

PROBLEM	POSSIBLE CAUSE	ACTION
Pipettor does not work, there is no motor sound and the Red Low battery light is on	Batteries need to be charged	Charge pipettor for 14 hours minimum.
	Charger not working or not plugged into pipettor correctly	Check charger by measuring voltage with voltmeter. A no load voltage of 6.2V±8% at the 2.5mm charger plug is acceptable for proper operation. Also, check that charger plug is fully connected to the pipettor.
	Batteries are not inserted properly	Check the batteries to insure they are properly inserted.
Unit does not pipette but there is motor sound	Filter is clogged	Replace filter.
	Peristaltic tubing link is not primed	Raise pipettor speed setting to a faster position and run 3 or 4 cycles to prime tube.
	Peristaltic tubing is kinked	Remove tubing from spindle. Roll between fingers to remove kink. Reinstall tubing.
Unit works but only holds a charge for a short period of time	Batteries need full charging	Charge batteries for 14 hours minimum.
	Batteries have come to their full life span and won't hold charge	Replace batteries.
Pipette leaks when attached to pipettor	Pipette adapter is worn out or damaged	Replace pipette adapter.
	Peristaltic tubing link is worn out, stretched or broken	Replace tubing link.
	Pipette not secured in the nosepiece	Re-adjust pipette so it fits into the nosepiece securely. (See specifications to determine if proper pipette is being used).
Pipette does not stay in the adaptor	Pipette is too small	See specifications for recommended pipette size
	The pipette adaptor is worn out	Replace adaptor

I N S T R U C T I O N S



Ergopet™ Memory Pipettor 37910 Series

PRINCIPLE OF OPERATION

The Ergopet™ Memory Pipettor is a state-of-the-art automatic pipettor capable of aspirating and dispensing a precise amount of liquid repeatedly without using the graduations of the pipette each time.

ERGONOMIC RANGE OF ADJUSTMENT

The head of the pipettor can be positioned straight ahead in line with the hand or rotated up to 90° left or right. This allows unobstructed viewing of the pipette while aspirating and dispensing, all while maintaining a more natural hand position. The nosepiece of the pipettor can also be rotated to change the angle of the pipette from vertical to 15° outwards.

SPECIFICATIONS

	LENGTH	WEIGHT
I Cat. No. F37910-0011	19.1 CM 7-1/2"	314 GM 11.1 OZ
II Cat. No. F37910-0012	29.2 CM 11-1/2"	352 GM 12.4 OZ
III Cat. No. F37910-0013	39.4 CM 15-1/2"	390 GM 13.7 OZ
IV Cat. No. F37910-0014	49.5 CM 19-1/2"	428 GM 15.1 OZ

Power (charger): 120 volt charger, output 3VDC, 200mA
 Batteries: Two standard 1.2V AA NiMH, replaceable
 Battery Operation Life: A full battery charge performs a full day's work.
 Battery Service Life: Batteries can be charged approximately 500 times and provide 2 to 4 years of service in average use. Batteries will hold approximately 90% of their charge for one week without usage.
 Charge Time: The pipettor will recharge in approximately 14 hours from total discharge and less time if partially charged.
 Pipette Size: 1-100.0ml with outside mouth diameter of 3.0 to 9.9mm
 Speed: 10ml in approximately 6 seconds.
 Programmed Pipettor Accuracy: ±3.0%

FILTER

Each Ergopet™ contains a 25mm, 0.2 micron PTFE hydrophobic filter that will prevent water from passing through it. This protects the inside of the unit from contamination if it is accidentally overfilled. If the filter becomes wet from overfilling the pipette, it must be replaced (Cat. No. H37908-0250).

HOUSING

The Ergopet™ housing is made of ABS plastic. The housing may be cleaned with a mild detergent such as Bel-Art's Aquet (Cat. No. 17094-0030). Be sure to wipe off the detergent with a moist towel. Do not immerse the entire unit in any fluid.

WARNING

This pipette must not be used or recharged in an atmosphere with danger of explosion. Observe laboratory safety precautions when pipetting hazardous material. Follow general instructions for safety regulations.



HOW TO USE THE ERGOPET™ MEMORY PIPETTOR

FIRST TIME USE

To assemble batteries into the pipettor - remove screw from the battery cover in the base of the handle. Remove battery cover and insert the two NiMH AA batteries into the unit. Before using Ergopet™ Memory Pipettor for the first time, be sure to charge the unit for a minimum of 14 hours. This ensures maximum battery life.

Note: The Ergopet™ Memory Pipettor must be fully charged before initial use or overall battery life will be reduced.

