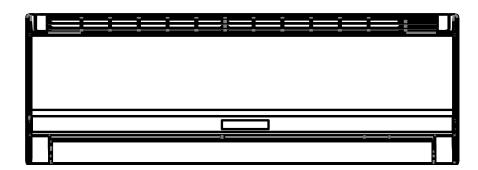
DC 24V Solar Air Conditioner Installation and Operating Instruction



- *The installation should be completed by qualified technicians.
- * To your use safety, Please read carefully the manual before use.
- * Please keep this manual in good condition for your reference in the future.

Notes to Users

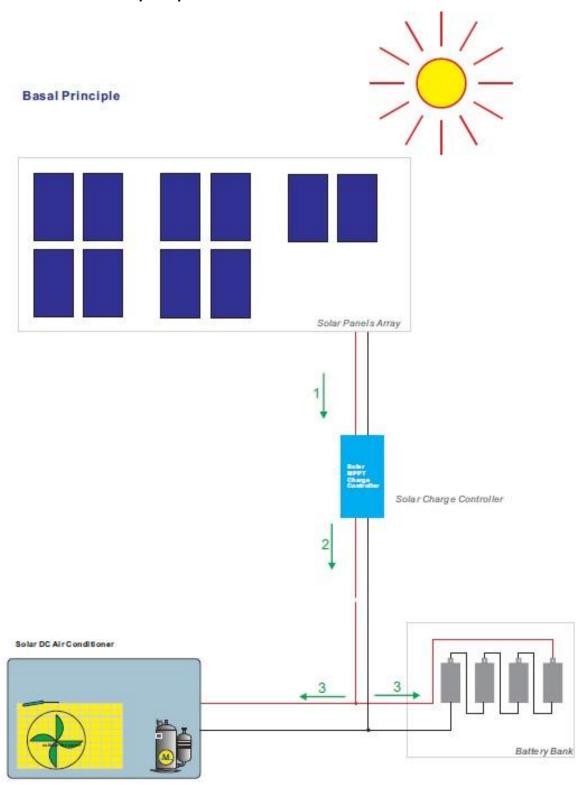
We appreciate your purchasing our solar air conditioner. We will serve for you loyally. Our solar air conditioner is manufactured under the strictest quality control, and is provided with excellent performance and reliable security property. For protecting your rights and interests, for guaranteeing the eximious performance of our solar air conditioner to function normally, and for ensuring you receiving the better service, we plead you to necessarily advert to the following items.

- I. The part of the *Installation Guide* in the *Notes* only provides for the consultation of professional installers.
- II. When you are going to use the solar air conditioner, please be sure to read the *Notices* to avoid damaging the solar air conditioner or other accidents as a result of false operations.
- III. Please be sure to cut off the power of the solar air conditioner, just like the other apparatus, when you stop using.
- IV. The correct installation and application assure the eximious performance of the solar air conditioner. Please read the *Operation Instruction* before installation, adjustment and application.
- V. This machine and the *Operation Instruction* are subject to ameliorate without notice.
- VI. The carried standard of the product is Q/320581FSC001-2006
- VII. Please properly keep your purchase invoice, *Warranty Card* and *Operation Instruction*.

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work principle of the DC 24V Solar Air Conditioner



The Performance Characteristics of the Solar Air Conditioner

- The compressor, which is of the international famous brand, cools and heats powerfully, operates most smoothly, and runs on low load. Service life is extended.
- The operation is calm and silent. The air conditioner adopts the advanced off-center blades and foam air duct. The high performance low noise blower is adopted. The noise reduces remarkably.
- Via auxiliary heating by electricity energy, the solar air conditioner is exactly fit for the freezing area, and brings warmth in severe cold days. It saves more electricity compared with electric heating.
- It is provided with an elegant, graceful, grand design of a new appearance.
- It is provided with the microcomputer control technique. The remote control and the control panel can be applied interchangeably. The operation is convenient and simple. The air conditioner is also provided with an automatic detection display system. You will feel beneficial, comfortable, and enjoyable with Our hybrid solar air conditioner.
- Uses standard 150W, 24V solar panels.
- Uses 2 standard 12V deep cycle solar bateries.

Notice: The above-mentioned advantages are the main functions of Our solar air conditioner. We hereby inform that they maybe slightly different literally with advertising materials.

Chief Property Parameters

Power Supply: 24VDC (22V to 27V)					
Model No.			TKF-26GW/DC		
		Perf	ormance		
		Btu/h	9000		
Capacity	Cooling				
		W	2600		
Noise	Indoor	dB(A)	≤40		
NOISE	Outdoor	dB(A)	≤52		
Air Circ	ulation	m³/h	450		
Suitabl	e Area	m²	9~15		
EE	D.	W/W	4.56		
L-L	-1\	Btu/h/w	15.5		
Batte	eries		12 VDC *2		
Battery A	λH(each)	AH	120 *2		
Solar panel s	specification		24V/30W*2		
Refrig	erant	R-410a			
		Power C	consumption		
Power	Input	W	600		
Rated (Current	Α	12.5		
Input F	Power	V	DC 24		
		Din	nension		
Indoor Unit	Shipping	mm	775*260*210		
indoor Onit	NET	mm	840*325*265		
Outdoor Unit	Shipping	mm	790*260*540		
Outdoor Offic	NET	mm	910*370*610		
Solar Banal	Shipping	mm	1074*801*165		
Solar Panel	NET	mm	1200*880*205		
Dotton/	Shipping	mm	645*245*495		
Battery	NET	mm	405*175*235		
Weight					
Indoor Unit Net/Gross		kg	10/13		
Outdoor Unit	Net/Gross	kg	40/45		
Solar Panel	Net/Gross	kg	30/35		
Battery Net/Gross		kg	20/26		

Note:1. Parameters in the form are measured in the rated working state according to GB/T7725-2004. Changes may appear according to the real working state.

Please refer to the products nameplate.

² Parameters may change due to the product improvement.

Notice

Application Notice

Safety Specification

△ Warning:

- Keep the switch of solar air conditioner out of the reach of children in order to prevent children from playing with the electricity.
- Please switch off the power in the thunderstorm weather; otherwise the thunder would cause damages to the machine.
- Please switch off the power when the machine is not in use, or when you leave the room for a long time. Otherwise the solar air conditioner may cause incidents.
- Please switch off the power before cleaning or maintaining the machine. Otherwise incidents may happen.
- Never rinse the machine with liquid detergent, liquefied cleaning agent, and corrosive cleaning agent. Never sprinkle water or other liquid to the machine. Liquid would damage the plastic accessories. Even the electricity-shock may be caused.

