AIR CONDITIONER
Wall Mounted Type

INSTALLATION MANUAL

PART No. 9333005201

⚠️ **CAUTION**

R32
REFRIGERANT

This Air Conditioner contains and operates with refrigerant R32.

THIS PRODUCT MUST ONLY BE INSTALLED OR SERVICED BY QUALIFIED PERSONNEL.

Refer to Commonwealth, State, Territory and local legislation, regulations, codes, installation & operation manuals, before the installation, maintenance and/or service of this product.

For authorized service personnel only.

Contents

1. SAFETY PRECAUTIONS

- Be sure to read this Manual thoroughly before installation.
- The warnings and precautions indicated in this Manual contain important information pertaining to your safety. Be sure to observe them.
- Hand this Manual, together with the Operating Manual, to the customer. Request the customer to keep them on hand for future use, such as for relocating or repairing the unit.

⚠️ WARNING	Indicates a potentially or imminently hazardous situation which, if not avoided, could result in death or serious injury.

⚠️ CAUTION	Indicates a potentially hazardous situation that may result in minor or moderate injury or damage to property.

⚠️ WARNING

- Installation of this product must be done by experienced service technicians or professional installers only in accordance with this manual. Installation by non-professional or improper installation of the product might cause serious accidents such as injury, water leakage, electric shock, or fire. If the product is installed in disregard of the instructions in this manual, it will void the manufacturer's warranty.
- Do not turn on the power until all work has been completed. Turning on the power before the work is completed can cause serious accidents such as an electric shock or a fire.
- If refrigerant leaks when you are working, ventilate the area. If the leaking refrigerant is exposed to a direct flame, it may produce a toxic gas.
- Installation must be performed in accordance with regulations, codes, or standards for electrical wiring and equipment in each country, region, or the installaton place.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater.
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odour.

⚠️ CAUTION

- Read carefully all of safety information written in this manual before you install or use the air conditioner.
- Install the unit by following local codes and regulations in force at the place of installation, and the instructions provided by the manufacturer.
- This unit is part of a set constituting an air conditioner. The unit must not be installed alone or be installed with non-authorized device by the manufacturer.
- Always use a separate power supply line protected by a circuit breaker operating on all wires with a distance between contact of 3 mm for this unit.
- To protect the persons, earth (ground) the unit correctly, and use the power cable combined with an Earth Leakage Circuit Breaker (ELCB).
- The units are not explosion proof, and therefore should not be installed in explosive atmosphere.
- To avoid getting an electric shock, never touch the electrical components soon after the power supply has been turned off. After turning off the power, always wait 5 minutes or more before you touch the electrical components.
- This unit contains no user-serviceable parts. Always consult experienced service technicians for repairing.

⚠️ CAUTION

- When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.
- Do not place any other electrical products or household belongings under indoor unit or outdoor unit. Condensation dripping from the unit might get them wet, and may cause damage or malfunction of your property.

- Be careful not to scratch the air conditioner when handling it.
- After installation, explain correct operation to the customer, using the operating manual.

Precautions for using R32 refrigerant

The basic installation work procedures are the same as conventional refrigerant (R410A, R22) models.
However, pay careful attention to the following points:

Since the working pressure is 1.6 times higher than that of refrigerant R22 models, some of the piping and installation and service tools are special. (See "2.1. Special tools for R32 (R410A)".)
Especially, when replacing a refrigerant R22 model with a new refrigerant R32 model, always replace the conventional piping and flare nuts with the R32 and R410A piping and flare nuts on the outdoor unit side.
For R32 and R410A, the same flare nut on the outdoor unit side and pipe can be used.

Models that use refrigerant R32 and R410A have a different charging port thread diameter to prevent erroneous charging with refrigerant R22 and for safety. Therefore, check beforehand. [The charging port thread diameter for R32 and R410A is 1/2-20 UNF.]

Be more careful than R22 so that foreign matter (oil, water, etc.) does not enter the piping. Also, when storing the piping ,securely seal the opening by pinching, taping, etc. (Handling of R32 is similar to R410A.)

⚠️ CAUTION

1-Installation (Space)
- That the installation of pipe-work shall be kept to a minimum.
- That pipe-work shall be protected from physical damage.
- That compliance with national gas regulations shall be observed.
- That mechanical connections shall be accessible for maintenance purposes.
- In cases that require mechanical ventilation, ventilation openings shall be kept clear of obstruction.
- When disposing of the product is used, be based on national regulations, properly processed.

2-Servicing
2-1 Service personnel
- Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification.
- Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
- Servicing shall be performed only as recommended by the manufacturer.

⚠ CAUTION

2-2 Work
- Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimised. For repair to the refrigerating system, the precautions in 2-2 to 2-8 shall be complied with prior to conducting work on the system.
- Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapour being present while the work is being performed.
- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out.
- Work in confined spaces shall be avoided.
- The area around the workspace shall be sectioned off.
- Ensure that the conditions within the area have been made safe by control of flammable material.

2-3 Checking for presence of refrigerant
- The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres.
- Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. nonsparking, adequately sealed or intrinsically safe.

2-4 Presence of fire extinguisher
- If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available at hand.
- Have a dry powder or CO_2 fire extinguisher adjacent to the charging area.

2-5 No ignition sources
- No person carrying out work in relation to a refrigeration system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion.
- All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space.
- Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

2-6 Ventilated area
- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work.
- A degree of ventilation shall continue during the period that the work is carried out.
- The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

2-7 Checks to the refrigeration equipment
- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification.
- At all times the manufacturer's maintenance and service guidelines shall be followed.
- If in doubt consult the manufacturer's technical department for assistance.
- The following checks shall be applied to installations using flammable refrigerants.
  - The charge size is in accordance with the room size within which the refrigerant containing parts are installed.
  - The ventilation machinery and outlets are operating adequately and are not obstructed.
  - If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant.
  - Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected.
  - Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

2-8 Checks to electrical devices
- Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures.
- If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with.
- If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used.
- This shall be reported to the owner of the equipment so all parties are advised.
- Initial safety checks shall include.
  - That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking.
  - That there no live electrical components and wiring are exposed while charging, recovering or purging the system.
  - That there is continuity of earth bonding.

⚠ CAUTION

3-Repairs to sealed components
- During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc.
- If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected.
- This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.
- Ensure that apparatus is mounted securely.
- Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres.
- Replacement parts shall be in accordance with the manufacturer's specifications.

NOTE: The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment.
Intrinsically safe components do not have to be isolated prior to working on them.

4-Repair to intrinsically safe components
- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.
- Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere.
- The test apparatus shall be at the correct rating.
- Replace components only with parts specified by the manufacturer.
- Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

5-Cabling
- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects.
- The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

6-Detection of flammable refrigerants
- Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks.
- A halide torch (or any other detector using a naked flame) shall not be used.

7-Leak detection methods
- Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.)
- Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used.
- Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed.
- Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.
- If a leak is suspected, all naked flames shall be removed/extinguished.
- If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak.
Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

8-Removal and evacuation
- When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used.
However, it is important that best practice is followed since flammability is a consideration.
The following procedure shall be adhered to:
    - remove refrigerant
    - purge the circuit with inert gas
    - evacuate
    - purge again with inert gas
    - open the circuit by cutting or brazing
- The refrigerant charge shall be recovered into the correct recovery cylinders.
- The system shall be "flushed" with OFN to render the unit safe.
- This process may need to be repeated several times.
- Compressed air or oxygen shall not be used for this task.
- Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum.
- This process shall be repeated until no refrigerant is within the system.
- When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.
- This operation is absolutely vital if brazing operations on the pipe work are to take place.
- Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

9-Charging procedures
- In addition to conventional charging procedures, the following requirements shall be followed.
  - Ensure that contamination of different refrigerants does not occur when using charging equipment.
  - Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
  - Cylinders shall be kept upright.
  - Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
  - Label the system when charging is complete (if not already).
  - Extreme care shall be taken not to overfill the refrigeration system.
- Prior to recharging the system it shall be pressure tested with OFN.
- The system shall be leak tested on completion of charging but prior to commissioning.
- A follow up leak test shall be carried out prior to leaving the site.

10-Decommissioning
- Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its details.
- It is recommended good practice that all refrigerants are recovered safely.
- Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant.
- It is essential that electrical power is available before the task is commenced.
  a) Become familiar with the equipment and its operation.
  b) Isolate system electrically.
  c) Before attempting the procedure ensure that:
    - mechanical handling equipment is available, if required, for handling refrigerant cylinders;
    - all personal protective equipment is available and being used correctly;
    - the recovery process is supervised at all times by a competent person;
    - recovery equipment and cylinders conform to the appropriate standards.
  d) Pump down refrigerant system, if possible.
  e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
  f) Make sure that cylinder is situated on the scales before recovery takes place.
  g) Start the recovery machine and operate in accordance with manufacturer's instructions.
  h) Do not overfill cylinders. (No more than 80 % volume liquid charge).
  i) Do not exceed the maximum working pressure of the cylinder, even temporarily.
  j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
  k) Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

11-Labelling
- Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant.
- The label shall be dated and signed.
- Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

12-Recovery
- When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.
- When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed.
- Ensure that the correct number of cylinders for holding the total system charge are available.
- All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant).
- Cylinders shall be complete with pressure relief valve and associated shut-off valves in good working order.
- Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.
- The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants.
- In addition, a set of calibrated weighing scales shall be available and in good working order.
- Hoses shall be complete with leak-free disconnect couplings and in good condition.
- Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.
- The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer Note arranged.
- Do not mix refrigerants in recovery units and especially not in cylinders.
- If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant.
- The evacuation process shall be carried out prior to returning the compressor to the suppliers.
- Only electric heating to the compressor body shall be employed to accelerate this process.
- When oil is drained from a system, it shall be carried out safely.

Explanation of symbols displayed on the indoor unit or outdoor unit.

⚠🔥	WARNING	This symbol shows that this appliance uses a flammable refrigerant. If the refrigerant is leaked and exposed to an external ignition source, there is a risk of fire.
📖	CAUTION	This symbol shows that the operation manual should be read carefully.
📖	CAUTION	This symbol shows that a service personnel should be handling this equipment with reference to the installation manual.
📖ⓘ	CAUTION	This symbol shows that information is available such as the operating manual or installation manual.

