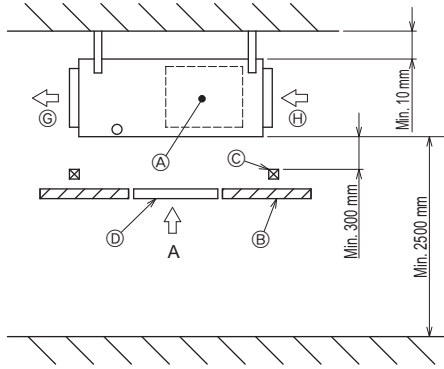


Packaged Air-Conditioners  
INDOOR UNIT

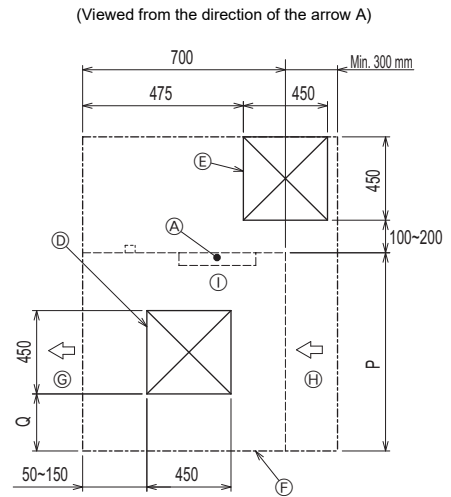
**PEAD-M35,50,60,71,100,125,140JA2**  
**PEAD-M35,50,60,71,100,125,140JAL2**  
**PEAD-SM35,50,60JA**  
**PEAD-SM35,50,60JAL**  
**PEAD-SM71,100,125,140JA2**  
**PEAD-SM71,100,125,140JAL2**

INSTALLATION MANUAL	FOR INSTALLER	English
INSTALLATIONSHANDBUCH	FÜR INSTALLATEUR	Deutsch
MANUEL D'INSTALLATION	POUR L'INSTALLATEUR	Français
INSTALLATIEHANDLEIDING	VOOR DE INSTALLATEUR	Nederlands
MANUAL DE INSTALACIÓN	PARA EL INSTALADOR	Español
MANUALE DI INSTALLAZIONE	PER L'INSTALLATORE	Italiano
ΕΓΧΕΙΡΙΔΙΟ ΟΔΗΓΙΩΝ ΕΓΚΑΤΑΣΤΑΣΗΣ	ΓΙΑ ΑΥΤΟΝ ΠΟΥ ΚΑΝΕΙ ΤΗΝ ΕΓΚΑΤΑΣΤΑΣΗ	Ελληνικό
MANUAL DE INSTALAÇÃO	PARA O INSTALADOR	Português
INSTALLATIONSMANUAL	TIL INSTALLATØREN	Dansk
INSTALLATIONSMANUAL	FÖR INSTALLATÖREN	Svenska
MONTAJ ELKİTABI	MONTÖR İÇİN	Türkçe
РУКОВОДСТВО ПО УСТАНОВКЕ	ДЛЯ УСТАНОВИТЕЛЯ	Русский
ПОСІБНИК З УСТАНОВЛЕННЯ	ДЛЯ СПЕЦІАЛІСТА З МОНТАЖУ	Українська
РЪКОВОДСТВО ЗА МОНТАЖ	ЗА МОНТАЖНИКА	Български
INSTRUKCJA MONTAŻU	DLA INSTALATORA	Polski
INSTALLASJONSHÅNDBOK	FOR MONTØR	Norsk
ASENNUSOPAS	ASENTAJALLE	Suomi
INSTALAČNÍ PŘÍRUČKA	PRO MONTÁŽNÍ PRACOVNÍKY	Čeština
NÁVOD NA INŠTALÁCIU	PRE MONTÉRA	Slovenčina
TELEPÍTÉSI KÉZIKÖNYV	A TELEPÍTŐ RÉSZÉRE	Magyar
NAMESTITVENI PRIROČNIK	ZA MONTERJA	Slovenščina
MANUAL DE INSTALARE	PENTRU INSTALATOR	Română
PAIGALDUSJUHEND	PAIGALDAJALE	Eesti
MONTĀŽAS ROKASGRĀMATA	UZSTĀDĪŠANAS SPECIĀLISTAM	Latviski
MONTAVIMO VADOVAS	SKIRTA MONTUOTOJUI	Lietuviškai
PRIRUČNIK ZA POSTAVLJANJE	ZA INSTALATERA	Hrvatski
UPUTSTVO ZA UGRADNJU	ZA MONTERA	Srpski

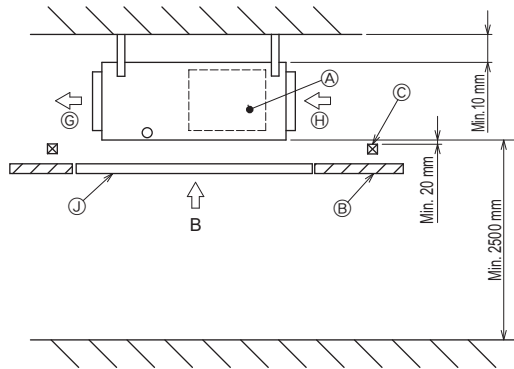
[Fig. 3-1-1]



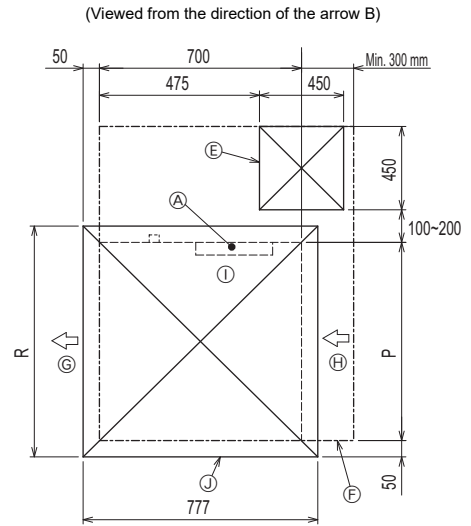
[Fig. 3-1-2]



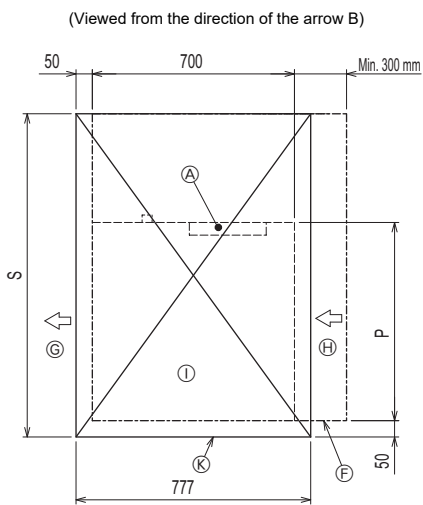
[Fig. 3-1-3]



[Fig. 3-1-4]

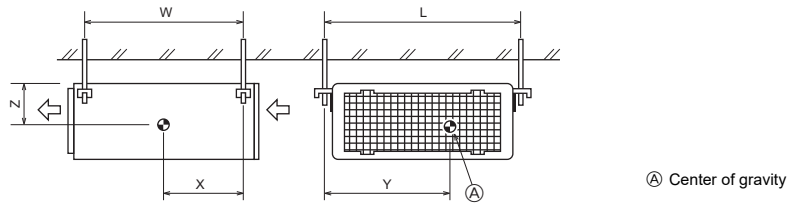
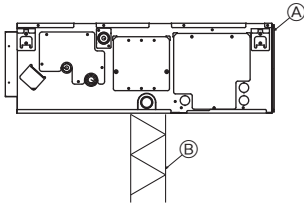


[Fig. 3-1-5]

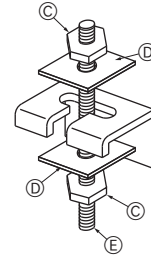


- (A) Electric box
- (B) Ceiling
- (C) Ceiling beam
- (D) Access door 2 (450 x 450)
- (E) Access door 1 (450 x 450)
- (F) Maintenance access space
- (G) Supply air
- (H) Intake air
- (I) Bottom of indoor unit
- (J) Access door 3
- (K) Access door 4

Model	P	Q	R	S
PEAD-(S)M35, 50	900	150~250	1000	1500
PEAD-(S)M60, 71	1100	250~350	1200	1700
PEAD-(S)M100, 125	1400	400~500	1500	2000
PEAD-(S)M140	1600	500~600	1700	2200

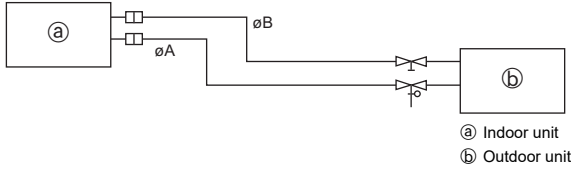
**4****4.1****[Fig. 4-1]****5****5.1****[Fig. 5-1-1]**

- Ⓐ Unit body
- Ⓑ Lifting machine

**[Fig. 5-1-2]**

- Ⓒ Nuts (field supply)
- Ⓓ Washers (accessory)
- Ⓔ M10 hanging bolt (field supply)

[Fig. 6-1]

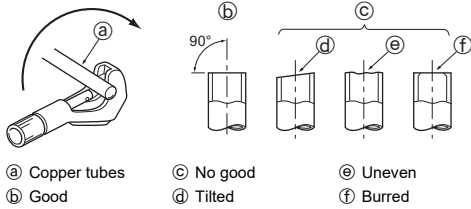


Model	A	B
PEAD-(S)M35, 50	ø12.7	ø6.35
PEAD-(S)M60, 71, 100, 125, 140	ø15.88	ø9.52

Ⓐ Indoor unit  
Ⓑ Outdoor unit

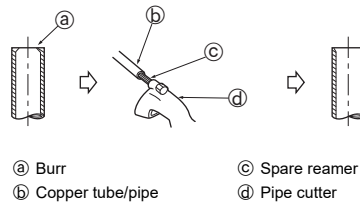
6.2

[Fig. 6-2-1]



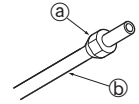
Ⓐ Copper tubes  
Ⓑ Good  
Ⓒ No good  
Ⓓ Tilted  
Ⓔ Uneven  
Ⓕ Burred

[Fig. 6-2-2]



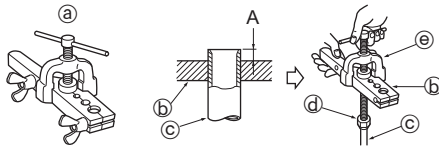
Ⓐ Burr  
Ⓑ Copper tube/pipe  
Ⓒ Spare reamer  
Ⓓ Pipe cutter

[Fig. 6-2-3]



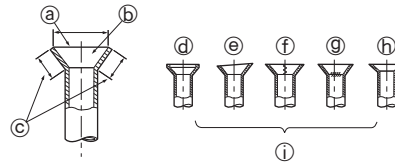
Ⓐ Flare nut  
Ⓑ Copper tube

[Fig. 6-2-4]



Ⓐ Flaring tool  
Ⓑ Die  
Ⓒ Copper tube  
Ⓓ Flare nut  
Ⓔ Yoke

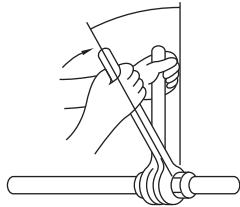
[Fig. 6-2-5]



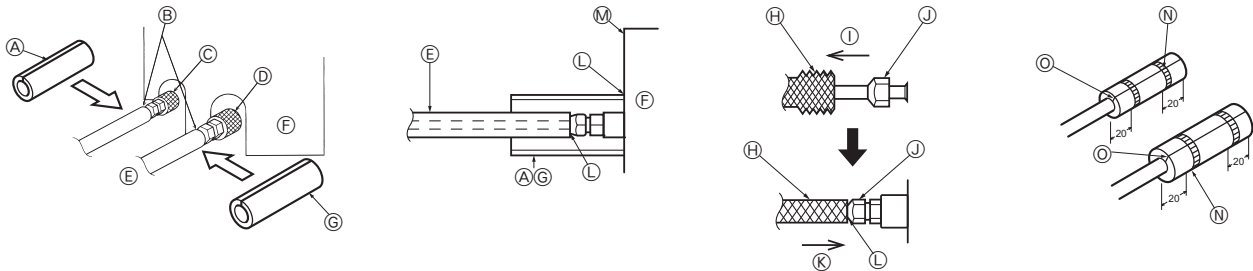
Ⓐ Smooth all around  
Ⓑ Inside is shining without any scratches  
Ⓒ Even length all around  
Ⓓ Too much  
Ⓔ Cracked  
Ⓕ Tilted  
Ⓖ Scratch on flared plane  
Ⓗ Uneven  
Ⓘ Bad examples

6.3

[Fig. 6-3-1]

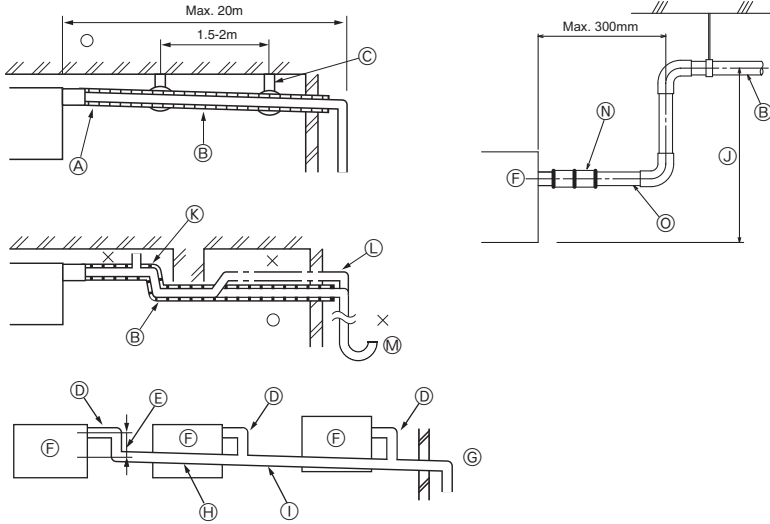


[Fig. 6-3-2]



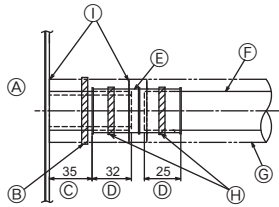
Ⓐ Pipe cover (small) (accessory)  
Ⓑ Caution:  
Pull out the thermal insulation on the refrigerant piping at the site, insert the flare nut to flare the end, and replace the insulation in its original position.  
Take care to ensure that condensation does not form on exposed copper piping.  
Ⓒ Liquid end of refrigerant piping  
Ⓓ Gas end of refrigerant piping  
Ⓔ Site refrigerant piping  
Ⓕ Main body  
Ⓖ Pipe cover (large) (accessory)  
Ⓗ Thermal insulation (field supply)  
Ⓘ Pull  
Ⓙ Flare nut  
Ⓚ Return to original position  
Ⓛ Ensure that there is no gap here  
Ⓜ Plate on main body  
Ⓝ Band (accessory)  
Ⓞ Ensure that there is no gap here. Place joint upwards.

