LONGFIAN

USER'S MANUAL FOR OXYGEN CONCENTRATOR

MODEL: JAY-5

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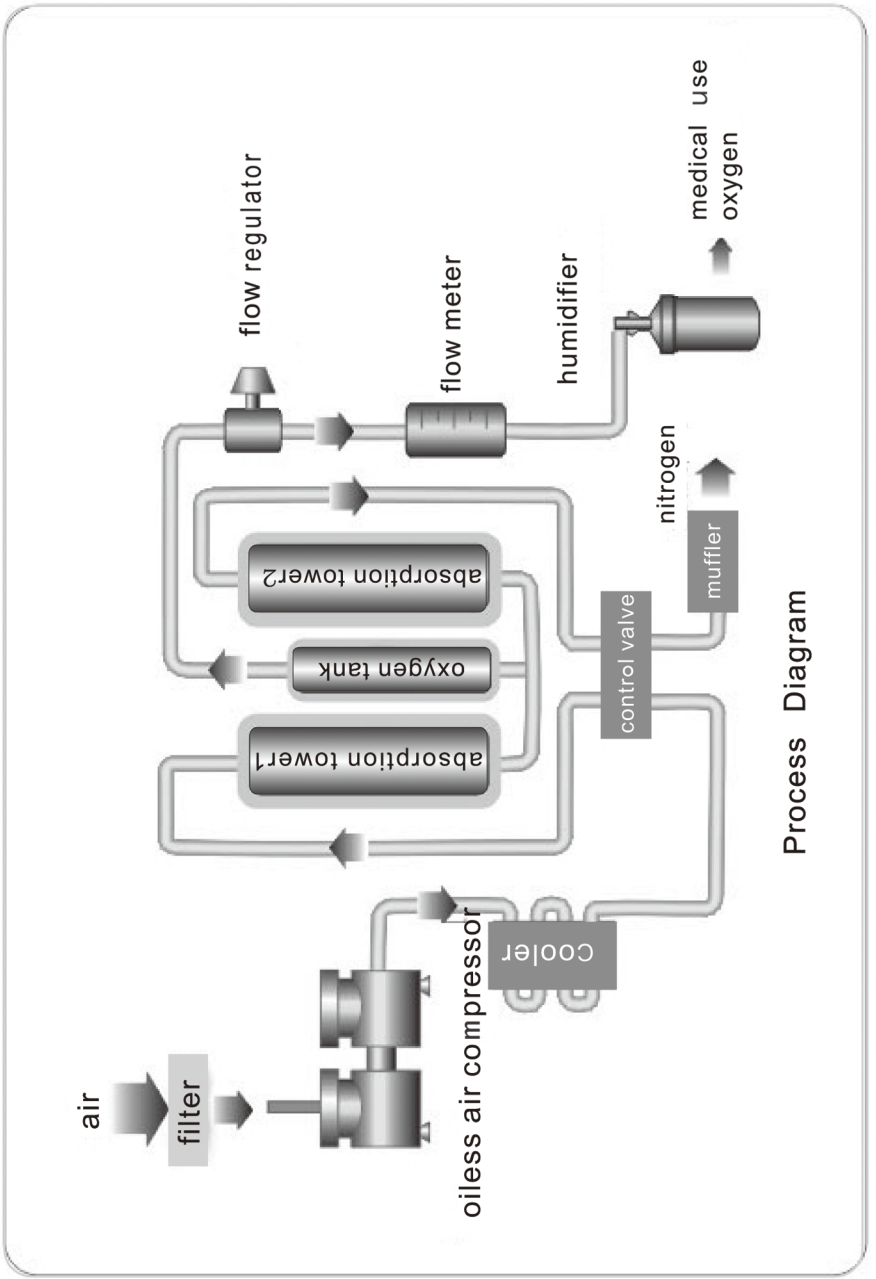

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1 Foreword

Thank you for purchasing our products, hoping you will be satisfied with our products. This operation manual contains function, operation steps, basic trouble solution and so on.

To ensure your efficient use of the oxygen concentrator, please have a close read of this operation manual before operating it.

2 Symbols

The following table is a list of symbols and definitions that used with the JAY-5 Oxygen Concentrator.

