

The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details.



SOPHIA SERIES

Mini Split Air Conditioner with Heat Pump

USER'S MANUAL



Read This Manual

Keep this manual where the operator can easily find them. Inside you will find many helpful hints on how to use and maintain your air conditioner properly. Just a little preventative care on your part can save you a great deal of time and money over the life of your air conditioner. You'll find many answers to common problems in the chart of troubleshooting tips If you review the chart of Troubleshooting Tips first you may not need to call for service.



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To prevent injury to the user or other people and property damage, the following instructions must be followed. Incorrect operation due to ignoring of instructions may cause harm or damage. The seriousness is classified by the following indications.

∆ WARNING	This symbol indicates the possibility of death or serious injury.	\
∆ CAUTION	This symbol indicates the possibility of injury or damage to property.	_

■ Meanings of symbols used in this manual are as shown below:

\bigcirc	Strictly prohibited
<u> </u>	Be sure to follow the instructions







- Do not extend the cable and never use multiple plugs. A poor electrical connection, poor insulation or voltage which is higher than permitted can cause fire.
- Do not expose your body directly to the cool air for prolonged period.
- Never poke fingers, sticks or other objects in the air inlet and outlet vents.
- Never attempt to repair, relocate, modify the air conditioner yourself. Always contact your service partner if it requires.
- Never pull the plug out by pulling on the cable. Hold the plug firmly and pull it out of the plug socket, otherwise there is a risk of damaging the cable.
- Do not operate your air conditioner in a wet room such as a bathroom or laundry room.

- Remove all dirt from the power plug and plug it firmly. Soiled plugs can cause fire or an electric shock.
- In the event of any abnormalities such as smell of burning, immediately switch off the device and pull the plug. Contact your service partner.
- Always switch off the device and pull the plug before you start to clean it.
- Use specified power cord.
- Contact the authorized installer for installation of this unit.
- Contact an authorized service technician for repair or maintenance of this unit.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the air conditioner.

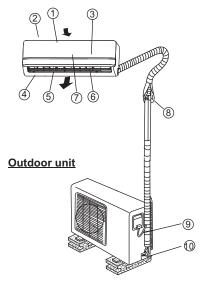
⚠ CAUTION



- Never actuate any switches with a wet hand. It may cause an electric shock.
- Never use the device for any other purpose than the intended use.
- Never place food, precision instruments, plants,
 animals, paint, etc. on the unit.
- Do not expose plants or animals directly to the air flow.
- Never clean the air conditioner with water.
 Never use combustible cleaning agents as these could cause a fire or deformation.
- Never place any burning objects close to the device if they could be directly affected by the emitted air.
- Never step onto the outdoor device and never place anything on it.
- Never use an unsteady or rusty base.
- Never install the air conditioner in places where combustible gas can be emitted.
 Emitted gas may collect and cause an explosion.
- Never allow the air conditioner to run for too long with the doors or windows open, or if the humidity is very high.

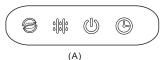
- 1
- If the air conditioner is to be used in conjunction with other heaters, the air should be refreshed periodically, otherwise there is a risk of lack of oxygen.
- Always pull out the power plug if the unit is not going to be used for any lengthy period of time. Collections of dust can cause fire.
- Always switch off the air conditioner and pull out the power plug during a storm.
 Electrical parts may get damaged.
- Check that the drainage line is correctly connected. If not, water will escape.
- Check that the condensation water can run off unhindered. It may cause water damage if the condensation water cannot run off properly.
- The air conditioner must be earthed in accordance with the local codes.
- For electrical safety purposes we recommend that you install an earthleakage circuit-breaker.
- If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

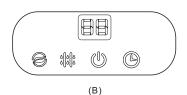
Indoor unit



Indication lamp

The display window of the indoor unit you purchased may be look like:





Names of parts

Indoor unit

- 1. Front panel
- 2. Air inlet
- 3. Air filter
- 4. Air outlet
- Horizontal air flow grille 6. Vertical air flow louver

(inside)

7. Display panel

- Outdoor unit 8. Connecting pipe
- 9. Connecting cable
- 10. Stop valve

NOTE:

All the pictures in this manual are for explanation purposes only. The actual shape of the indoor unit you purchased may be slight different on front panel and display window. The actual shape shall prevail.

