3.2.5 Refrigerant Adding

See the following table for the amount of additional refrigerant.

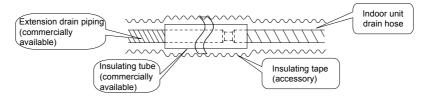
Item	Standard Pipe Length	Unnecessary Charge Pipe Length	Additional Refrigerant Amount for Extra Pipe
GU50W/A1-K	5.0m	≤7.0m	22 g/m
GU71W/A1-K	5.0m	≤7.0m	30 g/m
GU85W/A1-K	5.0m	≤7.0m	30 g/m
GU100W/A1-M	5.0m	≤7.0m	45 g/m
GU125W/A1-M	5.0m	≤7.0m	45 g/m
GU140W/A1-M	7.5m	≤9.5m	45 g/m
GU160W/A1-M	7.5m	≤9.5m	54 g/m

3.2.6 Installation of Drain Hose

- (1) It is not allowed to connect the condensate drain pipe into waste pipe or other pipelines which are likely to produce corrosive or peculiar smell to prevent the smell from entering indoors or corrupt the unit.
- (2) It is not allowed to connect the condensate drain pipe into rain pipe to prevent rain water from pouring in and cause property loss or personal injury.
- (3) Condensate drain pipe should be connected into special drain system for air conditioner

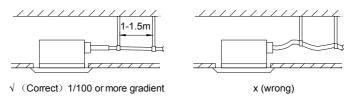
3.2.6.1 Indoor Side Drainage Pipe

- (1) Keep pipe size equal to or greater than that of the connecting pipe.
- (2) Install the drain piping as shown and take measures against condensation.

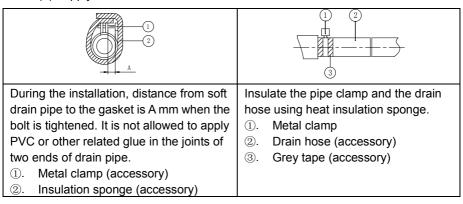


- (3) Keep piping as short as possible and slope it downwards at a gradient of at least 1/100 so that air may not remain trapped inside the pipe.
- (4) If the drain pipe can't be installed at a proper inclination, then add drain lift pipe.

(5) In order to make sure the drain hose is straight, the hangers should keep a distance of 1~1.5m from one another.



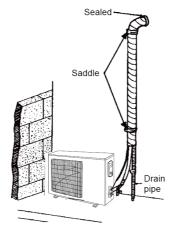
- (6) Use the drain hose that is delivered together with the unit.
- (7) Insert the drain hose into the drain faucet.
- (8) For the purpose of thermal insulation, wind a large piece of sponge around the clamp of drain hose.
- (9) Apply thermal insulation for the indoor drain hose.



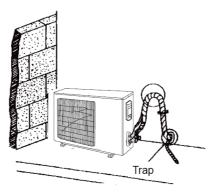
Indoor Unit	A mm
GUD50T/A1-K	
GU71T/A1-K	
GU85T/A1-K	
GU100T/A1-K	≤15
GU125T/A1-K	
GU140T/A1-K	
GU160T/A1-K	

3.2.6.2 Outdoor Side Drainage Pipe

- (1) If the outdoor unit is underneath the indoor unit, arrange the pipeline according to the following diagram.
 - 1)Drain hose should be placed on the ground and its end should not be immersed into water. The whole pipeline should be supported and fixed onto the wall.
 - 2) Wind the insulating tape from bottom to top.
 - 3)The whole pipeline should be wound with insulating tape and fixed onto the wall with saddles

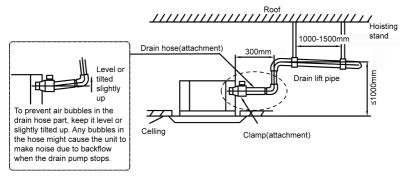


- (2) If the outdoor unit is above the indoor unit, arrange the pipeline according to the following diagram.
 - 1) Wind the insulating tape from bottom to top.
 - 2) The whole pipeline should be wound together to avoid water returning to the room.
 - 3) Use saddles to fix the whole pipeline onto the wall.