Symbol	Description	Symbol	Description
	Warning – Describes a hazard or unsafe practice that can result in severe bodily injury or death		Indicating its conformity with the Medical Devices Directive 93/42/EEC.The 0197 is the number of the Notified Body.
	Caution – Describes a hazard or unsafe practice that can result in property damage		“ON” (power)
	Follow User’s Manual		“OFF” (power)
	CLASS II equipment	SN	Serial number
EC REP	Authorised Representative in the European Community		Separate collection for electrical and electronic equipment
	Type BF Applied Part, F-TYPE APPLIED PART complying with the specified requirements of this standard to provide a higher degree of protection against electric shock than that provided by TYPE B APPLIED PARTS.The symbol of Type BF Applied Part will be pasted on the outlet of oxygen.		Variability, rotational adjustment. To identify the control by means of which a quantity is controlled. The controlled quantity increases/decreases by rotation with the figure width
	Date of manufacture		Alternating current
	Manufacturer	F6.3AL/ 250V	Type and rating of fuse
	Fragile, handle with care		Keep dry
	This way up		Stacking limit by number
	No open flame; Fire, open ignition source and smoking prohibited		No smoking

3 Safety notice

 :This unit is not a life-support device , a backup supply of oxygen must be available. In certain circumstances oxygen therapy can be hazardous, it is suggested that if any patient who needs oxygen treatment, please follow doctor’s advice to choose the right flow and period for oxygen before using the oxygen concentrator. .For the effectiveness of treatment, oxygen output settings should be regularly reassessed.

 :In the event of an alarm, you observe your oxygen concentrator not working properly, or if you feel discomfort, consult your Equipment Provider and /or your physician immediately.

 :Use only voltage specified on rating label.

 :This device manufactures high concentration oxygen, which promotes rapid burning. Do not allow open flames within 2 m of the oxygen concentrator or any oxygen-carrying accessories. Do not allow smoking within the same room where the oxygen concentrator or any oxygen carrying accessories are located. If unable to leave the room, you must wait 10 minutes after you have turned the oxygen concentrator off.

 :Do not leave a nasal oxygen cannula under bed coverings or chair cushions. If the unit is turned on without use, the oxygen will help the flammable material get fire .

 :Use no lubricants, grease, or petroleum-based products on or near your oxygen concentrator. Do not lubricate fittings, connections, tubing, or other accessories of the oxygen concentrator to avoid the risk of fire and burns.

 :Electrical shock hazard. Do not remove covers while the unit is plugged in. Only your Equipment Provider or a qualified service technician should remove the covers or service the unit.

 :Care should be taken to prevent the unit from getting wet or allowing water to enter the unit.

 :Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

 :Portable RF communications equipment (including peripherals such as antenna

cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the JAY-5 medical oxygen concentrator, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

WARNING :Geriatric, paediatric or any other patient unable to communicate discomfort can require additional monitoring and or a distributed alarm system to convey the information about the discomfort and or the medical urgency to the responsible care giver to avoid harm.

CAUTION :The oxygen concentrator should be set to use in an environment without dust, corruption or toxicological harm gas.

CAUTION :Do not place the oxygen concentrator in surroundings where its airflow is obstructed.

CAUTION :Do not place items on top of the concentrator.

CAUTION :Always place the concentrator on a hard surface. Never place the concentrator on a surface such as bed or couch, where the concentrator may tip or fall.

CAUTION :NEVER leave the concentrator unattended when plugged in.

CAUTION :Ensure the bottom smooth exhaustion during operating, or else the oxygen concentrator will be over-heated.

CAUTION :5 minutes are needed from oxygen concentrator from warming up to reach regular function and nominal performance.

NOTE: If oxygen does not seem to flow, first verify that the flowmeter ball is registering a flow. Then, place the tip of the cannula into a glass of water; if bubbles come out of the cannula, oxygen is flowing. If bubbles do not appear, turn off the oxygen concentrator immediately and refer to Troubleshooting.

NOTE: There is never a danger of depleting the oxygen in a room when you use your oxygen concentrator.

Radio Frequency Interference

Most electronic equipment is influenced by Radio Frequency Interference (RFI). When there is strong electromagnetic interference, maybe the LCD will be slightly affected, but the oxygen concentrator is still running. ALWAYS exercise CAUTION with regard to the use of portable communications equipment in the area around such equipment.

Requirement of environment protection

The materials used in the system won't create environment hazard. The packing materials of the system are recyclable, and they must be collected and disposed according to the

related regulation in the country or region where the package of the system or its accessories is opened. The nasal oxygen tubes are for personal use only and are disposable medical products.The nasal oxygen tube is made of medical PVC, and if it is thrown away, it could not be bio-degradable, so it will cause the pollution. Any material of the system, that may cause pollution in the environment, must be collected disposed strictly complied with the local rules and requirements.

Contraindication

Oxygen concentrator therapy has well-established contraindications including: patients with chronic obstructive pulmonary disease (COPD) complicated by hypercapnic respiratory failure (Type II respiratory failure), acute respiratory failure requiring high-flow oxygen therapy or mechanical ventilation support, pneumothorax without closed thoracic drainage, giant bullae with rupture risk, certain cardiac conditions with hemodynamic instability, as well as individuals at risk of oxygen toxicity or with documented oxygen hypersensitivity. In institutional healthcare settings, patients must adhere strictly to prescribed oxygen therapy protocols. For home oxygen therapy, patients unable to perform accurate self-assessment of their disease status should obtain formal medical evaluation and written physician authorization prior to initiating oxygen concentrator use.

