



10) When there is not much liquid left, you may tilt the device towards yourself to allow liquid gathers at the nebulizing head side in order to make full use of the residual liquid. During operation be cautious not to shake the device because it may cause device malfunction, such as automatic shutdown.

7. After completion of treatment, shut it down by pressing the ON/OFF switch. If power adapter is connected, you are also required to unplug it.

8. Remove the mouthpiece/mask in an order reverse to the corresponding installation order.

9. Remove the nebulizer: hold the main unit with left hand, press the PRESS-key (over the jack for adapter) with your left thumb along the direction of arrow (see Fig. 11); hold both sides of the lower end of nebulizer the right hand to gently pull it out.

11. Remove the residual liquid to empty the nebulizer and clean the device. For details please refer to the section – **Cleaning and Disinfecting**.

Note: You are advised to, after each use, allow the device running with clean water instead of liquid for 1-2 minutes in order to clean the nebulizing head.

Cleaning and Disinfecting

- Remove all accessories (including nebulizer, mask, mouthpiece) from the device after each use.
- Open the cover of nebulizer and remove the residual liquid. You are advised to, after each use, allow the device running with clean water instead of liquid for 1-2 minutes in order to clean the nebulizing head. Clean the mask, mouthpiece, nebulizer gently (Note that the main unit should not be washed).
- Immediately after completion of cleaning, dry the accessories with medical gauze. Note that the metal mesh in nebulizing head must not be touched strongly any sharp and rough object. Dry the water inlet and outlet of the nebulizing head with medical swab gently.

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4. If there is dust on the surface of main unit, please wipe it up with wet and dry gauze successively.

5. After completion of cleaning, store the device in clean storage bag.

Disinfecting

1. Disinfecting by using disinfectants

- Rinse the mask, mouthpiece with solution of sodium chloride diluted to 0.1% for 10minutes (Not including nebulizer); rinse with water; dry with medical gauze.
- Disinfecting of nebulizer: Open the cover and add 2-3ml medical alcohol, allow the device running with medical alcohol for 1-2 minutes (possibly no aerosol or little aerosol), remove alcohol and rinse nebulizer with water; dry the surface of nebulizer with medical swab softly.

Storage and Maintenance

- Make sure no residual liquid in nebulizer.
- Make sure the nebulizer has been cleaned and sterilized thoroughly after each use.
- Store the device and its parts and components and accessories in clean and safe place.
- Do not use the device where it may be exposed to flammable gas.
- This unit conforms to EMC Standard IEC60601-1-2. However, if it is used together with other medical devices or electrical equipment, they may influence the operations of some of devices. Please follow any instruction in the manuals and use all devices correctly.
- Don't serve and maintain the mask and mouthpiece when in use with patient.

Declaration

When technical information for user requirements is not in the scope of confidentiality of the Company, the Company committed to provide information disclosure in accordance with procedures including circuit diagrams and parts lists, and other related type technology information that does not involve commercial secrets may be disclosed. Access to information channels and procedures, please contact your dealer or manufacturer.

INSTRUCTION

Thank you for purchasing the OLV-N01 mesh nebulizer. This product is intended for the treatment of respiratory diseases such as asthma, allergies, etc. Working principle: thanks to self-excited oscillation circuit, the ceramic sheets contained in nebulizing head together with the metal mesh are driven successively to oscillate at a high frequency, which makes the liquid flowing through the micromesh of the metal mesh being ejected and nebulized to form inhalant aerosol.

SYMBOLS

| SYMBOLS | MEANING |
|---------|---|
| | Manufacturer |
| | Authorized Representative in the European community |
| | Symbol for the marking of electrical and electronics devices according to Directive 2002/96/EC. The device, accessories and the packaging have to be disposed of waste correctly at the end of the usage. Please follow Local Ordinances or Regulations for disposal. |
| | Attention, consult accompanying documents |
| | CE marking in conformity with EC directive 93/42/EEC |
| | Operating instructions |
| | Type BF Applied Part |
| | Power indicate light |
| | Low battery indicate |
| | CLASS II |

Warning: Before the device is send back to the factory for inspection and repair, never dismantle or attempt to repair it without permission.

Notes

- Never touch the metal mesh in the nebulizing head with hands.
- Never use liquids which containing ester, fatty or suspended particles (including diffusion juice of herb); please note that specifications may vary with medication type used; please use doctor-adviced standard liquid for nebulizing.
- The liquid for nebulizing should be prepared based on 0.9% saline or whatever advised by your doctor. No tap water or boiled water can be used.
- The container for preparation of liquid must be boiling-sterilized.
- The duration limit for each use of the device should be not more than 15 minutes or other limits as advised by doctor.