△ Danger:

- Never put your hands or a stick into the air outlet of the indoor or outdoor machine, otherwise the high-speed fan would bring about damages.
- Never touch the board when the wind board is running, otherwise it will clamp your fingers, or damage the transmission component of the wind board.
- Never remove the ventilating hood of the machine, or the high-speed fan would cause damage to people.
- Never allow children to play with the solar air conditioner. Such condition may cause an accident.
- Never moisten the indoor machine and the remote controller. Otherwise it may cause short circuit, even a fire.
- Never put or use combustible liquid or gas such as hair styling jelly, paint, and gasoline near the machine. Otherwise it may cause a fire.
- If some abnormal situation happens, such as abnormal noise, smell, smoke, temperature increment, creepage, please cut off the power instantly. Call the local distributors or Our solar air conditioner after-sale service centers. Don't maintain and repair the machine by yourself.

Solar Air Conditioner Application

Pre-checking

- *Please check if the grounding wire is rightly connected or not.
- *Please check if the air strainer is fixed.
- *If the solar air conditioner is idle for a long time, please rinse the strainer before start-up.

For more details, please consult the chapter Repair and Maintenance.

*The inlet opening and the outlet opening of the indoor and the outdoor units should be unblocked.

Optimum operation

- *Please set a proper comfortable temperature. Avoid exceedingly hot or cold, especially where the elders, children and patients live.
- * When cooling, please use curtain or shutter to avoid sunlight from shining in.
- *Please shut the windows, otherwise the convection of indoor and outdoor air will decrease the effect of cooling and heating
- *If you need to set the pre-runtime, please use the remote controller.
- *Never place barriers, which baffle the airflow, near the indoor and outdoor units. It will decrease the effect of air conditioner system; even stop the running of the system.
- *Please rinse the air strainer frequently. If the air strainer is blocked, it decreases effect of cooling and heating.

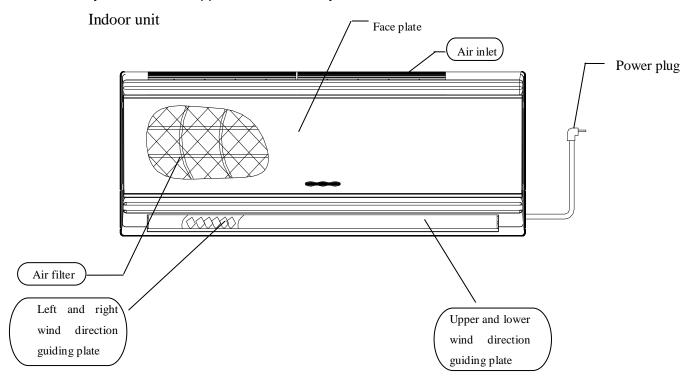
Working temperature range

Mode		
	Cooling	Heating
Temperature		
Indoor Temperature	above 18 °C	below 31 °C
Outdoor Temperature	18 °C ~43 °C	-7 °C ~24 °C

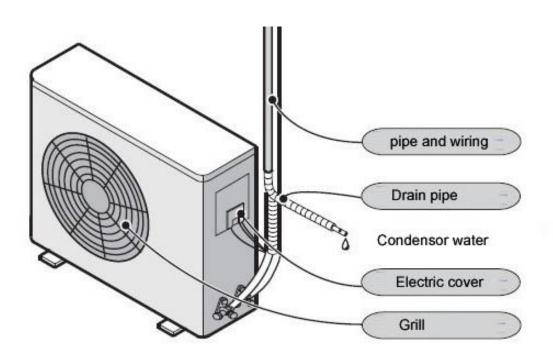
For ensuring normal working of solar air conditioner, please use it in working temperature range. Otherwise, the interior protection, water dripping, or low efficiency may be induced.

Air Conditioner Components' Names

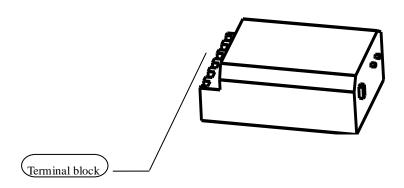
Notice: The graphic example is based on the standard type solar air-conditioner. Thus, it may be different in appearance of that of yours.



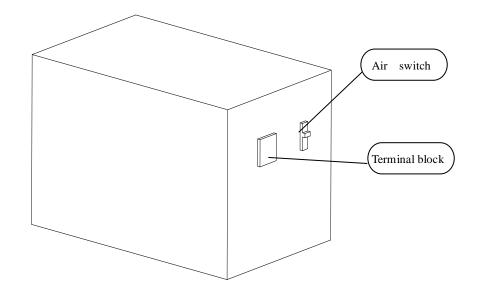
Outdoor unit



Solar charge controller

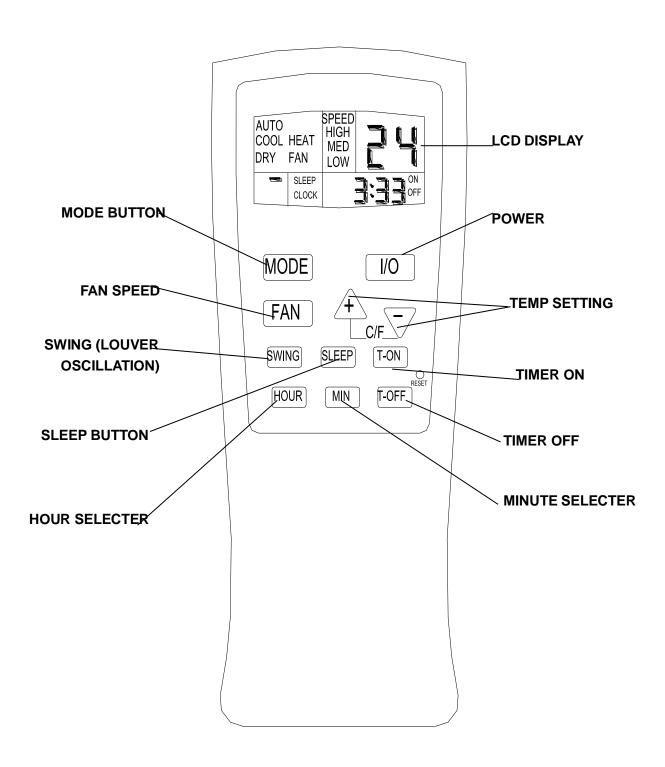


Batteries canbinet



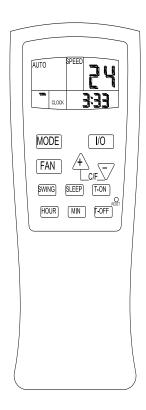
Operation Manual

Remote Control Function



Automatic Control

A comfortable room condition will be Realized simply by pushing button"Au -tomatic Operation".