[Fig. 6-5-1]



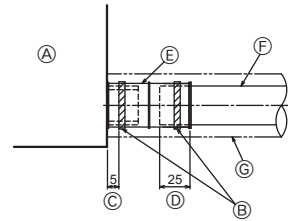
- Correct piping
  - × Wrong piping
  - Ⓐ Insulation (9 mm or more)
  - Ⓑ Downward slope (1/100 or more)
  - Ⓒ Support metal
  - Ⓚ Air bleeder
  - Ⓛ Raised
  - Ⓜ Odor trap
- Grouped piping
- Ⓓ O. D. ø32 PVC TUBE
  - Ⓔ Make it as large as possible. About 10 cm.
  - Ⓕ Indoor unit
  - Ⓖ Make the piping size large for grouped piping.
  - Ⓗ Downward slope (1/100 or more)
  - Ⓘ O. D. ø38 PVC TUBE for grouped piping. (9 mm or more insulation)
- PEAD-(S)M·JA model
- Ⓙ Up to 700 mm
  - Ⓝ Drain socket (accessory)
  - Ⓞ Horizontal or slightly upgradient

[Fig. 6-5-2]



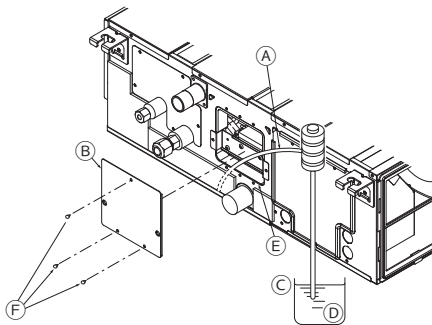
- Ⓐ Indoor unit
- Ⓑ Tie band (accessory)
- Ⓒ Visible part
- Ⓓ Insertion margin
- Ⓔ Drain socket (accessory)
- Ⓕ Drain pipe (O.D. ø32 PVC TUBE, field supply)
- Ⓖ Insulating material (field supply)
- Ⓗ Tie band (accessory)
- Ⓘ To be gap free. The joint section of the insulating material meet must be at the top.

[Fig. 6-5-3]



- Ⓐ Indoor unit
- Ⓑ Tie band (accessory)
- Ⓒ Band fixing part
- Ⓓ Insertion margin
- Ⓔ Drain socket (accessory)
- Ⓕ Drain pipe (O.D. ø32 PVC TUBE, field supply)
- Ⓖ Insulating material (field supply)

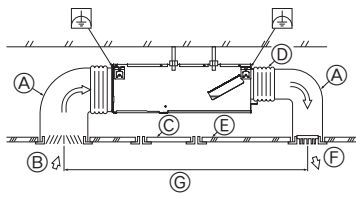
[Fig. 6-6]



- Ⓐ Insert pump's end 2 to 4 cm.
- Ⓑ Remove the water supply port.
- Ⓒ About 2500 cc
- Ⓓ Water
- Ⓔ Filling port
- Ⓕ Screw
- Ⓖ Screw

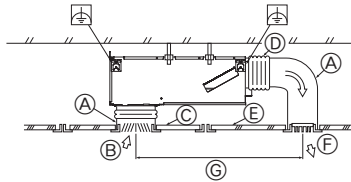
[Fig. 7-1]

<A> In case of rear inlet

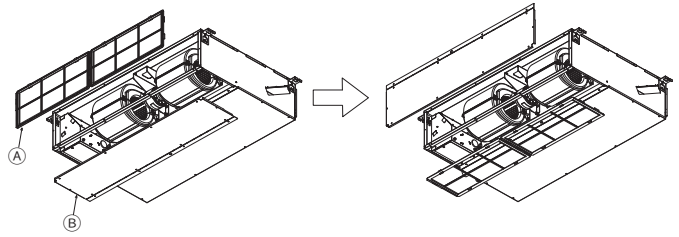


- Ⓐ Duct
- Ⓑ Air inlet
- Ⓒ Access door
- Ⓓ Canvas duct
- Ⓔ Ceiling surface
- Ⓕ Air outlet
- Ⓖ Leave distance enough to prevent short cycle

<B> In case of bottom inlet

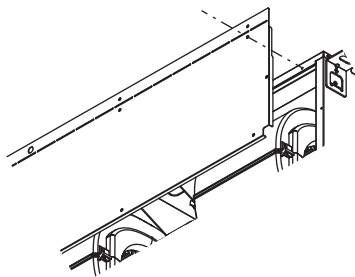


[Fig. 7-2]

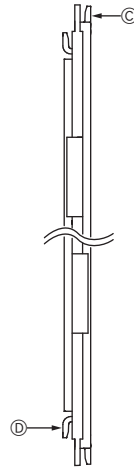


- Ⓐ Filter
- Ⓑ Bottom plate

[Fig. 7-3]



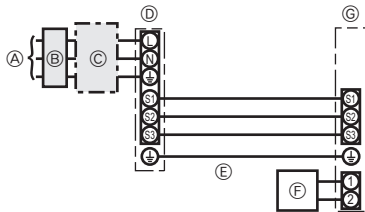
[Fig. 7-4]



- Ⓒ Nail for the bottom inlet
- Ⓓ Nail for the rear inlet

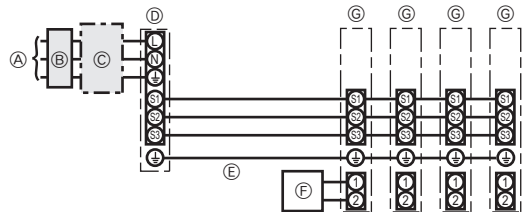
8.1

[Fig. 8-1-1]



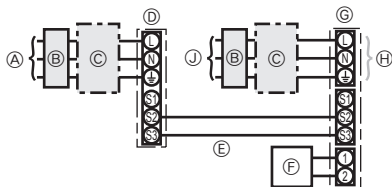
- Ⓐ Outdoor unit power supply
- Ⓑ Earth leakage breaker
- Ⓒ Wiring circuit breaker or isolating switch
- Ⓓ Outdoor unit
- Ⓔ Indoor unit/outdoor unit connecting cords
- Ⓕ Remote controller (option)
- Ⓖ Indoor unit

[Fig. 8-1-2]



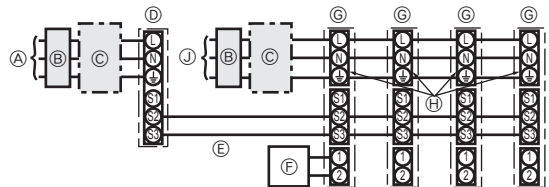
- Ⓐ Outdoor unit power supply
- Ⓑ Earth leakage breaker
- Ⓒ Wiring circuit breaker or isolating switch
- Ⓓ Outdoor unit
- Ⓔ Indoor unit/outdoor unit connecting cords
- Ⓕ Remote controller (option)
- Ⓖ Indoor unit

[Fig. 8-1-3]



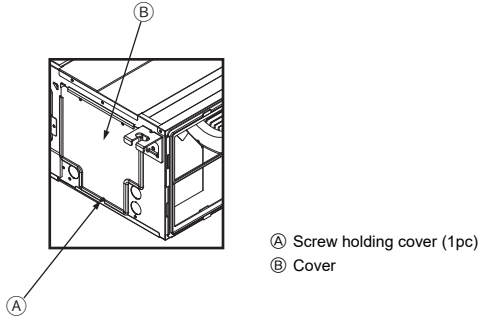
- Ⓐ Outdoor unit power supply
- Ⓑ Earth leakage breaker
- Ⓒ Wiring circuit breaker or isolating switch
- Ⓓ Outdoor unit
- Ⓔ Indoor unit/outdoor unit connecting cords
- Ⓕ Remote controller (option)
- Ⓖ Indoor unit
- Ⓗ Option
- Ⓙ Indoor unit power supply

[Fig. 8-1-4]

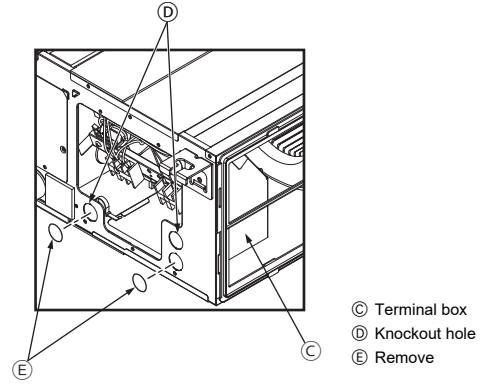


- Ⓐ Outdoor unit power supply
- Ⓑ Earth leakage breaker
- Ⓒ Wiring circuit breaker or isolating switch
- Ⓓ Outdoor unit
- Ⓔ Indoor unit/outdoor unit connecting cords
- Ⓕ Remote controller (option)
- Ⓖ Indoor unit
- Ⓗ Option
- Ⓙ Indoor unit power supply

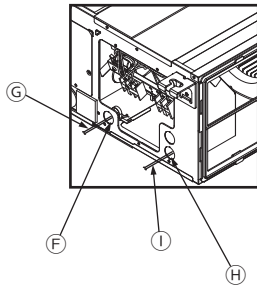
[Fig. 8-2-1]



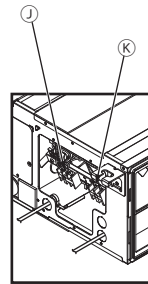
[Fig. 8-2-2]



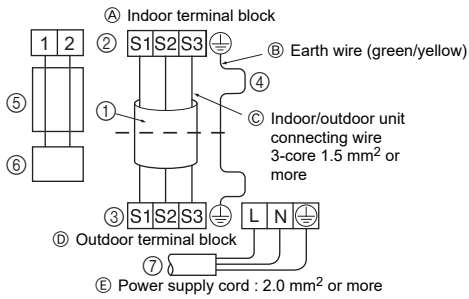
[Fig. 8-2-3]



[Fig. 8-2-4]



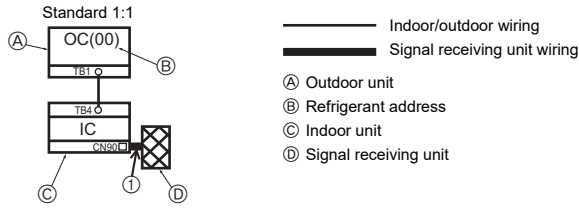
[Fig. 8-2-5]



- A Indoor terminal block
- B Earth wire (green/yellow)
- C Indoor/outdoor unit connecting wire 3-core 1.5 mm<sup>2</sup> or more
- D Outdoor terminal block
- E Power supply cord : 2.0 mm<sup>2</sup> or more
- F Use PG bushing to keep the weight of the cable and external force from being applied to the power supply terminal connector. Use a cable tie to secure the cable.
- G Power source wiring
- H Use ordinary bushing
- I Transmission wiring
- J Terminal block for power source and indoor transmission
- K Terminal block for remote controller

- ④ Always install an earth wire (1-core 1.5 mm<sup>2</sup>) longer than other cables
- ⑤ Remote controller cable  
Wire No × size (mm<sup>2</sup>) : Cable 2C × 0.3  
This wire accessory of remote controller (wire length : 10m, non-polar. Max. 500m)
- ⑥ Wired remote controller (option)
- ⑦ Power supply cord  
Cable 3-core 2.0 mm<sup>2</sup> or more, in conformity with Design 60245 IEC 57.

