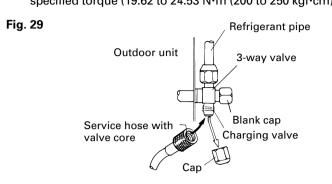
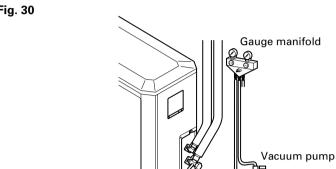


VACUUM PROCESS

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 in them lowers to below 1.5 mmHg.
- (3) Disconnect the service hoses and fit the cap to the charging valve (Tightening torque: 6.87 to 8.83 N·m (70 to 90 kgf·cm). (4) Remove the blank caps, and fully open the spindles of the 2-way and 3-way valves with a hexagon wrench (Torque: 2-way valve:
- 6.87 to 8.83 N·m (70 to 90 kgf·cm), 3-way valve: 9.81 to 11.77 N·m (100 to 120 kgf·cm)).
- (5) Tighten the blank caps of the 2-way valve and 3-way valve to the specified torque (19.62 to 24.53 N·m (200 to 250 kgf·cm)).





2. ADDITIONAL CHARGE

Refrigerant suitable for a piping length of 7.5 m is charged in the outdoor unit at the factory.

When the piping is longer than 7.5 m, additional charging is neces-

For the additional amount, see the table below. Table 5

Pipe I	length	7.5 m (25 ft)	10 m (33 ft)	15 m (49 ft)	20 m (66 ft)	25 m (82 ft)
Additional refrigerant	Heat & Cool (Reverse cycle)	None	100 g (3.5 oz)	300 g (10.6 oz)	500 g (17.6 oz)	700 g (24.7 oz)
	Cooling model	None	43 g (1.5 oz)	128 g (4.5 oz)	213 g (7.5 oz)	298 g (10.5 oz)

Between 7.5 m and 25 m, when using a connection pipe other than that in the table, charge additional refrigerant with 40 g (1.4 oz)/1 m (3.3 ft) (Reverse cycle model), 17 g (0.6 oz)/1 m (3.3 ft) (Cooling model) as the criteria.

CAUTION

- ① When charging the refrigerant, always use a measuring cylinder.
- 2) Add refrigerant from the charging valve after the completion of the work.



GAS LEAKAGE INSPECTION

!\ CAUTION

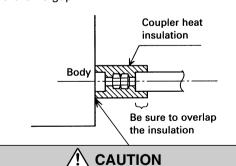
After connecting the piping, check the joints for gas leakage with gas leak detector.



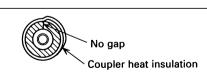
INSTALLING THE COUPLER HEAT INSULATION

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 tape so that there is no gap.





Must fit tightly against body without any gap.



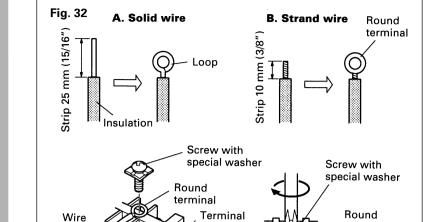
ELECTRICAL WIRING

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.
- (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

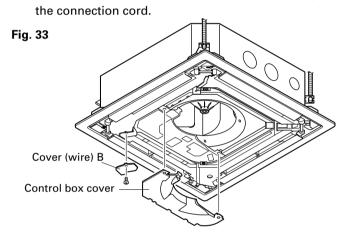
- (1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 10 mm (3/8") of expose the strand wiring.
- (2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
- (3) Using a round terminal fastener or pliers, securely clamp a round terminal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



1. INDOOR UNIT SIDE

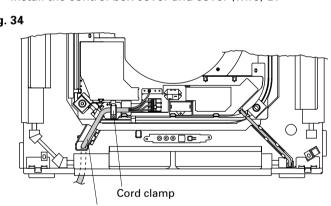
WARNING

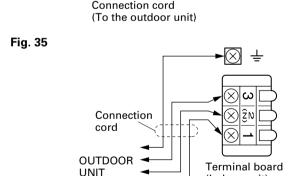
- Before starting work, check that power is not being supplied to the indoor unit.
- Match the terminal board numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.
- 3 Connect the connection cord firmly to the terminal board. Imperfect 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.)
- ⑤ Always connect the ground wire.
- (1) Remove the control box cover and cover (wire) B and install



(2) After wiring is complete, clamp the connection cord with the cord clamp. (3) Install the control box cover and cover (wire) B.



