

# User Manual

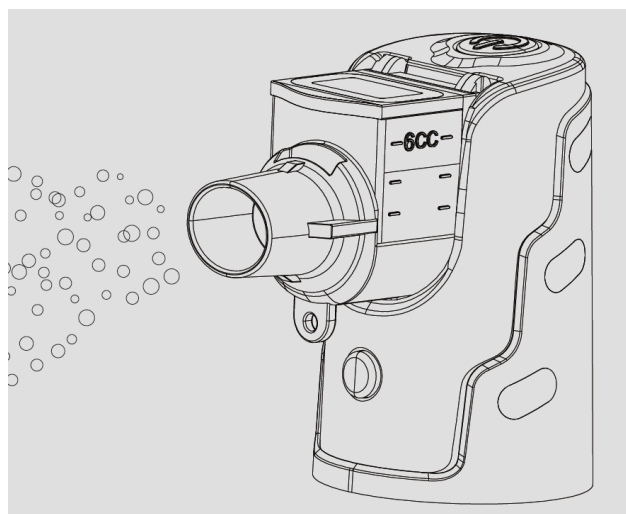


## Mesh Nebulizer

**MODEL: JLN-MB001**

**Revision: V1.1**

**Date: 02.05, 2018**



# HOMED MESH NEBULIZER

MODEL NO. : JLN-MB001

## INSTRUCTIONS

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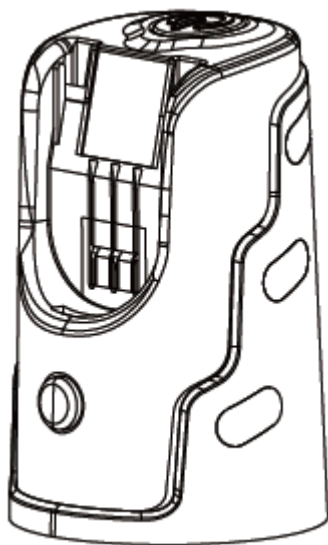
## 1. INTRODUCTION

Thank you for purchasing the HOMED Mesh Nebulizer. It is a compact medical device designed to efficiently deliver physician prescribed medication to the bronchial lung passages. With proper care and use, it will provide you with many years of reliable treatment.

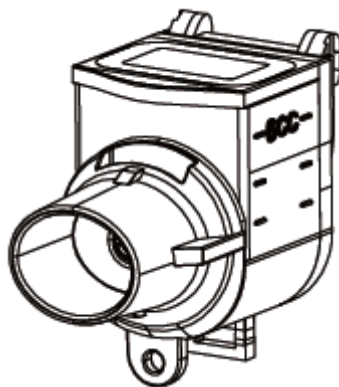
It is intend for use in the treatment of asthma, COPD and other respiratory ailments in which an aerosolized medication is required during therapy. It is used for single one and can reusable. The device is for pediatric and adult population,

Your Homed Mesh Nebulizer should be used under the supervision of a licensed physician and/or a respiratory therapist. We encourage you to thoroughly read this guidebook to learn about the features of this product. Any use of this product other than its intended use should always be avoided.

## 2. PRODUCT IDENTIFICATION



Main unit



Medicine cup(with cover)

## 3. IMPORTANT SAFEGUARDS

**Note:** Read all instructions carefully before use.

The following basic precautions are needed when using an electrical product:

**Caution:** Failure to read and observe all precautions could result in personal injury or equipment damage.

**Product cautions:**

This machine, like any other machine, may not work because of power failure, battery depletion or other failures. We recommend that you have spare batteries or other spare machines available.

When using electrical products, always follow the basic electrical safety precautions. Such as any electrical equipment has a special care for children.

1. To avoid electrical shock:
  - Keep the unit away from water
  - Do not immerse the power cord or the unit in liquid
  - Do not use while bathing
  - Do not reach for a unit that has fallen into water – immediately unplug the unit.
2. Never operate the unit if it has any damaged parts (including power cord), if it has been dropped or submersed in water. Promptly send it to a service center for examination and repair.
3. The unit should not be used where flammable gas, oxygen or aerosol spray products are being used.
4. Disconnect the unit from the electrical outlet before cleaning, filling and after each use.
5. Avoiding dropping the device otherwise it may not function normally.
6. Machine can be used by many people, but the attachment is single use.
7. Do not attempt to disassemble, repair or modify the machine.
8. Follow local laws and recycling plans regarding disposal or recycling of components, batteries and packaging.
9. Do not use other attachments unless recommended by manufacturer.all accessories meet ISO10993.