In consideration that some small-sized parts could be swallowed by infants or children, the device may only be applied to infants or children when sufficient supervision is provided. Children and mental illness patients should use this device under the tutelage of healthy adult.

- Remove the battery if it is predicted that the device will not be used for a certain period.
- Never place the device in water, under waterfall or very humid enclosure.
- Never use it while taking a shower.

If the device does not work, find the solutions in the section – **Troubleshooting**.

- Please always use private accessories as stated herein.
- Do not use the device where it may be exposed to flammable gas.
- This unit conforms to EMC Standard IEC60601-1-2. However, if it is used together with other medical devices or electrical equipment, they may influence the operations of some of devices. Please follow any instruction in the manuals and use all devices correctly.
- Don't serve and maintain the mask and mouthpiece when in use with patient.

Declaration

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SAFETY INFORMATION

Caution:

- Never use this device when ambient temperature is over 40°C. For more operating environment requirements, please refer to the section - **Specifications**.
- Do not shake the nebulizer during operation.
- Avoiding any strong shock on the main unit and its components, e.g., falling on the ground.
- Never dismantle the device or attempt to repair any part or component.
- This device is for human use only.
- Always use optional accessories as stated in this Instruction Manual only.
- The device and its parts and components and optional accessories shall only be discarded in accordance with the relevant local regulations. Inappropriate disposal may cause environmental pollution.
- Prior to use, make sure the device and its parts and components (e.g. mouthpiece and mask) are correctly assembled as per this Instruction Manual.

Risk of electric shock:

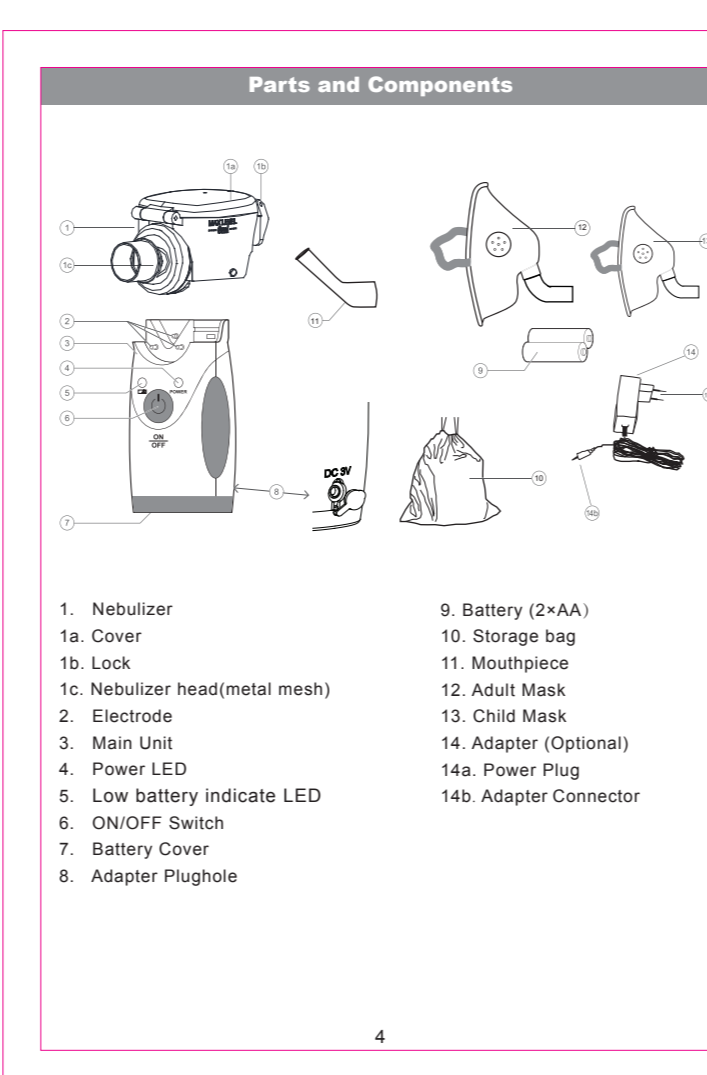
- Never use the device in case the power cord is wet.
- Never plug in or unplug from the power socket with wet hands.
- Do not immerse the main unit into water or other liquids.
- Protect it against water or other liquid splashes. In case it contacts with any splash, disconnect the power supply and mop up with gauze or other soft absorbent materials.
- Never use the device in humid environment such as bathroom.
- When connected to power supply, check the supply voltage at power socket is correct and make sure your plugging in will not cause overload.
- Disconnect it from power supply after the use of this device and never leave an energized device aside.
- Clean the device only after disconnecting it from power supply.

