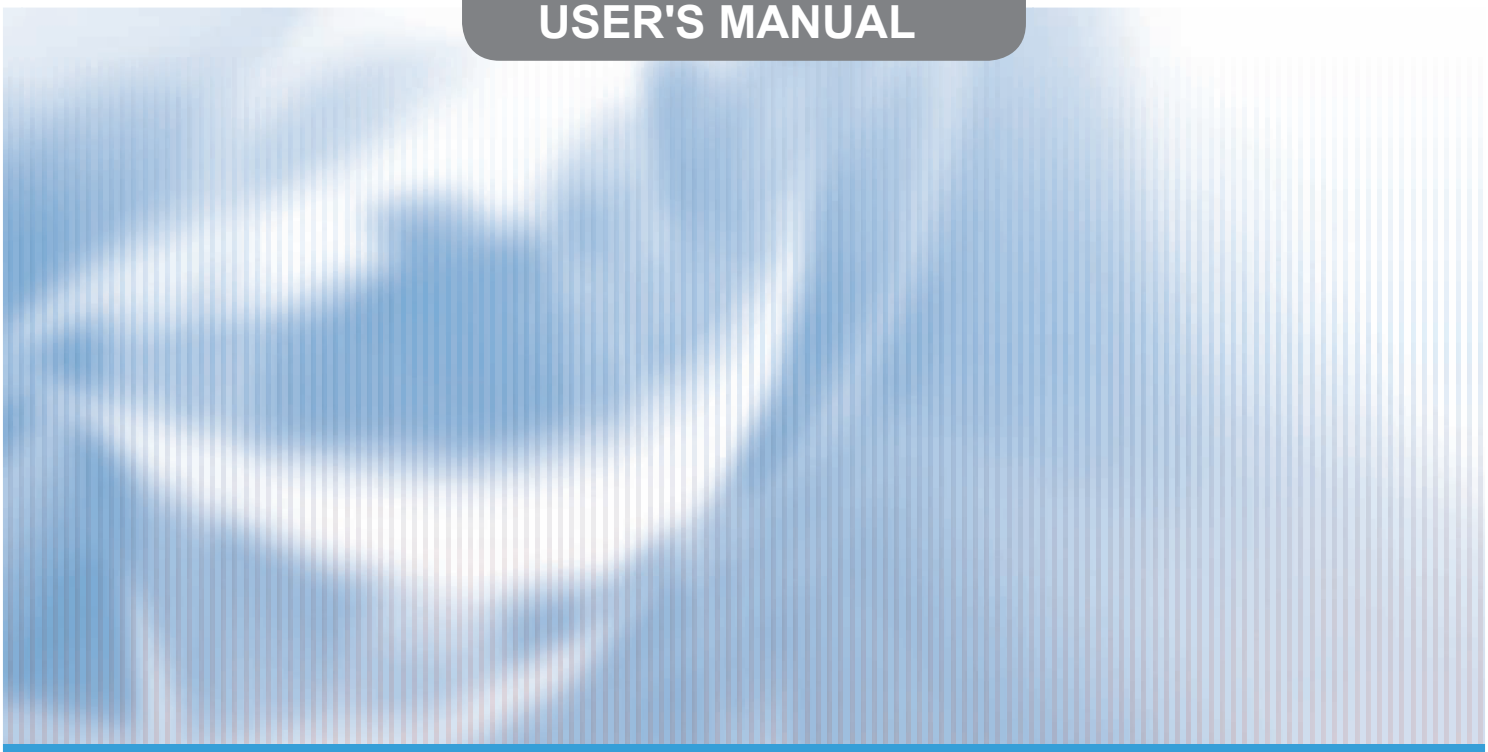
USER'S MANUAL



ASH-18AIN PT, ASH-24AIN PT

sinclair

AIR CONDITIONING

◆Contents

Use and Maintenance

Installation Services

This mark indicates the matter that shall be prohibited.

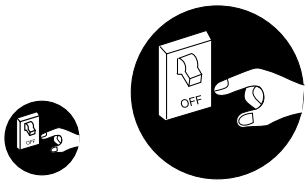
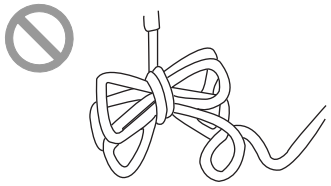
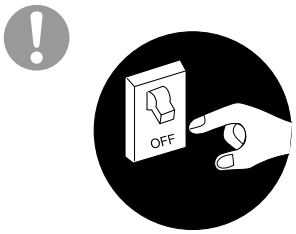
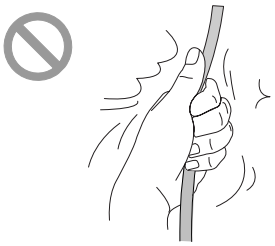
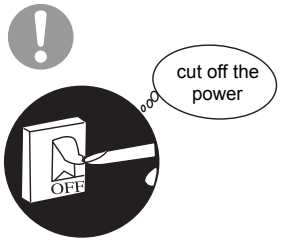
This mark indicates the matter that must be followed.

Welcome to select SINCLAIR air conditioner. For correct use of this air conditioner, please keep this Manual properly for future reference.

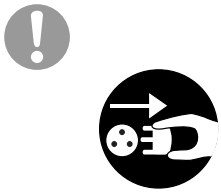
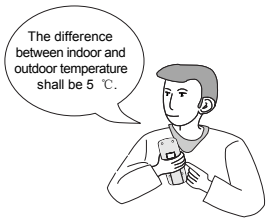
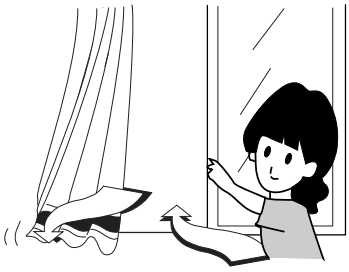
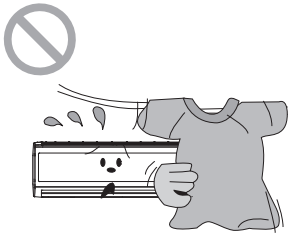
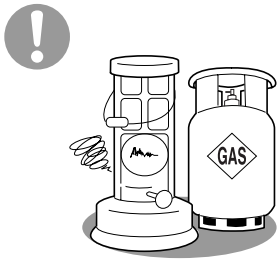
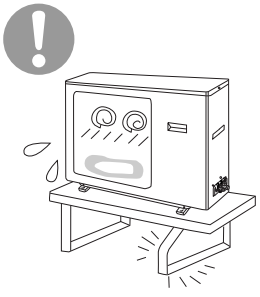
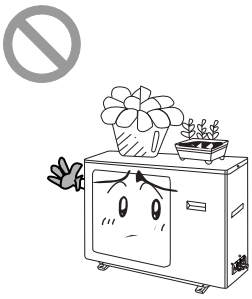
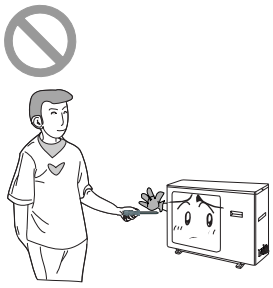
◆Use and Maintenance——Precautions on Use