To start operation:

Push button "I/O".

When it displays (Automatic Operation) mode, the air conditioner runs "automatic control", and an optimum room temperature is controlled and an realized.

To change the tempeature display unit:

Push the Push "+" button and "-" button You can shift the temperature diplay, from Celsius to Fahrenheit temperature display

To stop operation:

Push "I/O" button.

Push"mode"button to set"Automatic
Operation"mode if is does not display
Automatic operation.

Push"Mode"button, the operation mode is changed in sequence of (Automatic Operation)→(Cooling)→(Dehunidification)→(Heaatting)→(Automatic Operation).

Automatic Operation:

- A comfortable room condition will be achieved automatically and economically. as the computerized control system will change the operation mode in accordance with the real room condition.
- you may select your desired temperature, wind speed and wind direction by Buttons
- Yoprotect the compressor, the automatic time-lapse protection is possessed. Compressor stops, you have to wait at least 3minutes before restart.

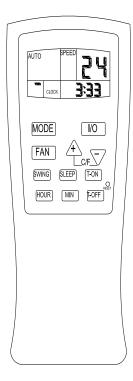
Caution:

• When the outdoor temperature is low, the outdoor heat exchanger is susceptible to frosting to influence its heating effect. At that moment, the LED indicator will flash and indoor fan motor will stop. After defrosting, it will recover its heating

Operation automatically.

Manual Control

Select operation mode and Slightly adjust temperature Or wind direction.



Using Manual Control for cooling, dehumi
Dification of heating operation:
push "I/O"button.
push"Mode"button,the operation mode
Push"Mode"to select operation mode.
Is changed in sequence of (Automatic

Operation)→(Cooling)→(Dehumidification)
→ (Heating)→(Automatic Operation).

To stop operation"

Push" I/O:button

If you set it well, later it will run as the same setting when you push "I/O" button.

To change temperature setting:

Push "+" button to decrease the temperature Setting The setting will be decreased by 1° C Each time when you push the button once. Push "-" button to increase the temperature Setting. The setting will be increased by 1° C Each time when you push the button once.

In heating operation:

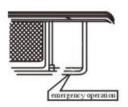
The machine will be overloaded if the air conditioner absorbs too much heat from air. The fan of the out door set will stop automatically in accordance with the judgment of the microprocessor. It is not a failure that the outdoor set frosts when the fan stops.

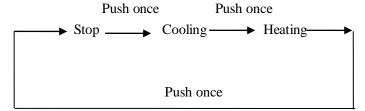
In dehumidification operation:

The temperature is set automatically and it cannot be adjusted. In runs at a temperature slightly lower than the room temperature. The wind will run at a low spe-ed and it cannot be adjustable.

Emergency Operation

If the remote controller is lost or inactive, you may use the emergency operation switch on the air conditioner. (When push the switch. Emergency operation switch will be selected.)





Wind Direction and Wind Speed

To Change wind speed, push "FAN" button.

The indoor fan will change its wind speed in a sequence

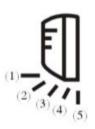


→ (Automatic) each time when you push the button.

To change wind direction up and down push "SWING" button. The swing blade will change its wind direction a sequence of each time when you push the button.

The Recommended Wind Direction of Up and Down Normally use (Automatic).

Set (1) or (3) in the mode of cooling or dehumidification while set (3) to (5) in the mode of heating



Move the left-right guide blade to change the wind direction in left and right.

When push "SWING" button, the vans will swing up and down. And push "SWING" button again, the swing mode will be cancel

SLEEP MODE

To set Sleep mode, make sure the unit is in Air Conditioner mode or Heating mode .Press the SLEEP Button ,The "sleep" icon appears on the control panel display.

CLOCK

AUTO

MODE

3:33

To set the clock on the remote control, hold down either the MIN or HOUR button until the displayed time flashes on the remote control display. Change the minutes by pressing the MIN button and change the hours by pressing the HOUR button. Set the clock prior to programming the timer.

TIMER

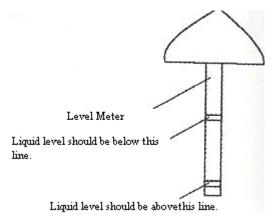
To program the timer, first press the T-ON button. Once T-ON is pressed the auto-on timer will blink in the bottom right rectangle of the remote control display. Press the MIN and HOUR buttons to change the clock to the desired time for the unit to automatically turn on. The minutes will increase by 10 with each press of the MIN button and the hours will increase by 1 with each press of the HOUR button. Press the T-OFF button and the remote control display will flash the desired auto-off timer. Press the MIN and HOUR buttons to change the clock to the desired time for the unit to automatically turn off. The timer is set when the auto-off time stops flashing and the words "ON" and "OFF" are displayed next to the time.

The Maintenance

Please cut off the electricity before repair and maintenance.

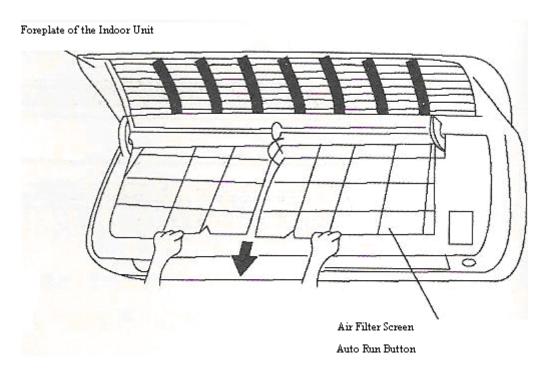
1. Check The Heat Conductor Level Periodically Or Before Starting Up.

- (1) Please dismount the exhaust cap on the insulating tank.
- (2) Take out the level meter; observe the liquid level mark on it.
- (3) Please contact with the local distributor or the solar air conditioner after sale service center in time if the liquid is insufficient. Don't open the machine by yourself.



2. Rinse the Air Filter

- 1) Dismount the filter
- (1) Please open upwards the fore plate of the indoor unit.
- (2) Extract downwards the two air filter screens.
- 2) Rinse the air filter screen
- (1) Clean the filter screen by a dust collector.
- (2) Wash the filter screens with clean warm water below 40°C.
- 3) Reinstall the filter screens after airing.
- 4) Close the inlet grilles of the indoor unit.
- * Please rinse the filter screen every 15 days.