**Operating Cautions:**

1. Connect this product to an appropriate voltage outlet for your model.
2. Do not run this product unattended.
3. Never operate if this unit has a damaged part, if it has been dropped, or in any way, into water, if it does not work properly. Return it to a service center for repair.
4. If any abnormality occurs, discontinue use immediately until the unit has been examined and repaired.
5. Always unplug the product immediately after use.
6. The children use atomizer, need to use under adult supervision.
7. Do not drop any liquid on the main machine or adapter, if the liquid drops on it, please wipe off immediately.
8. Non oily drugs that are soluble in water should be used.
9. Do not use the machine when it is close to the inflammable and explosive materials.

10. Do not use a cellular phone near the device. It may result in an operational failure.
11. Do not use extension cords. Plug the power cord directly into the electrical outlet.
12. For type, dose, and regime of medication follow the instructions of your licensed physician and/or respiratory therapist.
13. Do not add more than 6ml of medication to the medication cup.
14. Do not plug in or unplug the Adapter from the electrical outlet with wet hands.

### Storage Cautions:

1. Keep the device away from direct sunlight, excessive heat or cold to avoid damaging the batteries.
2. Keep the unit out of reach of small children and infant or mental disease patients.
3. Always keep the unit unplugged while not in use.

### Cleaning Cautions:

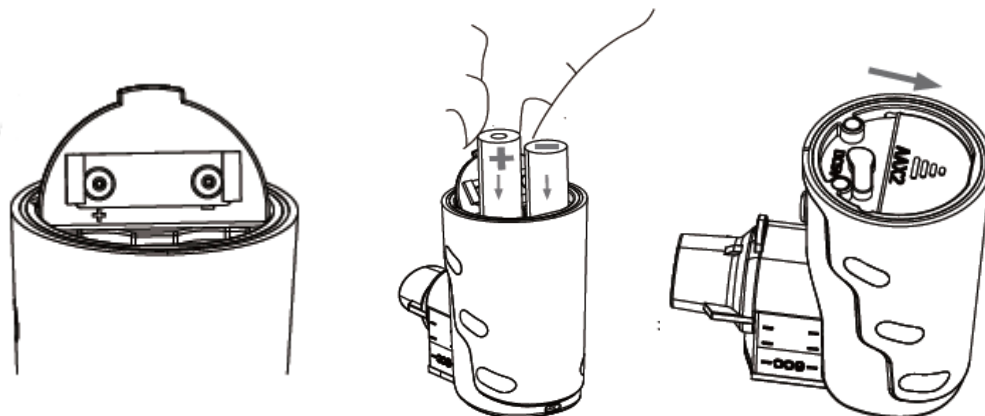
1. Do not immerse the unit in water. It may damage the unit.
2. Disconnect the unit from the electrical outlet before cleaning.
3. Clean all necessary parts after each use as instructed in this guidebook.
4. Don't try to clean the grid with any object, it will damage the grid.

