Operations Manual

ORBi-SHAKER™ XL



Benchmark

Index:

I. General Information

II-1. Introduction

II-2. Installation

II-3. Specifications

II-4. Features

III-1, Operation

III-2. Platform Installation

III-3. Error Messages

III-4. Maintenance

IV-1. Service and Contact

I. General Information

NOTE : Before operating the Orbi-Shaker, please take a few minutes to familiarize yourself with the contents of this manual.

Thank you for purchasing the Orbi-Shaker XL. This operations manual contains instructions for the care of this Instrument. In order to use the instrument properly, please read this manual carefully before operation. Please keep it available for future use.

Prior to the initial operation:
Please check the Instrument and the accessories against the packing list when you first open the shipping carton. If you find there is damage, a discrepancy, or missing items, please contact your supplier immediately.

II-1. Introduction

The Orbi-Shaker XL is designed for many applications used in general research laboratories. The Microprocessor's constant monitoring system ensures accurate shaking speed. The

beltless drive system minimizes noise and vibration while increasing the life span of the unit. Optional accessories are available for compatibility with a wide variety of laboratory vessels, including flasks, tubes, dishes and trays.

II-2. Installation

- Choose a location that is free from rapidly changing temperature conditions (away from a heating or cooling vent).
- To assure proper ventilation, allow a minimum of 2 inches (5 Cm) of the clearance between the rear and side of the unit and the adjacent wall.
- Always ensure that the machine is installed on a level surface.
- Before plugging the machine into the outlet, ensure that the electrical specifications (listed on the serial number label on the rear side of the unit) matches the electrical specifications of your outlet.
- Always
    - Avoid a direct ray and light.
    - Avoid high humidity and dust air.
    - Avoid cool areas (below 5□).

II-3. Specification

1) Dimension (Exterior) : 47(W) X 54(D) X 12.5(H) cm / 18.5(W) x 21.25 (D) x 5(H) in.

(Platform): 45(W) x453(D) cm / 17.8(W) x 17.8(D) in.

2) Speed range : 30 - 300 RPM

3) Shaking Orbit: 19mm (3/4”)

4) Timer : Digital - 1 min. to 47hr 59min. (1 min. increments)

5) Motor : Brushless DC - Beltless

6) Weight: 65 lbs / 30 kg

7) Electrical: 120V or 230V, 50-60Hz / 200W

II-4. Features

1) Constant Monitoring System (CMS) ensures precise control over speed

2) Extremely compact

3) MAGic Rack platform available as optional accessory.

4) Blushless DC motor and beltless drive system minimizes noise and vibration.

5) Digital control panel displays speed and time .

6) Wide variety of optional accessories available for most common laboratory vessels

III-1. Operation

1) Place the power switch (located on the rear of the machine) in the "**ON**" position (the display will illuminate).

2) To set the desired time, Press and hold the "RPM/TIME" key for approximately 2 seconds until **LED** displays "t" followed by the current set time. Press the "SET" key located underneath the time/speed display. The set time is displayed and will blink continuously. It can be adjusted by using the UP (▲) and DOWN (▼) keys. Once the desired time is displayed, press the "SET" key to confirm.

* If you do not press the "SET" key to store the desired time the new time will not be saved and the set time will return to the prior setting.

3) To set the desired mixing speed, Press and hold the "RPM/TIME" key for approximately 2 seconds until **LED** displays "r" followed by the current set mixing speed. Press the "SET" key located underneath the time/speed display. The set speed is displayed and will blink continuously. It can be adjusted by using the UP (▲) and DOWN (▼) keys. Once the desired speed is displayed, press the "SET" key to confirm.

* If you do not press the "SET" key to store the desired speed the new speed will not be saved and the set speed will return to the prior setting.

III-2. Platform Installation

The Orbi-Shaker XL includes a flat non-slip platform for low speed operation with many common vessels, including trays and dishes. For installation of any of the optional platform the user must:

1.) Unscrew the four metal, platform screws from the corners of the internal platform and remove the green rubber mat.

2.) Clean any dirt or debris from the metal base-platform and apply the desired optional platform so that the four corner holes are aligned.

3.) Screw in the four plastic, platform screws tightly by hand.

* I you have ordered the optional MAGic Clamp platform, the installation procedure is slightly different than the above. These instructions are included with the platform. If you are unable to locate these instructions, please contact your supplier.

III-3. Error Messages



1) This message “rErrL” represents a low speed speed error

- Check the platform to ensure that nothing is obstructing it’s movement
- Check the set speed to make sure that it is within the acceptable range (30 to 300rpm)

Solution : Use your hand to move platform. While the platform is moving press and hold the "STOP" and "SET" keys simultaneously.



2) This message “rErrH” represents a high speed error.

- Removal of load or partial load.

Solution : If a vessel has been removed, replace the vessel or restart the machine.



3) This message, “Error” represents an electrical error.

- Machine has lost power during the run.

Solution : Check that the power cord is properly installed and restart or check that the circuit has not been interrupted and restart.

4.) Display will not illuminate

(1) Electrical connection - Please disconnect main power cord and connect again.

(2) Voltage supply - Please check to voltage.

(3) Check the fuse

(4) Verify voltage on the serial number label of the machine

(5) Defective power switch (check voltage at switch)

III-4. Maintenance:

The platform of the Orbi-Shaker XL should be cleaned regularly with a soft cloth dampened with water or alcohol. (Always ensure that the machine has been powered down prior to cleaning.

In the event of a spillage: Power down the unit, remove the platform and dry the internal chamber with a soft cloth. DO NOT attempt to operate the unit until the spillage had been properly dried.

IV-4. Service and Contact

Service on the Orbi-Shaker XL should only be performed by qualified service personnel. To request service or technical support, please contact Benchmark Scientific or your local Benchmark Scientific representative.



Ph: +1-908-769-5555
Fax: +1-908-222-1864
Em: Info@BenchmarkScientific.com
Web: www.BenchmarkScientific.com
P.O. Box 709 Edison, NJ 08817, USA