

OWNER'S MANUAL

HUMIDIFIER

MODEL: SPS-111W



Thank you for purchasing your new Humidifier.

The humidifier helps you to restore an appropriate level of humidity and eliminate the discomfort associated with dry air. The ventilation system diffuses water in the form of a cool or warm vapor in order to provide the desired level of humidity. This vapor is characterized by a mist discharged through the diffusion nozzle. We wish you many years of healthy indoor air with this efficient and effective product.

We recommend you spend some time reading this instruction manual in order to fully understand all the operational features it offers. Attention: pictures are for reference only.

SAFETY WARNING

*** Read all the safety instructions carefully before use and keep this instruction manual for future reference:**

- 1) Please follow all the safety precautions listed below for safety and to reduce the risk of injury or electrical shock.
- 2) This humidifier can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the humidifier in a safe way and understand the hazards involved. Children shall not play with the humidifier. Cleaning and user maintenance shall not be made by children without supervision.
- 3) Before using this humidifier ensures that the voltage of your electricity supply is the same as that indicated on the rating plate of the humidifier.
- 4) Always place the humidifier on a hard, flat and level surface. Avoid exposure to direct sunlight and always keep it away from walls and heat sources such as stoves, radiators, etc. Warning: The humidifier may not work correctly if it is not placed on a level surface.
- 5) Do not insert or remove the electric plug on the humidifier with wet hands.
- 6) If the mains cable is damaged it must be replaced by the manufacturer, its service agent, or similarly qualified person in order to avoid a hazard.
- 7) To reduce the risk of electric shock, do not remove screws. The humidifier does not contain any user-serviceable parts. Please leave all maintenance work to qualified personnel.
- 8) Fill the tank with fresh, distilled or demineralized water. Do not drop any other liquid into water tank or water basin. Do not run the humidifier when there is no water in the tank or the water basin.
- 9) Do not shake the humidifier as this might cause the water spill over into the base of humidifier.
- 10) Never touch the water or components while the humidifier is in operation.
- 11) If there is an unusual smell when it is being used as described in these manual, switch the humidifier off, unplug it and have it examined by your dealer.
- 12) Do not pour hot water into the tank, i.e. at a temperature in excess of 40°C.
- 13) Unplug the humidifier before cleaning it or removing the tank.
- 14) Do not immerse the humidifier or the mains cable or plug in water or other liquids.
- 15) Never scrape the transducer with a hard tool. The humidifier must be cleaned regularly. To do this, refer to the cleaning instructions in this manual.
- 16) If you spill any liquid into the humidifier, it can cause serious damage. Switch it off at the mains immediately. Withdraw the mains plug and consult your dealer.
- 17) Disconnect the humidifier from the power supply when not in use and before cleaning.
- 18) Ensure that the mains cable does not touch any hot surface and that it does not overhang a table edge.
- 19) Never use this humidifier in a room where aerosol products (sprays) are used or in a room or where oxygen is being administered.
- 20) Do not put items of clothing or towels on top of the humidifier. If the nozzle is obstructed, this may cause the humidifier to malfunction.
- 21) When moving the humidifier, lift it by the base humidifier and not by the water tank.
- 22) Do not use the humidifier if the air in the room is already sufficiently humid.
- 23) The ideal relative humidity level for human comfort is in fact between 45% and 65%. Excess humidity shows up in the form of condensation on cold surfaces or cold walls in the room. To measure the room's humidity correctly, use a hygrometer available in most specialist shops and hypermarkets.
- 24) The humidifier is designed for indoor and domestic use only.

Working Principle: Humidifier uses the ultrasonic high-frequency oscillator to break up water into tiny water particles with the diameter of about 1-5um. The ventilation system blows out this water into the dry air where they evaporate to give the required humidity. The clearly visible smooth and even fog can be seen out of the humidifier.

* Correct Humidity Level:

What exactly is relative humidity: Relative humidity is the amount of water vapor in the air, expressed as a percentage of the maximum amount that the air could hold at the given temperature. We normally mark it with %RH, like 45%RH. Atmospheric air always contains water vapor, the percentage of which depends on the meteorological conditions. The higher the temperature is the more the air keeps water vapor. Therefore, we use the concept of 'relative humidity'. In winter, when the cold air is heated up to the comfort temperature, the relative percentage of the water vapor falls which means the relative humidity drops. In order to keep a comfortable and health environment at home, we need some artificial addition of water or water vapor to the room air- that's air humidification.

Ideal relative humidity levels under different situations.