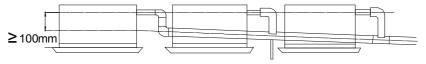


3.2.6.3 Notice on Drain Lift Pipe

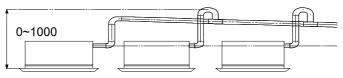
(1) The drain lift pipe should be 1000mm or less away from ground, as shown below.



(2) If multiple drain pipes are to be converged, please install according to the following process. Make sure the main drain pipe is laid downward at a certain angle.



T-joint converging drain pipes



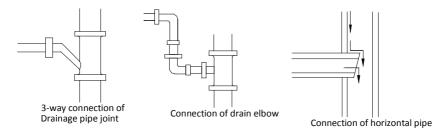
T-joint converging drain pipes



NOTICE: Specifications of the converging drain pipes should be applicable

to the operating capacity of the units.

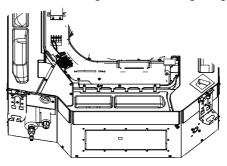
- (3) Drain branch should be connected to the vertical or horizontal part of the main drain pipe.
- (4) Horizontal pipe should not be connected to the vertical pipe that is on the same level. It should be connected in the following way:
 - 1)Install 3-way connector of drainage pipe joint, as shown in the left figure.
 - 2) Install drain elbow as shown in the middle figure.
 - 3) Install horizontal pipe as shown in the right figure.

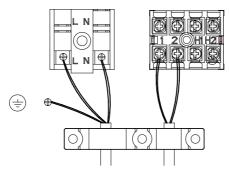


3.2.6.4 Check Drainage

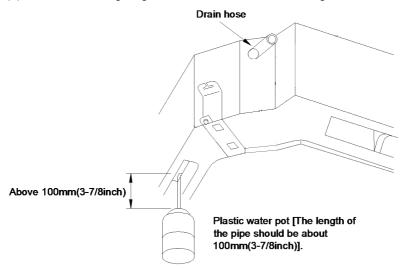
After the pipeline work is finished, check whether the drainage can go smoothly.

(1) Add slowly about 1L of water into the water tray. After the electric circuit is completed, check the drainage condition during refrigerating operation.





(2) See the following diagram for the method of water filling.

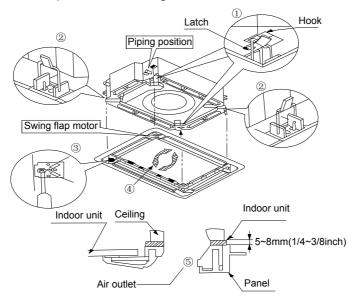


<Immiting water from the outlet vent terminal>

3.2.7 Installing the Front Panel

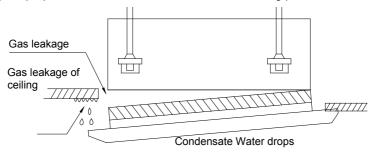
As shown below, take off the 4 corner covers from the front panel and loose the hexagon screw bolts on the 4 fasteners to the maximum. The position marked with "PIPING SIDE" on the front panel will direct right at the pipe mouth of the indoor unit.

- (1) Temporarily hang the 4 fasteners on the corresponding hooks of the main body of the indoor unit (Do not let the conducting wires get involved into the sealing material).
- (2) Screw in the hexagon screws beneath the 4 fasteners by about 15mm (front panel will rise).
- (3) As shown below, turn the front panel according to the arrow direction so that the front panel can be well connected with the ceiling.
- (4) Screw up the screws until the thickness of the sealing material between the front panel and the ceiling is 5-8mm.



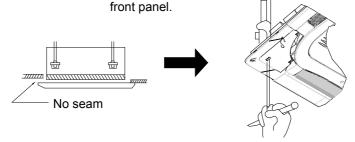


(1) Improper screw looseness will lead to the following problem.



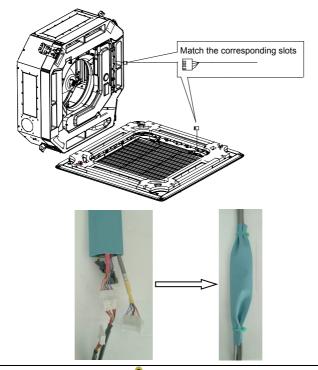
(2) After the screws are tightened, if there is still a gap between the ceiling and the decorative front panel, adjust the height of the unit again (as shown below).

