Instruction Manual

Mesh Nebulizer

(Model No. JSL-W301 JSL-W302 JSL-W303)

Version:A.1

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Introduction

Thank you for purchasing JSL-W301 mesh nebulizer(hereinafter referred to the device), please read the manual carefully to make sure that you can operate it correctly and safely. Please store the manual well after reading it for later reading and referencing.

【Quality Assurance】

Main unit 12 Months for free warranty, medical bottle(including mesh plate)3 months for free warranty. During warranty period, we depend on the damage to decide maintenance or change damaged parts.

Accessories are consumables, not belong to warranty rage. If you need to change, please select the products who has certificates for your safe.The company's mask manufacturer and European information are listed in the label.

The below not including in warranty range:

- The damage caused by human fall, touch, soaking, wet
- The damage caused by not in accordance with the correct operation instructions.
- Damaged by accident
- Without our company's authority, users who disassembly and assembly by selves.
- Product Serial No. is teared or can't be recognized well, and no warranty card and invoice.

⚠ **NOTE:** Take warranty card "Users Page "to contact local distributor or our company if your nebulizer need to be repaired. Meanwhile, please keep packing box well so that can be used when you send it to our company.

Chapter 1 Product Introduction

1、Product Overview

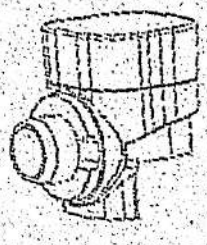
The device is designed for respiratory diseases treatment and respiratory tract infection prevention. The device is pushed by certain circuit frequency vibration to make piezoelectric ceramic vibrate harmony that caused high speed vibration of mental mesh. And the medicine liquid will be quickly popped through micro mesh hole of mental mesh plate to be countless micro atomizing particles. To the target of inhalation treatment using masks or mouthpieces by importing to patients' respiratory system.

2、Components

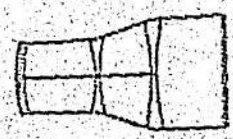
Main unit, Medical bottle (including mesh plate), Accessories (Aerosol Mask w/Nebulizer adult , Aerosol Mask w/Nebulizer infant and mouth piece etc. Can be 3 components or 2 or 1 single piece) . Details see Picture1:



