

VACUUM PROCESS

1. VACUUM

- (1) Vacuum inside the indoor unit and the piping to a pressure of 1.5 mmHg abs or less from the charging valve with a vacuum pump. (2) After vacuuming inside the indoor unit and the piping, remove the
- cap of the two valves. (3) Open the handle of the two valves from the closed state (Table 6). (4) Tighten the cap of the two valves to the specified torque.

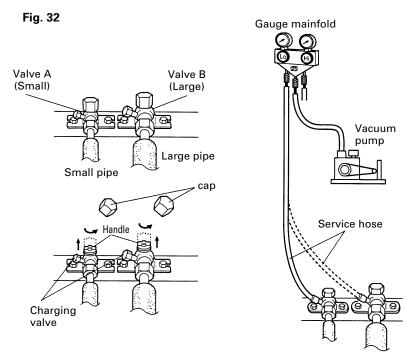
Table 5

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

Table 6

Open valve state	Closed valve state

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



2. ADDITIONAL CHARGE

Refrigerant suitable for a piping length 20 m for other model is charged in the outdoor unit at the factory. When the piping is longer than 20 m, additional charging is necessary. For the additional amount, see the table below.

Table 7

Pipe length Model type	20 m (66 ft)	30 m (99 ft)	40 m (132 ft)	50 m (164 ft)	g/m (oz/ft)
36,000 BTU 45,000 BTU class	None	400 g (14.1 oz)	800 g (28.2 oz)	1200 g (42.3 oz)	40 g/m (1.41 oz/3.3 fi
54,000 BTU class	None	500 g (17.6 oz)	1000 g (35.2 oz)	1500 g (52.8 oz)	50 g/m (1.76 oz/3.3 fi

!\ CAUTION

- When charging the refrigerant, always use a measur-
- ② Add refrigerant from the charging valve after the completion of the work.

INSTALLING THE COUPLER HEAT INSULATION

After checking for gas leaks, insulate by wrapping insulation around the two parts (large and small) of the indoor unit coupling, using the coupler heat insulation. After installing the coupler heat insulation, wrap both ends with vinyl

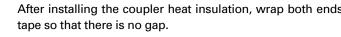
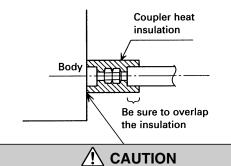


Fig. 33



Must fit tightly against body without any gap.



ELECTRICAL WIRING

HOW TO CONNECT WIRING TO THE TERMINALS

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

- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 25 mm (15/16") of expose the solid wire.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using pliers, bend the solid wire to form a loop suitable for

the terminal screw using a screwdriver.

the terminal screw. (4) Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a

B. For strand wiring

screwdriver.

- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 10 mm (3/8") of expose the strand wiring.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using a round terminal fastener or pliers, securely clamp a
- round terminal to each stripped wire end. (4) Position the round terminal wire, and replace and tighten

Screw with

HOW TO FIXED CONNECTION CORD AND POWER

After passing the connection cord and power supply cord

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

⚠ WARNING

Before starting work, check that power is not being

Match the terminal board numbers and connection

Erroneous wiring may cause burning of the electric parts.

3) Connect the connection cord firmly to the terminal

(4) Always fasten the outside covering of the connection

(1) Remove the control box cover and cover (wire) B and install

(2) After wiring is complete, clamp the connection cord with the

(3) Install the control box cover and cover (wire) B.

Cord clamp

Connection cord (To the outdoor unit)

OUTDOOR ◄

Ceiling height setting

Ceiling height

2.5 ~ 3.0

Dip switch

Terminal board

DIP-SW4

OFF

ON

Set the DIP switch for the ceiling height according to the table be-

Table 8

Normal

High ceiling 1

More than 3.5 | High ceiling 2 |

Less than 2.5 Low ceiling

cord with the cord clamp. (If the insulator is chafed,

cord colors with those of the outdoor unit.

board. Imperfect installation may cause a fire.

through the insulation tube, fasten it with the cord clamp.

SUPPLY CORD AT THE CORD CLAMP

Fig. 35

1. INDOOR UNIT SIDE

supplied to the indoor unit.

electric leakage may occur.)

⑤ Always connect the ground wire.

the connection cord.