If the lifting level of indoor unit and the drain pipeline won't be affected, it's fine to adjust the height of indoor unit through the holes on the corners of the



- (3) After installing the front panel, make sure there's no gap between the unit and the front panel.
- (4) Circuit of the decorative front panel.

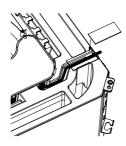
Connect the front panel to the main body through the corresponding slots. Match the slots according to their different size.





After installing the panel, the insulated protective cover with the thickness of 1mm shall be used to wrap the wiring terminal, Tighten the insulated glue cover on both sides with bonding tie to fix it.

(5) After connecting the communication wire, attach the flannelette on the foam to prevent the communication wire from reaching out the electric raceway(for 50).



3.3 Electrical Installation

3.3.1 Requirement and Notice on Electrical Installation



WARNING:

The electrical installation for the air conditioner should observe the following requirements:

- ①. The electrical installation must be conducted by professionals in compliance with local laws and regulations and the instructions in this manual. Never extend the power cord. The electric circuit must be equipped with a circuit breaker and air switch both with sufficient capacity.
- ②. The unit's operating power must be within the nominal range stated in the instruction manual. Use a specialized power circuit for the air conditioner. Do not draw power from another power circuit.
- The air conditioner circuit should be at least 1.5m away from any inflammable surface.
- ④. The external power cord, connection wire of indoor and outdoor units and the communication cords must be effectively fixed.
- ⑤. The external power cord, connection wire of indoor and outdoor units and the communication cords can't directly contact any hot objects. For example: they must not contact chimney pipes, warm gas pipes or other hot objects.
- ⑥. The external power cord, communication cords, and the connection wire of indoor and outdoor units must not be squeezed. Never pull, stretch or bend the wires.
- The external power cord, communication cords and the connection wire of indoor and outdoor units must not collide with any metal beam or edge on the ceiling, or touch any metal burrs or sharp metal edge around.
- ®. Connect wires correspondingly by referring to the circuit diagram labeled on the unit or electric box. Screws must be tightened up. Slipped screws must be replaced by specialized flat-head screws.

- cables, please contact Gree's local service center.
- . Wiring terminals should be connected firmly to the terminal board. Loose connection is forbidden.
- ①. After the electrical installation is finished, please use wire clamps to secure the power cord, connection wire of indoor and outdoor units and the communication cords. Make sure the wires are not clamped too tight.
- ①. The wire gauge of power cord should be large enough. Damaged power cord or other wires must be replaced by specialized wires. Wiring work must be done according to national wiring rules and regulations.

3.3.2 Electrical Parameters

Model	Power supply	Fuse capacity	Circuit breaker capacity	Min. sectional area of power cord
	V/Ph/Hz	Α	Α	mm ²
Indoor unit	220-240V ~50Hz	3.15	6	1.0

Model	Power supply	Circuit breaker capacity	Min. sectional area of power cord
Wodel	V/Ph/Hz	Α	mm²
GU50W/A1-K	220-240V ~50Hz	16	1.5
GU71W/A1-K	220-240V ~50Hz	20	2.5
GU85W/A1-K	220-240V ~50Hz	20	2.5
GU100W/A1-M	380-415V 3N~50Hz	16	1.5
GU125W/A1-M	380-415V 3N~50Hz	16	1.5
GU140W/A1-M	380-415V 3N~50Hz	16	1.5
GU160W/A1-M	380-415V 3N~50Hz	16	1.5



- 1). Fuse is located on the main board.
- ②. Install a circuit breaker at every power terminal near the units (indoor and outdoor units) with at least 3mm contact gap. The units must be able to be plugged or unplugged.
- ③. Circuit breaker and power cord specifications listed in the above table are determined based on the maximum power input of the units.
- 4. Specifications of power cords listed in the above table are applicable in a