The most comfortable RH for human being:	45-65%RH
Ideal RH for prophylactic and curative purpose:	40-55%RH
Computer and telecom apparatuses:	45-60%RH
Furniture and musical instruments:	40-60%RH
Library art gallery and museums:	40-60%RH

* Relative Humidity

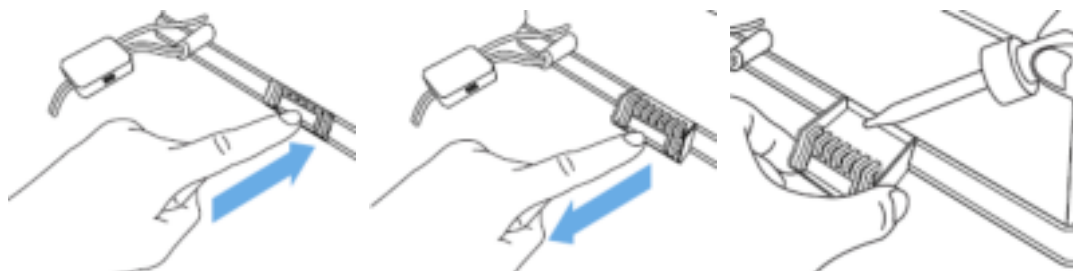
1. The percentage of water mist in a given space with a given air temperature is named as relative humidity, usually marked as %RH, i.e. 45%RH. The air contains water mist more or less. The proportion of water mist to the air varies according to different air temperatures. The higher the temperature, the more water mist inhaled in the air.
2. In winter, the cold air outside enters the room and becomes warmer by the higher temperature in the room. As a result, the relative humidity decreases. If you want to keep the healthy environmental humidity, we need to increase the mist volume in the air. The humidifier can do that for us.
3. Relative humidity in different environments suitable for people:
Bedroom, living room: 45-65%RH
Patient's room: 40-55%RH
Room with computer, experiment equipment: 45-60%RH
Room with piano: 40-60%RH
Museum, exhibition hall, and library: 40-50%RH

* Water filter

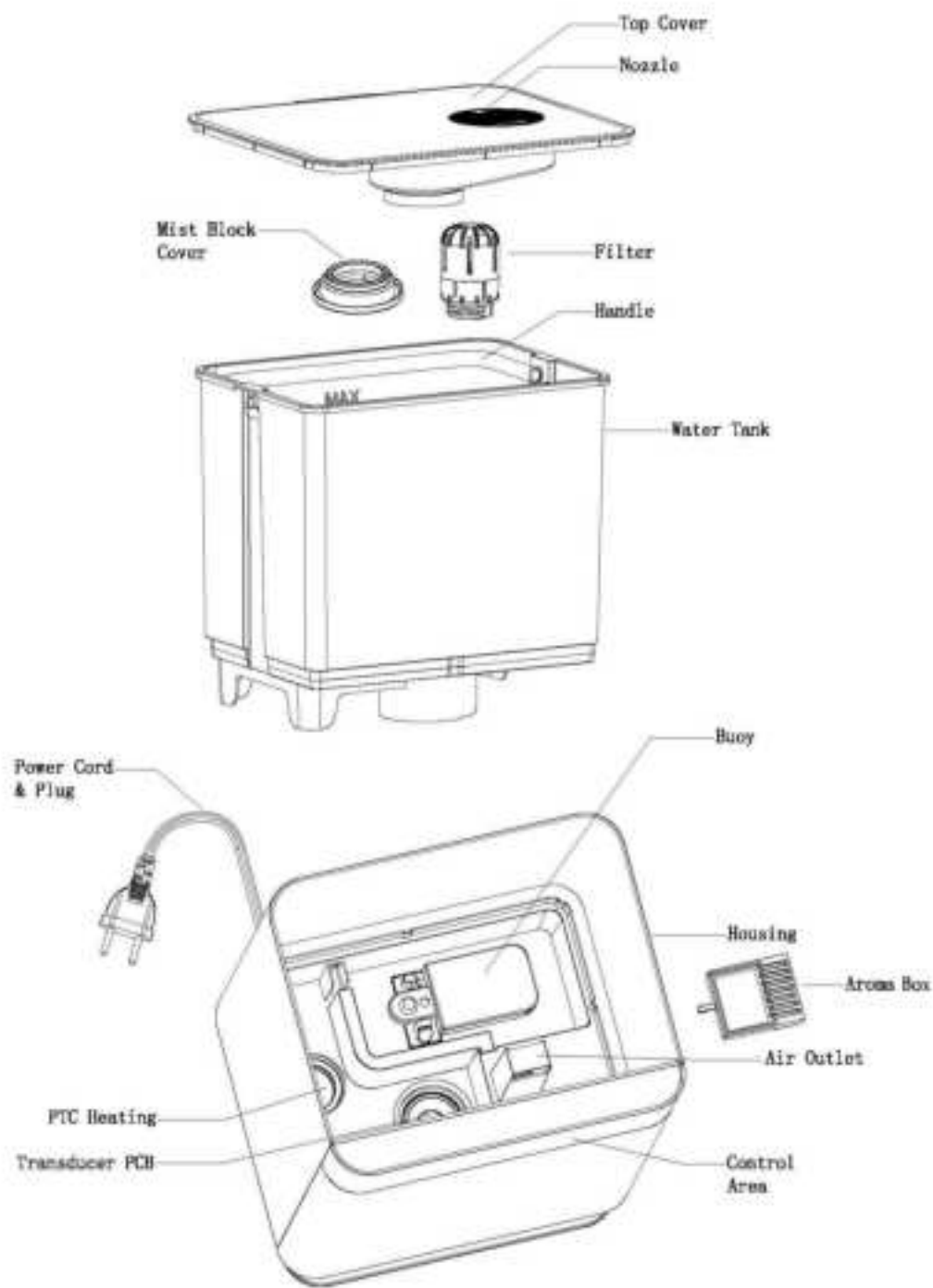
1. Ceramic balls can soften the hard water.
2. Ceramic filter can eliminate the strange smell in the water.