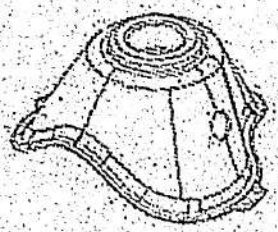
1.Main unit



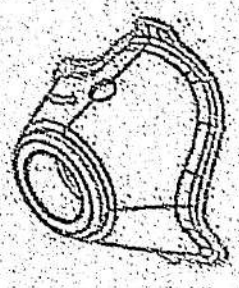
2.Medical bottle



3.Mouth piece

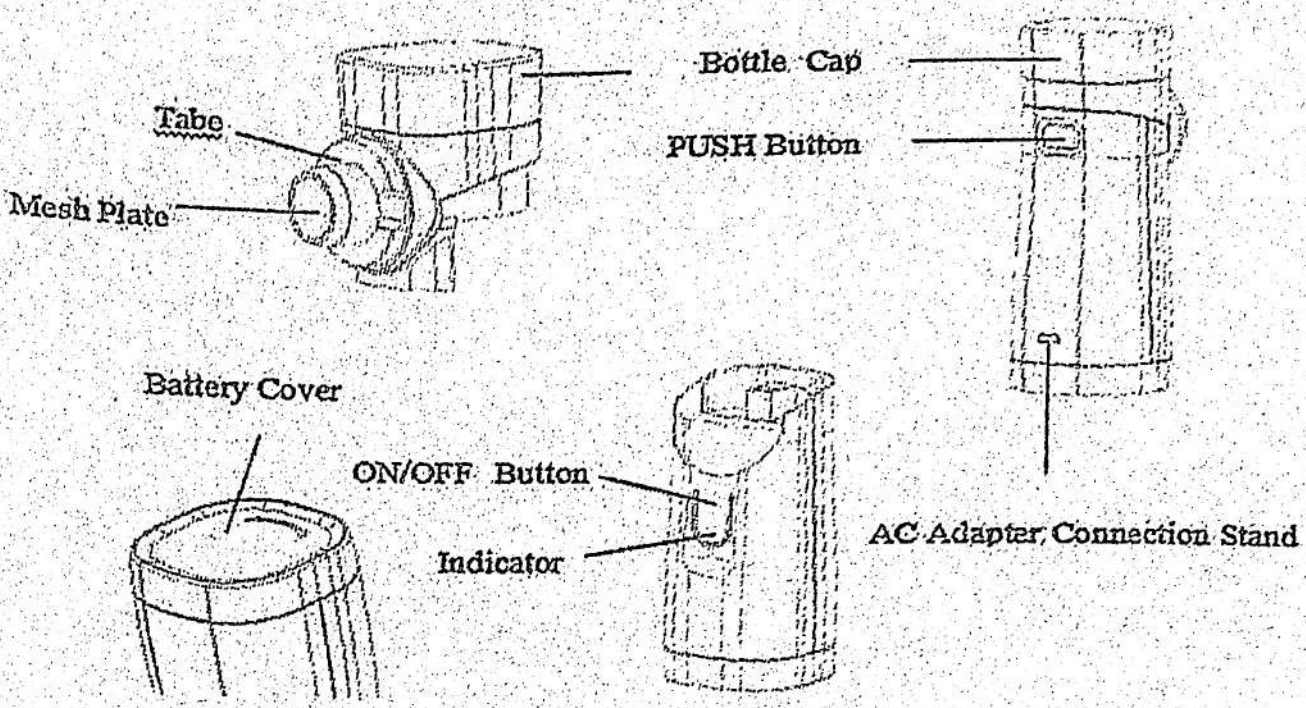


4.Aerosol Mask w/Nebulizer adult



5.Aerosol Mask w/Nebulizer infant

Picture 1 Components



Picture 2 Detailed Components

3.Available Range

The nebulizer is designed for respiratory diseases treatment and respiratory tract infection prevention. It is widely used in curing diseases of respiratory system, such as cold, fever, bronchitis, asthma, pneumonia, pneumonic mycosis and pulmonary heart disease. It can also be used to cure occupational disease; give throat care to the artists, cure ENT throat diseases like chronic allergic rhinitis, acute laryngitis, acute phatyngitis, acute tonsillitis, etc.

The nebulizer shall be used with face mask, and the face mask's connection tube diameter shall be 20.0±0.1mm, therefore the face mask can be connected to the nebulizer tigtly.

4.Applicable people scope

The nebulizer is available to adults, aged people, infants and children must under adults supervision.

The nebulizer can be used at homehold environment, and it complies with requirement of IEC 60601-1-11.

Contraindications:

1) The device can not be applied to anesthesia breathing system and respiratory system.
2) Infants and children must under adults supervision.
3) Pentamidine is not applicable to the device.

5、Working Principle

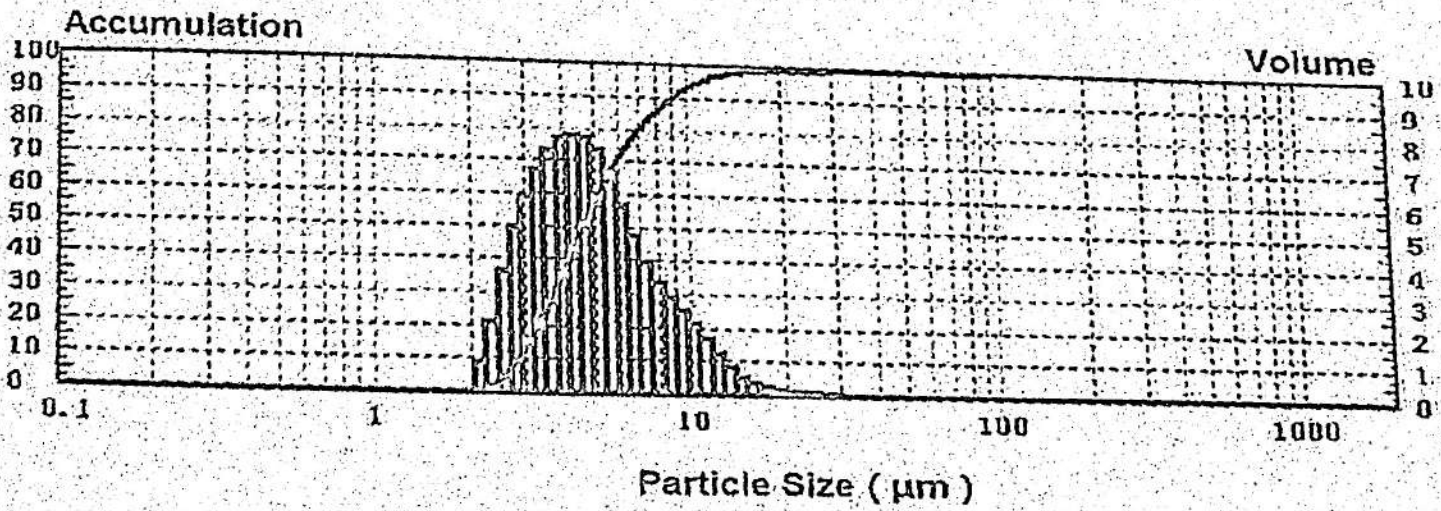
The device is pushed by certain circuit frequency vibration to make piezoelectric ceramic vibrate harmony that caused high speed vibration of mental mesh. And the medicine liquid will be quickly popped through micro mesh hole of mental mesh plate to be countless micro atomizing particles. To the target of inhalation treatment using masks or mouthpieces by importing to patients' respiratory system.

