

Installation & User Manual



PIN09H1V51 PIN09H2V51 PIN12H1V51 PIN12H2V51 PIN18H2V51 PIN24H2V51







- The information contained in the manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments
- Installation or repairs made by unqualified persons can resu t in hazards to you and others.
- Failure to carefully read and follow all instructions in thi manual can result in equipment malfunction, property damage, personal injury and/or death.
- This service is only for service engineer to use

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To prevent personal injury, or property or unit damage, adhere to all precautionary measures and instructions outlined in this manual. Before servicing a unit, refer to this service manual and its relevant sections.

Failure to adhere to all precautionary measures listed in this section may result in personal injury, damage to the unit or to property, or in extreme cases, death.



WARNING indicates a potentially hazardous situation which if not avoided could result in serious personal injury, or death.



CAUTION indicates a potentially hazardous situation which if not avoided could result in minor or moderate personal injury, or unit damage.

1. In case of Accidents or Emergency

! WARNING

- If a gas leak is suspected, immediately turn off the gas and ventilate the area if a gas leak is suspected before turning the unit on.
- If strange sounds or smoke is detected from the unit, turn the breaker off and disconnect the power supply cable.
- If the unit comes into contact with liquid, contact an authorized service center.
- If liquid from the batteries makes contact with skin or clothing, immediately rinse or wash the area well with clean water.
- Do not insert hands or other objects into the air inlet or outlet while the unit is plugged in.
- Do not operate the unit with wet hands.
- Do not use a remote controller that has previously been exposed to battery damage or battery leakage.

A CAUTION

- Clean and ventilate the unit at regular intervals when operating it near a stove or near similar devices.
- Do not use the unit during severe weather conditions. If possible, remove the product from the window before such occurrences

2. Pre-Installation and Installation

(I) WARNING

- Use this unit only on a dedicated circuit.
- Damage to the installation area could cause the unit to fall potentially resulting in personal injury, prop-erty damage, or product failure.
- Only qualified personnel should disassemble, install, remove, or repair the unit.
- Only a qualified electrician should perform electricalwork. For more information, contact your dealer, seller, or an authorized Innovair service center.

🛕 CAUTI

While unpacking be careful of sharp edges around the unit as well
as the edges of the fins on the condenser and evaporator.

3. Operation and Maintenance

(!) v

WARNING

- Do not use defective or under-rated circuit breakers
- Ensure the unit is properly grounded and that a dedicated circuit and breaker are installed.
- Do not modify or extend the power cable. Ensure the power cable is secure and not damaged during operation.
- Do not unplug the power supply plug during operation.
- Do not store or use flammable materials near the unit.
- Do not open the inlet grill of the unit during operation.
- Do not touch the electrostatic filter if the unit is equipped with one
- Do not block the inlet or outlet of air flow to the unit.
- Do not use harsh detergents, solvents, or similar items o clean the unit. Use a soft cloth for cleaning.
- Do not touch the metal parts of the unit when
- Do not step on or place anything on the unit or outdoor
 units
- Do not drink water drained from the unit
- Avoid direct skin contact with water drained from the unit.
- Use a firm stool or step ladder according to manufacturer procedures when cleaning or maintaining the unit.

⚠ CAUT

- Do not install or operate the unit for an extended period of time in areas of high humidity or in an environment directly exposing it to sea wind or salt spray.
- Do not install the unit on a defective or damaged installation stand, or in an unsecure location.
- Ensure the unit is installed at a level position
- Do not install the unit where noise or air discharge created by the outdoor unit will negatively impact the environment or nearby residences.
- Do not expose skin directly to the air discharged by the unit for prolonged periods of time.
- Ensure the unit operates in areas water or other liquids.
- Ensure the drain hose is installed correctly to ensure proper water drainage.
- When lifting or transporting the unit, it is recommended that two or more people are used for this task.
- When the unit is not to be used for an extended time, disconnect the power supply or turn off the breaker.



Safety Precaution

Symbols in this Use and Care Manual are interpreted as shown below.

Be sure not to do.

Grounding is essential.

^oPay attention to such a situation.

Warning: Incorrect handling could cause a serious hazard,



Use correct power supply in accordance with the rating plate requirement. Otherwise, serious faults or hazard may occur or a fire maybe break out.



Keep the power supply circuit breaker or plug from dirt. Connect the power supply cord to it firmly and correctly, lest an electric shock or a fire break out due to insufficient contact.





Do not use the power supply circuit breaker or pull off the plug to turn it off during operation. This may cause a fire due to spark, etc.



Do not knit, pull or press the power supply cord, lest the power supply cord be broken. An electric shock or fire is probably caused by a broken power supply cord.



Never insert a stick or similar obstacle to the unit. Since the fan rotates at high speed, this may cause an injury.



It is harmful to your health if the cool air reaches you for a long time. It is advisable to let the air flow be deflected to all the room

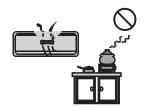


malfunction occurs.

 $\overline{\mathbb{V}}$



Do not repair the appliance by yourself. If this is done incorrectly, it may cause an electric shock, etc.



Prevent the air flow from reaching the gas burners and stove.



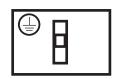
Turn off the appliance by remote control

firstly before cutting off power supply if

Do not touch the operation buttons when your hands are wet.



Do not put any objects on the outdoor unit.





It is the user's responsibility to make the appliance be grounded according to local codes or ordinances by a licenced technician.



Safety Instructions

- To guarantee the unit work normally, please read the manual carefully before installation, and try to install strictly according to this manual.
- Do not let air enter the refrigeration system or discharge refrigerant when moving the air conditioner.
- Properly ground the air conditioner into the earth.
- •Check the connecting cables and pipes carefully, make sure they are correct and firm before connecting the power of the air conditioner.
- There must be an air-break switch.
- After installing, the consumer must operate the air conditioner correctly according to this
 manual,keep a suitable storage for maintenance and moving of the air conditioner in the future.

• The Fuse of the unit:

Model	Fuse of Indoor unit	Fuse ot outdoor unit
9K(115V)	T 3.15A 250V	T 20A 250V
12K(115V)	T 3.15A 250V	T 20A 250V
9K-12K(208/230V)	T 3.15A 250V	T 15A 250V
18K(208/230V)	T 3.15A 250V	T 20A 250V
24K(208/230V)	T 3.15A 250V	T 30A 250V

- A residual current device(RCD)with the rating of above 10mA shall be incorporated in the fixed wiring according to the national rule
- Warning: Risk of electric shock can cause injury or death: Disconnect all remote electric power supplies before servicing.
- The best length of the connecting pipe between the indoor unit and outdoor unit is less than 7.5 meters(24.6ft). It will affect the efficiency of the air conditioner if the distance longer than that length.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- The batteries in remote controller must be recycled or disposed of properly. Disposal of Scrap Batteries --- Please discard the batteries as sorted municipal waste at the accessible collection point.
- If the appliance is fixed wiring, the appliance must be fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III conditions, and these means must be incorporated in the fixed wiring in accordance with the wiring rules.
- 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.
- The appliance shall be installed in accordance with local electrical safety regulations and National Electrical Codes(NEC).
- The air conditioner must be installed by professional or qualified persons.
- The appliance shall not be installed in the laundry.



Preparation before use

Note

- ✓ When charging refrigerant into the system, make sure to charge in liquid state, if the refrigerant of the appliance is R410A. Otherwise, chemical composition of refrigerant (R410A) inside the system may change and thus affect performance of the air conditioner.
 - According to the character of refrigerant (R410A,the value of GWP is 2088), the pressure of the tube is very high, so be sure to be careful when you install and repair the appliance.
- 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.
- ✓ The air conditioner must be installed by a professional engineer.
- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

Preset

Before using the air conditioner, be sure to check and preset the following.