* Aroma box

1. Press out aroma box from the base.
2. Use water-soluble aroma oil and drop on to the sponge.
3. Put the aroma box back into humidifier, the aroma function will remain on when the humidifier is running.
4. To stop the aroma function or when storing the humidifier, clean the sponge in the aroma box.
5. Only drop aroma oil into aroma cotton. Do not drop any liquid except clean water into water tank or basin.



*Product Overview



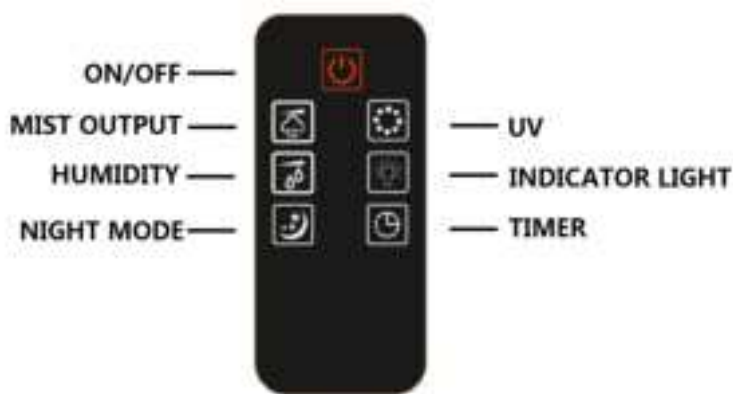
* Display



*Control panel



*Remote Control



* Features:

- High efficient in humidification with large output.
- Low energy consumption, save 85-90 percent of electricity than normal stream humidifier.
- Long lifetime.
- Automatic control of humidity level, lack-of-water security protection.
- Base with aroma cotton, to wet it with aromatic oil.

TECHNICAL DATA

Model: SPS-111W
 Power supply: 100V 50/60Hz
 Humidify power: 110W
 Water tank capacity: 4.3L
 Evaporation Rate: 300ml/H (± 50 ml/H) Cool mist
 Noise level: ≤ 35 dB(A)
 Product size: 23.5x20.3x32.2cm



* Operation Instruction

- First Operation, put humidifier in the room temperature for half of an hour before running.
- It is recommended to use the humidifier under temperature of 20°C, relative humidity less than 80%RH.
- Use clear water not over 40°C.
- Check the water basin, make sure it is clear.

* Instructions for usage


1. Put the humidifier on a flat surface.
2. Remove the top cover, fill water into the water tank and then put back the top cover. Alternatively, take out water tank for filling water, afterwards put the water tank back on the main base.
3. Check if the rated voltage meets the input voltage, and plug into the socket.
4. The LED display will flash once and a beep sound will be heard. The humidifier is in standby state. "ON/OFF"




button  will be red.




5. Touch the "ON/OFF" button  on the control panel to switch on the humidifier, display will light up and all buttons will be white. Indicator light will be on (with 7-color changing). Display shows current humidity, current temperature and "AUTO" symbol . It means humidifier works under AUTO MODE.



Humidifier will decide running humidity based on current temperature as below table. Heating, UV and timer function is optional.

