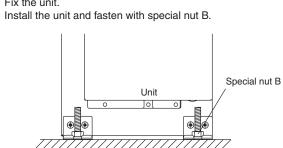
3. INSTALLING THE HANGERS

Install the hangers to the unit (4 places).

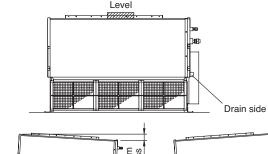
A and B.

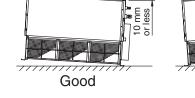
Hang the unit.

4. INSTALL THE UNIT



Base horizontal and vertical direction leveling on top of the unit.





CAUTION In order to prevent water from leaking around the outlet port, make sure to insulate it (on both the CEILING CONCEALED type and the FLOOR STANDING CONCEALED type).

Bad

NOTE: INSTALLING DRAIN HOSE

CAUTION Install the drain hose 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 HOSE

- Install the drain hose with downward gradient (1/50 to 2/50) and so there are no rises or traps in the hose. Use general hard polyvinyl chloride pipe and connect it with adhesive (polyvinyl chloride) so that there is no leakage.
- When the hose is long, install supporters. Do not perform air bleeding. Always heat insulate the indoor side of the drain hose. When the unit is shipped from the factory, the drain port is on
- the right side (control box side). When using the drain port on the left side of the unit, remove the drain cap and install it to the right side drain port.

12000-22000 BTU/h 811

A. CONCEALED CEILING TYPE

Good

Good

Good

well insulated.

drain hose.

B. CONCEALED FLOOR STANDING TYPE

Bad

∴ CAUTION

cover can be removed for servicing.

Install the drain hose so that the control box

In order to prevent water from leaking into the

control box, make sure that the drain hose is

After the wiring is connected and installation

make a seal around the opening in the wall.

installed onto the unused drain port. If the

drain cap is not installed correctly, water may

The outside diameter of drain port is 26 mm, use a suitable

of the piping and drain hose is complete,

Make sure that the drain cap is securely

drip during the cooling operation.

The Drain hose insulation

Bad

Drain hose insulation

Arrange the drain hos

MODEL

9000 BTU/h

Good

5. MAINTENANCE HOLE DIMENSIONS

Control box

Open a maintenance hole with the dimensions shown

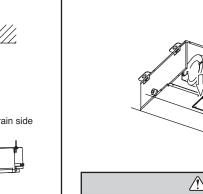
Unit

6. INTAKE DUCT CONNECTION

Follow the procedure in the following figure to the ducts.

Intake hole A (mm

4. LEVELING Base horizontal direction leveling on top of the unit.



and flange.

⚠ CAUTION When air is taken in from the bottom side, the

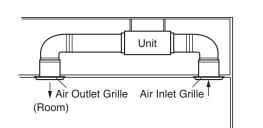
The air inlet duct can be changed by replacing the intake grille

Install the product and intake grilles where the affect of the operating sound is small.

operating sound of the product will easily enter

⚠ CAUTION

-) If an intake duct is installed, take care not to damage the temperature sensor (the temperature sensor is attached to the intake port
- Be sure to install the air inlet grille and the air outlet grille for air circulation. The correct temperature cannot be detected.



Grills must be fixed so that man cannot touch indoor unit fan, and cannot be removed by only hand operation without tool.

Be sure to install the air filter in the air inlet. If the air filter is not installed, the heat exchanger may be clogged and its performance may decrease.

CONNECTING THE PIPE

⚠ CAUTION 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.

nitrogen gas through them. The maximum lengths of this product are shown in the table. If the units are further apart than

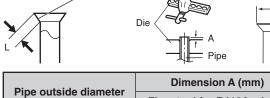
this, correct operation can not be guaranteed.

While welding the pipes, be sure to blow dry

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.

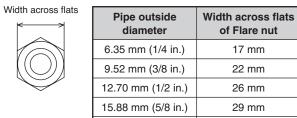




Flare tool for R410A, clutch 6.35 mm (1/4 in.) 9.52 mm (3/8 in.) 12.70 mm (1/2 in.) 0 to 0.5 15.88 mm (5/8 in.) 19.05 mm (3/4 in.)

Pipe outside diameter	Dimension B ⁰ _{-0.4} (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.



19.05 mm (3/4 in.)

(Continued to the next page.

36 mm



↑ CAUTION

1) To prevent breaking of the pipe, avoid sharp Bend the pipe with a radius of curvature of 150 mm or over.

