

Operation Manual



BVMX-201

Multi-tube Vortex

Thank you for Choosing Biolab products. Please read the "Operating Instructions" and "Warranty" before operating this unit to assure proper operation.

Foreword

Thank you for purchasing Multi-Tube Vortexer. This Manual for users contains function and operation of the Instrument. In order to use the instrument properly, please read this manual carefully before using the Instrument.

Opening Check

Please check the instrument and appendix with the packing list when you first open the packing case. If you find there is something wrong with the instrument or the appendix, please contact the vendor or the producer.

Safety Warnings and Guidelines

1. Important operation information of the security

Before operation, please have a perfect conception of how to use the Instrument. Read this manual carefully before using it.



Operation before reading the Manual is forbidden. Read the guidelines and directions below and carry out the countermeasure according to them.

2. Security

The operation, maintenance and repair of the Instrument should comply with the basic guidelines and the remarked warning below. Otherwise, it will affect the scheduled using life of the Instrument and the protection provided.



This product is a normal and an indoor Instrument which conforms to Standard B style- I type- GB9706.1.



Before operation, read the manual carefully. These units are designed for using in the laboratory environments by who're knowledgeable in safe laboratory practices.



The operator should not open or repair the Instrument by himself, which will result in losing the qualification of repair guarantee or occur accident. If there is some wrong with the Instrument, the company will repair it.



A.C. power's grounding should be reliable to safeguard against an electric shock. The 3-pin plug supplied with thermo-shaker's power cable is a safety device that should be matched with a suitable grounded socket.



Before power on, guarantee the voltage used should be accordant to the voltage needed, and the rated load of electrical outlet should not lower than the demand. If the electric line is damaged, you should replace it with the same type. You should assure there's nothing on the electric line and you should not put the electric line in the ambulatory place. Hold the jack when you pull out the electric line, and don't pull the electric line.



Power off when you finish your work. Pull off the connector plug when there's long time no use of the Instrument and cover it with a cloth or plastic paper to prevent from dust.



Pull the connector plug from the jack immediately in the following cases, and contact the vendor:

- There is some liquid flowing into the Instrument.
- Drenched or fire burned.
- Abnormal operation such as abnormal sound or smell.
- Instrument dropping or outer shell damaged.

3. The maintenance of Instrument

The platform and clamp should be cleaned by the cloth stained with a little alcohol. If there are smutches on the Instrument, clean them by soft cloth stained with cleaning cream .

4. After Sale Service Commitment

A) Content of warranty

The company will be responsible for replacement due to fault caused by the materials and manufacturing from the date of delivery within 1 month. The company will provide free warranty due to fault caused by the materials and manufacturing from the date of delivery within 12 months. In the warranty period, the company will provide free repair service or replacement for those machines which are proved as defective apparatus selectively.

B) Scope of Warranty

Improper use or use under unmoral condition, damage caused by repair or modify without authority etc. do not belong to the scope of warranty.

Out of Warranty period, charge the cost of fees appropriately

Index

1. Introduction.....	06
2. Specifications.....	07
3. Preparations.....	08
4. Operation Guide.....	11
5. Failure Analysis and Handling.....	13
Annex 1 : Wiring Diagram for Multi-tube Vortexer.....	14

01 Introduction

The Multi-tube Vortexer is designed for mechanical and chemical cell lysis, mixing suspensions, and general sample agitation. It gives a distinctly different motion than shaking a sample. With vortexing, greater shearing forces are placed on materials in the bottom of a tube, thus promoting either disruption or solubility.

The multi-tube vortexer is a tool to provide that extra degree of mixing, however it accommodates full racks of tubes as opposed to single tube. Consequently, this instrument is useful for higher throughput mixing of samples.

Features

Maximum process 50 samples at the same time to make the experiment more convenient and efficient

Microprocessor control, simplistic designed appearance, LED display the speed and time.

Humanized program design, built-in short mix and timing operation modes. Operation stable and silent.

Large orbital vortex, performance effective. Various types of foam tube frames and pads for option.