4 Product introduction

JAY-5 medical oxygen concentrator is a device that extracts oxygen from atmospheric air. It will typically be an electrically-powered molecular sieve (artificial zeolite) used to separate nitrogen from ambient air. It could be applied widely in the hospitals at all different level, clinics, health centers and family nursing, health care for the old person, mental workers and students, etc.. Whether the user is professional or not, the users could operate the oxygen concentrator by themselves after reading this user's manual.The oxygen concentrator can supply 1-2 patients simultaneously, with steady oxygen flowing out, safe and reliable, low cost, adjustable flow. The key parts of the concentrator adopt anti-tiring and anti-aging design, and the planned life of the whole concentrator reaches up to 20,000 hours or 5 years, whichever comes first.

5 Operation conditions and Environment

Ambient temperature: 5℃-40℃
Relative humidity: 30%-85%
Air pressure: 800 hPa-1060 hPa
Altitude: Up to 2286m without degradation; Consult your equipment provider for further information regarding to 2286m to 4000m
No corrosive gas and strong magnetic field around.

⚠ :Use of this device at an altitude above 2000m or outside a temperature of 5℃-40℃ or a relative humidity above 85% is expected to adversely affect the flowrate and the percentage of oxygen and consequently the quality of the therapy.

6 Scope of application:

Intended Purpose:

Medical oxygen concentrator is intended to provide supplemental oxygen to persons requiring oxygen therapy. Medical oxygen concentrator is not for life support.

Indications:

The medical oxygen concentrator is intended to provide oxygen therapy for patients with Chronic Obstructive Pulmonary Disease (COPD), Obstructive Sleep Apnoea (OSA), bronchitis, bronchial asthma, interstitial lung disease, pneumonia, and other pulmonary diseases causing hypoxaemia requiring oxygen supplementation, to increase blood oxygen saturation, and serve as an adjunctive treatment for the aforementioned conditions.

Benefits:

Oxygen is provided to patients with respiratory diseases such as COPD, OSA, respiratory distress syndrome, pneumonia, hypoxaemia, bronchitis, bronchus, ASTHMA, interstitial lung disease and interstitial lung disease to improve symptoms by increasing SpO_2.

Target Patient Population:

Adult patients who require domiciliary, sub-acute or acute-ward oxygen therapy and can breathe spontaneously through the natural airway. The device is not used for life maintenance.

Target User Group:

The Medical oxygen concentrator is intended to be operated by healthcare giver or patients themself.

Intended environment:

Hospital wards, Outpatient clinics, Health centres or Home-care settings.

7 Technical Parameters

Model	JAY-5
Rated power(VA)	550
Operation voltage (V/Hz)	AC230/50
Oxygen flow (L/min)	0.5-5
Oxygen concentration (%)	93%±3%

Outlet pressure (Mpa)	0.04—0.07
Outlet pressure(maximum limited pressure in normal and single fault condition) (Mpa)	0.07
Alarm	Power failure; Start-up failure;low&high pressure ; Low oxygen concentration; temperature
Noise(dB(A))	⩽50
Large LCD display	Pressure digital(accuracy:0.001MPa); accumulating timing(range:0-99999hours); present timing(accuracy:1 minute); presetting timing(accuracy:1 minute) Optional : temperature digital(accuracy:0.1);
Electrical category:	Class II, Type BF
Net Weight (kg)	26
Dimension (mm)	365(deep)*375(width)*600(height)
Low purity alarm (OCSI)	When oxygen purity is ⩾85%, the blue lamp is on, when oxygen purity is <85%, red lamp is on, indicating low purity Accuracy:±3%
Mains Fuse	F6.3AL/250V

8 Structures and Functions

Figure 1

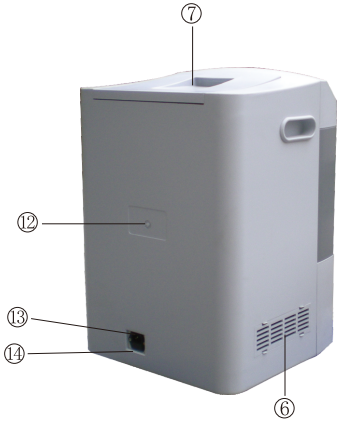

Figure 2

8.1 Indicating Lamp

Total 8 indicating lamps and their indication for each model are as follows:

a. P.O.: power switch (green lamp)

b. P.F.: power supply failure(yellow lamp)

c. H.P./H.T.: high pressure/over heated temperature(red lamp)

d. L.P.: low pressure(yellow lamp)

e. no use

f. $H.O_2$: oxygen purity is≥85%, (blue lamp)(Accuracy:±3%)

g. S.F: start failure(yellow lamp)

h. $L.O_2$.:oxygen purity is < 85%,(yellow lamp)(Accuracy:±3%)

8.2 Power switch

8.3 Oxygen flow meter

The location of float in the oxygen flow meter shows the outlet oxygen flow (L/min.).

