INSTALLATION INSTRUCTION **SHEET ∆** CAUT**I**ON

R410A REFRIGERANT

(FARI IV	5. 937 330 10 19)
△ WARNING	This mark indicates procedures which, if improperly performed, might lead to the death or serious injur the user.
△ CAUTION	This mark indicates procedures which, if improperly performed, might possibly result in personal harm the user, or damage to property.
Thi	is air conditioner uses new refrigerant HFC (R410A).

flare nuts with the IR410A piping and flare nuts.

Igerant R410A have a different charging port thread diameter to prevent erroneous charging with ant and for salety. Therefore, check beforehand. (The charging port thread diameter for R410A is 1/2

Charge hose	To increase pressure resistance, the hose material and base size were changed.				
Vacuum pump	A conventional vacuum pump can be used by installing a vacuum pump adapter.				
Gas leakage detector	Special gas leakage detector for HFC refrigerant R410A.				
Copper pipes t is necessary to use asamless copper pip esidual oil is less than 40 mg 10 m. Do no				Annealed Copper I	
selected or discolored portion (especially	Nominal diameter (inch)	Outer diameter (mm)	Thickness (m		

ç	per pipes thinner than 0.8 mm even when it is available on the market.				
	<u> </u>				
5	Do not use the existing (for conventional refrigerant) piping and flare nuts. If the existing materials are used, the pressure inside the refrigerant cycle will rise and cause breakage, injury, etc. (Use the special PA10A materials.)				

For the room air conditioner to operate satisfactorily, install it as outlined in this installation instruction sheet.					
Connect the indoor unit and outdoor unit with the room air conditioner piping and cords available standards parts. This installation instruction sheet describes the correct connections using the installation set available from our standard parts.					
Installation work must be performed in accordance with national wiring standards by authorized personnel only.					
Also, do not use an extension cord.					
Do not turn on the power until all installation work is complete.					

△ 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.			



STANDARD ACCESSORIES

The following installation accessories are supplied. Use them as required. INDOOR UNIT ACCESSORIES (Wall Mounted type)			
Name and Shape	lany	Use Use	
Wall hook bracket	,	For indoor unit installation	
Remote control unit	1	Use for air conditioner operation	
Battery (penlight)	2	For remate control unit	
Remote control unit holder	1	Use as remote control unit holder	
Cliath tape	1	For indoor unit installation	
Tapping screw (big) (p4 x 25)	a	For wall hook bracket installation	
Tapping screw (small)	Г	For remote control unit holder	

() Time	L				
OUTDOOR UNIT ACCESSORIES					
Name and Shape		Use			
Puty 🔾	1	For sealing			
Drain pipe (Heat & Cool model (Reverse cycle) only)	4	For outdoor unit drain piping work			
Drain cap (Heat & Cool model (Reverse cycle) only)	10	For outdoor unit drain piping work			

Nome	Oly
Connection pipe assembly	2.0
Connection cord (3-conductor + earth)	2
Wall pipe	2
Decorative tape	2
Vinyl tape	2
Wall cap	2
iadde	2 sets
Orain hose	2
Spping screws	2 sets
Fealant	2
Power supply cord	- 1

Name	Q'ty
Connection pipe assembly	3
	3
Wall pipe	3
Decorative tape	3
Vinyl tape	3
Wall cap	3
Saddle	3 set
Drain hose	3
Tapping screws	3 set
Sealant	2
Power supply cord	1

ELECTRICAL REQUIREMENT

Power supply cord (mm²)	MAX.	3.0
	MIN.	2.5
Connection cord (mm²)	MAX.	2.5
	MIN.	1.5
Breaker capacity (A)		20

CONNECTION PIPE REQUIREMENTS

Δα	AUTION
Failure to do so may cause	ed both the gas and liquid pipes. a water leaks. at resistance above 120 °C. (Re-
of the refrigerant piping is a best insulation around the pected humidity level is 71 is 15 mm or thicker and if 1 80%, use heat insulation if the translation is used the condensation may form or	nat is not as thick as specified, the surface of the insulation. ation with heat conductivity of



