



USER GUIDE



DiamondSerologic™
portable pipette controller

INTRODUCTION

The Diamond SeroLogic™ portable pipette controller is a rechargeable electronic pipetting aid designed for use with glass or plastic serological pipettes in the 0.1 to 100mL volume range. The SeroLogic™ is lightweight and ergonomically designed for effortless pipetting even during extensive use. It features soft grip push buttons and a conveniently located speed control switch for one-handed operation. The SeroLogic™ has a high performance micro pump with a quiet yet powerful 3-speed engine. It is equipped with a replaceable membrane filter that protects the inner mechanism from possible vapor contamination. The removable nose cone is autoclavable, and the unit is designed for a continuous working limit of eight hours.

PACKAGE CONTENTS

1. Diamond SeroLogic™ portable pipette controller
2. Two 1000mAH NiMH rechargeable batteries
3. Battery charger
4. Three PTFE membrane filters:
 - (1) 0.20 μm
 - (2) 0.45 μm (one installed)
5. Desktop stand
6. Wall mounting bracket
7. User guide/warranty



SAFETY PRECAUTIONS

Carefully read all operating instructions before use.

- Always wear protective clothing, gloves and goggles when pipetting.
- Follow the reagent manufacturer's safety instructions.
- Never use with highly flammable liquids.
- The Diamond SeroLogic™ should not be used with liquids such as ABS, PA, Silicon, POM, etc.; whose vapors may damage the unit's plastic components.
- Never use where the danger of explosion is present.
- Never charge the batteries with a charger other than that supplied by the manufacturer.
- Use only original spare parts and accessories.
- Store on supplied desktop stand or wall bracket when not in use. Never store with a filled pipette.
- In case of malfunction, follow the trouble shooting procedures on page 6.

PIPETTING

Choose the appropriate size serological pipette and inspect it for possible damage (including dents or sharp edges). Insert the pipette into the nose cone of the pipette controller. The silicone pipette holder will firmly secure the pipette in place once inserted correctly. When a serological pipette is attached, always hold the pipette controller in a vertical position with the tip of the pipette pointing down.

Speed Control: Set the pump speed using the H/L/G switch located on the back of the unit.

H: High – Fast aspirating and fast dispensing.

L: Low – Slow aspirating and slow dispensing.

G: Gravity – Slow aspirating and gravity force dispensing.

The “L” position should be used for serological pipettes with a volume up to 5mL and the “H” position used for volumes that are greater than 5 mL.

The speed of aspirating and dispensing can also be controlled manually by adjusting the finger pressure on the trigger buttons. The harder the button is pressed, the faster the liquid will aspirate or dispense.

Aspirating (filling the pipette): Slowly press the upper trigger button to start aspirating. Fill the pipette slightly above the desired volume mark. Adjust the aspiration speed by varying finger pressure, particularly in the final stages, to prevent overfilling the pipette. After filling the pipette slightly above the desired volume, press the lower trigger button gently to dispense excess liquid until the meniscus of liquid aligns exactly with the required volume mark on the pipette.

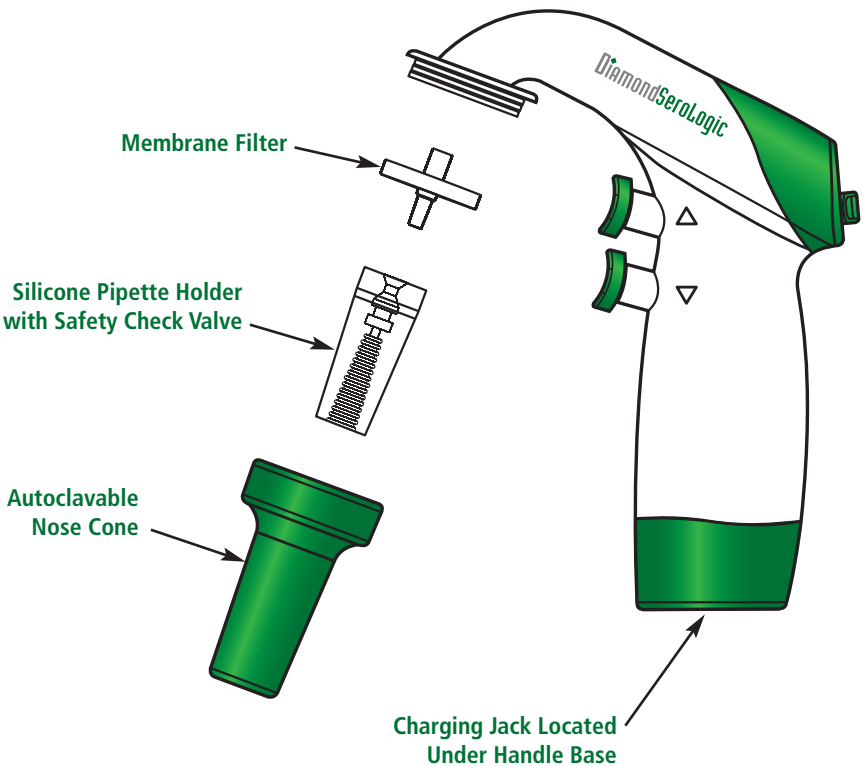
Dispensing: Slowly press the lower trigger to dispense.