Indication lamp



FRESH indication lamp (optional)

This lamp illuminates when Clean Air feature is activated.



DEFROST indication lamp

Lights up when the air conditioner starts defrosting automatically or when the warm air control feature is activated in heating operation.



OPERATION indication lamp

This lamp illuminates when the air conditioner is in operation.



TIMER indication lamp

Lights up during Timer operation.



DIGITAL DISPLAY indicator

- Displays the temperature settings when the air conditioner is operational.
- Displays the malfunction code.

Special functions

Refrigerant Leakage Detection

With this new technology, the display area will appear 'EC' and the indication lamps continue flashing when the outdoor unit detects refrigerant leakage.

Louver Angle Memory Function

Within the scope of safety angle, it will memorize the open angle of horizontal louver. If it exceeds, it will memorize the boundary of safety angle. In the following circumstances, it will return to standard angle: 1) pressing the manual control button, 2) unplug and then plug in the machine. So we strongly suggest that the open angle of the horizontal louver should not be set too small, in case the condensed water forms and drops from the horizontal louver.

SELFCLEAN Function

- Function used after the Shut Down of cooling operation to clean the Evaporator and keep it as fresh for the next operation.
- The unit will operate as following sequence: FAN ONLY mode at Low fan speed--Heating operation with LOW fan speed ---FAN ONLY operation---Stop Operation---Turn off.
 - This function is only available under COOL (AUTO COOL, FORCED COOL) and DRY mode.
- Before selecting this function, it is recommended to run the air conditioner under Cooling operation for about half an hour. Once the Self clean function is activated, all TIMER setting will be cancelled.
- During Selfclean operation, when press the SELFCLEAN button on the remote control again it will stop the operation and turn off the unit automatically.

NOTE: This manual does not include Remote Control operations. See the <<Quick Start Guide>> packed with the unit for details.

Operating temperature

Mode Temperature	Cooling operation	Heating operation	Drying operation
Room temperature	62°F~90°F (17°C~32°C)	32°F~86°F (0°C~30°C)	50°F~90°F (10°C~32°C)
Outdoor	32°F~122°F 0°C~50°C	5°F~86°F (-15° C~30°C)	32°F~122°F (0°C~50° C)
temperature	5°F~122°F/-15°C~50°C		
	For the models with low temperature cooling		

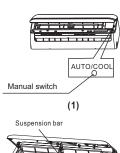
NOTE:

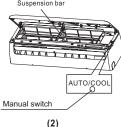
- Optimum performance will be achieved within these operating temperatures. If the air conditioner is used outside of the above conditions, certain safety protection features might come into operation and cause the unit to function abnormally.
- 2. If the air conditioner runs for a long time in cooling mode and the humidity is high (over 80%), condensed water may drip out of the unit. Please sets the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.

<u>Suggestion:</u> for the unit to adopt an Electric Heater, when the outside ambient temperature is below 32°F, we strongly recommend you to keep the machine plugged in order to guarantee it running smoothly.

Manual operation

Units are equipped with a switch to run emergency operation mode. It can be accessed by opening the front panel. This switch is used for manual operation in case the remote control fails to work or maintenance necessary.





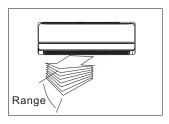
NOTE: The unit must be turned off before operating the manual control button. If the unit is operational, continue pressing the manual control button until the unit is off.

