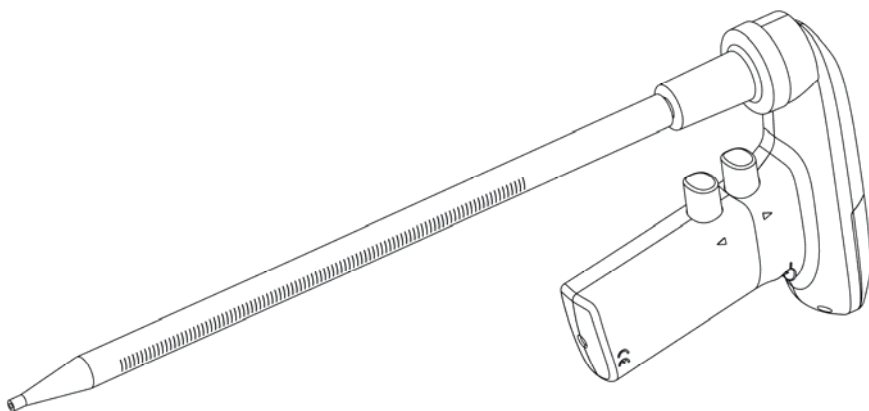


Pipette Mate **NEO**

Pipette Controller for liquid handling

User's Manual



- Thank you very much for purchasing Pipette Mate NEO.
- Please read this manual carefully before using.

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Pipette Mate **NEO**

Pipette Controller for liquid handling

Features

- Light (167g) weight and ergonomic design
- Autoclavable nose cone, pipette holder and filter (121°C, 20min)
- Compatible with glass and plastic pipettes from 1-100ml
- Continuous speed control wheel which can be fixed designated speed
- Long life rechargeable Lithium Ion battery
- Blow-out and Gravity dispense selection
- Self-stand design
- UV-resistant housing
- Complies with CE and RoHS

Standard accessories

- Pipette controller (Inc. Li-Ion battery and Filter)
- Hydrophobic filter 0.2um
- AC-DC adaptor
- User's manual

When unpacking package, check to make sure that the above-mentioned items are included.

Precautions on safety

- For using your Pipette Mate NEO properly and safely, carefully read "Precautions on safety" in this paragraph and "CAUTION" on the next page before starting work with it.
- Contents of "CAUTION" are matters that require user's attention, not only for using Pipette Mate NEO properly but for preventing user from accidents and physical damage.
- After reading this manual, please keep it in a convenient place for referring to at any time.

Please read following prior to use for your safety and correct usage.



CAUTION

Be sure to observe the following instructions for using
Pipette Mate NEO properly and safely.

If user misuses "Pipette Mate NEO", or disregards the following instructions, it may result in injury to the user or/and other persons or physical damage to pipette or/and other equipment.

