

(PART NO. 9365748039)



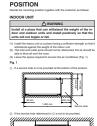
①	For the air conditioner to operate satisfactorily, install it as outlined in this installation instruction sheet.
0	Connect the indoor unit and outdoor unit with the air conditioner piping and cords available from our standard parts. This installation instruction sheet describes the correct connections using the installation set available from our standard parts.
0	Installation work must be performed in accordance with national wiring standards by authorized personnel only.
0	If refrigerant leaks while work is being carried out, ventilate the area. If the refrigerant comes in contact with a flame, it produces a toxic gas.
0	Do not turn on the nower until all installation work is complete

### STANDARD PARTS

### INDOOR UNIT ACCESSORIES

INDOON ONLY ACCES			
Name and Shape	Qty	Application	INE
Pernole controller	1	Use for air conditioner operation	In do
Flampe Joint	1	For connecting the piping	(1)
Gaster 🔊	1	Installation between flange joint and indoor unit	Fig
Special nut A (large flange)	4	For suspending the indoor unit from ceiling	
Special rut B (small flange)	4		
- O	0		
Coupler heat insulation	1	For indoor side pipe joint (small)	0
Flange joint insulation	1	For indoor side pipe joint (large)	
Birder (Large)	1	For fixing the connection pipe (Large and small)	2
Binder (Small)	1	For fixing the remote controller cord	
Remote controller cord clamp	10	For installing the remote controller cord	0

Coupler heat insulation	1	For outdoor side pipe joint
Gasket	1	Installation between flange joint assembly and valve II
Bolt 🖎	2	For fixing the flange joint assembly
Drain pipe	а	For outdoor unit drain piping work (Reverse cycle model only)

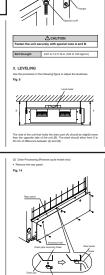




ī	
0	Install the unit where it will not be tilted by more than $5^{\prime}.$
0	When installing the outdoor unit it may be exposed to strong wind, fasten it securely.
2)	If possible, do not install the unit where it will exposed to direct surlight. (If necessary, install a blind that does not interfere with the air flow.) Install the outdoor unit in a place where it will be thee from being dirty or cetting with varia as much as cossible.







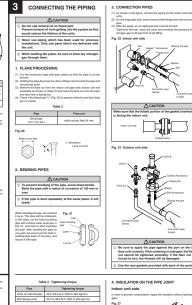
2. INSTALLING HANGERS
Fig. 4 Hanging bolt installation disco

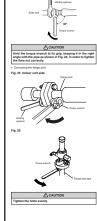


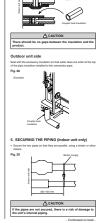
MOUNTING THE DUCT
Follow the procedure in the following fig.
Fig. 7 Flange positions for conne



5. INSTALLING DRAIN PIPE
Fig. 9 Position of drain piping and









### **⚠** CAUTION

- Do not purge the air with refrigerants but use a vacuum pump to vacuum the installation! There is no extra refrigerant in the outdoor unit for air purging!
- Use a vacuum pump for R407C exclusively. Using the same vacuum pump for different refrigerant may damage the vacuum pump or the unit.

- (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
- (4) After vacuuming inside the indoor unit and the piping, remove the cap of the two valves.
- (5) Open the spindle (handle) of the two valves from the closed state.
- (6) Tighten the cap and charging valve of the two valves to the specified torque (Table 5).

# Table 5

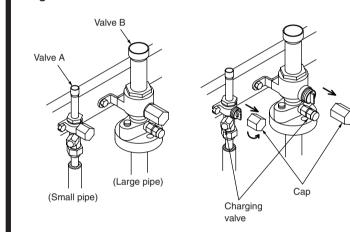
	Tightenir	ng torque	
	Large valve	Small valve	
Handle	1.47 N · m (15	kgf · cm) or less	
Сар	14.7 to 19.6 N · m (	m (150 to 200 kgf · cm)	

### Table 6

Open valve state	Closed valve state
	-

alve B				
Open valve state	Closed valve state			

\* If the spindle (handle) is not fully open, performance will drop and an abnormal sound will be generated.