8.4 Knob of oxygen flow meter switch

It adjusts and controls the outlet oxygen flow.

Do not Switch it over-forced, or else it is easy to damage the valve core. Switch it counterclockwise to turn on, clockwise to turn off.

8.5 Outlet for Atomization (optional)

8.6 Intake air filter

Once need to replace, refer to 11.2 on page 16

8.7 Storage cabinet

It is used for storage oxygen cannula

8.8 LCD display (Liquid crystal display)

a.. It can display some status of during operation of the oxygen concentrator, refer to 7.on page 6.

b. When starting the oxygen concentrator, the LCD screen is lighted, and it will return to screen saver mode in 15 minutes. But if you press the right key during working, the screen will be lighted again.

8.9 Timing buttons

The two buttons are used for timing adjustment, and each press of the left button(△) will increase timing by 10min, the max timing is 40 hours. And each press of the right button(▽) will decrease timing by 10min. When the right button(▽) is pressed to reduce timing till “0”, the oxygen concentrator will turn off automatically.

8.10 Humidifier

Humidifier which is used for humidifying oxygen and preventing throat and nasal mucosa stimulated by dry oxygen and dry hard sputum difficult to spit out.

8.11 Knob of Atomizer switch (optional)

8.12 Rating label

8.13 Appliance inlet

8.14 Holder

9 Operation instructions

⚠ CAUTION :The plug is the disconnection device of the oxygen concentrator, when the plug is pulled, there is no power supply. In order to pull the plug easily , be certain to place the unit where all sides are at least 30 cm away from walls, draperies, furniture, or other obstructions. Do not place the unit in a confined area.

⚠ CAUTION :Do not turn on or off frequently. To restart the oxygen concentrator after turning off, no less than 5 minutes are necessary (namely, exhaust internal gas of the oxygen concentrator completely, for if air compressor turns on with pressure, its life will be shortened)

9.1 If used with a humidifier, unscrew the flask from the humidifier in clockwise direction, pour in proper distilled water or cold boiled water within the scale between the max line and the min line(see 11.4), then re-connect the top cover to the humidifier bottle, as shown in Figure 3. The humidifier used with JAY-5 must comply with the general requirement of the 93/42/EEC European Directive as appropriate.

Figure 3

9.2. connect the nasal oxygen canula to the humidifier outlet nozzle or to the concentrator outlet if a humidifier has not been prescribed. Then set the nasal oxygen cannula over patient's ears, insert the nasal oxygen cannula into patient's nostrils to absorb oxygen; The nasal oxygen canula should be limited to 20 meters long, in order to ensure that the oxygen flow rate remains within specification values. The best absorbing time for health care keeps 40-50 minutes per time, absorbing time for medical treatment shall be followed doctor's advice, as shown in Figure 4.

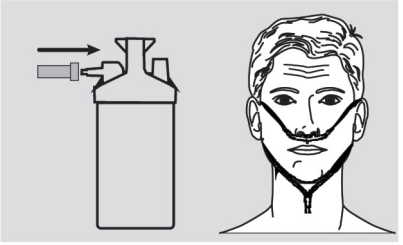

Figure 4

Note: The proper placement and positioning of the prongs of the nasal cannula in the nose is critical to the amount of oxygen delivered to the respiratory system of the patient.

9.3. Insert the power plug plug into the electrical outlet of the correct voltage and frequency as defined in **7**(Technical Parameters)on page 6 , and the power connector connected with the appliance inlet of the oxygen concentrator, then set the I/O power switch to the "I" position to turn the unit on, at the same time the P.O. lamp will light (**8.1a**)

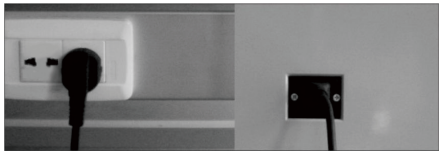

Figure 5

9.4. To set the flow of supplemental oxygen, turn the knob of oxygen flow meter switch left or right until the ball inside the flowmeter centers on the flow line number recommended oxygen absorbing flow.(counterclockwise—on, clockwise—off).

Figure 6

Flow value:

10 position flow value from 0.5 ~ 5L/min on flowmeter as shown in figure 6. The maximum recommended flow: 5L/min.

In compliance with the ISO 80601-2-69 standard, the flow supplied is equal to the flow set on the flowmeter, accurate to within ±10% or 200ml/min, whichever is the larger of the two The variation of the maximum recommended flow does not exceed ±10% of the indicated value when a back pressure of 7kPa is applied to the output of the device. The maximum outlet pressure is 70kPa

Oxygen Concentration:

-at 2L/min: >90%

-at 5L/min: 93%(±3%)

⚠ :It is very important to select only the prescribed level of oxygen. Change the flow selection only under the guidance of your physician.