## 4. OPERATING YOUR MESH NEBULIZER

**Note:** Prior to initial operation, the nebulizer should be thoroughly cleaned.

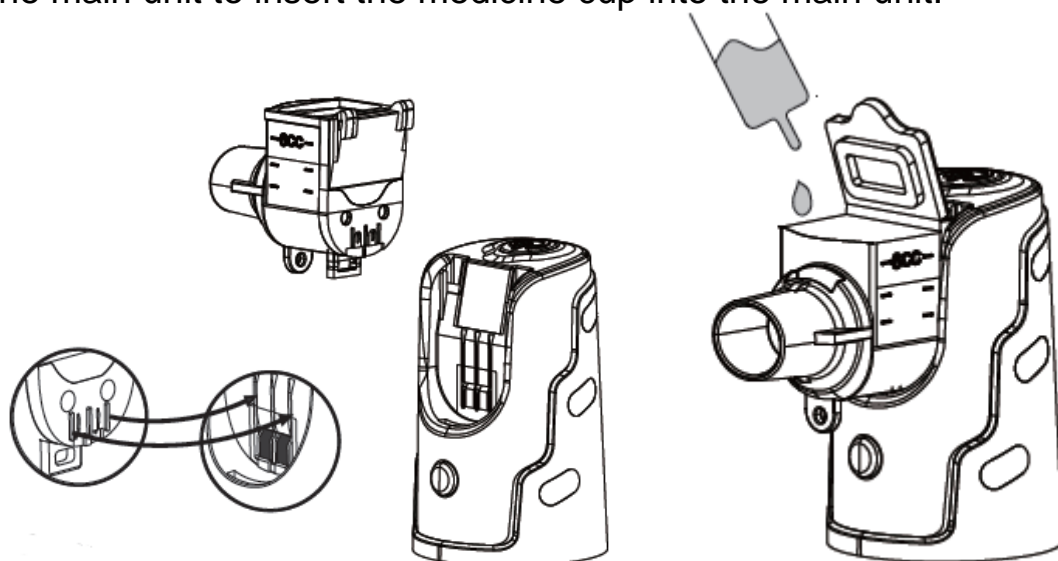
How to operate with batteries

1. Insert the batteries.
  - Turn the machine upside down.
  - Push back and pull up the battery cover to open it.
  - Insert two AA alkaline/NiMH rechargeable battery according to the battery polarity indicated inside the battery compartment.
  - Push down and push forward the battery cover to lock it.



2. Set up medicine cup.

- Align the three rubs on the back of the medicine cup with three trenches of the main unit to insert the medicine cup into the main unit.



Set up medicine cup

Fill the liquid

**Important:** a. Do not insert a battery with the positive(+) and negative(-) poles reversed; b. Do not using old and new batteries together or mixing batteries using differing cell chemis.

3. Fill the liquid.

**Make sure that indicator light is off before adding the liquid.**

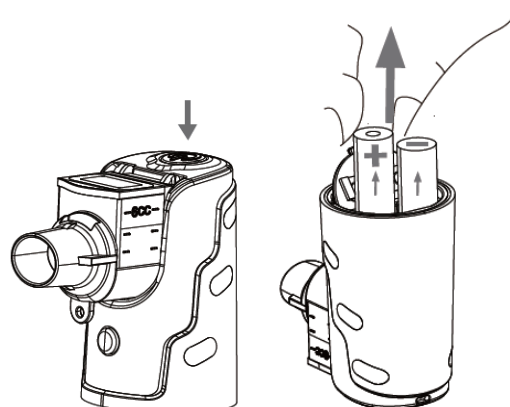
- Open the medicine cup cap.
- Fill the medicine cup with liquid, do not exceed the limit(maximum 6ml).
- Close the medicine cup cap properly.

4. Inhalation

- Put mouthpiece between your teeth, with your lips firmly sealed around the mouthpiece.
- Press the top switch button to turn on the device (light indicator turn on in green).
- Breathe in and out slowly through your mouth until aerosol formation stop.

5. End of inhalation

- Press the top switch button to turn it off.
- Remove the batteries from the main unit.



## Inhalation

## End of inhalation

**Important:**

- a. Tilt the device slightly, while the solution is almost exhausted to make sure that the residual solution contact the mesh and is sprayed completely.
- b. If the use of high-viscosity solution, nebulization may be reduce.
- c. If excessive solution is accumulated on the mesh, atomization may stop. In this case, Turn off the power and absorb the solution by gauze or lint-free towel.

## How to operate with Adapter

**Important:**

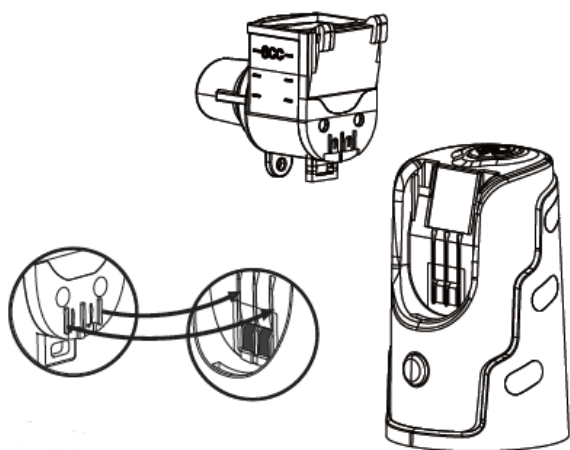
- A. The power adapter is optional accessories.
- B. Please use DC 5V/1A adapter, and the connection jack should matches a plug with outer diameter of 3.5mm, interior diameter of 1.35mm, 9.5mm in length and positive polarity.
- C. Adapter can not charge battery, Please remove the batteries before using the adapter.
- D. As with all electrical devices, It is recommended that keep the product unplugged when not in use.