Note: During gravity force dispensing (G), some contents in the pipette may not be completely emptied. This is caused by certain characteristics in the serological pipette used.

REPLACING THE FILTER

1. Unscrew the nose cone.
2. Remove membrane filter and discard.
3. Remove silicone pipette holder from nose cone and rinse. Set aside and allow to dry thoroughly.
5. Insert new membrane filter.
6. Insert dry silicone pipette holder into nose cone. Screw nose cone onto pipette controller.
7. Test for leaks before pipetting.

Note: Only use original manufacturer recommended filters and accessories.



CHARGING THE BATTERIES

The Diamond Serologic™ is equipped with a low battery LED indicator located just above the pump switch. When the LED is lit, the batteries need charging. The supplied charger is protected against over-charging, overheating and short circuiting. Never use a charger other than that supplied with the Diamond Serologic™. Use of any other chargers may damage the batteries and will void the warranty.

To charge the batteries:

1. Insert the charger connector into the base of the Diamond Serologic™ handle.
2. Plug the charger into a suitable wall socket. The LED *on the charger* will glow red indicating that charging has begun.
3. Once the batteries are fully charged (approximately 5 hours), the charger automatically stops charging and the LED *on the charger* turns green.

Note: The unit can be used during charging.

REPLACING THE BATTERIES

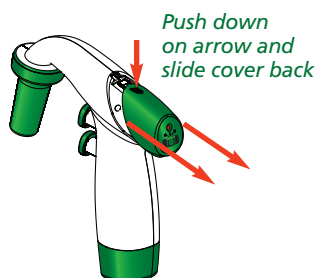
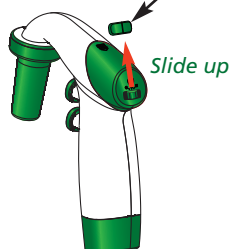
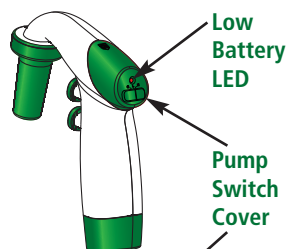
The Diamond Serologic™ utilizes two 1000mAH NiMH rechargeable batteries.

To replace the batteries:

1. Apply upward pressure to slide the pump switch cover up and off. Set aside.
2. Remove the battery compartment cover by pressing down firmly on the embossed arrow and simultaneously sliding the cover back. Set aside.
3. Remove the batteries. Note: It may be easier to remove the batteries by gently prying them out with a small screwdriver or similar instrument.

Never use the tab on the battery compartment cover for this purpose.

4. Insert new batteries.
5. Slide battery compartment cover back on until it snaps into place.
6. Slide the pump switch cover back down onto switch until it snaps into place.



TROUBLESHOOTING GUIDE

Trouble	Possible Cause	Solution
Suction capacity is low or there is no aspiration	Low motor speed selected	Select high motor speed
	Check valve is blocked	Clean the valve If it is wet, rinse and dry it. If it is displaced, try to set it in the proper position.
	Filter is dirty or wet	Replace filter
	Batteries are not charged	Charge batteries
	Pipette holder is damaged	Replace pipette holder
	Batteries are defective	Replace batteries
	Batteries are incorrectly inserted	Insert correctly
	Nose cone is not fully tightened	Tighten nose cone
Pipette drips	Pipette is not securely positioned in pipette holder	Insert pipette fully
	Pipette holder is damaged	Replace pipette holder
Reduced operating time with fully charged batteries	Wrong battery type	Replace with 1000mAH NiMH rechargeable batteries

WARRANTY

The Diamond SeroLogic™ portable pipette controller is covered by warranty against defects in materials and workmanship for one year from the date of purchase from the factory.

The warranty is void if, in the opinion of Globe Scientific Inc., the product has been damaged by accident, misuse, physical, chemical or electrical abuse, or resulting from unauthorized or incorrect maintenance, service or modification by someone other than an authorized service provider.

Normal wear and tear, and routine cleaning and maintenance, are not covered under the terms of this warranty.

Warranty replacement instructions:

- Contact Globe Scientific Inc. or its authorized distributor immediately with the details of the defect, how the product is being used and how the defect affects performance.
- With preauthorization, return the product to Globe Scientific Inc. for inspection. The cost of return (transportation, insurance, government taxes and miscellaneous fees) is to be paid by the customer.
- Globe Scientific Inc. will repair or replace the product at its discretion, under the conditions of this warranty.