If the pipe is bent repeatedly at the same place, it will break

3. CONNECTION PIPES

Indoor unit (1) Detach the caps and plugs from the pipes.

∴ CAUTION

- 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.
- Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.
- (2) Centering the pipe against port on the indoor unit, turn the flare nut with your hand.

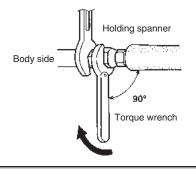


flare nut correctly.

remote controller.

To prevent gas leakage, coat the flare surface with alkylbenzene oil (HAB). Do not use mineral oil.

(3) 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

FUNCTION SETTING

This procedure changes to the function settings used to control

the indoor unit accoding to the installation conditions. Incorrect

Settings will not be changed if invalid numbers or setting values

settings can cause the indoor unit malfunction.

After the power is turned on, perform the "FUNCTION

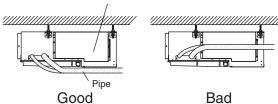
Flare nut Tightening torque 6.35 mm (1/4 in.) dia. 16 to 18 N·m (160 to 180 kgf·cm) 30 to 42 N·m (300 to 420 kgf·cm) 9.52 mm (3/8 in.) dia. 49 to 61 N·m (490 to 610 kgf·cm) 12.70 mm (1/2 in.) dia. 15.88 mm (5/8 in.) dia. 63 to 75 N·m (630 to 750 kgf·cm) 19.05 mm (3/4 in.) dia. 90 to 110 N·m (900 to 1100 kgf·cm)

CAUTION Be sure to connect the gas pipe after connecting the liquid pipe completely.

Lay the piping

Good

A. CONCEALED CEILING TYPE Control box cover



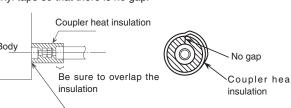
B. CONCEALED FLOOR STANDING TYPE

Good **A** CAUTION Bad

- Install the piping so that the control box cover can be removed for servicing.
- In order to prevent water from leaking into the control box, make sure that the piping is well

4. 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.



⚠ CAUTION

Must fit tightly against body without any gap.

ELECTRICAL WIRING

⚠ WARNING Before starting work, check that power is not being supplied to the indoor unit and outdoor

- Match the terminal board numbers and connection wire colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.
- Connect the connection wires firmly to the terminal board. Imperfect installation may cause

Install the remote controller wires so as not to

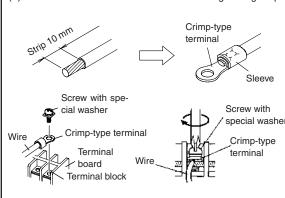
- Always fasten the outside covering of the connection cable with the cable clamp. (If the insulator is chafed, electric leakage may occur.)
- Always connect the ground wire.

be direct touched with your hand.

TERMINALS For strand wiring

HOW TO CONNECT WIRING TO THE

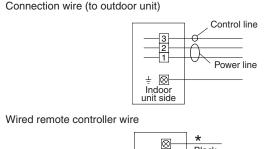
-) Use crimp-type terminals with insulating sleeves as shown in the figure below to connect to the terminal block. 2) Securely crimp the crimp-type terminals to the wires using an appropriate tool so that the wires do not come loose.
- Use the specified wires, connect them securely, and faster them so that there is no stress placed on the terminals.) Use an appropriate screwdriver to tighten the terminal
- Do not use a screwdriver that is too small, otherwise, the screw heads may be damaged and prevent the screws
- from being properly tightened. b) Do not tighten the terminal screws too much, otherwise,
- the screws may break. See the table below for the terminal screw tightening torques



Tightening torque 1.2 to 1.8 N·m (12 to 18 kgf·cm) M4 screw

Use crimp-type terminals and tighten the terminal screws to the specified torques, otherwise, abnormal overheating may be produced and possibly cause heavy damage inside the unit.

1. CONNECTION DIAGRAMS



unit side * Ground the remote controller ip it has a ground wire

Indoor

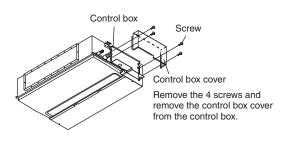


Use a 4-core wire cable.

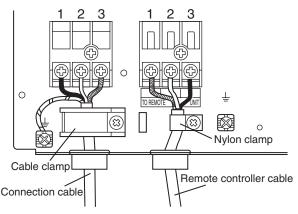
3. INDOOR UNIT SIDE

Use care not to mistake the power supply wire and connection wires when installing.

