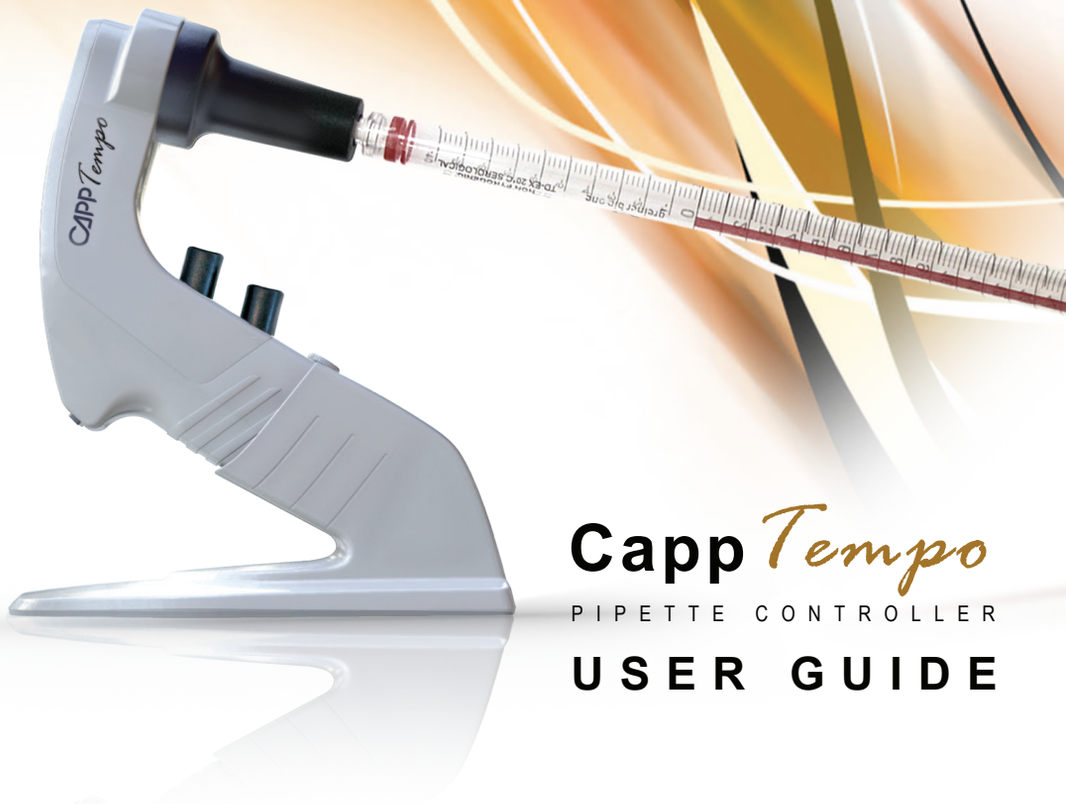
CAPP
DENMARK

CAPP
DENMARK



Capp *Tempo*

PIPETTE CONTROLLER

USER GUIDE

Capp ApS
Landbrugsvej 10
DK-5260 Odense
Denmark

Tel. (+45) 6613 6140
Fax. (+45) 6613 2770

Mail: info@capp.dk
Web: www.capp.dk

USER GUIDE CAPP TEMPO ™

Instructions for Use

TABLE OF CONTENTS

1. Prologue

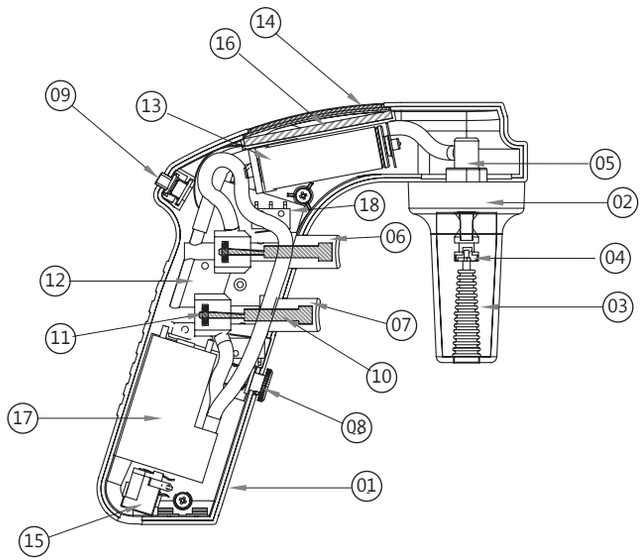
You have made a very wise decision in investing in the CAPP Tempo™ advanced motorized pipette controller. Not only does CAPP Tempo™ provide easy and efficient pipetting with maximum comfort, it also provides the unique Electronic Braking System (EBS™). Previously, customers had to utilize “stop-and-go” methods in order to aspirate the correct volume of sample. As a result, pipetting with typical pipette controllers was time-consuming and inefficient. Now customers are able to adjust the speed of aspiration or dispensation in real time to enable them to pipette the correct amount faster and easier than ever before.

2. Before you Start

Verify that your Capp Tempo™ Kit includes following.

- Pipette Controller
- 5V Charger
- Filter - 0.2 µm
- Wall Holder
- Recharging Stand
- User Guide

3. General Description



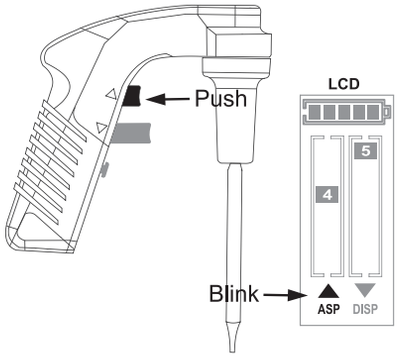
01: Handle (LS)
02: Nose cone
03: Silicon Pipette Holder
04: Pipette Holder Valve
05: Outlet Connector
06: Aspiration Trigger
07: Dispensing Trigger
08: EBS™ Control switch
09: Speed Selection Switch
10: Piston
11: O Ring
12: Knob Valve
13: Battery
14: Battery Cover
15: Battery Charging Point
16: LCD Display