- working condition where ambient temperature is 40°C and multi-core copper cable (e.g. YJV copper cable, with insulated PE and PVC sheath) is protected by a conduit, and is resistant to 90°C in maximum (See IEC 60364-5-52). If working condition changes, please adjust the specifications according to national standards.
- ⑤. Specifications of circuit breaker are based on a working condition where the working temperature is 40°C. If working condition changes, please adjust the specifications according to national standards.
- ⑥. Adopt 2pc of 0.75mm² power cords to be the communication cords between indoor and outdoor units. The maximum length is 100m. Please select a proper length according to local conditions. Communication cords must not be twisted together. To be in compliance IOS5151, it is necessary to use 8 meters long wire.
- ⑦. Adopt 2pc of 0.75mm² power cords to be the communication cords between wired control and indoor unit. The maximum length is 30m. Please select a proper length according to local conditions. Communication cords must not be twisted together. To be in compliance IOS5151, it is necessary to use 8 meters long wire.
- 8. The wire gauge of communication cord should not be less than 0.75mm². It's recommended to use 0.75mm² power cords as the communication cords.
- Calculation of the maximum permissible system impedance:
 - a) The following evaluation procedure shall be applied if the equipment emissions cannot meet the technical requirements of IEC 61000-3-3 and therefore the equipment cannot be declared compliant by the manufacturer in accordance with 6.2.1. In such a case the equipment shall only be connected to a supply having a system impedance lower than Z_{ref}.

b) To be in compliance with EN 61000-3-11, impedance value of power-supply system connected to product must be less than or equal to the allowable maximum value of $|Z_{sys}|$ in the following sheet:

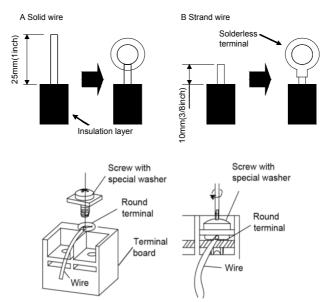
Models	Max Z _{sys} unit:ohms
GU50W/A1-K	0.170
GU71W/A1-K	0.090
GU85W/A1-K	0.071
GU100W/A1-M	0.416
GU125W/A1-M	0.142
GU140W/A1-M	0.173
GU160W/A1-M	0.193

c) Before connecting the product to public power network, please consult your local power supply authority to ensure that the power network has met the above requirements. No requirement for the unlisted product's impedance value of power-supply system.

3.3.3 Connection of Power Cord and Communication Cord

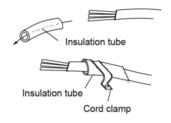
- (1) For solid wires (as shown below):
 - 1)Use wire cutters to cut off the wire end and then peel away about 25mm of the insulation layer.
 - 2)Use a screwdriver to unscrew the terminal screw on the terminal board.
 - 3)Use nippers to bend the solid wire into a ring that fits the terminal screw.
 - 4)Form a proper ring and then put it on the terminal board. Use a screwdriver to tighten up the terminal screw.
- (2) For strand wires (as shown below):
 - 1)Use wire cutters to cut off the wire end and then peel away about 10mm of the insulation layer.
 - 2)Use a screwdriver to unscrew the terminal screw on the terminal board.
 - 3)Use a round terminal fastener or clamp to fix the round terminal firmly on the peeled wire end.
 - 4)Locate the round terminal conduit. Use a screwdriver to replace it and

tighten up the terminal screw (as shown below).



(3) How to connect the connection wire and power cord

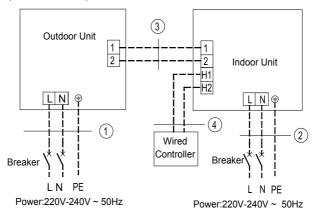
Lead the connection wire and power cord through the insulation tube. Then fix the wires with wire clamps (as shown in the next figure).





- ①. Before working, please check whether the indoor and outdoor units are powered on.
- Match the terminal numbers and wire colors with the colors indicated in the indoor unit.
- ③. Wrong wire connection may burn the electrical components.
- ④. Connect the wires firmly to the wiring box. Incomplete installation may lead to fire hazard.
- Please use wire clamps to secure the external covers of connecting wires.
 (Insulators must be clamped securely; otherwise, electric leakage may occur.)
 - (4) Electric wiring between the indoor and outdoor units

GU50W/A1-K,GU71W/A1-K,GU85W/A1-K.