3. Clean the Outer Surface of the Solar Air Conditioner

Error! Reference source not found.Wipe the outer surface with soft cloth and clean water.

Error! Reference source not found.Wipe the outer surface with soft cloth and neutral ambulant.

4. Inspection during Season Changes

1) When the air conditioner has not operated for a long time

Error! Reference source not found. Please switch on the air conditioner in cooling mode in a fine weather. The moisture inside can be removed if the machine keeps running for 6 to 8 hours.

Error! Reference source not found. Please switch off the solar air conditioner by the remote controller, cut off the electricity, and take out the batteries in the remote controller.

Error! Reference source not found.Clean the outdoor unit, and wrap it with a plastic film cover.

2) Air conditioner inspection before starting up during season changes

Error! Reference source not found. Take off the plastic protection cover of the outdoor unit.

Error! Reference source not found. Check the power circuit and connecting wire to find the possible damages.

Error! Reference source not found. Make sure that no obstacle is in the outlets of the indoor unit or the outdoor unit.

Error! Reference source not found. The drainpipe is without a crack or bruise.

Error! Reference source not found.Rinse the filter screens and reinstall them. Switch on the air conditioner after the electricity is connected for above half an hour.

5. Attention

- a) Never place inflammables or explosive goods such as paint, shampoo, etc near the air conditioner.
- b) Never apply the air conditioner for other purposes such as blowing dry clothes and food preservation.
- c) Keep other heat sources away from the solar air conditioner.
- d) If the power wire or the connecting wire is damaged, please cut off the electricity and call after sale serviceman for repair in order to avoid an accident.
- e) Prepare an individual socket for the source wire of the air conditioner. The rated current of the fuse is 30A. The copper core section area of the electric power conductor is at least 5mm².

Common Faults and Solutions

If your solar air conditioner cannot work normally, please check the following items before maintenance. If the faults cannot be solved, please contact our Special Repair Center or the distributor.

the distribut			
Phenomenon	Possible Reason	Solution	
Out of operation	 1.Power failure 2. The leakage breaker tripping 3. The voltage is exceedingly low. 4. The air conditioner special fuse is burnt out. 5. The air conditioner is switched off as a result of disoperation of the timer 6. The air conditioner is on defrosting mode. 	1.Re-connect the power supply 2.Contact the repair center 3.Consult the electrician or distributor. Buy a. Stabilizing voltage supply to ensure operation. (below 42v) 4.Change the fuse or consult the after service center. 5.Cancel the timing and reboot 6. Please wait for a moment.	
Poor cooling and heating effect	 1.The filters are dirty or blocked 2.A heating source or many people are indoors 3. The temperature setting is incorrect. 4. The air inlet and air outlet of the indoor machine are blocked. 5. The window or the door is open. 6. Outdoor temperature is below 0°C while heating. 7. The liquid is insufficient in the insulated tank. 8,The outdoor unit is downsun 	 Clean filters to improve air flow fluency Remove the heating source if possible. (Please pay attention to the air conditioner type when purchasing.) Reset the temperature. Remove the obstacles to ensure the airflow unhindered Close the door and window to avoid cooling air or heating air from escaping. Other subsidiary heating apparatuses can be applied simultaneously. Contact the repair center when the liquid is in shortage. Please move the outdoor unit face to sun. 	
Noise is aloud	1.Water flow sound 2.Exhausting sound 3. Arrangement is instable. 4. The operation noise is obviously unusual.	 Cooling fluid is flowing in the machine when the air conditioner switches on and switches off. Please wait for a moment. This is the sound of the four way valve switching. Please wait for a moment. Please contact the distributor If any unusual noise is heard, please contact the repair center. 	
Compressor cannot work.	 The temperature setting is incorrect. The LCD shows that the timing is 'on'. For protection, the compressor will not work in the first 3 minutes. Please wait for a moment. 	 Reset the temperature. Cancel the timing and then reboot. It is a normal phenomenon. Please wait for a moment. 	
No immediate wind blows out during heating.	If the air conditioner blows when the evaporator is at a low temperature, the wind will be uncomfortable. Please wait till the evaporator is heated.	Please wait for a moment.	
The compressor starts and stops frequently.	The input voltage is exceedingly low. Too many appliances are applied on the same line. The voltage for the air conditioner is insufficient. The heat preservation capacity of the room is poor.	 Check the electric power source (voltage and wire diameter). When the voltage is low, and the wire diameter is too short, please buy a power stabilizer and another power cord in time or consult the electrician or the distributor. Prepare a special power cord for the air conditioner. Improve the heat preservation capacity of the room. 	
The displayer of remote controller is not clear or not work	The battery is exhausted. The anode and cathode are confused so as to the battery is in stalled wrongly. The battery is exhausted. Output Description Descrip	1.Change another two new batteries 2.Install the batteries rightly Illy please check above items before	

If your solar air conditioner cannot work normally, please check above items before maintenance. If the faults cannot be solved, please contact the Special Repair Center or the distributor.

Common Failures Diagnosis and Elimination

Non-failure Phenomena

- 1. When you start up or shut down the solar air conditioner, sometimes you will hear sizzle sound, which is the flowing sound of the cooling agent, and is not a malfunction.
- 2. The solar air conditioner cannot restart at once after stops, though it is switched on. Within 3 minutes, the compressor will not run for the cooling, dehumidifying and heating.
- 3. Sometimes, the solar air conditioner inbreathes the bad smell so as to blow out the mawkish air. Under such condition, no failure is with the solar air conditioner. The filter screen is to be rinsed.
- 4. When heating, the indoor machine and the outdoor machine may stop simultaneity, but the compressor still runs. This is to defrost. The heating performance will continue after defrosting finished.
- 5. When heating, the outdoor machine may generate water flow or hydrosphere. This is a result of defrosting and thawing, and is not a malfunction.
- 6. After the heat pump solar air conditioner, which is applied in the Inner Mongolia, starts or stops, the air conditioner may beep. This is a result of self balanced pressure, and is not a malfunction.

Clew of Saving Energy:

Never jam the air inlet and the air outlet of the solar air conditioner. The air conditioner will not run normally and may be damaged if the outlets are obstructed. When cooling, please avoid direct sun radiation into the room of the solar air conditioner. Please adopt the sun shield or curtains. If the wall and ceiling of the room is heated by sunshine, the period of cooling will be long.

Please always keep the air filter screen clean. Filter screen jamming will greatly reduce the efficiency of the air conditioner. Keep the window, door and any openings closed, so as to avoid cooling air escaping.