17: Micro Pump
18: Circuit Board

4. Safety Instruction

To prevent fire, electronic shock or any injury to persons, following must be observed.

- The unit and its charger must not be submerged in any liquid.
- The user should not operate the charger that has damaged cord.
- The user must only use battery and chargers that are compatible with Capp Tempo™. (Either purchased from manufacturer or any authorised distributor.)
- Do not expose the battery into excessive heat.
- The user should not handle the charger plug with moist hands.
- The user must take caution while inserting glass pipette.

5.1.1 To Aspirate

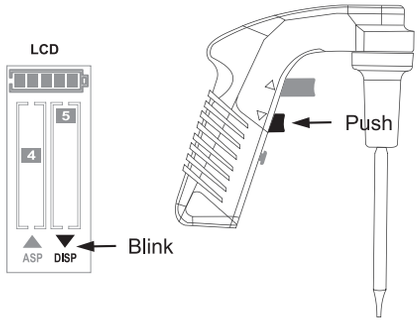


1. Select the desired aspiration speed by pressing (A) on "Speed selection switch (09)".
2. Cautiously insert the pipette into Nosecone (02) and Silicon Pipette Holder (03).
3. Immerse the pipette into liquid vessel.
4. Press Aspiration trigger (06) and start observing the volume on the pipette. During aspiration operation, you will find blinking of Arrow and ASP text on LCD screen to ensure that you are working on Aspiration mode.
5. Release the Aspiration trigger (06) when desired volume is being aspirated.

User is facilitated to decrease the Aspiration speed electronically to it's lowest level [1] during aspiration operation by pressing EBS™ control switch (08) for precise stop at desired volume. Check 5.1.9 EBS™ (Electronic Brake System) for more detail.

User is facilitated to adjust the aspiration speed mechanically by adjusting the finger pressure on Aspiration trigger.