## 1. Set up medicine cup

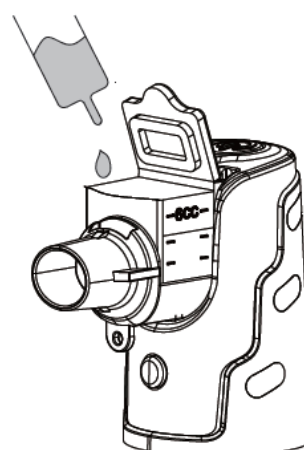
- Align the three ribs on the back of the medicine cup with three trenches of the main unit to insert the medicine cup into the main unit.

## 2. Fill the saline

- Open the medicine cup cap.
- Fill the medicine cup with saline, do not exceed the limit(maximum 6ml).
- close the medicine cup cap properly.



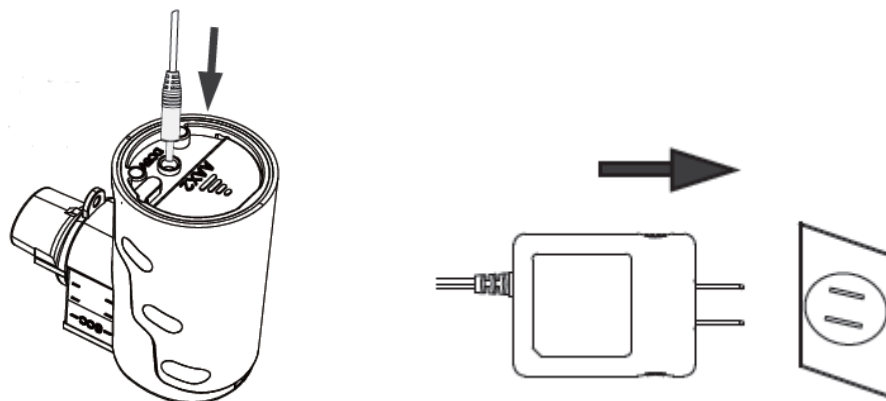
Set up medicine cup



Fill the saline

## 3. Connect with adapter

- Plug the cable into the power adapter jack on the main unit.
- Plug the adapter into a standard electrical outlet.



#### 4. Inhalation

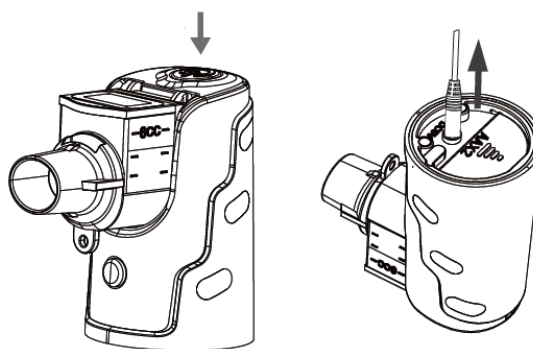
- Place the mouthpiece between your teeth, with your lips firmly sealed around the mouthpiece.
- Press the top switch button to turn on the device (light Indicator turns on in green).
- Breathe in and out slowly through your mouth until aerosol formation stop.

#### 5. End of inhalation

- Press the top switch button to turn it off.
- Remove the adapter from main unit and electrical outlet.



Inhalation



End of inhalation

## 5. CLEANING

**Important: If the device is not cleaned and disinfected correctly and frequently as indicated, microorganisms may remain in the unit and cause risk of infection**

All the accessories is for single use and need not cleaning.

After every use:

Clean the medication cup with distilled water after each inhalation.

1. Pour out the residual solutions in the medicine cup.
2. Pour some distilled water into the medicine cup.
3. Turn on the device to nebulize the distilled water for 1 to 2 minutes to clean the mesh.
4. Remove batteries or or disconnect the adapter from the main unit.
5. Remove the medicine cup from the main unit.