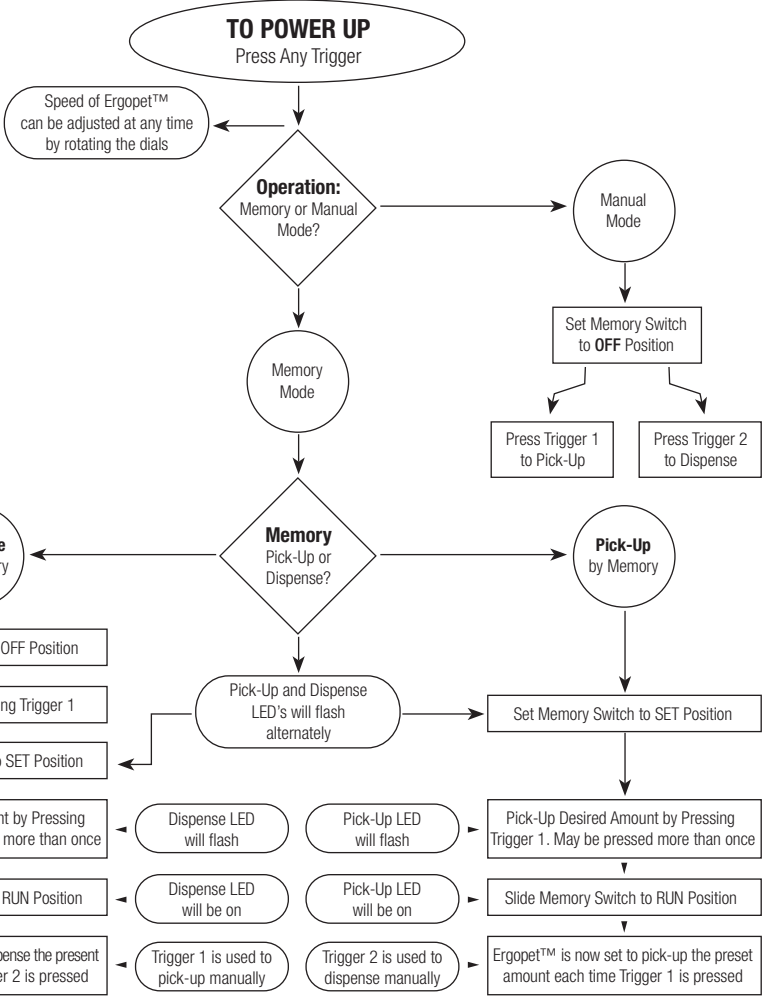
CHARGING AND RECHARGING THE BATTERIES

When the red light, located on the top of the pipettor (marked LOW) goes on or when the speed begins to slow, the batteries are low on energy and need to be charged.

1. Insert the wall charger's single plug connector into the charger jack located at the bottom of the Ergopet™ Memory Pipettor.
2. Plug wall charger into a compatible outlet and charge for a minimum of 14 hours.

OPERATION

Follow operation flow chart.



NOTES

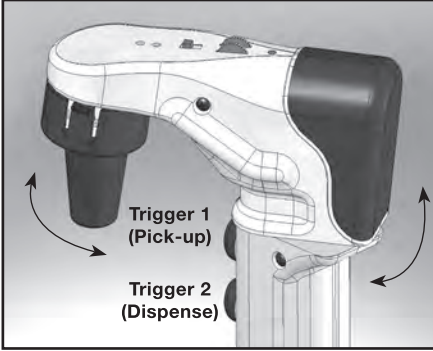
1. It is important to calibrate and operate the Ergopet™ Memory Pipettor at the same speed. Changing the speed after calibration will cause the aspirated or dispensing volume to change.
2. To avoid memory malfunction, do not rapidly change the motor direction or press pick-up and dispense buttons simultaneously.

MAINTENANCE PROPERTIES

REPLACEMENT OF BATTERIES

1. Remove screw from battery cover in base of handle.
2. Remove battery cover.
3. Remove the two NiMH AA batteries.
4. Replace with two new NiMH AA batteries, capacity of 2300mAh at the minimum (Bel-Art Products part no. 93790-8159).
5. Please note the battery polarities. Both batteries must be located with the + end facing upwards towards the pipettor head.
6. Re-insert the battery cover and screw.

Note: Once the batteries are removed from the Ergopet™ Memory Pipettor and then replaced, the two green LEDs will begin to blink if the Memory Slide Switch is located at SET or RUN. This is just a sign that all previous memory has been erased. Once a new procedure is begun, the lights will act normally again.



REPLACEMENT OF TUBING LINK

Replace the peristaltic tubing link if tubing is worn or broken.

1. Remove the blue pump cover screw and the pump cover.
2. Pull the tube up and then over the rotor.
3. Now gently but firmly pull up on the two white plastic connectors to remove the tubing.
4. To secure the new tubing link into the unit, reverse the above steps - Push the two white connectors down into the unit. Pull the tube up and over the rotor.
5. Screw the blue pump cover back onto the unit.



REPLACING THE FILTER

Replace the filter every two to four weeks depending on usage. The filter must be replaced when it gets wet (Cat. No. H37908-0250). If suction is noticeably decreased, the filter may be clogged and should be replaced. The filter is located within the blue swiveling nosepiece.

1. Remove the blue nosepiece by gently pushing down and outwards on the three tabs.
2. Gently pull on the silicone pipette adaptor to remove it and the replaceable filter from the pipettor.
3. Replace the filter by pressing the shorter luer end of the filter into the silicone pipette adaptor.
4. Reassemble the filter and pipette adaptor to the pipettor and reinstall the nosepiece.