2. ABOUT THIS PRODUCT

2.1. Special tools for R32 (R410A)

Tool name	Change from R22 to R32 (R410A)
Gauge manifold	Pressure is high and cannot be measured with a R22 gauge. To prevent erroneous mixing of other refrigerants, the diameter of each port has been changed. It is recommended to use gauge with seals -0.1 to 5.3 MPa (-1 to 53 bar) for high pressure. -0.1 to 3.8 MPa (-1 to 38 bar) for low pressure.
Charge hose	To increase pressure resistance, the hose material and base size were changed. (R32/R410A)
Vacuum pump	A conventional vacuum pump can be used by installing a vacuum pump adapter. (Use of a vacuum pump with a series motor is prohibited.)
Gas leakage detector	Special gas leakage detector for HFC refrigerant R410A or R32.

Copper pipes

It is necessary to use seamless copper pipes and it is desirable that the amount of residual oil is less than 40 mg/10 m. Do not use copper pipes having a collapsed, deformed or discolored portion (especially on the interior surface). Otherwise, the expansion value or capillary tube may become blocked with contaminants.
As an air conditioner using R32 (R410A) incurs pressure higher than when using R22, it is necessary to choose adequate materials.

⚠ WARNING

- Do not use the existing (for R22) piping and flare nuts.
  If the existing materials are used, the pressure inside the refrigerant cycle will rise and cause failure, injury, etc. (Use the special R32/R410A materials.)
- Use (refill or replace with) specified refrigerant (R32) only. Use of unspecified refrigerant can cause product malfunction, burst, or injury.
- Do not mix any gas or impurities except specified refrigerant (R32). Inflow of air or application of unspecified material makes the internal pressure of the refrigerant cycle too high, and may cause product malfunction, burst of piping, or injury.

⚠ WARNING

- For appropriate working of the air conditioner, install it as written in this manual.
- To connect indoor unit and outdoor unit, use air conditioner piping and cables available through your local distributor. This manual describes proper connections using such installation set.
- Do not turn on the power until all work has been completed.
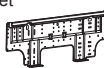
⚠ CAUTION

This manual describes how to install the indoor unit only. To install the outdoor unit, refer to the installation manual included in each product.

- Be careful not to scratch the air conditioner when handling it.
- After installation, explain correct operation to the customer, using the operating manual.

2.2. Accessories

The following installation accessories are supplied. Use them as required.

| Name and Shape	Q'ty	Name and Shape	Q'ty
Operating Manual	1	WLAN label (Attached to the indoor unit beside the WLAN indicator)	1
Setting manual (for WLAN control*)	1	Cloth tape	1
Installation Manual (This manual)	1	Tapping screw (M4)	5
Wall hook bracket	1	Tapping screw (M3)	2
Remote controller	1	Air cleaning filter	2
Battery	2	Filter holders	2
Remote controller holder	1		

* This product has a built-in WLAN adapter for wireless LAN control.
Confirm the WLAN label attached to the indoor unit (inside the front panel). Write down or stick the label on the Operating manual for WLAN control.
The following items are necessary to install this air conditioner. (The items are not included with the air conditioner and must be purchased separately.)

Name	Q'ty	Name	Q'ty
Connection pipe assembly	1	Wall cap	1
Connection cable (4-conductor)	1	Saddle	1 set
Wall pipe	1	Drain hose	1
Decorative tape	1	Tapping screws	1 set
Vinyl tape	1	Sealant	1

2.3. Optional parts

Refer to each installation manual for the method of installing optional parts.

Parts name	Model name	Application
Wired Remote Controller *	UTY-RVNYN	For air conditioner operation
Wired Remote Controller *	UTY-RNNYN	For air conditioner operation
Simple Remote Controller *	UTY-RSNYN	For air conditioner operation
External connect kit *	UTY-XWZXZ5	For control input/output port
Communication kit	UTY-XCBXZ2	For the installation of optional parts

* Optional communication kit is necessary for the installation.

3. GENERAL SPECIFICATION

This INSTALLATION MANUAL briefly outlines where and how to install the air conditioning system. Please read over the entire set of instructions for the indoor and outdoor units and make sure all accessory parts listed are with the system before beginning.

3.1. Type of copper pipe and insulation material

⚠ CAUTION

For appropriate pipe length and height difference, refer to the installation manual for the outdoor unit.

Gas pipe size (thickness) [mm]	Liquid pipe size (thickness) [mm]
Ø 9.52 (0.8)	Ø 6.35 (0.8)

⚠ CAUTION

• Wrap heat insulation around both of the gas pipe and the liquid pipe.
  No heat-insulation work or incorrect heat-insulation work may cause water leaks.
• In a reverse cycle model, use heat insulation with heat resistance above 120 °C.
• If expected humidity of the installation location of refrigerant pipes is higher than 70 %, wrap the heat insulation around the refrigerant pipes.
  If the expected humidity is between 70 % and 80 %, use heat insulation that has thickness of 15 mm or more.
  If the expected humidity is higher than 80 %, use heat insulation that has thickness of 20 mm or more .
• Using of thinner heat insulation than specified above may cause a condensation on the surface of the insulation.
• Use heat insulation with thermal conductivity of 0.045 W/(m•K) or less, at 20 °C.

3.2. Additional materials required for installation

A. Refrigeration (armored) tape
B. Insulated staples or clamps for connecting wire (See your local electrical codes.)
C. Putty
D. Refrigeration lubricant
E. Clamps or saddles to secure refrigerant piping

4. ELECTRICAL REQUIREMENT

The indoor unit is powered from the outdoor unit. Do not power indoor unit from separate power source.

⚠ WARNING

Standard for electrical wiring and equipment differs in each country or region. Before you start electrical working, confirm related regulations, codes, or standards.

Cable	Conductor size [mm²]	Type	Remarks
Connection cable	1.5	Type 60245 IEC 57	3 cable + Earth (Ground), 1 Ø 240 V

Max. Cable Length: Limit voltage drop to less than 2%. Increase cable gauge if voltage drop is 2% or more.

5. SELECTING THE MOUNTING POSITION

Decide the mounting position with the customer as follows:

5.1. Indoor unit

(1) Install the indoor unit level on a strong wall which is not subject to vibration.
(2) The inlet and outlet ports should not be obstructed : the air should be able to blow all over the room.
(3) Install the unit a dedicated electrical branch circuit.
(4) Do not install the unit where it will be exposed to direct sunlight.
(5) Install the unit where connection to the outdoor unit is easy.
(6) Install the unit where the drain pipe can be easily installed.
(7) Take servicing, etc. into consideration and leave the spaces shown in "6.1. Installation dimensions". Also install the unit where the filter can be removed.

Correct initial installation location is important because it is difficult to move the unit after it is installed.

⚠ WARNING

Install the unit where is capable to support the weight of the unit. Secure the unit firmly so that the unit does not topple or fall.

⚠ CAUTION

Do not install the unit in the following areas:
• Area with high salt content, such as at the seaside. It will deteriorate metal parts, causing the parts to fail or the unit to leak water.
• Area filled with mineral oil or containing a large amount of splashed oil or steam. It will deteriorate plastic parts, causing the parts to fail or the unit to leak water.
• Area where is close to heat sources.
• Area that generates substances that adversely affect the equipment, such as sulfuric gas, chlorine gas, acid, or alkali. It will cause the copper pipes and brazed joints to corrode, which can cause refrigerant leakage.
• Area that can cause combustible gas to leak, contains suspended carbon fibers or flammable dust, or volatile in flammables such as paint thinner or gasoline.
• If gas leaks and settles around the unit, it can cause a fire.
• Area where animals may urinate on the unit or ammonia may be generated.

• Do not use for preservation of food, plants, animals, precision equipment, art work, or other objects. This may cause quality deterioration of those items.
• Install the unit where drainage does not cause any trouble.
• Install the indoor unit, outdoor unit, power supply cable, transmission cable, and remote control cable at least 1 m away from a television or radio receivers. The purpose of this is to prevent TV reception interference or radio noise.
  (Even if they are installed more than 1 m apart, you could still receive noise under some signal conditions.)
• If children may approach the unit, take preventive measures so that they cannot reach the unit.
• Install the indoor unit on the wall where the height from the floor is more than 1.8 m.

This product has an built-in WLAN adapter.
Refer to the Setting manual for wireless LAN control for air conditioning to decide on the place of installation.
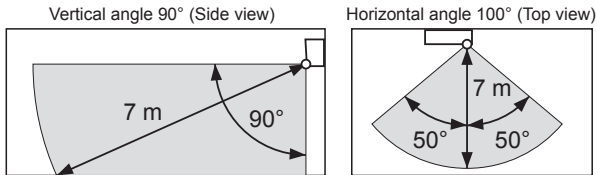
6. INSTALLATION WORK

> ⚠ **WARNING**
>
> During transportation and relocation shall be covered by wall hook bracket to the connecting pipe. With a connection pipe, that I do not carry.
> (When operating, There is a possibility that the stress is applied to the pipe joint, flammable gas may leak.)
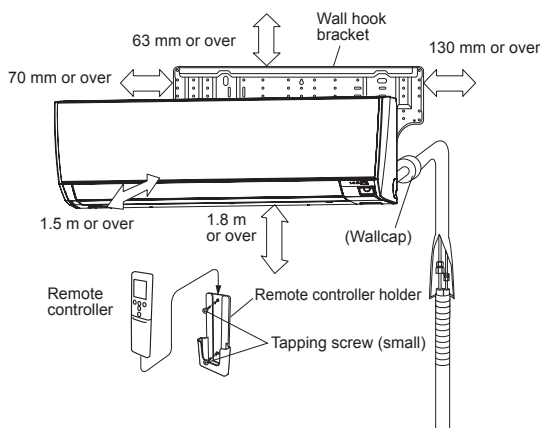
> ⚠ **CAUTION**
>
> • Do not hit or push the human sensor. This may lead to damage or malfunction.
> • Do not touch the human sensor. Any scratches or dirt may lead to incorrect detection.
> • Do not place large objects near the human sensor. Also keep heating units outside the sensor's detection area.

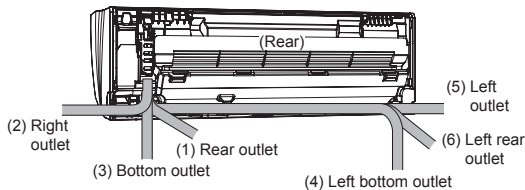Detection range of the human sensor is as follows.