Troubleshooting

Please find solutions from the following table first in case of any problem during operation.

| NO. | Faults | Symptom/Possible Causes | Solutions |
|-----|--|--|--|
| 1 | Lower nebulizing rate | Low battery indicate LED lights up/goes out Nebulizer is foul | Replace all batteries Clean the nebulizer (please refer to the section – Cleaning and Disinfecting) change nebulizing head if necessary |
| 2 | Power LED does not light up and the device does not work | Battery's polarity has been reversed Low battery voltage Power adapter is not correctly connected to the jack the main unit or the power socket | Reinstall batteries correctly Replace all batteries Reconnect it to power socket or re-plug it into the jack |
| 3 | Power LED lights up but the device does not work | Incorrect installation of nebulizer Incorrect installation of nebulizer Pollution to the nebulizer is serious The liquid can not be in contact with nebulizing head | Reinstall the nebulizer correctly. Please refer to the section – Assembling the Device Reinstall the nebulizer correctly Clean the nebulizer; replace nebulizing head if necessary Slightly tilt the main unit towards yourself to make the liquid gathers at the nebulizing head side |
| | | There are bubbles between the liquid and nebulizing head Dirt electric pole of the main unit | Gently shake the liquid Clean the electrode of the main unit with medical gauze |
| 3 | | | |

If faults still exist after take measures as listed above, contact your supplier or your nearest local distributor.



WARRANTY OBLIGATIONS

1. Warranty for this mesh nebulizer is 12 months since the date of purchase.

2. The warranty obligations are prescribed by warranty card for buyer.

WARNING:

- Do not modify this equipment without authorization of the manufacturer.
- All major maintains on the device must be performed by an authorized service center or distributor. No use-serviceable parts inside, before servicing to authorized representative or manufacturer!

CLASSIFICATION

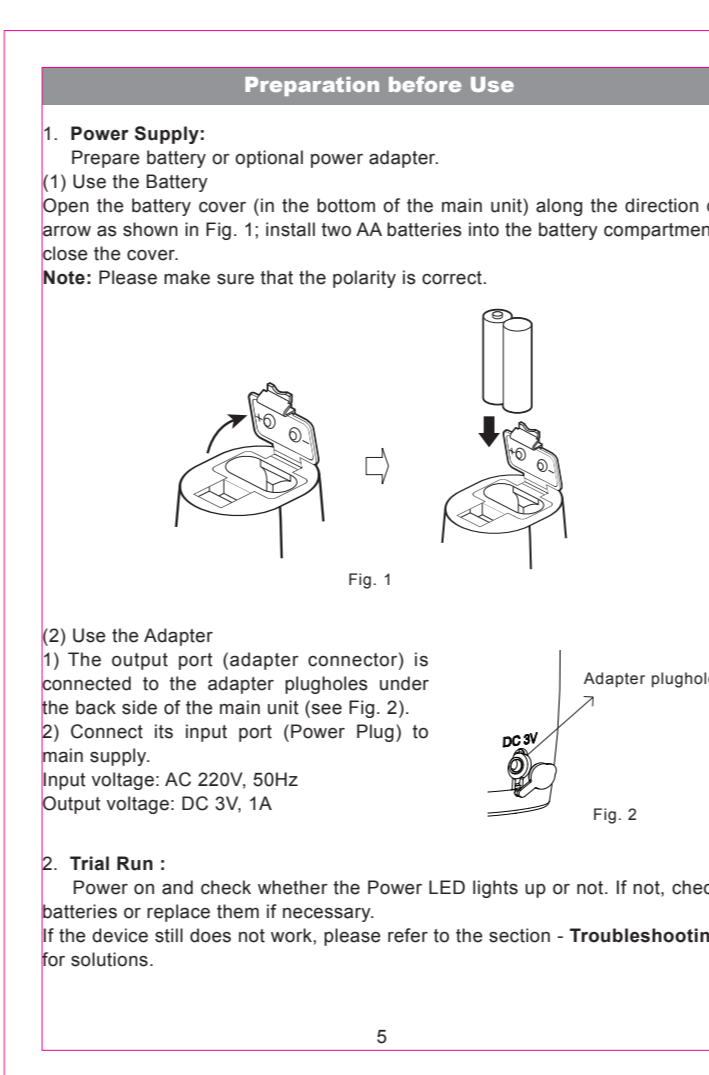
- Equipment not suitable for use in the presence of flammable mixtures.
- Type BF applied part. Recognized the mask or mouthpiece as applied part.
- Internally powered equipment (without adapter), Class II equipment (with adapter).