02 Specifications

1. The normal operating condition:

Ambient temperature:	4°C ~ 45°C
The relative humidity:	≤70%
Power supply:	AC100-240V 1.5A

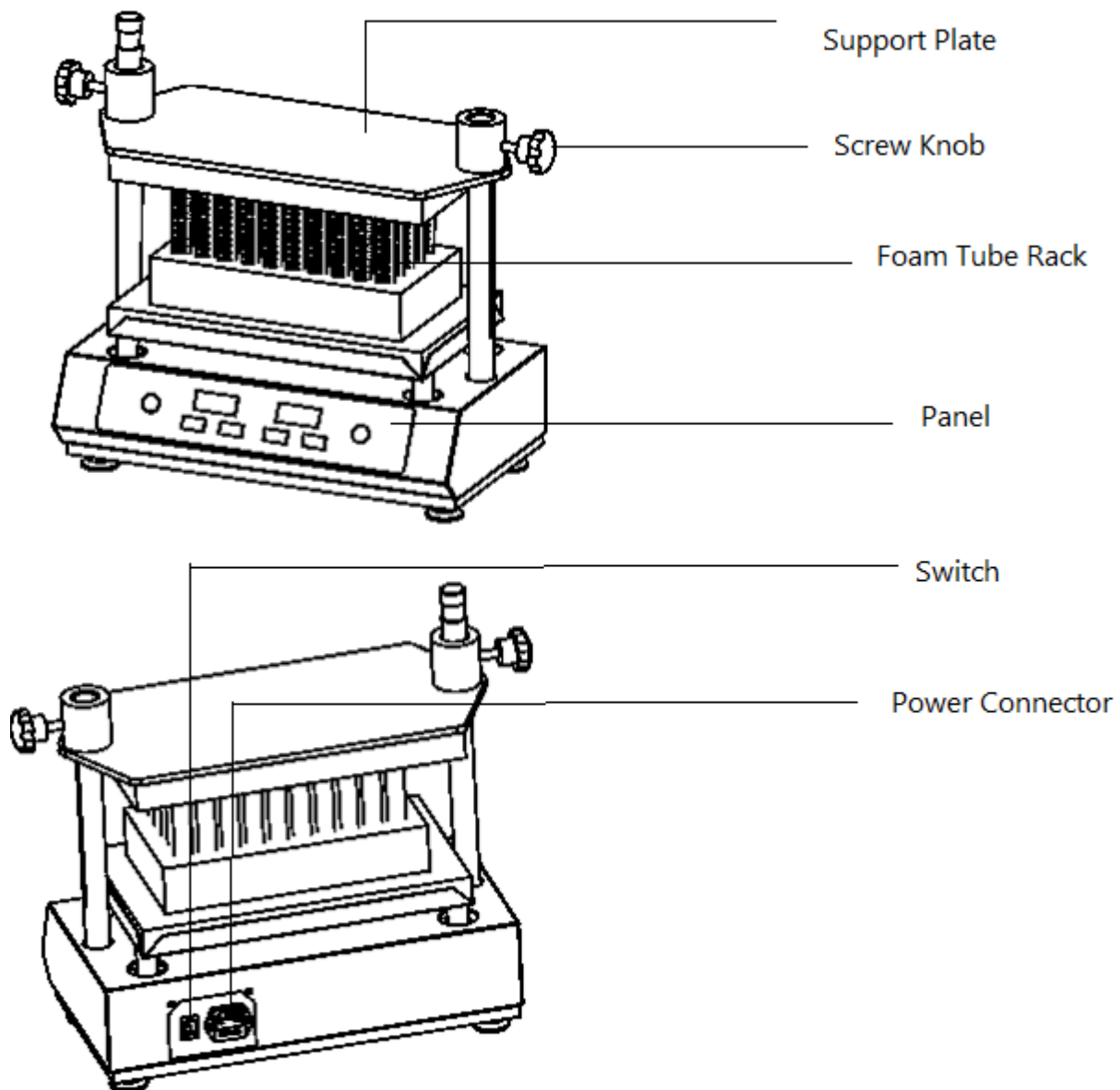
2. The basic parameters and function

Model Parameter	BVMX-201
Speed	500 ~2500rpm
Orbit	4mm
Time Setting	1min ~ 9999min
Max. Load	4.5kg
Input Power	60 W
Outer Dimension	426 x 250 x 480 mm
Weight	21.5kgs