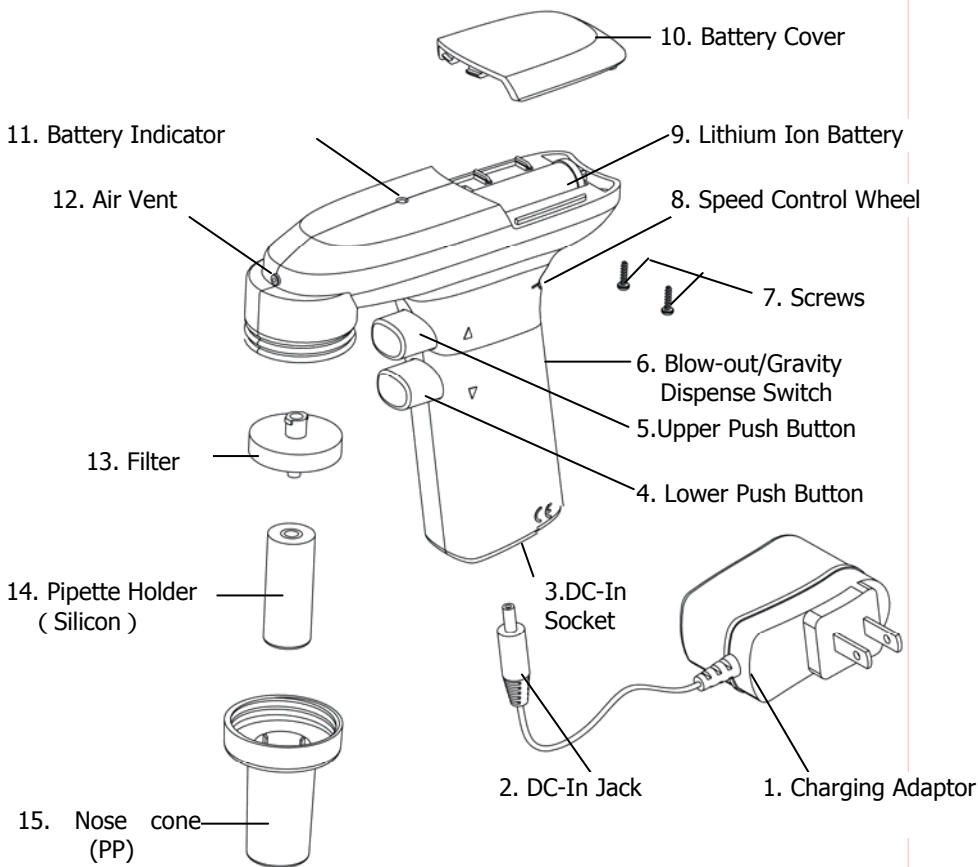
1. Do not use the controller for any purpose other than pipetting/dispensing liquid.
2. Do not modify the controller because modification may cause an accident.
3. Do not use the controller for pipetting any liquid to be injected into human body.
4. Do not expel dispensed liquid towards anybody.
5. Do not eject tip towards anybody.
6. Do not eject tip with liquid inside.
7. Do not slant the controller when liquid is inside of tip.
8. Make sure tip is secured. When using large tip such as 100ml, support the tip with another hand to avoid falling off.
9. If pipette is contaminated with liquid harmful to human, immediately take appropriate disposal to clean it safely before continuing to work.
10. When using infections, radioactive, toxic and other solutions which may cause health risks, please observe appropriate safety precautions.
11. Do not use the controller in a potentially explosive environment or with potentially explosive, flammable liquids.
12. The controller cannot be used with solvents whose vapors attack silicon, ABS, PP, NBR and PVDF.
13. If any harmful liquids are on the controller, please take appropriate treatment before using it.
14. Do not touch the controller after drying, because it will have got very hot during drying. Direct contact with the hot controller may cause injury.
15. Do not dispense/aspirate more than maximum volume of tips.
16. In case temperature of the controller goes up, stop using the controller and contact local distributors for inspection.
17. The controller operates on a small but powerful Lithium-ion battery. Misuse or abuse of the Lithium-ion battery may cause damage or injury through fire, electric shock or chemical leakage.
18. Do not incinerate the Lithium battery or expose it to excessive heat.
19. Do not short-circuit, puncture, crush, disassemble, damage, force, over-discharge (reversal) or modify the battery.
20. Do not expose the battery to water or moisture.
21. Only use the battery specified in this manual.
22. Only use the specified battery charging adaptor to charge the battery. Use the unauthorized battery charging adaptor might cause short-circuit or fire on the controller.

23. Do not use a leaking battery.
24. If charging is not completed within the specified time period, unplug the charger and discontinue charging immediately.
25. The liquid from battery enters your eye, immediately rinse the eye with plenty of fresh water and contact a doctor. If fluid from the battery makes contact with your skin or clothing, wash the area thoroughly with water.
26. Please observe the relevant regulations to dispose the battery.

Content

1. General descriptions	5
2. Operating procedure	6
3. How to recharge the battery	7
4. Self-inverted design	7
5. How to replace the battery	8
6. How to replace filter and tube holder	8
7. Autoclave	9
8. Cleaning	9
9. Specification	9
10. Part list	10
11. Troubleshooting	10
12. Warranty	11

1. General description



2. Operating procedure

To Aspirate:

- 1) Carefully hold the pipette and insert it securely into the nose cone and silicone pipette holder(Fig.-A).
- 2) Select the pipetting speed by rotate the speed control wheel(Fig.-C).
- 3) Press down the upper push button(Fig.-B).

Note: Do not dispense/aspirate more than maximum volume of tips. It would cause malfunction of the controller.

Note: Do not slant the controller when liquid is inside of tip. Liquid entrance into the controller would cause malfunction of the controller.

To Dispense:

- 1) In "Blow-Out mode", press down the lower push button(Fig.-C).
- 2) If "Gravity mode(G)" is chosen, the liquid in the pipette is dispensed by gravity only. The flow rate is regulated by the pressure applied to the lower push button(Fig.-B).