Start-up procedure:

Connect the nasal cannula to the gas outlet connector of the oxygen concentrator or, if used, to the bubble humidifier outlet connector per the manufacturer's instructions. With the oxygen concentrator turned on adjust the flowmeter to the desired flowrate. Gas should be flowing freely to the nasal cannula. You should be able to hear or feel the flow of gas to the prongs of the nasal cannula. Wave your hand in front of the prongs. If you do not feel the gas flowing, check the cannula connections for leaks.

Place the end of the nasal cannula under the surface of a half-full cup of water and look for bubbles.

9.5. When finished the absorbing, set the I/O power switch to the "O" position to turn off the unit, if there is discontinuous use, please unplug the power plug, as shown in Figure 7.

Unplug the power plug

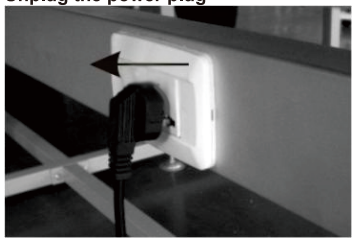

Figure 7

9.6. If the patient needs timing oxygen absorbing, please refer to **8.9** on page 9

Atomization operation methods (for optional)

The atomization function of the concentrator is applicable to help to cure the sufferers of chronic pulmonary tuberculosis and respiratory system, etc.

⚠ :Atomization treatment must be under advice and suggestion of your physician.

⚠ :Using distilled water to do the atomization for several seconds after each operation may lighten the crystallization caused by medical solution.

⚠ :If atomizing cannot work then open the cover of the bottle and add clean water in small amount. Rotate the white ball which lies in the bottle with the gas resource connected and select the proper angle to gain a better atomization.

a. Open the cover of medical cup, and add atomization remedy that needed, then close the cover.

b. Connect the joint of atomization nozzle (or mask) with the cover of medical cup, and then connect the other end of atomizer connection tube with the atomization outlet and turn on atomizer.

c. Turn on the power of oxygen concentrator, and shut up flow meter, then it is ready for atomization treatment.

d. Do clean the atomization devices followed by the instructions of the atomization devices.

10 Alarms-Safety devices

10.1 Alarms

According to the severity of the alarm, the alarm status of the oxygen concentrator is divided into high priority alarm and low priority alarm.And the oxygen concentrator has set alarm limits,User cannot change.

High priority alarm: indicates that the operator needs to respond immediately.

Sound pressure level (dBA)>62dBA

Low priority alarm: indicates that the operator needs to pay attention.

Sound pressure level (dBA)>41dBA

The list of alarm indications is as follows:

No.	Alarm type/ name	Priority	Alarm signals/ Indicator light			Auditory Yes/No	Alarm limit	Alarms signal generation delay	Alarm cleared	Remark
			colour	Strobe	Duty cycle					
1	Power supply failure alarm	Low priority	Yellow			Forced audible alarm	Input below 195V	No delay	Turn off	when the power supply falls below the value necessary to maintain normal operation, an audible alarm is activated with red indicator on 8.1b on page 8. The troubleshooting is referred to 12 on page 18.

2	Start-up failure alarm	Low priority	Yellow			Yes	After 2 minutes of startup, the concentration is below 90%	No delay	Turn off	When the oxygen concentrator is started for 120 seconds and the oxygen concentration is below 90%, the concentrator emits a low priority alarm with a yellow LED indicator.
3.	Low oxygen concentration alarm	Low priority	Yellow			Forced audible alarm	Concentration below 85%	No delay	Turn off	The oxygen concentration will rise to the normal level in five minutes of operation. When oxygen purity is ⩾ 85%, the blue lamp **8.1f** on page 8 is on, when oxygen purity is <85%, red lamp is on for audible alarm, indicating low purity **8.1h** on page 8. Refer to the troubleshooting on page 18. Or call your supplier to service the device
4	Low pressure alarm	Low priority	Yellow			Yes	System pressure below 0.1Mpa	Delay of 7 seconds	Turn off	There is a pressure sensor on the main board to check the system pressure, when the pressure is lower than 0.1Mpa,there is an audible alarm with yellow indicator on **8.1d** on page 8 and the oxygen concentrator is still working.
5	High pressure alarm	High priority	Red			Yes	The system pressure is higher than 0.23Mpa	Delay of 7 seconds	Turn off	There is a pressure sensor on the main board to check the system pressure,When the pressure is higher than 0.23Mpa,there is an audible alarm with red indicator on **8.1c** on page 8 and the oxygen concentrator is stopped. The troubleshooting is referred to **12** on page 18.

6.	High temperature alarm	High priority	Red			Yes	The temperature inside the machine is higher than 50 □	No delay	Turn off	There is a temperature sensor on the main board to check the internal temperature, when the temperature is higher than 50°C in the oxygen concentrator, there is an audible alarm with red indicator on(see H.T. on the lamp) and the oxygen concentrator will be stopped. The troubleshooting is referred to 12 on page 18.

⚠ :A potential hazard can exist if different alarm pre-sets are used for the same or similar equipment in any single area.

