LONGFIAN

User Manual

Contents

1.Glossary of Symbols

The following table is a list of symbols and definitions that used with the JAY-1000P Oxyegn Concenttrator.

Symbol	Description	Symbol	Description
	WARNING – DESCRIBES A HAZARD OR UNSAFE PRACTICE THAT CAN RESULT IN SEVERE BODILY INJURY OR DEATH		CAUTION – DESCRIBES A HAZARD OR UNSAFE PRACTICE THAT CAN RESULT IN PROPERTY DAMAGE
	AC POWER		“ON” /”OFF”
	NO SMOKING		FLOW UP
	NO OPEN FLAME		FLOW DOWN
	CHECK ACCESSORIES		5 SETTINGS
	NO OIL		ALARM
	NO DISASSEMBLING		SEPARATE COLLECTION FOR ELECTRICAL AND ELECTRONIC EQUIPMENT
	THIS SIDE UP		TYPE BF
	STACKING LEVEL LIMIT		CLASS II
	FRAGILE		PLEASE READ USER MANUAL
	KEEP DRY		NO TUMBLING
	THERE MAY BE INTERFERENCE NEARBY		TEMPERATURE LIMIT

2.Contraindications, Warnings and Cautions

Contraindications

• This equipment is to be used as an oxygen supplement and is NOT INTENDED to be life supporting or life sustaining.

Warnings

• The device produces concentrated oxygen gas which accelerates combustion. DO NOT USE THE DEVICE WHEN SMOKING OR NEAR OPEN FLAME, MATCHES, PETROLEUM, OIL, GREASE, SOLVENTS, RADIANT HEATERS, AEROSOLS etc. Use only water based lotions or salves that are concentrated oxygen compatible during oxygen therapy.

• Concentrated oxygen makes it easier for a fire to start and spread. Do not leave the nasal cannula on upholstery or other fabric such as bedding or personal clothing if the oxygen concentrator is turned on but not in use. Concentrated oxygen will make the materials flammable. Turn off the oxygen concentrator when not use.

• Do not use the oxygen concentrator in the presence of pollutants, smoke or fumes, flammable anesthetics, cleaning agents or other chemical vapors. This may internally contaminate the oxygen concentrator and degrade its performance.

• Do not use the oxygen concentrator if either the plug or the power cord is damaged to prevent accidental electrical shock.

• Do not submerge the oxygen concentrator in liquids, expose to liquids, or otherwise allow liquids to enter into the case, this may lead to electrical shock and/ or damage. If the oxygen concentrator is exposed to liquids turn it off and unplug from electrical outlet before attempting to clean and dry the liquid spill.

• Do not use cleaning agents other than those specified in this manual. Always unplug the oxygen concentrator before performing any cleaning. Do not use alcohol, isopropyl alcohol, ethylene chloride, or petroleum based cleaners. This may impair the proper function and/ or increase the risk of fire and burns.

• Do not disassemble the oxygen concentrator or attempt any maintenance other than tasks described in this user manual; disassembly creates a hazard of electrical shock and will void the warranty. Servicing of the concentrator is to be performed by qualified and trained personnel only.

• Do not use any columns other than those specified in this user manual. The use of non-specified columns may create a safety hazard and/or impair equipment performance and will void the warranty.

• To avoid danger of choking and strangulation hazard, keep tubing away from children and pets.

• If you begin to feel ill or are experiencing discomfort while using the oxygen concentrator, consult your health care provider immediately.

Cautions

• This device to sell or rental by or on the order of a physician; may also be applicable in other countries. Under certain circumstances,the use of non-prescribed oxygen therapy can be hazardous.
• Additional monitoring or attention may be required for patients using this device who are unable to hear or see alarms or communicate discomfort. If the patient shows any signs of discomfort, a physician should be consulted immediately.
• Accessories not specified for use with the oxygen concentrator may impair performance. Always use accessories according to manufacturer's instructions.
• Nasal cannula should be rated 5 liters per minute to ensure proper patient usage and oxygen delivery.
• Replace the nasal cannula on a regular basis. Check with your equipment provider or health care professional to determine how often the cannula should be replaced.
• It is recommended the oxygen concentrator accessory tubing and cannula include a means to reduce the propagation of fire.
• Do not operate the concentrator without the intake filter in place. Particles drawn into the oxygen concentrator may damage the equipment.
• Refer to the environmental range specifications for proper storage and use conditions. Temperatures in excess of the indicated range may cause device malfunction.
• Do not obstruct air intake or exhaust when operating the oxygen concentrator. Blockage of air circulation or proximity to a heat source may lead to internal heat buildup and shutdown or damage. Always maintain a minimum of six inches of clearance.
• Do not place anything in the power supply port other than the supplied wall cord. Avoid the use of electrical extension cords with the concentrator. Do not connect any other device to the same extension cord.
• Do not sit or stand on the concentrator, doing so can be hazardous.
•When the adapter is connected/unplugged or the battery is connected/unplugged, the device will beep "di" , and the main interface of the device will also display relevant information to display the current power supply.
•When an abnormal state occurs,there will be audible&visual alarm , the device will display abnormal information.