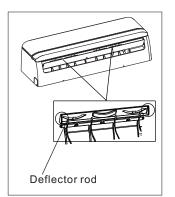
- ① Open and lift the front panel up to an angle until it remains fixed with a clicking sound. For some models, please use suspension bars to prop up the panel.
- ② One press of the manual control switch will lead to the forced AUTO operation. If press the switch twice within five seconds, the unit will operate under forced COOL operation.
- Close the panel firmly to its original position.

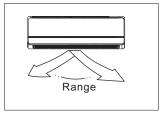
CAUTION:

- This switch is used for testing purposes only. You had better not choose it.
- To restore the remote control operation, use the remote control directly.

Airflow direction control







- Adjust the air flow direction properly, otherwise it might cause discomfort or cause uneven room temperatures.
- Adjust the horizontal louver using the remote control. For some models, the vertical louver can only be adjusted manually.

To set the horizontal/vertical air flow direction

- Perform this function while the unit is in operation.
- Use the remote control to adjust the air flow direction.
 The vertical/horizontal louver changes 6 degree in angle for each press, or swing up and down automatically.
 Please refer to the "Quick Start Guide" for Remote Control.
- For some models, the vertical louver can only be adjusted manually. Move the deflector rod manually to adjust the air flow in the direction you prefer.

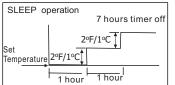
IMPORTANT:

Do not put your fingers into the panel of blower and suction side. The high-speed fan inside may cause danger.

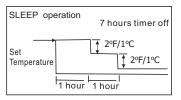
⚠ CAUTION

- Do not operate the air conditioner for long periods with the air flow direction set downward in cooling or dehumidifying mode. Otherwise, condensation may occur on the surface of the horizontal louver causing moisture to drop on to the floor or on furnishings.
- When the air conditioner is started immediately after it was stopped, the horizontal louver might not move for approximately 10 seconds.
- Open angle of the horizontal louver should not be set too small, as COOLING or HEATING performance may be impaired due to too restricted air flow area.
- Do not move the horizontal louver manually, otherwise the horizontal louver will be out of sync. Please cease operating, unplug power for a few seconds, then restart the air conditioner.
- Do not operate unit with horizontal louver in closed position.

How the air conditioner works



Cooling



Heating

AUTO operation

- When you set the air conditioner in AUTO mode, it will automatically select cooling, heating or fan only operation depending on set temperature and the room temperature.
- The air conditioner will control room temperature automatically to the temperature point you set.
- If you feel uncomfortable in the AUTO mode, you can set your desired temperature.

SLEEP operation

When you push SLEEP button on remote control during cooling, heating or AUTO operation, the air conditioner will automatically increase (cooling) or decrease (heating) 2°F /1°C per hour for the first 2 hours, then hold steadily for the next 5 hours, after that it will switch off. This mode saves you energy and brings you comfort at night.

DRYING operation

The fan speed will be automatically controlled under dry operation.

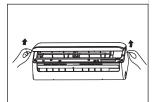
During the dry operation, if the room temperature is lower than $50^{\circ}F$ ($50^{\circ}C$), the compressor stops operation and restarts until the room temperature is above $54^{\circ}F$ ($12^{\circ}C$).

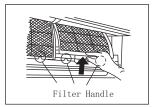
Optimal operation

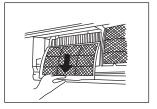
To achieve optimal performance, please note the following:

- Adjust the air flow direction correctly so that it is not towards people.
- Adjust the temperature to achieve the highest comfort level. Do not adjust the unit to excessive temperature levels
- Close doors and windows on COOL or HEAT modes, or performance may be reduced.
- Use TIMER ON button on the remote control to select a time you want to start your air conditioner.
- Do not put any object near air inlet or air outlet, as the efficiency of the air conditioner may be reduced and the air conditioner may stop running.
- Clean the air filter periodically, otherwise cooling or heating performance may be reduced.
- Do not operate unit with horizontal louver in closed position.