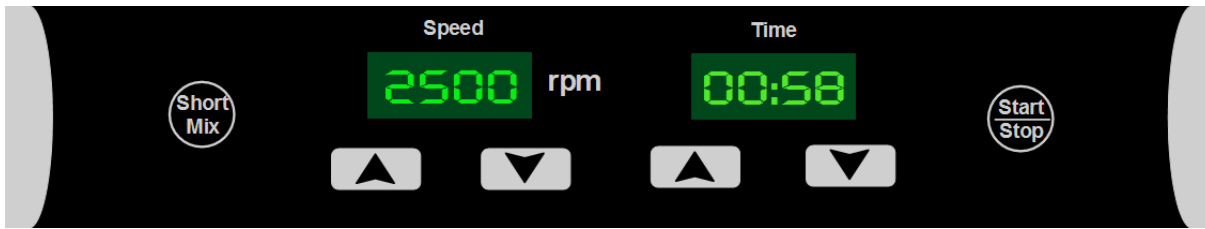
03 Preparations

This chapter introduces Multi-Tube Vortexer's mechanical structure and the central panel's functions and some preparations before power-on. You should be familiar with this chapter before the instrument is first operated.

1. Structure Description



2. Keyboard and Display panel



Short Mix Short mix key. Instrument mixes at the highest speed by pressing this key continuously, release to stop running.

Start Stop Start/Stop key. Pressing this key to start or stop the procedure.



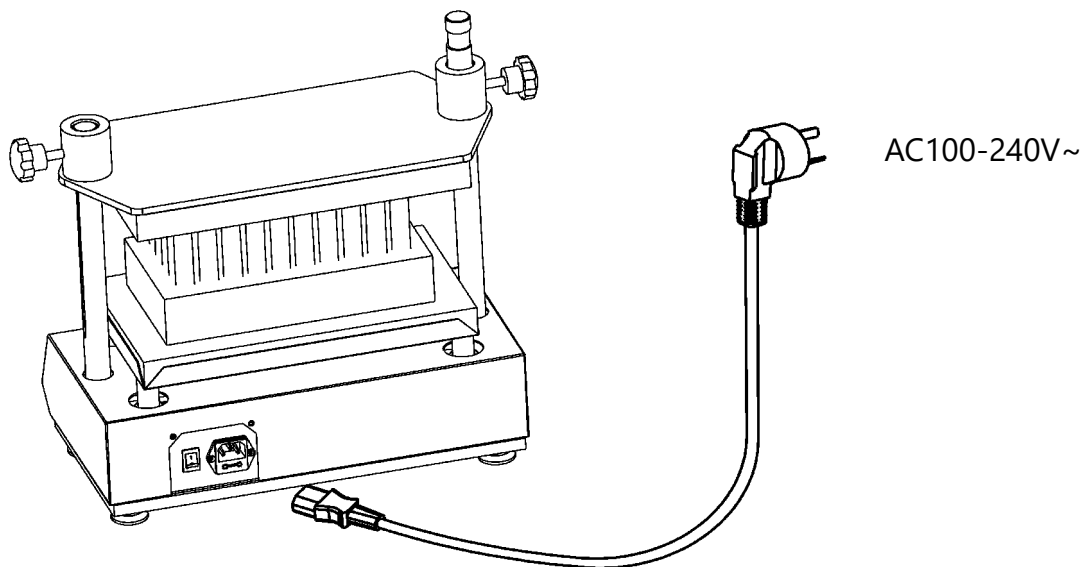
Key to increase speed or time setting value.



Key to decrease speed or time setting value.

3. Power connection

Place the Multi-Tube Vortexer on a horizontal and steady table. Plug the extend power supply unit into the socket at the rear side of the machine. The power adapter (AC100-240V) ensures the external safety of the unit.