SYSTEM LAYOUT







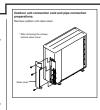


INSTALLATION PROCEDURE









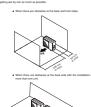










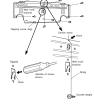












2. CUTTING THE HOLE IN THE WALL FOR THE CONNECTING PIPING















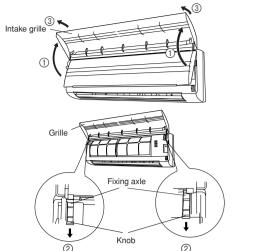


FRONT PANEL REMOVAL AND INSTALLATION

THE INTAKE GRILLE REMOVAL

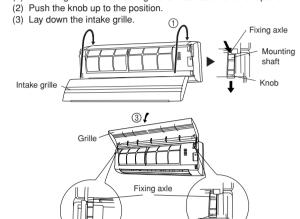
(1) Open the intake grille

(2) Pull down the knob. (3) Open the intake grille, and lift the intake grille upward, until the axle at the top of the intake grille is removed.

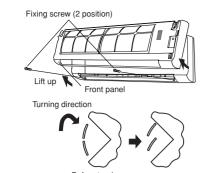


THE INTAKE GRILLE INSTALLATION

(1) The fixing axle of the intake grille is installed on the front panel. (2) Push the knob up to the position.



(1) Turn the wind guide and remove two screws at two sides of air outlet. (2) Take out the air outlet part of the front panel, then lift the whole front panel up to remove it

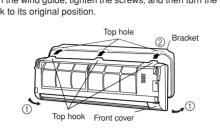


THE FRONT PANEL INSTALLATION

(1) Firstly fit the lower part of the front panel to the air outlet part and insert its lower edge into the slot of the lower cover. (2) Insert three hooks on the upper side of the front panel into the slot of

① Turning wind guide

(3) Turn the wind guide, tighten the screws, and then turn the wind guide back to its original position



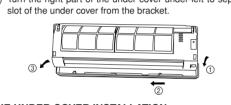
THE UNDER COVER REMOVAL AND INSTALLATION

The under cover removal should be done after the panel has been removed beforehand, or the parts may be damaged The under cover should be installed before the fixing of the panel, or it may result in poor installation

THE UNDER COVER REMOVAL

(1) While pressing the joint part between the right part of the under cover and the bracket, pull it out of the slot.

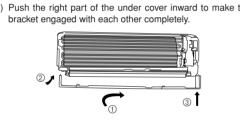
(2) Hold two sides of the under cover and slide it to the left. Make sure its under part getting out of the slot. (3) Turn the right part of the under cover under-left to separate the left



THE UNDER COVER INSTALLATION

(1) Hold two sides of the under cover and align it to the side of the bracket. Firstly match the left slot on the under cover to the bracket. (2) Make five slots on the under cover fit into the fixing plate of the body.

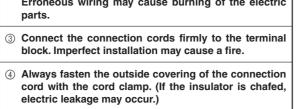
then slide it to the right until the left side of the under cover align to the (3) Push the right part of the under cover inward to make the slot and



THE FRONT PANEL REMOVAL **INDOOR UNIT WIRING**

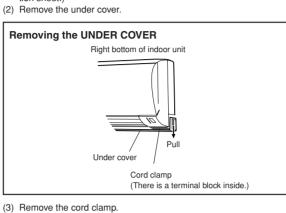
Before starting work, check that power is not being supplied to indoor units and the outdoor unit. Match the terminal block numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric

↑ CAUTION

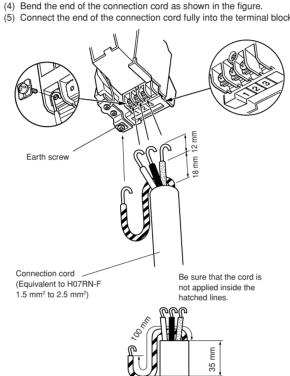


(1) Remove the front panel. (To remove the front panel, refer to "3 FRONT PANEL AND UNDER COVER REMOVAL" in this installation instruction sheet.)

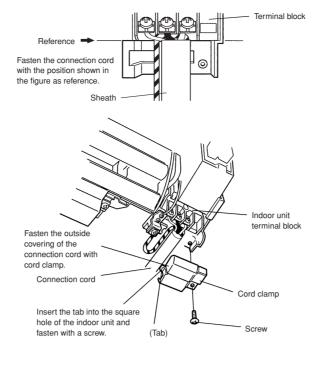
Always connect the ground wire.