Vertical angle 90° (Side view)   Horizontal angle 100° (Top view)

7 m   90°   7 m   50° 50°

6.1. Installation dimensions

Wall hook bracket
63 mm or over   130 mm or over
70 mm or over
1.5 m or over   1.8 m or over   (Wallcap)
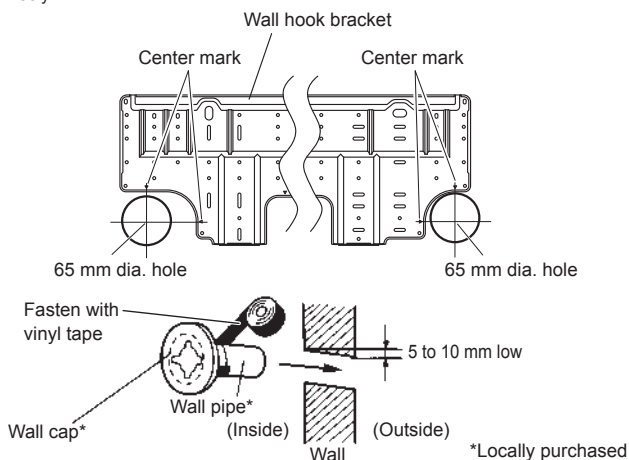Remote controller   Remote controller holder
Tapping screw (small)

6.2. Indoor unit piping direction

The piping can be connected in the 6 directions indicated in the following.
When the piping is connected to direction (2) , (3) , (4) or (5) , cut along the piping groove on the side of the front cover with a hacksaw.

(Rear)
(5) Left outlet
(2) Right outlet
(6) Left rear outlet
(1) Rear outlet
(3) Bottom outlet
(4) Left bottom outlet

## 6.3. Cutting the hole in the wall for the connecting piping

(1) Cut a 65 mm diameter hole in the wall at the position shown in the following.
(2) Cut the hole so that the outside end is lower (5 to 10 mm) than the inside end.
(3) Always align the center of the wall hole. If misaligned, water leakage will occur.
(4) Cut the wall pipe to match the wall thickness, stick it into the wall cap, fasten the cap with vinyl tape, and stick the pipe through the hole.
(5) For left piping and right piping, cut the hole a little lower so that drain water will flow freely.

Wall hook bracket
Center mark   Center mark
65 mm dia. hole   65 mm dia. hole
Fasten with vinyl tape
Wall pipe*   5 to 10 mm low
Wall cap*   (Inside)   (Outside)
Wall   *Locally purchased

> ⚠ **WARNING**
>
> Always use the wall pipe. If the wall pipe is not used, the cable that is connected between the indoor unit and the outdoor unit may touch metal, and cause an electric discharge.

6.4. Installing the wall hook bracket
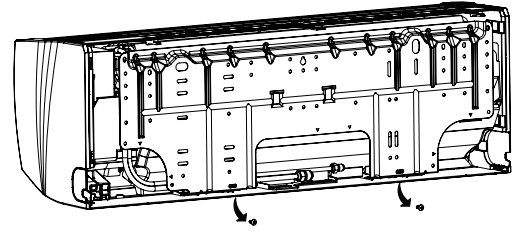
• Remove the wall hook bracket from the indoor unit. (Remove 2 screws).
(1) Install the wall hook bracket so that it is correctly positioned horizontally and vertically. If the wall hook bracket is titled, water will drip to the floor.
(2) Install the wall hook bracket so that it is strong enough to support the weight of the unit.
   • Fasten the wall hook bracket to the wall with 5 or more screws through the holes near the outer edge of the bracket.
   • Check that there is no rattle at the wall hook bracket.

Wall hook bracket
Tapping screw
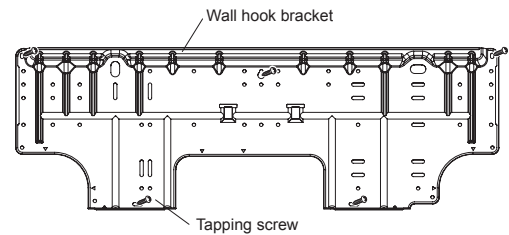
> ⚠ **CAUTION**
>
> Install the wall-hook bracket both horizontally and vertically aligned.
> Misaligned installation may cause water leakage.

6.5. Forming the drain hose and pipe

[Rear piping, Right piping, Bottom piping]

• Install the indoor unit piping in the direction of the wall hole and bind the drain hose and pipe together with vinyl tape.
• Install the piping so that the drain hose is at the bottom.
• Wrap the pipes of the indoor unit that are visible from the outside with decorative tape.

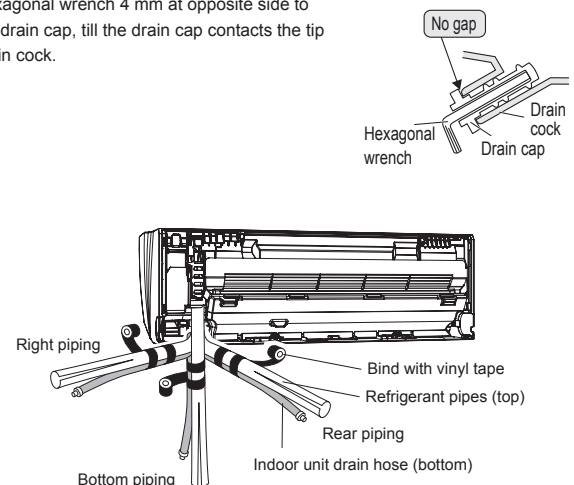**[For Left rear piping (Drain hose), Left piping (Drain hose)]**

Interchange the drain cap and the drain hose.
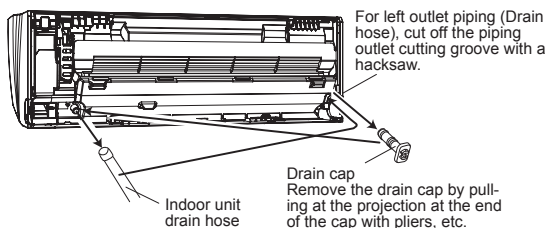
> ⚠ **CAUTION**
>
> • Insert drain hose and drain cap securely. Drain should slope down to avoid water leakage.
> • When inserting the drain hose, no other material than water should be applied. Application of other material than water will cause deterioration of the hose, and may cause water leakage.
> • After you remove a drain hose, be sure to attach the drain cap.
> • When you secure the piping and drain hose with tape, arrange the drain hose so that it is at the bottom of piping.
> • For drain hose piping in low temperature environment, you need to apply freeze protection to prevent a frozen drain hose.
>   After cooling operation is performed in low temperature environment, (when outdoor temperature under 0 °C,) water in the drain hose could be frozen. Frozen drain water will block the water flow in the hose, and may cause water leakage at the indoor unit.

Installing the Drain cap

Use a hexagonal wrench 4 mm at opposite side to insert the drain cap, till the drain cap contacts the tip of the drain cock.

No gap
Hexagonal wrench   Drain cock   Drain cap

Right piping
Bind with vinyl tape
Refrigerant pipes (top)
Rear piping
Indoor unit drain hose (bottom)
Bottom piping

For left outlet piping (Drain hose), cut off the piping outlet cutting groove with a hacksaw.

Drain cap
Remove the drain cap by pulling at the projection at the end of the cap with pliers, etc.

Indoor unit drain hose

Removing the drain hose
Remove the screw at the left of drain hose and pull out drain hose.

Installing the drain hose
Vertically insert the drain hose toward the inside, so that the drain fixture (white) can accurately align with the screw hole around the drain cock.
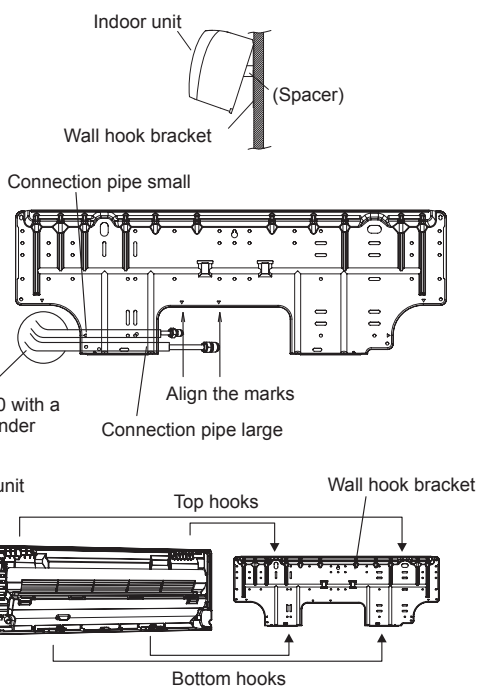After inserting and before replacing, please reinstall and fix the removed screws.

Screw   Drain hose

Drain fixture

Screw hole
Drain cock   Drain fixture
Screw
Drain hose
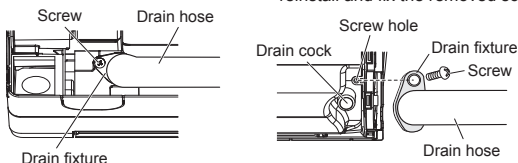
- Please hold around the joint of the drain hose during work.
- As the screw is inside, be sure to use screwdrivers treated with magnet.

- After passing the indoor piping and drain hose through the wall hole, hang the indoor unit on the hooks at the top and bottom of the wall hook bracket.

[Installing the indoor unit]
- Hang the indoor unit from the hooks at the top of the wall hook bracket.
- Insert the spacer, etc. between the indoor unit and the wall hook bracket and separate the bottom of the indoor unit from the wall.

Indoor unit
(Spacer)
Wall hook bracket

Connection pipe small

Bend 70 with a pipe bender

Align the marks
Connection pipe large

Indoor unit   Wall hook bracket
Top hooks
Bottom hooks

- After hooking the indoor unit to the top hook, hook the fittings of the indoor unit to the 2 bottom hooks while lowering the unit and pushing it against the wall.

## 6.6. Flare connection (Pipe connection)

⚠ **CAUTION**

Tighten the flare nuts with a torque wrench using the specified tightening method. Otherwise, the flare nuts could break after a prolonged period, causing refrigerant to leak and generate hazardous gas if the refrigerant comes into contact with a flame.

6.6.1. Flaring

Use special pipe cutter and flare tool designed for R410A or R32 pipework.
(1) Cut the connection pipe to the necessary length with a pipe cutter.
(2) Hold the pipe downward so that cuttings will not enter the pipe and remove any burrs.
(3) Insert the flare nut (always use the flare nut attached to the indoor unit(s) and outdoor unit or branch box respectively) onto the pipe and perform the flare processing with a flare tool. Use the special R410A or R32 flare tool, or the conventional flare tool. Leakage of refrigerant may result if other flare nuts are used.
(4) Protect the pipes by pinching them or with tape to prevent dust, dirt, or water from entering the pipes.