Carefully read following precautions before use

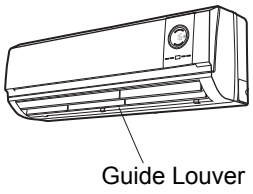
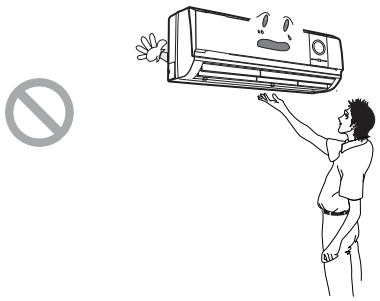
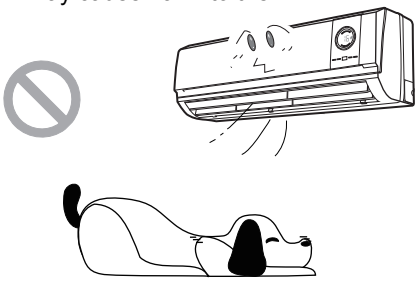
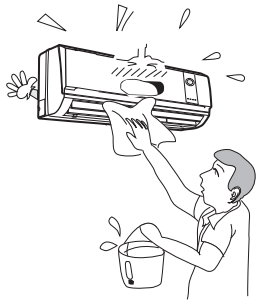
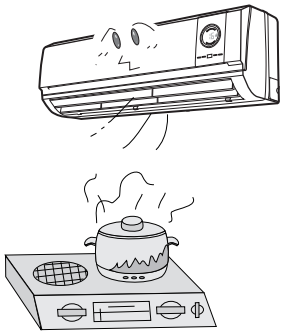
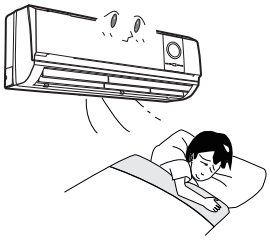
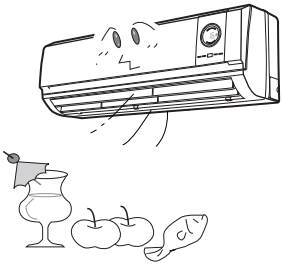
Warning

★In case of abnormality (e.g. burnt smell), please cut off the power supply immediately and then contact SINCLAIR Authorized Service Center.  If abnormal state continues, the air conditioner may be damaged and even worse, electric shock or fire might be caused.	★Never operate the air conditioner with wet hand.  Otherwise there is risk of electric shock.	★Please do not cut or damage the power cords and control lines. Damaged power cords and signal control lines of the air conditioner must be replaced by professional technicians with special cords. 
★To avoid fire, be sure to use special circuit for power supply.  Otherwise it might cause electric shock or fire.	★Disconnect the power supply if long putting the air conditioner out of use.  Otherwise accumulation of dust might cause heating or fire.	★Never damage the cable or use unapproved cable.  Otherwise it might result in cable overheating and cause fire.
★Please turn off the power before cleaning the air conditioner.  Otherwise it might cause electric shock or injury.	★Rated voltage of this air conditioner 220-240V~,with a tolerable fluctuation at 10%. The compressor will vibrate sharply if the voltage is too low, resulting in damage to refrigerating system. Electrical elements are easy to damage if the voltage is too high.	★For power supply, be sure to use special circuit with air break switch of sufficient capacity. The air conditioner can automatically start or stop according to your requirements. Please do not switch on or off your air conditioner too frequently; otherwise negative impacts will be caused to the air conditioner.

◆Precautions on Use

<table>
<tr>
<td>⚠ ★Earthing: The unit must be reliably earthed. The earthing cable shall be connected to the special earthing device in the construction.
 
If no such device, ask a professional technician to install one. Never connect the earthing cable to gas pipe, water pipe, sewage pipe or any other position that the professional believes unreliable.</td>
<td>★Be sure to pull out the powerplug when not using the air co-nditioner for a long time.
 
Otherwise accumulation of dust might cause heating or fire.</td>
<td>★Set the room temperature appropriately.
 
Appropriate adjustment of the preset temperature is effective to avoid</td>
</tr>
<tr>
<td>★When the air conditioner is running, do not keep the door and window of the room long open.
 
Otherwise the effect of air conditioner will be decreased.</td>
<td>★Never block the air inlet or outlet of indoor and outdoor unit,
 
As this will decrease the effect of air conditioner or cause shutdown or even fire.</td>
<td>★Spraying chemicals and coal gas tank must be placed 1m away from the indoor and outdoor unit.
 
Otherwise it may cause fire or explosion.</td>
</tr>
<tr>
<td>★Take care if the mounting base of outdoor unit is damaged.
 
If the base is damaged without repair, the unit might fall down to cause injury.</td>
<td>★Do not foot on or place any goods on outdoor unit.
 
Falling of human or goods from the unit may cause injury.</td>
<td>★Do not repair the air conditioner at your discretion.
 
Incorrect repair may cause electric shock or fire. Please contact SINCLAIR Authorized Service Center for repair.</td>
</tr>
</table>

◆Precautions on Use

<table>
<tr>
<td>★Power supply of this air conditioner must be connected Y Type. Please do not cut or damage the external cable. Damaged external cable must be replaced by professional repairman.
  </td>
<td>★Adjust the air flow and direction properly.
When the air conditioner is running, you can press the SWING key on remote controller to adjust the guide louver and change the direction of air flow.
 
Guide Louver</td>
</tr>
<tr>
<td>★Never reach your finger or any stick into the indoor or outdoor outlet.
 
Otherwise, injuries may be caused.</td>
<td>★Never blow the air directly at pets or plants, as this may cause harm to them.
  </td>
</tr>
<tr>
<td>★Never spray water onto the unit or wash the air conditioner with water.
 
Otherwise, fault or electric shock may be caused.</td>
<td>★Never let the air conditioner blow against the heater.
 
Otherwise, the burning will be incomplete and result in carbon monoxide poisoning.</td>
</tr>
<tr>
<td>★To avoid any harm to your health, do not blow the cold air on your body too long or decrease the room temperature too low.
  </td>
<td>★This air conditioner cannot be used for drying the clothes or refrigerating the foods.
  </td>
</tr>
</table>

Models Specifications & Technical Data

Model		ASH-18AIN PT	ASH-24AIN PT
Functions		Heating and Cooling	Heating and Cooling
Cooling capacity (W)		5300 (2500-5800)	6500 (2000-7000)
Heating capacity (W)		5850 (2300-6400)	6500 (1600-8200)
Rated Voltage (V)		220-240~	
Rated Frequency (Hz)		50	
Cooling/Heating rated current (A)		10.48/10.71	14.0/14.2
Cooling/Heating rated power (W)		2400/2450	3200/3250
Cooling/Heating power input (W)		1560/1620	2020/1800
EER/COP (W/W)		3.40/3.61	3.22/3.61
Recycling air Volume (m^3/h)		600	850
Refrigerant and weight (kg)		R410a/1.6 kg	R410a/2.4kg
Noise (Indoor/Outdoor) dB (A)		48/56	48/58
Climate type		T1	
Water proof level		IP24	
Anti-electric shock protection		I	
Weight (kg) Indoor unit/Outdoor unit		13/52	13/68
Dimension (mm) W x H x D	Indoor unit	1020 x 319 x 234	1020 x 319 x 234
	Outdoor unit	848 x 685 x 378	950 x 840 x 420

The cooling capacity, heating capacity and noise level are tested before shipment.

In case od any change in performance parameters, the data provided on nameplate shall prevail.

Working temperature range:

Working temperature range		
	Indoor side DB/WB (°C)	Outdoor side DB/WB (°C)
Maximum cooling	32/23	43/26 (T1)
Maximum cooling	21/15	18/-
Maximum heating	20/-	24/-
Maximum heating	20/-	-14/-15

Principle and Special Functions under Cooling Mode

Principle:

The air conditioner absorbs heat from indoor air and transmits it outdoors for discharge, hence to decrease the indoor ambient temperature. The cooling capacity decreases with the rise of outdoor ambient temperature.

Anti-freeze Function:

If the air conditioner is running under low-temperature cooling mode, frost will appear on the surface of indoor heat exchanger. When the temperature of indoor heat exchanger is decreased to 0℃ or below, the microcomputer of indoor unit will stop the compressor to protect the complete unit.