10.2 Safety devices

a. Compressor motor:

Thermal safety is ensured by a thermal switch situated in the motor winding(145±5℃).

b. Safety valve:

This is fitted on the compressor outlet and is calibrated to 2.5 bar(250kPa).

11 Maintenance

⚠ :Disconnect the power cord from the electrical outlet before you clean the cabinet.

⚠ :Do not operate the concentrator without the filters installed, or while filters are wet. These actions could permanently damage the concentrator.

NOTE: If legally binding regulations govern the installation, service and/or the operation of the product, it is the responsibility for the operator to observe and follow these regulations.

NOTE: Modifying the product is not permitted.

11.1. Clean the whole body: In the condition of power off, make a clean for the outside body by soft towel with little mild household cleaner , and then wipe it up with dry towel, once or twice per month.

Figure 8

11.2. Clean air filter: It is a critical step for daily maintenance to clean intake air filter an interval about 300 hours.

Detail steps: remove the two intake air filters on both sides of the body, clean them with mild household cleaner and clean it with clean water completely, get ride of extra water and dry up naturally, finally set back after dry up, as shown in Figure 9.

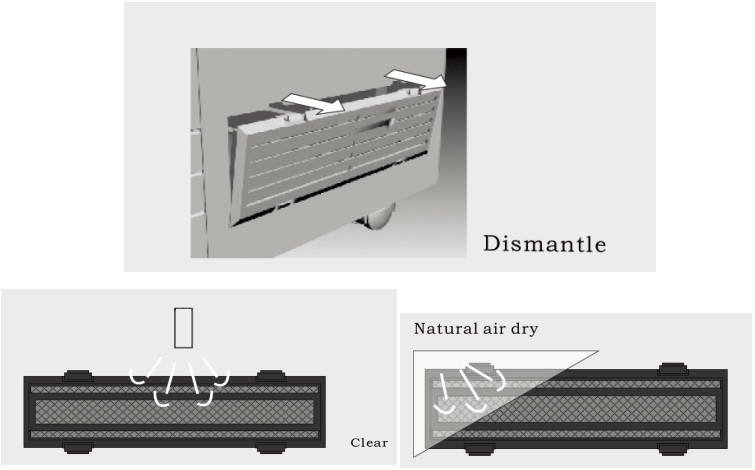

Figure 9

11.3. Clean secondary filter

Clean secondary filter an interval about 800 hours, open the top cover and take out storage case screw and open the pipe body of filter in counterclockwise direction, remove the filter cloth, then clean it with mild household cleaner, and then clean it with clean water completely, get rid of the extra water, and dry it naturally, finally set back after dry up.

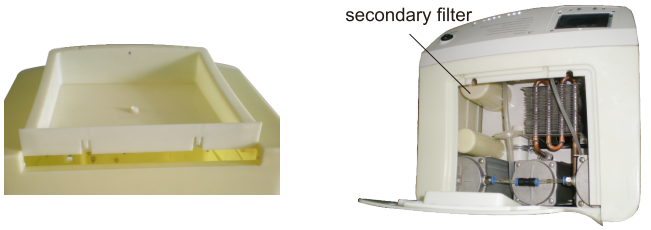

Figure 10

11.4. Clean the humidifier (if the humidifier is prescribed by a physician)

Daily:

- Empty the water from the humidifier.
- Rinse the humidifier flask under running water.
- Fill humidifier up to the mask with distilled water.

Regularly:

- Disinfect the humidifier parts by immersing them in a disinfectant solution(in general, we recommend using water containing a small amount of chlorine bleach).
- Rinse and dry.
- Check that the humidifier lid seal is in good condition.

11.5. Clean Oxygen tubing and nasal cannula

Follow the manufacturer's instructions

11.6. Replacement of fuse tube

Remove the cover of fuse, which is in the appliance inlet, dismantle the fuse tube off by small screwdriver. Close the cover of fuse after fuse tube is replaced.

The other fuse tube is located at the intake of internal power line; the method of replacement is the same with that above.

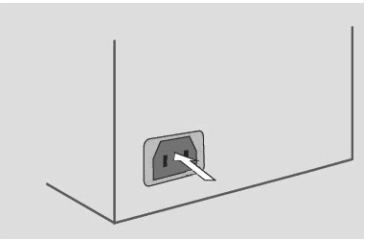

Figure 11

12 Troubleshooting

If your concentrator fails to operate properly, please refer to the troubleshooting chart on the following pages for probable causes and solutions. If problems with the equipment continue, please contact your Equipment Provider.

NOTE: If the unit has not been used for an extended time period, it needs to operate for several minutes before power failure alarm can become activated.