Failure Display Status List

Failure Type	Display Status
Indoor Temperature Sensor problem	E1
Indoor Coiler Transmitter Froblem	E2
Freon leaking or compressor problem	E4
Problem with indoor fan motor	E5

If any of the above-mentioned failures happen, please contact the distributor or the after service center.

Solar Air-conditioner Installment

The Installation Guide

Warning: Solar air conditioner must be installed by the professionals. Do not install by yourself according to this instruction booklet. In order to install it correctly, please first read the content of 'Installation Part'. The installation of this solar air conditioner should be in accordance with the stipulation of *GB17790 National Standard Room Air Conditioners Installation Criterions* and the requirements of this instruction booklet.

After installation, the professional should give some advice to the user about how to use and maintain the air conditioner; ask the user to read carefully and to take care of the 'installation and application instruction'.

Installation Notice:

Installing the air conditioner in the following places may cause malfunctions. If this can not be avoided, please contact the Our after sale service center.

- 1 Places where the air contains oil element (lubricating oil).
- 2 Places where the air contains the sulfide gas (sulfide hot spring).
- 3 Places where the air contains the inflammable gas or the volatile is spread.
- 4 Seashore alkaline land.
- (5) Places where the high frequency equipments are arranged, such as the wireless apparatus, the welding apparatus, and the medical equipment.
- (6) Special surroundings.

Electrical work

Electrical work should conform to the corresponding stipulations of the *GB17790 National*Standard Room Air Conditioners Installation Criterions

- ⊙ Electric appliance security requirements during the first installation
- 1. If the user's electricity environment is provided with serious security hidden danger, the installer should refuse to install and explain clearly. Only after the security hidden danger is removed, the installation can be continued.
- 2. Fluctuation scope of power line voltage is usually between $\pm 10\%$, if the voltage is not in this scope, please take measures to regulate it.
- 3. A leak-protector and a master switch should be provided on the line. The fuse is forbidden to be replaced by the copper wire and other wires. Please select the appropriate

fuse according to the maximum of the electric power consumption, which comprises 1.5 to 3 times of the maximum current of the solar air conditioner and the current of other electric appliances.

- 4. The power cord should be provided with effective ground wire. If not, the installer should refuse to install and clearly explain.
- 5. The power source must be supplied only for the solar air conditioner and should satisfy following items.

Form 5. Comparison of the Standards of Electric Conductor Cross Section Area (Diameter of Wire), Power Switch, Fuse and Load Current

Special power distribution equipment and Power distribution equipment and electric wire						
electric wire for the air conditioner			for the power bus			
Air	Electric	Standard spec	Circuit's	Electric	Standard spec	
conditioner's	conductor's	(A) of the	maximum	conducto's	(A) of the	
maximum	cross-sectio	socket or	current×(1.	cross	power switch /	
current (A)	nal area(m²)	power of the	5 to 3	sectional	the fuse	
		switch /fuse.	times) (A)	area(m²)		
≦10	1 or 1.5	16/16	≦16	1.5~4	32/25	
≦16	1.5 or 2.5	32/25	≦25	2.5~4	63/50	
≦25	2.5 or 4	63/50	≦32	4~10	63/50	
≦32	4 or 6	63/50	≦40	6∼16	100/80	
			≦63	10~25	125/125	

Notice: The maximal electric current of the solar air conditioner refers to the maximal input electric current, which is printed on the brand of the indoor unit. The maximal electric current of the circuit refers to the total summation of the maximal electric current, which comprises the maximal electric current of the solar air-conditioner and the maximal electric current of other appliance.

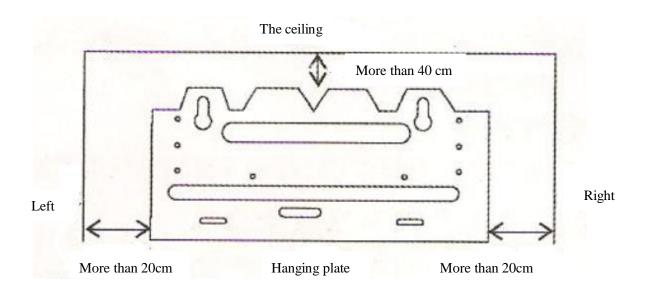
The electric security requirement of installation of solar air conditioner

- 1. Power cord of indoor and outdoor units cannot adopt polyvinyl chloride, and must adopt chloroprene rubber wires (including high-tension signal wires). It is forbidden to lengthen or shorten the wires by yourself. The exceedingly long wire of electric source should be folded as large round curves. It is strictly forbidden to wind wires into small circles.
- 2. The ground wire must adopt yellow and green wires with adequate wire size. The ground wire is strictly prohibited to connect to pipe of tap water, pipe of coal gas, zero line of electric source, and overhead ground wire.
- 3. When you connect wires, please refer to the electric circuit diagram in the machine and ensure everything is correct.

Please install the air conditioner at a place, which is provided with following characteristics.

1) Indoor Unit

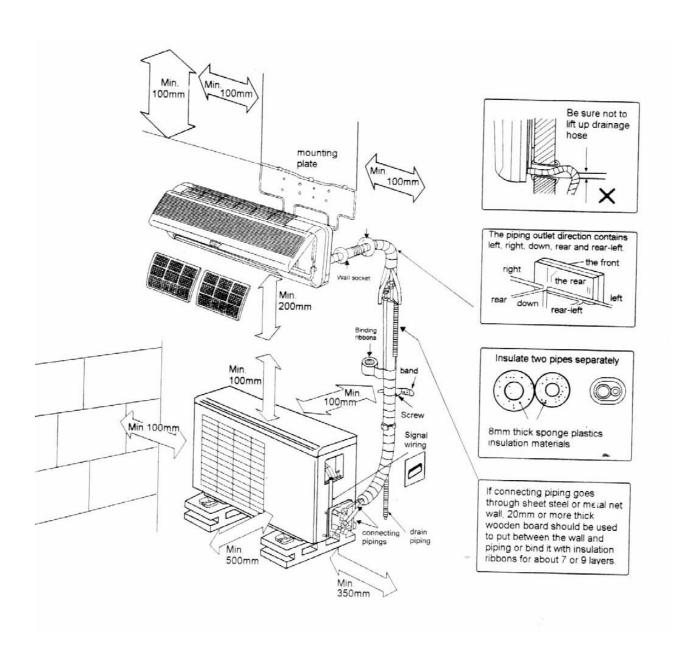
- ① Indoor unit should be installed upon a firm vibrationless wall.
- 2 Entrance and vent are supposed to be expedite. The hot wind and the cool wind are supposed to should blow toward all around the room.
- 3 Indoor unit should be installed where it is convenient to connect with the outdoor unit.
- ④ Indoor unit Installation should avoid direct solar radiation.
- ⑤ Indoor unit should be installed where drainage is convenient.
- ⑥ Indoor unit Installation should consider about future maintenance. The filter screen should be dismountable.
- 7 Indoor unit Installation should ensure the spaces which are shown in the following picture.