Principle and Special Functions under Heating Mode

Principle:

* The air conditioner absorbs heat from outdoor air and transmits it indoors for emission, hence to increase the air temperature in the room. The heating capacity decreases with the reduction of the outdoor ambient temperature.
* It takes only a short time for this type of hot air circulating system to increase the indoor temperature.
* Use this air conditioner with other heating equipment if the outdoor temperature is extremely low.

Defrost:

* When the outdoor temperature is low but the humidity is high, the heat exchanger of outdoor unit may frosted after the air conditioner has run for a period of time. This will decrease the heating effect. In this case, auto defrost function will be activated and the heating mode will temporarily stopped for 8-10 minutes.
* Both the indoor fan and outdoor fan will be stopped during auto defrost.
* During defrost, the indicator on indoor unit will blink and steam might flow from the indoor unit. This is caused by quick defrost other than fault.
* Heating mode will automatically resume upon completion of defrost process.

Anti-cold Air Function:

Under heating mode, if the indoor heat exchanger fails to reach a specific temperature under following statuses, the indoor fan will not be started, so as to avoid blowing of cold air (within 3 minutes):

1. Start of heating mode; 2. End of auto defrost; 3. Heating under low-temperature environment

★ Conditions for Air Conditioner Unable to Run Normally

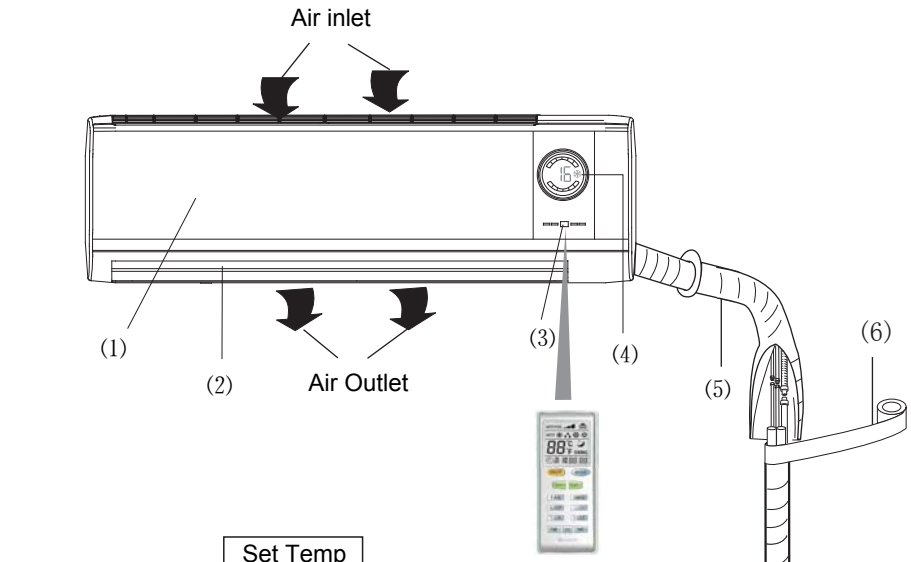
Protection device might be activated within such temperature range as specified below, so that the unit might be stopped.

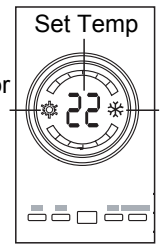
<table>
<tr><td rowspan="3">Heating Mode</td><td>Outdoor temperature over 24℃</td><td rowspan="3">Cooling Mode</td><td rowspan="2">Outdoor temperature over 43℃</td><td rowspan="3">Dehumidify Mode</td><td rowspan="3">Room temperature below 18℃</td></tr>
<tr><td>Outdoor temperature below -7℃</td></tr>
<tr><td>Room temperature over 27℃</td><td>Room temperature below 21℃</td></tr>
</table>

If the unit is long put under cooling or humidify mode when relative humidity is higher than 80% (door and windows are open), dew might drop near the air outlet.

◆ Description of Air Conditioner Components

Indoor Unit





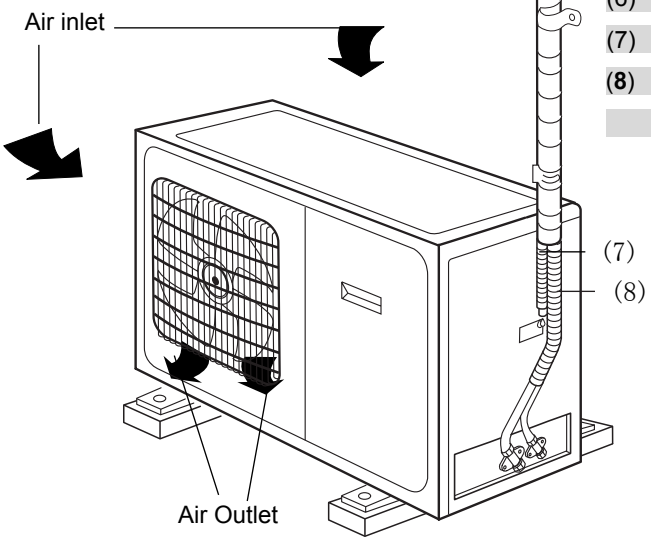
Heat (This indicator is black for single-cooling unit).

Cooling

Wireless remote control

(1) Front Panel
(2) Guide louver
(3) Receiving window
(4) LED Board
(5) Wall Pipe
(6) Wrapping Tape
(7) Drainage hose
(8) Connection pipe and connection wire