Care and Maintenance







Before maintenance

 Turn the system off before cleaning. To clean, wipe with a soft, dry cloth. Do not use bleach or abrasives.

NOTE: Power supply must be disconnected before cleaning the indoor unit.

♠CAUTIONS

- A cloth dampened with cold water may be used on the indoor unit if it is very dirty. Then wipe it with a dry cloth.
- Do not use a chemically treated cloth or duster to clean the unit.
- Do not use benzine, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or deform.
- Never use water hotter than 104 °F/40 °C to clean the front panel, it could cause deformation of discolouration.

Cleaning the unit

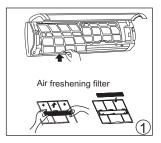
Wipe the unit with a soft dry cloth only. If the unit is very dirty, wipe it with a cloth soaked in warm water.

Cleaning the air filter and air freshening filter

A clogged air filter reduces the cooling efficiency of this unit. Please clean the filter once every 2 weeks.

- Lift the indoor unit panel up to an angle until it stops with a clicking sound. For some models, please use suspension bars to prop up the panel.
- Take hold of the handle of the air filter and lift it up slightly to take it out from the filter holder, then pull it downwards.
- Remove the AIR FILTER from the indoor unit. Clean the AIR FILTER once two weeks. Clean the AIR FILTER with a vacuum cleaner or water, then dry it up in cool place.





4. Remove the Air Freshening Filters from its supporting frame (the solution to disassemble may differ from each other for different filters. Refer to 1. Clean the air freshening filter at least once a month and replace it every 4-5 months.

Clean it with vacuum cleaner, then dry it in cool place.

- 5. Install the air freshening filter back into position.
- 6. Insert the upper portion of air filter back into the unit, taking care that the left and right edges line up correctly and place filter into position.

Replacement of air filter and air freshening filter

- 1. Remove the air filter.
- 2. Remove the air freshening filter.
- 3. Install a new air freshening filter.
- 4. Reinstall the air filter and securely close the front

Preparation for extended non-operation

If you plan to idle the unit for a long time, perform the following:

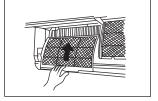
- 1. Clean the indoor unit and filters.
- 2. Operate the fan for about half a day to dry the inside of the unit.
- 3. Stop the air conditioner and disconnect power.
- 4. Remove the batteries from the remote control. The outdoor unit requires periodic maintenance and cleaning. Do not attempt to do this yourself. Contact your dealer or service provider.

Pre-season inspection

- Check that the wiring is not broken off or disconnected.
- Clean the indoor unit and filters.
- Check that the air filter is installed.
- Check if the air outlet or inlet is blocked after the air conditioner has not been used for a long time.



- Do not touch the metal parts of the unit when removing the filter. Injuries can occur when handling sharp metal edges.
- Do not use water to clean inside the air conditioner. Exposure to water can destroy the insulation. leading to possible electric shock.
- When cleaning the unit, first make sure that the power and circuit breaker are turned off.
- Do not wash air filter with hot water at more than 140°F / 40 °C. Shake off moisture completely and dry it in the shade. Do not expose it directly to the sun, it may shrink.



Normal function of the air conditioner

The following events may occur during normal operation:

1. Protection of the air conditioner.

Compressor protection

• The compressor can't restart for 3-4 minutes after it stops.

Anti-cold air

The unit is designed not to blow cold air on HEAT mode, when the indoor heat exchanger is in one of the following three situations and the set temperature has not been reached.

- A) When heating has just started.
- B) Defrosting.
- C) Low temperature heating.
- The indoor or outdoor fan stop running when defrosting.

Defrosting

Frost may be generated on the outdoor unit during heat cycle when outdoor temperature is low and humidity is high resulting in lower heating efficiency of the air conditioner.

During this condition air conditioner will stop heating operation and start defrosting automatically. The time to defrost may vary from 4 to 10 minutes according to the outdoor temperature and the amount of frost built up on the outdoor unit.

