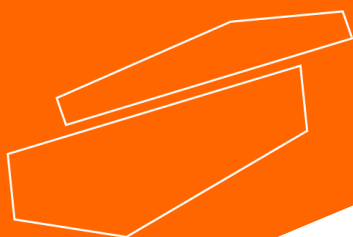




DISPENSING PERISTALTIC PUMP LBX P10

Please read the User Manual carefully before use, and follow all operating and safety instructions!



user manual

english / español / français



User Manual



Dispensing Peristaltic Pump P10

Important notice

This instrument is designed for laboratory usage only. Please read this manual carefully before installing or operating this equipment. The instrument shall not be modified in any way. Any modification will void the warranty and may result in potential hazard. We are not responsible for any injury or damage caused by any non-intended purposes and modifying the instrument without authorization.

1. Check the voltage specified on the name-plate and ensure it matches the line voltage in your location.
2. Install the instrument in a clean, dust-less, and ventilated area under 40°C.
3. Never spray flammable or toxic materials.
4. If the following occurs, turn off the pump and disconnect the power plug (pull the plug rather than holding the power line):
 - 4.1 Liquid spilled on the pump
 - 4.2 You think the pump needs maintenance or repair
5. Customer's power outlet must have a reliable earth ground
6. If the supply cord is damaged, please contact the manufacturer or your service agent for replacement to avoid hazard.

Service

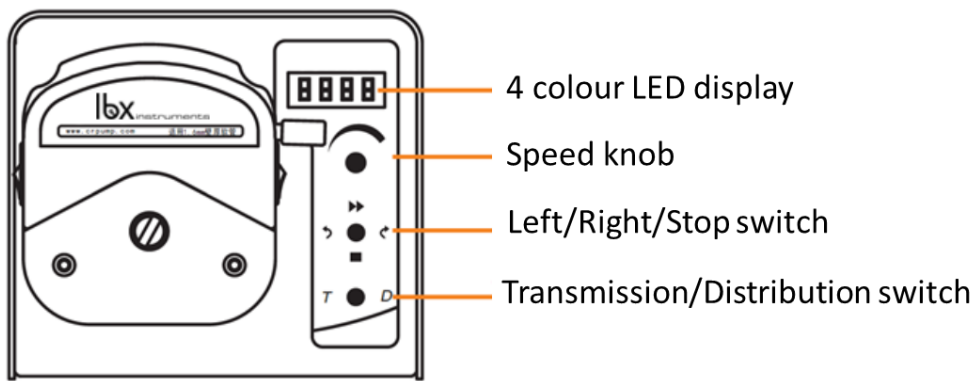
In order to guarantee this equipment Works safely and efficiently, it must have a regular maintenance. In case of any faults, do not try to repair it yourself. If help is needed, you can always contact your dealer or Labbox via **www.labbox.com**

Please provide the customer care representative with the following information:

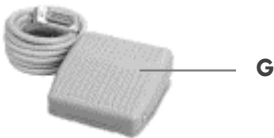
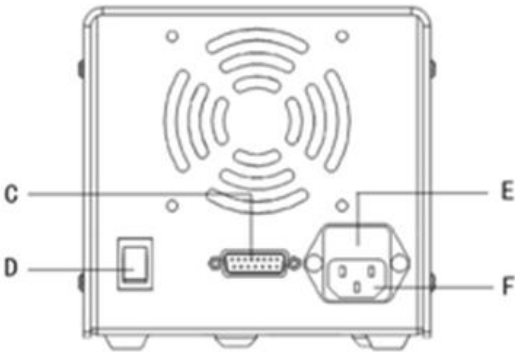
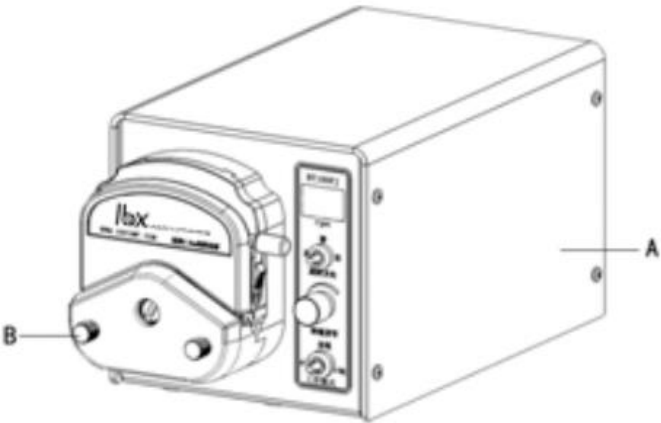
- Serial number
- Description of problem
- Your contact information