2) Outdoor Unit

- * Outdoor unit should be installed on the solid foundation, because the infirm foundation will increase noise and libration.
- * Please ensure that no barrier blocks the vent.
- * At the seaside, please do not install the outdoor unit at a high altitude where the sea wind is more forceful. To ensure the fan work normally, the solar air conditioner should be arranged tightly upon the wall. A baffle is to be adopted.
- * Preventing wind blows to the inside of solar air conditioner, epically in places where the wind is particularly strong.
- * Any barriers, which may block spreading heat, should be removed.
- * If you adopt hanging installation, the wall should be composed of solid brick, concrete, or other equally firm structure. Otherwise, please reinforce, stabilize, and secure the solar air conditioner installation. Slip, overturn and drop should be avoided.
- * Design and manufacture of erecting frame should make full consideration of bearing intension of material and structure, corrosion resistance, and convenience for installation and maintenance. The intension of outdoor erecting frame should be able to endure the weight above180kg. Steel components must be joined firmly, accept anticorrosive treatment, and satisfy the standards of the *GB17790-1999 National Standard Room Air Conditioners Installation Criterions*
- * The foot screw of outdoor unit should be fixed by the M8 or M10 bolt.
- ①Outdoor unit should be installed on a solid foundation.

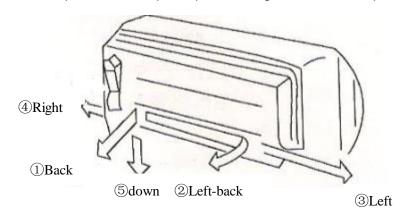
- ②If the outdoor unit quivers on the concrete foundation, please lay an aseismatic rubber cushion.
- 3) The unit should install vertically and horizontally, the gradient is below 5°.
- ④Outdoor unit installation should avoid places which some water drops spatter upon directly, and which is near thermal spring with sulphur and nitrogen gas.
- ⑤Indoor unit installation should ensure the space distance shown on the right picture.



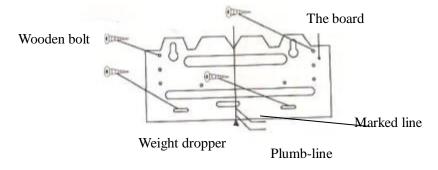
Installation of the Solar Air Conditioner

2. Indoor Unit Installation

1) As shown in the following picture, pipelines are connected in five directions with the indoor unit. When the pipelines are connected in ③ or ④ direction, please adopt the saw to open a preformed groove on the panel. When the pipelines are connected in ⑤ direction, please adopt the saw to open a preformed groove under the panel.



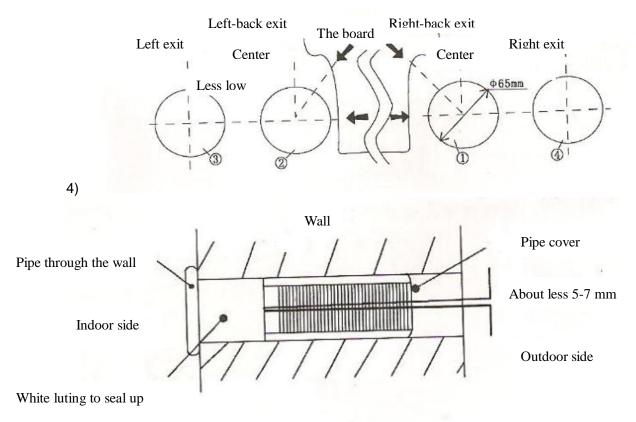
2) Adopt five 5Y51 size wooden bolts to fix the board on the wall



Notice:

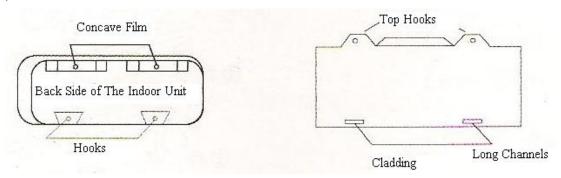
- * If indoor unit is installed on the concrete wall, please adopt bulgy bolt.
- * When you install the board, you are supposed to use weight dropper to test the board whether it is horizontal or vertical.
- * The installed board should be able to bear 50 kg.
- * Ensure that the board is firm and solid.
- 3) Based on the junction direction of the pipeline (Please consult the following picture), a hole which is provided with the diameter of 65 mm, is drilled in the corresponding place on the wall. Then the wall bushing and the tube cap are placed into the hole. If the pipeline is connected in the ③ or ④ direction, the hole in the ③ or ④ should be opened a little

lower than the height of the hole in the ①or ②. The aim is to ensure the condensate flowing out of the pipeline conveniently.



Installation of the Solar Air Conditioner

- 4) Please install the pipe of the indoor unit according to the direction of the wall hole; the outflow pipe, the cable line, and the indoor unit should bundled by an adhesive tape. The outflow pipe is below the other two.
- 5) Lead the affixed pipes going through the wall bushing, and hang up the indoor unit on via the top hooks, the bottom long channels of the indoor unit is shown in the following picture.



3. Installation of the outdoor unit

- Avoid a location where there is guest of strong wind.
- Install in a location where ventilation is well and dust is little.
- Install in a location unexposed to direct sunshine and rain.
- Select a location from which noise or heat airflow emitted by unit will not inconvenience neighbors.
- Install on a strong flat support to prevent noise or vibration from being increased.
- Avoid locations in which combustible gas may be generated, settle or leak.
- Be sure to anchor the outdoor unit legs by means of bolts if the unit is installed in a high place.

ATTENTION

Avoid installing the unit in the following locations, it may cause failure of the unit.

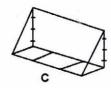
- □ A location where machine oil is used frequently (such as air outlet of smoke ejector).
- A coastal area where there is too many salts.
- A hot spring where there is sulfide gas.
- Other locations where there is special atmosphere.
- Always install the outdoor unit in a strong place (e.g. concrete foundation). If it is
 installed on a brick wall, the thickness of wall should be 100mm or more.
- Underlay the unit with protective vibration-proof rubber when it vibrates.
- Avoid installing it on the ground directly. It may cause troubles.
- The outdoor unit should not be tilted by more than 5⁰.
- Keep the outdoor unit 500 mm or more away from the front obstacles, 100mm or more away from the rear, left and upper obstacles, 350mm or more away from the right obstacles.