(4) Bend the end of the connection cord as shown in the figure.



(6) Fasten the connection cord with a cord clamp.



CONNECTING THE PIPING

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 R410A flare tool.

Check if [L] is fliand is not crack		Die Pipe	В
	Table 5-1	Flaring dimension: B	

Tabl	Table 3-1 Training difficulties. B		
Pipe outside diameter	B ⁺⁰ _{-0.4} (mm)		
6.35 mm (1/4 in.)	9.1		
9.52 mm (3/8 in.)	13.2		

When using conventional flare tools to flare R410A pipes, the dimension A should be approximately 0.5 mm more than indicated in Table 5-2 (for flaring with R410A flare tools) to achieve the specified flaring. Use a thickness gauge to measure the dimension A.

Table 5-2 Pipe outside diameter

Table 6 2 1 1pe datelae alameter				
Pipe outside	A (mm)			
diameter	Flare tool for R410A, clutch type			
6.35 mm (1/4 in.)	0 to 0.5			
9.52 mm (3/8 in.)	0 to 0.5			

2. BENDING PIPES

(1) When bending the pipe, be careful not to crush it. (2) To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with

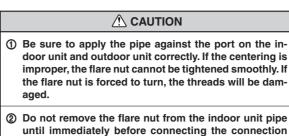
bend the pipe more than three times at one place.

a radius of curvature of 70 mm or over. (3) If the copper pipe is bent or pulled to often, it will become stiff. Do not

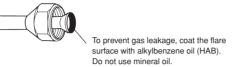
3. CONNECTION PIPES

Outdoor unit

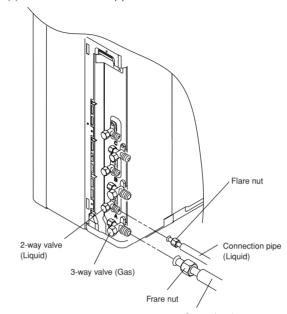
(1) Detach the caps and plugs from the pipes.



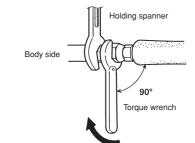
(2) Centering the pipe against port on the indoor unit, turn the flare nut



(3) Attach the connection pipe.



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



⚠ CAUTION Hold the torque wrench at its grip, keeping it in the right

angle with the pipe, in order to tighten the flare nut correctly.

Table 5-3 Flare nut tightening torque

Flare nut	Tightening torque	(using a 20 cm wrench)		
6.35 mm dia.	16 to 18 N·m (160 to 180 kgf·cm)	Wrist strength		
9.52 mm dia.	30 to 42 N·m (300 to 420 kgf·cm)	Arm strength		
Do not remove the cap from the connection pipe before connecting				

the pipe.

VACUUM PROCESS

↑ CAUTION Do not purge the air with refrigerants but use a vacuum pump to vacuum the installation! There is no extra re

frigerant in the outdoor unit for air purging!

Use a vacuum pump for R410A exclusively. Using the same vacuum pump for different refrigerants may damage the vacuum pump or the unit.

1. VACUUM

- (1) Remove the cap, and connect the gauge manifold and the vacuum pump to the charging valve by the service hoses.
- (2) Vacuum the indoor unit and the connecting pipes until the pressure gauge indicates -0.1 MPa (-76 cmHg).
- (3) When -0.1 MPa (-76 cmHg) is reached, operate the vacuum pump for at least 15 minutes. (4) Disconnect the service hoses and fit the cap to the charging valve to
- the specified torque. (5) Remove the blank caps, and fully open the spindles of the 2-way and 3-way valves with a hexagon wrench (Torque: 6 to 7 N·m (60 to 70
- (6) Tighten the blank caps of the 2-way valve and 3-way valve to the specified torque.

	Tightening torque	
Blank cap	20 to 25 N · m (200 to 250 kgf · cm)	

13 to 16 N · m (125 to 160 kgf · cm)

Use a 4 mm 9 Blank cap hexagon wrench Service hose with valve core with valve core

 (\land)

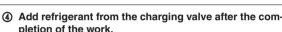
length (B1+B2) (25 ft) (33 ft) (49 ft) (65 ft)

⚠ CAUTION ① When moving and installing the air conditioner, do not

mix gas other than the specified refrigerant (R410A)

- ② When charging the refrigerant R410A, always use an electronic balance for refrigerant charging (to measure the refrigerant by weight).
- ③ When charging the refrigerant, take into account the slight change in the composition of the gas and liquid phases, and always charge from the liquid phase side whose composition is stable.

inside the refrigerant cycle



pletion of the work.

length, correct operation can not be guaranteed.