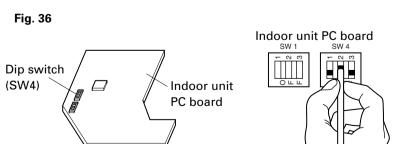




Ceiling height setting

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

Table 6				
Ceiling height			DIP-SW4	
(m)		1	2	3
2.5 ~ 3.0	Normal	_	OFF	OFF
3.0 ~ 3.5	High ceiling 1	_	ON	OFF
More than 3.5	High ceiling 2	_	OFF	ON
Less than 2.5	Low ceiling	_	ON	ON



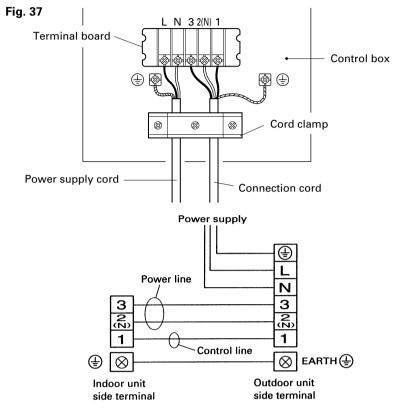
CAUTION

- ① If the setting for a low ceiling is selected, the capacity of the air conditioner decreases slightly.
- 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

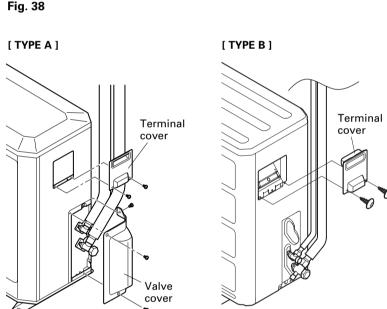
2. OUTDOOR UNIT SIDE

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

- Match the terminal board numbers and connection cord colors with those of the indoor unit side. Erroneous wiring may cause burning of the electric parts.
- Connect the connection cords and the power supply cord firmly to the terminal board. Imperfect installation may cause a fire.
- Always fasten the outside covering of the connection cord and the power supply cord with cord clamps. (If the insulator is chafed, electric leakage may occur.)
- Always connect the ground wire.
- (1) Remove outdoor unit terminal cover and connect the power supply cord and the outdoor unit connection cord wired at the indoor
- (2) Fasten the power supply cord and connection cord with cord clamp as shown in (Fig. 37).



(3) Install the terminal cover and valve cover. Fig. 38

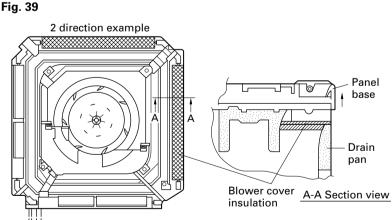


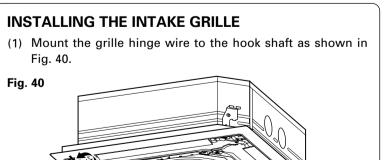
GRILLE INSTALLATION

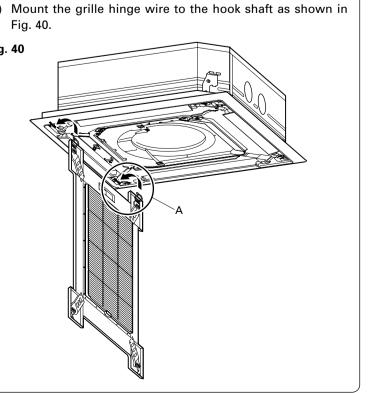
BLOWER COVER INSULATION Install the blower cover insulation only when the outlet direction is not

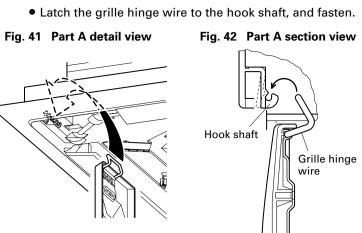
Two blower cover insulations are packed with the indoor unit. Install the blower cover insulation at the diffuser position shown in Fig. 39. At this time, use the piping position as the criteria.

(Piping direction)









(2) Install the hook wire. • Pass the hook wire through the panel base from the rear side as shown in Fig. 43, and fasten to the reinforced metal fitting of the intake grille using a screw.