Die
A
Pipe
B

Check if [L] is flared uniformly and is not cracked or scratched.
L
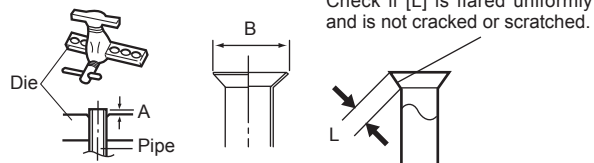
Pipe outside diameter [mm (in.)]	Dimension A [mm]	Dimension B [mm]
	Flare tool for R32, clutch type	
6.35 (1/4)		9.1
9.52 (3/8)		13.2
12.70 (1/2)	0 to 0.5	16.6
15.88 (5/8)		19.7
19.05 (3/4)		24.0

When using conventional flare tools to flare R32 pipes, the dimension A should be approximately 0.5 mm more than indicated in the table (for flaring with R32 flare tools) to achieve the specified flaring. Use a thickness gauge to measure the dimension A.

Width across flats

Pipe outside diameter [mm (in.)]	Width across flats of Flare nut [mm]
6.35 (1/4)	17
9.52 (3/8)	22
12.70 (1/2)	26
15.88 (5/8)	29
19.05 (3/4)	36

6.6.2. Bending pipes

- If pipes are shaped by hand, be careful not to collapse them.
- Bend R70 mm or more with a pipe bender.
- Do not bend the pipes in an angle more than 90°.
- When pipes are repeatedly bend or stretched, the material will harden, making it difficult to bend or stretch them any more.
- Do not bend or stretch the pipes more than 3 times.

⚠ **CAUTION**

To prevent breaking of the pipe, avoid sharp bends.

If the pipe is bent repeatedly at the same place, it will break.

6.6.3. Pipe connection

⚠ **WARNING**

The flare connection shall not be performed indoors.

⚠ **CAUTION**

Be sure to Install the pipe against the port on the indoor unit correctly. If the centering is improper, the flare nut cannot tighten smoothly. If the flare nut is forced to turn, the threads will be damaged.

Do not remove the flare nut from the indoor unit pipe until immediately before connecting the connection pipe.

Hold the torque wrench at its grip, keeping it in the right angle with the pipe, in order to tighten the flare nut correctly.

Tighten the flare nuts with a torque wrench using the specified tightening method. Otherwise, the flare nuts could break after a prolonged period, causing refrigerant to leak and generate hazardous gas if the refrigerant comes into contact with a flame.

Connect the piping so that the control box cover can easily be removed for servicing when necessary.

In order to prevent water from leaking into the control box, make sure that the piping is well insulated.

When the flare nut is tightened properly by your hand, hold the body side coupling with a wrench, then tighten with a torque wrench. (See the table below for the flare nut tightening torques.)

Tighten with 2 wrenches.
Holding wrench
Torque wrench
Flare nut
Indoor unit pipe (Body side)
Connection pipe
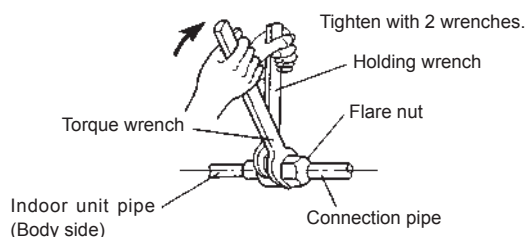
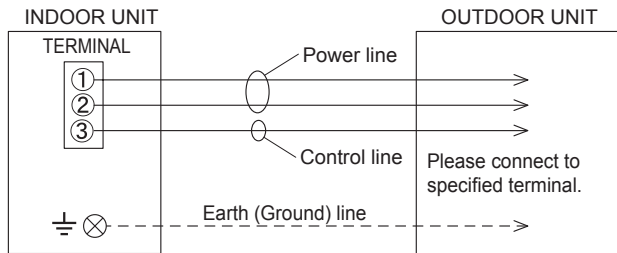| Flare nut [mm (in.)]	Tightening torque [N·m (kgf·cm)]
6.35 (1/4) dia.	16 to 18 (160 to 180)
9.52 (3/8) dia.	32 to 42 (320 to 420)
12.70 (1/2) dia.	49 to 61 (490 to 610)
15.88 (5/8) dia.	63 to 75 (630 to 750)
19.05 (3/4) dia.	90 to 110 (900 to 1,100)

7. ELECTRICAL WIRING

⚠ CAUTION

Be careful not to generate a spark as follows for using a flammable refrigerant.
- Do not remove the fuse while the power is on.
- Do not disconnect the wiring while the power is on.
- It is recommended to position the outlet connection in a high position. Place the cords so that they do not get tangled.
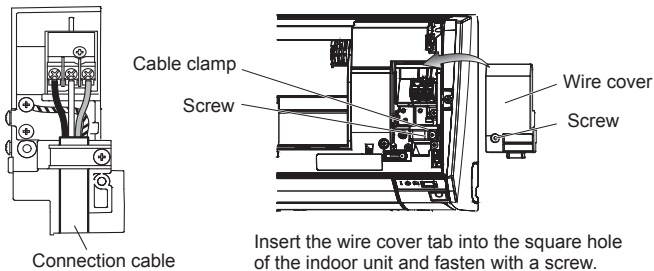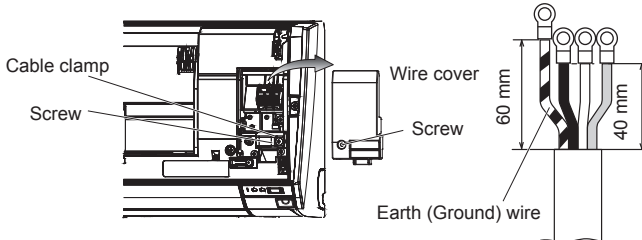
7.1. Wiring system diagram

⚠ WARNING

- Before connecting the wires, make sure the power supply is OFF.
- Every wire must be connected firmly.
- No wire should be allowed to touch refrigerant tubing, the compressor, or any moving part.
- Loose wiring may cause the terminal to overheat or result in unit malfunction. A fire hazard may also exist. Therefore, be sure all wiring is tightly connected.
- Connect wires to the matching numbers of terminals.

INDOOR UNIT | OUTDOOR UNIT

TERMINAL
① ② ③
Power line
Control line
Earth (Ground) line

Please connect to specified terminal.

7.2. Indoor unit wiring

1. Remove the wire cover. (Remove 1 screw.)
2. Remove the cable clamp.
3. Ring terminals connect to the connection cable.
4. Connect the ring terminals fully into the terminal block.
5. Fasten the connection cable with a cable clamp.

Cable clamp
Screw
Wire cover
Screw
60 mm
40 mm
Earth (Ground) wire

Cable clamp
Screw
Wire cover
Screw
Connection cable

Insert the wire cover tab into the square hole of the indoor unit and fasten with a screw.
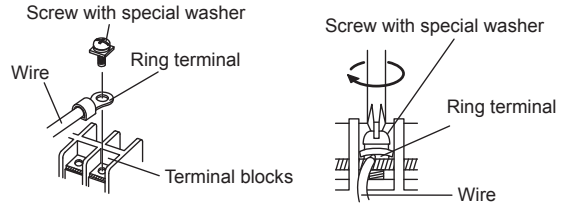
7.3. How to connect wiring to the terminals

Caution when wiring cable

To strip off the insulation of a lead wire, always use a special tool such as a wire stripper. If there is no special tool, carefully strip off the insulation by using a knife or other utensil.

(1) Use ring terminals with insulating sleeves as shown in the figure to connect to the terminal block.
(2) Securely clamp the ring terminals to the wires by using an appropriate tool so that the wires do not come loose.

Strip : 10 mm
Ring terminal
Sleeve
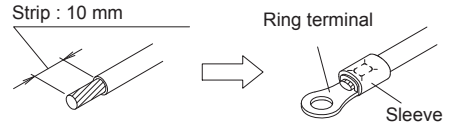
(3) Connect specified wires securely, and fasten them so that there is no stress applied on the terminals.
(4) Use a screwdriver with an appropriate bit size to tighten the terminal screws. Using of screwdriver with inappropriate bit size will damage the screw heads, and the screws will not be tightened properly.
(5) Do not overtighten the terminal screws. Otherwise, the screws may break.

Screw with special washer
Wire
Ring terminal
Terminal blocks

Screw with special washer
Ring terminal
Wire

(6) See the table for the terminal screw tightening torques.

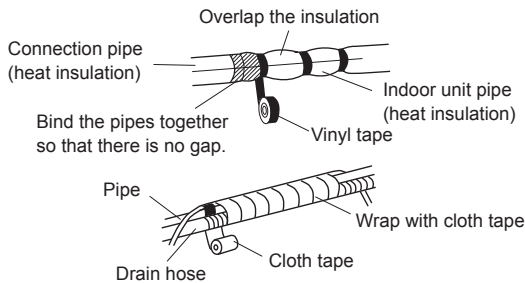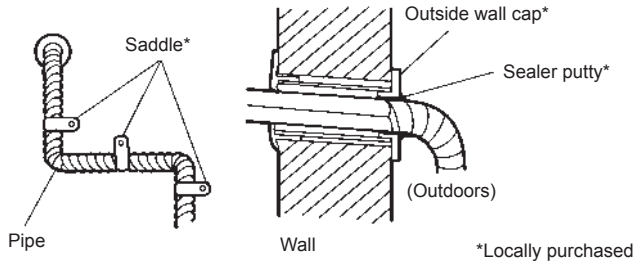| Tightening torque [N·m]	
M4 screw	1.2 to 1.8

⚠ CAUTION

- Match the terminal block numbers and connection cable colors with those of the outdoor unit. Incorrect wiring may cause a fire.
- Connect the connection cables firmly to the terminal block. Imperfect installation may cause a fire.
- When fixing the connection cable with the cable clamp, always fasten the cable at the plastic jacket portion, but not at the insulator portion. If the insulator is chafed, electric leakage may occur.
- Always connect the earth (ground) wire. Improper earthing (grounding) work can cause electric shocks.
- Do not use the earth (ground) screw for the indoor unit to the outdoor unit unless it is specified.

8. FINISHING

(1) Insulate between pipes.
  - Insulate suction and discharge pipes separately.
  - For rear, right, and bottom piping, overlap the connection pipe heat insulation and indoor unit pipe heat insulation and bind them with vinyl tape so that there is no gap.
(2) Temporarily fasten the connection cable along the connection pipe with vinyl tape. (Wrap to about 1/3 the width of the tape from the bottom of the pipe so that water does not enter.)
(3) Fasten the connection pipe to the outside wall with a saddle, etc.
(4) Fill the gap between the outside wall pipe hole and the pipe with sealer so that rain water and wind cannot blow in.
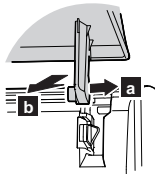(5) Fasten the drain hose to the outside wall, etc.