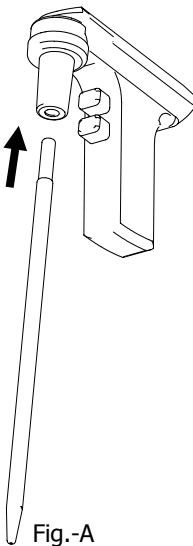


Fig.-A

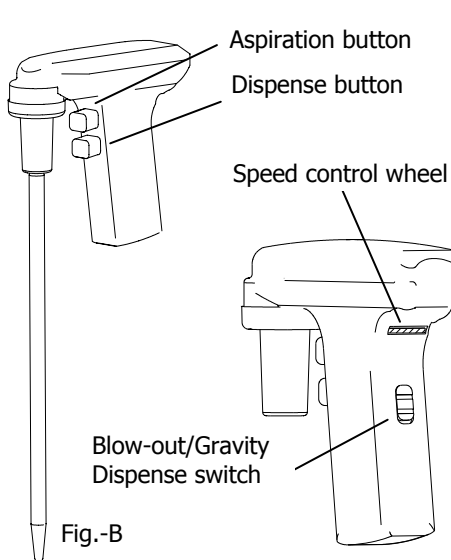


Fig.-B

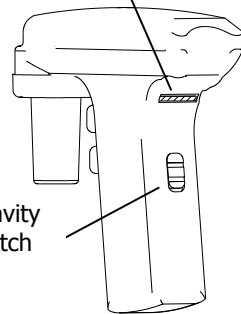


Fig.-C

3. How to recharge the battery

Please charge the Lithium battery 4 hours before first-time operation.

When the battery indicator(LED) turns red (low battery), follow the steps below to recharge the battery.

- 1) Plug the DC-in jack of charging adaptor to the DC-in socket in the base of the unit.
- 2) Plug the charging adaptor with external power source.
- 3) The battery indicator will turn orange during charging period.
- 4) After the battery is fully charged, the battery indicator will turn green again.
The charging period may take about 4 hours.

Note: 1. Please do not over-charge the battery for a long period of time.

2. The controller can be operated during recharging period.

3. When battery is fully charged, the controller can be used about 8 hours.

4. Do not touch the adaptor with wet hand. It would cause electric shock.

4. Self-inverted Design

Pipette Mate NEO, without a holder, or stand, can be self-inverted on the bench as shown in the Fig.-D below.

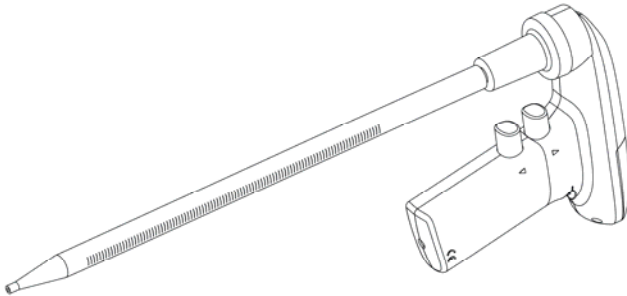


Fig.-D

5. How to replace the battery

Lithium-Ion Battery can be changed by following procedures

- 1) Unscrew two screws from the bottom part of battery holder
- 2) Lift the battery cover
- 3) Disconnect the battery's connector, and take out the battery.
- 4) When placing the battery, just follow reverse procedure from 3) to 1).

6. How to replace filter and tube holder

The hydrophobic filter will require occasional replacement, particularly when aspirating speed is decreased.

- 1) Rotate the nose cone counter-clockwise direction to loose it (See Fig.-E).
- 2) Remove or replace the wetted, dirty filter and worn pipette holder with the new ones. Reassemble the device.
- 3) When setting the filter or holder, just follow reverse procedure from 2) to 1).

Note: Do not set the filter and holder in wrong direction.

Note: Do not use the controller without a filter. Liquid entrance into the controller would cause malfunction of the controller.