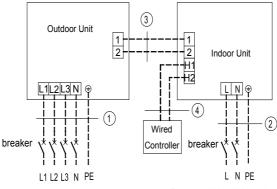
GUD50T/A1-K +GU50W/A1-K

- 1. Power cord 3×1.5mm²
- ②. Power cord 3×1.0mm²
- ③. Communication Cords 2×0.75mm²
- 4). Communication Cords 2×0.75mm²

GU71T/A1-K +GU71W/A1-K GU85T/A1-K +GU85W/A1-K

- 1. Power cord 3×2.5mm²
- 2. Power cord 3×1.0mm²
- ③. Communication Cords 2×0.75mm²
- 4). Communication Cords 2×0.75mm²

GU100W/A1-M, GU125W/A1-M, GU140W/A1-M, GU160W/A1-M



Power:380V-415V 3N ~ 50Hz

Power:220V-240V~ 50Hz

GU100T/A1-K +GU100W/A1-M
GU125T/A1-K +GU125W/A1-M
GU140T/A1-K +GU140W/A1-M
GU160T/A1-K +GU160W/A1-M
①. Power cord 5×1.5mm²
②. Power cord 3×1.0mm²
③. Communication Cords 2×0.75mm²
4. Communication Cords 2×0.75mm ²

(5) Electrical wiring of indoor unit



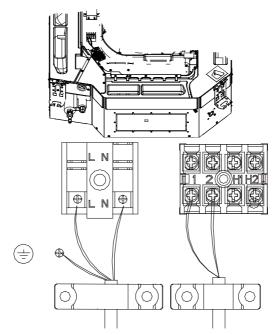
- ①. High and low voltage wires should be led through different rubber rings of the electric box cover.
- ②. Do not bundle up the connection wire and communication wire of wired control or lay them side by side, otherwise errors will occur.
- ③. High and low voltage wires should be secured separately. Secure the former ones with big clamps and the latter ones with small clamps.
- 4. Use screws to tighten up the connection wires and power cords of indoor and outdoor units on the terminal board. Wrong connection may lead to fire hazard.
- ⑤. If the connection wires of indoor unit (outdoor unit) and power cords are not correctly connected, the air conditioner may get damaged.
- ⑥. Ground the indoor and outdoor units through connecting the ground wire.



- ①. The units should comply with applicable local and national rules and regulations on power consumption.
- When connecting the power cord, make sure the phase sequence of the power supply matches with the corresponding terminals, otherwise the compressor will get reversed and operate abnormally.

1) Indoor side

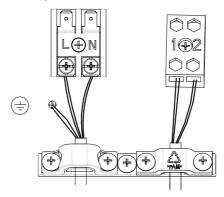
Take off the electric box cover from the sub-assembly of electric box. Then connect the wires. Connect the connection wires of indoor unit according to the corresponding marks.



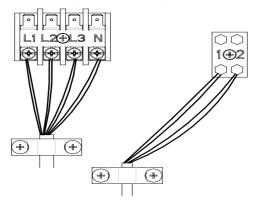
2)Outdoor side

Remove the big handle/front panel of the outdoor unit and insert one end of the communication cord and the power cord to the terminal board.

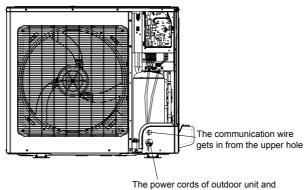
GU50W/A1-K, GU71W/A1-K, GU85W/A1-K



GU100W/A1-M, GU125W/A1-M, GU140W/A1-M, GU160W/A1-M



GU125W/A1-M, GU140W/A1-M, GU160W/A1-M



The power cords of outdoor unit and indoor unit get in from the lower hole.

Power cord should be secured along with the right side plate and fixed to the

hook with a wire clamp so as to avoid contacting the pipeline. The communication line between indoor and outdoor units should also be laid along with the right side plate but away from the power cord.