6、Main Performance Index

Please see Table 1, the device is tested by 0.9% physiological saline under the condition of temperature 25 ± 3℃, humidity 60%± 5%R.H.

Table1 Main Performance

Nebulizer ultrasonic working frequency	120KHz±10%
Nebulizer spraying rate	≥0.2ml/min
Medical bottle medicine liquid temperature	≤41℃
Working noise	≤50 dB
Fog particle media diameter	5μm



Picture 3 Fog Particle Equivalent Volume

⚠ NOTE : The horizontal line is particle diameter, the data are the logarithm distribution; Left vertical line is cumulative percentage of volume, corresponding to the curve upward trend; Right vertical line is a range of volume percentage, corresponding to Graph histogram or rolling.

The maximum and minimum recommended fill volume as 0.5cc-8cc.

Chapter 2 Operation

- To prevent cross infection, the nebulizer is used only by one person
- Please clean and disinfect nebulizer when you first using it or before and after using, then dry it. See Chapter 3.

1、Connect the power supply

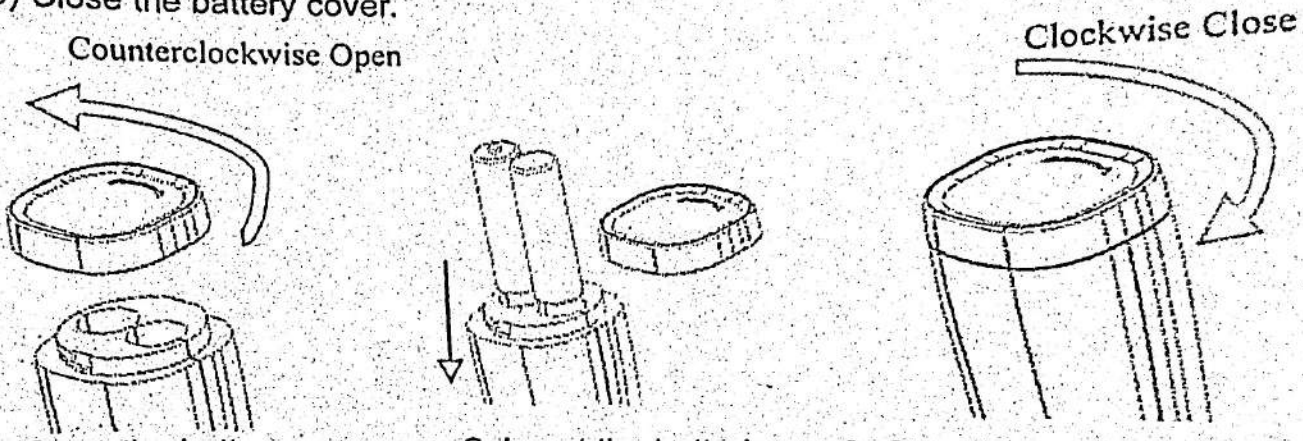
This nebulizer can both with AA Alkaline batteries or lithium battery nominal voltage 3.7V ± 20% (optional accessories), mobile charger with Android 8.0 flat pin (purchase additionally)

1、Install Batteries (Picture 4)

(1) Open the battery cover;

(2) Insert the batteries (2 Alkaline AA Batteries) ;

(3) Close the battery cover.