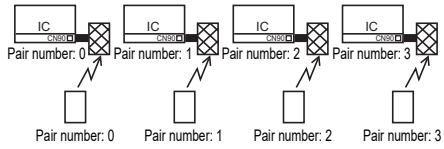
[Fig. 8-4-1]



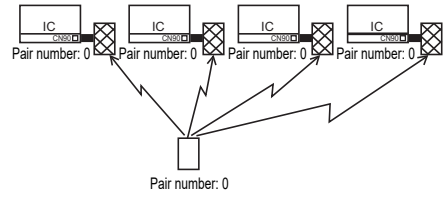
[Fig. 8-4-2]



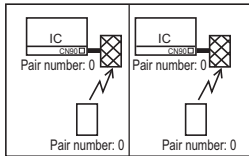
[Fig. 8-4-3]



[Fig. 8-4-4]

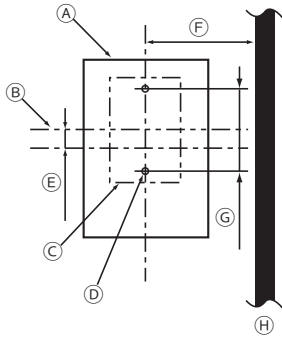


[Fig. 8-4-5]





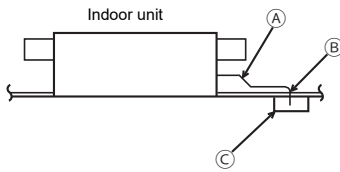
[Fig. 8-4-6]



- Ⓐ Signal receiving unit external
- Ⓑ Center of Switch box
- Ⓒ Switch box
- Ⓓ Installation pitch
- Ⓔ 6.5 mm (1/4 inch)
- Ⓕ 70 mm (2 - 3/4 inch)
- Ⓖ 83.5 ± 0.4 mm (3 - 9/32 inch)
- Ⓗ Protrusion (pillar, etc)

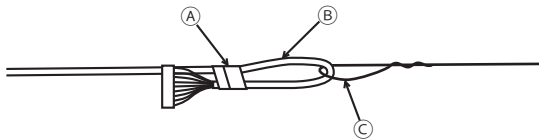
[Fig. 8-4-7]

Ceiling cassette type, Ceiling concealed type



- Ⓐ Remote controller wire
- Ⓑ Hole (drill a hole on the ceiling to pass the remote controller wire.)
- Ⓒ Signal Receiving Unit

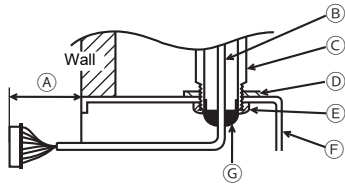
[Fig. 8-4-8]



- Ⓐ Fix tightly with tape.
- Ⓑ Remote controller wire
- Ⓒ Order wire

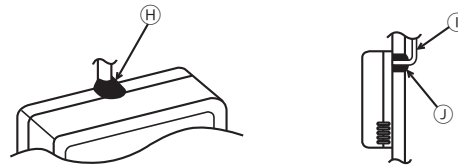
[Fig. 8-4-9]

When using the switch box



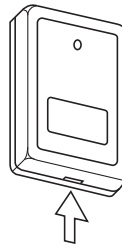
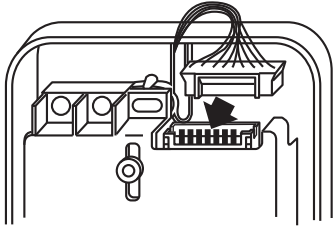
- Ⓐ 150 mm (5 - 15/16 inch)
- Ⓑ Remote controller wire (Accessory)
- Ⓒ Wiring pipe
- Ⓓ Locknut
- Ⓔ Bushing
- Ⓕ Switch box
- Ⓖ Seal around here with putty

When installing directly on the wall



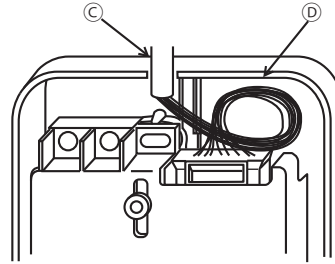
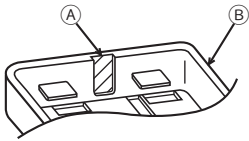
- Ⓗ Seal around here with putty
- Ⓙ Remote controller wire
- Ⓚ Seal around here with putty

[Fig. 8-4-10]



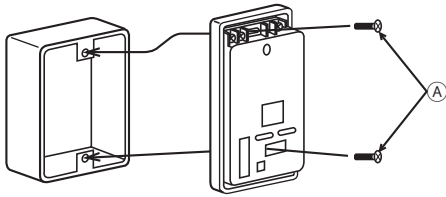
Ⓐ Insert the minus screwdriver toward the arrow pointed and wrench it to remove the cover.  
A flat screwdriver whose width of blade is between 4 and 7 mm (5/32 - 9/32 inch) must be used.

[Fig. 8-4-11]



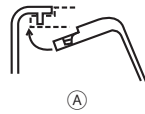
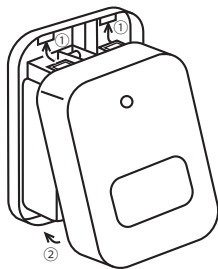
Ⓐ Thin-wall portion  
Ⓑ Bottom case  
Ⓒ Remote controller wire  
Ⓓ Conducting wire

[Fig. 8-4-12]



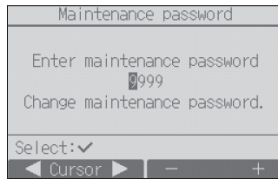
Ⓐ Screw (M4 × 30)  
\* When installing the lower case directly on the wall or the ceiling, use wood screws.

[Fig. 8-4-13]

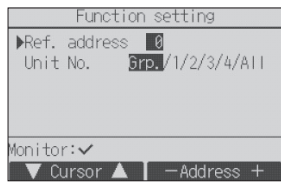


① Hang the cover to the upper hooks (2 places).  
② Mount the cover to the lower case  
Ⓐ Cross-section of upper hooks

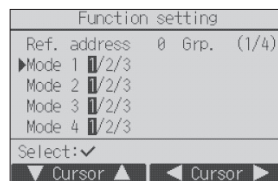
[Fig. 8-5-1]



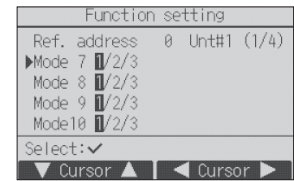
[Fig. 8-6-1]



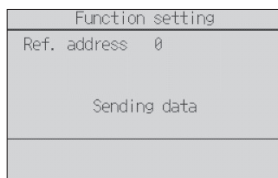
[Fig. 8-6-2]



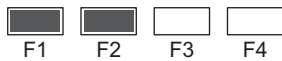
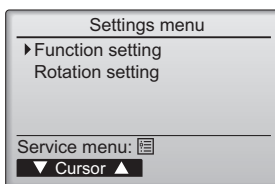
[Fig. 8-6-3]



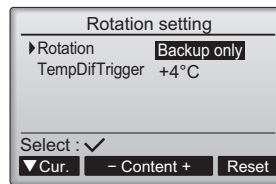
[Fig. 8-6-4]



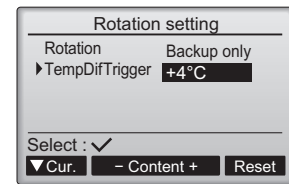
[Fig. 8-7-1]



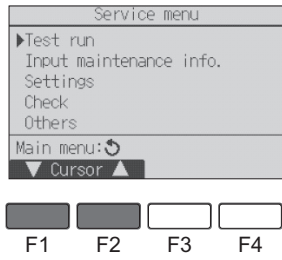
[Fig. 8-7-2]



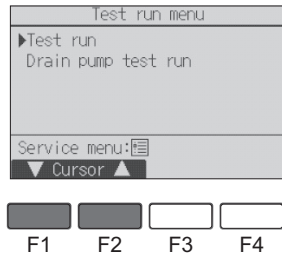
[Fig. 8-7-3]



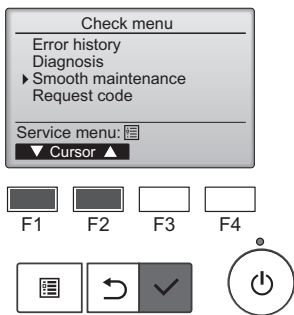
[Fig. 9-2-1]



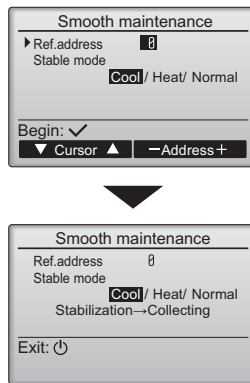
[Fig. 9-2-2]



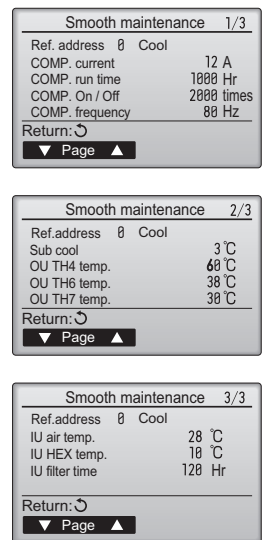
[Fig. 11-1]



[Fig. 11-2]



[Fig. 11-3]



# Contents





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**Note:**  
The phrase "Wired remote controller" in this installation manual refers only to the PAR-41MAA. If you need any information for the other remote controller, please refer to either the installation manual or initial setting manual which are included in these boxes.




## 1. Safety precautions

- ▶ Before installing the unit, make sure you read all the "Safety Precautions".
- ▶ The "Safety Precautions" provide very important points regarding safety. Make sure you follow them.
- ▶ Please report to or take consent by the supply authority before connection to the system.








### MEANINGS OF SYMBOLS ON THE UNIT


	<b>WARNING</b> (Risk of fire)	This symbol is only for R32 refrigerant. The type of the refrigerant used is written on the nameplate on the outdoor unit. R32 refrigerant is flammable. If the refrigerant leaks, or comes in contact with fire or parts that generate heat, it may create harmful gas and pose a risk of fire.
		Read the OPERATION MANUAL carefully before operation.
		Service personnel are required to carefully read the OPERATION MANUAL and INSTALLATION MANUAL before operation.
		Further information is available in the OPERATION MANUAL, INSTALLATION MANUAL, and the like.

### Symbols used in the text

-  **Warning:**  
Could lead to death, serious injury, etc.
-  **Caution:**  
Could lead to serious injury in particular environments when operated incorrectly.
-  **Warning:**  
Describes precautions that must be observed to prevent danger of fire.
- After reading this manual, be sure to keep it together with the instruction manual in a handy place on the customer's site.

### Symbols put on the unit

-  : Indicates an action that must be avoided.
-  : Indicates that important instructions must be followed.
-  : Indicates a part which must be grounded.
-  : Indicates that caution should be taken with rotating parts.
-  : Indicates that the main switch must be turned off before servicing.
-  : Beware of electric shock.
-  : Beware of hot surface.

-  **Warning:**
  - Carefully read the labels affixed to the main unit.
  - Do not install it by yourself (customer).  
Incomplete installation could cause injury due to fire, electric shock, the unit falling or leakage of water. Consult the dealer from whom you purchased the unit or special installer.
  - This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
  - Install the unit securely in a place which can bear the weight of the unit.  
When installed in an insufficient strong place, the unit could fall causing injured.
  - Use the specified wires to connect the indoor and outdoor units securely and attach the wires firmly to the terminal board connecting sections so the stress of the wires is not applied to the sections.  
Incomplete connecting and fixing could cause fire.
  - Do not use intermediate connection of the power cord or the extension cord and do not connect many devices to one AC outlet.  
It could cause a fire or an electric shock due to defective contact, defective insulation, exceeding the permissible current, etc.
  - Check that the refrigerant gas does not leak after installation has completed.
  - Perform the installation securely referring to the installation manual.  
Incomplete installation could cause a personal injury due to fire, electric shock, the unit falling or leakage of water.
  - Servicing shall be performed only as recommended by the manufacturer.
  - This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.
  - Perform electrical work according to the installation manual and be sure to use an exclusive circuit.  
If the capacity of the power circuit is insufficient or there is incomplete electrical work, it could result in a fire or an electric shock.
  - If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
  - Attach the electrical part cover to the indoor unit and the service panel to the outdoor unit securely.  
If the electrical part cover in the indoor unit and/or the service panel in the outdoor unit are not attached securely, it could result in a fire or an electric

- shock due to dust, water, etc.
- Be sure to use the part provided or specified parts for the installation work.  
The use of defective parts could cause an injury or leakage of water due to a fire, an electric shock, the unit falling, etc.
- Ventilate the room if refrigerant leaks during operation. If the refrigerant comes in contact with a flame, poisonous gases will be released.
- Children should be supervised to ensure that they do not play with the appliance.
- When installing, relocating, or servicing the air conditioner, use only the specified refrigerant written on the outdoor unit to charge the refrigerant lines. Do not mix the refrigerant with any other refrigerant, and do not allow air to remain in the lines.
  - If air is mixed with the refrigerant, then it may cause abnormal high pressure in the refrigerant lines, resulting in an explosion and other hazards.
  - The use of any refrigerant other than that specified for the system will cause mechanical failure, system malfunction, or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.
  - It may also be in violation of applicable laws.
  - MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.
- This indoor unit should be installed in a room which is equal to or larger than the floor space specified in the outdoor unit installation manual. Refer to the outdoor unit installation manual.
- Only use means recommended by the manufacturer to accelerate the defrosting process or to clean.
- This indoor unit shall be stored in a room that has no continuously-operating ignition device such as open flame, gas appliance, or electrical heater.
- Do not pierce a hole in or burn this indoor unit or refrigerant lines.
- Be aware that the refrigerant may be odour-free.
- Pipe-work shall be protected from physical damage.
- The installation of pipe-work shall be kept to a minimum.
- Compliance with national gas regulations shall be observed.
- Keep any required ventilation openings clear of obstruction.
- Do not use low temperature solder alloy when brazing the refrigerant pipes.