# fold and charging hose for R407C exclusively. Vacuum pump Service hose

Gauge manifold

**⚠** CAUTION

Use a clean gauge mani-

2. ADDITIONAL CHARGE

- Up to a pipe length of 30 m, charging with additional refrigerant is not
- If the pipe length exceeds 30 m, charging with refrigerant is necessary. Charge with additional refrigerant in the amounts shown in the table

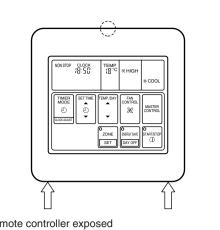
Actual pi	pe length	30 m (99 ft)	40 m (132 ft)	50 m (164 ft)	g/m (oz/ft)
Additional refrigerant	Cooling model	None	500 g (18 oz)	1,000 g (35 oz)	
	Reverse cycle model	None	1,000 g (35 oz)	2,000 g (70 oz)	100 g/m (3.5 oz/3.3 ft)

# **↑** CAUTION

- When moving and installing the air conditioner, do not mix gas other than the specified refrigerant R407C inside the refrigerant circuit.
- When charging the refrigerant R407C, always use an electronic balance for refrigerant charging (to measure the refrigerant by weight).
- 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 composi-
- Add refrigerant from the charging valve after the completion of the work.
- The maximum length of the piping is 50 m. If the units are further apart than this, correct operation can not be guaranteed.

# REMOTE CONTROLLER **INSTALLATION**

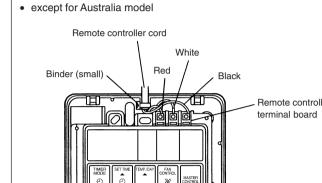
- Insert the end of a flat blade screwdriver at the arrow parts of the groove at the side of the remote controller case and remove the remote controller case top by turning the screwdriver.
- Disconnect the remote controller cord from the remote controller terminal board.

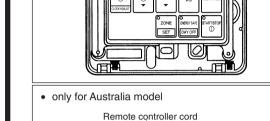


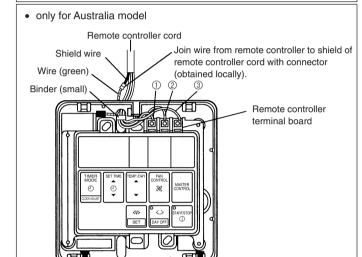
(1) When remote controller exposed 1) Make a notch in the thin part (() part of Fig. 32) at the remote controller case top and bottom with nippers, file, etc. 2) Connect the remote controller cord to the remote controller termi-

- nal board specified in (Fig. 33). 3) Clamp the remote controller cord sheath with the binder (small) as shown in Fig. 33.
- 4) Cut off the excess binder. 5) Clamp the remote controller cord to a wall, etc. with the remote controller cord clamp furnished (Fig. 34).

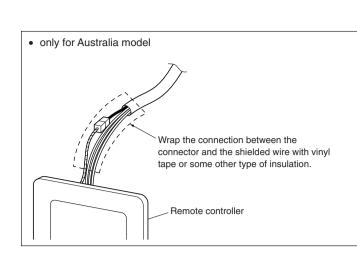
Fig. 32





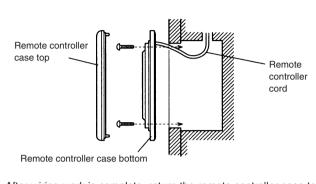


# Fig. 34 Remote controller cord



(2) When remote controller cord embedded 1) Embed the remote controller cord and box. 2) Pass the remote controller cord through the hole at the remote controller case bottom and install the cord to the box (Fig. 35). 3) Connect the remote controller cord to the remote controller terminal board specified in (Fig. 33).

## Fig. 35 [Example]



 After wiring work is complete, return the remote controller case top to its original state.

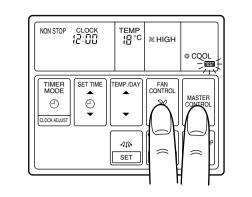
### **CAUTION** Do not bundle the remote controller cord, or wire the remote controller cord in parallel, with the indoor unit connection wire (to the outdoor unit) and the power supply cord. It may cause erroneous operation.

- When installing the remote controller and cord near a source of electromagnetic waves, separate the remote controller from the source of the electromagnetic waves and use shielded cord.
- Do not touch the remote controller PC board and PC board parts directly with your hands.

# **TEST RUNNING**

# 1. REMOTE CONTROLLER

- Supply power to the crankcase heater 12 hours before the start of operation in the winter.
- For test running, when the remote controller FAN CONTROL button and MASTER CONTROL button are pressed simultaneously for more than three seconds when the air conditioner is not running, the air conditioner starts and TEST is displayed on the remote controller display. However, the SET TEMP./DAY setting button does not function, but all other buttons, displays, and protection functions operate (Fig. 44).