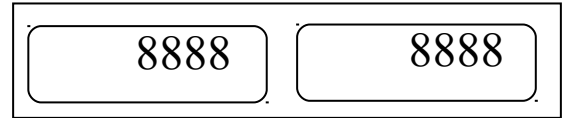
4. Exchangeable Tube Foam Rack

Type	Parameter	Tube Capacity	Dimension (mm)
BX-103865	10mm	50	245X132X45
BX-103866	12mm	50	245X132X45
BX-103867	13mm	50	245X132X45
BX-103868	16mm/15ml	50	245X132X45
BX-103869	25mm	15	245X132X45
BX-103870	50ml	15	245X132X45
BX-103871	Replacement tray pad set	/	305X178.5X25

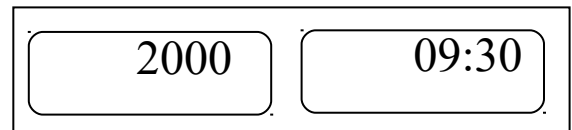
04 Operation Guide



1. Shaking speed and timing setting



- a) When the instrument powers on, display screen will show "8" one by one with the sound of "du...". The instrument goes into the initial interface after flicks three times.



- b) After about 2s, time display shows 9:30 (as right chart for example) which indicate 9 minutes and 30 seconds. It is last setting time. Speed display shows 2000 which indicate last setting speed is 2000rpm.

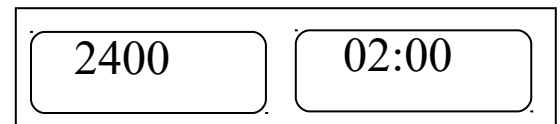
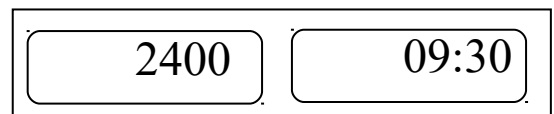


- c) Press  or  of the speed key, setting value will increase or decrease. Keep press for 2s, the value will increase or decrease tens, hundreds, or thousands fast.

- d) Press  or  of the time key, setting value will increase or decrease. Keep press for 2s, the value will increase or decrease tens, hundreds fast.

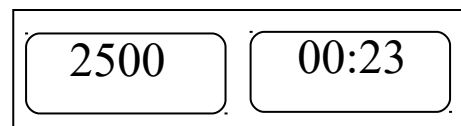


- e) If you want to set speed 2400rpm and timing 2minutes, press "X" of speed key, the setting value will increase. Till the value reaches 2400rpm, release the key, the device will save the value automatically. Press "?" of time key, the setting value will decrease. Till the value reaches 02:00, release the key, the device will save value automatically. The speed and time setting are completed.





2. Touch-Vortex mode

Keep press "Short Mix", the instrument starts to shake, release "Short Mix", shaking stops. Refer to the right chart, "2500" means shaking speed is 2500rpm, already operated 23s.





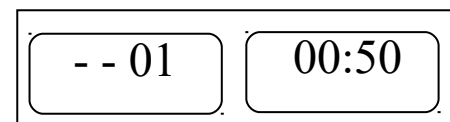
3. Pulse mode

Keep press  and  of time key synchronously to enter in pulse mode setting.

Press  or  key of speed to set intervals value from "00" to "10", unit is second. "00" means pulse mode off.



Press  or  key of time to set continuous working time. The setting value is from "00:00" to "99:59", unit is minute: second.