5.1.2 To Dispense



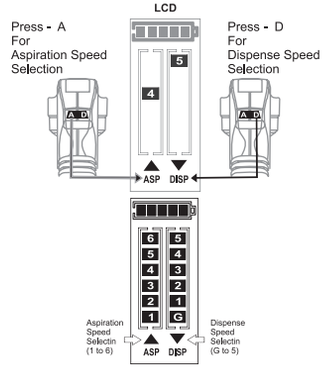
1. Select the desired dispense speed by pressing (D) on speed selection switch (09).
2. Insert the pipette into targeted vessel.
3. Press Dispensing trigger (07). During dispensing operation, you will find blinking of Arrow and DISP text on LCD screen to ensure that you are working in Dispensing mode.
4. Release the Dispensing trigger(07) when desired volume is dispensed.

User is able to decrease the Dispensing speed electronically to it's lowest level [G] during dispensing operation by pressing EBS™ control switch (08) for precise stop at desired volume. Check 5.1.9 EBS™ (Electronic Brake System) for more detail.

User is facilitated to adjust the Dispensing speed mechanically by adjusting the finger pressure on Dispensing trigger.

5.1.3 Electronic speed Adjustment

The Speed selection button switch (09) on the Capp Tempo™ allows you to separately set the Aspiration speed by pressing "A" and Dispensing speed by pressing "D" to your desired pace. The selection will be displayed on the LCD screen.
User can select the aspiration speed level range from 1 to 6 which will be displayed on the left side of the LCD screen where "1" is the lowest speed and "6" is the highest speed.
User can select the dispensing speed level range from G to 5 which will be displayed on the right side of the LCD screen where "G" is the lowest speed (Dispensing via Gravity) and "5" is the highest speed.



In Gravity speed selection, motor will stop and dispensing will be done by gravitational force only.

The user selected speed will be stored in the internal memory. So, In case of standby situation, when user will start working again, they can start with the same formerly selected speed.

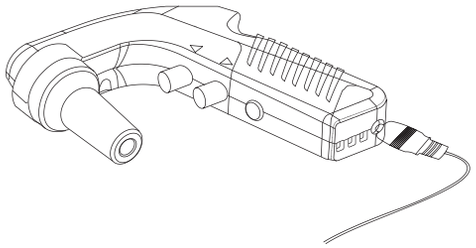
It is recommended to choose lower speed for pipettes of 5 ml or less.

5.1.4 Mechanical Speed Adjustment

The Aspiration and Dispensing speed can be controlled manually by controlling the finger pressure on trigger buttons, deeper the button is pressed, faster the liquid will aspirate or dispense.

5.1.5 Recharging the Battery

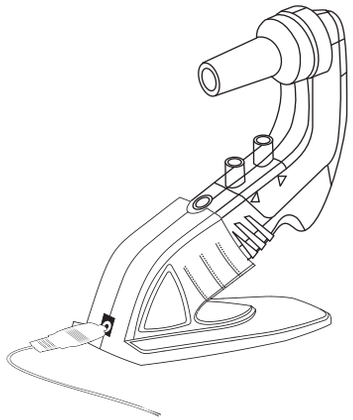
Capp Tempo™ requires charging when LCD display shows single battery on the screen. The original charger supplier along with the pipette controller kit should be used for charging to avoid any kind of overcharging, short circuit & damaging of batteries.
Pipette controller can be charged with the help of Recharging Stand as well which is supplied along with the kit.



Steps for charging through wall charger:

1. Plug the charger jack into the Battery charging point (15).
2. Plug the charger into a suitable wall socket. The moving bars on the LCD will ensure charging.
3. Allow unit to charge for approx 4 hours (due to it's quick charging characteristics) for getting fully charged.
4. Once the battery is fully charged, the bars will stop moving.

To maintain the maximum battery capacity, it is advisable to charge the battery when there is only 1 bar on LCD screen.



