



Life Sciences

## User Guide

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### Laboratory Shaker

*Part Number 4821A, 115 Volt CE*

*Part Number 4822A, 230 Volt CE*



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**Note:** *The procedures herein are intended only as a guide. Users should always verify product performance with their specific applications under actual use conditions. If you have questions about the information presented in this guide, please contact Pall Life Sciences Technical Service.*

## Description

- Designed to hold capsule filters in the horizontal orientation for elution of particulate and organisms.
- Easily detachable arms equipped with eight cork-lined clamps.
- Process up to eight Envirochek® Sampling Capsules at one time.
- Programmable digital speed and timer.

## General Information

-  1. Handle the parcel with care. Unpack and check that the contents coincide with the packing list. If any part is damaged or missing, please advise the distributor immediately.
2. Do not install or use the equipment without first reading the Product Information Insert.
  3. The manual should be made available for all users.
  4. If you have any inquiries, please contact your supplier or Pall Life Sciences Technical Service.
  5. Do not use the apparatus with liquids which can give off vapors capable of making explosive mixtures.

## Ordering Information

### Laboratory Shaker

Part Number	Description	Pkg
4821A	115V	1/pkg
4822A	230V	1/pkg

### Packing List

The standard equipment consists of the following components:

Product	Qty
Laboratory Shaker (115 or 230)	1
Arms	2
Clamps	8
Power Cord - 115V/230V	1/2
Product Information Insert	1
Allen Wrenches (3 mm, 5/32, 3/32)	3

## Specifications

### Dimensions

Height: 37.21 cm

Length: 82.21 cm

Width: 34.72 cm

### Maximum Capacity

4 kg (8.8 lb.)

### Oscillations/Minute

100-900 RPM

### Power Consumption

150 W

## Weight

PN 4821A: 40 kG (88.2 lb.)

PN 4822A: 41 kG (90.4 lb.)

## Voltage

PN 4821A: 115V, 50/60 Hz

PN 4822A: 230V, 50/60 Hz

## Installation of the Laboratory Shaker

1. Place the apparatus on a level surface with sufficient stability to resist its own vibrations.
2. Fit the arms with clamps vertical at the shaker side shaft so that the screws tighten against the side of the shaft.
3. If the shaker moves during operation, this can be alleviated by putting a piece of cushioned rubber between the table and the shaker.



### CAUTION!!!! IMPORTANT FOR YOUR SAFETY

Be sure that the voltage supply is the same as the one indicated on the characteristics plate.

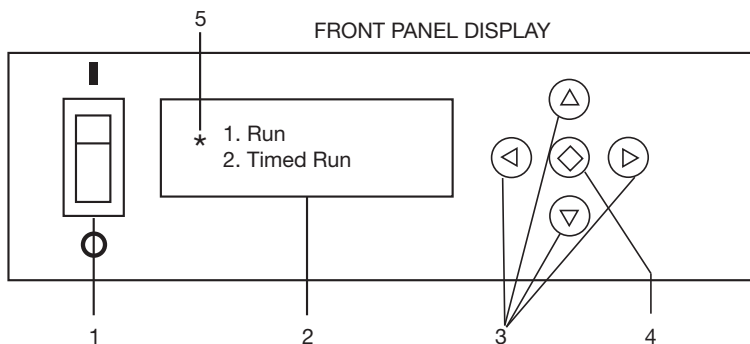
Do not use the apparatus to shake products capable of making an explosive mixture.

Do not use the apparatus if it is not grounded.

## Instructions for Use

### Control Panel

1. Power Switch
2. Display – time, speed
3. D-Pad
4. Enter button
5. Cursor indicator



### Starting Up

1. Plug Laboratory Shaker into 115V 50/60 Hz or 230V 50/60 Hz line as indicated on the characteristics plate located on the back of the instrument.
2. Turn on the Power switch located on the front of the instrument. Follow steps outlined below for Continuous Operation or Timed Operation.

### Continuous Operation Example

To run Laboratory Shaker in continuous (non-timed) operation, move the Cursor using the D-Pad to the 1. Run from the Main Menu and press the Enter button. The Shaker will engage at the last remembered RPM.

```
RUN TIME 00: 00: 01
RPM      100
*PAUSE   EXIT
```

*(Run Menu)*

The RPM can be adjusted by increments of +/- 50 using the D-Pad. The clock will keep track of the total run time. Selecting Pause will stop the clock and disengage the Shaker.

```
*PAUSE*
RUN TIME 00: 00: 01
RPM      100
* RESUME  EXIT
```

*(Paused Run Menu)*

Selecting Resume will start the clock count and re-engage the Shaker. Selecting Exit will disengage the Shaker and return the user to the Main Menu.

```
* 1. RUN
   2. TIMED RUN
```

*(Main Menu)*

### Timed Operation Example

To run the Laboratory Shaker in timed run operation, select the 2. Timed Run from the Main Menu and press the green button to navigate to the Timed Run Set-up Menu.

```
TIMED RUN SETUP
RUN TIME HR: MN: SC
* RPM      100
START      EXIT
```

*(Timed Run Set-up Menu)*

The first line will display Run Time, which controls the total run time before the Shaker stops. Hours, minutes, and seconds can be selected using the left and right arrows on the D-Pad. Once the time has been set, press the Enter button. The second line RPM can be adjusted by increments of +/- 50 using the D-Pad. Once the parameters have been set, select Start and press Enter to begin the timed run.

```
REMAINING 99: 59: 59
RPM      960
*PAUSE   EXIT
```

*(Timed Run Menu)*

Selecting Pause will stop the clock and disengage the Shaker. Selecting Resume will start the clock count down and re-engage the Shaker.

```
*PAUSE*
REMAINING 99: 59: 59
RPM          960
* RESUME     EXIT
```

*(Paused Timed Run Menu)*

Selecting Exit will disengage the Shaker and return the user to the main menu.

```
* 1. RUN
  2. TIMED RUN
```

*(Main Menu)*

## Maintenance



Before removing the casing, always be sure the Laboratory Shaker is unplugged. The manipulation of the internal electronic circuits of the apparatus by unauthorized personnel can cause irreparable damage to the apparatus.

### Cleaning

Cleaning of plastic: Use alcohol with cotton cloth.

Painted metal case: Use damp cloth and mild soap.

## Replacement Parts

<u>Part Number</u>	<u>Description</u>
89051	Clamp with extension collar

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