## 1. Safety precautions

- When performing brazing work, be sure to ventilate the room sufficiently. Make sure that there are no hazardous or flammable materials nearby. When performing the work in a closed room, small room, or similar location, make sure that there are no refrigerant leaks before performing the work. If refrigerant leaks and accumulates, it may ignite or poisonous gases may be released.
- For installation and relocation work, follow the instructions in the installation manual and use tools and pipe components specifically made for using with refrigerant specified in the outdoor unit installation manual.
- If the air conditioner is installed in a small room or closed room, measures must be taken to prevent the refrigerant concentration in the room from exceeding the safety limit in the event of refrigerant leakage. Should the refrigerant leak and cause the concentration limit to be exceeded, hazards due to lack of oxygen in the room may result.
- The appliance shall be stored so as to prevent mechanical damage from occurring.

### ⚠ Caution:

- Perform grounding.  
Do not connect the ground wire to a gas pipe, water pipe arrester or telephone ground wire. Defective grounding could cause an electric shock.
- Do not install the unit in a place where an inflammable gas leaks.  
If gas leaks and accumulates in the area surrounding the unit, it could cause an explosion.
- Install a ground leakage breaker depending on the installation place (where it is humid).  
If a ground leakage breaker is not installed, it could cause an electric shock.

## 2. Selecting the installation location

### 2.1. Indoor unit

- Where airflow is not blocked.
- Where cool air spreads over the entire room.
- Where it is not exposed to direct sunshine.
- At a distance 1 m or more away from your TV and radio (to prevent picture from being distorted or noise from being generated).
- In a place as far away as possible from fluorescent and incandescent lights (so the infrared remote control can operate the air conditioner normally).
- Where the air filter can be removed and replaced easily.

### ⚠ Warning:

Mount the indoor unit into a ceiling strong enough to withstand the weight of the unit.

### ⚠ Warning:

1. Install the unit in a space with at least a minimum floor area defined in the installation manual for the outdoor unit.
  - Refer to the installation manual for the outdoor unit.
2. Install the unit only in a well-ventilated space.

### 2.2. Outdoor unit

- Where it is not exposed to strong wind.
- Where airflow is good and dustless.
- Where it is not exposed to rain and direct sunshine.
- Where neighbours are not annoyed by operation sound or hot air.
- Where rigid wall or support is available to prevent the increase of operation sound or vibration.
- Where there is no risk of combustible gas leakage.
- When installing the unit at a high level, be sure to fix the unit legs.
- Where it is at least 3 m away from the antenna of TV set or radio. (Otherwise, images would be disturbed or noise would be generated.)
- Install the unit horizontally.

### ⚠ Caution:

Avoid the following places for installation where air conditioner trouble is liable to occur.

- Where there is too much machine oil.
- Salty environment as seaside areas.
- Hot-spring areas.
- Where sulfide gas exists.
- Other special atmospheric areas.

## 3. Selecting an installation site & Accessories

- Select a site with sturdy fixed surface sufficiently durable against the weight of unit.
- Before installing unit, the routing to carry in unit to the installation site should be determined.
- Select a site where the unit is not affected by entering air.
- Select a site where the flow of supply and return air is not blocked.
- Select a site where refrigerant piping can easily be led to the outside.
- Select a site which allows the supply air to be distributed fully in room.
- Do not install unit at a site with oil splashing or steam in much quantity.
- Do not install unit at a site where combustible gas may generate, flow in, stagnate or leak.
- Do not install unit at a site where equipment generating high frequency waves (a high frequency wave welder for example) is provided.
- Do not install unit at a site where fire detector is located at the supply air side. (Fire detector may operate erroneously due to the heated air supplied during heating operation.)
- When special chemical product may scatter around such as site chemical plants and hospitals, full investigation is required before installing unit. (The plastic components may be damaged depending on the chemical product applied.)
- If the unit is run for long hours when the air above the ceiling is at high temperature/high humidity (dew point above 26 °C), dew condensation may be produced in the indoor unit. When operating the units in this condition, add insulation material (10-20 mm) to the entire surface of the indoor unit to avoid dew condensation.
- Create access door 1 and 2 (450 x 450 mm each) as shown in Fig. 3-1-2. (Access door 2 is not required if enough space is available below the unit for a maintenance worker to work in.)
- (2) When a space of less than 300 mm is available below the unit between the unit and the ceiling (At least 20 mm of space should be left below the unit as shown in Fig. 3-1-3.)
  - Create access door 1 diagonally below the electric box and access door 3 below the unit as shown in Fig. 3-1-4.
  - or
  - Create access door 4 below the electric box and the unit as shown in Fig. 3-1-5.

[Fig. 3-1-1] (P. 2)

[Fig. 3-1-2] (Viewed from the direction of the arrow A) (P. 2)

[Fig. 3-1-3] (P. 2)

[Fig. 3-1-4] (Viewed from the direction of the arrow B) (P. 2)

[Fig. 3-1-5] (Viewed from the direction of the arrow B) (P. 2)

- |                             |                         |
|-----------------------------|-------------------------|
| Ⓐ Electric box              | Ⓔ Supply air            |
| Ⓑ Ceiling                   | Ⓕ Intake air            |
| Ⓒ Ceiling beam              | Ⓖ Bottom of indoor unit |
| Ⓓ Access door 2 (450 x 450) | Ⓗ Access door 3         |
| Ⓔ Access door 1 (450 x 450) | Ⓖ Access door 4         |
| Ⓕ Maintenance access space  |                         |

### ⚠ Warning:

The unit must be securely installed on a structure that can sustain its weight. If the unit is mounted on an unstable structure, it may fall down causing injuries.

### ⚠ Warning:

- This unit should be installed in rooms which exceed the floor space specified in outdoor unit installation manual. Refer to outdoor unit installation manual.
- Install the indoor unit at least 2.5m above floor or ground level. For appliances not accessible to the general public.
- Refrigerant pipes connection shall be accessible for maintenance purpose.

### 3.1. Install the indoor unit on a ceiling strong enough to sustain its weight

Secure enough access space to allow for the maintenance, inspection, and replacement of the motor, fan, drain pump, heat exchanger, and electric box in one of the following ways.

Select an installation site for the indoor unit so that its maintenance access space will not be obstructed by beams or other objects.

- (1) When a space of 300 mm or more is available below the unit between the unit and the ceiling (Fig. 3-1-1)

### 3. Selecting an installation site & Accessories

#### 3.2. Securing installation and service space

- Select the optimum direction of supply airflow according to the configuration of the room and the installation position.
- As the piping and wiring are connected at the bottom and side surfaces, and the maintenance is made at the same surfaces, allow a proper space properly. For the efficient suspension work and safety, provide a space as much as possible.

#### 3.3. Indoor unit accessories

The unit is provided with the following accessories:

No.	Name	Quantity
①	Pipe cover (for refrigerant piping joint) Small diameter	1
②	Pipe cover (for refrigerant piping joint) Large diameter	1
③	Bands for temporary tightening of pipe cover and drain socket	8(7)
④	Washer	8
⑤	Drain socket	1

The values in the parenthesis are for the PEAD-(S)M-JAL(2) model.

### 4. Fixing hanging bolts

#### 4.1. Fixing hanging bolts

[Fig. 4-1] (P. 3)

- Ⓐ Center of gravity

(Give site of suspension strong structure.)

#### Hanging structure

- Ceiling: The ceiling structure varies from building to one another. For detailed information, consult your construction company.

#### Center of gravity and Product Weight

Model name	W (mm)	L (mm)	X (mm)	Y (mm)	Z (mm)	Product Weight (kg)
PEAD-(S)M35JA(L)(2)	643	954	340	375	130	25.0 (24.5)
PEAD-(S)M50JA(L)(2)	643	954	340	375	130	26.5 (25.5)
PEAD-(S)M60JA(L)(2)	643	1154	325	525	130	29.5 (29.0)
PEAD-(S)M71JA(L)(2)	643	1154	325	525	130	29.5 (29.0)
PEAD-(S)M100JA(L)(2)	643	1454	330	675	130	37 (36)
PEAD-(S)M125JA(L)(2)	643	1454	330	675	130	38 (37)
PEAD-(S)M140JA(L)(2)	643	1654	332	725	130	42 (41)

The values in the parenthesis are for the PEAD-(S)M-JAL(2) model.

- If necessary, reinforce the hanging bolts with anti-quake supporting members as countermeasures against earthquakes.

\* Use M10 for hanging bolts and anti-quake supporting members (field supply).

- ① Reinforcing the ceiling with additional members (edge beam, etc.) must be required to keep the ceiling at level and to prevent the ceiling from vibrations.
- ② Cut and remove the ceiling members.
- ③ Reinforce the ceiling members, and add other members for fixing the ceiling boards.

### 5. Installing the unit

#### 5.1. Hanging the unit body

- ▶ Bring the indoor unit to an installation site as it is packed.
- ▶ To hang the indoor unit, use a lifting machine to lift and pass through the hanging bolts.

[Fig. 5-1-1] (P. 3)

- Ⓐ Unit body
- Ⓑ Lifting machine

[Fig. 5-1-2] (P. 3)

- Ⓒ Nuts (field supply)
- Ⓓ Washers (accessory)
- Ⓔ M10 hanging bolt (field supply)

#### 5.2. Confirming the unit's position and fixing hanging bolts

- ▶ Ensure that the hanging bolt nuts are tightened to fix the hanging bolts.
- ▶ To ensure that drain is discharged, be sure to hang the unit at level using a level.

⚠ **Caution:**

Install the unit in horizontal position. If the side with drain port is installed higher, water leakage may be caused.

### 6. Refrigerant piping work

#### 6.1. Refrigerant pipe

[Fig. 6-1] (P. 4)

- Ⓐ Indoor unit
- Ⓑ Outdoor unit

Refer to the Instruction Manual that came with the outdoor unit for the restrictions on the height difference between units and for the amount of additional refrigerant charge.

Avoid the following places for installation where air conditioner trouble is liable to occur.

- Where there is too much oil such as for machine or cooking.
- Salty environment as seaside areas.
- Hot-spring areas.
- Where sulfide gas exists.
- Other special atmospheric areas.
- This unit has flared connections on both indoor and outdoor sides. [Fig. 6-1]
- Insulate both refrigerant and drainage piping completely to prevent condensation.

#### Piping preparation

- Refrigerant pipes of 3, 5, 7, 10 and 15 m are available as optional items.

(1) Table below shows the specifications of pipes commercially available.

Model	Pipe	Outside diameter		Min. wall thickness	Insulation thickness	Insulation material
		mm	inch			
PEAD-(S)M35	For liquid	6.35	1/4	0.8 mm	8 mm	Heat resisting foam plastic 0.045 specific gravity
	For gas	12.7	1/2	0.8 mm	8 mm	
PEAD-(S)M50	For liquid	6.35	1/4	0.8 mm	8 mm	
	For gas	12.7	1/2	0.8 mm	8 mm	
PEAD-(S)M60	For liquid	9.52	3/8	0.8 mm	8 mm	
	For gas	15.88	5/8	1.0 mm	8 mm	
PEAD-(S)M71	For liquid	9.52	3/8	0.8 mm	8 mm	
	For gas	15.88	5/8	1.0 mm	8 mm	
PEAD-(S)M100	For liquid	9.52	3/8	0.8 mm	8 mm	
	For gas	15.88	5/8	1.0 mm	8 mm	
PEAD-(S)M125	For liquid	9.52	3/8	0.8 mm	8 mm	
	For gas	15.88	5/8	1.0 mm	8 mm	
PEAD-(S)M140	For liquid	9.52	3/8	0.8 mm	8 mm	
	For gas	15.88	5/8	1.0 mm	8 mm	

(2) Ensure that the 2 refrigerant pipes are well insulated to prevent condensation.

(3) Refrigerant pipe bending radius must be 10 cm or more.

## 6. Refrigerant piping work

**Warning:**  
To reduce the risk of fire, embed or protect the refrigerant pipes. Damage to the refrigerant pipes can lead to fire.

**Caution:**  
Using careful insulation of specified thickness. Excessive thickness prevents storage behind the indoor unit and smaller thickness causes dew dripage.

### 6.2. Flaring work

- Main cause of gas leakage is defect in flaring work.  
Carry out correct flaring work in the following procedure.

#### 6.2.1. Pipe cutting

[Fig. 6-2-1] (P. 4)

- Ⓐ Copper tubes
- Ⓑ Good
- Ⓒ No good
- Ⓓ Tilted
- Ⓔ Uneven
- ⓫ Burred

- Using a pipe cutter cut the copper tube correctly.