3.4 Check after Installation

Check Items after Installation

Check items	Possible events due to improper installation.
Is the main body installed securely?	The unit may fall down, vibrate or produce noise.
Did you do water leakage test?	Cooling capacity may become unsatisfactory.
Is the unit well insulated from heat?	Condensate, water drops may occur.
Does water drainage go well?	Condensate, water drops may occur.
Is the voltage consistent with that stated on the nameplate?	The unit may fail or its components may get burned.
Are the wires and pipes installed correctly?	The unit may fail or its components may get burned.
Has the unit been safely grounded?	Risk of electric leakage.
Do the specifications of wires comply with the requirement?	The unit may fail or its components may get burned.
Is there any obstacle blocking the air inlet and outlet of the indoor or outdoor units?	Cooling capacity may become unsatisfactory.
Have you recorded the length of refrigerant pipe and the refrigerant charging amount?	The refrigerant charging amount can't be controlled.

3.5 Test Running

Preparation before connecting the power

- (1) Power must not be connected if the installation work is not completed.
- (2) Control circuit is correct and all the wires are firmly connected.
- (3) Cut-off valves of the gas pipe and liquid pipe are open.
- (4) The inside of the unit should be clean. Take irrelevant objects out if there is any.
- (5) After checking, re-install the front side plate.

Operation after connecting the power

- (1) If all the above works are finished, power on the unit.
- (2) If the outside temperature is more than 30°C, heating mode can't be

enabled.

- (3) Make sure the indoor and outdoor units can run normally.
- (4) If there's sound of liquid shock when the compressor is running, then stop the air conditioner immediately. Wait until the electric heating belt is heated enough, and then restart the air conditioner.
- (5) Feel the air flow of the indoor unit to see if it is normal.
- (6) Press the swing button or speed control button on remote control or wired control to see if the fan can run normally.



- ①. If you use remote control to turn off the unit, compressor will continue to run for 6min.
- ②. If you use remote control to turn off the unit and then immediately turn the unit on again, compressor will need 3min to restart. Even if you press "ON/OFF" button on the remote control, it won't be started up right away.
- ③. If there's no display on the wired control, it's probably because the connection wire between the indoor unit and wired control is not connected. Please check again.

4 Installation of Controller

Refer to the Installation Manual of the controller for more details.

5 Maintenance

5.1 Failures Not Caused by Faults of the AC

If your air-conditioning unit suffers from abnormal operation or failure, please first check the following points before repair:

Failure	Possible Reasons	
The unit cannot be started.	The power supply is not connected. Electrical leakage of air-conditioning unit causes tripping of the leakage switch. The operating keys are locked. The control loop has failure.	
The unit operates for a while and then stops.	There is obstacle in front of the condenser. The control loop is abnormal.	
Poor cooling effect.	The air filter is dirty or blocked. There is heat source or too many people inside the room. The door or window is open. There is obstacle at the air intake or outlet. The set temperature is too high. There is refrigerant leakage. The performance of room temperature sensor becomes worse.	



NOTICE: Check the above items and adopt the corresponding corrective

measures. If the air conditioner continues to function poorly, please stop the air conditioner immediately and contact Gree's authorized local service center. Ask our professional service staff to check and repair the unit.

5.2 Error Code



WARNING

- ①. If abnormal things (for example, awful smell) occur, please stop the unit immediately and disconnect power. Then contact Gree's authorized service center. If the unit continues to run in abnormal situations, it may get damaged and cause electric shock or fire hazard.
- ②. Do not repair the air conditioner by yourself. Improper maintenance will cause electric shock or fire hazard. Please contact Gree's authorized service center and send for professional service staff to repair.

If the display panel or wired control displays an error code, please refer to the error code meaning stated in the following table.

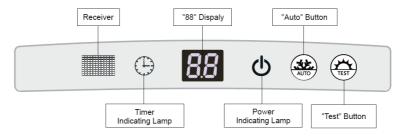
Number	Error code	Error
1	E1	Compressor high pressure protection
2	E2	Indoor anti-freeze protection
3	E3	Compressor low pressure protection, refrigerant lack protection and refrigerant colleting mode
4	E4	Compressor air discharge high-temperature protection
5	E6	Communication error
6	E8	Indoor fan error
7	E9	Water-full protection
8	F0	Indoor ambient temperature sensor error
9	F1	Evaporator temperature sensor error
10	F2	Condenser temperature sensor error
11	F3	Outdoor ambient temperature sensor error
12	F4	Discharge temperature sensor error
13	F5	Wired control temperature sensor error
14	C5	IDU jumper cap error
15	EE	IDU or ODU memory chip error
16	PF	Electric box sensor error
17	Н3	Compressor overload protection
18	H4	Overload
19	C4	ODU jumper cap error
20	EL	Emergency Stop(Fire Alarm)



NOTICE: When the unit is connected with the wired controller, the error code

will be simultaneously shown on it.