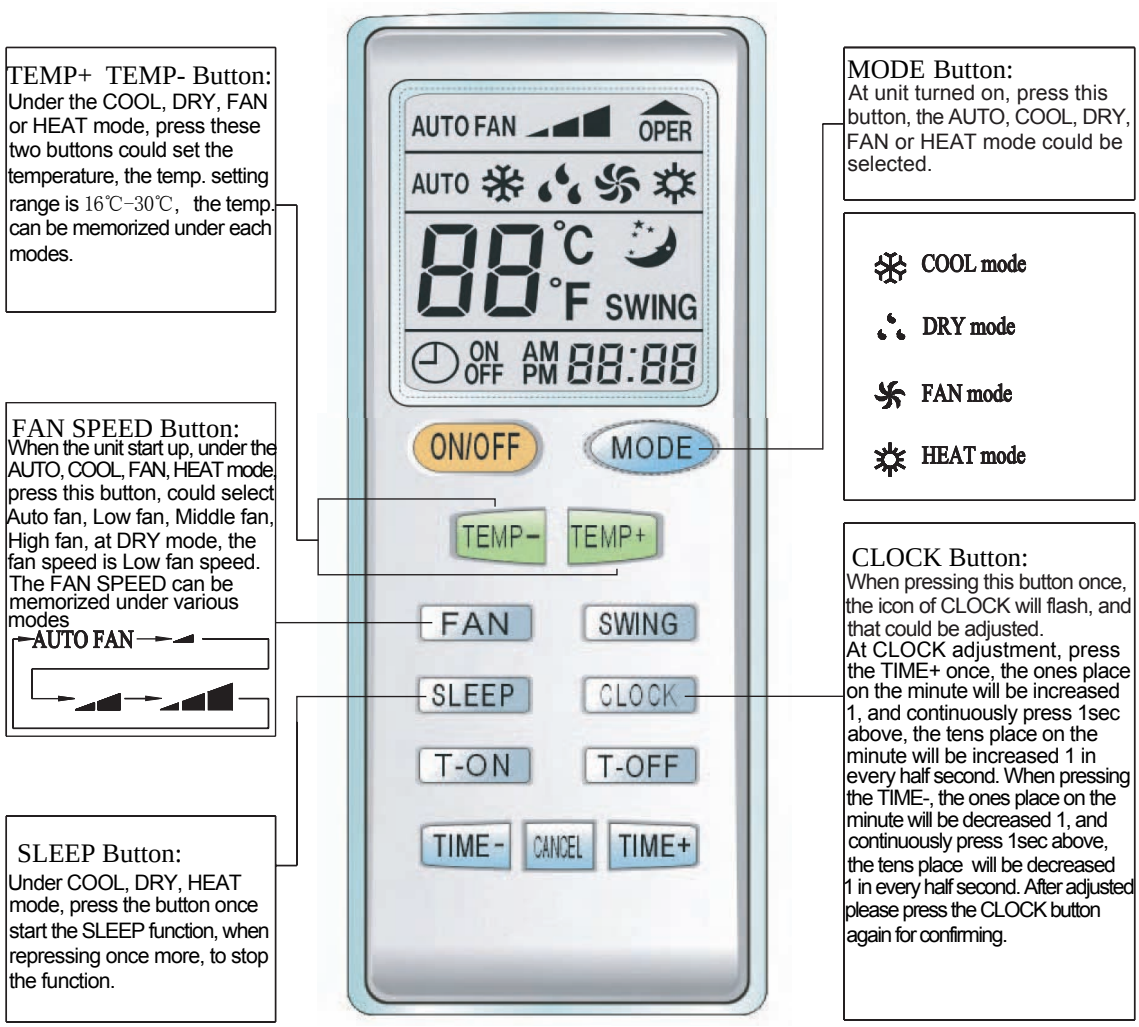
Outdoor Unit



Name and Function-Remote conteol

Note:

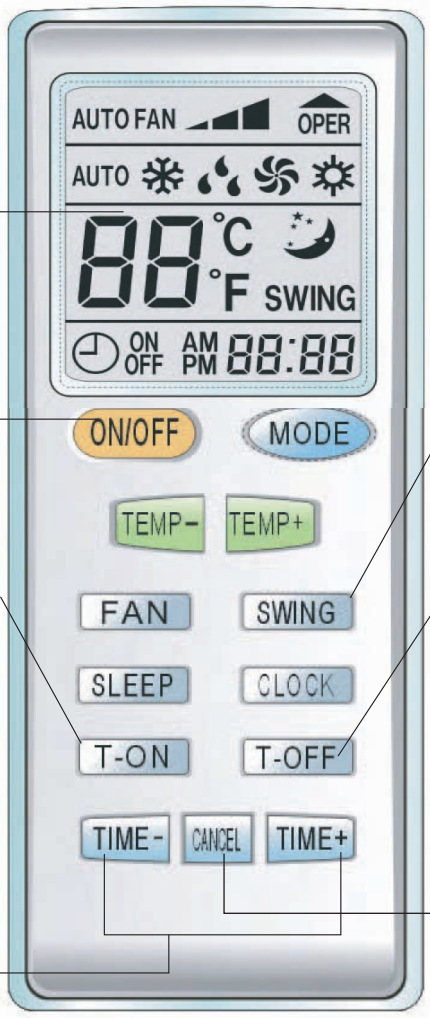
- Be sure that there is on obstruction.
- Don't drop or throw the remote control.
- Don't place the remote control in a location exposed to direct sunlight.
- Whe the unit is restarted after stopped,it can automatically resume its most latest running mode,and the outdoor unit starts a little bit later.



Name and Function-Remote control(continue)

Note:

- This type of remote control is a kind of new current.Some buttons of the control which have extra function will be described below.



Liquid crystal displayer
It shows all set contents.

ON/OFF Button
Every press of this button, the unit will be turned on, when repressed, the unit will be turned off.

T-ON Button
When pressing this button once, enter into T-ON setting, the icon of T-ON flash, every press of TIME+, the time of T-ON will be increased 1min. When continuously press 1sec above,the tens place on minute will be increased 1, every press of TIME- will be decreased 1 minute, when continuously press 1sec above, the tens place on minute will be decrease 1 in every half second, and it goes round with 12hours.

TIME+ TIME- Button
Function instruction please refer to T-ON button, T-OFF button, CLOCK button.

SWING Button:
At operating, when it is pressed, the louvers start to rotate automatically and stop when repressed again. When press it twice in one second, the light on the panel of indoor unit will be turned on. When press it twice in one second again, the light will be turned off.

T-OFF Button
Press this button once will enter into T-OFF setting, the icon of T-OFF will flash, the T-OFF button is available in ON or OFF mode, the setting method is the same with T-ON.

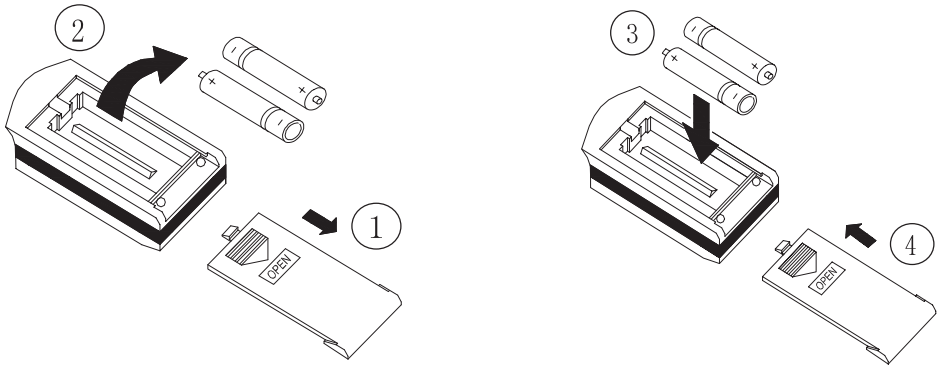
CANCEL Button
Press this button once, cancel all TIMER setting.

How to insert batteries

1.Remove the cover from the back of the remote control.
2.Insert the two batteries(Two AAA dry-cell batteries).
3.Re-attach the cover.

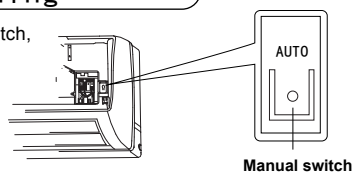
NOTE:

- Don't confuse the new and worn or different batteries.
- Remove batteries when not in use for a longtime.
- The batteries can be used for about one year.
- The remote control should be lm or more away from television or audio device.



Emergency running

When the wireless remote control is lost or broken, please use the manual switch, at this time it is in AUTO mode, the temperature setting and fan speed cannot be changed.Adopt the following operation by using ball point pen or some insulators.



- Turn on the unit: At unit off, press the manual switch, the unit will enter into AUTO running state automatically. The microcomputer will accord to the indoor temperature to select (COOL, HEAT, FAN), in order to achieve the comfortable efficiency.

Turn off the unit: When unit is running, press the manual switch STOP button, the unit will stop running.□□

PLASMA TEC

Plasma Technology PLASMA TEC

Plasma Air Purification Technology PLASMA TEC produces a natural bio-climate rich in active oxygen molecules, known as ions. It creates optimal quantity of positive and negative oxygen ions. Such an ion-enriched environment is notably cleaner and fresher. Plasma Technology has the capacity of breaking down bacteria into harmless particles, air purification, odor neutralization and reduction of particles in the air. All these qualities make PLASMA TEC Technology invaluable also for allergic persons.

◆Cleaning and Maintenance

Warning

- Be sure to cut off the power supply before cleaning the air conditioner; otherwise electric shock might happen.
- Wetting of air conditioner may cause the risk of electric shock. Make sure not to wash your air conditioner in any case.
- Volatile liquids such as thinner or gasoline will cause damage to the appearance of air conditioner. (Only use soft dry cloth or wet cloth soaked with neutral detergent to clean the air conditioner cabinet).

Clean the front panel (Be sure to remove the front panel before cleaning).