Saddle*

Outside wall cap*

Sealer putty*

(Outdoors)

Pipe

Wall

*Locally purchased

Overlap the insulation

Connection pipe (heat insulation)

Indoor unit pipe (heat insulation)

Bind the pipes together so that there is no gap.

Vinyl tape

Pipe

Wrap with cloth tape

Cloth tape

Drain hose

Check the following:

GOOD

Drain hose
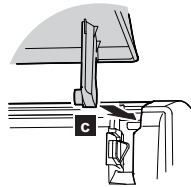
Saddle

PROHIBITED

Lifted up   Wave   End in water
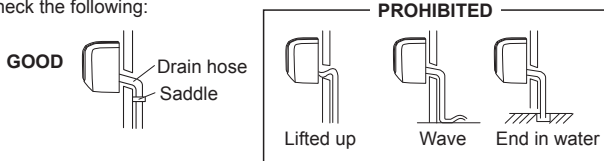
9. FRONT PANEL REMOVAL AND INSTALLATION

Intake grill removal

Open the intake grille. While gently pressing the left and right mounting shafts of the intake grille outward "a", remove the intake grille in direction of the arrow "b".
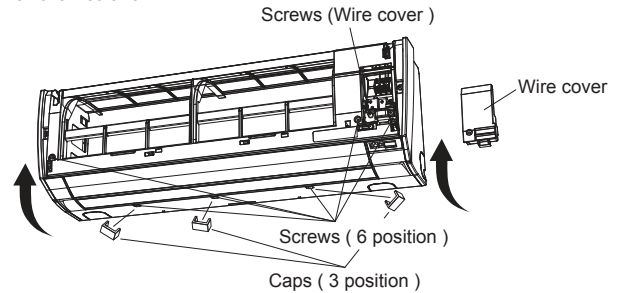
Intake grill installation

While holding the grille horizontal, set the left and right mounting shafts into the pillow blocks at the top of the panel "c".
To latch each shaft properly, insert the shaft until it snaps.
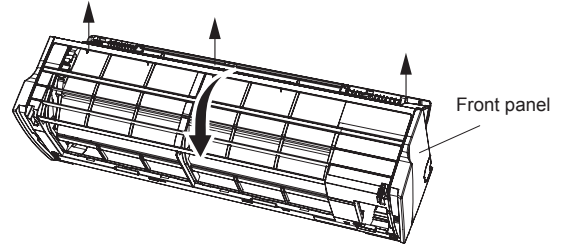Press 4 places on the intake grille to close it completely.

9.1. Front panel removal

(1) Remove intake grille (Reference the intake grille removal.)
(2) Remove 3 caps.
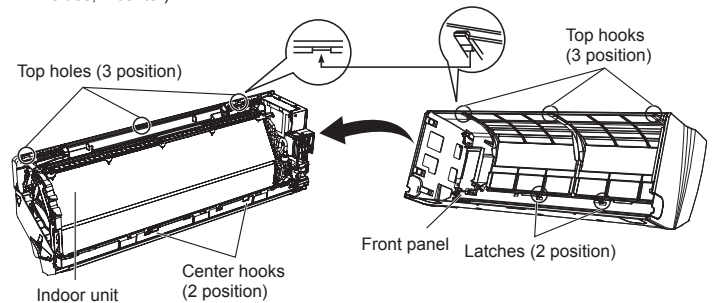(3) Remove wire cover.
(4) Remove 7 screws.

Screws (Wire cover)

Wire cover

Screws (6 position)

Caps (3 position)

(5) The front panel is pulled to the front, raising the upper surface, and a front panel is removed.

Front panel

9.2. Front panel installation

(1) First, fit the lower part of the front panel, and insert top and bottom hooks. (3 top sides, 2 center)

Top holes (3 position)

Top hooks (3 position)

Front panel

Latches (2 position)

Center hooks (2 position)

Indoor unit

(2) Attach the 6 screws.
(3) Attach the wire cover.
(4) Attach the 3 caps.
(5) Attach the intake grille.

⚠ CAUTION

Install the front panel and intake grille securely. If installation is imperfect, the front panel or intake grille may fall off and cause injury.

10. TEST RUN

Check items

(1) Is operation of each button on the remote control unit normal?
(2) Does each lamp light normally?
(3) Do air flow direction louvers operate normally?
(4) Is the drain normal?
(5) Do not have an abnormal noise and vibration during operation?
  - Do not operate the air conditioner in test run for a long time.

[Operation method]
Before starting the test run, wait for 1 minute after connecting the power supply.
By the wireless remote controller
- To start the test run, press the START/STOP button, the TEST RUN button on the remote controller with a by using the tip of a ballpoint pen or other small object.
By the indoor unit
- To start the test run, keep on pressing the MANUAL AUTO button of the indoor unit for more than 10 seconds.
- To end test operation, press the remote controller START/STOP button.
  (When the air conditioner is running by pressing the TEST RUN button, the OPERATION Lamp and TIMER Lamp will simultaneously flash slowly.)

[Using the wired remote controller] (Option)

For the operation method, refer to the operating manual and the installation manual of the optional remote controller.

[Using the wired remote controller] (Option)

For the operation method, refer to the operating manual.
(1) Stop the air conditioner operation.
(2) Press the MODE button and the FAN button simultaneously for 2 seconds or more to start the test run.

Test run display
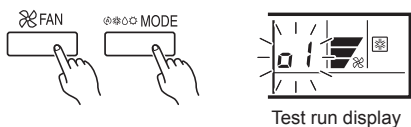
(3) Press the START/STOP button to stop the test run.

11. REMOTE CONTROLLER INSTALLATION

Check that the indoor unit correctly receives the signal from the remote controller, then install the remote controller holder.

⚠ **CAUTION**

Do not install the remote controller holder in the following conditions:
• Any places exposed in direct sunlight
• Positions affected by the heat from a stove or heater

11.1. Remote controller holder installation

• Install the remote controller a maximum distance of 7 m from the remote control receiver. After installing the remote controller, check that it operates correctly.
• Install the remote controller holder to a wall, pillar, etc. with the tapping screw.

remote controller holder fixing

Remote controller holder

Tapping screw (small)
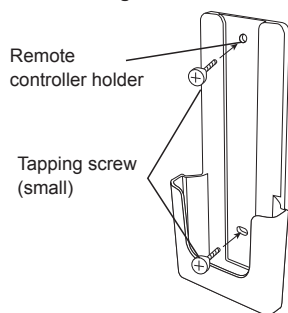
remote controller mounting

1 Set
2 Push
Remote controller
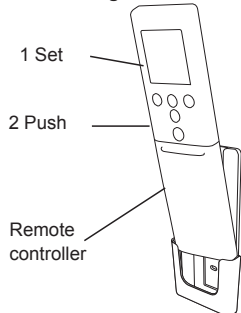
12. OPTIONAL KIT INSTALLATION

This air conditioner can be connected with the following optional kits.
• Wired remote controller
• Simple remote controller
• External connect kit

BEFORE INSTALLING THE WIRED REMOTE CONTROLLER
• When you use wired remote controller, some functions may not be used.

⚠ **CAUTION**

• Before installation, make sure that all power supplies has been disconnected.
• Do not touch the aluminum fins of heat exchanger built-in the indoor or outdoor unit to avoid personal injury when you install or maintain the unit.
• In the installation or removal, be sure not to have any wires getting caught by parts or getting an extreme tension. Excessive pressure or tension to the wire may cause malfunction of the air conditioner.
• Avoid any places exposed in direct sunlight.
• Choose a position that will not be affected by the heat from a stove or heater.
• Before setting up the optional kit, confirm whether the air-conditioner receives the signal from the remote controller.
• Do not connect the wired remote controller to the terminal for power supply.
• When connecting the wired remote controller with the indoor unit, use the connecting cable that is supplied with wired remote controller or simple remote controller.
• Recommended cable length of wired remote controller is 10 m. When you extend the cable, insulate the connecting part of the cable.

Do not connect power supply with the terminal.

INDOOR UNIT
PCB
TERMINAL
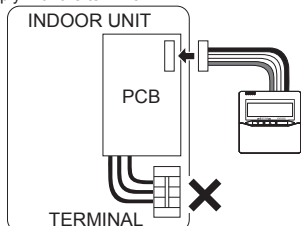
13. INSTALLATION WORK (OPTION)

⚠ **CAUTION**

• Do not hit or push the human sensor. This may lead to damage or malfunction.
• Do not touch the human sensor. Any scratches or dirt may lead to incorrect detection.

13.1. Remote controller cord modification

(1) Use a tool to cut off the terminal on the end of the remote controller cord, and then remove the insulation from the cut end of the cord.
(2) Connect the remote controller cord and connecting cord.
(supplied with wired remote controller)

Important: Be sure to insulate the connection between the cords.

20 mm
Remote controller cord

Connecting cord
White
Red
White
Red
Remote controller cord
Black
Insulated connection
Black
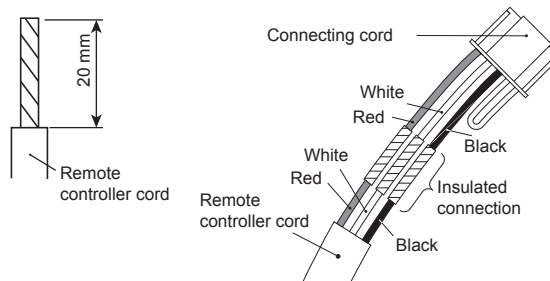
13.2. Installing wired remote controller terminal / external connect kit terminal (sold separately)

(1) Remove the screw on the control box as shown on the top right of the figure below.
(2) Release both bottom clasps at the sides in the direction of the arrow as circled in the bottom left of the figure below. Pull and remove the cover.
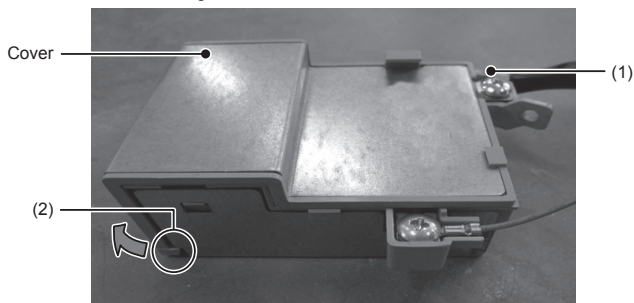
Cover
(2)
(1)

(3) Connect the wired remote controller terminal / external connect kit terminal (sold separately) to the specified terminal on the board as shown below. Please connect to the connector with necessary function according to the actual usage.
(4) After connecting each terminal, thread the cables through the notch as circled on the bottom right of the figure below.