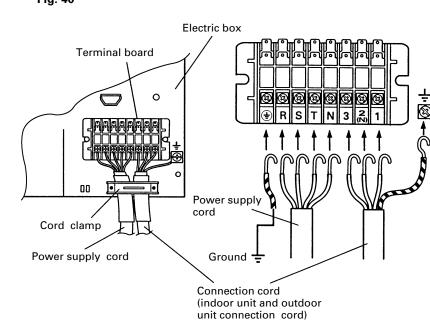
Control box cover

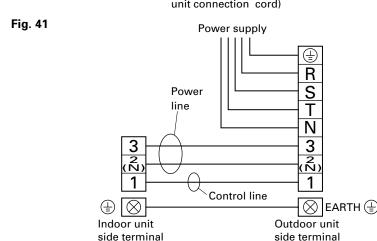
cord clamp

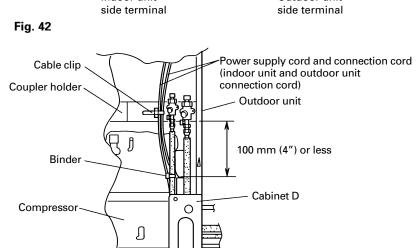
Fig. 37

/!\ WARNING

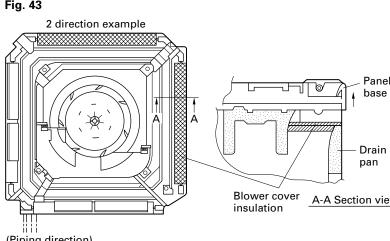
- supplied to the outdoor unit. cord colors with those of the indoor unit side.
- 3 Connect the connection cords and the power supply cord firmly to the terminal board. Imperfect installation may cause a fire.
- the insulator is chafed, electric leakage may occur.)
- **S** Always connect the ground wire.



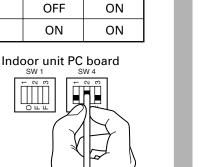




Install the blower cover insulation only when the outlet direction is not specified. Two blower cover insulations are packed with the indoor unit. Install the blower cover insulation at the diffuser position shown in



INSTALLING THE INTAKE GRILLE



OFF

OFF

!\ CAUTION

) If the setting for a low ceiling is selected, the capacity of the air conditioner decreases slightly.

Indoor unit

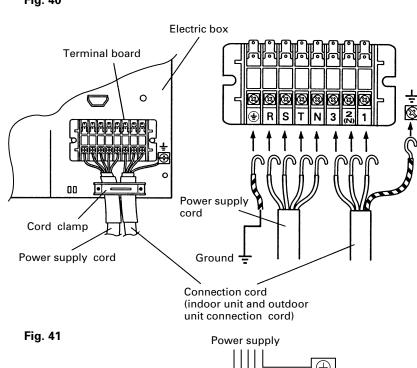
PC board

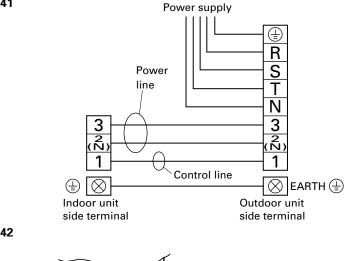
2) Do not set any switches other than those specified in this sheet or the remote controller installation instruction sheet. The air conditioner may not operate correctly if any switches other than those specified are changed.

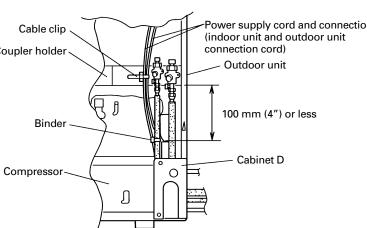
2. OUTDOOR UNIT SIDE

① Before starting work, check that power is not being 2) Match the terminal board numbers and connection

- Erroneous wiring may cause burning of the electric parts.
- Always fasten the outside covering of the connection cord and the power supply cord with cord clamps. (If
- (1) Remove outdoor unit cabinet A and connect the power supply cord and the outdoor unit connection cord wired at the indoor unit. (2) Fasten the power supply cord and connection cord with cable clip and binders as shown in (Fig. 42).



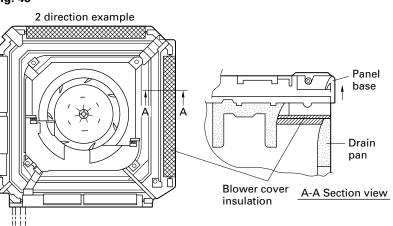




GRILLE INSTALLATION

BLOWER COVER INSULATION

Fig. 43. At this time, use the piping position as the criteria.