• When EE: EE blinks at the current time display, there is an error inside the air conditioner. If the SET TIME button (▼) and SET TEMP./DAY button (▼) are pressed simultaneously for more than three seconds, the self diagnosis check will start and the error contents will be displayed at the current time display (Fig. 45). When the operation lamp lights, press the START/STOP button and after operation lamp goes off, perform the same operation (Fig. 45). Process the error contents by referring to (Table 8).

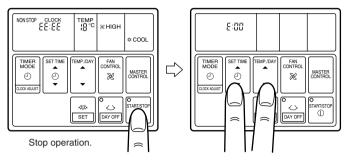


	Table 8
Error cord	Error contents
E:00	Communication error (indoor unit
E:[] {	Communication error (indoor unit outdoor unit)
E:02	Room temperature sensor open
E:03	Room temperature sensor shortcircuited
E:DH	Indoor heat exchanger temperature sensor open
E:05	Indoor heat exchanger temperature sensor shortcircuited
E:05	Outdoor heat exchanger temperature sensor open
E:[[7]	Outdoor heat exchanger temperature sensor shortcircuited
E:08	Power source connection error
E:09	Float switch operated
E:OA	Outdoor temperature sensor open

### Error cord Error contents utdoor temperature sensor shortcircuited E:CIC Discharge pipe temperature sensor open E:[]d Discharge pipe temperature sensor shortcircuited E:DE Outdoor low pressure abnormal E:OF Discharge pipe temperature abnormal Model abnormal Indoor fan abnormal Outdoor signal abnormal Outdoor EEPROM abnormal

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

### 2. OUTDOOR UNIT

When the outdoor temperature drops, the outdoor unit's fans may switch to low speed, or one of the fans may stop intermittently.

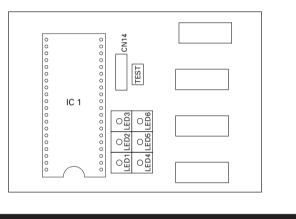
The LED lamps operate as follows (Table 9) according to the error contents.

Error contents	LED1	LED2	LED3	LED4	LED5	LED6
Signal abnormal	_	_	×	0	×	×
ndoor unit abnormal	_	_	×	×	0	×
Discharge pipe emperature abnormal	_	_	×	×	×	0
Outdoor heat exchanger emperature abnormal	_	_	×	×	0	0
Outdoor temperature abnormal	_	_	×	0	×	0
Power sorce connection error	_	_	0	×	×	×
EEPROM abnormal	_	-	0	0	0	0
	0	0	0	0	0	0
Outdoor high pressure abnormal	0	_	_	_	-	_
Discharge pipe emperature abnormal	_	0	_	_	ı	_
: 0.5s ON/0.5s OFF (flash) ×: OFF						

©: 0.1s ON/0.1s OFF (flash) —: Indefinite

When the fault is cleared, the LED lamp goes off. However, for discharge pipe temperature abnormal and high pressure abnormal, the LED lamp lights continuously for 24 hours, as long as the power is not turned off.

# Fig. 46 ERROR LED DISPLAY LAYOUT



# **POWER**

# **⚠ WARNING**

- The rated voltage of this product is 380-415 V 3ø 50 Hz. Before turning on verify that the voltage is within the 342 to 457 V range.
- Always use a special branch circuit and install a special receptacle to supply power to the air conditioner.

Use a special branch circuit breaker and receptacle

that the air conditioner can be operated safely and posi-

- matched to the capacity of the air conditioner. (Install in accordance with standard.) Perform wiring work in accordance with standards so
- Install a leakage special branch circuit breaker in accordance with the related laws and regulations and elec-

# **⚠** CAUTION

tric company standards.

When the voltage is low and the air conditioner is difficult to start, contact the power company the voltage raised.

# **ELECTRICAL WIRING**

# **⚠ WARNING**

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

Match the terminal board numbers and connection cord

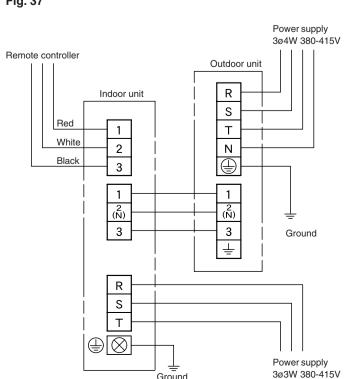
- colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric
- Connect the connection cord firmly to the terminal board. Imperfect installation may cause a fire.
- Always fasten the outside covering of the connection cord with the cord clamp. (If the insulator is chafed, electric leakage may occur.)
- Always connect the ground wire.