• Remote Control presetting

Each tim e after the remote control is replaced with new batteries or is energized, re mote control auto presetting heat pump.If the air conditioner you purchased is a Cooling Only one, heat pump remote controller can also be used.

Back -light function of Remote Control(optional)

Hold down any button on remote control to activate the back light. It automatically shuts off 10 seconds later.

Note: Back -light is an optional function.

Auto Restart Presetting

The air conditioner has an Auto-Restart function.

Safeguarding the environment

This appliance is made of recyclable or re-usable material. Scrapping must be carried out in compliance with local waste disposal regulations. Before scrapping it, make sure to cut off the mains cord so that the appliance cannot be re-used.

For more detailed information on handling and recycling this product, contact your local authorities who deal with the separate collection of rubbish or the shop where you bought the appliance.

SCRAPPING OF APPLIANCE

This markin gindicate sthat this product should not be dispose dwith other household wastes throughout he North America. To prevent possible harm to the environment or humanhealth from uncontrolled wasted isposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collectionsystems or contact the retailer where the product was purchased.



The y can take this product for environmenta Is afer ecycling.



Maintenance Instructions

Periodic Maintenance Is Essential for The System!

Maintaining the air conditioner will ensure that is stays efficient. Before carrying out any sort of maintenance, always ensure that the power supply to the system is turned off.

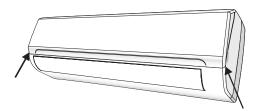
Indoor Unit

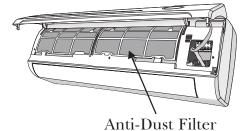
Anti-Dust Filters (Clean once every 2 weeks)

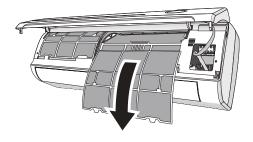
- 1. Open the front panel by pulling outward and upward at the indicated location.
- 2. Keep the front panel raised with one hand and take out the air filters with the other.
- 3. The filters are washable and should be cleaned with warm water (under 113).
- 4. Leave the filters to dry in a cool, dry place.
- 5. Keeping the front panel raised with one hand, insert the air filters with the other.
- 6. Close the front panel.

Any electrostatic or deodorizing filters, if installed, are not washable and should be replaced once every 6 months.

Interior of the Indoor Air Handler







In addition to the filters, the interior of the indoor unit itself as well as the inner coil should be inspected every season. The front panel can be disconnected and removed from the top hinge where the pegs connect. This will allow for easier inspection of the interior and behind the air filters. The interior should be cleaned with damp cloth and neutral soaps. Do not use any sort of aggressive solvents or detergents. Only a soft cloth that is lightly damp should be used.

♦ BEFORE CLEANING OR MAINTENANCE

ALWAYS TURN OFF YOUR AIR CONDITIONER SYSTEM AND DISCONNECT ITS POWER SUPPLY BEFORE PERFORMNG CLEANING OR MAINTENANCE. DO NOT SPRAY WATER DIRECTLY NEAR THE INDOOR UNIT, AS IT CAN DAMAGE INSULATION AND ELECTRICAL COMPONENTS.



Front panel maintenance

1

Cut off the power supply

Turn off the appliance first before disconnecting from power supply.

2

Grasp position "a" and pull outward to remove the front panel.



3

Wipe with a soft and dry cloth.

Use soft moisture cloth to clean if the front panel is very dirty;



4

Never use volatile substance such as gasoline or polishing powder to clean the appliance.



5

Never sprinkle water onto the indoor unit



6

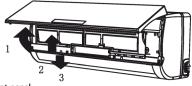
Reinstall and shut the front panel.

Reinstall and shut the front panel by pressing position "b" downward.

• Air filter maintenance

1

Stop the appliance, cut off the power supply and remove the air filter.



- 1. Open the front panel.
- 2. Press the handle of the filter gently
- 3. Grasp the handle and slide out the filter.

2

Clean and reinstall the air filter.

If the dirt is conspicuous, wash it with a solution of detergent in lukewarm water. After cleaning, dry well in shade.



3

Close the front panel again.

Il Clean the air filter every two weeks If the air conditioner operates In an extremely dusty environment. It is necessary to clean the air filter after using it for about 100 hours.



Model Reference

Indoor Unit Model	Outdoor Unit Model	Capacity (Btu/h)	Power Supply
PIN09H1V51(I)	PIN09H1V51(O)	9k	115V~, 60Hz,
PIN12H1V51(I)	2H1V51(I) PIN12H1V51(O)		1Phase
PIN09H2V51(I)	PIN12H2V51(O)	9k	
PIN12H2V51(I)	N12H2V51(I) PIN12H2V51(O)		208/230V~, 60Hz,
PIN18H2V51(I) XIN18H2V51(O)		18k	1Phase
PIN24H2V51(I)	PIN24H2V51(O)	24k	

Nomenclature

 $\frac{P}{1}$ $\frac{IN}{2}$ $\frac{12}{3}$ $\frac{H}{4}$ $\frac{2}{5}$ $\frac{V}{6}$ $\frac{5}{7}$ $\frac{1}{8}$ $\frac{(I)}{9}$

1—Brand

 $P = P\ddot{U}RE$

2— System Performance

IN = Inverter Type E = Fixed Speed

3— Nominal Capacity

09 = 9,000 BTU/H 12 = 12,000 BTU/H 18 = 18,000 BTU/H

24 = 24,000 BTU/H

4—System Type

C = Cool Only H = Heat Pump

5—Voltage

1 = 115V/60Hz 2 = 208~230V/60Hz

4 = 220V/50Hz

6—Compressor Type

R = Fixed Rotary Speed V = Variable Rotary Speed 7—Installation Kit Length

0 = No Kit

3 = 3M (10FT)

5 = 5M (16FT)

8—Version

1 = 1st Version

9—Unit Identification

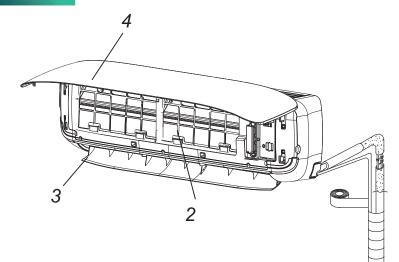
I = Indoor Unit

O = Outdoor Unit

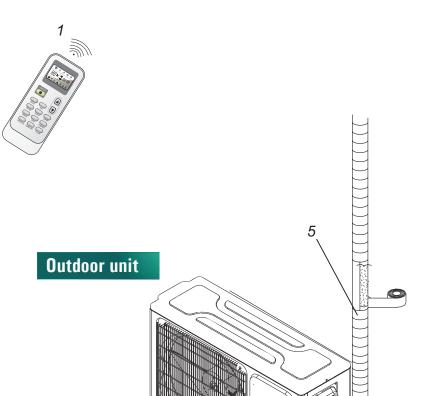


System Diagram

Indoor unit



Part Name



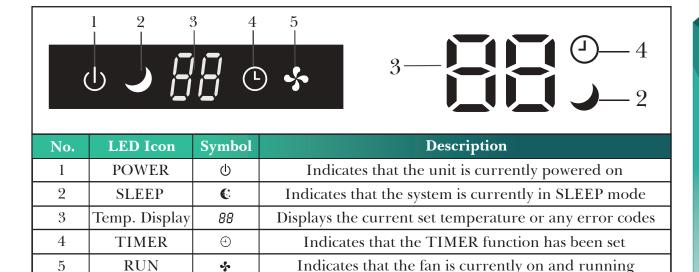
- 1. Remote Controller
- 2. Air Filter
- 3. Horizontal Louvers
- 4. Front Panel
- 5. Pipes and Power Connection Cord
- 6. Drain Hose

The figures in this manual are based on the external view of a standard model. Consequently, the shape may differ from that of the air conditioner you have selected.