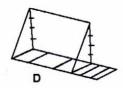
4-1 Installation Support

The following installation supports are for your reference:



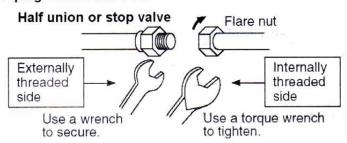






Note: All the supports must be fixed by means of expansion bolt.

4-2 Piping Connection work



Indoor unit connection

- ☐ Apply the refrigerant oil thinly on half union and flare nut.
- During connecting, firstly aim the half union at the center of the flare nut, tighten the flare nut for the first 3-4 circles by hand. Connecting the gas pipe firstly makes working easier.
- ☐ Take the tightening torque table as the standard of tightening the flare nuts.

 Tighten them with two wrenches. Forced fastening without careful centering may damage the threads or cause leakage of gas.

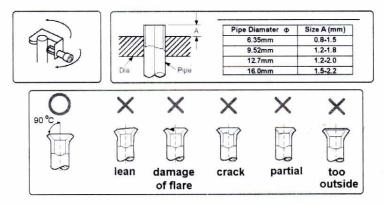
Outdoor unit connection

Connect the piping to the stop valves of the outdoor unit in the same method on indoor unit connection.

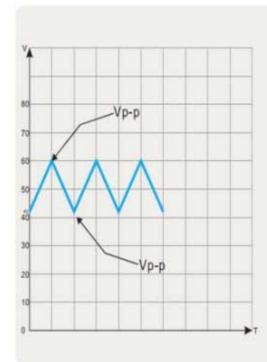
Flaring work of piping.

Gas leakage is caused most probably by incorrect flaring work. Therefore, carefully check the flare joint before connecting with the half union or stop valve. In case that there existing be defectiveness on flare joint, perform flaring work correctly according to the following procedures.

- Cut the pipe with a pipe cutter and remove the burs.
- Insert a flare nut into the pipe and flare the pipe.



This air conditioner can work with pure dc power source or industrial dc power source, please refer to below graphic to choose power source or make controls:

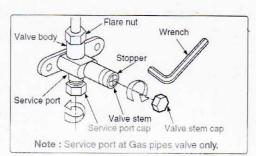


User may use industrial or telecom dc power source to run this air conditioner, if the power source is not a pure dc power source.

Please make sure the Vp-p not higher than 30 V and smaller than 24V; Otherwise could reduce the use life of this air conditioner or damage this air conditioner.

Or please make sure it is a 24VDC (+/- 1%) precision do power source.

- Loosen the flare nut of gas pipe (thick pipe) counterclockwise by half circle.
- Loosen the valve stem of liquid pipe (thick pipe) by one circle and gas comes out through flare nuts. Then tight the nut and stem after 5 seconds.



- Carefully check system piping joints and valves caps for gas leakage with a leak detector or soapy water.
- If there is no gas leakage, open the stop valves counterclockwise all the way, and fasten the valve caps firmly.

5-2 Trial Run Procedures

Before trial run, be sure to check all the wiring and piping are correct and reliable, the stop valves are opened completely, and the air conditioner is grounded reliably.

- 1. Supply main power, the beeper will make a short beep.
- 2. Turn on the air conditioner by means of remote control.
 - In case that the indoor ambient temperature is around 0°C~20°C. Select HEAT mode and set the temperature at 25°C to test HEAT operation.
 - In case that the indoor ambient temperature is around 20°C~45°C. Select COOL mode and set the temperature at 16°C to test COOL operation

NOTE

Check the flowing items according to the related content in the Manual:

- □ Is there any abnormal noise?
- □ Are all the lamps normally lighting?
- □ Is condensed water discharged out securely?
- Does any abnormal noise or vibration occur during the operation?
- □ Are the noise, airflow outlet and water drainage affecting your neighbors?
- ☐ Gas leakage from pipe connecting?
- Are all the function buttons of the remote controller normal?
- □ Up on receiving the remote signal, will the indoor unit make a beep?

5-3 Customer Guidance

After the installation is complete, kindly explain to the customers who to operate:

- Use the Instruction Manual to explain to customer the major operation procedure, usage of each button and other cases which shall be paid attention to.
- How to remove the air filters and how to use SWING function.
- How to remove/set batteries from/on remote controller.
- The customer shall carefully read the Instruction Manual before using the air conditioner.

Solar Air Conditioner Installation

Notice:

Error! Reference source not found. When the pipe line is extended, discharge the air in the connecting pipe with refrigerant gas, which is from the outside of the system. And then, discharge the redundant refrigerant in degassing method.

Error! Reference source not found. Installation height of the indoor unit and the outdoor unit should be below 5 m.

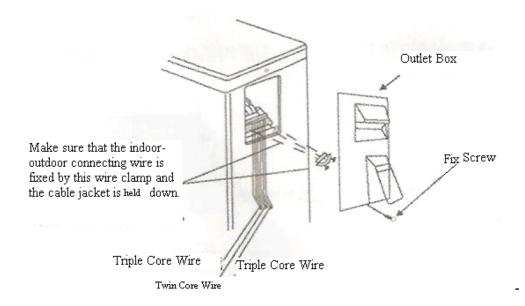
Error! Reference source not found.The length of the pipe, which connects the indoor unit and the outdoor unit, should be less than 10 m.

Error! Reference source not found. The refrigerant filling amount of the solar air conditioner should be adjusted according to the length of the pipe (L). The refrigerant increment G= (L- length of the standard pipe)*30(g/m).

Connection of the Power Supply of the Outdoor Units

Dismount the outlet box of the outdoor unit; connect the triple core wire and the twin core wire with the five jacks of the connecting terminals in accordance with their colors. As shown in the following form, the connection method of the triple core wire of the subsidiary electric heating pipe on the insulating barrel is that the blue wire is connected with terminal board (N), the brown wire is connected with terminal board 3; the yellow/green wires are connected with terminal board grounded.