1. Open the battery cover 2. Insert the batteries 3. Close the battery cover

Picture 4 Installation of Batteries

⚠ NOTE:

(1) Please install batteries as battery chamber polarity symbol.

(2) Please do not mixed using different styles, manufacturers, factories.

(3) Please remove the batteries if not using nebulizer.

2、Adapter Using

(1)Connect adapter output to AC adapter(Picture 2);

(2)Connect adapter input to power.

⚠ NOTE:

1)Users should purchase Mobile Charger additionally, please note that the output port of Mobile Charger should match with the AC power required;

2)To ensure safe using, please use Mobile Chargers that meet the electrical safety standard GB 9706.1-2007 or IEC 60601-1;

3)Mobile Charger technical parameter should satisfy as below :

4)Input voltage: AC 100～240V,50/60 Hz;

5)Output voltage: 3～5VDC,1～2A

3、 lithium battery (optional accessories)

（1） If the purchased atomizer has lithium battery function, the machine can be used directly with lithium battery。 lithium battery nominal voltage 3.7V

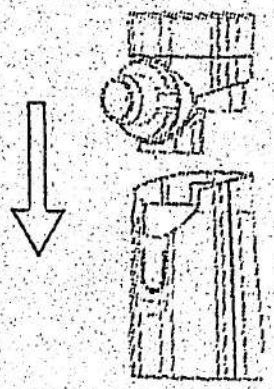
（2） when the power voltage of the lithium battery is less than 3.3 ±0.1Vv, the red indicator will start to light, and automatically shut down when the voltage is less than 3.0 ±0.1V.At this time, please charge the lithium battery, use the power adapter to link the host and power socket, the red light flashing when charging, lithium battery is full of power and the red light goes out.

（3）when charging, connect the power adapter output port to the AC power adapter socket in the rear view in Picture 2.

2、Nebulizer Assembly

(1) Please clean and disinfect nebulizer before using, then dry it, see chapter 3 in details;

(2) Use One hand to hold the main unit, the other to hold the medicine bottle. push follow the slot until you hear a "Click" sound.(Picture 5)



Picture 5 Nebulizer Assembly

⚠ NOTE:

（1） If not assemble medical bottle in right place, that may caused electrode couldn't turn and nebulizer can't work .

（2） Please keep main unit and medical bottle clean(see chapter 3),or may cause nebulizer can't work.

3、Add Liquid Medicine (Picture 6)

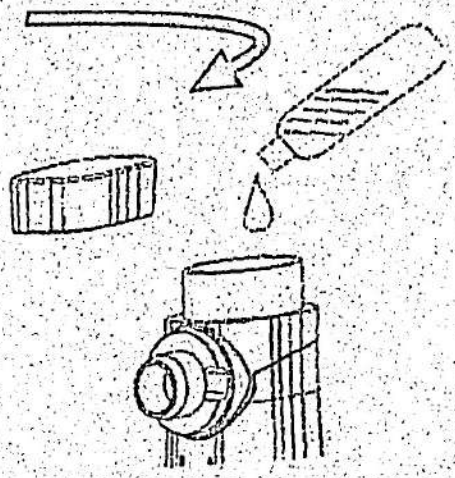
（1） One hand holds the machine unit, the other hand rotates the medicine cup lid

clockwise to open the cup lid ;

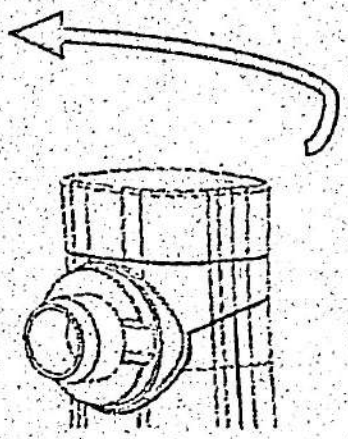
(2) Put liquid medicine in the medical bottle;