① Remove the front panel

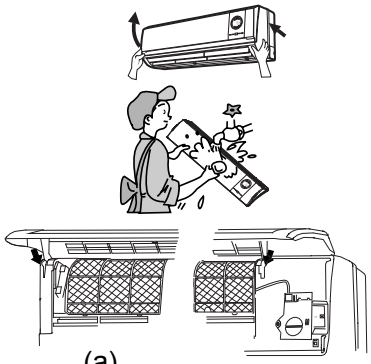
1. Lift up the front panel along arrow direction. Pull the groove on two ends of the front panel with force to remove the front panel.

② Clean the front panel

Wash with soft brush soaked with water and neutral detergent. Wipe off the water and dry the panel.

③ Installing Front Panel

Place the support at two ends of the panel into supporting groove. Cover up the panel along arrow direction and clamp it. See Fig. 4 (a, b)



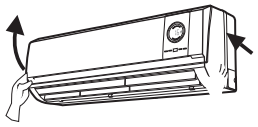
(a) Fig 4 (b)

Clean filter (Every 3 months approximately)

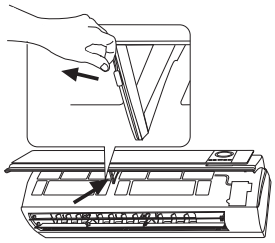
Note: Clean the air filter more frequently if the air conditioner is used under dusty environment. To avoid injury, do not touch the fins of indoor unit with your finger after removing the filter.

① Remove the air filter

Hold the groove on two ends of the front panel. Along arrow direction, pull with force to open the front panel for an angle. Then pull the air filter downward for removal. See Fig. 5 (a, b,c)



(a)



(b)

② Clean the air filter

Wash the filter with vacuum cleaner or water. If the filter is too dirty, wash with warm water (below 45℃) that is added with neutral detergent. Then dry it at a cool place.

Note: To avoid decoloring or deformation, do not wash with hot water over 45℃. Never dry on the fire, as the filter may be burnt or deformed.

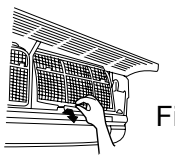
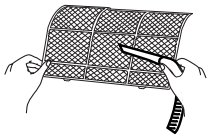


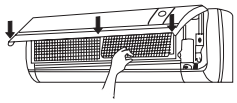
Fig 5 (c)

◆Cleaning and Maintenance

③ Install the air filter

Mount the air filter along arrow direction. Then, clamp the cover of front panel securely.





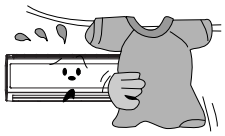
Checks before Seasonal Use

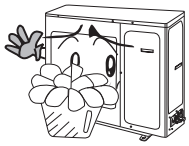
① Check the air inlet/outlet on indoor and outdoor units for any blocking.

② Check the earthing cable for reliability.

③ Check the battery of remote controller for replacement.

④ Check the mounting frame of outdoor unit for damage. If damaged, please contact SINCLAIR Authorized Service Center.





Checks after Seasonal Use

① Cut off the power supply to air conditioner.

② Clean the filter and the indoor/outdoor unit.

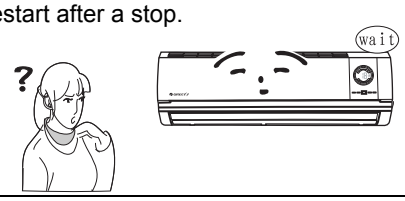
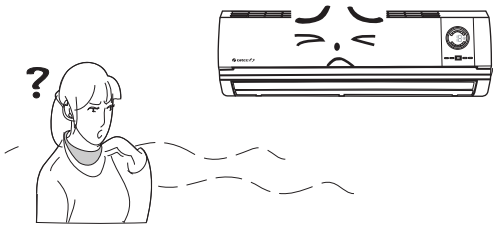
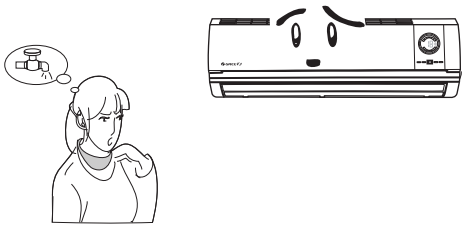
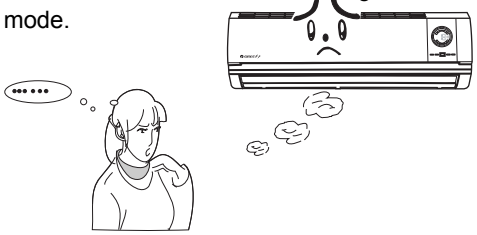
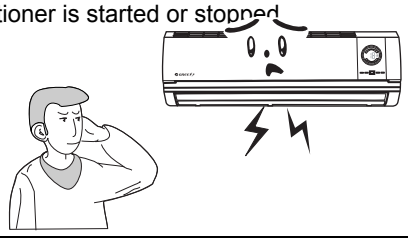
③ Clear off the dust and foreign particles on outdoor unit.

④ If the outdoor unit is rusted, paint on the rusty position to prevent expansion.

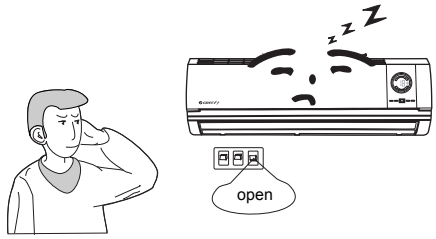
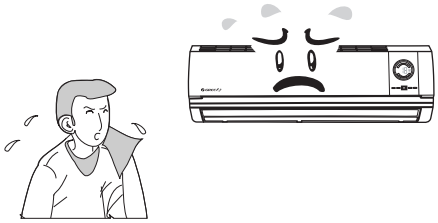
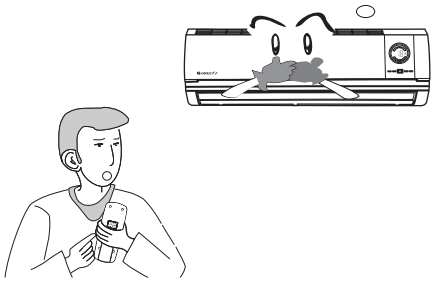
◆Trouble-Shooting

Warning

- Do not repair the air conditioner at your discretion. Incorrect repair may cause electric shock or fire, so please contact SINCLAIR Authorized Service Center for professional repair.
  Following checks prior to contact may save your time and costs.

Fault	Cause Analysis
Air conditioner does not run upon immediate restart after a stop. 	To protect the air conditioner upon immediate restart after a stop, the microcomputer controller will delay the unit for 3 minutes before the air conditioner will run.
Air conditioner blows out bad smell when it is initially started. 	The air conditioner itself has no bad smell. If any, it is the bad smell accumulated from environment. Solution: Clean the air filter. If still any problem, the air conditioner shall be cleaned (Please contact SINCLAIR Authorized Service Center).
You may hear “water flowing” noise when the air conditioner is running. 	When the air conditioner is started, or the compressor is started or stopped during running or the air conditioner is stopped, sometimes you may hear “hua-hua” or “di-du-di-du” noise. This is the flowing sound of refrigerant other than fault.
Sometimes a thin fog will flow out of the outlet when air conditioner is running under cooling mode. 	This might occur when indoor temperature and humidity are high. This is because the indoor air is quickly cooled down. After a period of time, the fog will disappear with the decrease of indoor temperature and humidity.
You may hear a slight crack when the air conditioner is started or stopped. 	This is the sound of friction caused by expansion of panel or other parts due to the change of temperature.