No.	Trouble	Causes	Solution
1	No oxygen out or tiny outtake flow	1. Folded inside oxygen tube, no smooth outtake 2. Filter clogged, no smooth intake 3. The cover of dampen bottle leakin	1. Connect the oxygen tube again 2. Clean the filter 3. Take off the cover, screw well the cover, block the outtake by thumb after turning on, and there will some sound from the humidifier after 5 second around (the safety valve of humidifier turns on)
2	No exhaust sound	1. Air controller cannot work 2. Electrical control board cannot work	1.Have air control valve replaced 2.Have electric control board replaced
3	Too noisy exhaustion	1. The joint of exhaustion muffler fallen off 2. Exhaustion muffler broken	1.Connect the joint well 2.Have the muffler replaced
4	The oxygen concentrator is working but the L.P. lamp is light with audible alarm.	The system pressure is too low.	Check every gas circuit connectors with soapy water whether there are air leakage.
5	The oxygen concentrator is stopped and the H.T. lamp is light with audible alarm.	The temperature in the oxygen concentrator is too high.	1. Check the fan's connector on the main board whether it is bad contact. 2. turn off the oxygen concentrator and consult your Equipment Provider.
6	The oxygen concentrator is stopped and the H.P. lamp is light with audible alarm.	The system pressure is too high.	Turn off the oxygen concentrator and consult your Equipment Provider.
7	The oxygen concentrator is working but the L.O_2 lamp is light.	Oxygen concentration is too low.	1. Check every gas circuit connectors with soapy water whether there are air leakage. 2. Turn off the oxygen concentrator and consult your Equipment Provider.

13 Information on Electromagnetic compatibility

The JAY-5 needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the accompanying documents; Portable and mobile RF communications equipment can affect the JAY-5.

All cables and maximum length of cables, Transducers and other accessories with which the manufacturer of the JAY-5 claims compliance with the requirements, Accessories that do not affect compliance with the requirements of these sub clauses need not be listed. Accessories, transducers and cables may be specified either generically or specifically.

NOTE:

Transducers and cables sold by the manufacturer of the JAY-5 as replacement parts for internal components need not be listed.

The use of accessories, transducers and cables other than those specified, with the exception of transducers and cables sold by the manufacturer of The JAY-5 as replacement parts for internal components, may result in increased emissions or decreased immunity of The JAY-5.

Guidance and manufacturer's declaration – electromagnetic emissions		
The JAY-5 is intended for use in the electromagnetic environment specified below. The customer or the user of the JAY-5 should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
RF emissions CISPR 11	Group 1	The JAY-5 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 CISPR 11	Class A	The JAY-5 is suitable for use in all establishments other than domestic, and may be used in domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes, provided the following warning is heeded: Warning: This JAY-5 is intended for use by healthcare professionals only. This equipment/ system may cause radio interference or may disrupt the operation of nearby equipment. It may be necessary to take mitigation measures, such as re-orienting or relocating the JAY-5 or shielding the location.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity			
The JAY-5 is intended for use in the electromagnetic environment specified below. The customer or the user of the JAY-5 should assure that it is used in such an environment.			
IMMUNITY test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact ± 15 kV air	± 8 kV contact ± 15 kV air	Floors 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 ± 1 kV for input/output Lines	± 2 kV for power supply lines ± 1 kV for input/output Lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	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 s	<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 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the JAY-5 requires continued operation during power mains interruptions, it is recommended that the JAY-5 be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	Not applicable Note: The JAY-5 does not contain components susceptible to magnetic fields, such as Hall elements or magnetic field sensors. Therefore, the EUT is deemed to meet the requirement without actual testing.	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			
The JAY-5 is intended for use in the electromagnetic environment specified below. The customer or the user of the JAY-5 should assure that it is used in such an electromagnetic environment.			
IMMUNITY test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 V 0.15MHz - 80 MHz 6V in ISM bands between 0.15MHz and 80MHz 80% AM at 1kHz 3 V/m 80 MHz to 2.7 GHz 80% AM at 1kHz	3 V 0.15MHz - 80 MHz 6V in ISM bands between 0.15MHz and 80MHz 80% AM at 1kHz 3 V/m 80 MHz to 2.7 GHz 80% AM at 1kHz	Portable and mobile RF communications equipment should be used no closer to any part of the JAY-5, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = 1.17\sqrt{P}$ $d = 1.17\sqrt{P}$ 80 MHz to 800 MHZ $d = 2.33\sqrt{P}$ 800 MHz to 2,7 Ghz 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: 
NOTE 1 At 80 MHz and 800 MHz, 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.			

[a] 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 JAY-5 is used exceeds the applicable RF compliance level above, the JAY-5 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the JAY-5.

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

Recommended separation distances between portable and mobile RF communications equipment and the JAY-5			
The JAY-5 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the JAY-5 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the JAY-5 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 $d = 1.17\sqrt{P}$	**80 MHz to 800 MHz** $d = 1.17\sqrt{P}$	**800 MHz to 2,7 GHz** $d = 1.17\sqrt{P}$
0.01	0.12	0.12	0.07
0.1	0.37	0.37	0.22
1	1.17	1.17	0.70
10	3.69	3.69	2.21
100	11.67	11.67	7.00
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.			