(3) Rotate the medicine cup lid anticlockwise to cap the cup lid

switch clockwise



Switch anticlockwise



1.Open cover , Add medicine liquid

2.Close the cover

Picture 6 Add Liquid Medicine

⚠ **NOTE:**

(1) Suggestion:Max medicine liquid 8ml,min 0.5ml

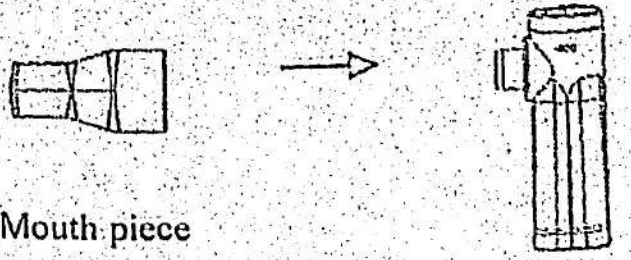
(2) After putting medicine liquid in, to prevent nebulizer shaking or inverted that may cause the leakage of medicine liquid.

(3) Keep medicine liquid and mesh completely contacting to prevent mesh plate air shock.

4、Usage of Nebulizer

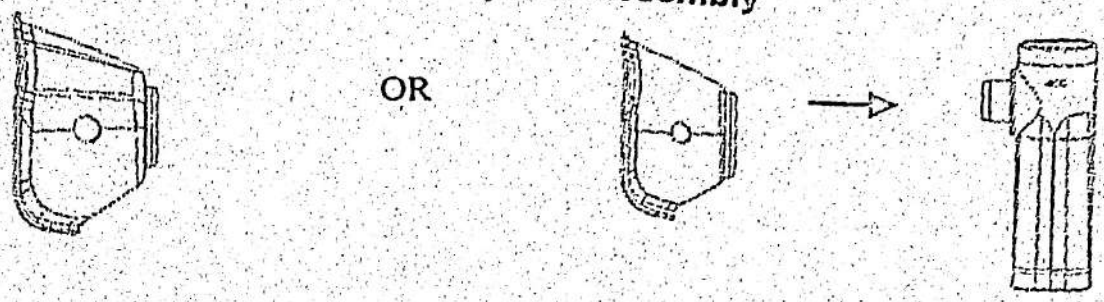
Nebulizer accessories includes mouthpiece, adult mask and child mask. If need to be treated by the throat, please use the mouthpiece; meanwhile if need to be treated by nasal cavity / or throat, please choose a mask.

(1) Connect mouthpiece or mask and sending pipe of main unit as Picture 7,or connect mask and sending pipe of main unit as picture 8:



Mouth piece

Picture 7 Mouthpiece Assembly



Aerosol Mask w/Nebulizer (adult) Aerosol Mask w/Nebulizer (infant)

Picture 8 Mask Assembly

2、Push START/STOP button, the power indicator light (Blue Light) will light up and turn on;

3、Keep calm, relax and sit well, with the hand holding the nebulizer smoothly, take deep and slow breathing to have more effective treatment:

(1)When use mouthpiece, make the mouthpiece flat end into the mouth, lips slightly closed, so that the medicine liquid to the affected area.

(2)When use mask, make mask slightly close to face, better for covering nose cavity and mouth:

① Treat by nose cavity, deep inhaling from nose cavity, exhaling from mouth.

② Treat by throat, inhaling from mouth, exhaling from nose cavity.

③ During treatment, can both use ① and ②.

⚠ **NOTE:**

(1) Put 0.9% physiological saline into medical bottle, after assembly and before using, push START/STOP to test If it can't work well(Chapter 6).

(2) Please follow Picture 7&8, by accessories' connectors to assemble mouthpiece or mask.

(3) Please use correctly using mouthpiece, don't spray the liquid to your tongue.

(4) Don't swallow liquid and make sure liquid does not go direct to the affected area..

(5) Improper gesture and not smooth breathing may cause respiratory passage blockage.

(6)After working for 20 minutes, the time indicator (Yellow) will flicker continuously and turn off the power automatically.If the bottle is not filled with any liquid medicine, the nebulizer will not work..

(7) Slightly tilt the Main Unit toward yourself to immerse the Vibrating Mesh in the Medicine.