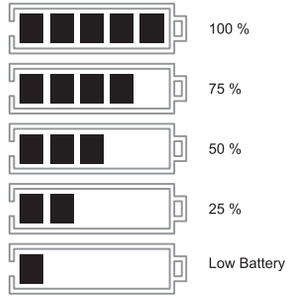
Steps for charging through recharging stand:

1. Plug the charging stand into a suitable wall socket.
2. Place the pipette controller into a stand socket as shown in figure. Charging will automatically start and moving bars on LCD indicate charging.
3. Allow unit to charge for approx 4 hours for a full charged.
4. Once the instrument is fully charged, the bars will stop moving.

5.1.6 Battery Condition

Display on the top half of the Illuminated LCD screen is the battery life indicator. This indicates the level of charge – more bars indicate more charge while fewer bars mean less charge.
At the time of low battery single bar will be displayed on the screen and the instrument will stop working after few minutes.

A fully charged Lithium battery allows 8 hours of continuous use.



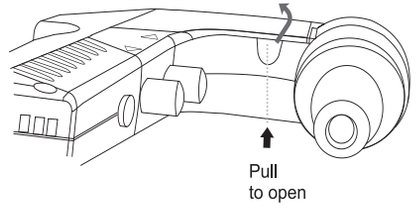
5.1.7 Replacing the Battery

The Lithium battery supplied with the Capp Tempo™ is designed to last for several years. The Lithium battery only needs to be replaced when it is unable to maintain a charge or the battery becomes damaged.

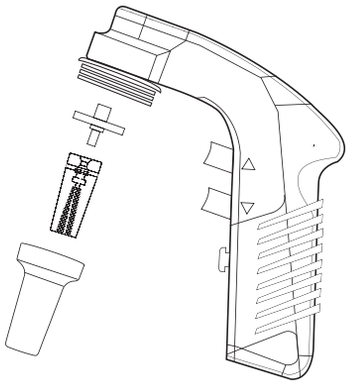
If it is necessary to replace the Lithium battery it is important to use the appropriate battery from Capp or an authorized distributor.

Steps for changing the battery:

1. Hold the pipette controller in an upward direction as shown in the fig. and remove the battery cover (14).
2. Remove the old battery(13).
3. Check the positive and negative sign marked on the battery slot area and insert the battery in a correct direction.
4. Close the battery cover.
5. Charge the Battery.



5.1.8 Replacing the Filter and cleaning of Silicon Pipette Holder

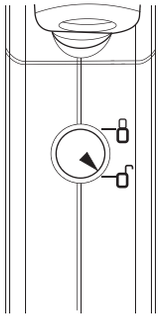


1. Unscrew the nosecone (02).
2. Remove the membrane filter and Silicon pipette holder (03).
3. Rinse the silicon pipette holder (03) having pipette holder valve(04) using a wash bottle.
4. Blow out the liquid and let it dry completely.
5. Attach the new membrane filter having thicker side assembled to the Outlet connector(05).
6. Reassemble the instrument and perform the leak test.

5.1.9 EBS™ (Electronic Brake System)

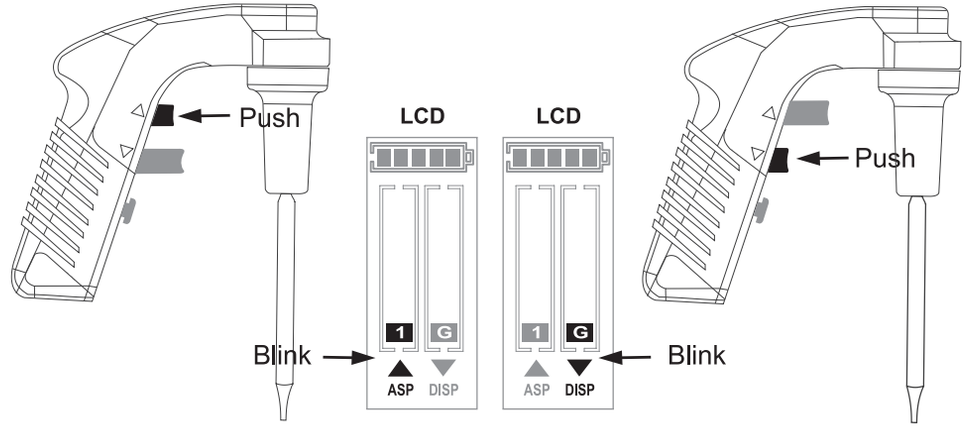
The EBS™ is a patented aspiration and dispense system that is unique to Capp Tempo™. EBS™ allows users to pipette at maximum speed and instantaneously slow down at the last minute for precise volume control.