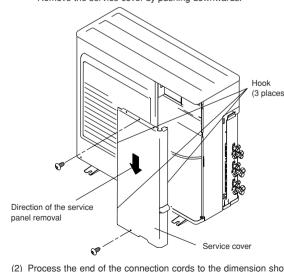
OUTDOOR UNIT WIRING

	⚠ WARNING			
D	Before starting work, check that power is not being supplied to the outdoor unit.			
_	Matabatha tauninal blask numbara and asmastian assel			

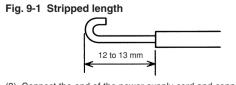
- colors with those of the indoor unit side. Erroneous wiring may cause burning of the electric
- Connect the connection cords firmly to the terminal block. Imperfect installation may cause a fire.
- cord with cord clamps. (If the insulator is clamped, electric leakage may occur.)

Always connect the ground wire.

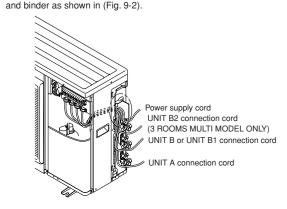
(1) Service cover removal · Remove the two mounting screws. • Remove the service cover by pushing downwards.

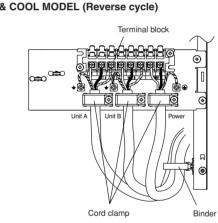


(2) Process the end of the connection cords to the dimension shown in (Fig. 9-2) and bend the end of each cord as shown in (Fig. 9-1).

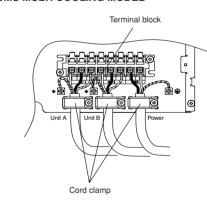


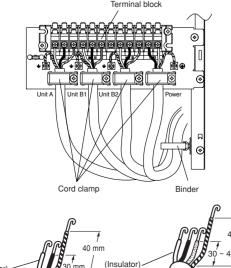
(3) Connect the end of the power supply cord and connection cord fully (4) Fasten the sheath with a cord clamp. (5) Fasten the power supply cord and connection cord with cord clamps



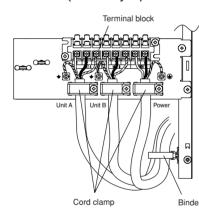


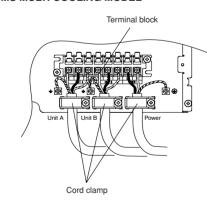
2 ROOMS MULTI COOLING MODEL



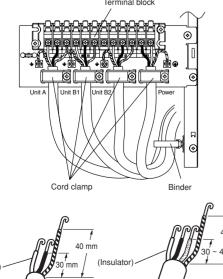


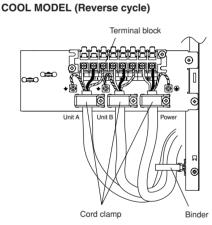
HEAT & COOL MODEL (Reverse cycle)

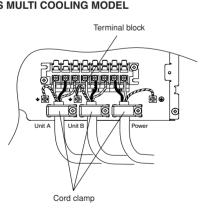


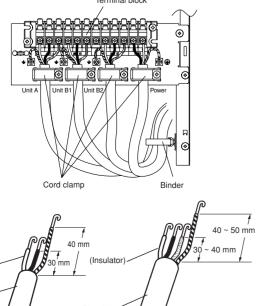


3 ROOMS MULTI MODEL

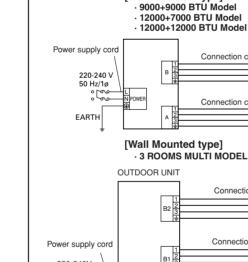




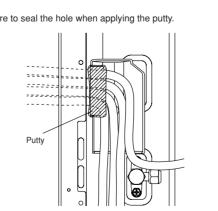




Indoor and outdoor wire connection [Wall Mounted type]