⚠ NOTE:If the vibrator is not immersed in the Medicine, the device will not nebulize within 10 seconds.

(8) When the Medicine is not much, tilt the device toward yourself by START/STOP side) , make the Medicine gathered in mesh plate, in order to make full use of the residual Medicine.

(9) The device should avoid empty shock, in case of mesh plate broken.

(10) When Low Voltage Indicator (Red Light) continue to slow flash, the power will run out, please change new Alkaline Batteries as soon as possible.
(11) Do not strongly wave or vibrate the device in use; otherwise the device automatically shut down.
12) Pure water is not suitable for normal working mode, otherwise the device will not turn on

5、Turn Off The Power

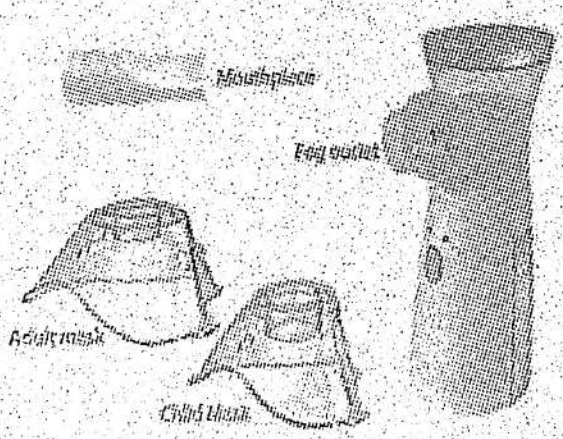
1. Press the START/STOP button to turn off the power, the Power Indicator (Blue Light) will go out.
2. When the Mobile Charger is used, remove the power plug from the electrical outlet after using the device.

6、After Using

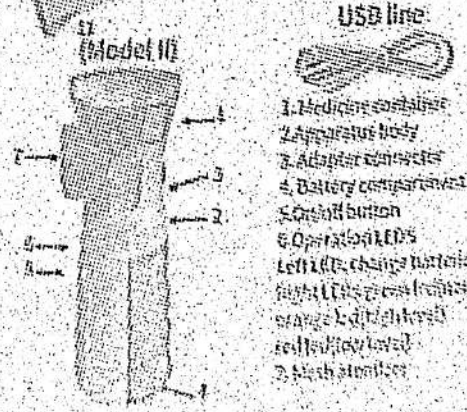
1. Remove the mouthpiece or mask
2. Hold the Main Unit by one hand, and Press the [PUSH] button behind the Main Unit shown in Picture 9; Hold the Medicine bottle by the other hand, remove the Medicine bottle along the slot ;.

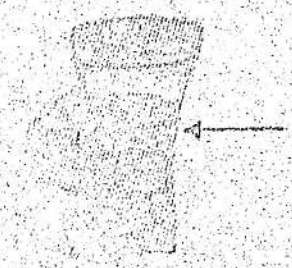
Picture 9

3. Open the lid, pour all the residual liquid medicine bottle, and promptly clean the device, allow the parts to air dry and store the device in a clean environment. See Chapters 3 and 4.









Please note that the top of this machine model can not beseparated from the fuselage

Chapter 3 Cleaning and Disinfecting

- After each use, first discard all residual medicine, and remove the attachment from the main unit to clean and disinfect. Dry the parts immediately after washing.
- Be sure to turn off the device.
- Do not store when main unit , medicine bottle and accessories remain any moisture.

1、Medicine Bottle

1. Open the medicine bottle, and discard any residual medicine;
2. Pour a small amount of hot water into the medication bottle and close the cover;

⚠ NOTE: Suggest that the water temperature is 30-60℃

3. Press the START/STOP button for 5 seconds, Power Indicator(Blue Light) and Low Water Indicator (Yellow Light) and Low Voltage Indicator (Red Light) constantly light, Turn on the device in cleaning pattern to nebulize the distilled water for 1 to 2 minutes to remove residual Medicine from the mesh holes.
4. Rinse the medicine bottle and Medical Cap with distilled water. Gently wipe off excess water with a soft clean cloth or allow the parts to air dry in a clean environment.
5. Immerse the medicine bottle in 75% medical alcohol disinfecting at least 3 minutes, then remove the medicine bottle in a clean environment to dry and store.