In order to ensure a safe installation and operation of the Oxygen Concentrator, read and understand this entire manual before using the device.

The Oxygen Concentrator has a 5 year expected life except 1 year expected life for user serviceable sieve bed columns and rechargeable battery.

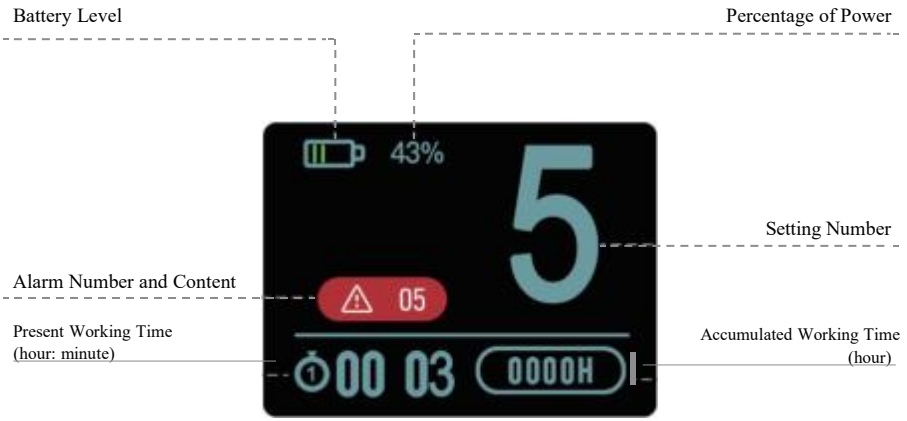
3.Indications for Use

The Oxygen Concentrator is used on a prescriptive basis by patients requiring supplemental oxygen. It supplies a high concentration of oxygen and is used with a nasal cannula to channel oxygen from the concentrator to the patient. The Oxygen concentrator may be used in a home or institution.

4 . User Interfaces, Controls

① ON/OFF button
② Flow setting control button
③ Flow setting display
④ Oxygen outlet
⑤ Particle filter
⑥ Type C charging port
⑦ Lithium battery

(1) User Interfaces



(2)User Controls

ON / OFF Button

Press once to turn "ON";

Press and hold for three seconds to turn "OFF".

Flow Setting Control Buttons

Use the – or + flow setting control buttons to select the setting as shown on the display. There are five settings, from 1 to 5.

5 . Operating Instructions

(1) Place the concentrator in a well-ventilated location; air intake and exhause must have clear access. Ensure that the concentrator is at least 6 inches (15 cm.) away from walls,furniture and curtains that could impede adequate airflow to the device.
(2) Ensure particle filter is in place.
(3) Ensure intake filter is in place.
(4) Follow instructions as below:
Connecting your nasal cannula tubing to the nozzle fitting.Nozzle fitting is located on the top of the concentrator. See figure 1.

Figure 1

(5) Turn on the concentrator by pressing the ON/OFF button. See Figure 1.

(6) Use the ▲ or ▼ buttons to adjust the device to the prescribed setting. There are five flow settings, from 1 to 5. The current setting can be viewed on the display. You may begin breathing from the device; the required oxygen concentration is normally reached within 2 minutes after device is powered on.

(7) Ensued that the tubing is not kinked or pinched in any way and that oxygen is flowing through the nasal cannula, Refer to the troubleshooting section of this manual.

(8) Adjust the nasal cannula ,so that it is properly aligned on your face or as directed by your equipment provider.

(9) Turn off concentrator by pressing the ON/OFF button ⏻ . Turn off the concentrator when not use.

6.Troubleshooting

Contact your equipment provider if you need assistance with the device.