(3) Wired remote controller connector : CNC01(White) *

(3) Control input (Operation/ Stop or Forced stop) connector : CNA01(White) *

(3) Error Status output connector : CNB02(Black) *

(3) Operation status output connector : CNB01(White) *

(4)
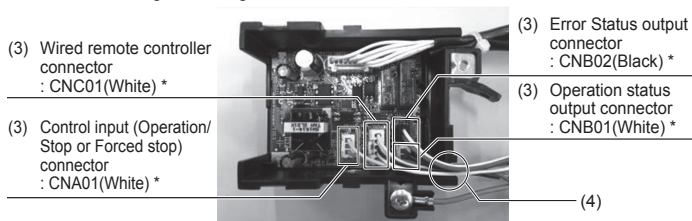
* : Symbol indicating the location printed on the board

(5) Install the control box cover as shown below.
  (Align the cover with the upper and lower right corners as indicated by the triangular symbols on the figure.
  Insert the clasps on the cover into both sides at the bottom of the two dotted circles.)
  • When installing the control box cover, make sure that the cables are not caught as shown in the detail view.
(6) Install one screw.
(7) Screw the earth wire of wired remote controller as shown in the figure. (AUSTRALIA model only).
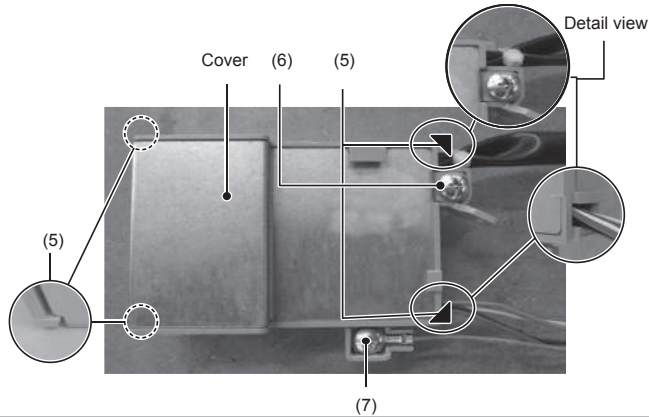
13.3. Installing communication box

13.3.1. Removing intake grille
(See "9.1. Front panel removal")
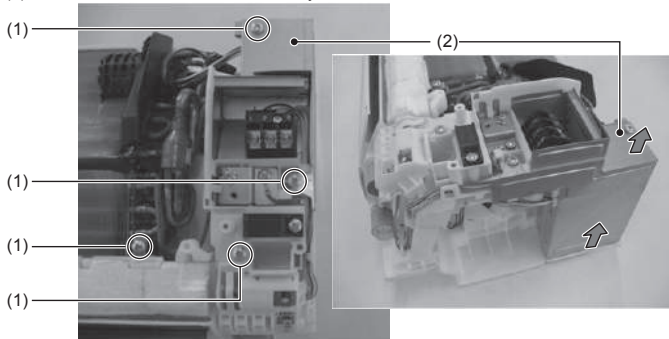
13.3.2. Removing control box
(1) Remove the screws (x4). (Use the same screws when installing.)
(2) Pull the control box cover towards you and remove.

(3) Remove the connectors (x4).
  • Remove and pull off the lock at the side of the connector insertion part.

⚠ CAUTION
• Be careful not to damage the parts on the board.
  Otherwise, it will cause malfunction.

Connector number: CN 5
Connector number: CN 4
Connector number: CN 10
Connector number: CN 7
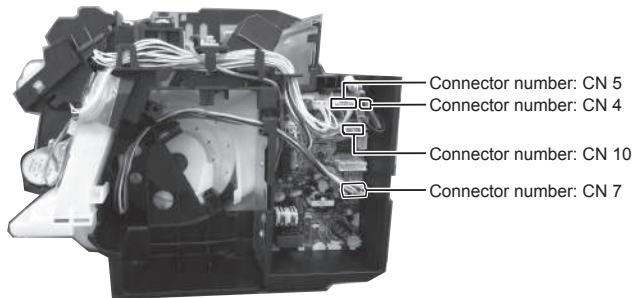
* : Symbol indicating the location printed on the board

(4) Remove the wires from the three fixtures. (See the figure below)
  • Leave the thick green wire in fixture C and remove the rest of the wires.

⚠ CAUTION
• Do not pull the wires forcibly.
  You may damage them.

Before   After

Fixture A
Fixture B
Fixture C

Fixture C
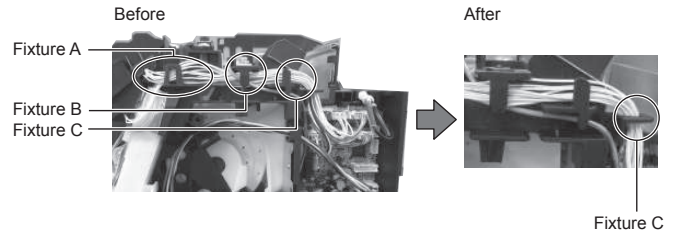
(5) While pulling the control box towards you, remove in the right direction.
  • Do not remove the thermistor.
  • Do not damage the terminals on the removed wires. (See the figure below)

Thermistor

Control box

Terminals

Control box

(5)
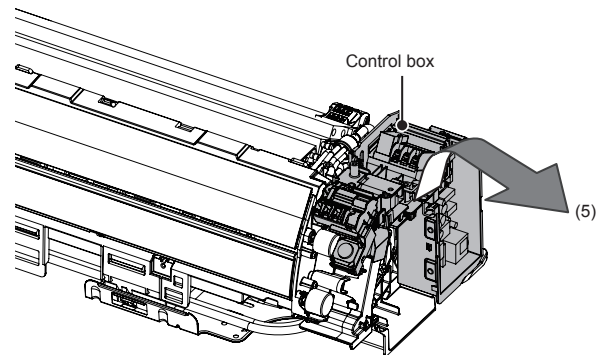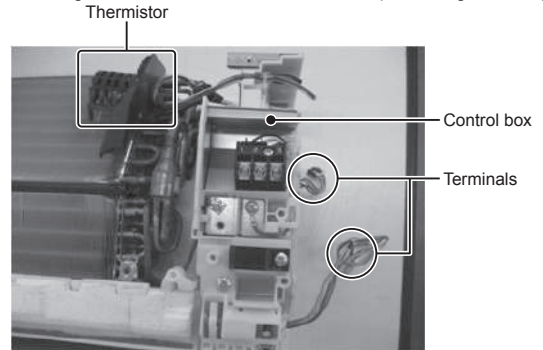
13.3.3. Installing communication box
(1) Install the communication box on the main unit and secure it with the provided screw at the location shown below.

View A (Detail view)

Screw

View A (Detail view)

Motor cover
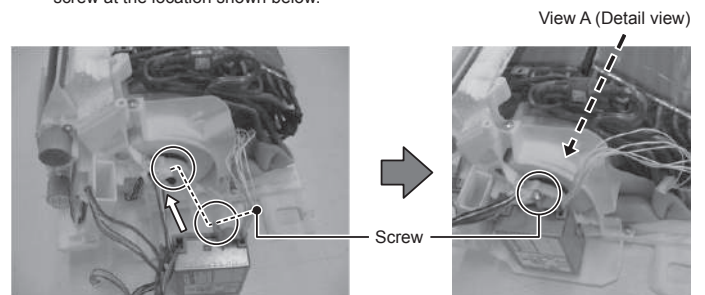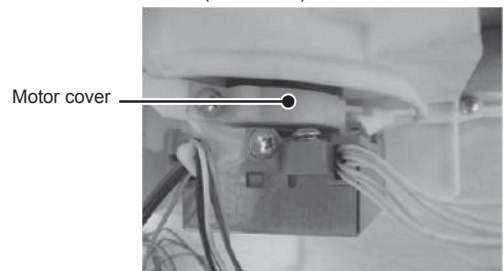
(2) Use the hole on the motor cover and secure the wire from the communication box with the provided cable tie.   (See the figure below)

Cut away the tip of the cable tie.

Hole

Cable tie
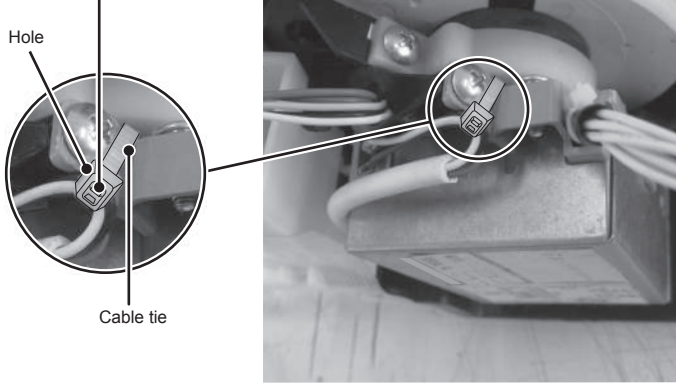
13.3.4. Installing control box

(1) Set the control box toward the bottom so that it touches the motor cover from the right.

Insert the protruding part of the main unit on the fixture (1 location) into the control box.
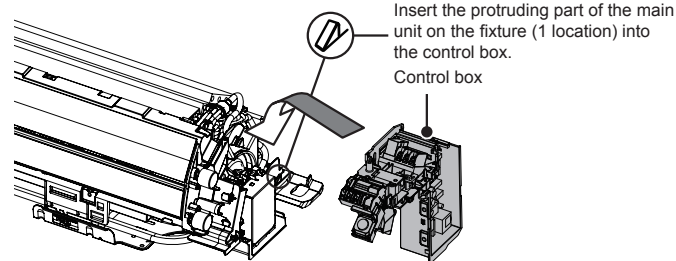
Control box

- • The installation method of the control box is different for each destination country. (See figure below)
  (When installing, reuse the screw that was removed in **13.3.2. Removing control box**.)