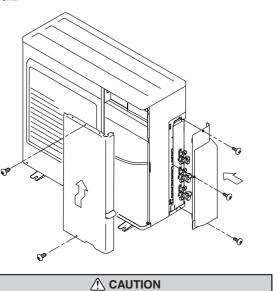


220-240V 50 Hz/1ø (6) Be sure to seal the hole when applying the putty



INDOOR UNIT

(7) Put the service cover and valve cover back after completion of the



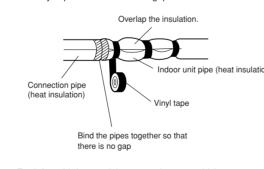
Do not make power supply cord and connection cord come

in contact with valve (Gas).

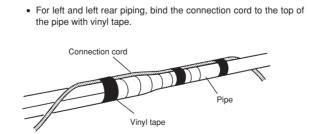
FINISHING

(1) Insulate between pipes. • For rear, right, and bottom piping, overlap the connection pipe heat insulation and indoor unit pipe heat insulation and bind them with

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

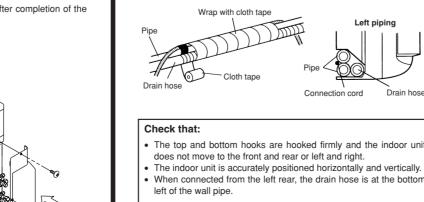


· For left and left rear piping, wrap the area which accommodate the rear piping housing section with cloth tape.



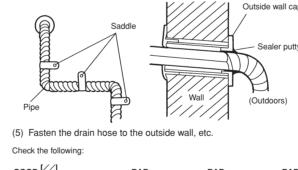
• For left and left rear piping, bundle the piping and drain hose together by wrapping them with cloth tape over the range within which they fit into the rear piping housing section.

the left rear)

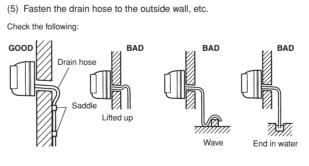


(2) Temporarily fasten the connection cord along the connection pipe with vinyl tape. (Wrap to about 1/3 the width of the tape from the bottom of the pipe so that water does not enter.) (3) Fasten the connection pipe to the outside wall with a saddle, etc.

(4) Fill the gap between the outside wall pipe hole and the pipe with sealer so that rain water and wind cannot blow ir



Indoor unit pipe



POWER

⚠ WARNING			
$\textcircled{\scriptsize 1}$ The rated voltage of this product is 220-240 V A.C. 50 Hz.			
② Before turning on the verify that the voltage is within the 198 V to 264 V range.			

- Always use a special branch circuit and install a special receptacle to supply power to the room air condi-Use a circuit breaker and receptacle matched to the
- 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.

Perform wiring work in accordance with standards so

that the room air conditioner can be operated safely

cult to start, contact the power company to have the

capacity of the room air conditioner

and positively.

Install a leakage circuit breaker in accordance with the related laws and regulations and electric company standards.

⚠ CAUTION

- 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. When the voltage is low and the air conditioner is diffi-
- This air conditioner must be connected to a power source that has an electrical impedance of 0.329 Ω or less or has a supply current of 100 A or greater. If the power supply does not meet the specifications, contact the power company.

Charging port cap

TEST RUNNING

· Perform test operation and check items 1 and 2 below.

 For the operation method, refer to the operating manual. · The outdoor unit may not run, depending on the room temperature. In this case, press the test run button on the remote control unit while



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

When the air conditioner is run by pressing the remote control unit test run button, the OPERATION and TIMER lamps flash slowly at the same time. To end test operation, press the remote control unit START/STOP button.

The OPERATION, TIMER and SWING lamps operate as follows ac-

cording to the error contents.

	Error display		
Error contents	OPERATION (RED)	TIMER (GREEN)	SWING (ORANGE
Indoor unit circuit board error	0	0	_
Room temperature thermistor or			
piping thermistor error (wire discon-	2 times	0	_
nected or broken)			
Indoor unit-outdoor unit miswiring	5 times	0	_
Indoor unit fan error	6 times	0	_
Outdoor unit thermistor error		2 times	_

○ : Fast flashing ■ : Slow flashing — : Off

OUTDOOR UNIT [Heat & Cool model (Reverse cycle) and 3 Rooms multi model only1

When a malfunction occurs in the outdoor unit, the LEDs on the circuit board light to indicate the error. Refer to the following table for the description of each error according to the LEDs.