Indoor Unit Overview

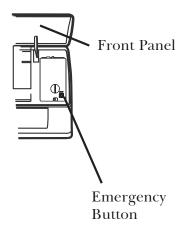
Front Panel Display



The shape and position of switches and indicators may vary according to the model, however the functions remain the same. There may be variances between the amount of digits that are shown on the remote (3) vs. the amount on the indoor unit (2).

Emergency Manual Button And Auto-Restart Function

The emergency button is located at the terminal block cover of the unit under the front panel.



Emergency Manual Button

If the remote controller fails to operate the system, proceed as follows:

- Open and lift the front panel up at an angle to gain access to the emergency button.
- Press the manual button once to start the unit in COOL mode.
- \bullet Press the button again within 3 seconds to start the unit in HEAT mode.
- Press a 3rd time within 5 seconds to turn off the unit.

Auto-Restart Feature

This appliance is programmed with an auto-restart function.

In case of sudden power failure, the control module will remember the settings configured before power loss.

When power is restored, the unit will restart automatically, and will be set to the previous settings, which were preserved with this memory function.



Remote Buttons Overview

Button	Description		
(0)	Turns the air conditioner on or off		
ightharpoonup	Decreases set temperature, set timing, or navigates the functional menu		
	Increases set temperature, set timing, or navigates the functional menu		
MODE	Selects the mode of operation (Auto, Cool, Dry, Fan, and Heat modes)		
ECO	Activates/deactivates the ECO feature		
TURBO	Activates/deactivates the TURBO feature, which allows the system to reach set temperatures quicker		
FAN	Configures the fan speed (Auto, Low, Mid, and High)		
TIMER	Configures the automatic on/off times		
SLEEP	Toggles the system's Sleep Mode		
DISPLAY	Turns the LED display on or off		
SWING	Activates the swinging of the louver		
MUTE	Puts the system into silent mode		
I FEEL	Activates the system's Follow Me mode		
АН	Controls the 46°F "Away from Home" freeze protection.		



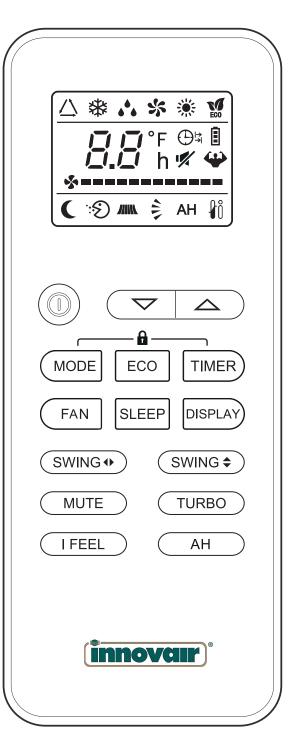
The display and some features of the remote control may vary according to the model of the system.



The shape and positions of the buttons and indicators may vary according to the model of the system, but the features and functionality would remain the same.

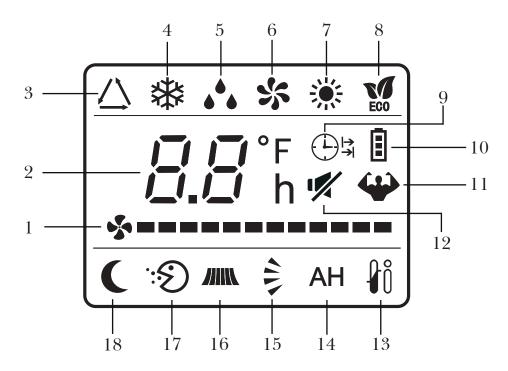


The unit will confirm the successful reception of each button command with a beep.





Remote Controller LED Screen and Icons



No.	Icon	Description
1	%===	Fan Speed
2	8.8° F	Temperature
3	\triangle	Auto Mode
4	*	Cooling Mode
5	**	Dry Mode
6	*	Fan Only Mode
7	*	Heating Mode
8	EGO	ECO Mode
9	⊕ Et	Timer

No.	Icon	Description
10		Battery
11	4	Turbo Mode
12	"	Mute Function
13	₽ů	I Feel/Follow Me Mode
14	AH	46°F Freeze Protection
15	41. ≪	Up-Down Auto Swing
16	////////////////////////////////////	Left-Right Auto Swing
17	\$	Health Function
18		Sleep Function

NOTE ON ILLUSTRATIONS

The illustrations in this manual are strictly for explanatory purposes. The actual display and some functions of the remote controller may vary according to the model purchased.

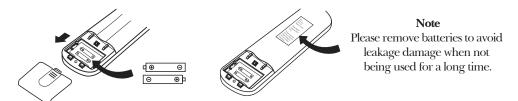


Replacement of Batteries

Remove the battery cover from the rear of the remote controller, by sliding it downward in the direction of the arrow as depicted below. Install batteries according to the depicted directions (+ and -) as shown on the remote controller. The cover then slides back into place.



Use 2x AAA batteries. Do not use re-chargeable batteries. Replace old batteries with new ones of the same type when the display is no longer legible. Do not dispose of batteries as unsorted municipal waste. Disposal of such waste separately for special treatment is necessary. If the system will not be used for a long time, remove batteries to prevent leakage.



Configuring Remote Controller Settings (some models)

Depending on the system, the control type (Cooling Only or Heat Pump) must be set after a battery swap is done. As soon as the batteries are inserted, the symbols * and * will begin flashing. Operate as below:

- When the symbol 🅸 is displayed, push any button to set the control type to Cooling Only.
- When the symbol ***** is displayed, push any button to set the control type to Heat Pump.



Note: If the remote control is used to set the control type to Cooling Only, the heating function cannot be activated in systems with a heat pump. To modify or reset this setting, first remove the batteries and then reinstall and repeat.

The temperature display can be set to show degrees in either °C or °F by doing the following:

- 1. Press and hold the TURBO button for 5+ seconds to activate the change prompt.
- 2. Repeat this process once more to switch between °C and °F options.
- 3. Release the button, and the setting will be active after 5 seconds have elapsed.

Operating the Remote Controller Successfully and Safely

- Ensure no objects come between the remote controller and signal receptor of indoor unit.
- Keep the remote at least 3 ft away from televisions and other electrical appliances.
- Always direct the remote controller toward the air conditioner.
- Don't leave the remote exposed to sunrays.

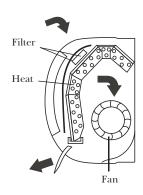




Regarding the Airflow of the Indoor Unit

The air that is pulled in by the fan (the "return air") enters the grille and is passed through the filter. It is then cooled/dehumidified/heated through the heat exchanger.

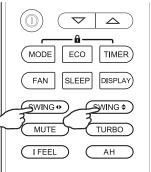
The direction of the air output is manipulated up and down by the motorized louver, and left to right via manually controlled vertical deflectors. Some models may come with "dual-swing" capability, which offers both a horizontal and vertical motorized air flow swing.



Controlling the System's Airflow

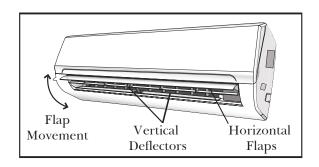
- 1. Pressing the SWING buttons activate the louver.
- Press the \$\DDF\ button to trigger the horizontal flaps to swing up and down. Press this button again to stop swing movement at the current angle.
- Press the button to trigger the vertical flaps to swing left and right. Press this button again to stop swing movement at the current angle.
- 2. If the vertical deflectors (which are located underneath the flaps) are adjusted manually, they can be used to fix the airflow in a certain vertical position before turning the system on.





