



CappController Pipette Controller

Operation Manual

Version: 1.2



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1. Safety Precautions

Before using the CappAid™ pipette controller for the first time, please read this entire operating manual carefully. To guarantee problem free, safe operation, it is essential to observe the following points:

When using infectious, radioactive, toxic and other solutions which may pose health risks, please observe appropriate safety precautions.

Do not use the CappAid™ pipette controller in a potentially explosive environment or with potentially explosive, flammable liquids.

When using organic solvents or corrosive chemicals, please check their compatibility with the CappAid™ pipette controller.

The CappAid™ pipette controllers operate 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.

Do not incinerate the Lithium battery or expose it to excessive heat.

Do not short-circuit, puncture, crush, disassemble, damage, force over-discharge (reversal) or modify the battery.

Do not expose the battery to water or moisture.

Only use the battery specified in this manual.

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 CappAid™ pipette controller.

Do not use a leaking battery.

If charging is not completed within the specified time period, unplug the charger and discontinue charging immediately.

The charger and battery temperature rises with extended periods of use. Care should be taken to avoid burns.

Burns may result if the battery is removed immediately after extended periods of use.

If fluid from the 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.

The CappAid™ pipette controller can't be used with solvents whose vapors attack silicon, ABS, PP, NBR, PVDF.

Please observe the relevant regulations to dispose the battery.

All repairs should be carried out by an authorized service personnel only.

2. General Description

The CappAid™ pipette controller features an efficient, as well as ergonomic and light-weighted design. Other features include:

- Compatible with glass and plastic pipettes range from 0.1 to 100ml
- Powerful Lithium battery, no memory effect.
- Continuous speed control wheel
- Blow-out and Gravity dispense selection
- Dangerous fume or liquid protective hole
- Self-inverted design
- UV-resistant housing
- Complies with CE and RoHS

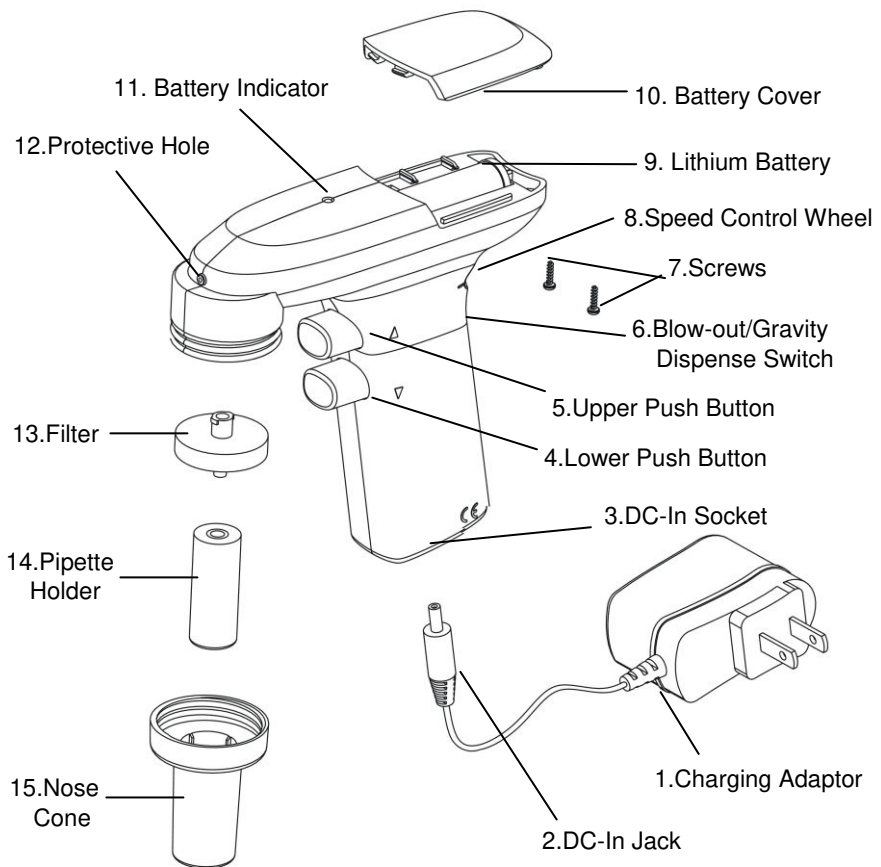


Figure 1. Overview of the CappAid™ Pipette Controller:

3. Getting Started

Open the CappAid™ pipette controller package and confirm that all items are included:

- CappAid™ pipette controller unit with a Lithium battery included
- AC-DC charging adaptor
- Operation manual
- Spare hydrophobic PTFE filter, 0.2 μ m

If there are any items missing, damaged, or not according to your order, please contact your distributor or sales representatives for replacement immediately.