Temperature of the air, degrees Celsius	≤19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	≥37
Humidity (%)	65	60	58	57	55	53	50	48	45	43	40	38	36	35	34	32	31	30	25

6. Touch the "MIST OUTPUT" button  to adjust the mist output, meanwhile "AUTO" symbol will disappear.

 = level 1,  = level 2,  = level 3.

Long touch "MIST OUTPUT" button  to entre NIGHT MODE. Display will become dim and show NIGHT MODE symbol , indicator light will be off. 10 seconds later, whole display will be off except NIGHT MODE symbol . There is no operative sound and waterless warning sound under this mode. Long touch the button again to exit NIGHT MODE.

7. Touch the "HUMIDITY" button  to set your expected humidity from 30%RH to 75%RH, display will show symbol . Touch once, it will increase by 5%RH.

The LED display will flash the expected humidity three times and then turn back to show the current humidity. The humidifier enters into the constant humidity function, the expected humidity is set.








Under constant humidity function, humidifier will adjust mist output level automatically.


- When the expected humidity is 1%RH ~ 10%RH higher than current humidity, humidifier works in level 1.
- When the expected humidity is 10%RH ~ 15%RH higher than current humidity, humidifier works in level 2.
- When the expected humidity is 15%RH higher than current humidity, humidifier works in mist output level 3.
- When the expected humidity is less than the current humidity, the devise will be in sleeping state. (Timer

function is still working under this state.)

- When the expected humidity is higher than the current humidity, the humidify function will work again.

Touch the button till the LED display shows “Co”, or long touch the button, it means to cancel the humidity setting and back to AUTO MODE.

8. Touch the “TIMER” button  to set your desired working time from 01-12 hours. Touch till display shows “Co” or long touch the button, it means to cancel the timer setting.
9. First touch the “UV” button  to start “HEATING” function, display will show HEATING symbol  as well. Second touch the button to start “UV” function, display will show UV symbol . Third touch to cancel “HEATING” function. Forth touch to cancel “UV” function.
10. First touch the “INDICATOR LIGHT” button , indicator light will be green. Second touch light will be blue. Third touch light will be warm yellow. Forth touch light will be 7-color changing. Long touch the button to turn on/off the light.
11. Auto Shut-Off: Once the water in the basin is too little to keep the humidifier working, the humidifier will automatically stop working and have 3 beep sounds (No sound under NIGHT MODE). Display will only show waterless symbol  and “ON/OFF” button will be red. Refill water tank, and **touch “ON/OFF” button**  **again to restart.**

During working, remove water tank, humidifier will stop working and “OF/OFF” button  will be red. Put back water tank, humidifier will work again.

The following is not considered faulty operation:

1. If your water is very hard (containing abnormally high levels of minerals) the humidifier may produce white dust. This is not a malfunction. The solution would be to clean the filter more often or use softer water.
2. If you stand very close to the humidifier, you will hear the gurgling sound of water. This is normal.
3. The humidifier operates very quietly but it is not completely silent. Noise levels less than 35dB(A) is considered normal.

* Maintenance

In a case when the water is hard which means water contains too much calcium and magnesium, it can cause a “white powder” problem and leave heavy scales on the surface of water basin, transducer and inner surface of the water tank. Scales on the surface of transducer will let the humidifier work improperly.

We recommend:

- 1) Use cold boiled water or distilled water.
- 2) Clean the transducer, water tank and basin humidifier every week.
- 3) Change the water in water tank more often to keep it fresh.
- 4) Make sure to pour out water from the water tank and dry the water basin before you store it unused for a long time.
- 5) Clean the whole humidifier and make sure that all parts of the humidifier are dried completely if it is supposed to be leaved unused for a long time.

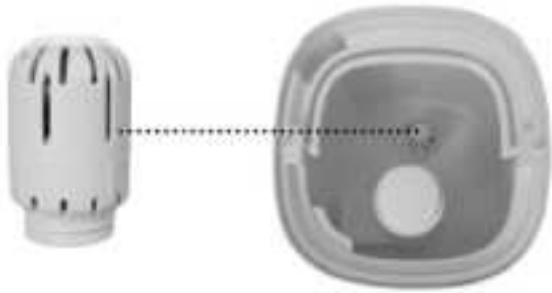
How to clean the transducer:

- 1) Clean with clean water or citric acid if there is scale in it.
- 2) Brush off the scale from the surface.
- 3) Rinse the transducer with clean water.

How to clean the basin humidifier:

- 1) Clean the water basin with soft cloth or use citric acid if there is scale in it.
- 2) If the scale is covered on the security switch, drop citric acid for 2-5 mins on the scale and clean it out with the brush.
- 3) Rinse the water basin with clean water.