2. A white mist coming out from the indoor unit.

- A white mist may generate due to a large temperature difference between air inlet and air outlet on COOL mode in an indoor environment that has a high relative humidity.
- A white mist may generate due to moisture generated from defrosting process when the air conditioner restarts in HEAT mode operation after defrosting.

3. Low noise of the air conditioner.

- You may hear a low hissing sound when the compressor is running or has just stopped running. It is the sound of the refrigerant flowing or coming to a stop.
- You can also hear a low "squeak" sound when the compressor is running or has just stopped running. This is caused by heat expansion and cold contraction of the plastic parts in the unit when the temperature is changing.
- A noise may be heard due to louver restoring to its original position when power is turned on.

4. Dust is blown out from the indoor unit.

This is a normal condition when the air conditioner has not been used for a long time or during first use of the unit

5. A peculiar smell comes out from the indoor unit.

This is caused by the indoor unit giving off smells permeated from building material, from furniture, or smoke

6. The air conditioner turns to FAN only mode from COOL or HEAT mode.

When indoor temperature reaches the temperature setting on air conditioner, the compressor will stop automatically, and the air conditioner turns to FAN only mode. The compressor will start again when the indoor temperature rises on COOL mode or falls on HEAT mode to the set point.





TROUBLESHOOTING TIPS

- 7. Dripping water may generate on the surface of the indoor unit when cooling in a high relatively humidity (relative humidity higher than 80%). Adjust the horizontal louver to the maximum air outlet position and select HIGH fan speed.
- 8. The air conditioner draws in heat from the outdoor unit and releases it via the indoor unit during heating operation. When the outdoor temperature falls, heat drawn in by the air conditioner decreases accordingly. At the same time, heat loading of the air conditioner increases due to larger difference between indoor and outdoor temperature. If a comfortable temperature can't be achieved by the air conditioner, we suggest you use a supplementary heating device.

Auto-restart function

- 9. Power failure during operation will stop the unit completely.
- For the unit without Auto-restart feature, when the power restores, the OPERATION indicator
 on the indoor unit starts flashing. To restart the operation, push the ON/OFF button on the
 remote control.
- For the unit with Auto-restart feature, when the power restores, the unit restarts automatically
 with all the previous settings preserved by the memory function.



TROUBLESHOOTING TIPS

Troubleshooting guide

Trouble	OPERATION (RUN) indicator or other indicators continue flashing. If one of the following code appears on the display area: E0,E1,E2,E3or P0,P1,P2, P3, or F1,F2,F3	The unit may stop operation or continue to run in a safety condition (depending on models). Waiting for about 10 minutes, the fault may be recovered automatically, if not, disconnect the power and then connect it in again. If the problem still exists, disconnect the power and contact the nearest customer service center.
	Fuse blows frequently or circuit breaker trips frequently.	Stop the air conditioner immediately,
	Other objects or water fall into the air conditioner.	disconnect the power and contact the
	Terrible odours are smelled or abnormal sounds are heard.	nearest customer service center.

Malfunctions	Cause	What should be done?
Unit does not	Power cut.	Wait for power to be restored.
start	Unit may have become unplugged.	Check that plug is securely in wall receptacle.
	Fuse may have blown.	Replace the fuse.
	Battery in Remote Control may! have been exhausted.	Replace the battery.
	The time you have set with timer is incorrect.	Wait or cancel timer setting.
Unit not cooling	Inappropriate temperature	Set temperature correctly. For
or heating	setting.	detailed method please refer to
room very well		"Using remote control" section.
while air flowing	Air filter is blocked.	Clean the air filter.
out from the air conditioner	Doors or windows are opened.	Close the doors or windows.
Conditioner	Air inlet or outlet of indoor or outdoor unit has been blocked.	Clear obstructions away first, then restart the unit.
	Compressor 3 minutes protection has been activated.	Wait.