Problem	Possible reason	Recommended Solution
Concentrator does not power on, when On/Off button is pressed	Battery not installed properly	Disassemble battery and reinstall
	Low battery	Connect power plug ,charge the battery
	Power cord is not connected properly	Check power cord for proper connection
	Malfunction	Contact your equipment provider
No oxygen	Concentrator is not power on	Press On/Off button to power concentrator
	Cannula is not connected Properly or is kinked or obstructed	Check cannula and its connection.
High temperature	Operating temperature is too high.	1. Check location of the device, make sure it is located on well ventilated place; 2. Make sure no block on the outlet; 3. Contact your equipment provider;
Low oxygen	Molecular sieve failure	Contact your equipment provider to replace molecular sieve beds.

7.Cleaning, Care and Maintenance

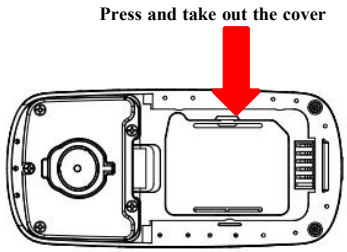
Cleaning and Care

Periodically you may clean the outside case using a cloth dampened with a mild liquid detergent and water.

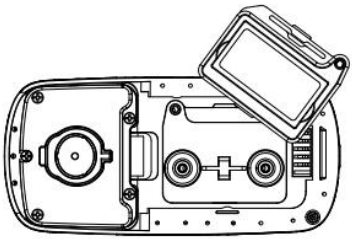
Follow manufacturer's instructions on cleaning and care of concentrator accessories; clean or replace these accessories according to your healthcare provider or respective manufacturer's instructions for use.

Filter cleaning and replacement

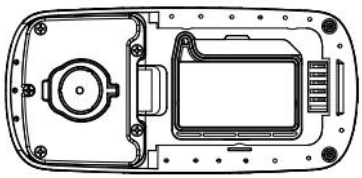
1. Turn off the device ,disconnect the power supply and remove the battery.
2. Take out the intake filter and replace it with a new one.
3. Take out the intake filter. Note that the intake filter after long- time use may absorb and accumulate a lot of dust, please take precautions to avoid dust inhalation while operating.
4. Load the new filter in the correct direction.
5. Reinstall the cover and insert the battery.



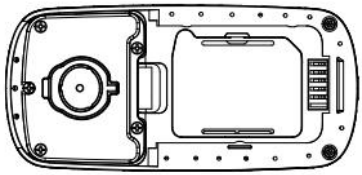
1.Remove the battery and open the cover



2.Remove the cover and take out the intake filter



3. Replace new intake filter

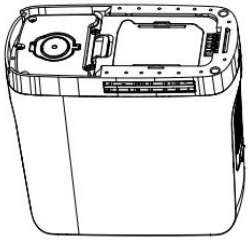


4. Reinstall the cover and insert the battery

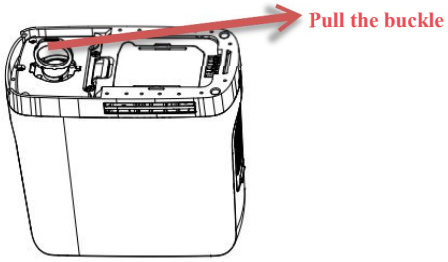
Please clean and replace the filter in time, the replacement cycle depends on the use environment .

Sieve bed columns replacement

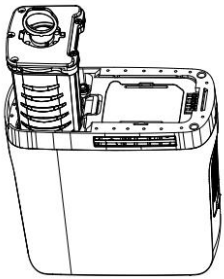
1. When the device indicates low oxygen concentration ,the sieve bed columns needs to be replaced, please contact the device provider in time.
2. Long-term storage may shorten the lifespan of sieve bed .
3. Long-term operation in a humid environment may shorten the lifespan of the sieve bed .
4. When the sieve bed is approaching the expiration date, it may cause high internal pressure,big noise, and low oxygen, which affects the performance and normal use of the equipment. Please pay attention to the relevant alarm information such as pressure and concentration .



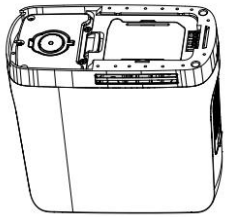
1. **Remove the battery and lift the handle of the molecular sieve;**



2.Pull the buckle in the direction of the red arrow, and at the same time to pull the molecular sieve handle up;



3. Take out the molecular sieve and replace new one;



4. Fasten the buckle and handle, and insert the battery;

Service

The concentrator is specifically designed to minimize routine preventative maintenance.
For assistance, if needed, in setting up,using, maintaining, or reporting unexpected operation or events, contact your equipment provider,or the manufacturer.

Storage

When not use, store indoors away from excessive moisture and temperatures. Storage conditions outside of range specified may result in damage and device malfunction.