! CAUTION

- Do not manipulate the louvers themselves manually, or serious damage may occur.
- Deflector adjustments should be made only when the system is switched off.
- Never poke fingers, sticks, or other objects into the air inlet/outlet vents.





COOLING Mode

Cooling mode allows the air conditioner to cool the room while also reducing the humidity of the air in the room.

To put the system into cooling mode, press the MoDE button until the ₩ symbol appears on the remote's display.

The ∇ and \triangle buttons can then be used to set a temperature lower than that of the room.

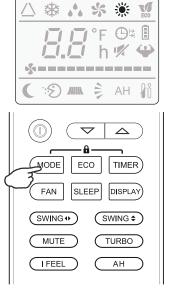
AH JÎ AH JÎ SWING O SWING O I FEEL AH

HEATING Mode

Heating mode allows the air conditioner to heat the room.

To put the system into heating mode, press the MODE button until the symbol appears on the remote's display.

The ∇ and \triangle buttons can then be used to set a temperature higher than that of the room.





NOTE

In heating mode, the appliance will periodically enter a defrost cycle, which is essential in order to clean frosting off the condenser and recover heat exchange capability. This process is normal and lasts for 2-10 minutes.

During defrosting, the indoor unit's fan will cease operation. After the cycle is completed, the system will resume its normal heat mode operation automatically.



DRY Mode

Dry mode is a limited function that can help reduce the humidity/moisture of the room.

To put the system into dry mode, press the MODE button until the symbol appears on the remote's display.

An automatic preset of this mode is then activated.

FAN-ONLY Mode

Fan-only mode is used to set the system to use only air ventilation and no heating or cooling.

To put the system into fan-only mode, press the MODE button until the symbol appears on the remote's display.

AUTO Mode

Auto mode will let the system determine the running configuration based on the set temperature and the current room temperature.

To put the system into AUTO mode, press the $\begin{tabular}{l} MODE \\ \hline MODE \\ \hline \end{bmatrix}$ button until the \triangle symbol appears on the remote's display.





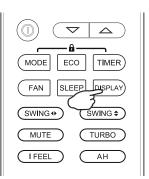




Turning the Display On or Off

The LED display on the front panel of the system can be turned on or off as desired.

To do so, press the putton in order to switch off the LED display on the front panel. This button can be pressed again to turn the LED display back on.



SLEEP Mode

Sleep mode is generally meant for periods of lower cooling requirements, such as during typical sleeping hours. This mode will result in decreased energy use, and can only be activated via remote control.

After 10 hours in sleep mode, the air conditioner will revert to the previously set mode.

To put the system into sleep mode, press the button, and the symbol will appear on the display. Press this button again to exit from this mode.

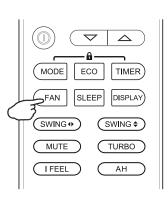




Changing the Fan Speed

The fan speed can be changed between AUTO, LOW, MID, and HIGH speeds.

To do so, press the FAN button. The running fan speed can then be set.





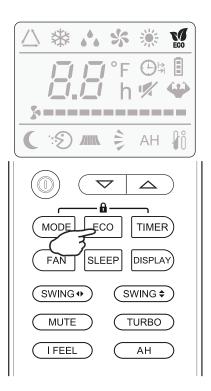
Energy Saver (ECO) Option

In this mode, the appliance will automatically manage the operation in order to save energy.

To turn the ECO feature on, press the button on the remote, and the icon will appear. The system is now running in ECO, and the process can be repeated to turn it off.

NOTE

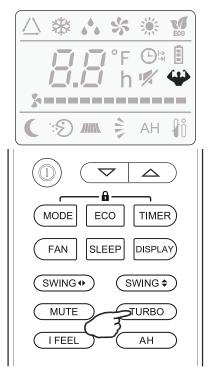
The ECO feature is available in both COOLING and HEATING modes.



TURBO Option

In this mode, the appliance will operate using the highest fan speed in order to maximize output and reach the set temperature the quickest.

To turn the TURBO feature on, press the button on the remote, and the icon will appear. The system is now running in TURBO, and the process can be repeated to turn it off.





Using the Timer - TIMER ON

The TIMER feature allows you to set a time delay for the system to turn itself on or off.

To set a time delay for the system to turn itself on in X number of hours:

- 1. Begin by pressing the while the system is powered off. The Θ symbol will then display. You can then set the needed modes.
- 2. Set the desired mode (COOL, HEAT, AUTO, FAN, DRY) by pressing the MODE button.
- 3. Set the desired fan speed with the FAN button.
- 5. Press the TMER button again to set the switch-on time. Use the

 → and

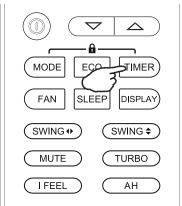
 buttons to set the needed time delay.
- 6. Press the TIMER button again to confirm. It can also be pressed once more to cancel the setting.

Using the Timer - TIMER OFF

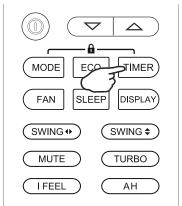
The TIMER OFF feature allows the appliance to turn itself off after X number of hours have passed. The symbol 🕒 will appear. To set a time delay for the system to turn itself off in X number of hours:

- 1. Confirm that the appliance is on and running.
- 2. Press the TIMER button to enter the prompt for switching off the system. Use the ▼ and △ buttons to configure the time delay setting.
- 3. Press the TIMER button again to confirm. It can also be pressed once more to cancel the setting.











46°F Freeze Protection Function

This feature is meant to be used to prevent freezing while the user is away from home. When turned on, it sets the system to keep a temperature of 46°F. If the unit is in standby, then the setting will automatically start the heating mode when the room temperature is equal to or lower than 46°F. It will set the system back to standby when the room temperature reaches 48°F.

If the room temperature is ever 64°F or higher, then the appliance will cancel or prevent this feature automatically.



When the system is muted, the remote controller will display AUTO fan speed, and the indoor unit will operate at its lowest fan speed in order to minimize operation noise.

Press the MUTE button in order to activate this mode. The icon will display to indicate that the system is muted.

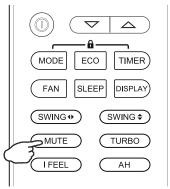
This mode can be cancelled by pressing either the FAN, TURBO, or SLEEP buttons.

Note: The MUTE feature cannot be activated when the system is in DRY mode.











I FEEL - To Ensure Comfort

The I FEEL feature enables the remote to act as the temperature sensor and relay the current air temperature of where the remote is physically placed within the room. In some cases, this can aid with reducing thermal drift between the set temperature and the actual room temperature.

In order to activate this feature, press the button, and the $\frac{1}{10}$ icon will appear on the display.

Note: The I FEEL feature will automatically de-activate itself 2 hours later.

SELF-CLEAN Feature

This feature helps carry away accumulated dust, dirt, bacteria, and other microbial contents away from the indoor evaporator.

To activate this feature, press the wind and winds buttons together until a beep is heard from the unit. This procedure will run for approximately 30 minutes, before returning to the preset mode.

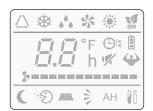
The ① button can be pressed to cancel this feature during the process. Two beeps will be emitted from the machine when it is finished or cancelled.

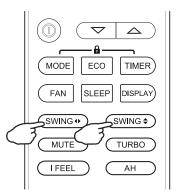
This procedure can result in some uncommon noise coming from the machine. This noise is normal as a side effect of the plastics expanding and contracting due to reactions with heat and cold.

It is recommended to use this function only when indoor temperature is under 86°F and outside temperature is between 41°F and 86°F.

It is suggested to run this feature once every 3 months.









Protection

Operating condition

The protective device maybe trip and stop the appliance in the cases listed below.