(1) Mount the grille hinge wire to the hook shaft as shown in Fig. 44.

POWER

WARNING

• Latch the grille hinge wire to the hook shaft, and fasten.

• Pass the hook wire through the panel base from the rear

metal fitting of the intake grille using a screw.

(3) Loosen the screw, put the loop of the hook wire over it,

CAUTION

Install the intake grille hook wire to the grille assem-

(4) Bring up the intake grille by pushing it up at an angle as

shown in Figs. 49, 50, and fasten.

and tighten the screw again.

side as shown in Fig. 47, and fasten to the reinforced

Fig. 45 Part A detail view

(2) Install the hook wire.

Fig. 48 Section view

Fig. 46 Part A section view

Grille hinge

Hook wire

Hook shaft

- ① 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 matched to the capacity of the air conditioner. (Install in accordance with standard.)
- Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.
- Install a leakage special branch circuit breaker in accordance with the related laws and regulations and electric company standards.

/!\ CAUTION

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

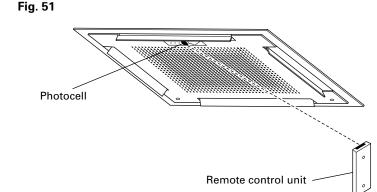
REMOTE CONTROL UNIT INSTALLATION

!\ CAUTION

- Check that the indoor unit correctly receives the signal from the remote control unit, then install the remote control unit holder.
- Select the remote control unit holder selection site by paying careful attention to the following: Avoid places in direct sunlight. Select a place that will not be affected by the heat
- from a stove, etc.

• Install the remote control unit so that the front is facing the pho-

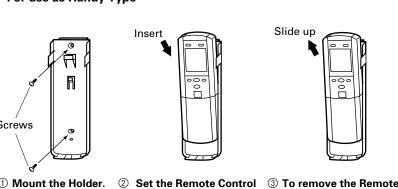
tocell. (Fig. 51)



- Install the remote control unit with a distance of 7 m between the remote control unit and the grille photocell as the criteria. However, when installing the remote control unit, check that it oper-
- ates positively. • Install the remote control unit holder to a wall, pillar, etc. with the tapping screw (Fig. 52).

Fig. 52

For use as Handy Type

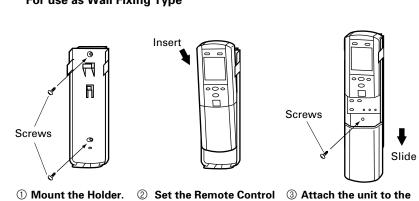


Control Unit (when use

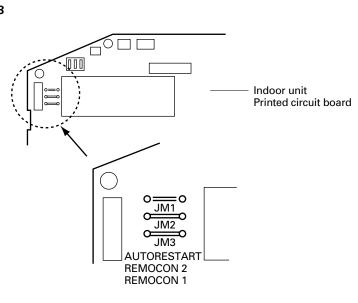
holder as shown.

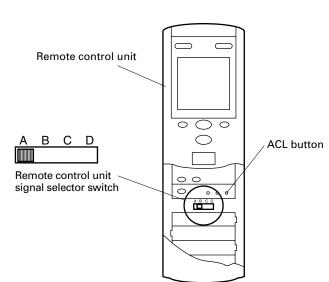
at hand.)

For use as Wall Fixing Type



Remote control unit code switching.





Confirm the remote control unit signal selector switch selection and printed circuit board setting. If these are not confirmed, the remote control unit cannot be operated for the air conditioner.

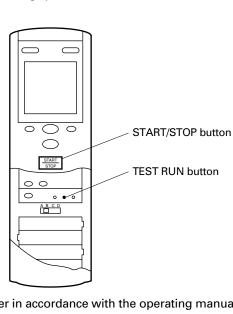
	Tab	oie 9	
Jumper wire		Remote control unit	
JM 2	JM 3	signal selector switch	
Connect	Connect	A (Primary setting)	
Connect	Disconnect	В	
Disconnect	Connect	С	
Disconnect	Disconnect	D	

After setting the remote control unit signal selector switch, press the ACL button.

TEST RUNNING

1. INDOOR UNIT

- Press the remote control unit test run button while the air conditioner is running.
- At the end of test running, press the remote control unit startstop button. (Fig. 54)



3. CHECKING DRAINAGE

water as shown in Fig. 55.