### **HOW TO CONNECT WIRING** TO THE TERMINALS

- the insulation to about 25 mm (15/16") to expose the solid wire.
- (3) Using pliers, bend the solid wire to form a loop suitable for the terminal screw.
- tighten securely with the terminal screw using a screwdriver.
- the insulation to about 10 mm (3/8") to expose the strand wiring.
- 4) Position the round terminal wire, and replace and tighten the ter-

# special washer

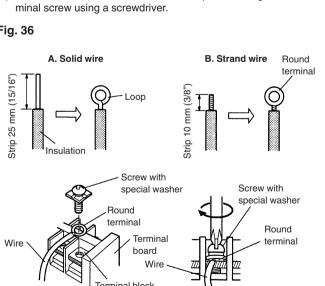
# 1. CONNECTIONS DIAGRAM

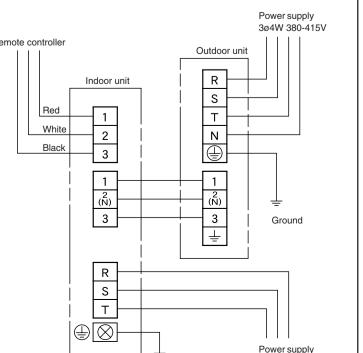


- A. For solid core wiring (or F-cable) (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip
- 2) Using a screwdriver, remove the terminal screw(s) on the terminal
- 4) Shape the loop wire properly, place it on the terminal board and

# B. For strand wiring

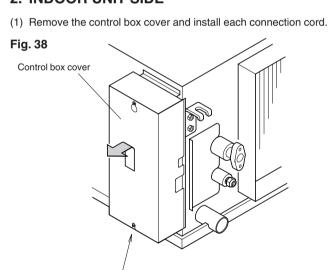
- 1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip 2) Using a screwdriver, remove the terminal screw(s) on the terminal
- (3) Using a round terminal fastener or pliers, securely clamp a round
- terminal to each stripped wire end.



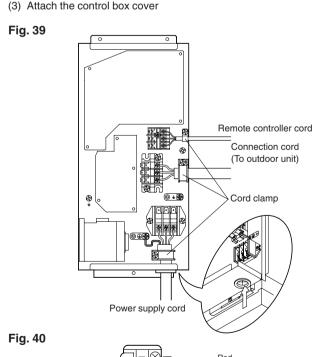


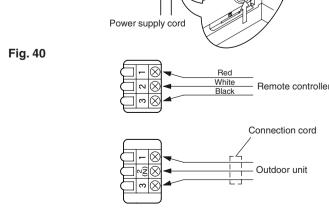
# 2. INDOOR UNIT SIDE

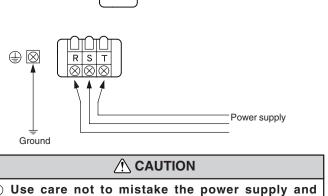
Use a shielded wire (obtained locally) for the remote controller cord.



(2) After wiring is complete, clamp the remote controller cord, connection cord and power supply cord with cord clamp.



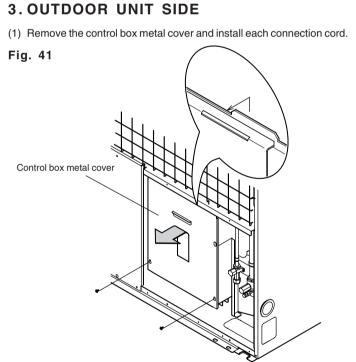




Install so that the wire for the remote controller will

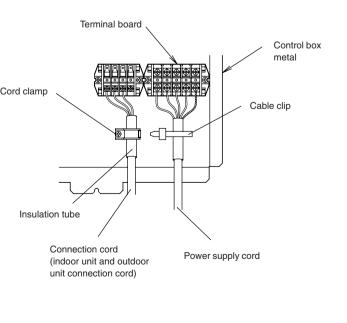
not come in contact with other connection wires.

connection wires when installing.

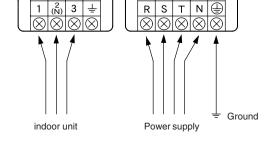


(2) After wiring is complete, clamp connection cord and power supply cord with cord clamp. (3) Attach the control box cover.

# Fig. 42



# Fig. 43



# PART NO. 9365748039