The Terminal Board							
Base on the Outdoor	+	-	(1)	N	1	2	3
Units							
The Color of Wire							
Connected With the	RED	BLACK	YEL/	Blue	Brown	Blue	Brown
Indoor Unit			GR				

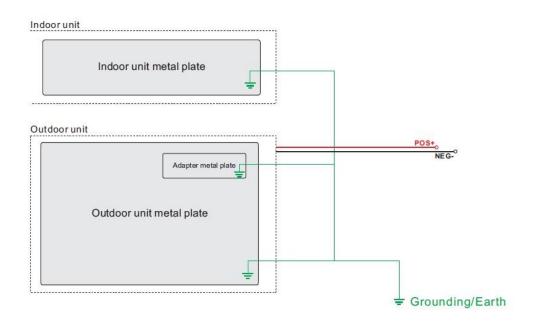


This air conditioner is designed for definite applications, such as telecom, outdoor camping room, unattended operation..etc; require of independent dc power source, such as solar power, battery or converter dc power sources...etc; normally does not allow directly using this air conditioner as home appliances.

Grounding Notices:

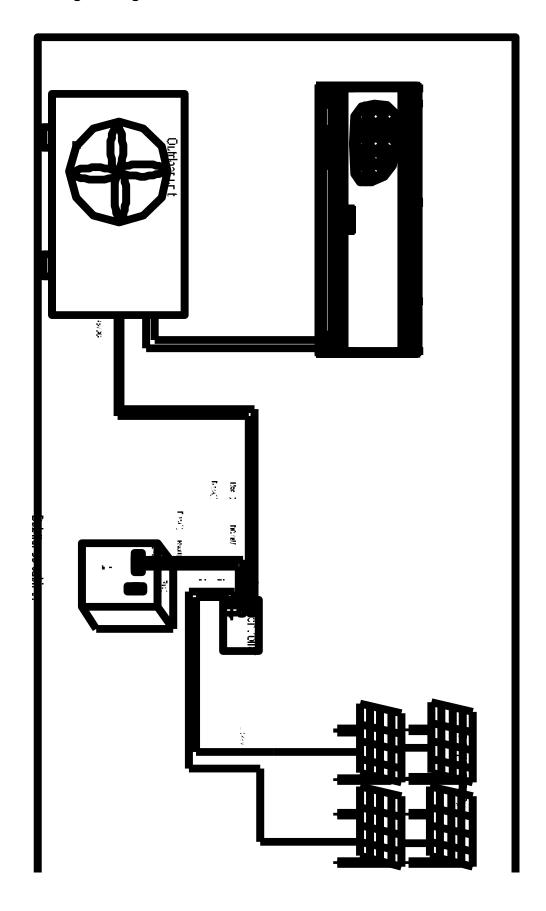
This air conditioner already has grounding wires, the indoor unit metal plate, outdoor metal plate, adapter metal plate are series-connected by grounding wire.

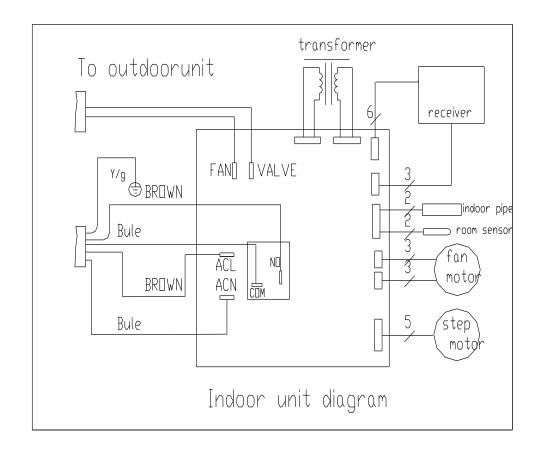
This air conditioner working under dc power source, but shall be grounded this air conditioner with earth.



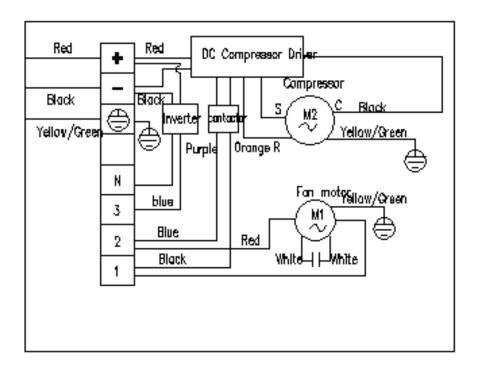
Please install, repair or maintain this air conditioner under your local distributor's trained professional service; If reverse connect the DC+(POS+) and DC-(NEG-) wires, could directly damage air conditioner, and could damage or burn out the dc power source;

If reverse connect the inner wires inside of this air conditioner, could directly damage or burnout air conditioner parts.





Outdoor Electric Diagram



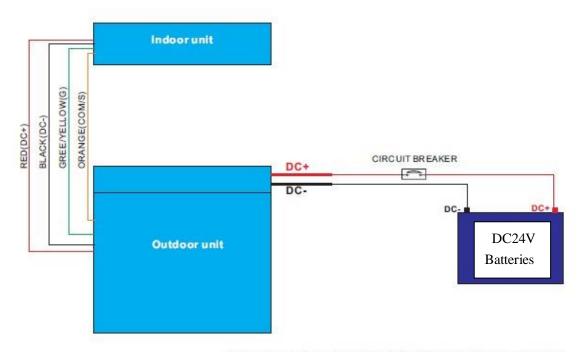
Important

This air conditioner connect with DC power source only! There is marked 'DC+' and 'DC-' on the drawing, it is meaning the unit can connect with pure dc power source such as battery or converter dc power source. The 'DC+' is same meaning with 'POS+' and 'DC-' is same meaning 'NEG-'.

Important

The power source connection terminals of this air conditioner already marked in RED and BLACK. RED terminal is POS+ pole and BLACK terminal is NEG- pole.

NEVER REVERSE CONNECT RED(POS+) TERMINALS AND BLACK (NEG-)TERMINALS WITH POWER SOURCE POS+ POLE AND NEG- POLE. OTHERWISE, COULD CAUSE BURN AIR CONDITIONER OR POWER SOURCE!



Please double check the power source POS+ and NEG-poles connected correct before turn on the circuit breaker.

Packing List

Indoor unit packing list

NO	Name	unit	pcs	remark
1	Indoor unit	unit	1	
2	Application and installation manual	pcs	1	
3	Remote controller	pcs	1	
4	AAA battery	pcs	2	
5	Watll hang bracket	pcs	1	
6	Rubber mud	pcs	1	
7	Expansion screw	pcs	5	
8	screw	pcs	5	

Outdoor unit packing list

NO	Name	unit	pcs	remark
1	Outdoor unit		unit	1
2	Low pressure connecting	TP2M Ф 9.52*0.7*3600	pcs	1
	pipe			
3	high pressure connecting	TP2M Ф 6.35*0.7*3600	pcs	1
	pipe			