6. Wash and rinse the medicine cup with distilled water.
7. Shake off excess water and allow parts to be fully air dried on a clean, dry towel.
8. Use gauze or a clean towel to wipe off stains on the main unit if necessary.
9. Make sure that all cleaned parts are completely dry before you store them or use them next time.

**Important:**

- a. Keep the battery compartment stay in dry all the time.
- b. Do not use your fingers, cotton swab, or any object to poke the mesh.
- c. Do not use dishwasher to clean parts.
- d. Do not use microwave to dry any accessories.

**Disinfections:**

Please follow the following steps to disinfect your nebulizer unless otherwise specified by your physician. It is suggested that the unit is disinfected after the last treatment of the day.

**Disinfection by boiled water:**

1. Rinse the medicine cup with distilled water.
2. Bring a saucepan of DISTILLED water to the boil. Do NOT boiled medication cup directly.
3. Carefully immerse the medication cup in the boiled water for a maximum ten (10) minutes.
4. Carefully to remove the medication cup from the boiled water and shake off excess water.
5. Allow parts cooling down and fully air dry on a clean, dry towel, and out of reach of children.
6. Make sure that all cleaned parts are completely dry before you store them or use them next time.

**Disinfection by alcohol:**

1. Rinse the medicine cup with distilled water.
2. Immerse the medication cup in 75% ethyl alcohol for 1 minute.
3. Rinse the medication cup with distilled water again, shake off excess water and allow parts to be fully air dried on a clean, dry towel.
4. Make sure that all cleaned parts are completely dry before you store them or use them next time.

**Important:** Alcohol is highly flammable. Do not use alcohol in the vicinity of a fire or smoking.

**Battery life and change**

1. Battery life is usually depending on the capacity and condition of the batteries. In general, this device can operate about 4 days with two brand new AA alkaline batteries based on usage of 20 minutes a day.
2. When the power indicator turns into orange (means low power), please replace both batteries with new ones.

3. Discarded batteries must not be discarded in the garbage, can not be burned, need to focus on the recycling of waste batteries in the trash.

## 6. Carrying and storing

Put on the mouthpiece cover, store the device and medication cup in a dry and clean environment.

1. Do NOT leave or carry the device containing residual liquid in the medication cup.
2. Remove the batteries if device is not in use for long periods. Failure to do so could result in damage due to battery leakage.
3. Do NOT leave the device under direct sunlight, in high humidity, extreme heat or cold environment.
4. Keep this device away from fire, high electromagnetic fields and out of the reach of children.

## 7. Troubleshooting

If any trouble occurs while you are using the device, please check the following list first.

Problem	Possible Cause	Action
Low atomization	Low battery power	Replace the batteries or use the adapter
	The stains on the electrode cause a fault connection	Use rubbing alcohol to clean electrodes
	The mesh holes has been clogged	Refer to Cleaning and Disinfection procedure to clean the medicine cup
	The mesh is broken	Replace the medicine cup
After turn on the power, power indicator is not on and no mist comes out.	The batteries are inserted in the wrong direction	Follow (+) and (-) mark on the battery cover to re-insert the batteries in correct direction
	Batteries are dead	Replace the batteries or use the adapter
	Fault connection between adapter and main unit	Check and reconnect the adapter to main unit
After turn on the power, the power indicator is on but no atomization.	The medication cup is not installed properly	Refer to Set up the medication cup procedure to re-install the medicine cup
	The mesh holes has been clogged	Refer to Cleaning and Disinfection procedure to clean the medicine cup
	The mesh is broken	Replace the medication cup
Power indicator turns into orange light constantly	Low battery power	Replace the batteries or use the adapter

Power indicator turns into orange light and flashing.	Fault connection of electrode and main unit	Use rubbing alcohol to clean electrodes and re-stall the medicine cup
	The mesh is broken	Replace the medication cup

### 8.EXAMPLE of Guidance and manufacturer’s declaration


<b>Guidance and manufacturer’s declaration – electromagnetic emissions</b>		
The JLN-MB001 Mesh Nebulizer is intended for use in the electromagnetic environment specified below. The customer or the user of the JLN-MB001 Mesh Nebulizer should assure that it is used in such an environment.		
<b>Emissions test</b>	<b>Compliance</b>	<b>Electromagnetic environment – guidance</b>
RF emissions CISPR 11	Group 1	The JLN-MB001 Mesh Nebulizer uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.  The JLN-MB001 Mesh Nebulizer suitable for use in all establishments,including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies	