MANUFACTURER'S DECLARATION

Guidance and manufacturer's declaration – electromagnetic immunity

The model OLV-N01 Mesh Nebulizer is intended for use in the electromagnetic environment specified below. The customer or the user of the model OLV-N01 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) IEC60004-2 | ±8kV contact ±8kV air | ±8 kV contact ±8 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%. |
| Electrical fast transient/burst IEC 61000-4-4 | ±2 kV for power supply lines | ±2 kV for power supply lines | Mains power quality should be that of a typical commercial or hospital environment. |
| Surge IEC 61000-4-5 | ±1 kV differential mode | ±1 kV differential 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 line IEC 61000-4-11 | <-0% U₁ (>95% dip in UT) for 0.5 cycle 40% U₁ (60% dip in UT) for 5 cycles 70% U₁ (30% dip in UT) for 25 cycles <-5% U₁ (>95% dip in UT) for 5 sec | <-0% U₁ (>95% dip in UT) for 0.5 cycle 40% U₁ (60% dip in UT) for 5 cycles 70% U₁ (30% dip in UT) for 25 cycles <-5% U₁ (>95% dip in UT) for 5 sec | Mains power quality should be that of a typical commercial or hospital environment. If the user of the OLV-N01 Mesh Nebulizer Equipment requires continued operation during power mains interruptions, it is recommended that the OLV-N01 Mesh Nebulizer Equipment be powered from an uninterruptible power supply or a battery. |
|--|---|---|--|
| Power frequency 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. |
| Conducted RF IEC 61000-4-6 | 3Vrms 150 kHz to 80 MHz | 3 Vrms | Portable and mobile RF communications equipment should be used no closer to any part of the OLV-N01 Mesh Nebulizer Equipment, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = \frac{2.2}{f} \sqrt{P}$ Where P is the maximum output power (W) of the transmitter in watts (W) according to the transmitter manufacturer's data. The relative humidity should be at least 30%. Field strengths from fixed RF transmitters as determined by an electromagnetic site survey should be less than the compliance level in each frequency range. NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people. |
| Radiated RF IEC 61000-4-3 | 10 V/m 80 MHz to 2.5 GHz | 3 V/m | Where P is the maximum output power (W) of the transmitter in watts (W) according to the transmitter manufacturer's data. The relative humidity should be at least 30%. Field strengths from fixed RF transmitters as determined by an electromagnetic site survey should be less than the compliance level in each frequency range. NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people. |
| | | | |

Note:

- Remember to clean and sterilize the nebulizer and its parts and components and accessories prior to use for the first time. For details see the section - **Cleaning and Disinfecting**.
- If the device does not be used for a long time, carry out the above described cleaning and disinfecting.
- To avoid cross infection, all users of a same device should each be provided with a set of nebulizer and accessories. The nebulizers and accessories for different users should be stored separately.

Assembling the Device

1. **Install Nebulizer**
Hold the main unit and the nebulizer of the device with your left hand and right hand respectively; gently push the nebulizer along the direction of arrow (see Fig. 3) into the slot; a "Ka" sound indicates it is installed into position.

Note:

- Always keep electrode and nebulizer clean.
- If it is not installed correctly, it may do not work during nebulizing.
- As consumable, the nebulizer has a service life of 6 months (given that it is used 3 times pay day). You can get additional nebulizers from your supplier or the nearest local distributors.

2. **Place the assembled device into clean and dry storage bag.**

SEPARATION DISTANCE

Note 1 At 80MHz and 800MHz, 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.

* Field strength from fixed transmitters, such as base stations for radio 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 OLV-N01 Mesh Nebulizer is used exceeds the applicable RF compliance level above, the Model OLV-N01 Digital Blood Pressure Monitor should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Model OLV-N01 Mesh Nebulizer.
* Over the frequency range 150kHz to 80MHz, field strength should be less than 3 V/m

| Rated maximum output power of transmitter (W) | Separation distance according to frequency of transmitter (m) | | |
|---|---|-------------------|--------------------|
| | 150 kHz to 80 MHz | 80 MHz to 800 MHz | 800 MHz to 2.5 GHz |
| 0.01 | 0.117 | 0.117 | 0.233 |
| 0.1 | 0.369 | 0.369 | 0.738 |
| 1 | 1.167 | 1.167 | 2.333 |
| 10 | 3.699 | 3.699 | 7.379 |
| 100 | 11.697 | 11.697 | 23.333 |

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (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.