	Outdoor air temperature is over 86 (30)	
HEATING	Outdoor air temperature is below -13 (-25)	
	Room temperature is over 86°F(30°C)	
COOLING	Outdoor air temperature is over *127°F(53°C)	
COOLING	Room temperature is below 89°F(32°C)	
DRY Room temperature is below 89°F(32°C)		

*For Tropical (T3) Climate condition models, the temperature point is 131 (55) instead of 109 (43). The temperature of some products is allowed beyond the range. In specific situation, please consult the merchant. If the air conditioner runs in COOLING or DRY mode with door or window opened for a long time when relative humidity is above 80%, dew may drip down from the outlet.

Noise pollution

- Install the air conditioner at a place that can bear its weight in order to operate more quietly.
- Install the outdoor unit at a place where the air discharged and the operation noise would not annoy your neighbors.
- Do not place any obstacles in front of the air outlet of the outdoor unit lest it increases the noise level.

Features of protector

The protective device will work at following cases.

- Restarting the unit at once after operation stops or changing mode during operation, you need to wait 3 minutes.
- If all operation has stopped, press ON/OFFbutton again to restart, Timer should be set again if it has been canceled.

Features of HEATING mode

Preheat

At the beginning of the HEATING operation, the airflow from the indoor unit is discharged 2-5 minutes later.

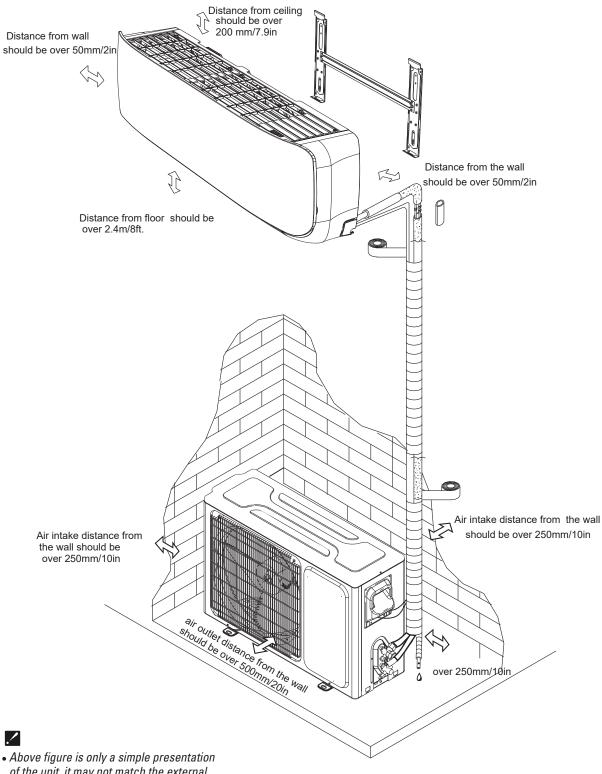
Defrost

In **HEATING** operation the appliance will defrost (de-ice) automatically to raise efficiency. This procedure usually lasts 2-10 minutes. During defrosting, fans stop operation. After defrosting completes, it returns to **HEATING** mode automatically.

Note: Heating is NOT available for cooling only air conditioner models.



Installation Diagram



- of the unit, it may not match the external appearance of the unit you purchased.
- Installation must be performed in accordance with the national wiring standards by authorized personnel only.



Location

Installation Site

Site for Installing Indoor Unit

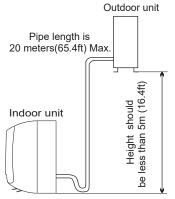
- Where there is no obstacle near the air outlet and air can be easily blown to every corner.
- Where piping and wall hole can be easily arranged.
- Keep the required space from the unit to the ceiling and wall according to the installation diagram on previous page.
- Where the air filter can be easily removed.
- Keep the unit and remote controller 1m(3.28ft) or more apart from television, radio etc.
- keep as far as possible from fluorescent lamps.
- Do not put anything near the air inlet to obstruct it from air absorption.
- Install on a wall that is strong enough to bear the weight of the unit.
- Install in a place that will not increase operation noise and vibration.
- Keep away from direct sunlight and heating sources. Do not place flammable materials or combustion apparatuses on top of the unit.

Height should sh

Indoor unit is higher than outdoor unit

Site for Installing Outdoor Unit

- Where it is convenient to install and well ventilated.
- Avoid installing it where flammable gas could leak.
- Keep the required distance apart from the wall.
- Keep the outdoor unit away from greasy dirt, vulcanization gas exit.
- Avoid installing it by the roadside where there is a risk of muddy water.
- A fixed base where it is not subject to increased operation noise.
- Where there is not any blockage of the air outlet.
- Avoid installing under direct sunlight, in an aisle or sideway, or near heat sources and ventilation fans. Keep away from flammable materials, thick oil fog, and wet or uneven places.



Outdoor unit is higher than indoor unit

In case the pipe length is more than 7.5m(24.6ft), the refrigerant should be charged additionally, according
to below table.

Model	Max. Allowable Tubing Length at Shipment (m /ft)	Limit of Tubing Length (m /ft)	Limit of Elevation Difference H (m /ft)	Required amount of additional refrigerant (g/m) (oz/ft)
9K-18K	5m (16.4ft)	15m (50Ft)	5m (16.4ft)	20g/ m (0.22oz/ ft)
24K	5m (16.4ft)	15m (50Ft)	5m (16.4ft)	30g/ m (0.32oz/ft)

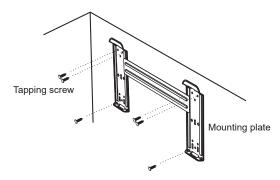
If the height or pipe length is out of the scope of the table, please consult the dealer.



Indoor Unit Installation

1. Installing the Mounting Plate

- Decide an installing location for the mounting plate according to the indoor unit location and piping direction.
- Keep the mounting plate horizontal with a horizontal ruler or dropping line.
- Drill holes of 32mm in depth on the wall for fixing the plate.
- Insert the plastic plugs to the hole, fix the mounting plate with tapping screws.
- Inspect if the mounting plate is well fixed. Then drill a hole for piping.



Note: The shape of your mounting plate may be different from the one above, but the installation method is similar. Note: As the above figure shown, the six holes matched with tapping screw on the mounting plate must be used to fix the mounting plate, the others are prepared.

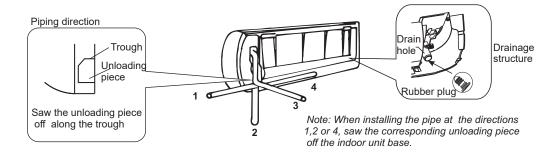
2. Drill a Hole for Piping

- Decide the position of the hole for piping according to the location of mounting plate.
- Drill a hole in the wall. The hole should tilt a little downward toward outside.
- Install a sleeve through the wall hole to keep the wall tidy and clean.

Wall hole sleeve (hard polythene tube prepared by user) 5mm 0.2in (tilt downward)

3. Indoor Unit Piping Installation

- Put the piping (liquid and gas pipe) and cables through the wall hole from outside or put them through from inside after indoor piping and cables connection is complete to connect to the outdoor unit.
- Decide whether to saw the unloading piece off in accordance with the piping direction.(as shown below)



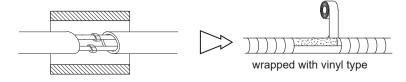
 After connecting the piping, install the drain hose. Then connect the power cords. After connecting, wrap the piping, cords and drain hose together with thermal insulation materials.



Indoor Unit Installation

Piping oints Thermal Insulation:

Wrap the piping joints with thermal insulation materials and then wrap with a vinyl tape.