#### 6.2.2. Burrs removal

[Fig. 6-2-2] (P. 4)

- Ⓐ Burr
- Ⓑ Copper tube/pipe
- Ⓒ Spare reamer
- Ⓓ Pipe cutter

- Completely remove all burrs from the cut cross section of pipe/tube.
- Put the end of the copper tube/pipe to downward direction as you remove burrs in order to avoid burrs drop in the tubing.

#### 6.2.3. Putting nut on

[Fig. 6-2-3] (P. 4)

- Ⓐ Flare nut
- Ⓑ Copper tube

- Remove flare nuts attached to indoor and outdoor unit, then put them on pipe/tube having completed burr removal.  
(not possible to put them on after flaring work)
- Use the flare nut included with this indoor unit.

#### 6.2.4. Flaring work

[Fig. 6-2-4] (P. 4)

- Ⓐ Flaring tool
- Ⓑ Die
- Ⓒ Copper tube
- Ⓓ Flare nut
- Ⓔ Yoke

- Carry out flaring work using flaring tool as shown below.

Pipe diameter (mm)	Dimension	
	A (mm)	B <sup>+0</sup> <sub>-0.4</sub> (mm)
	When the tool for R32/R410A is used	
	Clutch type	
6.35	0 – 0.5	9.1
9.52	0 – 0.5	13.2
12.7	0 – 0.5	16.6
15.88	0 – 0.5	19.7

- Firmly hold copper tube in a die in the dimension shown in the table at above.
- When reconnecting the detached refrigerant pipes, make sure to flare them again.

#### 6.2.5. Check

[Fig. 6-2-5] (P. 4)

- Ⓐ Smooth all around
- Ⓑ Inside is shining without any scratches
- Ⓒ Even length all around
- Ⓓ Too much
- Ⓔ Tilted
- ⓫ Scratch on flared plane
- ⓬ Cracked
- ⓭ Uneven
- ⓮ Bad examples

- Compare the flared work with a figure in right side hand.
- If flare is noted to be defective, cut off the flared section and do flaring work again.

### 6.3. Pipe connection

[Fig. 6-3-1] (P. 4)

- Apply a thin coat of refrigeration oil on the seat surface of pipe.
- For connection first align the center, then tighten the first 3 to 4 turns of flare nut.
- Use tightening torque table below as a guideline for indoor unit side union joint section, and tighten using two wrenches. Excessive tightening damages the flare section.

Copper pipe O.D. (mm)	Flare nut O.D. (mm)	Tightening torque (N·m)
ø 6.35	17	14 – 18
ø 9.52	22	34 – 42
ø 12.7	26	49 – 61
ø 15.88	29	68 – 82

**Warning:**  
Be careful of flying flare nut! (Internally pressurized)

Remove the flare nut as follows:

- Loosen the nut until you hear a hissing noise.
- Do not remove the nut until the gas has been completely released (i.e., hissing noise stops).
- Check that the gas has been completely released, and then remove the nut. Reusable mechanical connectors and flared joints cannot be used indoors. When connecting the refrigerant piping by brazing instead of using flare connections, complete all brazing work prior to connecting indoor unit to outdoor unit.

#### Outdoor unit connection

Connect pipes to stop valve pipe joint of the outdoor unit in the same manner applied for indoor unit.

- For tightening use a torque wrench or spanner, and use the same tightening torque applied for indoor unit.

#### Refrigerant pipe insulation

- After connecting refrigerant piping, insulate the joints (flared joints) with thermal insulation tubing as shown below.

[Fig. 6-3-2] (P. 4)

- Ⓐ Pipe cover (small) (accessory)
- Ⓑ Caution:

Pull out the thermal insulation on the refrigerant piping at the site, insert the flare nut to flare the end, and replace the insulation in its original position.  
Take care to ensure that condensation does not form on exposed copper piping.

- Ⓒ Liquid end of refrigerant piping
- Ⓓ Site refrigerant piping
- Ⓔ Pipe cover (large) (accessory)
- ⓫ Pull
- ⓬ Return to original position
- ⓭ Plate on main body
- ⓮ Ensure that there is no gap here.
- ⓯ Gas end of refrigerant piping
- ⓰ Main body
- ⓱ Thermal insulation (field supply)
- ⓲ Flare nut
- ⓳ Ensure that there is no gap here
- ⓴ Band (accessory)

- Remove and discard the rubber bung which is inserted in the end of the unit piping.
- Flare the end of the site refrigerant piping.
- Pull out the thermal insulation on the site refrigerant piping and replace the insulation in its original position.

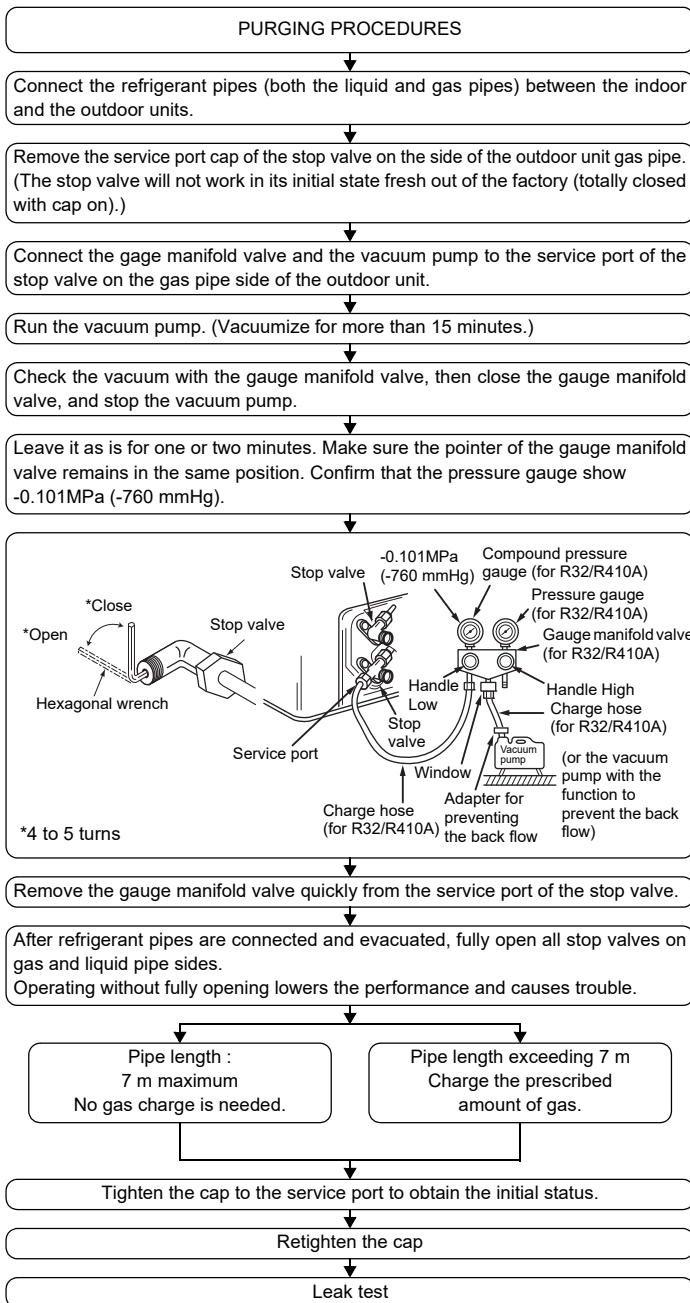
#### Cautions On Refrigerant Piping

- Be sure to use non-oxidative brazing for brazing to ensure that no foreign matter or moisture enter into the pipe.
- Be sure to apply refrigerating machine oil over the flare connection seating surface and tighten the connection using a double spanner.
- Provide a metal brace to support the refrigerant pipe so that no load is imparted to the indoor unit end pipe. This metal brace should be provided 50 cm away from the indoor unit's flare connection.



## 6. Refrigerant piping work

### 6.4. Purging procedures leak test



### 6.5. Drain piping work

- Ensure that the drain piping is downward (pitch of more than 1/100) to the outdoor (discharge) side. Do not provide any trap or irregularity on the way.
- Ensure that any cross-wise drain piping is less than 20 m (excluding the difference of elevation). If the drain piping is long, provide metal braces to prevent it from waving. Never provide any air vent pipe. Otherwise drain may be ejected.
- Use a hard vinyl chloride pipe VP-25 (with an external diameter of 32 mm) for drain piping.
- Ensure that collected pipes are 10 cm lower than the unit body's drain port.
- Do not provide any odor trap at the drain discharge port.
- Put the end of the drain piping in a position where no odor is generated.
- Do not put the end of the drain piping in any drain where ionic gases are generated.

#### [Fig. 6-5-1] (P. 5)

- Correct piping
- × Wrong piping
- Ⓐ Insulation (9 mm or more)
- Ⓑ Downward slope (1/100 or more)
- Ⓒ Support metal
- Ⓚ Air bleeder
- Ⓛ Raised
- Ⓜ Odor trap

#### Grouped piping

- Ⓓ O. D. ø32 PVC TUBE
- Ⓔ Make it as large as possible. About 10 cm.
- Ⓕ Indoor unit
- Ⓖ Make the piping size large for grouped piping.
- Ⓗ Downward slope (1/100 or more)
- Ⓛ O. D. ø38 PVC TUBE for grouped piping. (9 mm or more insulation)

#### PEAD-M-JA model

- Ⓜ Up to 700 mm
- Ⓝ Drain socket (accessory)
- Ⓞ Horizontal or slightly upgradient

#### [PEAD-(S)M-JA(2) model]

1. Insert the drain socket (accessory) into the drain port (insertion margin: 25 mm). (The drain socket must not be bent more than 45° to prevent the socket from breaking or clogging.) (Attach the socket with glue, and fix it with the band (small, accessory).)
2. Attach the drain pipe (O.D. ø32 PVC TUBE PV-25, field supply). (Attach the pipe with glue, and fix it with the band (small, accessory).)
3. Perform insulation work on the drain pipe (O.D. ø32 PVC TUBE PV-25) and on the socket (including elbow).
4. Check the drainage. (Refer to [Fig. 6-6])
5. Attach the insulating material (field supply), and fix it with the band (large, accessory) to insulate the drain port.

#### [Fig. 6-5-2] (P. 5) \*only on the PEAD-(S)M-JA(2) model

- Ⓐ Indoor unit
- Ⓑ Tie band (accessory)
- Ⓒ Visible part
- Ⓓ Insertion margin
- Ⓔ Drain socket (accessory)
- Ⓕ Drain pipe (O.D. ø32 PVC TUBE, field supply)
- Ⓖ Insulating material (field supply)
- Ⓗ Tie band (accessory)
- Ⓛ To be gap free. The joint section of the insulation material meet must be at the top.

#### [PEAD-(S)M-JAL(2) model]

1. Insert the drain socket (accessory) into the drain port. (The drain socket must not be bent more than 45° to prevent the socket from breaking or clogging.) The connecting part between the indoor unit and the drain socket may be disconnected at the maintenance. Fix the part with the accessory band, not be adhered.
2. Attach the drain pipe (O.D. ø32 PVC TUBE, field supply). (Attach the pipe with glue for the hard vinyl chloride pipe, and fix it with the band (small, accessory).)
3. Perform insulation work on the drain pipe (O.D. ø32 PVC TUBE) and on the socket (including elbow).

#### [Fig. 6-5-3] (P. 5) \*only on the PEAD-(S)M-JAL(2) model

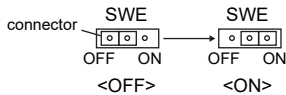
- Ⓐ Indoor unit
- Ⓑ Tie band (accessory)
- Ⓒ Band fixing part
- Ⓓ Insertion margin
- Ⓔ Drain socket (accessory)
- Ⓕ Drain pipe (O.D. ø32 PVC TUBE, field supply)
- Ⓖ Insulating material (field supply)

## 6. Refrigerant piping work

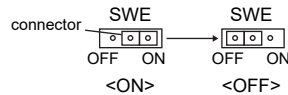
### 6.6. Confirming drain discharge

▶ **Make sure that the drain-up mechanism operates normally for discharge and that there is no water leakage from the connections.**

- Be sure to confirm the above in a period of heating operation.
  - Be sure to confirm the above before ceiling work is done in the case of a new construction.
1. Remove the water supply port cover on the same side as the indoor unit piping.
  2. Fill water into the feed water pump using a feed water tank. In filling, be sure to put the end of the pump or tank in a drain pan. (If the insertion is incomplete, water may flow over the machine.)
  3. Perform the test run in cooling mode, or connect the connector to the ON side of SWE on the Indoor controller board. (The drain pump and the fan are forced to operate without any remote controller operation.) Make sure using a transparent hose that drain is discharged.



4. After confirmation, cancel the test run mode, and turn off the main power. If the connector is connected to the ON side of SWE, disconnect it and connect it to the OFF side, and attach the water supply port cover into its original position.



[Fig. 6-6] (P. 5)

- Ⓐ Insert pump's end 2 to 4 cm.
- Ⓑ Remove the water supply port.
- Ⓒ About 2500 cc
- Ⓓ Water
- Ⓔ Filling port
- Ⓕ Screw

## 7. Duct work

- Connect canvas duct between unit and duct. [Fig. 7-1] (P. 6)
- Use incombustible material for duct parts.
- Provide full insulation to inlet duct flange and outlet duct to prevent condensation.
- Be sure to change the position of air filter to a position where it can be serviced.