Fig. 55

Fig. 56

To check the drain, remove the water cover and fill with 2 to 3 ℓ of

Water cover

Unit: mm

The drain pump operates when operating in the cooling mode.

Watering pot

OPENING THE DUCT

CONNECTION HOLE

!\ CAUTION

When performing hole opening work, be careful not to

② When connecting the distribution duct, to make the air

Screw position and connection hole which are fresh air duct and dis-

12-ø3.3 self tapping screw holes (for 4 mm)

2. DISTRIBUTION DUCT AND FRESH AIR DUCT HOLE

Use the distribution duct hole and fresh air duct hole by removing

• Cut off the part (Cabinet) indicated by the arrow in the Fig. 58 with

P. D 88

the blocking direction, refer to Fig. 43.

flow easily, block the outlet port with the blower cover

insulation as shown by the hatched lines in Fig. 56. For

damage the drain pan.

1. DIMENSION

PROCESSING

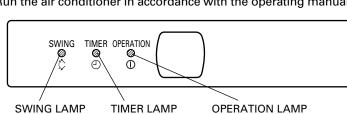
Fig. 58

the insulation material as shown below.

nippers, needle nose pliers, etc.

tribution duct.

• Run the air conditioner in accordance with the operating manual.



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

Test running

(Orange)

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.

Error

The OPERATION, TIMER and SWING lamps operate as follows (Table 10) according to the error contents.

Table 10

Table 10						
Error contents	OPERATION lamp (RED)	TIMER lamp (GREEN)	SWING lamp (ORANGE)			
Indoor EEPROM abnormal	0	0	×			
Outdoor EEPROM abnormal	0	0	0			
Indoor room temperature sensor open	(2 times)	0	×			
Indoor room temperature sensor shortcircuited	(2 times)	0	0			
Indoor heat exchanger temperature sensor open	(3 times)	0	×			
Indoor heat exchanger temperature sensor shortcircuited	(3 times)	0	0			
Float switch operated	(4 times)	0	×			
Indoor signal abnormal	(5 times)	0	X			
Outdoor signal abnormal	(5 times)	0	0			
Indoor fan abnormal	(6 times)	0	×			
Outdoor power source connection abnormal	0	(2 times)	×			
Outdoor heat exchanger temperature sensor open	0	(3 times)	×			
Outdoor heat exchanger temperature sensor shortcircuited	0	(3 times)	0			
Outdoor temperature sensor open	0	(4 times)	×			
Outdoor temperature sensor shortcircuited	0	(4 times)	0			
Outdoor discharge pipe temperature sensor open	0	(5 times)	×			
Outdoor discharge pipe temperature sensor shortcircuited	0	(5 times)	0			
Outdoor high pressure abnormal	0	(6 times)	×			
Outdoor discharge pipe		(7 times)	×			

temperature abnormal : 0.1s ON/0.1s OFF (flash)

● : 0.5s ON/0.5s OFF (flash)

2. OUTDOOR UNIT

Error contents

Indoor unit abnormal

temperature abnormal

Outdoor heat exchanger

temperature abnormal

Outdoor temperature

Power sorce connection

Outdoor high pressure

temperature abnormal

○: 0.5s ON/0.5s OFF (flash)

: 0.1s ON/0.1s OFF (flash)

long as the power is not turned off.

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

EEPROM abnormal

abnormal

Signal abnormal

Discharge pipe

When the outdoor temperature drops, the outdoor unit's fans may

switch to low speed, or one of the fans may stop intermittently. **ERROR: HEAT &COOL MODEL (REVERSE CYCLE) ONLY**

The LED lamps operate as follows (Table 11) according to the error contents.

X: OFF

However, for discharge pipe temperature abnormal and high pres-

sure abnormal, the LED lamp lights continuously for 24 hours, as

—: Indefinite

LED1 LED2 LED3 LED4 LED5 LED6

- Open the holes and cut the insulation with a knife. * Be careful not to damage the internal parts.
- * Be careful not to cut yourself on the cutout in the metal plate. * Please remove the insulation (inner box) left over after cutting.
- Connect the distribution duct. * When mounting the duct, block the gap so that there is no cold air leakage.
- * Insulate the duct and cut connection.

! CAUTION

The air conditioner cannot take in fresh air by itself. When

connecting a fresh air duct, always use a duct fan.