(2) Secure the control box with a screw. (Use a long screw.)
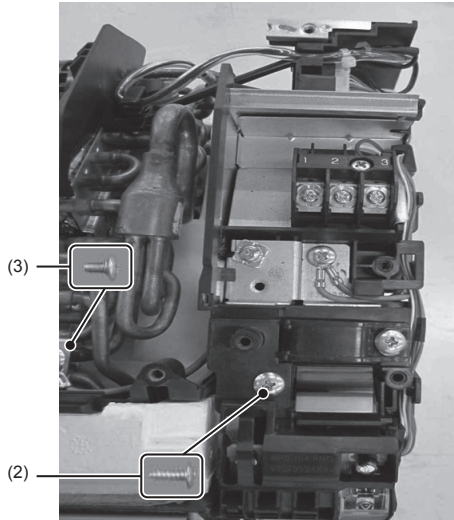
(3) Fasten the earth wires of the heat exchanger together as shown in the left figure above. (Use a short screw here.)

(4) Hitch the wires onto the fixtures as shown in the oval circles below. Then connect the connectors in the squares to the terminals respectively.
  (Each terminal should form a pair with a connector.)

⚠ **CAUTION**

- • Ensure that the connector is properly inserted.
  Otherwise, it may result in erroneous operation.
- • Be careful not to damage the parts on the board.
  Otherwise, it will cause malfunction.

Wired remote controller cable
External connect kit cable (sold separately)

Communication kit connector
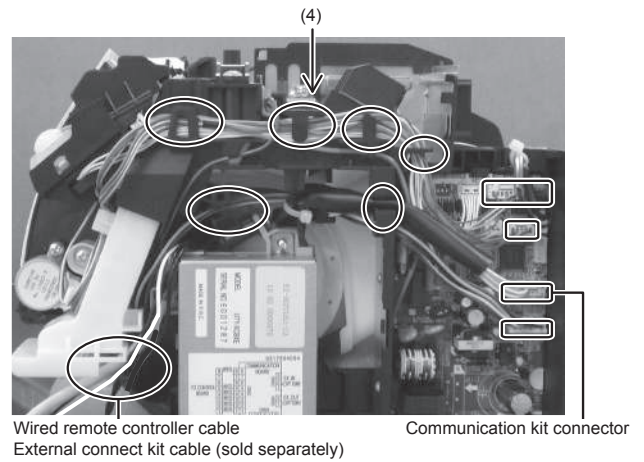
(5) Fasten the earth wire (green) in the communication box together with the earth wire (green) on the board of the control box as shown below and in the bottommost figure of the previous page.
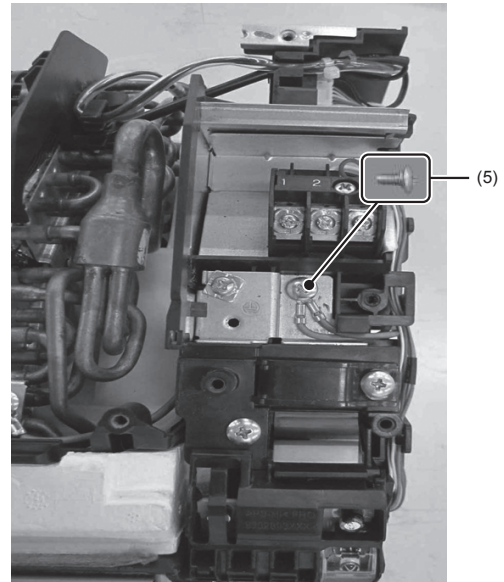
(6) Install the cover of the control box onto the inner side of the rib as shown below.

⚠ **CAUTION**

- • Do not cut or tuck the wires with the electrical component box cover.
  An electric shock may occur if the wires are damaged.

(7) Tighten with screws to prevent the cover of the control box from falling off.
  (When installing, reuse the screws that was removed in 13.3.2. Removing control box.)

(8) Paste protect seals (2 locations) to prevent the wires from sticking out.

(8)

13.3.5. Installing front panel
(See "9.2. Front panel installation")

14. SELECTING THE REMOTE CONTROLLER CUSTOM CODE

When two or more air conditioners are installed in a room and the remote controller is operating an air conditioner other than the one you wish to set, change the custom code of the remote controller to operate only the air conditioner you wish to set (4 selections possible).
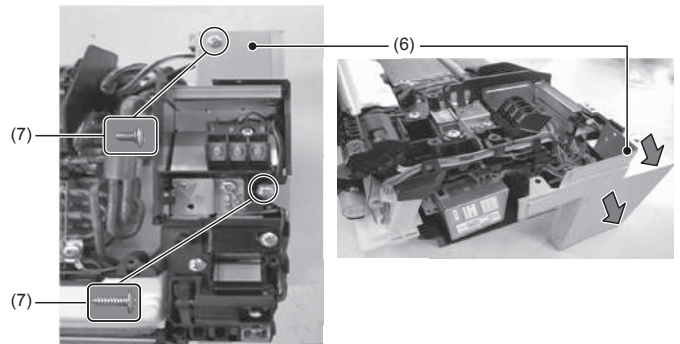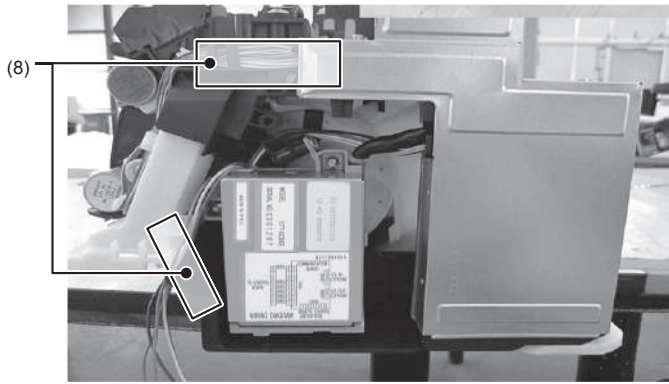When two or more air conditioners are installed in a room, please contact your retailer to set the individual air conditioner custom codes.

Selecting the Remote Controller Custom Code

Use the following steps to select the custom code of the remote controller. (Note that the air conditioner cannot receive a custom code if the air conditioner has not been set for the custom code.)

(1) Press the START/STOP (⏻/❘) button until only the clock is displayed on the remote controller display.
(2) Press the MODE button for at least 5 seconds to display the current custom code (initially set to A).
(3) Press the TEMP. (∧ / ∨) buttons to change the custom code between A↔b↔c↔d.
   Match the code on the display to the air conditioner custom code.
(4) Press the MODE button again to return to the clock display. The custom code will be changed.
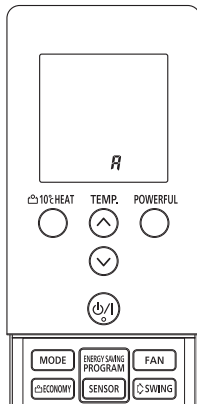
• If no buttons are pressed within 30 seconds after the custom code is displayed, the system returns to the original clock display. In this case, start again from step (1).
• The air conditioner custom code is set to A prior to shipment.

15.FUNCTION SETTING

Perform the "FUNCTION SETTING" according to the installation conditions using the remote controller.

> ⚠ CAUTION
>
> • Confirm whether the wiring work for outdoor unit has been finished.
> • Confirm that the cover for the electrical enclosure on the outdoor unit is in place.

• This procedure changes to the function settings used to control the indoor unit according to the installation conditions. Incorrect settings can cause the indoor unit to malfunction.
• After the power is turned on, perform the "FUNCTION SETTING" according to the installation conditions using the remote controller.
• The settings may be selected between the following two: Function Number or Setting Value.
• Settings will not be changed if invalid numbers or setting values are selected.
• Refer to the installation manual enclosed with the remote control unit when the wired remote control unit (option) is used.

Entering the Function Setting Mode

While pressing the POWERFUL button and TEMP. (∧) button simultaneously, press the RESET button to enter the function setting mode.

Selecting the Function Number and Setting Value [Reverse cycle model]

(1) Press the TEMP. (∧ / ∨) buttons to select the function number. (Press the 10°C HEAT button to switch between the left and right digits.)
(2) Press the POWERFUL button to proceed to setting value. (Press the POWERFUL button again to return to the function number selection.)
(3) Press the TEMP. (∧ / ∨) buttons to select the setting value. (Press the 10°C HEAT button to switch between the left and right digits.)
(4) Press the MODE button once to send the function setting information. Please confirm the beeping sound.
(5) Next, please press START/STOP (⏻/❘) button once to fix the function setting. Please confirm the beeping sound.
(6) Press the RESET button to cancel the function setting mode.
(7) After completing the FUNCTION SETTING, be sure to turn off the power and turn it on again.

Function Number
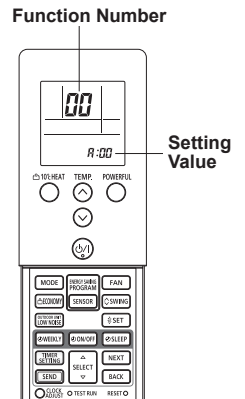
Setting Value

Selecting the Function Number and Setting Value [Cool model]

(1) Press the TEMP. (∧ / ∨) buttons to select the function number. (Press the ECONOMY button to switch between the left and right digits.)
(2) Press the POWERFUL button to proceed to setting value. (Press the POWERFUL button again to return to the function number selection.)
(3) Press the TEMP. (∧ / ∨) buttons to select the setting value. (Press the ECONOMY button to switch between the left and right digits.)
(4) Press the MODE button once to send the function setting information. Please confirm the beeping sound.
(5) Next, please press START/STOP (⏻/❘) button once to fix the function setting. Please confirm the beeping sound.
(6) Press the RESET button to cancel the function setting mode.
(7) After completing the FUNCTION SETTING, be sure to turn off the power and turn it on again.

Function Number

Setting Value
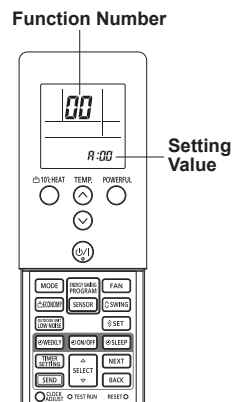
> ⚠ CAUTION
>
> After turning off the power, wait 30 seconds or more before turning on it again. The function setting does not become active unless the power is turned off then on again.

15.1. Function details

Filter Sign
Select appropriate intervals for displaying the filter sign on the indoor unit according to the estimated amount of dust in the air of the room.
If the indication is not required, select "No indication" (03).

(♦... Factory setting)

Function Number	Setting Value	Setting Description	
11	00	Standard (400 hours)	
	01	Long interval (1000 hours)	
	02	Short interval (200 hours)	
	03	No indication	♦

Auto Restart
Enable or disable automatic restart after a power interruption.

(♦... Factory setting)

Function Number	Setting Value	Setting Description	
40	00	Enable	♦
	01	Disable	

* Auto restart is an emergency function such as for power outage etc. Do not attempt to use this function in normal operation. Be sure to operate the unit by remote controller or external device.