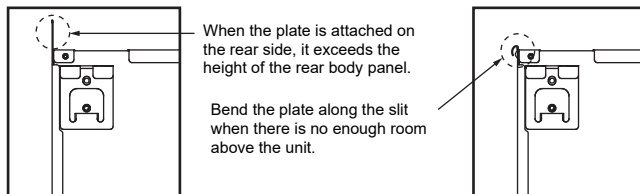
<A> In case of rear inlet  
<B> In case of bottom inlet

- Ⓐ Duct
- Ⓑ Air inlet
- Ⓒ Access door
- Ⓓ Canvas duct
- Ⓔ Ceiling surface
- Ⓕ Air outlet
- Ⓖ Leave distance enough to prevent short cycle

- Procedure for changing the rear inlet to the bottom inlet. [Fig. 7-2] (P. 6)

- Ⓐ Filter
- Ⓑ Bottom plate

1. Remove air filter. (First remove filter lock screw.)
2. Remove the bottom plate.
3. Fit the bottom plate to the rear of the body. [Fig. 7-3] (P. 6)  
(Position of lug-holes on the plate are different from those for rear inlet.)



4. Fit filter to the underside of the body.  
(Be careful of which side of the filter to fit.) [Fig. 7-4] (P. 6)

- Ⓒ Nail for the bottom inlet
- Ⓓ Nail for the rear inlet

### ⚠ Warning:

If one or more rooms are connected to the unit using a duct system, make sure:

- Install the unit in a space with at least a minimum floor area defined in the installation manual for the outdoor unit.
- no auxiliary devices, which may be a potential ignition source, are installed in the duct work;
- only auxiliary devices approved by the manufacturer are used in the duct work;
- an air inlet or outlet is connected directly with a room by ducting. Do NOT use spaces such as a false ceiling as a duct for the air inlet or outlet.
- Do NOT install operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater) in the duct work.

### ⚠ Caution:

- Inlet duct of 850 mm or more should be constructed.  
To connect the air conditioner main body and the duct for potential equalization.
- To reduce the risk of injury from metal sheet edges, wear protective gloves.
- To connect the air conditioner main body and the duct for potential equalization.
- The noise from the intake will increase dramatically if intake is fitted directly beneath the main body. Intake should therefore be installed as far away from the main body as possible.  
Particular care is required when using it with bottom inlet specifications.
- Install sufficient thermal insulation to prevent condensation forming on outlet duct flanges and outlet ducts.
- Keep the distance between the inlet grille and the fan over 850 mm.  
If it is less than 850 mm, install a safety guard not to touch the fan.
- To avoid electrical noise interference, do not run transmission lines at the bottom of the unit.

## 8. Electrical work

### 8.1. Power supply

#### 8.1.1. Indoor unit power supplied from outdoor unit

The following connection patterns are available.

The outdoor unit power supply patterns vary on models.

##### 1:1 System

[Fig. 8-1-1] (P. 6)

- Ⓐ Outdoor unit power supply
- Ⓑ Earth leakage breaker
- Ⓒ Wiring circuit breaker or isolating switch
- Ⓓ Outdoor unit
- Ⓔ Indoor unit/outdoor unit connecting cords
- Ⓕ Remote controller (option)
- Ⓖ Indoor unit

\* Affix a label A that is included with the manuals near each wiring diagram for the indoor and outdoor units.

##### Simultaneous twin/triple/four system

[Fig. 8-1-2] (P. 6)

- Ⓐ Outdoor unit power supply
- Ⓑ Earth leakage breaker
- Ⓒ Wiring circuit breaker or isolating switch
- Ⓓ Outdoor unit
- Ⓔ Indoor unit/outdoor unit connecting cords
- Ⓕ Remote controller (option)
- Ⓖ Indoor unit

\* Affix a label A that is included with the manuals near each wiring diagram for the indoor and outdoor units.

##### Field electrical wiring

Indoor unit model		PEAD
Wiring Wire No. x size (mm <sup>2</sup> )	Indoor unit power supply (Heater)	—
	Indoor unit power supply (Heater) earth	—
	Indoor unit-Outdoor unit	3 × 1.5 (polar)
	Indoor unit-Outdoor unit earth	1 × Min. 1.5
Circuit rating	Remote controller-Indoor unit	*1 2 × 0.3 (Non-polar)
	Indoor unit (Heater) L-N	*2 —
	Indoor unit-Outdoor unit S1-S2	*2 230 V AC
	Indoor unit-Outdoor unit S2-S3	*2 24 V DC
	Remote controller-Indoor unit	*2 14 V DC

\*1. The 10 m wire is attached in the remote controller accessory. Max. 500 m

\*2. The figures are NOT always against the ground.

S3 terminal has 24 V DC against S2 terminal. However between S3 and S1, these terminals are not electrically insulated by the transformer or other device.

- Notes:**
1. Wiring size must comply with the applicable local and national code.
  2. Power supply cords and indoor unit/outdoor unit connecting cords shall not be lighter than polychloroprene sheathed flexible cord. (Design 60245 IEC57)
  3. Install an earth longer than other cables.

#### 8.1.2. Separate indoor unit/outdoor unit power supplies (For PUHZ/PUZ application only)

The following connection patterns are available.

The outdoor unit power supply patterns vary on models.

##### 1:1 System

\* The optional wiring replacement kit is required.

[Fig. 8-1-3] (P. 6)

- Ⓐ Outdoor unit power supply
- Ⓑ Earth leakage breaker
- Ⓒ Wiring circuit breaker or isolating switch
- Ⓓ Outdoor unit
- Ⓔ Indoor unit/outdoor unit connecting cords
- Ⓕ Remote controller (option)
- Ⓖ Indoor unit
- Ⓗ Option
- Ⓙ Indoor unit power supply

\* Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

##### Simultaneous twin/triple/four system

\* The optional wiring replacement kits are required.

[Fig. 8-1-4] (P. 6)

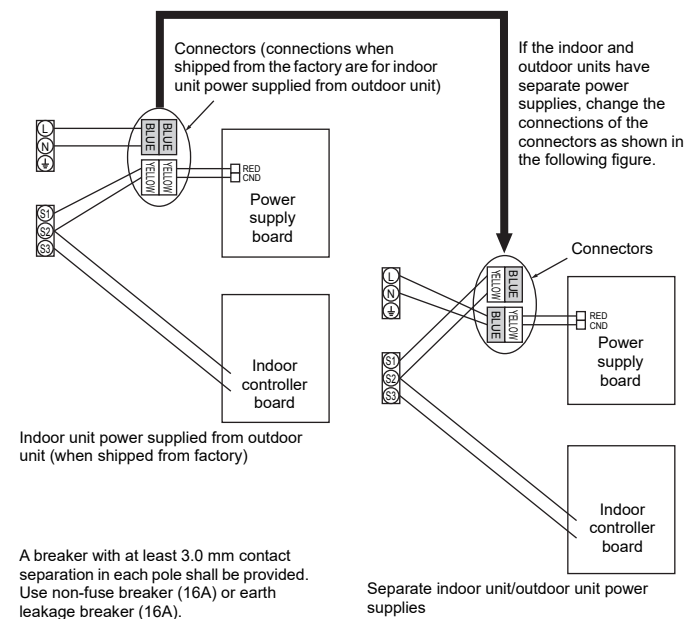
- Ⓐ Outdoor unit power supply
- Ⓑ Earth leakage breaker
- Ⓒ Wiring circuit breaker or isolating switch
- Ⓓ Outdoor unit
- Ⓔ Indoor unit/outdoor unit connecting cords
- Ⓕ Remote controller (option)
- Ⓖ Indoor unit
- Ⓗ Option
- Ⓙ Indoor unit power supply

\* Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

If the indoor and outdoor units have separate power supplies, refer to the table at the below. If the optional wiring replacement kit is used, change the indoor unit electrical box wiring referring to the figure in the right and the DIP switch settings of the outdoor unit control board.

	Indoor unit specifications								
Indoor power supply terminal kit (option)	Required								
Indoor unit electrical box connector connection change	Required								
Label affixed near each wiring diagram for the indoor and outdoor units	Required								
Outdoor unit DIP switch settings (when using separate indoor unit/outdoor unit power supplies only)	<table border="1" style="display: inline-table;"> <tr> <td>ON</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>OFF</td> <td>1</td> <td>2</td> <td></td> </tr> </table> (SW8)	ON			3	OFF	1	2	
ON			3						
OFF	1	2							

\* There are three types of labels (labels A, B, and C). Affix the appropriate labels to the units according to the wiring method.



## 8. Electrical work

### 8.2. Indoor wire connection

Work procedure

1. Remove the screws holding the cover to dismount the cover.
2. Punch out the knockout holes. (Recommended tool: screwdriver)
3. Route each cable through the wiring intake into the electric component box. (Procure power cable and in-out connecting cable locally and use remote control cable supplied with the unit.)
4. Securely connect the power cable and the in-out connecting cable and the remote control cable to the terminal blocks.
5. Secure the cables with clamps inside the electric component box.
6. Attach the electric component cover as it was.
  - Fix power supply cable and indoor/outdoor cable to control box by using buffer bushing for tensile force. (PG connection or the like.)

**⚠ Warning:**

- **Attach the electrical part cover securely. If it is attached incorrectly, it could result in a fire, electric shock due to dust, water, etc.**
- **Use the specified indoor/outdoor unit connecting wire to connect the indoor and outdoor units and fix the wire to the terminal block securely so that no stress is applied to the connecting section of the terminal block. Incomplete connection or fixing of the wire could result in a fire.**

**[Fig. 8-2-1] (P. 7)**

- Ⓐ Screw holding cover (1pc)
- Ⓑ Cover

**[Fig. 8-2-2] (P. 7)**

- Ⓒ Terminal box
- Ⓓ Knockout hole
- Ⓔ Remove

**[Fig. 8-2-3] (P. 7)**

- Ⓕ Use PG bushing to keep the weight of the cable and external force from being applied to the power supply terminal connector. Use a cable tie to secure the cable.
- Ⓖ Power source wiring
- Ⓗ Use ordinary bushing
- ① Transmission wiring

**[Fig. 8-2-4] (P. 7)**

- ④ Terminal block for power source and indoor transmission
- Ⓚ Terminal block for remote controller

- Perform wiring as shown in [Fig. 8-2-4]. (Procure the cable locally.)  
Make sure to use cables of the correct polarity only.

**[Fig. 8-2-5] (P. 7)**

- Ⓐ Indoor terminal block
- Ⓑ Earth wire (green/yellow)
- Ⓒ Indoor/outdoor unit connecting wire 3-core 1.5 mm<sup>2</sup> or more
- Ⓓ Outdoor terminal block
- Ⓔ Power supply cord : 2.0 mm<sup>2</sup> or more
- ① Connecting cable  
Cable 3-core 1.5 mm<sup>2</sup>, in conformity with Design 60245 IEC 57.
- ② Indoor terminal block
- ③ Outdoor terminal block
- ④ Always install an earth wire (1-core 1.5 mm<sup>2</sup>) longer than other cables
- ⑤ Remote controller cable  
Wire No × size (mm<sup>2</sup>) : Cable 2C × 0.3  
This wire accessory of remote controller  
(wire length : 10 m, non-polar. Max. 500 m)
- ⑥ Wired remote controller (option)
- ⑦ Power supply cord  
Cable 3-core 2.0 mm<sup>2</sup> or more, in conformity with Design 60245 IEC 57.

- Connect the terminal blocks as shown in [Fig. 8-2-5].

**⚠ Caution:**

- **Use care not to make mis-wiring.**
- **Firmly tighten the terminal screws to prevent them from loosening.**
- **After tightening, pull the wires lightly to confirm that they do not move.**

### 8.3. Remote controller (wired remote controller (option))

#### 8.3.1. For wired remote controller

##### 1) Installing procedures

Refer to the installation manual that comes with each remote controller for details.

##### 2) Function selection of remote controller

If two remote controllers are connected, set one to "Main" and the other to "Sub". For setting procedures, refer to "Function selection of remote controller" in the operation manual for the indoor unit.

### 8.4. Remote controller (wireless remote controller (option))

#### 8.4.1. For wireless remote controller

Refer to the installation manual that comes with each remote controller for details.

#### 8.4.2. Signal Receiving Unit

##### 1) Sample system connection

**[Fig. 8-4-1] (P. 8)**

- Indoor/outdoor wiring
- Signal receiving unit wiring
- Ⓐ Outdoor unit
- Ⓑ Refrigerant address
- Ⓒ Indoor unit
- Ⓓ Signal receiving unit

Only the wiring from the signal receiving unit and between the remote controllers is shown in [Fig. 8-4-1]. The wiring differs depending on the unit to be connected or the system to be used.

For details on restrictions, refer to the installation manual or the service handbook that came with the unit.

##### 1. Connecting to Mr. SLIM air conditioner

(1) Standard 1:1

###### ① Connecting the signal receiving unit

Connect the signal receiving unit to the CN90 (Connect to the wireless remote controller board) on the indoor unit using the supplied remote controller wire. Connect the signal receiving units to all the indoor units.

##### 2) Setting the pair number switch

**[Fig. 8-4-2] (P. 8)**

<Indoor controller board>

##### 1. Setting method

Assign the same pair number to the wireless remote controller as that of the indoor unit. If not doing so, the remote controller cannot be operated. Refer to the installation manual that came with the wireless remote controller for how to set pair numbers of wireless remote controllers.