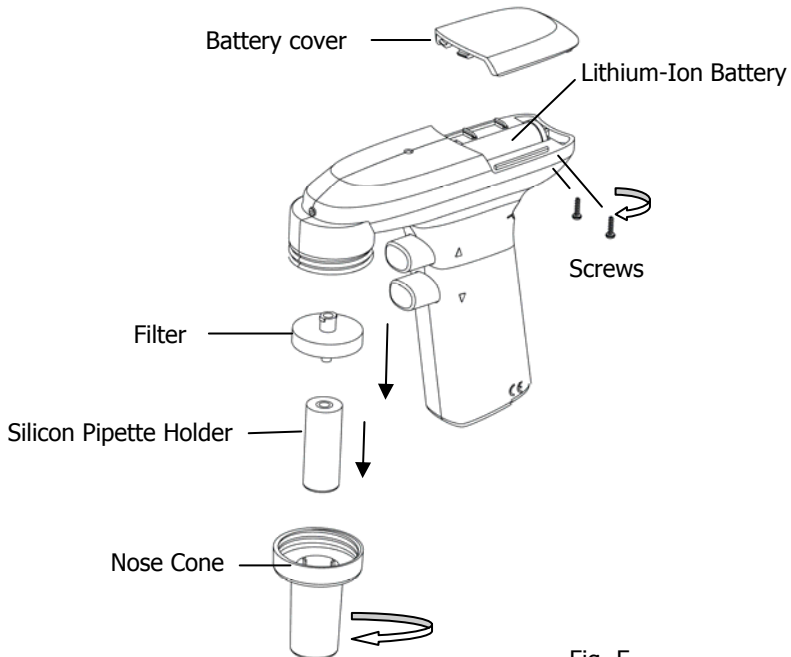


Fig.-E

7. Autoclave

Nose cone, Silicon Pipette Holder and Filter are autoclavable. When autoclaving, carry on at condition of 121°C for 20 minutes based on the procedure mentioned below.

- 1) Please follow the instructions mentioned on "6. How to replace filter and tube holder" when disassembling Nose cone, Silicon Pipette Holder and Filter.
- 2) As autoclaving is completed, dry the pipette parts completely.

Note: Autoclave may discolor the parts, but this does not affect performance for the controller.

Note: The parts cannot be used right after autoclave due to high temperature. Please use after cooling them down.

8. Cleaning

Please take off the charger before cleaning. The controller can be disinfected with disinfectant (i.e. 60% isopropanol, 70% ethanol or detergent).

9. Specification

Type of tip	1-100ml Plastic/Glass pipette
Dispense mode	Selection for Powered/Gravity
Speed control wheel	Continuous
Power	AC100-240V 50 ~ 60Hz DC5V 1.0A
Filter	Hydrophobic 25mm, 0.2um
Autoclave	Nose cone, pipette holder, Filter
Usage temperature	10-35°C
Usage humidity	RH:0-85%
Lithium Ion battery	600mAh/3.6V Li-Ion
Weight	167g
Housing material	ABS
Nose cone material	PP

10. Part list

No.	Description	Code	Qt'y
1	Battery cover	00-PM-N003	1
2	Nose Cone	00-PM-N005	1
3	Silicon Pipette Holder	00-PM-N013	1
4	Battery	00-PM-N018	1
5	Charging Adaptor	00-PM-N024	1
6	0.2um filter	00-PM-N100	5

11. Troubleshooting

Symptom	Cause	Remedy
Aspiration speed	Blocked filter	Filter replacement
	Broken filter	
	Low battery	Battery charge
Charging failure	Low battery	Battery replacement
	No adaptor connection	Plug in
	Broken adaptor	Adaptor replacement
	No jack connection	Plug in
Liquid drip	Pipette looseness	Secure pipette
	Scratch or deformity for pipette holder or pipette	Silicon pipette holder or pipette replacement
Pipette looseness	Scratch or abrasion on pipette holder	Pipette holder replacement

If the problems cannot be resolved with the solution above, please contact the authorized distributors to arrange a service. Please note that the controller is not contaminated before arranging the service.

Dear users,

As one of our activities to protect our environment, we would ask all of our customers to discard disused items properly based on local conditions.

12. Warranty

The Pipette Mate NEOs are covered by a warranty for one year against defects in materials and workmanship. This period begins from the date of purchase, and within this period all defective parts will be replaced at no charge by manufacturer. The warranty does not cover defects caused by excessive wear and tear or damage due to shipping, accident, abuse, misuse, problems with electrical power, or usage not in accordance with product instructions, or if other than original spare parts supplied by the manufacturer have been used. Each controller is tested and documented by the manufacturer before shipping.