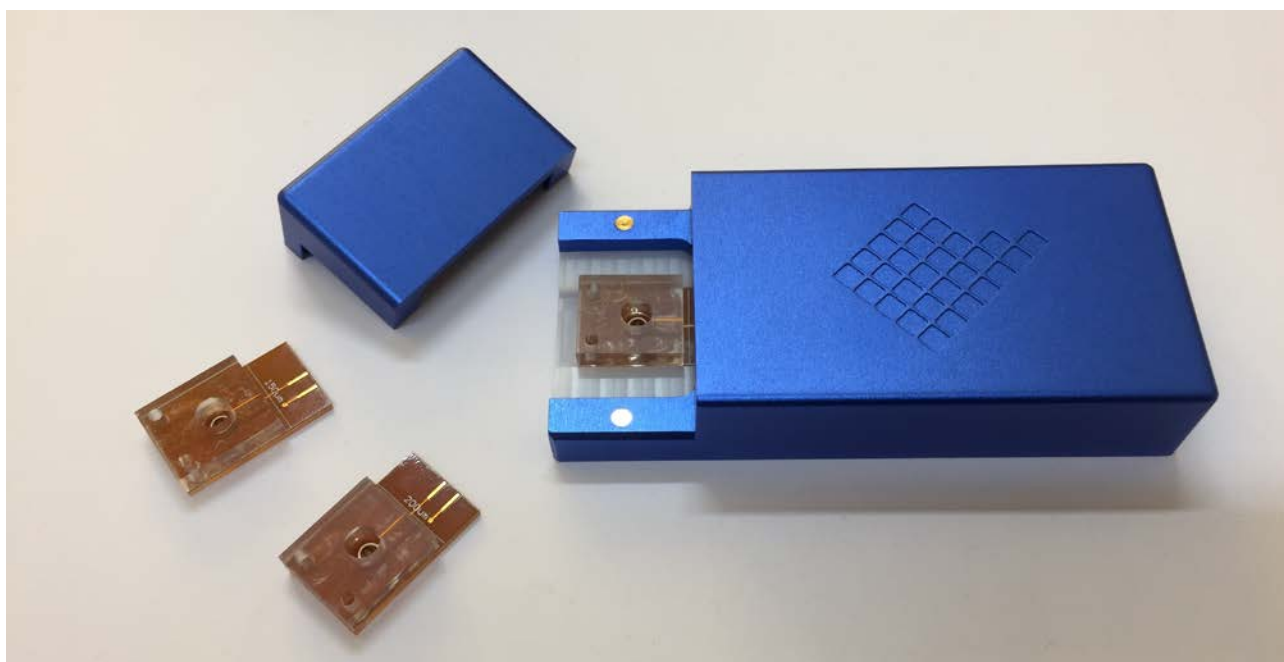


BLM chip: how to make lipid bilayer experiments



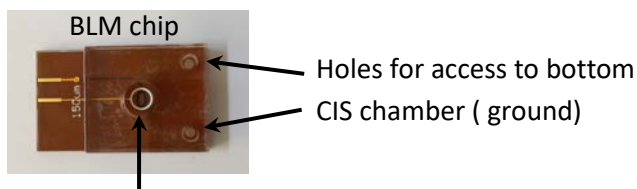
This Quick Guide shows how to perform lipid bilayer experiments using the BLM chip and the Nanopore Reader.

The BLM chip is available with 3 hole sizes. The table below indicates the typical BLM capacitance.

100 μm : 20 – 40 pF

150 μm : 35 – 90 pF

200 μm : 45 – 140 pF



Top TRANS chamber (applied voltage)

Step by step experiment:

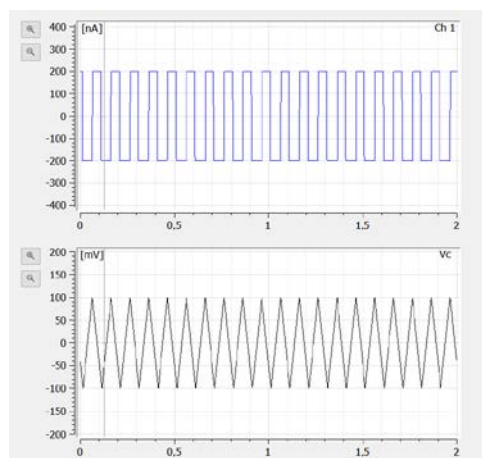
Step 1: chlorinate for 10 minutes the Ag electrodes on the BLM chip by adding 60 μl of bleach on the bottom chamber and 60 μl on the top chamber. At the end, rinse with double-distilled water.

Step 2: slowly fill the BLM chip with Buffer solution (i.e. KCl 1M) by adding 60 μl on the bottom chamber and 60 μl on the top chamber. Insert the chip into the reader.

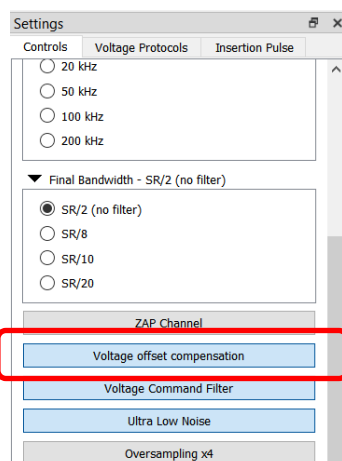
At least the first usages of the BLM chip it is suggested to fill the chambers before inserting the BLM chip into the reader to avoid any possible buffer leakage when the BLM chip is into the device.

Step 3: apply the triangular wave input signal (protocol 1) and check the proper filling of the hole.

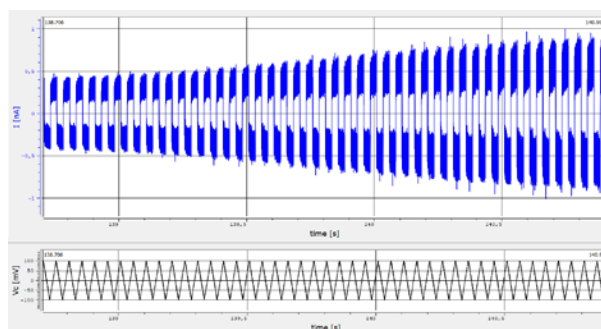
A full scale square wave (due to amplifier saturation) should be seen.



Step 4: compensate electrode offsets clicking on the “Voltage offset compensation” button.



Step 5: start painting lipids to form a BLM. An increasing square wave current signal should be seen.



Step 6: apply the desired input signal (see the different voltage protocols in the EDR 3 Manual) and add the protein.

For a more accurate guide on BLM experiments and tips, please have a look at the BLM kit Quick guide in the “BLM kit → How to” section of our [website](#)