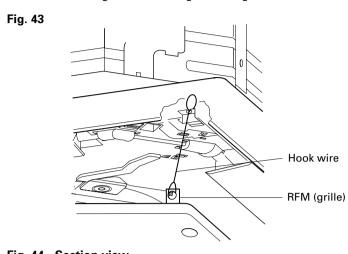
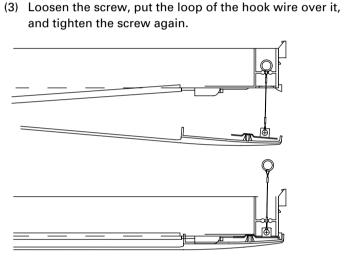


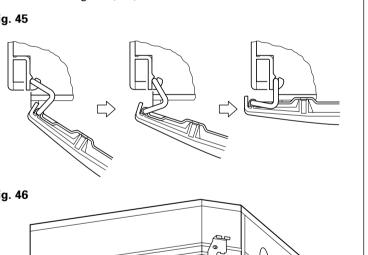
Fig. 44 Section view Hook wire

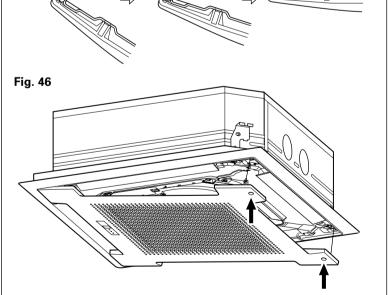


Install the intake grille hook wire to the grille assembly. If it falls, it may cause injuries.

!\ CAUTION

(4) Bring up the intake grille by pushing it up at an angle as shown in Figs. 45, 46, and fasten.





POWER

(10)

⚠ WARNING

- ① The rated voltage of this product is 220-240 V 50 Hz.
- Before turning on verify that the voltage is within the 198 to 264 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.

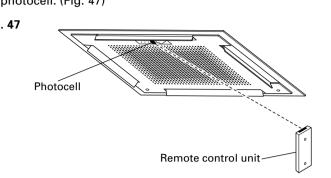
CAUTION

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

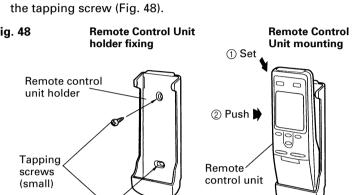
REMOTE CONTROL UNIT INSTALLATION

! CAUTION

- 1) Check that the indoor unit correctly receives the signal from the remote control unit, then install the remote control unit holder.
- 2) 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 photocell. (Fig. 47)



- 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-
- Install the remote control unit holder to a wall, pillar, etc. with



SWITCHING REMOTE CONTROL UNIT SIGNAL CODES Confirm the setting of the remote control unit signal code and the printed circuit board setting.

If these are not confirmed, the remote control unit cannot be used to operate for the air conditioner.

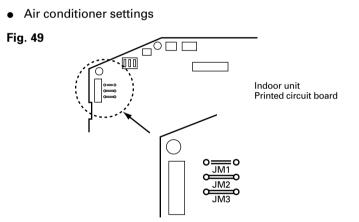
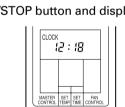
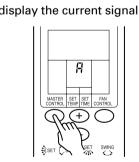


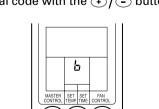
Table 7				
Jumper wire		Remote control unit		
JM 2	JM 3	signal code		
Connect	Connect	A (Primary setting)		
Connect	Disconnect	В		
Disconnect Connect		С		
Disconnect	Disconnect	D		

 Remote control unit settings (1) Press the START/STOP button and display only the clock.



(2) Press the MASTER CONTROL button continuously for more than five seconds to display the current signal code.





(4) Press the MASTER CONTROL button again to return to the clock display and change the signal code.

TEST RUNNING

 Perform test operation and check items 1 and 2 below. • For the operation method, refer to the operating manual.

'TEST RUN' signal from the remote control unit).

 The outdoor unit may not run, depending on the room In this case, the 'TEST RUN' signal is received during air conditioner operation (use a metallic object to short the two

Short the two metal contacts under the battery compartment lid.

metal contacts under the battery compartment lid and send the

To end test operation, press the remote control unit START/STOP

(When the air conditioner is run by pressing the remote control unit TEST RUN button, the OPERATION and TIMER lamps will simultaneously flash slowly.)