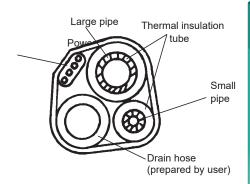
Piping Thermal Insulation:

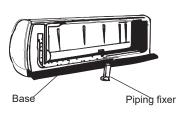
- a. Place the drain hose under the piping.
- b. Insulation material uses polythene foam over 6mm in thickness. *Note: Drain hose is prepared by user.*

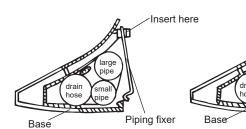
Do not arrange the drain pipe in a way that leaves it twisted, sticking out or waving around. Do not immerse the end of it in water.

If an extension drain hose is connected to the drain pipe, make sure to insulated when passing along the indoor unit.

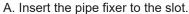
When the piping is directed to the right, piping, power Cord and drain pipe should be thermal insulated and fixed onto the back of the unit with a piping fixer.







Thermal insulation



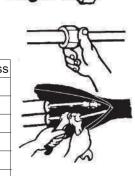
B. Press to hook the pipe fixer onto the base.

Piping Connection:

a. Connect indoor unit pipes with two wrenches. Pay special attention to the allowed torque as shown below to prevent the pipes, connectors and flare nuts from being deformed and damaged.



Model	Pipe size	Torque	Nut width	Min.thickness
9K-18K	Liquid Side (15~20N·m or 1~15ft-lbs	17	0.5 or 0
24K	Liquid Side (30~35N·m or 22~26ft-lbs		0.6 or 0.
9K-12K	Gas Side (Φ 9.53 or 3/8)	30~35N·m or 22~2	22	0.6 or 0.
18K	Gas Side (Φ 12 or 1/2)	50~55N·m or 37~41ft-l	24	0.6 or 0
24K	Gas Side (Φ 16 or 5/8)	60~65N·m or 44~48ft-lb	27	0.6 or 0.



NOTE:

Dimensions are in "mm or inch" unless otherwise stated in the table.

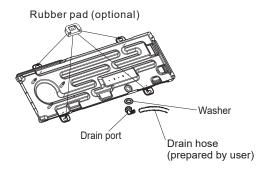


Outdoor Unit Installation

1. Install Condensate Drain for Outdoor Unit

The condensate drains from the outdoor unit when the unit operates in heating mode. In order not to disturb your neighbor and protect the environment, install a drain port and a drain hose to direct the condensate water. Just install the drain port and rubber washer to the chassis of the outdoor unit, then connect a drain hose to the port as the right figure demonstrates.





2. Install Ground Pad or Wall Hangers

- 1. Determine proper location for outdoor unit.
- 2. Follow all instructions provided by manufacturer for installing wall hangers rubber pad.
- 3. Verify the wall hangers or rubber pad can safely support the weight of the outdoor unit
- 4. Verify the wall hangers or rubber pad is level and meets all outdoor dimensional clearance.
- 5. Fix with bolts and nuts tightly on a flat and strong floor.

 If installed on the wall or roof, make sure to fix the supporter well to prevent it from shaking due to serious vibration or strong wind.



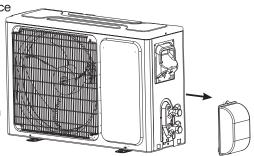
Florida wind load requirements state that outdoor unit must be anchored to concrete pad using four 3/8-in diameter power wedge bolt plus(or equivalent) with 1-in diameter fender washers. Anchor bolts must be embedded into 3000 PSI minimum concrete at a distance of 4 1/2- in from any concrete edge. The concrete thickness must exceed 1.5 times the anchor depth.



Outdoor Unit Installation

3. Piping Connections to Outdoor Unit

- Remove service valve cover(if provided) to access the service valves and refrigerant ports.
- Carefully bend and adjust length of refrigerant pipes to meet outdoor unit service valves connection with proper tools to avoid kinks.
- Apply a small amount of refrigerant oil to the flare connection on the refrigerant pipe.
- Properly align piping and tighten flare nut using a standard wrench and a torque wrench as shown in the indoor piping section.
- Carefully tighten flare nuts to correct torque level referring to the following Torque Table:



Service Valve Cover



Pipe diameter	Nut Size	Tighte	ning Torque
/inch(mm)	/inch(mm)	ft-lbs	N-m
1/4(6.35)	1/4(17)	11 to 15	15 to 20
3/8(9.5)	3/8(22)	22 to 26	30 to 35
1/2(12.7)	1/2(25)	37 to 41	50 to 55
5/8(15.9)	5/8(29)	44 to 48	60 to 65

Torque Table

Note: Over tightening may damage flare connections and cause leaks.



Outdoor Unit Installation

4. Connecting of the Cable

• Indoor Unit

Connect the power cord to the indoor unit by connecting the wires to the terminals on the control board individually in accordance with the outdoor unit connection.

Note: For some models, it is necessary to remove the cabinet to connect to the indoor unit terminal.

• Outdoor Unit

- 1) Remove the access door from the unit by loosening the screw. Connect the wires to the terminals on the control board individually as follows.
- 2) Secure the power cord onto the control board with cable clamp.
- 3) Reinstall the access door to the original position with the screw.
- 4) Use a recognized circuit breaker for 24K model between the power source and the unit. A disconnecting device to adequately disconnect all supply lines must be fitted.

Front panel Terminal (inside) Cabinet Indoor unit Chassis Cable Cross Board Wire Hole Outdoor unit The figures in this manual are based on the external view of a standard model. Consequently, the shape may differ from that of the air conditioner you have selected

CAUTION

- 1. Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, refer to the circuit diagram posted on the inside of the access door .
- 2. Comfirm that the cable thickness is as specified in the power source specification.
- 3. Check the wires and make sure that they are all tightly fastened after cable connection.
- 4. Be sure to install an earth leakage circuit breaker in wet or moist areas.

Cable Specifications

capacity(Btuh)	Power cord		Powerc	onnecting cord
	Type Normal cross- sectional areas		Type	Normal cross- sectional areas
9K-12K(208/230V)	SJ TW 3X14 AWG		SJ TW	4X18 AWG
18K-24K(208/230V)	SJ TW 3X12 AWG		SJ TW	4X18 AWG
24K(208/230V)	SJ TW 3X12 AWG		SJ TW	4X18 AWG
9K(115V)	SJ TW 3X12 AWG		SJ TW	4X18 AWG
12K(115V)	SJ TW 3X12 AWG		SJ TW	4X18 AWG

Attention:

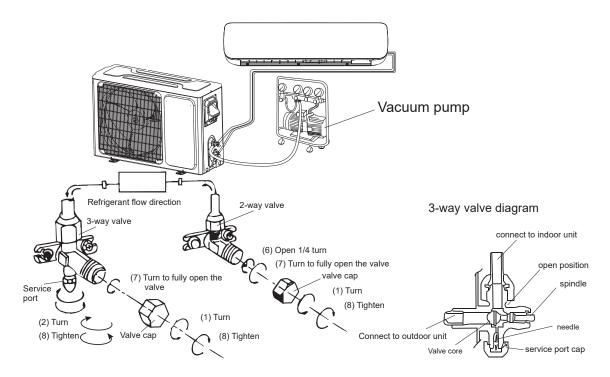
The plug must be accessible even after the installation of the appliance in case there is a need to disconnect it. If not possible, connect appliance to a double-pole switching device with contact separation of at least 3 mm placed in an accessible position even after installation.



Air Purging

The air which contains moisture remaining in the refrigeration cycle may cause a malfunction on the compressor. After connecting the indoor and outdoor units, release air and moisture from the refrigerant cycle using a vacuum pump, as shown below.

Note: To protect the environment, be sure not to discharge the refrigerant to the air directly.