Disposal of Equipment and Accessories

Follow your local governing ordinances for disposal and recycling of the concentrator and accessories.

8.Specification

Dimensions:	183L x 86W x 199H mm					
Weight:	1.98 kg					
Oxygen Concentration:	93±3% at all settings					
AC Power:	100-240VAC, 50-60Hz					
Environmental Ranges for Use:	Temperature:- 10 to 40˚C Humidity: ≤ 80% Atmospheric pressure:86- 106Kpa					
Environmental Ranges for Shipping & Storage:	Temperature:- 10 to 40˚C Humidity : ≤ 80% Atmospheric pressure:86- 106Kpa					
Outlet pressure	≤ 120Kpa					
Flow Control Settings:	5 Settings: 1 to 5 settings					
Battery running time	Setting 1≈4.5 hours Setting 2 ≈3.5 hours Setting 3 ≈2.5 hours Setting 4 ≈2.0 hours Setting 5 ≈1.5 hours					
Breathing Frequency	10 to 40 BPM					
Flow Control Settings and Pulse Volumes	Settings					
		1	2	3	4	5
	Breathe rate	Pulse volume(ml)				
	15	14	28	42	56	66
	20	10	21	31	42	50
	25	8	16.8	25	33	40
	30	7	14	21	28	33
	35	6	12	18	24	28
	40	5	10	16	21	25
	±15% at STPD* +/-25% over the rated environmental range *STPD is 101.3 Kpa at an operating temperature of 20 ℃					

Classifications

Mode of Operation:	Pulse dose oxygen supply
Type of Protection Against Electrical Shock:	Class II
Degree of Protection to Concentrator Components Against Electrical Shock:	Type BF Not intended for cardiac application
Degrees of Protection Provided by Enclosure	IPX1

Alarm

1. High Temperature Alarm：
   The red light on the display will be flashing and the screen will show “1!!!” “High Temperature!!!” Number and content are displayed in turn, with a red background.

2. Fan Error Alarm:
   The red light on the display will be flashing and the screen will show “2!!!” “Fan stop alarm” Number and content are displayed in turn, with a red background.

3. Compressor Failure Alarm:
   The red light on the display will be flashing and the screen will show “3!!!” “Compressor Failure!!!” Number and content are displayed in turn, with a red background.

4. Low Oxygen Concentration Alarm(≤85%):
   The Yellow light on the display will be flashing and the screen will show “4!!” “Low Oxygen Concentration!!” Number and content are displayed in turn, with a yellow background.

5. Low Pressure Alarm：
   The Yellow light on the display will be flashing and the screen will show “5!!” “Low Pressure!!” Number and content are displayed in turn, with a yellow background.

6. Low Battery Alarm:
   When the battery power is≤5%, and without external power, the yellow light on the display ill be flashing and the screen will show “6!!” “Low Battery!!” Number and content are displayed in turn, with a yellow background.

7. No Breathing Alarm:
   This alarm occurs when a breath is not detected for 4 minutes after turning on. The yellow light on the display will be flashing and the screen will show “7!!” “No Breathing!!” . Number and content are displayed in turn, with a yellow background. During the operation, if a breath is not detected within 1 minute, this alarm will also be occurs.

8. Preheating Alarm:
   After starting the oxygen concentrator for 120 seconds, if the oxygen concentration does not reach 93±3%, the yellow light on the display will be flashing and screen will show“8!” Preheating Number and content are displayed in turn, with a green background, disappear after 2s. And the device emits an audible alarm. If the oxygen concentration reaches 93±3% within 120s after power on, the alarm will not be activated.

9.Guidance and Manufacturer's Declaration- Electromagnetic Emissions:

The Concentrator is intended for use in the electromagnetic environment specified below. The user of the Concentrator should make sure it is used in such an environment.

Guidelines and Manufacturer's Declaration - Electromagnetic Emissions		
JAY-1000P is intended for use in the electromagnetic environment specified below, and the purchaser or user should make sure it is used in the electromagnetic environment		
Launch Test	Compliance	Electromagnetic Environment - Guidance
RF emission CISPR 11	Group 1	The JAY-1000P uses RF energy only for its internal functions. Therefore, its RF emissions are low and the potential for interference to nearby electronic equipment is low
RF emission CISPR 11	Class B	
Harmonic emission IEC 61000-3-2	Class A	JAY-1000P is suitable for use in all installations including domestic installations and direct connection to domestic residential public low voltage power supply network
Voltage fluctuation/ flickering emission IEC 61000-3-3	compliance	