Instructions to the Error Indicating Lamps on the Panel of the Cassette Type Unit.



Power and ON/OFF Indicating Lamp:

It goes red when the unit is powered on while it goes white when the unit is started.

Timer Indicating Lamp:

It goes on when the timer is set and goes off when it is not. Its display is in yellow.

"88" Display:

When there is no error, and it receives valid remote control information. It will display the temp setup for 5s, then display the temp of indoor. When the unit has error, it will display the error code. When there are more than one error, the error code will be displayed alternately.

After the grille of the front panel is opened, the front panel is still allowed to realize the following functions by pressing the "Auto" button and the nearby "Test" button simultaneously for five seconds when the unit is "Off".

5.3 Unit Maintenance

5.3.1 Clean Air Filter

If the air conditioner is used at a dusty place, clean the air filter regularly. (Once every half a year)

How to clean the air filter		
Open the air intake grill. Push the clasps outward and then open the air intake grill.		
Remove the air filter. Pull the handle at the back of air intake grill. Lift up the filter and then detach it. Then remove the 3 cleaners that are fixed on the filter.		
3) Cleaning Use vacuum cleaner to remove dust or rinse the filter. If the filter is very dirty (greasy), use warm water (below 45°C) with neutral detergent to clean it. Then dry the filter at a cool place. Notice: do not use hot water (above 45°C) to clean, otherwise the filter may be discolored or out of shape. Do not dry it with fire, otherwise the filter will catch fire or become out of shape.		
4) Fix the 3 cleaners on the filter and then re-install the filter by fitting it into the protruding parts on top of the air intake grill. Pull the handle at the back of the air intake grill to secure the filter.		
5) Close the air intake grill. Push the clasps outward and then match the air intake grill with the main body. Loose the clasps and then close it.		

5.3.2 Clean Air Intake Grill

How to clean the air intake grill			
1) Open the air intake grill.	Same with step 1 in "Clean Air Filter".		
2) Take out the air filter.	Same with step 2 in "Clean Air Filter".		
3) Take out the air intake grill. (Open the air intake grill at an angle of 45 degrees, and then lift it up.)			
4) Cleaning Use soft brush, water, neutral detergent to clean. After cleaning, shake off the water or let it dry. Notice: do not use hot water (above 45°C) to clean, otherwise the filter may be discolored or out of shape.			
5) Install the air intake grill.	Refer to step 3.		
6) Install the air filter.	Same with step 4 in "Clean Air Filter".		
7) Close the air intake grill.	Refer to step 1.		

5.3.3 Drainage Pipe

Periodically check if the drainage pipe is blocked to smooth the condensate water

5.3.4 Notices at the Beginning of the Using Season

- (1) Check if there is blockage at the inlet or outlet vent of air conditioner.
- (2) Check if the earth wire has been attached reliably by the skilled serviceman.
- (3) Check if the exhausted batteries of the wireless controller have been replaced.
- (4) Check if the air filter had been installed well by professional.

Keep the power switch "On" 8 hours before the startup of the unit which has not been used for a long period.

5.3.5 Maintenance at the End of the Using Season

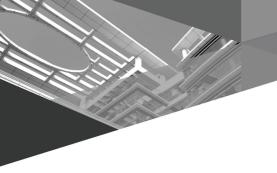
- (1) Cut off the main power of air conditioner.
- (2) Clean the air filters and other parts by the skilled serviceman.
- (3) Leave the fan running for 2-3 hours to dry the inside of the unit.

5.3.6 Components Replacement

Components are available in Gree agency or Gree distributors nearby.

5.4 After-Sales Services

Any quality or other issues encountered in the purchased air conditioner, please contact the local Gree after-sales service department.





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