How to Purge Air Tubes:

- 1. Unscrew and remove caps from 2 and 3-way valves.
- 2. Unscrew and remove cap from service valve.
- 3. Connect vacuum pump flexible hose to the service valve.
- 4. Start vacuum pump for 10-15 minutes until reaching a vacuum of 10 mm Hg absolutes.
- 5. With vacuum pump still running close the low pressure knob on vacuum pump manifold. Then stop the vacuum pump.
- 6. Open 2-way valve , 1/4 turn, then close it after 10 seconds. Check tightness of all joints using liquid soap or an electronic leak detector.
- 7. Turn 2 and 3-way valves stem to fully close the valves. Disconnect the flexible vacuum pump hose.
- 8. Replace and tighten all valve caps.



Installation Check List

Start-up

Test Operation

Perform test operation after completing gas leak and electrical safety check.

- 1. Turn on electrical disconnect to outdoor unit.
- 2. Push the "ON/OFF" button on Remote Controller to begin testing.
- 3. Push MODE button, select COOLING, HEATING, FAN mode to confirm all functions.

System Checks

- 1. Conceal refrigerant pipes where possible.
- 2. Make sure drain hose slopes downward along entire length.
- 3.Ensure all refrigerant pipes and connections are properly insulated.
- 4. Fasten pipes to outside wall, when possible.
- 5.Seal and weatherproof wall hole which the interconnecting wires and refrigerant pipes pass through.

Indoor Unit

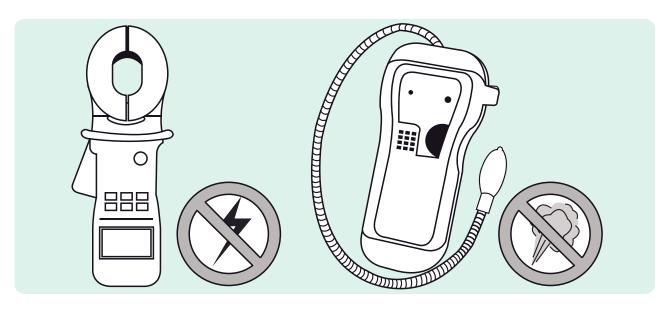
- 1.Do all Remote controller's buttons function properly?
- 2.Do the display panel lights work properly?
- 3. Does the swing louver function properly?
- 4.Does the drain work?

Outdoor Unit

- 1.Push the mode button to COOL and adjust the room setting to $61 \, \boxtimes (16\!\boxtimes)$ deg. wait up to 3 minutes from compressor time guard. Does compressor and outdoor fan turn on in cooling mode?
- 2.Push the mode button to HEAT and adjust the room setting to $85 \, \text{M}(30\,\text{M})$ deg. wait up to 3 minutes for compressor time guard. Does compressor and outdoor fan turn on in heat mode?



Electrical/Gas Leak Check and Test Run



ELECTRICAL SAFETY CHECKS

After installation, confirm that all electrical wiring is installed in accordance with local and national regulations, and according to the Installation Manual.

BEFORE TEST RUN

- ☑ Check Grounding Work
- $\ensuremath{\underline{\square}}$ Measure grounding resistance by visual detection or with a grounding resistance tester. Grounding resistance must be less than 4Ω .

Note: This may not be required in some locations.

DURING TEST RUN

- ☑ Check for Electrical Leakage
- During the Test Run, use an electroprobe and and multi-meter to perform a comprehensive electrical leakage test.
- If electrical leakage is detected, turn off the unit immediately and call a licensed electrician to find and resolve the cause of the leakage.

Note: This may not be required in some locations.

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WARNING – RISK OF ELECTRIC SHOCK

ALL WIRING MUST COMPLY WITH LOCAL AND NATIONAL ELECTRICAL CODES, AND MUST BE INSTALLED BY A LICENSED ELECTRICIAN.

GAS LEAK CHECKS

There are 2 methods to check for gas leakage:

☑ Soap and Water Method

Using a soft brush, apply soapy water or liquid detergent to all pipe connection points on the indoor unit and outdoor unit. The presence of bubbles indicates a leak.

☑ Leak Detector Method

If using leak detector, refer to the device's operation manual for proper usage instructions.

AFTER PERFORMING GAS LEAK CHECKS

After confirming that the all pipe connection points DO NOT leak, replace the valve cover on the outside unit.



Electrical/Gas Leak Check and Test Run

Test Run

BEFORE TEST RUN

Only perform a test run after the following steps have been completed:

☑ Electrical Safety Checks

Confirm that the unit's electrical system is safe and is operating properly.

☑ Gas Leak Checks

Check all flare nut connections and confirm that the system is not leaking.

☑ Opened Valves

Confirm that both the gas and liquid valves (high/low) are 100% fully opened.

TEST RUN INSTRUCTIONS

The following test run should be performed for 30 minutes:

- **1.** Connect power to the unit.
- **2.** Press the ON/OFF button on the remote controller to turn it on.
- **3.** Press the MODE button to scroll through the following functions, one at a time:
- COOL Select lowest possible temperature
- HEAT Select highest possible temperature
- **4.** Let each function run for 5 minutes, and perform the following checks:

PASS/FAIL?

No Electrical Leaks or Abnormal Noises	☐ Water Drains from Drain Hose Properly
Unit is Properly Grounded	☐ All Piping is Properly Insulated
All Electrical Terminals Properly Covered	☐ Indoor Unit Responds to Remote Controller
Indoor and Outdoor Units Securely Installed	☐ Indoor Unit Louvers Work Properly
All Pipe Connections Points Do Not Leak	☐ System Works in Both HEAT + COOL mode

AFTER TEST RUN COMPLETION

After the 10 boxes above have been checked as having PASSED, perform the following operation:

- 1. Using the remote control, return the system to a normal desired operating temperature.
- **2.** Using insulation tape, wrap the indoor unit refrigerant pipe connections that were left uncovered during the indoor unit installation process.

IF AMBIENT TEMPERATURES ARE TOO HIGH TO RUN A HEATING TEST:

If outside temperatures are too high to permit HEATING mode on the remote, do the following:

- 1. Turn the unit on and set it to HEAT mode using the emergency button as depicted on Page 8.
- **2.** Run the heating mode test as normal, and turn the unit back off using the button when complete.

DOUBLE CHECK ALL PIPE CONNECTIONS

During operation, the pressure of the refrigerant circuit will increase. This may reveal leaks that were not present during your initial leak check. Take time during the Test Run to double-check that all copper pipe connection points are leak-free. Refer to the Leak Check page for instructions. Cooling mode pressures should be 120-155 PSI. Heating mode pressures should be 320-440 PSI.



Troubleshooting

MALFUNCTION	POSSIBLE CAUSES				
If the appliance does not operate or respond	There is a power failure/plug pulled out				
	The indoor/outdoor unit fan motor was damaged				
	There is a faulty compressor or thermomagnetic circuit breaker				
	There is a faulty protective device or fuses				
	The electrical connections are loose				
	The system has entered a protection mode				
	The system has entered an overvoltage or undervoltage protection				
	The TIMER-ON function is active				
	The electronic control board was damaged				
If there are strange odors	. The air filter is dirty				
If there's running water	rater There was a backflow of liquid into the refrigerant circulation.				
If a fine mist is coming from the air outlet	This occurs when the air in the room becomes very cold, for example in "COOLING" or "DEHUMIDIFICATION/DRY" modes				
If strange noises are being emitted	This noise is made by the expansion or contraction of the front panel due to variations in temperature, and if so, is normal				
	The temperature setting is unsuitable				
If the airflow is	The air conditioner intakes and outlets may be obstructed				
insufficient, and the	The air filter may be dirty				
air is not hot or cold	The fan speed may be set at the minimum				
enough	There may be too many other heat sources in the room				
	The system may be getting low on refrigerant, pressures should be checked				
If the appliance does not	The remote control may not be close enough to the indoor unit				
If the appliance does not respond to commands	The batteries of remote control may need to be replaced				
	There are obstacles between remote control and indoor unit signal receiver				
If the display is off	The DISPLAY button has been pressed				
If the display is off	There has been a power failure				
Switch off the air conditioner immediately and cut off the power supply in the event of	Strange noises not due to expansion/contraction are heard during operation				
	The electronic control board is faulty or malfunctioning				
	Any fuses or switches are faulty or malfunctioning				
	The sound of spraying water or objects are heard inside the appliance				
	The cables or plugs have overheated				
	There are very strong odors being emitted from the appliance				
EDDOD SIGNALS (