Guidelines and Manufacturer's Declaration - Electromagnetic Emissions			
JAY- 1000P is intended for use in the electromagnetic environment specified below, and the purchaser or user should make sure it is used in the electromagnetic environment			
Immunity test	IEC 60601 Test level	compliance level	Electromagnetic Environment - Guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 KV Contact discharge ±8 KV Air discharge	±6 KV Contact discharge ±8 KV Air discharge	Floors should be wood, concrete or tile If floors are covered with synthetic materials, the relative humidity should be at least 30%
Electrical fast transient /burst IEC 61000-4-4	±2 KV To the power cord	±2 KV to the power cord	Mains power should be of typical quality used in a commercial or hospital environment
Surge IEC 61000-4-5	±1 KV Line to line ±2 KV Line to ground	±1 KV Line to line	Mains power should be of typical quality used in a commercial or hospital environment
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	＜5%Ur, lasts 0.5 cycles (>95% dip on Ur) 40%Ur, lasts 5 cycles (>60% dip on Ur) 70%Ur, lasts 25 cycles (>30% dip on Ur) ＜5%Ur, lasts 5s (>95% dip on Ur)	＜5%Ur, lasts 0.5 cycles (>95% dip on Ur) 40%Ur, lasts 5 cycles (>60% dip on Ur) 70%Ur, lasts 25 cycles (>30% dip on Ur) ＜5%Ur, lasts 5s (>95% dip on Ur)	Mains power should be of typical quality used in a commercial or hospital environment. If the user of JAY-1000P needs continuous operation during power interruption, it is recommended that JAY-1000P be powered by uninterruptible power supply or battery.
Power frequency magnetic field (50/60 Hz) IEC 61000-4-8	3A/m	3 A/m, 50 Hz, 60 Hz	The power frequency magnetic field shall have the characteristics of the power frequency magnetic field level of a typical location in a typical commercial or hospital environment
Note: Ur refers to the AC network voltage before applying the test voltage			

Guidelines and Manufacturer's Declaration - Electromagnetic Emissions			
JAY- 1000P is intended for use in the electromagnetic environment specified below, and the purchaser or user should make sure it is used in the electromagnetic environment			
Immunity test	IEC 60601 Test level	Compliance Level	Electromagnetic Environment - Guidance
Conducted RF IEC 61000-4-6	3 Vrms (valid value) 150 KHz to 80 MHz	3 Vrms (valid value)	Portable and mobile RF communications equipment should be used no closer to any part of the device,including cables,than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance: d=1.2√P 150 kHz to 80 MHz d=1.2√P 80 MHz to 800 MHz d=2.3√P 800 MHz to 2.5 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 meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range b. Interference may occur in the vicinity of equipment marked
Radiated RF IEC 61000-4-3	6 Vrms Amateur Radio & ISM Bands between 150 kHz and 80 MHz	6 Vrms Amateur Radio & ISM Bands between 150 kHz and 80 MHz	
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.5 GHz	10 V/m	
1			

			with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the formula for the higher frequency band is used

NOTE 2 These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and people.

A Fixed transmitters, such as base stations for wireless (cellular, cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcasts, and television broadcasts, have field strengths that cannot theoretically be accurately predicted. To assess the electromagnetic environment of fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location where the JAY-1000P is located is higher than the applicable RF compliance level above, the JAY- 1000P should be observed to verify normal operation. If abnormal performance is observed, supplementary measures may be necessary, such as reorienting or repositioning the JAY- 1000P.
b In the entire frequency range of 150 kHz-80 MHz, the field strength should be lower than 3 V/M.

Recommended isolation distance between portable and mobile RF communication equipment and JAY-1000P

The JAY-1000P is intended for use in electromagnetic environments where radio frequency radiation disturbances are controlled. Depending on the maximum rated output power of the communication equipment, the purchaser or user can prevent electromagnetic interference by maintaining the minimum distance between portable and mobile RF communication equipment (transmitters) and the JAY-1000P as recommended below.

Transmitter rated maximum output power W	Corresponding to the isolation distance of different frequencies of the transmitter/m		
	150 kHz~80 MHz d=1.2√P	80 MHz~800 MHz d=1.2√P	800 MHz~2.5 GHz d=2.3√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 the maximum rated output power of the transmitter listed in the table above, the recommended isolation distance d, in meters (m), can be determined by the formula in the corresponding transmitter frequency column, where P is the transmitter provided by the transmitter manufacturer Maximum rated output power in watts (W).
Note 1: At the 800 MHz frequency point, the formula for the higher frequency band is used.

Note 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and people.