To use this feature, set the EBS™ control switch(08) to “unlock” position.



1. Start aspiration / dispensing at your desired speed level.
2. Press the EBS™ control switch (08) in between the operation. It will immediately, reduce the aspiration / dispensing speed to It’s lowest level. So, you can precisely reach to your desired volume.
3. To start working with your formerly selected speed, press EBS™ control switch(08) once again.

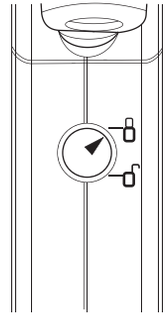
During aspiration operation, there is a blinking of Arrow, [1] and ASP text on LCD screen & During dispensing operation, there is a blinking of Arrow, [G] and DISP text on LCD screen to indicate that you have pressed the brakes.



Aspiration during EBS™ Dispense during EBS™

You can readjust the speed by pressing “A” / “D” on speed selection switch(09).

If user does not want to use this feature for a long time, simply place the EBS™ Control Switch(08) to the locked position.

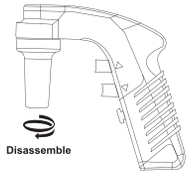


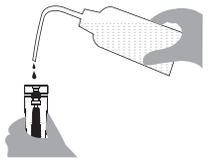
5.1.10 Stand By Mode

There is no on / off switch in this instrument. On the idle condition, instrument will automatically switch off after 20 seconds. The instrument can be activated again by pressing any of the buttons.

6. General Maintenance

Like most pipette controllers, Capp Tempo™ can be cleaned with any laboratory disinfectant (e.g. ethanol). However, it must not be submerged in any liquid as this would damage the electronic components of the pipette.

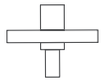




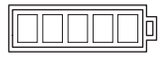
1. To prepare the unit for cleaning, turn the nosecone(02) in a counter clockwise direction with the nosecone pointing upwards.
2. Remove the Silicon pipette holder.
3. Rinse the silicon pipette holder(03) having pipette holder valve(04) using a wash bottle.
4. Blow out the liquid and let it dry completely.
5. Autoclave the nosecone(02) at 121o C. You may Autoclave the nosecone along with the silicon pipette holder.
6. Reassemble the instrument in reverse order and carry out the leak test.

7. Accessories

Recharging Stand

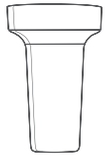


Filters : 0.2 µm



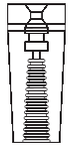
Battery

Wall Mounting Stand



Nosecone

Battery Charger



Silicon Pipette Holder

8. Warranty

Capp Tempo™ provides a warranty of the instrument for a period of 1 year from the date of purchase under the terms and condition of this warranty.

The parameters of this warranty cover material and manufacturing defects. The manufacturer's warranty does not cover damage resulting from improper handling, negligence, accidental damage, trauma or normal wear and tear. Capp is not liable for any kind of damage resulting from usage of non standard accessories which are not purchased from original manufacturer or any authorised distributors.

9. Technical Specifications

Pipettes	0.1-100ml plastic/ glass pipette
Aspiration Speed Selection	1-6
Dispense Speed Selection	G-5
EBS™ (Electronic Brake System)	Lowest Asp. & Disp. speed
Battery	1400 mAh/3.7 V Li-ion
Charger	Input : ~100V-240V 50/60Hz Output : DC 5.0V, 1.0A US/UK/EU/AU pin available
Display	Segmented LCD
Filter	Hydrophobic 0.2µm
Silicon pipette holder	Autoclave at 121℃
Nosecone	Autoclave at 121℃
Storage Temperature	-20℃ to+50℃