◆Trouble-Shooting

Fault	Cause Analysis
Air conditioner does not run. 	● If power failure? ● If circuit protection device has tripped? ● If the voltage is too high or too low? (To be tested by professional technicians). ● If timer function is correctly used?
Air conditioner is poor in cooling (or heating) effect. 	● If temperature setting is proper? ● If air inlet or outlet of outdoor unit is blocked? ● If air filter is clogged by dust? ● If all doors and windows are closed? ● If air flow is set to “LOW FAN”? ● If any other heating source in the room?
Remote controller cannot execute control. 	● Remote controller sometimes cannot execute control if the air conditioner is subject to abnormal interference or frequent switch of functions. To resume normal operation, just pull out the power and reinsert it properly. ● If within receivable range or blocked by any obstacles? ● Check the battery in remote controller for power level. If low power, replace the battery. ● If the remote controller is damaged.
Water leaks from indoor unit.	● Air humidity is high. ● Condensing water overflows. ● Joint of indoor unit drain pipe is loose.
Water leaks from outdoor unit	● Under cooling mode, water might condense on pipe or pipe joint due to cooling. ● Defrosted water flows out under heating or defrost (auto defrost) mode. ● Under cooling mode, water attached on heat exchanger will drip.
Indoor unit gives out noise.	● The sound that the fan or compressor relay is switching (close/open). ● Air conditioner may give out sounds under defrost or when it is stopped. This is caused due to inverse flow of refrigerant in the unit.

◆Trouble-Shooting

Fault	Cause Analysis
No air blows out from indoor unit.	● When the temperature of indoor heat exchanger is low during heating process, the indoor unit will stop air blowing to prevent blowing of cold air (within 3 minutes). ● Under dehumidify mode, the fan of indoor unit might be stopped sometimes to prevent evaporation of condensing water and inhibit the rise of temperature.
Moisture exists on outlet grill.	● If the air conditioning is long running under high humidity, moisture might condense on the grill and drop down.

In case of following events, please contact SINCLAIR Authorized Service Center.

▲ Air conditioner gives out shrill noise during running.
▲ Air conditioner gives out bad smell during running.
▲ Water leaks indoors.
▲ Air break switch or leakage protection switch trips frequently.
▲ Foreign matters or water are poured into the machine or remote controller.
▲ Abnormal overheating of power cord and plug.

→ Stop the air conditioner and pull out the power plug.

◆Installation Services—Precautions on Installation

Important Caution

1. The air-conditioning unit must be installed by professional technicians in accordance with the state line layout rules to ensure smooth and sound use.
2. Contact the local SINCLAIR installation and service agency before installation. Air-conditioning unit installed by an agency not designated by SINCLAIR may not be served timely when in failure owing to inconvenient business contact.
3. For relocation of the air conditioner to another position, please contact the local SINCLAIR Authorized Service Center.

Basic Requirements for Installation Position

Installation at the following places may cause failure of the air-conditioning unit. Please contact SINCLAIR installation and service agency if the installation at such places cannot be avoided.

- The environment where the strong heat, steam, flammable or explosive gas exists or the volatile matters are distributed in the air.
- The place close to high-frequency facilities, e.g. welding machine, medical equipment,
- A region with saline-sodic soil near the sea
- The place where the air contains oil (mechanical oil).
- A place with sulphide gases (such as sulphur spring);
- An environment with special conditions(such as laundry).

Indoor unit Selection of Installation Position

1. The air inlet and air outlet must be far away from obstacles to ensure that airflow can reach every corner of the room;
2. Choose a position where condensation water can be easily discharged and the outdoor unit can be easily connected;
3. Install the unit in a place where the children can not reach.
4. Choose a place where the weight of indoor unit can be withstood and operating noise and vibration are not increased;
5. Ensure sufficient clearance and space for service and maintenance; Ensure the indoor unit is at least 2.4m from the floor;
6. Choose a position at least 1 meter from any TV, sound system or other household electric appliances.
7. Choose a place so that the air filter can be easily pulled out;
8. Ensure the installation of indoor unit is in conformity with the requirements of installation dimension drawing.

Outdoor unit Selection of Installation Position

1. The place where the noise and air flow from the fan will not affect the neighbors, animals or plants.
2. Ensure good ventilation of outdoor unit.
3. No obstacles near the outdoor unit obstructing the air intake and air exhaust of the unit;
4. The installation position shall be able to withstand the weight and vibration of the outdoor unit and ensure safe installation;
5. Select a dry place but not exposed to direct sunshine or strong wind.
6. Ensure that the outdoor unit is installed in compliance with installation dimensions for easy repair and maintenance.
7. Height difference of fitting pipes shall be within 5 meters and the length of fitting pipe shall be within 10 meters.
8. Install the unit in a place where the children can not reach.
9. A place not affecting the public passage or city view.

Electrical Safety Requirements

1. The power supply must be of rated voltage via special circuit for air-conditioning. The diameter of power cable shall conform to requirements.
2. Applicable voltage range : the normal operation range of voltage is 90%～110% of rated voltage.
3. Do not pull the power cable with force.

◆Installation Services—Precautions on Installation

4. Ensure safe grounding and the grounding wire shall be connected with the special grounding equipment of the building and must be installed by professional technicians. In the fixed line there must be an electrical leakage protection switch and an air switch with sufficient capacity. The air switch shall also have the magnetic tripping and thermal tripping functions to achieve protection of both short-circuit and overload.
5. The minimum clearance between air conditioner and flammable surface is 1.5m.

Grounding Requirement

1. As air-conditioning unit is of Class I electrical appliance, reliable grounding measures must be taken for it.
2. The double color (yellow and green) cable inside the air conditioner is for grounding and shall not be used for other purposes nor can it be cut. Do not tighten with tapping screw; otherwise electric shock will be caused.
3. The ground resistance shall be in conformity with the requirements of state standard GB17790.
4. The user power supply shall have reliable grounding terminal. It is prohibited to connect the grounding wire to the following items:

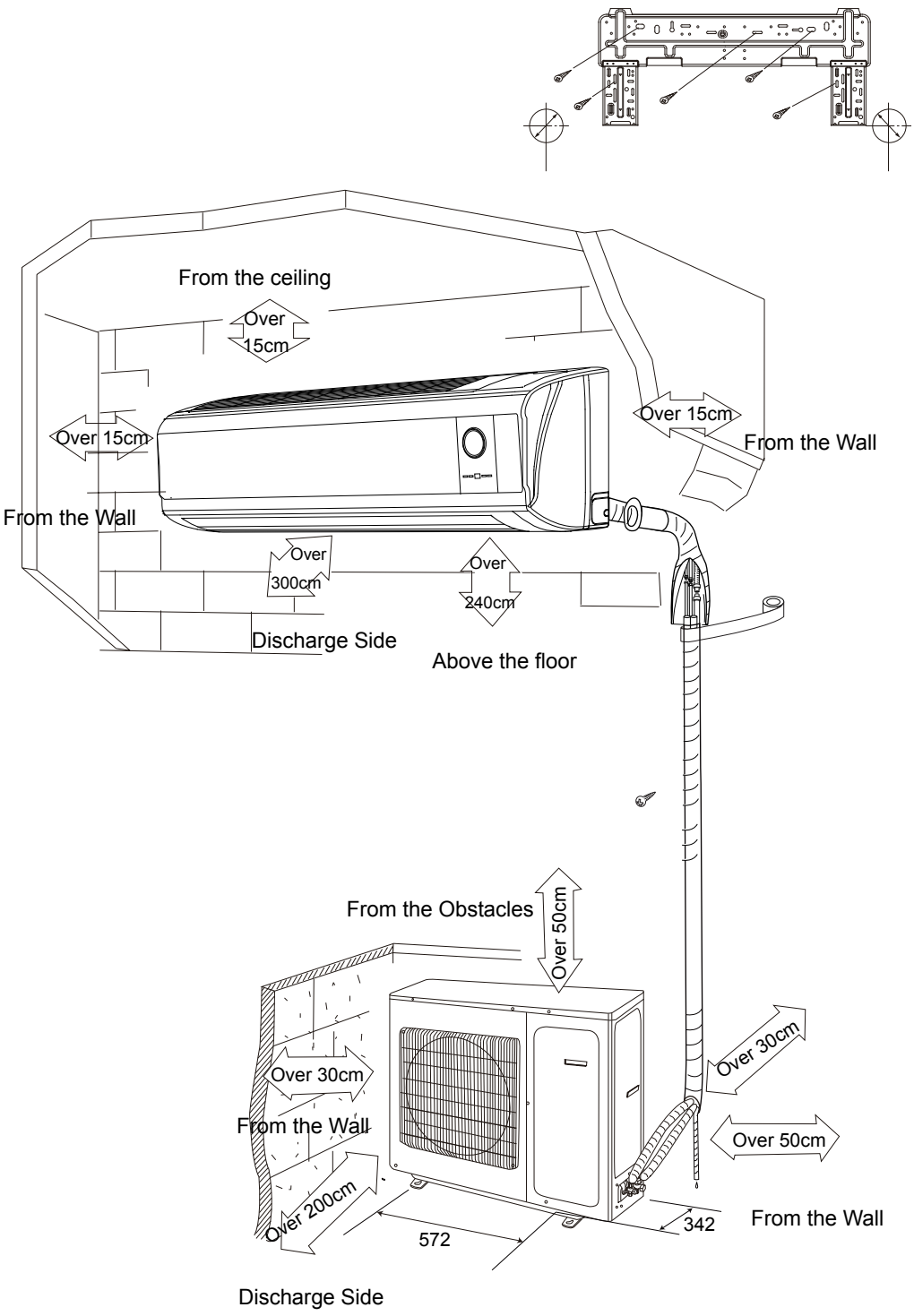
   ① Water Supply Pipe ② Gas Pipe ③ Sewage Pipe
   ④ Other positions that are considered to be unreliable by professionals.