Position of daisy wire on the controller circuit board on the indoor unit.

Controller circuit board on the indoor unit (reference)

**[Fig. 8-4-2] (P. 8)**

- Ⓐ CN90: Connector for remote controller wire connection

For pair number settings, the following 4 patterns (A-D) are available.

Pair number setting pattern	Pair number on remote controller side	Indoor controller circuit board side Point where the daisy wire is disconnected
A	0	Not disconnected
B	1	J41 disconnected
C	2	J42 disconnected
D	3~9	J41 and J42 disconnected

## 8. Electrical work

### 2. Setting example

(1) To use the units in the same room

#### [Fig. 8-4-3] (P. 8)

① Separate setting

Assign a different pair number to each indoor unit to operate each indoor unit by its own wireless remote controller.

#### [Fig. 8-4-4] (P. 8)

② Single setting

Assign the same pair number to all the indoor units to operate all the indoor units by a single wireless remote controller.

#### [Fig. 8-4-5] (P. 8)

(2) To use the units in different rooms

Assign the same pair number to the wireless remote controller as that of the indoor unit. (Leave the setting as it is at purchase.)

### 3) How to Install

#### [Fig. 8-4-6] (P. 9) to [Fig. 8-4-13] (P. 10)

### 1. Common items for "Installation on the ceiling" and "Installation on the switch box or on the wall"

#### [Fig. 8-4-6] (P. 9)

- Ⓐ Signal receiving unit external
- Ⓑ Center of Switch box
- Ⓒ Switch box
- Ⓓ Installation pitch
- Ⓔ 6.5 mm (1/4 inch)
- Ⓕ 70 mm (2 - 3/4 inch)
- Ⓖ 83.5 ± 0.4 mm (3 - 9/32 inch)
- Ⓗ Protrusion (pillar, etc)

#### [Fig. 8-4-7] (P. 9)

- Ⓐ Remote controller wire
- Ⓑ Hole (drill a hole on the ceiling to pass the remote controller wire.)
- Ⓒ Signal Receiving Unit

(1) Select the installation site.

The following must be observed.

- ① Connect the signal receiving unit to the indoor unit with the supplied remote controller wire. Note that the length of the remote controller wire is 5 m (16 ft). Install the remote controller within the reach of the remote controller wire.
- ② When installing on either the switch box or the wall, allow space around the Signal Receiving Unit as shown in the figure in [Fig. 8-4-6].
- ③ When installing the Signal Receiving Unit to the switch box, the Signal Receiving Unit slipped downward for 6.5 mm (1/4 inch) as shown in the figure in [Fig. 8-4-6].
- ④ Parts which must be supplied on site.
  - Switch box for one unit
  - Thin-copper wiring pipe
  - Lock nut and bushing
- ⑤ The thickness of the ceiling to which the remote controller is installed must be between 9 mm (3/8 inch) and 25 mm (1 inch).
- ⑥ Install the unit on the ceiling or on the wall where the signal can be received from the wireless remote controller.

The area where the signal from the wireless remote controller can be received is 45° and 7 m (22 ft) away from the front of the signal receiving unit.
- ⑦ Install the signal receiving unit to the position depending on the indoor unit model.
- ⑧ Connect the remote controller wire securely to the order wire. To pass the remote controller wire through the conduit, follow the procedure as shown in Fig. 8-4-8.

#### [Fig. 8-4-8] (P. 9)

- Ⓐ Fix tightly with tape.
- Ⓑ Remote controller wire
- Ⓒ Order wire

#### Note:

- The point where the remote controller wire is connected differs depending on the indoor unit model.

Take into account that the remote controller wire cannot be extended when selecting the installation site.
- If the Signal Receiving Unit is installed near a fluorescent lamp specially inverter type, signal interception may occur.

Be careful for installing the Signal Receiving Unit or replacing the lamp.

### 2. Installation on the switch box or on the wall

- (1) Use the remote controller wire to connect it to the connector (CN90) on the controller circuit board on the indoor unit.
- (2) Seal the Signal Receiving Unit cord lead-in hole with putty in order to prevent the possible entry of dew, water droplets, cockroaches, other insects, etc.

#### [Fig. 8-4-9] (P. 9)

- Ⓐ 150 mm (5 - 15/16 inch)
- Ⓑ Remote controller wire (Accessory)
- Ⓒ Wiring pipe
- Ⓓ Locknut
- Ⓔ Bushing
- Ⓕ Switch box
- Ⓖ Seal around here with putty

- When installing on the switch box, seal the connections between the switch box and wiring pipe with putty.

#### [Fig. 8-4-9] (P. 9)

- Ⓗ Seal around here with putty
- Ⓐ Remote controller wire
- Ⓓ Seal around here with putty

- When opening a hole using a drill for Signal Receiving Unit wire (or taking the wire out of the back of the Signal Receiving Unit), seal that hole with putty.
- When routing the wire via the portion cut off from the upper case, equally seal that portion with putty.

### (3) Install the remote control wire to the terminal block.

#### [Fig. 8-4-10] (P. 10)

- Ⓐ Insert the minus screwdriver toward the arrow pointed and wrench it to remove the cover. A flat screwdriver whose width of blade is between 4 and 7 mm (5/32 - 9/32 inch) must be used.

### (4) Installing hole when the Signal Receiving Unit is installed on the wall direct.

#### [Fig. 8-4-11] (P. 10)

- Ⓐ Thin-wall portion
- Ⓑ Bottom case
- Ⓒ Remote controller wire
- Ⓓ Conducting wire

- Cut the thin-wall portion inside the bottom case (oblique section) by a knife or a nipper.
- Take out the connected remote controller wire to the terminal block through this space.

### (5) Install the lower case on the switch box or directly on the wall.

#### [Fig. 8-4-12] (P. 10)

- Ⓐ Screw (M4 × 30)
  - \* When installing the lower case directly on the wall or the ceiling, use wood screws.

#### Mounting the cover

#### [Fig. 8-4-13] (P. 10)

- ① Hang the cover to the upper hooks (2 places).
- ② Mount the cover to the lower case
- Ⓐ Cross-section of upper hooks

#### ⚠ Caution:

- Insert the cover securely until the clicking sound is made. If not doing so, the cover may fall.

## 8. Electrical work

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### 8.5. Service menu

**Note: Maintenance password is required.**

Press Setting on the Main window, and select "Service" to set the maintenance settings.

When the Service menu is selected, a window will appear asking for the password.

[Fig. 8-1-1] (P. 6)

To enter the current maintenance password (4 numerical digits), move the cursor to the digit you want to change with the [F1] or [F2] button, and set each number (0 through 9) with the [F3] or [F4] button. Then, press the [SELECT] button.

**Note:**

- The initial maintenance password is "9999." Change the default password as necessary to prevent unauthorized access. Have the password available for relevant personnel.
- If you forget your maintenance password, you can initialize the password to the default password "9999" by pressing and holding the [F1] button for ten seconds on the maintenance password setting screen.
- Air conditioning units may need to be stopped to make certain settings. There may be some settings that cannot be made when the system is centrally controlled.

### 8.6. Function settings

#### 8.6.1. By wired remote controller

Make the settings for the indoor unit functions via the remote controller as necessary. Select "Function setting" from the Settings menu to bring up the Function setting screen. [Fig. 8-6-1] (P. 11)

① [Fig. 8-6-2] (P. 11)

- Set the indoor unit refrigerant addresses and unit numbers with the [F1] through [F4] buttons, and then press the [SELECT] button to confirm the current setting.
- When data collection from the indoor units is completed, the current settings will appear highlighted. Non-highlighted items indicate that no function settings have been made. Screen appearance varies depending on the "Unit No." setting.

② [Fig. 8-6-3] (P. 11)

- Use the [F1] or [F2] button to move the cursor to select the mode number, and change the setting number with the [F3] or [F4] button.

③ [Fig. 8-6-4] (P. 11)

- When the settings are completed, press the [SELECT] button to send the setting data from the remote controller to the indoor units.
- When the transmission is successfully completed, the screen will return to the Function setting screen.

#### 8.6.2. By wireless remote controller

Refer to the installation manual included with the wireless remote controller.

#### 8.6.3. Changing the power voltage setting (Function table 1)

- Be sure to change the power voltage setting depending on the voltage used.

## 8. Electrical work

**Function table 1**

Select unit number 00

Mode	Settings	Mode no.	Setting no.	Initial setting	Check
Power failure automatic recovery (AUTO RESTART FUNCTION)	Not available	01	1	*2	
	Available *1		2	*2	
Indoor temperature detecting	Indoor unit operating average	02	1	○	
	Set by indoor unit's remote controller		2		
	Remote controller's internal sensor		3		
LOSSNAY connectivity	Not Supported	03	1	○	
	Supported (indoor unit is not equipped with outdoor-air intake)		2		
	Supported (indoor unit is equipped with outdoor-air intake)		3		
Power voltage	240V	04	1		
	220V, 230V		2	○	
Auto mode	Energy saving cycle automatically enabled	05	1	○	
	Energy saving cycle automatically disabled		2		
Smart Defrost *3	Available	20	1	○	
	Not available		2		

**Function table 2**

Select unit numbers 01 to 04 or all units (AL [wired remote controller]/07 [wireless remote controller])

Mode	Settings	Mode no.	Setting no.	Initial setting	Check		
Filter sign	100 Hr	07	1				
	2500 Hr		2				
	No filter sign indicator		3	○			
External static pressure	External static pressure	08	1				
	35 Pa (40 Pa)		Setting no. of mode no. 08	Setting no. of mode no. 10	2	1	
	50 Pa (before shipment)		3	1	3	○	
	70 Pa	1	2	10	1	○	
	100 Pa	2	2		2		
	150 Pa	3	2		3		
	Fan speed during the cooling thermostat is OFF.	Setting fan speed	27	1			
Stop		2					
Extra low		3		○			

\*1 When the power supply returns, the air conditioner will start 3 minutes later.

\*2 Power failure automatic recovery initial setting depends on the connecting outdoor unit.

\*3 It is available when the indoor unit is connected to any of the particular outdoor units.

**Note:** When the function of an indoor unit were changed by function selection after the end of installation, always indicate the contents by entering a ○ or other mark in the appropriate check filed of the tables.

## 8. Electrical work

### 8.7. Rotation setting

You can set these functions by wired remote controller. (Maintenance monitor)

**[Fig. 8-7-1] (P. 11)**

- ① Select "Service" from the Main menu, and press the [SELECT] button.
- ② Select "Settings" with the [F1] or [F2] button, and press the [SELECT] button.
- ③ Select "Rotation setting" with the [F1] or [F2] button, and press the [SELECT] button.

**[Fig. 8-7-2] (P. 11)**

- ④ Set the rotation function.
  - Select "Rotation" with the [F1] button.
  - Select the switching period or "Backup only" with the [F2] or [F3] button.

- "Rotation" setup options  
None, 1 day, 3 days, 5 days, 7 days, 14 days, 28 days, Backup only

**Notes:**

- When 1 to 28 days are selected from the setup options, the backup function is also enabled.
- When "Backup only" is selected, the rotation function will be disabled. The systems with refrigerant addresses of 00 or 01 (00 system/ 01 system) will be operated as a main system while the 02 system is the standby mode as backup.

**[Fig. 8-7-3] (P. 11)**

- ⑤ Set the support function.
  - Select "TempDifTrigger" with the [F1] button.
  - Select the difference between the suction temperature and the set temperature with the [F2] or [F3] button.

- "TempDifTrigger" setup options  
None, +4°C, +6°C, +8°C

**Notes:**

- The support function is available only in the COOL mode. (Not available in the HEAT, DRY and AUTO mode.)
- The support function is enabled when any option other than "None" is selected from the "Rotation" setup options.

- ⑥ Press the [SELECT] button to update the setting.

**Reset method**

- Press the [F4] button in step ④ or ⑤ to reset the operation time of the rotation function. Once it is reset, operation will start from the systems with refrigerant addresses of 00 or 01.

Note: When the system with refrigerant address of 02 is in the backup operation, the 00 or 01 systems will be operated again.



## 9. Test run

### 9.1. Before test run

- ▶ After completing installation and the wiring and piping of the indoor and outdoor units, check for refrigerant leakage, looseness in the power supply or control wiring, wrong polarity, and no disconnection of one phase in the supply.
- ▶ Use a 500-volt megohmmeter to check that the resistance between the power supply terminals and ground is at least 1.0 MΩ.
- ▶ Do not carry out this test on the control wiring (low voltage circuit) terminals.

#### ⚠ Warning:

Do not use the air conditioner if the insulation resistance is less than 1.0 MΩ. Insulation resistance

After installation or after the power source to the unit has been cut for an extended period, the insulation resistance will drop below 1 MΩ due to refrigerant accumulating in the compressor. This is not a malfunction. Perform the following procedures.

1. Remove the wires from the compressor and measure the insulation resistance of the compressor.
2. If the insulation resistance is below 1 MΩ, the compressor is faulty or the resistance dropped due the accumulation of refrigerant in the compressor.