(1) Remove the control box cover and install each connection



(2) After wiring is complete, secure the remote controller cable, connection cable, and power cable with the cable clamps.



⚠ CAUTION

- Tighten the indoor unit connection wire (to the outdoor unit) and power supply indoor and outdoor unit terminal board connections firmly with the terminal board screws. Faulty connection may cause a fire.
- If the indoor unit connection wire (to the outdoor unit) and power supply are wired incorrectly, the air conditioner may be damaged.
- Wire the indoor unit connection wire (to the outdoor unit) by matching the numbers of the outdoor and indoor units terminal board numbers as shown in terminal label.
- Ground both the indoor and outdoor units by attaching a ground wire.
- Unit shall be grounded in compliance with the applicable local and national codes.

⚠ CAUTION

Do not bundle the remote controller cable, or wire the remote controller cable in parallel, with the indoor unit connection wire (to the outdoor unit) and the power supply cable. It may cause erroneous operation.

REMOTE CONTROLLER **SETTING**

↑ CAUTION When detecting the room temperature_ using the remote controller, please set Temperature sensor up the remote controller according to the following conditions. If the remote controller is not well set, the correct room temperature will not be detected, and thus the abnormal conditions like "not cooled" or "not heated" will occur even if the air-conditioner is running normally. A location with an average temperature for the room being airconditioned Not directly exposed to the outlet air from the

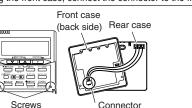
- air-conditioner. Out of direct sunlight. Away from the influence of other heat sources.
- Do not touch the remote controller PC board and PC board parts directly with your hands.
- Do not wire the remote controller cable and the bus wire together with or parallel to the connection cables, transmission cables, and power supply cables of the indoor and outdoor units.
- When installing the bus wire near a source of electromagnetic waves, use shielded wire.

It may cause erroneous operation.

Do not set the DIP switches, either on the air conditioner or the remote controller, in any way other than indicated in this sheet or the manual that is supplied with the air conditioner. Doing so may result in an accident.

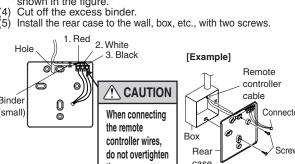
1. INSTALLING THE REMOTE CONTROLLER Open the operation panel on the front of the remote controller. remove the two screws indicated in the following figure, and then remove the front case of the remote controlle

When installing the remote controller, remove the connector from the front case. The wires may break if the connector is not removed and the front case hángs down. When installing the front case, connect the connector to the front case.



When remote controller cable is embedded Embed the remote controller cable and box (2) Pass the remote controller cable through the hole in the rear case and connect the remote controller cable to the remote

controller terminal board specified in the figure. (3) Clamp the remote controller cable sheath with the binder as shown in the figure

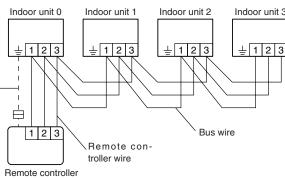


the screws.

⚠ CAUTION When setting DIP switches, do not touch any

Be sure to turn off the main power.

- A number of indoor units can be operated at the same time
- using a single remote controller. Depending on the model, some indoor units cannot be con-
- nected for group control. Some functions may become unusable, depending on the com-
- (1) Wiring method (indoor unit to remote controller)



Set the unit number of each indoor unit using DIP switch on the indoor unit circuit board. (See following table and figure.) DIP switch is normally set to make unit number No. 0.

1 2 3

OFF OFF OFF

4

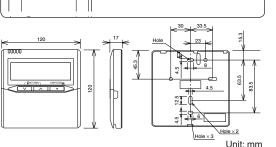
Indoor unit Unit number

remote controller wires with vinyl tape or some other type of insulation as shown in the

Ground the remote controller if it has a ground wire.

Remote controller

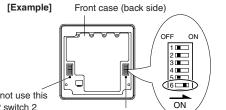
Wrap the connector and



⚠ CAUTION

- Install the remote controller wires so as not to be direct touched with your hand.
- Do not touch the remote controller PC board and PC board parts directly with your hands.