14 Accessories

Your concentrator includes the following components:

•Humidifier (REF-7600)

•Nasal cannula

• Intake air filter (two pieces, part number:GL-01)

• Secondary filter (one piece, part number:GL-02)

The concentrator comes with two air filters and one secondary filter already installed.

⚠ : Please use the parts mentioned in this chapter, if the use of other parts can degrade minimum safety and performance.

⚠ : Please choose the suitable humidifier and Nasal oxygen cannula, they must:

- be oxygen compatible,
- be biocompatible,

- include a means to prevent the propagation of fire and accord with requirements of ISO 80601-2-69:2014

15 Condition for transportation and storage

Environment temperature scale: -40~55℃

Comparative humidity scale: ≤95%

Air pressure scale: 700 –1060 hpa

16 Quality Warranty

Warranty for whole unit:15 months

Warranty for magnetic valve:24 months

Warranty for compressor:24 months

17 Contact us

LONGFIAN SCITECH CO.,LTD

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EC REP OBELIS S.A.

Bd. Général Wahis 53, 1030 Brussels,Belgium

DISTRIBUTOR: _____

ADDRESS: _____

TELEPHONE: _____

FAX: _____

Appendix 1:relationship between outlet oxygen concentration and flow rate

The following table shows the relationship between outlet oxygen concentration and flow rate:

Flow Rate (L/min)	0	1	2	2.5	3	4	5
Export oxygen concentration (V/V)	21%	92.95%	94.00%	95.20%	94.20%	94.16%	93.84%

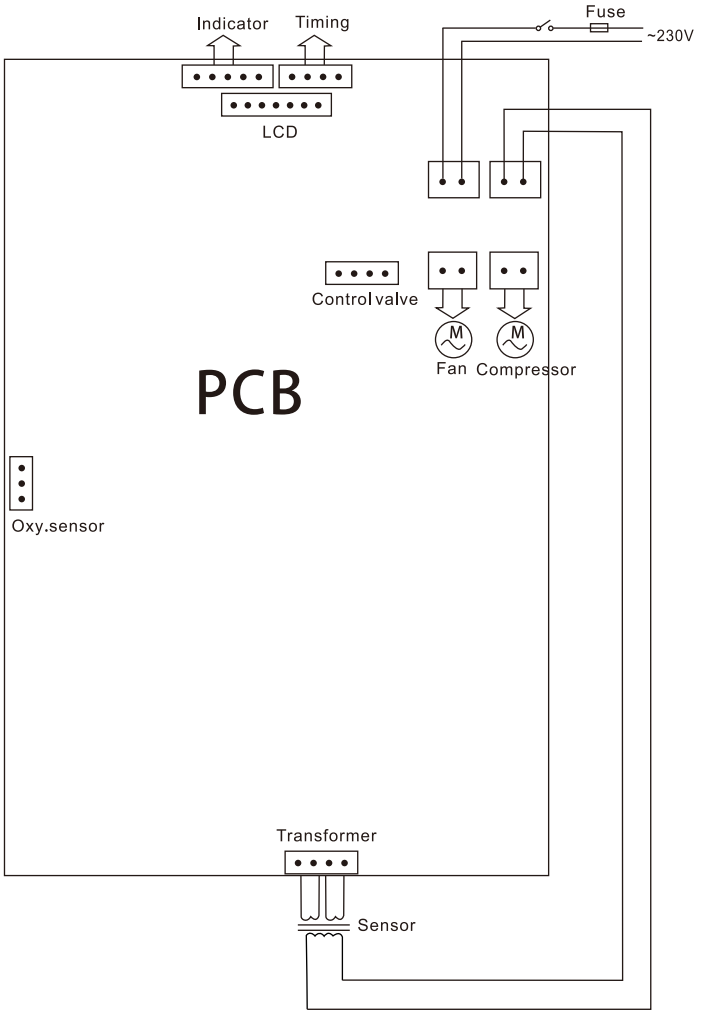
Note: When the flow rate is 0L/min, the outlet pressure is 0Kpa.

Appendix 2: Changes in oxygen concentration with altitude under different atmospheric pressure conditions

In sea level areas, the pressure formed by air per square centimeter is 101.3 Kpa, and in dry air, oxygen accounts for 20.40% (V/V), so the oxygen partial pressure is 21.15 Kpa. The proportion of oxygen in the air is basically not affected by the plateau. When atmospheric pressure decreases due to altitude increase, the oxygen partial pressure decreases proportionally.

The following table shows the variation of oxygen concentration with altitude under different atmospheric pressure conditions:

Altitude (m)	0	1000	2000	3000	4000
Atmospheric pressure (Kpa)	101.3	89.87	79.5	70.11	61.64
Oxygen concentration at rated flow rate (V/V)	90.00%	79.85%	70.63%	62.29%	54.76%



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