How to clean ceramic filter:



- 1) Clean and activate the ceramic ball filter after using 1000L water regularly. Depend on water quality, if ceramic balls are dirty, the filter needs to be cleaned more frequently.
- 2) It can be dipped in vinegar about 5 minutes. Then rinse it cleanly with clean water.
- 3) Put the filter under the sun for 4~6 hours.
- 4) You can purchase replacement filters.

* Trouble Shooting Guide

If any trouble is found in normal operation, please kindly refer to below:

Trouble	Possible cause	Possible solution
Power lamp is off when switched on	Humidifier is not plugged in.	Plug the humidifier into a powered electrical socket.
	Power cord is damaged.	Immediately discontinue use and contact Customer Support.
	Humidifier is defective or malfunctioning.	
Power lamp is on when switched on, but no mist come out	Humidifier is not turned on.	Press the power button to turn it on.
	The target humidity is reached.	Increase the target humidity or change mode.
Water shortage indicator is on	No water in the tank.	Refill the water tank wait at least 1 minute.
	Water level is low.	
	The water level required has not yet reached the vaporization compartment.	Wait at least 1 minute.
	The water tank isn't well positioned.	Check the positioning of tank on the base.
	The humidifier isn't on a flat surface.	Check the positioning of the humidifier.
Humidifier produces an unusual smell	Humidifier is new.	Take out water tank, open cover, let it stay 12 hours in cool position.

	Dirty water or water sitting too long.	Clean water tank, fill with clear water.
	Residual smell from diffusing aroma oil on the aroma cotton.	Remove the aroma cotton, rinse it under clean water and allow it to dry.
Humidifier makes a loud or unusual sound	Resonant in water tank when water is too low.	Fill water into water tank.
	Humidifier is on an unstable surface.	Move the humidifier to a stable flat surface.
	Water tank is positioned incorrectly.	Turn off and unplug the humidifier, then align the water tank cover with its respective opening in the inner chamber.
	Humidifier is malfunctioning.	Immediately discontinue use and contact Customer Support.
The humidification capacity is too low	There is natural or artificial air replacement in the room which interfere the increase of %RH.	Check if doors and windows are closed.
		Check if there is no air conditioning working in the room.
	The air inlet grids and nozzle could be blocked.	Remove any blocking items from the grids and the nozzle.
	Too much scale in the water basin.	Clean transducer.
	The humidity selected rate is too low.	Increase mist output speed.
		Increase humidity setting rate.
	Water is too dirty or water kept too long in the tank.	Clean water tank, change to fresh clear water.
The ambient humidity is too high	Humidifier is working in CONTINUOUS MODE.	Cancel the mode.
	The humidity target is too high.	Select a lower %RH target.
	Room is not well-ventilated.	Open a window to ensure proper air flow for your humidifier, or move the humidifier to a more well-ventilated room.
	Excess water tank has spilled while filling the water tank or replacing the water tank back onto the base.	Wipe off excess water from the top and bottom of the base before replacing the water tank.
There is condensation in the room	The room temperature is too low.	Heat the room up.
The mist suddenly stops coming out	Programmed timer period has run out.	Turn humidifier on.
	The water shortage indicator is on.	Refill water tank.
	The target humidity level is reached.	
Incorrect humidity level is being displayed.	Room is larger than the effective range of the humidifier.	Move the humidifier to a room which is with suitable room size.
	Moisture has built up inside of the humidity sensor.	Turn off the humidifier and allow the humidity sensor to completely air dry before resuming use.
	The nozzle is facing the direction of the humidity sensor.	Turn the nozzle so that it is facing away from the humidity sensor.
	Humidity sensor is broken or defective.	Contact Customer Support.
Control panel does not work	Hands are too wet when operating control panel.	Keep hands dry while operating the control panel.
	Humidifier has malfunctioned.	Contact Customer Support.

White dust appears around the humidifier	Water being used has a high mineral content.	Use distilled water with the humidifier. If distilled water is not available, use purified or filtered water. Remember to clean water tank at least once a week.
	Humidifier was not properly cleaned after last use.	Clean humidifier.
Mist is coming out from the base	Water tank is not positioned correctly.	Turn off and unplug the humidifier, then align the water tank cover with its respective opening in the inner chamber.
Mist fog coming out from around nozzle	There are apertures between the nozzle and water tank.	Reposition the cover and check if the nozzle is well plugged in the cover.



DISPOSAL: Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.

FCC Warning

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.