2. SETTING THE DIP SWITCHES Set the remote controller DIP switches

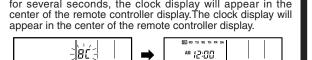


Do not use thi DIP switch 2 DIP switch 1 OFF

	1	*		not change)
	2	*		Dual remote controller setting * Refer to 2. DUAL REMOTE CONTROLLERS in 3 SPECIAL INSTALLATION METHODS.
vitch 1	3	Follow the selection in FUNCTION SETTING	Invalidity	Filter reset operation and filter display
	4	*		Cannot be used. (Do not change)
	5	*		Cannot be used. (Do not change)
	6	★ Invalidity	Validity	Memory backup setting * Set to ON to use batteries for the memory backup. If batteries are not used, all of the settings stored in memory will be deleted if there is a power failure.
		•	•	(★ Factory setting)

3 TURNING ON THE POWER

- Check the remote controller wiring and DIP switch settings. Install the front case.
- When installing the front case, connect the connector to th front case (in 1 INSTALLING THE REMOTE CONTROLLER). Check the indoor and outdoor unit wiring and circuit board switch settings, and then turn on the indoor and outdoor units. After "Hz" has flashed on the set temperature display for several seconds, the clock display will appear in the



™ 12:00 4 SETTING THE ROOM TEMPERATURE

DETECTION LOCATION The detection location of the room temperature can be selected from the following two examples. Choose the detection location that is best for the installation location.

A. Indoor unit setting (factory setting)

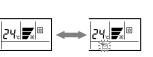
The room temperature is detected by the indoor unit temperature sensor. (1) When the THERMO SENSOR button is pressed, the lock flashes because the function is locked at the factory.

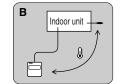


B. Indoor unit/remote controller setting (room temperature sensor selection)

1) Enable the room temperature sensor selection in FUNCTION

SETTING, which will be described later. (2) Press the THERMO SENSOR button for 5 seconds or more to select the temperature sensor of the indoor unit or the remote controlle





⚠ CAUTION When select the "Indoor unit/remote controller setting", if the detected temperature value between the temperature sensor of the indoor unit and the temperature sensor of the remote controller varies significantly, it is likely to return to the control status of temperature sensor of the

indoor unit temporarily. As the temperature sensor of remote controller detects the temperature near the wall, when there is a certain difference between the room temperature and the wall temperature, the sensor will not detect the room temperature correctly sometimes.
Especially when the outer side of the wall on which the sensor is positioned is exposed to the open air, it is recommended to use the

temperature sensor of the indoor unit to detect

the room temperature when the indoor and outdoor temperature difference is significant. The temperature sensor of the remote controller is not only used when there is a problem in the detection of the temperature

sensor of the indoor unit. NOTES

ing with wiring.

If the function to change the temperature sensor is used as shown in examples A (other than example B), be sure to lock the detection location. If the function is locked, the lock display on will flash when the THERMO SENSOR button is pressed.

WHEN CONNECTING

OPTIONAL UNITS

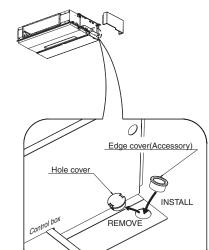
Remove the hole cover, install the edge cover, and then connect-

⚠ CAUTION

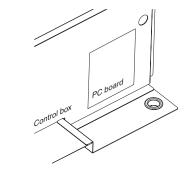
installation or removal. Edge cover can be installed from the printed

circuit board side only.

1) Do not scratch the printed circuit board during



After installation, it is as shown below



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

temperature adjustment, timer, air flow switching, and other remote controller operations. (2) Air filter removal and cleaning. (3) Give the operating and installation manuals to the

PART NO. 9374815111-02

,		
Setting Description	Function Number	Setting Value
Standard	31	00
Lower control		01
Slightly warmer control	31	02

value to "01"

Setting Record

the power and turn it on again.

3) Press the SET TIME(<) (>) but-00:00 -tons to select the function numbe Unit number of INDOOR UNIT

_____00:00 <u>00 |</u>

100:30 <u>10,13</u>

The display flashes as shown to the right during setting value selection. Press the TIMER SET button to confirm the setting. If the setting value display changes or if "- -" is displayed when the flashing stops, the setting value has not been VA AR

Setting value Repeat steps 2 to 5 to perform additional settings. taneously again to cancel the function setting mode. In addition, the function setting mode will be automatically canceled after 1

minute if no operation is performed.