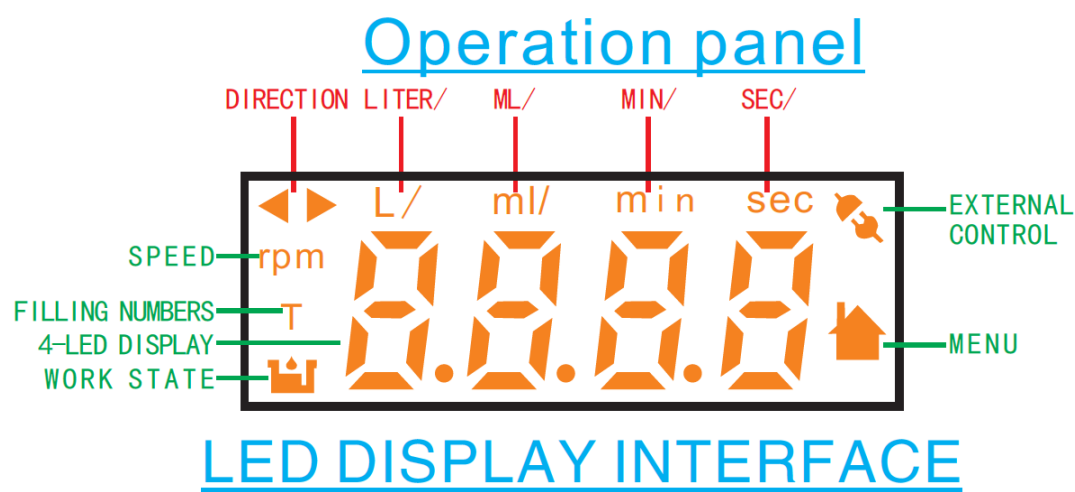
Product overview



- A. Drive
- B. Pump head
- C. Analog interface
- D. Power switch
- E. Fuse
- F. Power socket
- G. Foot pedal (provided)



Display



General settings

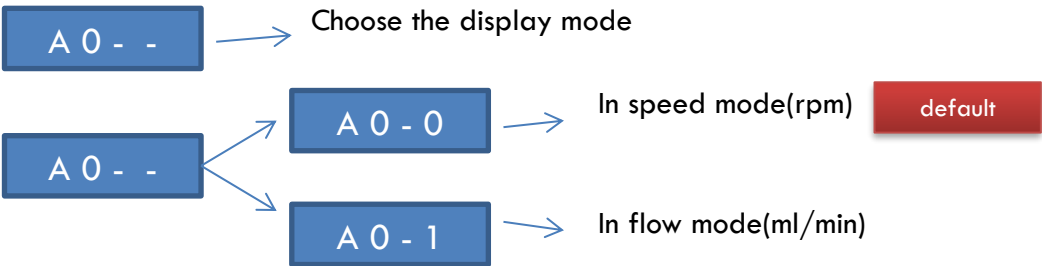
- - 1 - When the power is on the display will show 1-32

Note:
Press the rotary knob, enter the setting menu. Rotate the knob to choose the setting

A 0 - -	Choose the work mode	F 0 - -	Set the filling time
A 1 - -	Set external control	F 1 - -	Set the STOP time
A 2 - -	Choose the head & tube	F 2 - -	Set the filling number
E 0 - -	Calibration function		

Note:
In A0-0 mode. You can set the A1 /F0/F1/F2
In A0-1 mode. You can set the A1 /A2/E0/F0/F1/F2

Note:
Press the rotary knob, enter the setting menu. Rotate the knob to choose the setting mode



Note:
Rotate the knob to ESC. Then exit the current display.

A 1 - - → External control and system settings

A 1 - -	A 1 - 0	→	C 0 - 4	default	Necessary setting when using the pump
	A 1 - 1	→	C 1 - 0	default	
	A 1 - 2	→	C 2 - 1	default	
	A 1 - 3	→	C 3 - 1	default	
A 1 - -	A 1 - 4	→	C 4 - 1	default	Note: Please do not set the A1-4 to A1-d without the manufacturer's professional guide
	A 1 - 5	→	C 5 - 0	default	
	A 1 - 6	→	9600	default	
	A 1 - 7	→	- - 1 -	default	
	A 1 - 8	→	10 RPM	default	
	A 1 - 9	→	0	default	
	A 1 - a	→	C o - 0	default	
	A 1 - b	→	C b - 4	default	
	A 1 - c	→	C c - 0	default	
	A 1 - d	→	C d - 0	default	

A 2 - - → In the A0-1 flow mode, set the type of pump head and tube.

A 2 - 0 → Choose the pump head that you will use (provided)

A200 → YZ1515x default

ESC → Exit

A 2 - 1 → Choose the right tube. Please check the tube parameter (10mm provided)



Calibration setting

E 0 - -

In the A0-1 flow mode. Calibration function can be accessed

Press the knob to enter the calibration function

15.85

Display the volume. You can rotate the knob to the volume that you want to calibrate (ml/)

Before calibrating, please use the scale or counting cup in order to know the volume beforehand.