Room temperature sensor switching

(Only for Wired remote controller)

When using the Wired remote controller temperature sensor, change the setting to "Both" (01).

(♦... Factory setting)

Function Number	Setting Value	Setting Description	
42	00	Indoor unit	♦
	01	Both	

00: Sensor on the indoor unit is active.
01: Sensors on both indoor unit and wired remote controller are active.
* Remote controller sensor must be turned on by using the remote controller.

Remote controller custom code

(Only for wireless remote controller)

The indoor unit custom code can be changed.

Select the appropriate custom code.

(♦... Factory setting)

Function Number	Setting Value	Setting Description	
44	00	A	♦
	01	B	
	02	C	
	03	D	

External input control

"Operation/Stop" mode or "Forced stop" mode can be selected.

(♦... Factory setting)

Function Number	Setting Value	Setting Description	
46	00	Operation/Stop mode 1	♦
	01	(Setting prohibited)	
	02	Forced stop mode	
	03	Operation/Stop mode 2	

Room temperature sensor switching (Aux.)

To use the temperature sensor on the wired remote controller only, change the setting to "Wired remote controller" (01). This function will only work if the function setting 42 is set at "Both" (01)

When the setting value is set to "Both" (00), more suitable control of the room temperature by setting function setting 30 and 31 too.

(♦... Factory setting)

Function Number	Setting Value	Setting Description	
48	00	Both	♦
	01	Wired remote controller	

Indoor unit fan control for energy saving for cooling

Enables or disables the power-saving function by controlling the indoor unit fan rotation when the outdoor unit is stopped during cooling operation.

(♦... Factory setting)

Function Number	Setting Value	Setting description	
49	00	Disable	
	01	Enable	
	02	Remote controller	♦

00: When the outdoor unit is stopped, the indoor unit fan operates continuously following the setting on the remote controller.
01: When the outdoor unit is stopped, the indoor unit fan operates intermittently at a very low speed.
02: Enable or disable this function by remote controller setting.

*When using a wired remote controller without Indoor unit fan control for energy saving for cooling function, or when connecting a single split converter, the setting cannot be made by using the remote controller. Set to "00" or "01".

To confirm if the remote controller has this function, refer to the operating manual of each remote controller.

Setting record

Record any changes to the settings in the following table.

Setting Description	Setting Value
Filter sign	
Auto restart	
Room temperature sensor switching	
Remote controller custom code	
External input control	
Room temperature sensor switching (Aux.)	
Indoor unit fan control for energy saving for cooling	

After completing the FUNCTION SETTING, be sure to turn off the power and turn it on again.

15.2. Temperature correction

NOTE:

When changing Function 95, perform this setting before other Room temp. control settings (Function 30, 31, 35, 36).

If Function 95 is not set first, Room temperature control settings (Function 30, 31, 35, 36) will be reset and you must re-do them again.

Heat Insulation condition (building insulation)

Heat insulation conditions differ according to the installed environment.

"Standard insulation" (00) allows system to rapidly respond to the cooling or heating load changes.

"High insulation" (01) is when the heat insulation structure of the building is high and does not require system to rapidly respond to cooling or heating load changes.

When "High insulation" (01) is selected;

• Overheating (overcooling) is prevented at the start-up.

• All room temp. control settings (Function 30, 31, 35, 36) will reset to "No correction" (0.0°C).

(♦... Factory setting)

Function Number	Setting Value	Setting Description	
95	00	Standard insulation	♦
	01	High insulation	

Room temperature control for indoor unit sensor

Depending on the installed environment, correction of the room temperature sensor may be required.

Select the appropriate control setting according to the installed environment.

The temperature correction values show the difference from the "Standard setting" (00) (manufacturer's recommended value).

* When Function 95-01(High insulation) is set, the "Standard setting" (00) will be the same as "No correction (01) (0.0°C).

(♦... Factory setting)

Function Number		Setting Value	Setting Description	
30 (For cooling)	31 (For heating)	00	Standard setting*	♦
		01	No correction 0.0°C	
		02	-0.5°C	More Cooling Less Heating
		03	-1.0°C	
		04	-1.5°C	
		05	-2.0°C	
		06	-2.5°C	
		07	-3.0°C	
		08	-3.5°C	
		09	-4.0°C	
		10	+0.5°C	Less Cooling More Heating
		11	+1.0°C	
		12	+1.5°C	
		13	+2.0°C	
		14	+2.5°C	
		15	+3.0°C	
		16	+3.5°C	
		17	+4.0°C	

Room temperature control for wired remote controller sensor

Depending on the installed environment, correction of the wire remote temperature sensor may be required.

Select the appropriate control setting according to the installed environment.

To change this setting, set Function 42 to Both "01".

Ensure that the Thermo Sensor icon is displayed on the remote controller screen.

(♦... Factory setting)

Function number		Setting value	Setting description	
35 (For cooling)	36 (For heating)	00	No correction 0.0°C	♦
		01	No correction 0.0°C	
		02	-0.5°C	More Cooling Less Heating
		03	-1.0°C	
		04	-1.5°C	
		05	-2.0°C	
		06	-2.5°C	
		07	-3.0°C	
		08	-3.5°C	
		09	-4.0°C	
		10	+0.5°C	Less Cooling More Heating
		11	+1.0°C	
		12	+1.5°C	
		13	+2.0°C	
		14	+2.5°C	
		15	+3.0°C	
		16	+3.5°C	
		17	+4.0°C	

Setting record

- Record any changes to the settings in the following table.

Setting	Setting Value	
Heat Insulation condition (building insulation)		
Room temperature control for indoor unit sensor	Cooling	
	Heating	
Room temperature control for wired remote controller sensor	Cooling	
	Heating	

After completing the Function Setting, be sure to turn off the power and turn it on again.

16.CUSTOMER GUIDANCE

Explain the following to the customer in accordance with the operating manual:
(1) Starting and stopping method, operation switching, temperature adjustment, timer, air flow switching, and other remote control unit operations.
(2) Air filter removal and cleaning, and how to use the air louvers.
(3) Give the operating manual to the customer.

17.ERROR CODES

If you use a wireless remote controller, the lamp on the photo detector unit will output error codes by way of blinking patterns. If you use a wired remote controller, error codes will appear on the remote control display. See the lamp blinking patterns and error codes in the table. An error display is displayed only during operation.

Error display			Wired remote controller Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(1)	●(1)	◇	11	Serial communication error
●(1)	●(2)	◇	12	Wired remote controller communication error
●(1)	●(5)	◇	15	Check run unfinished
●(1)	●(6)	◇	16	Peripheral unit transmission PCB connection error
●(1)	●(8)	◇	18	External communication error
●(2)	●(1)	◇	21	Unit number or Refrigerant circuit address setting error [Simultaneous Multi]
●(2)	●(2)	◇	22	Indoor unit capacity error

Error display			Wired remote controller Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(2)	●(3)	◇	23	Combination error
●(2)	●(4)	◇	24	• Connection unit number error (indoor secondary unit) [Simultaneous Multi] • Connection unit number error (indoor unit or branch unit) [Flexible Multi]
●(2)	●(6)	◇	26	Indoor unit address setting error
●(2)	●(7)	◇	27	Primary unit, secondary unit setup error [Simultaneous Multi]
●(2)	●(9)	◇	29	Connection unit number error in wired remote controller system
●(3)	●(1)	◇	31	Power supply interruption error
●(3)	●(2)	◇	32	Indoor unit PCB model information error
●(3)	●(5)	◇	35	Manual auto switch error
●(3)	●(10)	◇	3A	Indoor unit communication circuit (wired remote controller) error
●(4)	●(1)	◇	41	Room temp. sensor error
●(4)	●(2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
●(4)	●(4)	◇	44	Human sensor error
●(5)	●(1)	◇	51	Indoor unit fan motor error
●(5)	●(3)	◇	53	Drain pump error
●(5)	●(7)	◇	57	Damper error
●(5)	●(8)	◇	58	Intake grille error
●(5)	●(15)	◇	5U	Indoor unit error
●(6)	●(1)	◇	61	Outdoor unit reverse/missing phase and wiring error
●(6)	●(2)	◇	62	Outdoor unit main PCB model information error or communication error
●(6)	●(3)	◇	63	Inverter error
●(6)	●(4)	◇	64	Active filter error, PFC circuit error
●(6)	●(5)	◇	65	Trip terminal L error
●(6)	●(10)	◇	6A	Display PCB microcomputers communication error
●(7)	●(1)	◇	71	Discharge temp. sensor error
●(7)	●(2)	◇	72	Compressor temp. sensor error
●(7)	●(3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
●(7)	●(4)	◇	74	Outdoor temp. sensor error
●(7)	●(5)	◇	75	Suction Gas temp. sensor error
●(7)	●(6)	◇	76	• 2-way valve temp. sensor error • 3-way valve temp. sensor error
●(7)	●(7)	◇	77	Heat sink temp. sensor error
●(8)	●(2)	◇	82	• Sub-cool Heat Ex. gas inlet temp. sensor error • Sub-cool Heat Ex. gas outlet temp. sensor error
●(8)	●(3)	◇	83	Liquid pipe temp. sensor error
●(8)	●(4)	◇	84	Current sensor error

Error display			Wired remote controller Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(8)	●(6)	◇	86	• Discharge pressure sensor error • Suction pressure sensor error • High pressure switch error
●(9)	●(4)	◇	94	Trip detection
●(9)	●(5)	◇	95	Compressor rotor position detection error (permanent stop)
●(9)	●(7)	◇	97	Outdoor unit fan motor 1 error
●(9)	●(8)	◇	98	Outdoor unit fan motor 2 error
●(9)	●(9)	◇	99	4-way valve error
●(9)	●(10)	◇	9A	Coil (expansion valve) error
●(10)	●(1)	◇	A1	Discharge temp. error
●(10)	●(3)	◇	A3	Compressor temp. error
●(10)	●(4)	◇	A4	High pressure error
●(10)	●(5)	◇	A5	Low pressure error
●(13)	●(2)	◇	J2	Branch boxes error [Flexible Multi]

Display mode ● : 0.5s ON / 0.5s OFF
◇ : 0.1s ON / 0.1s OFF
( ) : Number of flashing

[Troubleshooting with the indoor unit display]

OPERATION indicator (green)
TIMER indicator (orange)
ECONOMY indicator (green)

[Troubleshooting with the Wired Remote Controller Display (Option)]
If an error occurs, the following display will be shown. ("Er" will appear in the set room temperature display.)

SU MO TU WE TH FR SA
00:11   Er

Error code