Setting the Static Pressure			
Setting Descr	ription	Function Number	Setting Valu
Normal		21	00
High static pres	ssure 1		01
High static pres	ssure 2		02
High static pres	ssure 3		03
Determine the wind volume in each mode i.e., applica			

CHARACTERISTICS. (The unit is factory-set to "00") **Setting the Cooler Room Temperature Correction**

range of static pressure, refering to [7] STATIC PRESSURE

Depending on the installed environment, the room temperature sensor may require a correction. The settings may be selected

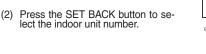
as shown in the table below. (The unit is factory-set to "00".)

SETTING" according to the installation conditions using the The settings may be selected between the following two: Func-

[OPERATION METHOD] Press the SET TEMP buttons (V

 $(\ \ \)$ and FAN button simultaneously for more than 5 seconds to enter the function setting mode.

tion Number or Setting Value.



(4) Press the SET TEMP buttons SETTIME button (V) (Λ) to select the setting

been selected for the indoor unit.)

aa:3**a** -- | Function number set correctly.
(An invalid setting value may have

Press the SET TEMP buttons (\bigvee) (\bigwedge) and FAN button simul-

After completing the FUNCTION SETTING, be sure to turn off the power and turn it on again.

Setting the Static Pressure

			.	Statio	
	Setting Description	Function Number	Setting Value		
			ŭ		Coole
	Normal		00		corre
	High static pressure 1		01		Heate
	High static pressure 2	21	02		corre
	High static pressure 3		03		Auto
	Determine the wind volume in each mode i.e., applicable				Indoo

Setting Description Function Number | Setting Value Standard 00

	201101 00111101		٠.	
	etting the Heater Ro			
•	Depending on the insta	lied environment, the	room	
1	temperature sensor ma	y require a correction	. The settings	
	may ha changad as she	own in the table below	/ (The unit is	

lactory-set to 60 ./			
Setting Description	Function Number	Setting Value	
Standard		00	
Lower control	31	01	
Slightly warmer control		02	
	1		

Setting Other Functions

operating conditions. (The unit is factory-set to "00".)					
Auto Restart	uto Restart				
Setting Description Function Number Setting Value					
Yes	40	00			

indoor recom remperature censor ownering randicin			
Setting Description	Function Number	Setting Value	
No	42	00	
\/	42	0.1	

· If setting value is "00", room temperature is controlled by the indoor unit temperature sensor.

Record any changes to the settings in the following table.		
Setting	Setting Value	
Static pressure		
Cooler room temperature correction		
Heater room temperature correction		
Auto restart		
Indoor room temperature sensor		

turn it off.

- **CHECK ITEMS** (1) Is operation of each button on the remote controller nor-
- (2) Does each lamp light normally? (3) Do not air flow direction louvers operate normally? (4) Is the drain normal? normal noise and vibration during operation?

METHOD]

When using floor console installation, change the setting

Indoor Room Temperature Sensor Switching Function			
Setting Description	Function Number	Setting Value	
No	42	00	

Record any changes to the settings in the following table.		
Setting	Setting Value	
Static pressure		
Cooler room temperature correction		
Heater room temperature correction		
Auto restart		
Indoor room temperature sensor		

TEST RUN

nay be changed as shown in the table below. (The unit is

01

This is possible only on the wired remote controller. [SELF-DIAGNOSIS] If an error occurs, the following display will be shown.

If setting value is "01", room temperature is controlled by either indoor unit temperature sensor or remote controller sensor.

(1) If the operation lamp is on, press the START/STOP button to

(2) Press the MODE button and FAN button at the same time

[Troubleshooting at the remote controller LCD]

Error cable

EX. Self-diagnosis

EE

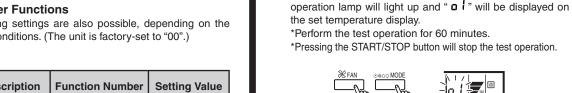
("EE" will appear in the set room temperature display.)

00:00

for more than two seconds to start the test operation. The

51 y 30t to 30 .)			(5) Is there any abnormal noise and vibration during operation?
ting Description	Function Number	Setting Value	Do not operate the air conditioner in the running state for a
Standard		00	long time.
Lower control	31	01	[OPERATION METHOD]
tly warmer control		02	 For the operation method, refer to the operating manual.

Warmer control 03



(3) Press the START/STOP button to stop the test run.