NOTE:

1. All the electrical work must be done by qualified personnel according to relative wiring regulation and this manual.
2. The power supply is type Y connection. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
3. The rated voltage and the exclusive circuit must be used.
4. Leakage circuit-breaker and air switch of correct capacity must be installed. The air switch of 32A should be used in these models.
5. The plug must be accessible after the appliances have been positioned.
6. A air switch having a contact separation of at least 3mm in all poles should be fixed in fixed wiring.
7. Fuse size:25A/250VAC

◆Installation Services—Installation Dimension Drawing

Installation Dimension Drawing



◆Installation Services—Install Indoor Unit

Installing Wall-Mounting Frame

1. Level with plumb line or spirit level. As the drain outlet is on left side, it is better that the left side shall be lower when adjusting the wall-mounted board.
2. Use screws to secure the wall-mounting frame on the wall.
3. After installation is completed, manually pull the wall-mounting frame to check if it is secured. The mounted frame shall be able to withstand the weight of an adult (60 kg) and the fixing screws shall have relatively even stress.

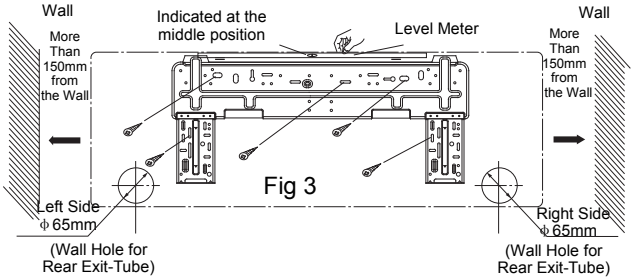
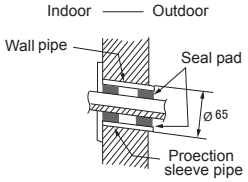


Fig 3

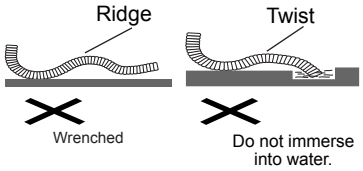
Wall Opening and Wall Pipe Installation

1. After deciding the hole position of the fitting pipe according to Figure 6, drill a declining hole （Ø 65）
2. To prevent the fitting pipe and the cable passing through the wall from being harmed and also protect the hollow wall from rats, it is necessary to install a wall pipe.



Installing Drainage Pipe

1. The flexible drainage pipe must descend to allow smooth running of water.
2. Pay attention not to allow twists, ridges and distortion of the drainage pipe in the layout and not to immerse the outlet in water.
3. Extended part of flexible drainage pipe passing through the indoor unit must be wrapped by thermal insulation material.



Connection of Indoor and Outdoor Cables

1. Pull open the front panel from the above. (page 10 Fig5 (a))
2. Unscrew the screw fixing the covering plate of terminal board.(Fig 7)
3. Pass the power cable through a separate cable duct on the back of indoor unit and pull it out from the front.
4. Connect the blue wire of the power connection cables to the "N（1）"terminal of the terminal board, connect the black wire to the "2" terminal, and connect the brown wire to the "3" terminal and connect the yellow-green wire to the "⏚" terminal (See Fig. 8).
5. Place the section of power cable with protective pipe into pressing groove and close the cover plate. Tighten the fixing screws to clamp the connecting cable.
6. Install the front panel back into position

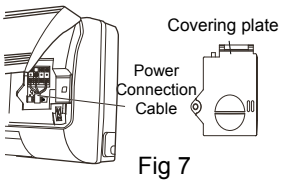


Fig 7

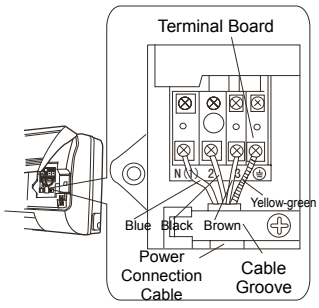


Fig 8

◆Installation Services—Install Indoor Unit

Notes:

If the connecting cable is not long enough, please contact the designated service station for a piece of special cable with sufficient length. No joints are allowed in the middle of the cable.

- Be sure to connect the cable correctly. Incorrect connection will cause fault to some electrical parts.
- Tighten the terminal screw to avoid looseness.
- After tightening the screw, gently pull the cable for tightness.
- Incorrect connection of earthing cable might cause electric shock.
- Be sure to fix the junction cover plate securely and press it closely against connecting cable. Improper fixing of junction cover plate might allow dust or water to enter or expose connecting terminal directly under the external force, whereas fire or electric shock might occur.

Installing Indoor Unit

- Fitting pipe can come out from four directions, i.e. right, rear right, left and rear left.

1. When laying the pipe (line) at the left or right side, cut as needed the extra part of the fitting pipe left at the tube-exit plate of the unit base. (See Fig. 9).
   (1) When only drawing out the power line, cut extra part 1.
   (2) When drawing out the connecting pipe and the electrical line, cut extra parts 1 & 2 (or 1, 2 & 3);
2. Pull out the fitting pipe from bottom case. Use adhesive tape to bondage the fitting pipe, electrical cable and drain hose properly and then pass them through the fitting pipe hole (See Fig. 10).
3. Hung the claws at the rear side of the indoor unit to the hook on the wall-mounting frame. Move the unit left and right to see if it is steady. (See Fig 11)
4. The installation height of the indoor unit must be at least 2.4m.

