

QPatch Compact Assay Setup Guide

QPatch Compact protocols

QPatch Compact utilizes protocols for whole-cell formation, voltage- and current-clamp. The system is being delivered with a selection of standard protocols, which can be used as provided or as templates for your own modified protocols.

QPatch Compact Analyzer software

Besides analyzing data from the QPatch Compact (QPC), the Sophion Analyzer software is also used for editing and creating new protocols.



Editing an existing whole-cell protocol

- 1. Select whole-cell protocol**

Open Sophion Analyzer. Click on "Assay" tab. Click on "Whole-cell Protocols". From the list of whole-cell protocols, double-click to select the protocol you wish to use as a template.
- 2. Copy the protocol**

Click on "Copy..." (at the bottom of the window). Click in the "Whole-cell protocol" field (in the top of the window) to give the protocol a name.

Whole-cell protocol: Timed protocol

Description:
- 3. Adjust the parameters (optional)**

If needed, change the parameters in the protocol to fit the cells and ion channels you are targeting.
- 4. Save the changes**

Click on "Apply" to save all your changes. The whole-cell protocol is now available on the QPC.

Creating a new whole-cell protocol

- 1. Start new whole-cell protocol**

Open Sophion Analyzer. Click on "Assay" tab. Click on "Whole-cell Protocols".
- 2. Creating the protocol**

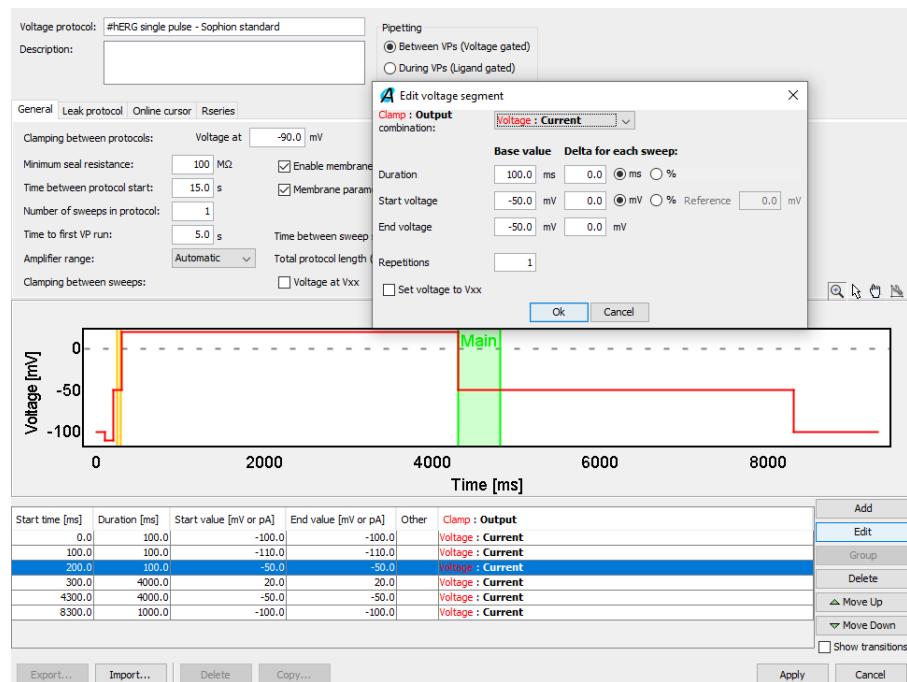
Click on "New" (at the bottom of the window). Click in the "Whole-cell protocol" field (in the top of the window) to give the protocol a name.
- 3. Adjust the parameters**

Set the applicable parameters in the protocol to fit the cells and ion channel you are targeting.
- 4. Save the changes**

Click on "Apply" to save all your changes. The whole-cell protocol is now available on the QPC.

Editing an existing voltage protocol

- 1. Select voltage protocol** Open Sophion Analyzer. Click on "Assay" tab. Click on "Voltage Protocols". From the list of voltage protocols, double-click to select the protocol you wish to use as a template.
- 2. Copy the protocol** Click on "Copy..." (at the bottom of the window). Click in the "Voltage protocol" field (in the top of the window) to give the protocol a name.
- 3. Adjust the parameters** Change the parameters in the protocol to fit the ion channel you are targeting.



Start time [ms]	Duration [ms]	Start value [mV or pA]	End value [mV or pA]	Other	Clamp
0.0	100.0	-100.0	-100.0		Output
100.0	100.0	-110.0	-110.0		Current
200.0	100.0	-50.0	-50.0		Current
300.0	4000.0	20.0	20.0		Current
4300.0	4000.0	-50.0	-50.0		Current
8300.0	1000.0	-100.0	-100.0		Current

- 4. Save the changes** Click on "Apply" to save all your changes. The voltage protocol is available now available on the QPC.

Creating a new voltage protocol

- 1. Start new voltage protocol** Open Sophion Analyzer. Click on "Assay" tab. Click on "Voltage Protocols".
- 2. Creating the protocol** Click on "New" (at the bottom of the window). Click in the "Voltage protocol" field (in the top of the window) to give the protocol a name.
- 3. Adjust the parameters** Set the applicable parameters in the protocol to fit the cells and ion channel you are targeting.
- 4. Save the changes** Click on "Apply" to save all your changes. The voltage protocol is now available on the QPC.