CHECK ITEMS

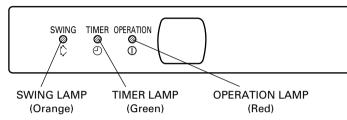
(1) INDOOR UNIT

- (1) Is operation of each button on the remote control unit nor-
- (2) Does each lamp light normally?
- (3) Do not 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

1. INDOOR UNIT



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

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 8) according to the error contents.

, , , , , , , , , , , , , , , , , , , ,			
٦	Γable 8		
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	×
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

(4 times) ●

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 \bigcirc

(4 times)

(5 times)

(5 times)

(6 times)

(7 times)

temperature abnormal : 0.1s ON/0.1s OFF (flash) $\times:\mathsf{OFF}$

Outdoor temperature sensor open

Outdoor temperature sensor

Outdoor discharge pipe

temperature sensor open

Outdoor discharge pipe

Outdoor discharge pipe

shortcircuited

■ : 0.5s ON/0.5s OFF (flash)

temperature sensor shortcircuited

Outdoor high pressure abnormal

2. OUTDOOR UNIT When the outdoor temperature drops, the outdoor unit's fans may switch to low speed.

ERROR: HEAT &COOL MODEL (REVERSE CYCLE) ONLY The LED lamps operate as follows (Table 9) according to the error

Table 9

Error o		
LED1	LED2	Error contents
ON OFF	ON OFF	Model abnormal or EEPROM abnormal
Quick flash continued	Quick flash continued	
OFF 2 sec. 1 quick flash repeated	ON OFF	Power source connection error
ON 0.5 sec. OFF 2 sec. 2 quick flash repeated	ON OFF	Discharge temperature sensor error
ON 0.5 sec. 2 sec. 3 quick flash repeated	ON OFF	Outdoor heat exchanger temperature sensor error
4 quick flash repeated	Lighting continued	Outdoor temperature sensor error
5 quick flash repeated	Lighting continued	Communication signal error
6 quick flash repeated	Lighting continued	Indoor unit error

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.

7 quick flash repeated | Lighting continued | Discharge temperature abnormal

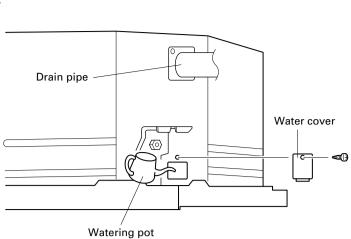
8 quick flash repeated | Lighting continued | High pressure abnormal

3. CHECKING DRAINAGE

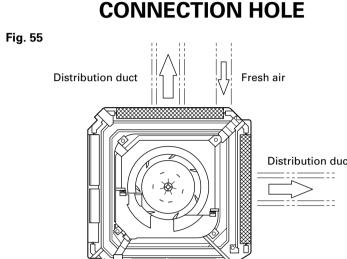
To check the drain, remove the water cover and fill with 2 to 3 ℓ of water as shown in Fig. 54. The drain pump operates when operating in the cooling mode.

Fig. 54

13







CAUTION

- ① When performing hole opening work, be careful not to damage the drain pan.
- ② When connecting the distribution duct, to make the air flow easily, block the outlet port with the blower cover insulation as shown by the hatched lines in Fig. 55. For the blocking direction, refer to Fig. 39.

1. DIMENSION

Screw position and connection hole which are fresh air duct and distribution duct.

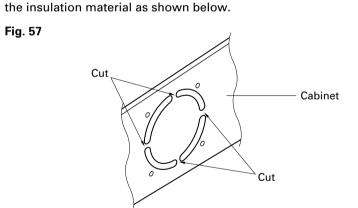
Fig. 56 Unit: mm P. D 120 P. D 88

12-ø3.3 self tapping screw holes (for 4 mm) 2. DISTRIBUTION DUCT AND FRESH AIR DUCT HOLE

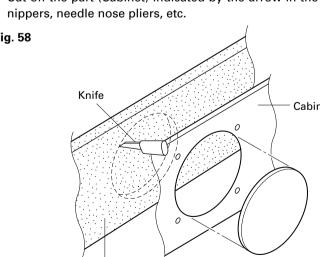
160

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

Fig. 58



• Cut off the part (Cabinet) indicated by the arrow in the Fig. 57 with



• 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.

(Inner box)

* Insulate the duct and cut connection.

 Connect the distribution duct. * When mounting the duct, block the gap so that there is no cold air leakage.

!\ CAUTION The air conditioner cannot take in fresh air by itself. When connecting a fresh air duct, always use a duct fan.

* Please remove the insulation (inner box) left over after cutting.

PART NO. 9369341038