Error contents

Indoor unit error

Discharge temperature

GAS LEAKAGE INSPECTION

⚠ CAUTION

After connecting the piping, check the joints for gas leak-

age with gas leak detector.

ON OFF JULIANA CONTINUED	ON OFF JUMP OF CONTINUED	Model abnormal or EEPROM abnormal
OFF 2 sec. 2 quick flash repeated	Dislighting continued	UNIT A Discharge tempera- ture sensor error
on 0.5 sec. off 2 sec. 3 quick flash repeated	Dislighting continued	UNIT A Outdoor heat exchanger tempera- ture sensor error
4 quick flash repeated	Dislighting continued	Outdoor temperature sensor error
5 quick flash repeated	Dislighting continued	UNIT A Communication signal error
6 quick flash repeated	Dislighting continued	UNIT A Indoor unit error
7 quick flash repeated	Dislighting continued	UNIT A Discharge temperature abnormal

perature UNIT B Dislighting continued Discharge tempera ture sensor error 2 quick flash repeated Dislighting continued UNIT B Outdoor heat

| 2 sec. | exchanger tempera-3 quick flash repeated ture sensor error Dislighting continued 5 quick flash repeated UNIT B Communication signal e Dislighting continued | 6 quick flash repeated | UNIT B

When the fault is cleared, the LED lamp goes off.

Dislighting continued 7 quick flash repeated UNIT B

CHECK ITEMS (1) INDOOR UNIT

- (1) Is operation of each button on the remote control unit normal?
- (2) Does each lamp light normally? (3) Do the air flow direction louvers operate normally? (4) Is the drain normal?
- (5) Is there any abnormal noise and vibration during operation? (2) OUTDOOR UNIT

(1) Is there any abnormal noise and vibration during operation?

(2) Will noise, wind, or drain water from the unit disturb the neighbors? (3) Is there any gas leakage? • Do not operate the air conditioner in the test running state for a long

• For the operation method, refer to the operating manual and perform

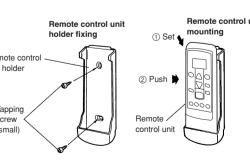
CUSTOMER GUIDANCE

- Explain the following to the customer in accordance with the operating
- justment, timer, air flow switching, and other remote control unit op-

Check that the indoor unit correctly receives the signal from the remote control unit, then install the

Select the remote control unit holder selection site by paying careful attention to the following: Avoid places in direct sunlight. Select a place that will not be affected by the heat from

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



PART NO. 9375301019

3 ROOMS MULTI MODEL Refrigerant suitable for a piping length of 7.5 m is charged in Unit A: the outdoor unit at the factory. Unit B1+B2: Refrigerant suitable for a total piping length of 15 m is

charged in the outdoor unit at the factory.

When the piping is longer than 7.5 m (Unit A), 15 m (Unit B1+B2), additional

ADDITIONAL CHARGE

Refrigerant suitable for a piping length (each indoor unit) of 7.5 m is charged

When the piping is longer than 7.5 m, additional charging is necessary.

(33 ft)

25 g

(49 ft)

75 g

(0.9 oz) (2.6 oz) (0.11 oz/ft)

charging is necessary. For the additional amount, see the table below.

2 ROOMS MULTI MODEL

For the additional amount, see the table below.

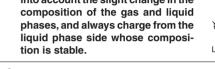
(25 ft)

None

in the outdoor unit at the factory.

UNICA.					
Piping length	7.5 m (25 ft)	10 m (33 ft)	15 m (49 ft)		
Additional refrigerant	None	25 g (0.9 oz)	75 g (2.6 oz)	10 g/m (0.11 oz/ft)	

None None 50 g 10 g/m (1.8 oz) (0.11 oz/ft)



(5) If the units are further apart than the maximum pipe

(1) Starting and stopping method, operation switching, temperature ad-

2) Air filter removal and cleaning, and how to use the air louvers. (3) Give the operating and installation instruction sheets to the customer.

REMOTE CONTROL UNIT

HOLDER INSTALLATION ↑ CAUTION

remote control unit holder.