Example:

Volume to calibrate: 20 ml

- Enter to calibration setting.
- Rotate the knob to 20.00
- Left-stop-right switch to the direction needed. After stop transfer. Let the direction switch to stop.
- Rotate the knob
- Input the measured volume by scale or counting cup.
- Here finishes the first calibration. If calibration it is still not precise use that calibration function again. 3-5 times is recommended

Flow/speed setting

F 0 - -

0.1-9999 the unit is second

166.7-9999 the unit is minute

For example (pump model is P10 10J and the tube diameter is 10mm):

The flowrate range is 0.0015-290 ml/min.

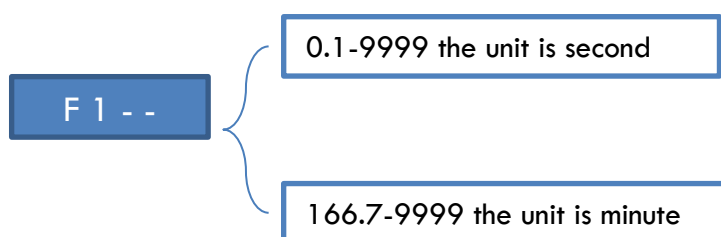
- Bottle volume 30 ml
- Wanted performance: to fill 3 bottles per minute
- The speed needed can be calculated by $30 \times 3 \times 2 = 180$ ml/min
- In the flow mode, adjust the flow to 180 ml/min
- In the speed mode, adjust speed bearing in mind that 1rpm=2.9 ml
- $180 / 2.9 = 65$ rpm, so adjust the speed to 65 rpm
- $180 \text{ ml} / 60 \text{ s} = 3 \text{ ml/s}$ $30 / 3 = 10$ s
- So set the filling time in 10 seconds.



Flow rate according to tube outer diameter. Note: the supplied tube is 10mm in OD.

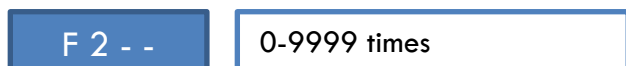
Tube OD (mm)	Speed (ml/min/rpm)											
	1 rpm	10 rpm	30 rpm	50 rpm	100 rpm	150 rpm	200 rpm	300 rpm	400 rpm	450 rpm	500 rpm	600 rpm
4	0,07 ml	0,7 ml	2,1 ml	3,5 ml	7 ml	10,5 ml	14 ml	21 ml	28 ml	31,5 ml	35 ml	42 ml
4,8	0,27 ml	2,7 ml	8,1 ml	13,5 ml	27 ml	40,5 ml	54 ml	81 ml	108 ml	121,5 ml	135 ml	162 ml
5,6	0,51 ml	5,1 ml	15,3 ml	25,5 ml	51 ml	76,5 ml	102 ml	153 ml	204 ml	208,5 ml	255 ml	306 ml
6,3	0,82 ml	8,2 ml	24,6 ml	41 ml	82 ml	123 ml	164 ml	246 ml	328 ml	369 ml	410 ml	492 ml
8	1,7 ml	17 ml	51 ml	85 ml	170 ml	255 ml	340 ml	510 ml	680 ml	765 ml	850 ml	1020 ml
10	2,9 ml	29 ml	87 ml	145 ml	290 ml	435 ml	580 ml	870 ml	1160 ml	1305 ml	1450 ml	1740 ml
11,1	3,8 ml	38 ml	114 ml	190 ml	380 ml	570 ml	760 ml	1140 ml	1520 ml	1710 ml	1900 ml	2280 ml
PUMP-10J-001						PUMP-30J-001			PUMP-60J-001			

Interval time setting



Interval time setting

Number of times that the pump is needed to repeat the filling action



Warranty

This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 48 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation.

For claim under the warranty please contact your supplier.



Nota importante para los aparatos electrónicos vendidos en España
Important note for electronic devices sold in Spain
Remarque importante pour les appareils électroniques vendus en Espagne

Instrucciones sobre la protección del medio ambiente y la eliminación de aparatos electrónicos:



Los aparatos eléctricos y electrónicos marcados con este símbolo no pueden desecharse en vertederos.

De conformidad con la Directiva 2002/96/ CE, los usuarios de la Unión Europea de aparatos eléctricos y electrónicos, tienen la oportunidad de retornar el instrumento para su eliminación al distribuidor o fabricante del equipo después de la compra de uno nuevo. La eliminación ilegal de aparatos eléctricos y electrónicos es castigada con multa administrativa.

Nota importante para los aparatos electrónicos vendidos en Francia
Important note for electronic devices sold in France
Remarque importante pour les appareils électroniques vendus en France

Informations sur la protection du milieu environnemental et élimination des déchets électroniques :



Les appareils électriques et électroniques portant ce symbole ne peuvent pas être jetés dans les décharges.

En réponse à la réglementation, Labbox remplit ses obligations relatives à la fin de vie des équipements électriques de laboratoire qu'il met sur le marché en finançant la filière de recyclage de Réylum dédiée aux DEEE Pro qui les reprend gratuitement (plus d'informations sur www.recylum.com).

L'élimination illégale d'appareils électriques et électroniques est punie d'amende administrative.



www.labbox.com