<b>Guidance and manufacturer’s declaration – electromagnetic immunity</b>			
The JLN-MB001 Mesh Nebulizer is intended for use in the electromagnetic environment specified below. The customer or the user of the JLN-MB001 Mesh Nebulizer should assure that it is used in such an environment.			
<b>Immunity test</b>	<b>IEC 60601 test level</b>	<b>Compliance level</b>	<b>Electromagnetic environment – guidance</b>
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6kV Contact ±8kV Air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %. If ESD interfere with the operation of equipment, counter measurements such as wrist strap, grounding shall be considered.
Electrical fast	±2 kV for power	±2 kV for Power	Mains power quality should be that of a

transient/burst IEC 61000-4-4	supply lines ±1 kV for input/output lines	supply lines	typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1kV differential mode ±2kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 sec	<5% UT for 0.5 cycle 40% UT for 5 cycles 70% UT for 25 cycles <5% UT for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the JLN-MB001 requires continued operation during power mains interruptions, it is recommended that the JLN-MB001 be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

**Guidance and manufacturer's declaration – electromagnetic immunity –  
for EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING**

<b>Guidance and manufacturer's declaration – electromagnetic immunity</b>			
The JLN-MB001 Mesh Nebulizer is intended for use in the electromagnetic environment specified below. The customer or the user of the JLN-MB001 Mesh Nebulizer should assure that it is used in such an environment.			
<b>Immunity test</b>	<b>IEC 60601 test level</b>	<b>Compliance level</b>	<b>Electromagnetic environment – guidance</b>
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3V	Portable and mobile RF communications equipment should be used no closer to any part of the JLN-MB001, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1.2 \sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3V/m	

			<p><math>d = 1.2 \sqrt{P}</math> 80 MHz to 800 MHz</p> <p><math>d = 2.3 \sqrt{P}</math> 800 MHz to 2,5 GHz</p> <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range.</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
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Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT or SYSTEM –  
For EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING

<b>Recommended separation distances between Portable and mobile RF communications equipment and the JLN-MB001 MES</b>			
The JLN-MB001 Mesh Nebulizer is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the JLN-MB001 Mesh Nebulizer can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the JLN-MB001 Mesh Nebulizer as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1.2 \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3 \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $P$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

## 9. SPECIFICATIONS

Power	Input 220AC, 50HZ,output 6V/0.4A or DC 3V (1.5 x 2 battery)
Power Consumption	10W
Ultrasonic vibration frequency	110KHz ± 25%
Medication Capacity	≤6ml
Particle Size	1 to 5 um, >50%
MMAD	5 um ± 25%
Sound Level	Around 50dBA
Average Nebulization Rate	≥0.4ml/min
Continuous working time	4h
Operating Temperature Range	50°F to 104°F (10°C to 40°C)
Operating Humidity Range	30 to 75% RH
Storage Temperature Range	8°C to 30°C
Storage Humidity Range	20 to 80 % RH
Dimension (L x W x H)	77*74*48”mm
Weight	80g
Transporation condtions	-20°C-70°C, 10%-93%RH,50kPa-106kPa
Standard Accessories	Medicine cup;Mask; Mouthpiece;

Protection against electric shock



- Type B applied parts




- Class II










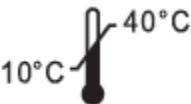
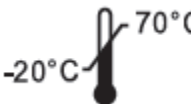
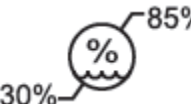





protection against harmful ingress of water


-IPX0(ordinary)

degree of safety in the presence of flammable anesthetics or oxygen

-No AP/APG(Not suitable for use in the presence of flammable anesthetic or oxygen)

Symbol	Explanation
	Manufacturer

	Authorised representative in the European Community
	Lot Number
	Serial Number
	Date of Manufacture
	Caution
	Batteries or electronic instruments must be disposed of in accordance with the locally applicable regulations, not with domestic waste.
	Please refer to manual
	Power button
	DC
	Operating Temperature Range
	Storage Temperature Range
	Operating Humidity Range
	Storage Humidity Range
	serial number
	Keep dry
	Environmental protection cycle mark
	Recycling symbol

	Intertek Semko AB
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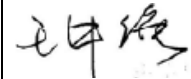
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