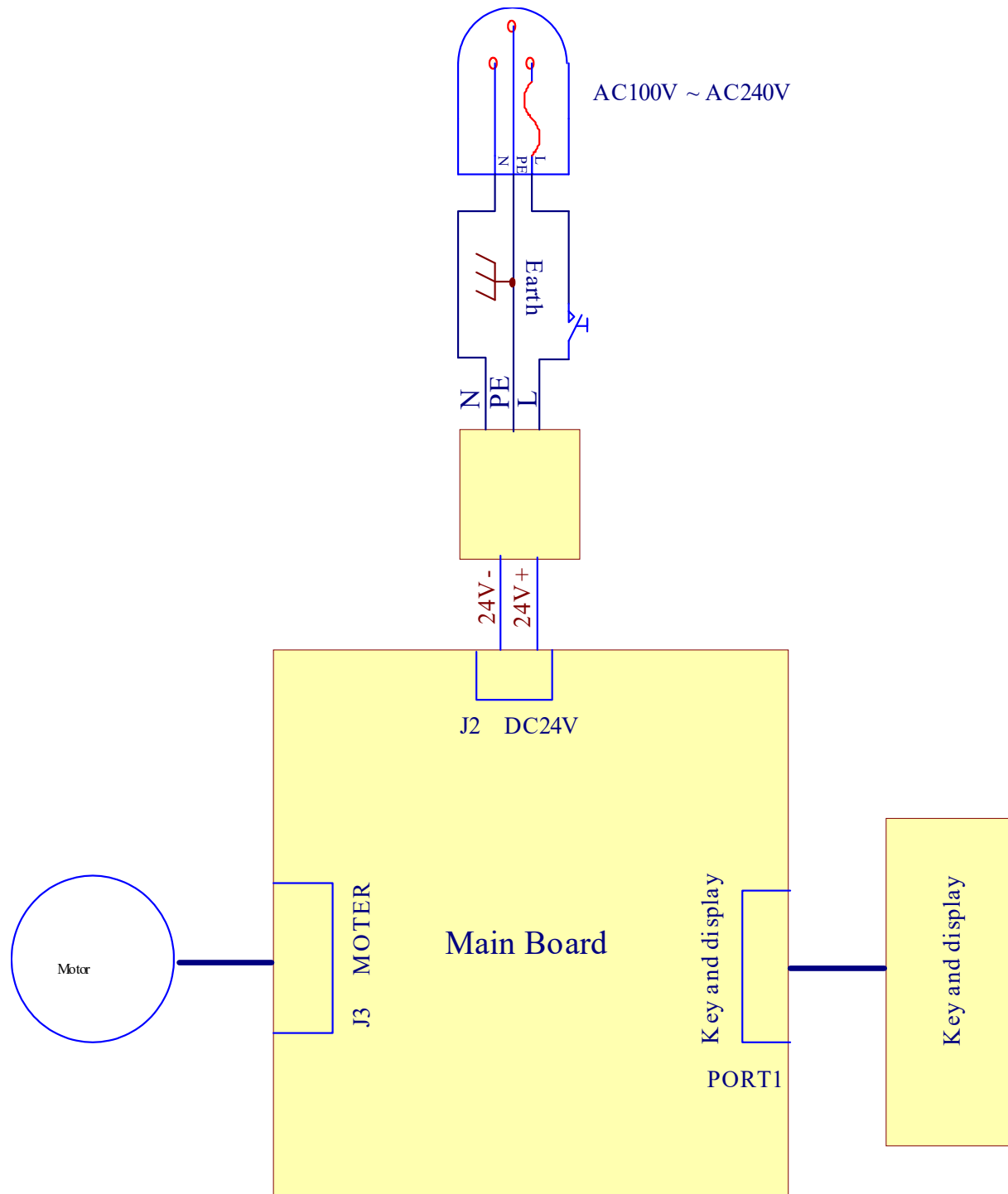
Press "start/stop" key to confirm, and return to working interface. Press "start/stop" key to start operation.

05 Failure Analysis and Handling

Failure analysis and processing procedures

No.	Phenomenon	Cause	Remedy
1	No display	No power	Check the connection of power
		Switch Failure	Exchange the switch
		Others	Contact the seller
2	Shaking too heavily	Mixing samples are placed asymmetrically	Place the mixing samples symmetrically
3	The actual speed is different from the displayed speed	Failure in control board	Contact the seller
4	"ERR" in the display	Shaking speed is out of control	Contact the seller
5	Press invalid	Press-key failure	Contact the seller

Annex 1: Wiring Diagram for Multi-tube vortexer BVMX-201





BIOLAB SCIENTIFIC LTD.

3660 Midland Avenue, Suite 300, Toronto, Ontario M1V 0B8 Canada

Email: contact@biolabscientific.com Tel: +1 707 533 1445

Website: www.biolabscientific.com