ERROR SIGNALS ON THE DISPLAY

In case of error, the display on the indoor unit may show the following error codes:

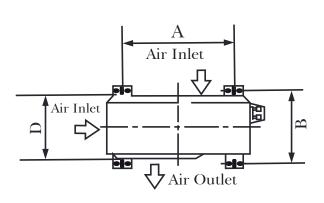
Display	lay Description of the error		Description of the trouble		
ΕI	Indoor temperature sensor fault	E8	Outdoor discharge temperature sensor fault		
E2	Indoor pipe temperature sensor fault	E9	Outdoor IPM module fault		
E 3	Outdoor pipe temperature sensor fault	ER	Outdoor current detection fault		
EY	Refrigerant system leakage or fault	EE	Outdoor PCB EEPROM fault		
88	Malfunction of indoor fan motor	EF	Outdoor fan motor fault		
E7	Outdoor air temperature sensor fault	ЕН	Outdoor suction temperature sensor fault		

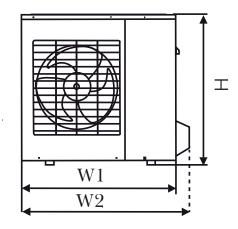


Anchoring the Outdoor Unit

The outdoor unit can be anchored to the ground or to wall-mounted brackets. The following is a list of different outdoor unit sizes and the distance between their mounting feet. Prepare the installation base of the unit according to the dimensions found below:

Innovair Series Mini Split MODEL/Capacity (Btu/h)	A	В	D	Н	W1	W2
(9,000 BTU - 110/120V)	438 mm	278 mm	284 mm	546 mm	727.5 mm	810 mm
	17-1/4 in.	10-15/16 in.	11-3/16 in.	21-1/2 in.	28-5/8 in.	31-7/8 in.
(12,000 BTU - 110/120V)	438 mm	278 mm	284 mm	546 mm	727.5 mm	810 mm
	17-1/4 in.	10-15/16 in.	11-3/16 in.	21-1/2 in.	28-5/8 in.	31-7/8 in.
(9,000 BTU - 208/230V)	415 mm	263 mm	270 mm	498 mm	712 mm	787 mm
	16-11/32 in.	10-3/8 in.	10-5/8 in.	19-5/8 in.	28-1/32 in.	31 in.
(12,000 BTU - 208/230V)	415 mm	263 mm	270 mm	498 mm	712 mm	787 mm
	16-11/32 in.	10-3/8 in.	10-5/8 in.	19-5/8 in.	28-1/32 in.	31 in.
(18,000 BTU - 208/230V)	516 mm	314 mm	324 mm	603.5 mm	780 mm	863 mm
	20-5/16 in.	12-3/8 in.	12-3/4 in.	23-3/4 in.	30-11/16 in.	34 in.
(24,000 BTU - 208/230V)	586 mm	347.5 mm	361 mm	699 mm	850 mm	927 mm
	23-3/32 in.	13-11/16 in.	14-7/32 in.	27-1/2 in.	33-15/32 in.	36-1/2 in.





If installing the unit on the ground or on a concrete mounting platform, do the following:

- 1. Mark the positions for four expansion bolts based on dimensions in the "Unit Mounting Dimensions" chart.
- 2. Pre-drill holes for expansion bolts.
- 3. Clean concrete dust away from holes.
- **4.** Place a nut on the end of each expansion bolt.

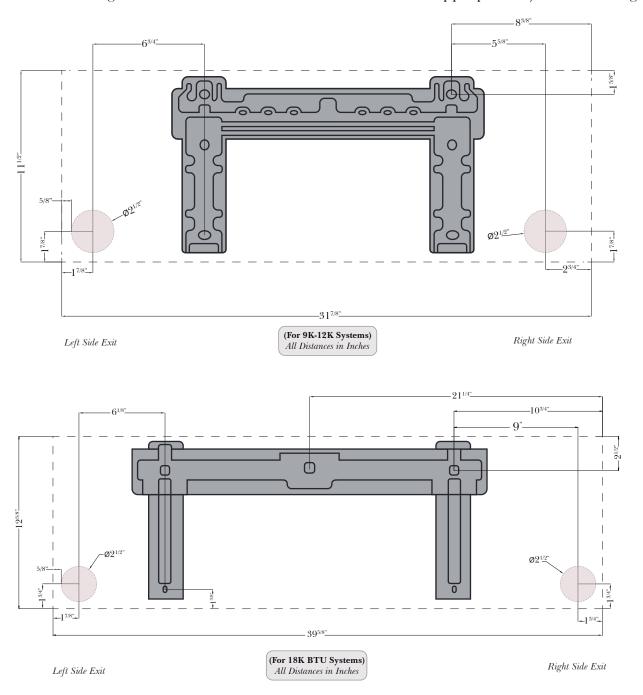
- **5.** Hammer expansion bolts into each hole.
- **6.** Remove the nuts from expansion bolts, and place the outdoor unit onto the bolts.
- **7.** Put washers onto each expansion bolt, then replace each of the nuts.
- **8.** Using a wrench, tighten each nut until snug.

WHEN DRILLING INTO CONCRETE, WEAR EYE PROTECTION AT ALL TIMES!



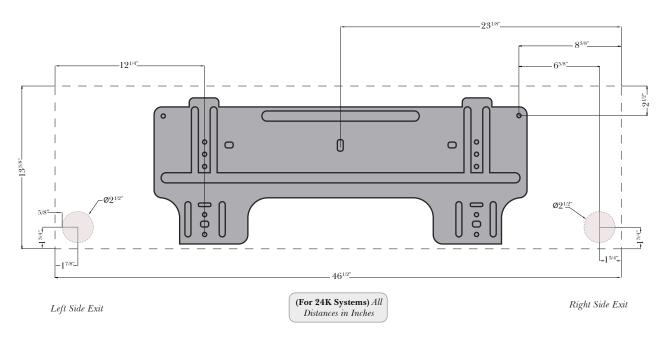
Guidelines for Drilling the Wall Hole

Below are the suggested locations for the wall hole for systems between 9,000 - 24,000 BTU. Both left side/right side exits are considered. Confirm holes are appropriate by corner tracing.

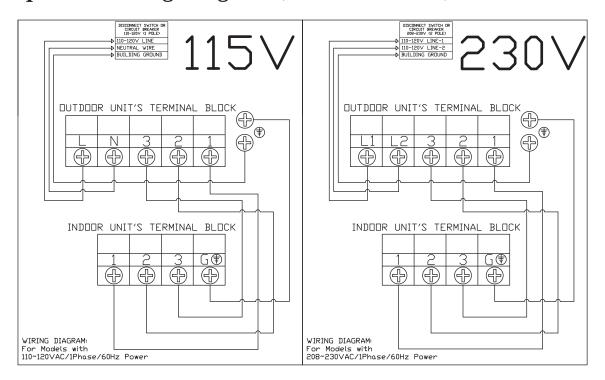




Guidelines for Drilling the Wall Hole (continued)



Simplified Wiring Diagram (115V and 230V)





Special Notice

Disposing of this appliance improperly, or in other natural surroundings, endangers your health and is bad for the environment. Hazardous substances may leak into the ground water and enter the food chain. Please follow proper disposal protocol.