If the trouble has not been corrected, please contact a local dealer or the nearest customer service center. Be sure to inform them of the detailed malfunctions and unit model number.

Notes: Do not attempt to repair the unit yourself.

Always consult an authorized service provider.





www.cooperandhunter.us



LIMITED WARRANTY STATEMENT

MULTI ZONE INVERTER AIR CONDITIONING SYSTEM WITH HEAT PUMP

This warranty should be registered on our website www.cooperandhunter.us within 60 days of installation The warranty is only valid when unit is installed by a Licensed HVAC Technician

FOR WARRANTY SERVICE OR REPAIR:

Contact your installing contractor. You may not the installer's name on the equipment or in your Owner's packet. Complete product registration below and send back by e-mail at warranty@cooperandhunter.us

PRODUCT REGISTRATION:	
Model No.:	
Serial No.:	Date of Installation:
Owner Name:	
Address of Installation:	
Installing Contractor:	
Address:	
Phone No. / E-mail:	
Place Of Purchase:	
Date of Purchase:	



Visit our website for:

- **Product Information**
- Warranty Registration
- Installation Manual



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- **Product Introductions**
- Advertisement and more

www.youtube.com/ cooperandhunterusa

C&H distributor (hereinafter "Company") warrants this product against failure due to defect in materials or workmanship under normal use and maintenance as follows. All warranty periods begin on the date of original installation. If the date cannot be verified, the warranty period begins one hundred twenty (120) days from date of manufacture. Damage resulting from failure to use, install or maintain the product in a manner consistent with our/ manufacturer's recommendations shall render the warranty void. Cooper&Hunter, at its option, may request a report from a qualified technician prior to honoring a warranty claim. If a part fails due to defect during the applicable warranty period Company will provide a new or remanufactured part, at Company's option, to replace the failed defective part at no charge for the part. This limited warranty is subject to all provisions, conditions, limitations and exclusions listed below.

- A warranty period of Seven (7) years on compressor to the original registered end-user.
- · A warranty period of Five (5) years on all parts to the original registered end user.
- A warranty period of One (1) year on the remote control provided with the original unit.

- Limited warranty applies only to systems that are properly installed by a state certified or licensed HVAC contractor, under applicable local and state law in accordance with all applicable building codes and permits; C&H installation and operation instructions and good trade practices.
- Warranty applies only to products remaining in their original installation location.
- Defective parts must be returned to the distributor through a registered servicing dealer for credit.

LIMITATIONS OF WARRANTIES: ALL IMPLIED WARRANTIES AND/OR CONDITIONS (INCLUDING IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE) ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESS WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

THIS WARRANTY DOES NOT COVER:

- 1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing, or handling of defective parts, replacement parts, or new units.
- 2. Product cleaning required prior to warranty service and repair.
- 3. Normal maintenance as outlined in the installation and servicing instructions or user's manual, including filter cleaning and/or replacement and lubrication.
- 4. Failure, damage, or repairs due to faulty installation, misapplication, abuse, improper servicing, unauthorized alteration. or improper operation.
- 5. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
- 6. Failure or damage due to floods, winds, fires, lightning, accidents, corrosive environments (rust, etc.), or other conditions beyond the control of Company.
- 7. Failure or damage of coils or piping due to corrosion on installations within one (1) mile of a sea coast or a corrosive
- 8. Parts not supplied or designated by Company, or damages resulting from their use.
- 9. Products installed outside the continental USA and Canada.
- 10. Electricity or fuel costs, or increases in electricity or fuel costs for any reason whatsoever, including additional or unusual use of supplemental electric heat.
- 11. Any cost to replace, refill, or dispose of refrigerant, including the cost of refrigerant.
- 12. Shipping damage or damage as a result of transporting the unit.
- 13. Accessories such as condensate pumps, line sets, and so forth.
- 14. Any special, indirect, or consequential property or commercial damage of any nature whatsoever. Some states or provinces do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.

Design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details.