3.1. Recharging the Battery

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

When the battery indicator(11) turns red (low battery), follow the steps below to recharge the battery.

1. Plug the DC-in jack(2) of charging adaptor(1) to the DC-in socket(3) in the base of the unit.
2. Plug the charging adaptor(1) with external power source.
3. The battery indicator(11) will turn orange during charging period.
4. After the battery is fully charged, the battery indicator(11) 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. *CappAid™ can be operated during recharging period*
3. *When battery is fully charged, CappAid™ can be used about 8 hours..*
4. *Lithium Battery(10) can be changed by following procedures: 1)unscrew two screws(7), 2)lift the battery cover(10), and 3) disconnect the battery's connector.*

3.2. Starting Pipetting

To aspirate:

1. Carefully hold the pipette and insert it securely into the nose cone(15) and silicone pipette holder(14).
2. Select the pipetting speed by rotate the speed control wheel(8).
3. Press down the upper push button(5).

To Dispense:

1. In “Blow-Out mode”, press down the lower push button(4).
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(4).

3.3. Self-inverted Design

The CappAid™ pipette controller, without a holder, or stand, can be self-inverted on the bench as shown in the Figure 2 below.

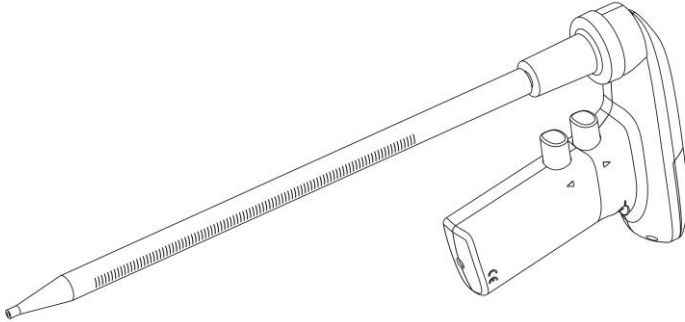


Figure 2. Self-inverted on the bench

4. Changing Filter

The hydrophobic filter(13) will require occasional replacement, particularly when aspirating speed is decreased. Rotate the nose cone(15) counter-clockwise direction to loose it (See Fig. 1). Remove or replace the wetted, dirty filter and worn pipette holder(14) with the new ones. Reassemble the device.

5. Maintenance

Before cleaning, disconnect the unit from the charging adaptor.

The CappAid™ pipette controller can be cleaned with most common laboratory disinfectants, such as 60% Isopropanol, 70% ethanol or mild detergent. The PTFE filter(13), polypropylene nosecone(15) and silicone pipette holder(14) can be autoclaved.

6. Troubleshooting

To ensure the product's quality and performance, the CappAid™ pipette controller is designed to be robust and long-lasting.

If the problems can't be resolved with the solution below, please contact the Authorized distributors to arrange a DOA/RMA service.

Symptom	Possible Cause	Solution
Reduced suction efficiency	Filter blocked, dirty or wetted	Clean or replace filter
	Low battery	Recharge battery
Pipette drips	Pipette not securely inserted in silicon pipette holder	Insert pipette further
	Pipette holder or pipette damaged	Replace pipette holder or pipette
Pipette loose	Pipette holder damaged	Replace pipette holder

7. Technical Specifications

Pipette types	1-100ml plastic/ glass pipette
Aspirating/Dispensing Speed	> 6ml/sec.
Dispense Mode	Blow-out / Gravity Selection
Speed Control Wheel	Continuous
Power Adaptor	100/120/220/240V AC-DC 3.6 V with US/EU/UK/Australian plug
Filter	Hydrophobic 25mm diameter, 0.2 μ m
Autoclavable	Nose cone, pipette holder and filter only
Operating Temperature	+10~ 35°C
Operating Humidity	RH: 0 ~ 85%
Battery	600 mAh/3.6 V or above, Li-Ion
Weight	167 g, including a battery
Housing Material	ABS
Nose Cone Material	Polypropylene
Pipette Holder	Silicon
Certification	Complies with CE, Class A (EN61010-1, EN60101-1-2, EN50082-1, EN 55011) RoHS

Note: Specifications are subject to change without prior notice.

Appendix A: Warranty

The CappAid™ pipette controllers 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 CappAid™ pipette controller is tested and documented by the manufacturer before shipping.