⚠ NOTE:

1.) Use medical gauze and medical cotton swabs to clean and disinfect

2) Do not wipe in tissue paper or other cloth, otherwise the mesh will not nebulize normally.

3) Do not wipe with the sharp object or touch the mesh.

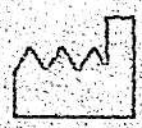
4) Disinfect the Mesh after the last treatment of each day in the following solution: 2ml Vinegar (1 part white vinegar and 3 parts distilled water), OR 2ml hot water (No more than 80 degrees C). Turn on the device to nebulize in the disinfecting solution until running out. Turn off the power, then soak the medicine bottle in vinegar or hot water for 3 minutes, then remove and rinse with pure water.

5) Do not use other household bleach to clean the device in addition to the above solution.

2、Cleaning the Main Unit

1. Gently wipe the Main Unit with 75% medical alcohol and wipe off excess water with a soft clean cloth;

Chapter 8 Marks and Symbols

CE 0123	CE mark	SN	Serial number
	Separate collection		Date of manufacture
	See the Instruction		Manufacturer
	BF type application part	EC REP	European union representative
	Notice		Power Indicator
	Time Indicator		Low Voltage Indicator
IP22	Waterproofing Grade		Environment-friendly Use Period

Chapter 5 Safety Information and Care

1. Safety Information

1. Do not use or store the device in humid locations, such as a bathroom. Use the device within the operating temperature and humidity.
2. Read all the information in the instruction book and any other literature included in the box before using the unit.
3. Accessories mentioned in the instruction manual are just for the device .
4. Do not subject the device or any of the components to strong shocks, such as dropping on the floor.
5. Do not shock the device in using.
6. Do not disassemble or attempt to repair the device or components.
7. Remove all batteries when the device does not work.
8. When the Mobile Charger is used, remove the power plug from the electrical outlet and clean the device.
9. Do not operate the device or contact the Mobile Charger socket or power switch with wet hands.
10. Do not immerse the main unit in water or other liquid, avoid splashing water or other liquid to the main unit or AC adapter; Turn off the power, and immediately dry with a clean cloth.
11. To prevent damage to the device, do not carry or leave the Medicine Bottle filled with Medicine or distilled water.
12. Do not operate the device with rechargeable batteries, Dispose of the device, components, and optional accessories according to applicable local regulations. Unlawful disposal may case environmental pollution.
13. This device is approved for human use only.

2. Care for the Device

1. The nebulizer is a prescription medical device. For type or dose of Medicine follow the instructions of your physician and/or licenced healthcare practitioner
2. Do not use the Medicine with ester, fat or suspended particles, including herbal medicine, suggest use the standard nebulizing Medicine in accordance with the physician's advice.
3. The device nebulizes for 10 ~ 20 minutes each time, the amount of Medicine for 2 ~ 4 ml, but still can be used as the physician suggested.
4. The device is a personal medical equipment, Do not mixe its usage with others.
5. Do not touch the mesh with your hand or any other object.
6. Keep the device out of the reach of unsupervised infants and children.
7. Suggest that the device be kept away from other electrical products with above 2W power consumption at least 3.3 meters, to avoid the electromagnetic interference; Consult your physician for users wearing the heart pacemaker.

⚠ WARNING: Pentamidine is not applicable to the device!

The device can not be applied to anesthesia breathing system and respiratory system!

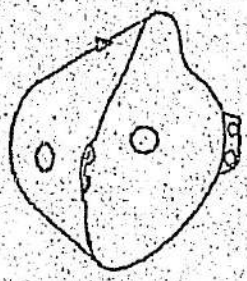
Chapter 6 Guidance and manufacturer's declaration – electromagnetic emission

Guidance and manufacturer' s declaration - electromagnetic emission		
The JSL-W301 Mesh Nebulizer is intended for use in the electromagnetic environment specified below . The customer or the user of JSL-W301 Mesh Nebulizer should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic enviroment-guidance
RF emissions CISPR11	Group 1	The Model JSL-W301 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.
RF emissions CISPR11	Class B	The Model JSL-W301 is 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.
Harmonic emissions IEC61000-3-2	N/A	
Voltage fluctuations/flicker emissions IEC61000-3-3	N/A	