Using the Device

1. **Open the nebulizer:**
Hold the main unit with your left hand, pinch the nebulizer lock with the thumb and forefinger of your right hand and snap it upward to open the nebulizer as in Fig. 4.

2. **Add the liquid:**
pour the liquid drug into drug storage area (near the nebulizing head side) as in Fig. 5.

Note:

- the maximum and minimum volume of liquid is 8ml (at MAX LEVEL mark) and 0.5ml respectively
- If it is needed to adjust the temperature of liquid, add hot or cold water into the temperature adjustment storage area.

SPECIFICATIONS

| | |
|---|--|
| Name of Product | Mesh Nebulizer |
| Model | OLV-N01 |
| Power Supply | 2xAA batteries or Adapter (AC-DC 3V1A) |
| Rated Power | 2W |
| Ultrasonic Frequency | Approximately 140kHz |
| Safety level | Type BF, Class II |
| Nebulizing Rate | 30.2ml/min |
| Max./Min. Liquid Volume | 8ml/0.5ml |
| MMAD | Approximately 5µm |
| Low Battery Indicate | 2.2V±0.2V |
| Nebulizing Head Life | 100 hours |
| Battery Life | 90 minutes supplied by two AA Alkaline Battery |
| Automatic Shutdown | Automatic shutdown without liquid |
| Operating Temperature and humidity Air pressure | +10°C~+40°C, ≤85% RH 700hPa to 1060hPa |
| Storage Temperature and humidity Air pressure | -10°C~+40°C, ≤85% RH 500hPa to 1060hPa |
| Pollution degree | Degrees 2 |
| Voltage Category | Category II |
| Altitudes | ≤2000M |
| Accessories | Adult mask, Child mask, Mouthpiece, Instruction manual, Gift box, Warranty card, 2xAA batteries, Adapter (optional). |

Technical specifications may be subject to variations without prior notice.

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4. **Close Nebulizer:**
As shown in Fig. 6, hold the main unit of the device with your left hand and close the nebulizer cover with your right hand, press the lock downwards with the thumb to the point when you hear a "ka" sound which indicates a good closing state.

6. **Install mouthpiece or mask:**
(1) The enclosed parts include a mouthpiece, which is intended for medication through throat.
• Install the mouthpiece: connect the mouthpiece to nebulizer head along the direction of arrow (see Fig. 7).
• Use the mouthpiece: bring the mouthpiece into mouth and close lips slightly to facilitate nebulized liquid flowing to the lesion position smoothly (see Fig. 8).

(2) In case of medication through nasal cavity and/or throat, the mask should be used.
• Install the mask: connect the nebulizer head and mask together along the direction of arrow (see Fig. 9).

PERIODIC SAFETY CHECKS

If you use the device with power adapter, preventive inspection and maintenance to be performed including the frequency of such maintenance.

- Every time before use, please check the adapter, once damaged, never to use.
- Please clean the plug of adapter plug at least once a year. Too much dust on plug may cause the fire.

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MADE IN CHINA
N01/1212/01

• Use the mask:
Keep the mask in slightly contact with or a little away from the patient's face, then pull the elastic belt to the back of the head and secure it appropriately (see Fig. 10).

- In case of medication through nasal cavity, it is recommended to take a long breath through nasal cavity and then exhale through mouth.
- In case of medication through throat, it is recommended to take breath through mouth and then exhale through nasal cavity.
- It is allowed to alternate between both methods said above.

Note:

- For the sake of safety, when replacing the mask please select only medical devices that meeting the regulatory requirements for medical devices and made by manufacturers with certificate of registration.
- Use the mouthpiece correctly and avoid nebulized liquid against spraying onto the tongue.
- Never swallow the nebulized liquid and try to let the nebulized liquid stay in the affected part.
- In order for effective nebulizing, the user is required to keep calm, relaxed and sit still. If you want to lay in bed for treatment, it is suggested to put a pillow beneath your back so that you can keep the spine straight. Discomfort posture and uneasy breathing may lead to blockage of the respiratory tract.
- Please posture correctly before startup the device. Take long breathes steadily and slowly so that the nebulized liquid may be inhaled into the respiratory tract deeply.
- Press the ON/OFF switch if you want to stop the nebulizing during treatment; the device will be shut down automatically whenever the liquid is used up.
- When no aerosol comes out you can check the nebulizer head lightly after power off.
- During nebulizing, the maximum permissible tilting angle of the device is 45° (from the vertical line). If the angle is exceeded, the liquid may spill from the metal mesh in nebulizing head.
- If an operating device is tilted to the extent that the liquid is not in contact with the nebulizing head, the device will shutdown after a delay time of 10 seconds (depending on the liquid type).