Setting	Setting Value	
Static pressure		
Cooler room temperature correction		
Heater room temperature correction		
Auto restart		
Indoor room temperature sensor switching function		

After completing the FUNCTION SETTING, be sure to turn off

Error contents Error code 01

27		
00	Wired remote controller error	
02	Indoor room temperature sensor error	
04	Indoor heat exchanger temperature sensor (middle) error	
28	Indoor heat exchanger temperature sensor (inlet) error	
09	Float switch operated	

Indoor signal error

26

2C

16

C0

Outdoor discharge pipe temperature sensor 0C Outdoor heat exchanger temperature sensor outlet) error Outdoor temperature sensor error Compressor temperature sensor error 2-way valve temperature sensor error 3-way valve temperature sensor error

Outdoor heat exchanger temperature sensor middle) error Indoor manual auto switch error Power supply frequency detection error 2A IPM protection 17 18 CT error 1A Compressor location error Outdoor fan error 1b Connected indoor unit error 1C Outdoor unit computer communication error Indoor fan error 12 0F Discharge temperature error

4-way valve error

Pressure switch error

1C

Compressor temperature error 2b Active filter error 19 25 PFC circuit error

Exessive high pressure protection on cooling

If "CO" appears in the unit number display, there is a remote controller error. Unit number | Error code Content Incompatible indoor unit is connected ndoor unit ↔ remote

controller communication error

STATIC PRESSURE **CHARACTERISTIC**

If the applicable static pressure does not match the static pressure mode, the static pressure mode may be changed to another mode automatically.

↑ CAUTION

RECOMMENDED RANGE OF **EXTERNAL STATIC PRESSURE** 9000 BTU/h model 0Pa to 40pa 12000-22000 BTU/h models

mode and wind volume, referring to the TECHNICAL MANUAL. •The air flow is set according to the FUNCTION setting in the following tables. •It is possible to change the setting of static pressure mode.refer

•It is necessary to set up a static pressure mode for each usage of static

pressure. Determine the applicable range of static pressure in each

Mode | Setting condition | Static pressure range

0Pa to 90Pa

 $0 \le P \le 4$

 $5 \le P \le 13$

 $17 \leq P \leq 29$

 $34 \leq P \leq 40$

 $0 \le P \le 10$

 $16 \leq P \leq 32$

 $46 \leq P \leq 61$

 $77 \leq P \leq 90$

 $0 \le P \le 8$

 $13 \leq P \leq 31$

 $45 \leq P \leq 61$

 $76 \leq P \leq 90$

High static pressure 1 High static pressure 2

High static pressure 3

AIRFLOW SETTING

to [5] FUNCTION SETTING.

9000BTU/h model

	12000BTU/h model						
	Mode	Setting condition	Static pressure range				
① Normal		Normal	0 ≤ P ≤ 5				
	2	High static pressure 1	$7 \le P \le 23$				
③ High static pressure 2		High static pressure 2	34 ≦ P ≦ 51				
	4)	High static pressure 3	75 ≦ P ≦ 90				

Mode | Setting condition | Static pressure range

High static pressure 2 High static pressure 3

18000BTU/h model

Normal

High static pressure 1

High static pressure 1

High static pressure 2

High static pressure 3

14000BTU/h model

4)	High static pressure 3	76 ≦ P ≦ 90
00E	BTU/h model	
ode	Setting condition	Static pressure range
1)	Normal	0 ≤ P ≤ 15
2)	High static pressure 1	20 ≦ P ≦ 39
3)	High static pressure 2	$45 \le P \le 67$

Mode | Setting condition | Static pressure range

SPECIAL INSTALLATION **METHODS**

other parts on the circuit board directly with vour bare hands.

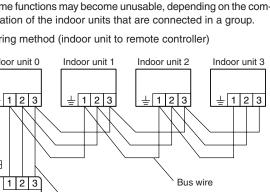
- bination of the indoor units that are connected in a group. Indoor unit 3

When ground wire is necessary (2) DIP switch setting (Indoor unit)

1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON

Example: No. 3

indoor units. 1.GROUP CONTROL SYSTEM The timer and self-diagnosis functions cannot be used on the slave units.



following table.

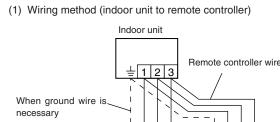
Number of remote

controllers

1 (Normal)

2 (Dual)

1 2 3 4 2.DUAL REMOTE CONTROLLERS



(2) Remote controller DIP switch 1 setting Set the remote controller DIP switch 1 No. 2 according to the

Master unit

OFF

Master uni

1 2 3

1 2 3

Slave unit

ON

Slave unit

DIP SW 1 No. 2 DIP SW 1 No. 2

CUSTOMER GUIDANCE

(1) Starting and stopping method, operation switching,



Мо