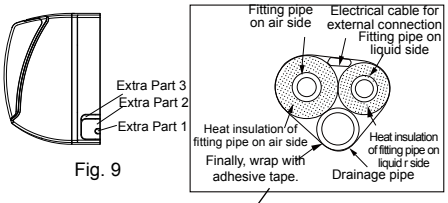


Fig. 9

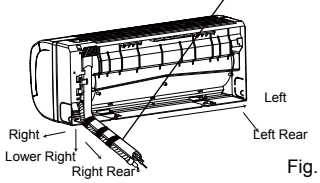


Fig. 10

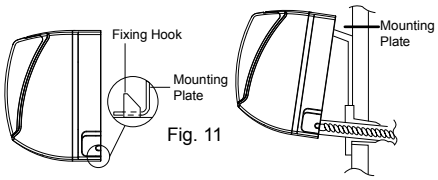
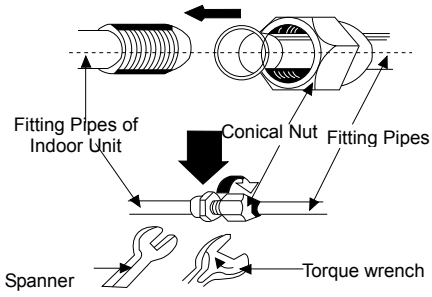


Fig. 11

Installing Connecting Pipe

1. The taper end of the connecting pipe must be in line with the corresponding tape face of the valve joint.
2. Use force to manually tighten the nut of the connecting pipe and then use spanner to tighten the nut.



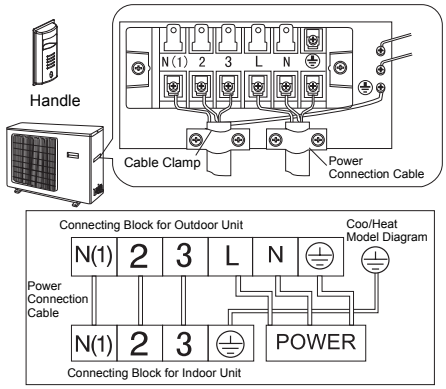
Hexagon Nut	Tightening Torque (N • m)
ϕ6	15~20
ϕ9.52	31~35
ϕ12	50~55
ϕ16	60~65

Notes: Connect the connecting pipe to the indoor unit first and then connect it to the outdoor unit. Pay attention to the bending and layout when preparing the connecting pipe in order not to harm it. Do not screw the joint nut too tightly, otherwise leakage will be caused.

◆Installation Services—Install Outdoor Unit

Install the power line

1. Remove the front side plate.
2. Pull all wires through the rubber bush.
3. Remove the wire clamp and connect the end of the power connection cord with screws to the wiring terminal board according to the "WIRING DIAGRAM" of outdoor unit.
4. Make sure that the wiring has been connected firmly.
5. Tighten the wire with clamp and clasp.



Vacuum-pumping and Leakage Inspection

1. Remove the nut cover at the shutoff valve.
2. Align with the center of the fitting pipe and manually tighten the conical nut sufficiently.
3. Use spanner to tighten the conical nut.
4. Remove the liquid valve cap, the gas valve cap and the nut of refrigerant charging mouth.
5. Use inner hexagon spanner to twist off the liquid valve body and at the same time use screwdriver to open the valve core of the liquid valve. Now gas shall flow out.
6. After gas continues flowing out for about 15 second and refrigerant gas begins to flow out, close the valve core and tighten the nut of refrigerant charge mouth.
7. Completely open the valve body of the liquid valve and the gas valve. （See Fig 12）
8. Turn and tighten the valve cap, then use soap water or a leak detector to check if there is gas leakage at the outdoor and indoor units and the pipeline connections.
9. If conditions permit, use a vacuum pump to exhaust air in the unit from the valve core. （See Fig 13）

Fig 12

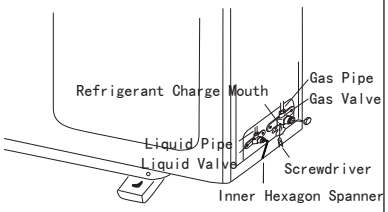
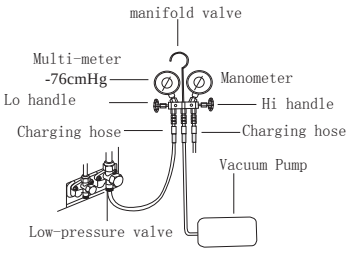


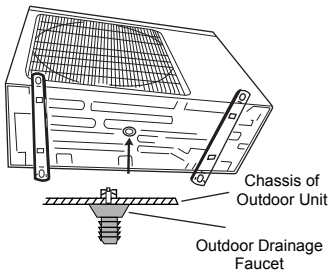
Fig 13



Draining of Condensate Water of Outdoor Unit (Cooling Only Unit Does Has Such Valve)

When the air-conditioning unit is in the heating mode, the condensate water generated at the outdoor unit and the water generated by defrosting shall be drained through the drainage pipe to proper place.

Installation methods : As shown in Figure, insert the drainage joint of the outdoor unit into the Φ25 hole on the base plate. Connect the drainage pipe to the drainage mouth so as to drain the condensate water and water generated by defrosting to proper place.



♦ Test Run and Checks after Installation

Check Items After Installation

Check Items	Problems Owing to Improper Installation
Is the installation reliable?	The unit may drop, vibrate or make noises
Has the gas leakage been checked?	May cause unsatisfactory cooling (heating) effect
Is the thermal insulation of the unit sufficient?	May cause condensation and water dropping
Is the drainage smooth?	May cause condensation and water dropping
Does the power supply voltage accord with the rated voltage specified on the nameplate?	The unit may bread down or the components may be burned out
Are the lines and pipelines correctly installed?	The unit may bread down or the components may be burned out
Has the unit been safely grounded?	Risk of electrical leakage
Are the models of lines in conformity with requirements?	The unit may bread down or the components may be burned out
Are there any obstacles near the air inlet and outlet of the indoor and outdoor units?	The unit may bread down or the components may be burned out
Have the length of refrigerating pipe and refrigerant charge amount been recorded?	It is not easy to decide the charge amount of refrigerant.

Test Run

1. Preparation of Test Run
   (1) Do not switch on the power before all installation work is completed.
   (2) Confirm that the control line is correctly installed and all electrical lines are firmly connected.
   (3) Open the shutoff valves of the big and small pipes.
   (4) Remove all foreign articles, especially metal scraps, line ends and forceps, from the unit.
2. Method of Test Run
   (1) Connect to the power supply, press the “ON/OFF” key on the remote controller, and the air-conditioning unit starts to operate.
   (2) Press the Mode key, select the operating modes such as cooling and fan, and observe if the operation is normal.

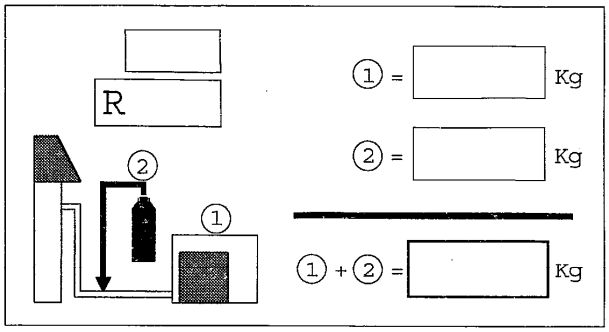
ENVIRONMENTAL INFORMATION

This unit contains fluorinated gases with greenhouse effect covered by the Kyoto Protocol.
Maintenance and disposal must be carried out by qualified persons only.
Refrigerant gas R410A, GWP = 1730

EXTRA REFRIGERANT CHARGE

Pursuant to Regulation EC 842/2006 on certain fluorinated greenhouse gases, in case of extra refrigerant charge, it is compulsory to:

- Fill in the label accompanying the unit inserting the factory quantity of refrigerant charge (see the technical label), the extra refrigerant charge and the total charge.
- Apply the label next to the technical label applied on the unit. For the split-type air conditioner apply on the outdoor unit.



1 Factory charge
2 Extra charge
1+2 Total charge