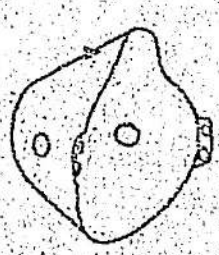
List of product accessories



Sprayer ×1



Adult mask ×1



Children's mask ×1



Bite ×1



USB power cord ×1



Instructions ×1

Guidance and manufacturer's declaration -electromagnetic immunity			
The JSL-W301 Mesh Nebulizer is intended for use in the electromagnetic environment specified below . The customer or the user of JSL-W301 Mesh Nebulizer should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Electrostatic discharge(ESD) IEC61000-4-2	± 8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	± 8 kV contact ±2 kV, ±4 kV, ± 8 kV, ±15 kV air	Floor should be wood , concrete or ceramic tile . If floors are covered with synthetic material,the relative humidity should be at least 30%
Electrostatic Transient/burst IEC61000-4-4	± 2 kV for power supply lines 100 kHz repetition frequency ± 1 kV for input/output lines	N/A	Mains power quality should be that of a typical commercial or hospital environment
Surge IEC610000-4-5	± 0.5 kV, ± 1 kV differential mode line-line	N/A	Mains power quality should be that of a typical commercial or hospital environment
Voltage dips ,short interruption and voltage variations on power supply input lines IEC61000-4-11	0 % UT (100 % dip in UT)for 0.5 cycle at 0° , 45° , 90° , 135° ,180° ,225° , 270° , and 315° 0 % UT (100 % dip in UT)for 1 cycle at 0° 70 % UT (30 % dip in UT)for 25/30 cycles at 0° 0 % UT(100 % dip in UT)for 250/300 cycle at 0°	N/A	Mains power quality should be that of a typical commercial or hospital environment. If the user of the JSL-W301 Mesh Nebulizer requires continued operation during power mains interruptions,it is recommended that the JSL-W301 Mesh Nebulizer be powered from an uninterruptible power supply or a battery
Power frequency (50/60Hz) magnetic field IEC61000-4-8	30 A/m, 50/60Hz	30 A/m, 50/60Hz	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment
NOTE	U_T is the a.c. mains voltage prior to application of the test level		

Guidance and manufacturer's declaration -electromagnetic immunity

The JSL-W301 Mesh Nebulizer is intended for use in the electromagnetic environment specified below . The customer or the user of JSL-W301 Mesh Nebulizer should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC610000-4-6	3 Vrms 150 kHz to 80 MHz 6 Vrms 150 kHz to 80 MHz outside ISM bandsa	N/A	Portable and mobile RF communications equipment should be used no closer to any part of the Models JSL-W301, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended Separation Distance $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m	$d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80MHz ~ 800MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800MHz ~ 2.7GHz 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). Field strengths from fixed RF transmitters,

			as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range b Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE1 At 80MHz and 800MHz,the higher frequency range applies
NOTE2 These guidelines may not apply in all situations.Electromagnetic is affected by absorption and reflection from structures, objects and people.

a The ISM (industrial, scientific and medical) bands between 0,15 MHz and 80 MHz are 6,765 MHz to6,795 MHz; 13,553 MHz to 13,567 MHz; 26,957 MHz to 27,283 MHz; and 40,66 MHz to 40,70 MHz. The amateur radio bands between 0,15 MHz and 80 MHz are 1,8 MHz to 2,0 MHz, 3,5 MHz to 4,0 MHz, 5,3 MHz to 5,4 MHz, 7 MHz to 7,3 MHz, 10,1 MHz to 10,15 MHz, 14 MHz to 14,2 MHz, 18,07 MHz to 18,17 MHz,21,0 MHz to 21,4 MHz, 24,89 MHz to 24,99 MHz, 28,0 MHz to 29,7 MHz and 50,0 MHz to 54,0 MHz.

b The compliance levels in the ISM frequency bands between 150 kHz and 80 MHz and in the frequency range 80 MHz to 2,7 GHz are intended to decrease the likelihood that mobile/portable communications equipment could cause interference if it is inadvertently brought into patient areas. For this reason, an additional factor of 10/3 has been incorporated into the formulae used in calculating the recommended separation distance for transmitters in these frequency ranges.

c Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the JSL-W301 is used exceeds the applicable RF compliance level above, the JSL-W301 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the JSL-W301.

d Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.