3. After connecting the wires to the compressor, the compressor will start to warm up after power is supplied. After supplying power for the times indicated below, measure the insulation resistance again.
  - The insulation resistance drops due to accumulation of refrigerant in the compressor. The resistance will rise above 1 MΩ after the compressor is warmed up for two to three hours. (The time necessary to warm up the compressor varies according to atmospheric conditions and refrigerant accumulation.)
  - To operate the compressor with refrigerant accumulated in the compressor, the compressor must be warmed up at least 12 hours to prevent breakdown.
4. If the insulation resistance rises above 1 MΩ, the compressor is not faulty.

#### ⚠ Caution:

**The compressor will not operate unless the power supply phase connection is correct.**

**Turn on the power at least 12 hours before starting operation.**

- Starting operation immediately after turning on the main power switch can result in severe damage to internal parts. Keep the power switch turned on during the operational season.

## 9.2. Test run

### 9.2.1. Using wired remote controller

- Make sure to read operation manual before test run. (Especially items to secure safety)

#### Step 1 Turn on the power.

- Remote controller: The system will go into startup mode, and the remote controller power lamp (green) and "PLEASE WAIT" will blink. While the lamp and message are blinking, the remote controller cannot be operated. Wait until "PLEASE WAIT" is not displayed before operating the remote controller. After the power is turned on, "PLEASE WAIT" will be displayed for approximately 3 minutes.
- Indoor controller board: LED 1 will be lit up, LED 2 will be lit up (if the address is 0) or off (if the address is not 0), and LED 3 will blink.
- Outdoor controller board: LED 1 (green) and LED 2 (red) will be lit up. (After the startup mode of the system finishes, LED 2 will be turned off.) If the outdoor controller board uses a digital display, [-] and [-] will be displayed alternately every second.

If the operations do not function correctly after the procedures in step 2 and thereafter are performed, the following causes should be considered and eliminated if they are found.

(The symptoms below occur during the test run mode. "Startup" in the table means the LED display written above.)

Symptoms in test run mode		Cause
Remote Controller Display	OUTDOOR BOARD LED Display < > indicates digital display.	
Remote controller displays "PLEASE WAIT", and cannot be operated.	After "startup" is displayed, only green lights up. <00>	• After power is turned on, "PLEASE WAIT" is displayed for 3 minutes during system startup. (Normal)
After power is turned on, "PLEASE WAIT" is displayed for 3 minutes, then error code is displayed.	After "startup" is displayed, green(once) and red(once) blink alternately. <F1>	• Incorrect connection of outdoor terminal block. (R, S, T and S1, S2, S3)
	After "startup" is displayed, green(once) and red(twice) blink alternately. <F3, F5, F9>	• Outdoor unit's protection device connector is open.
No display appears even when remote controller operation switch is turned on. (Operation lamp does not light up.)	After "startup" is displayed, green(twice) and red(once) blink alternately. <EA, Eb>	• Incorrect wiring between the indoor and outdoor unit. (Polarity is wrong for S1, S2, S3)
	After "startup" is displayed, only green lights up. <00>	• Remote controller transmission wire short. • There is no outdoor unit of address 0. (Address is other than 0.) • Remote controller transmission wire open.
Display appears but soon disappears even when remote controller is operated.	After "startup" is displayed, only green lights up. <00>	• After canceling function selection, operation is not possible for about 30 seconds. (Normal)

#### Step 2 Switch the remote controller to "Test run".

- ① Select "Test run" from the Service menu, and press the [SELECT] button. [Fig. 9-2-1] (P. 12)
- ② Select "Test run" from the Test run menu, and press the [SELECT] button. [Fig. 9-2-2] (P. 12)
- ③ The test run operation starts, and the Test run operation screen is displayed.

#### Step 3 Perform the test run and check the airflow temperature.

- ① Press the [F1] button to change the operation mode.
  - Cooling mode: Check that cool air blows from the unit.
  - Heating mode: Check that warm air blows from the unit.

#### Step 4 Confirm the operation of the outdoor unit fan.

The speed of the outdoor unit fan is controlled in order to control the performance of the unit. Depending on the ambient air, the fan will rotate at a slow speed and will keep rotating at that speed unless the performance is insufficient. Therefore, the outdoor wind may cause the fan to stop rotating or to rotate in the opposite direction, but this is not a problem.

#### Step 5 Stop the test run.

- ① Press the [ON/OFF] button to stop the test run. (The Test run menu will appear.)
- Note: If an error is displayed on the remote controller, see the table below.

## 9. Test run

• For description of each check code, refer to the following table.

① Check code	Symptom	Remark
P1	Intake sensor error	
P2, P9	Pipe (Liquid or 2-phase pipe) sensor error	
E6, E7	Indoor/outdoor unit communication error	
P4	Drain sensor error	
P5	Drain pump error	
PA	Forced compressor error	
P6	Freezing/Overheating safeguard operation	
EE	Communication error between indoor and outdoor units	
P8	Pipe temperature error	
E4	Remote controller signal receiving error	
Fb	Indoor unit control system error (memory error, etc.)	
E0, E3	Remote controller transmission error	
E1, E2	Remote controller control board error	
E9	Indoor/outdoor unit communication error (Transmitting error) (Outdoor unit)	
UP	Compressor overcurrent interruption	For details, check the LED display of the outdoor controller board.
U3, U4	Open/short of outdoor unit thermistors	
UF	Compressor overcurrent interruption (When compressor locked)	
U2	Abnormal high discharging temperature/49C worked/insufficient refrigerant	
U1, Ud	Abnormal high pressure (63H worked)/Overheating safeguard operation	
U5	Abnormal temperature of heat sink	
U8	Outdoor unit fan safeguard stop	
U6	Compressor overcurrent interruption/Abnormal of power module	
U7	Abnormality of super heat due to low discharge temperature	
U9, UH	Abnormality such as overvoltage or voltage shortage and abnormal synchronous signal to main circuit/ Current sensor error	
Others	Other errors (Refer to the technical manual for the outdoor unit.)	

• On wired remote controller

① Check code displayed in the LCD.

### 9.2.2. Using wireless remote controller (option)

Refer to the installation manual included with the wireless remote controller.

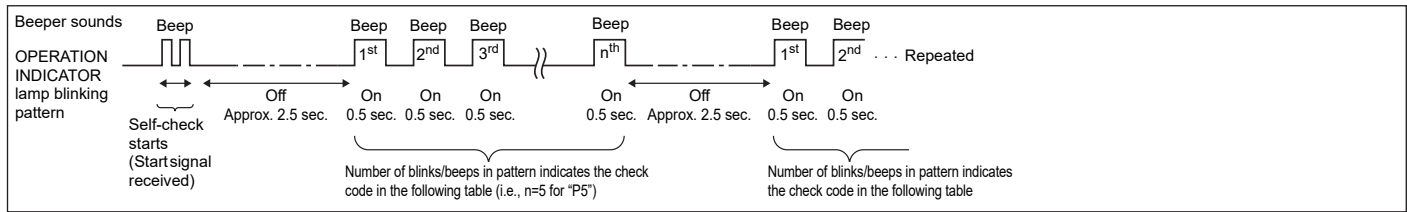
[Output pattern A] Errors detected by indoor unit

Wireless remote controller	Wired remote controller	Symptom	Remark
Beeper sounds/OPERATION INDICATOR lamp flashes (Number of times)	Check code		
1	P1	Intake sensor error	
2	P2, P9	Pipe (Liquid or 2-phase pipe) sensor error	
3	E6, E7	Indoor/outdoor unit communication error	
4	P4	Drain sensor error	
5	P5	Drain pump error	
6	P6	Freezing/Overheating safeguard operation	
7	EE	Communication error between indoor and outdoor units	
8	P8	Pipe temperature error	
9	E4	Remote controller signal receiving error	
10	—	—	
11	—	—	
12	Fb	Indoor unit control system error (memory error, etc.)	
14	PL	Refrigerant circuit abnormal	
No sound	--	No corresponding	

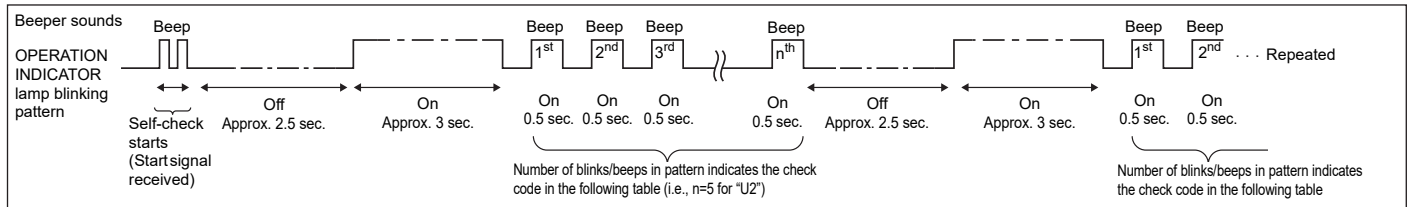
## 9. Test run

Refer to the following tables for details on the check codes. (Wireless remote controller)

[Output pattern A]



[Output pattern B]



[Output pattern B] Errors detected by unit other than indoor unit (outdoor unit, etc.)

Wireless remote controller	Wired remote controller	Symptom	Remark
Beeper sounds/OPERATION INDICATOR lamp flashes (Number of times)	Check code		
1	E9	Indoor/outdoor unit communication error (Transmitting error) (Outdoor unit)	For details, check the LED display of the outdoor controller board.
2	UP	Compressor overcurrent interruption	
3	U3, U4	Open/short of outdoor unit thermistors	
4	UF	Compressor overcurrent interruption (When compressor locked)	
5	U2	Abnormal high discharging temperature/49C worked/ insufficient refrigerant	
6	U1, Ud	Abnormal high pressure (63H worked)/ Overheating safeguard operation	
7	U5	Abnormal temperature of heat sink	
8	U8	Outdoor unit fan protection stop	
9	U6	Compressor overcurrent interruption/Abnormal of power module	
10	U7	Abnormality of super heat due to low discharge temperature	
11	U9, UH	Abnormality such as overvoltage or voltage shortage and abnormal synchronous signal to main circuit/Current sensor error	
12	—	—	
13	—	—	
14	Others	Other errors (Refer to the technical manual for the outdoor unit.)	

\*1 If the beeper does not sound again after the initial two beeps to confirm the self-check start signal was received and the OPERATION INDICATOR lamp does not come on, there are no error records.

\*2 If the beeper sounds three times continuously "beep, beep, beep (0.4 + 0.4 + 0.4 sec.," after the initial two beeps to confirm the self-check start signal was received, the specified refrigerant address is incorrect.

- On wireless remote controller  
The continuous buzzer sounds from receiving section of indoor unit.  
Blink of operation lamp

### 9.3. Self check

Refer to the installation manual that comes with each remote controller.

## 10. System control

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Refer to the outdoor unit installation manual.

## 11. Easy maintenance function

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Maintenance data, such as the indoor/outdoor unit's heat exchanger temperature and compressor operation current can be displayed with "smooth maintenance".

\* **This cannot be executed during test operation.**

\* **Depending on the combination with the outdoor unit, this may not be supported by some models.**

[Fig. 11-1] (P. 12)

- Select "Service" from the Main menu, and press the [SELECT] button.
- Select "Check" with the [F1] or [F2] button, and press the [SELECT] button.
- Select "Smooth maintenance" with the [F1] or [F2] button, and press the [SELECT] button.

[Fig. 11-2] (P. 12)

Select each item.

- Select the item to be changed with the [F1] or [F2] button.
  - Select the required setting with the [F3] or [F4] button.
    - "Ref. address" setting ..... "0" - "15"
    - "Stable mode" setting..... "Cool" / "Heat" / "Normal"
  - Press the [SELECT] button, fixed operation will start.
- \* Stable mode will take approx. 20 minutes.

[Fig. 11-3] (P. 12)

The operation data will appear.

The Compressor-Accumulated operating (COMP. run) time is 10-hour unit, and the Compressor-Number of operation times (COMP. On/Off) is a 100-time unit (fractions discarded)

### **Navigating through the screens**

- To go back to the Main menu.....[MENU] button
- To return to the previous screen..... [RETURN] button



AIR CONDITIONER INDOOR UNIT

MODEL \_\_\_\_\_ T1(ISO5151) <H>

SERVICE REF. \_\_\_\_\_ <COOLING/HEATING>

RATED INPUT (INDOOR ONLY) \_\_\_\_\_ kW

RATED CURRENT (INDOOR ONLY) \_\_\_\_\_ A

RATED VOLTAGE 220-240V~

FREQUENCY 50Hz

WEIGHT \_\_\_\_\_ kg

REFRIGERANT R32/R410A

ALLOWABLE PRESSURE 4.15MPa

Fan Information	
Overall efficiency(%)	
Measurement category	
Efficiency category	
Efficiency grade(N)	
VSD	

SERIAL NO. \_\_\_\_\_ YEAR OF MANUFACTURE \_\_\_\_\_

**MITSUBISHI ELECTRIC CORPORATION**

MANUFACTURER: MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEMS EUROPE LTD.  
NETTLEHILL ROAD HOUSTON INDUSTRIAL ESTATE  
LIVINGSTON EH54 5EQ SCOTLAND, UNITED KINGDOM.  
MADE IN UNITED KINGDOM





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This product is designed and intended for use in the residential,  
commercial and light-industrial environment.

Please be sure to put the contact address/telephone number on  
this manual before handing it to the customer.

**MITSUBISHI ELECTRIC CORPORATION**

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