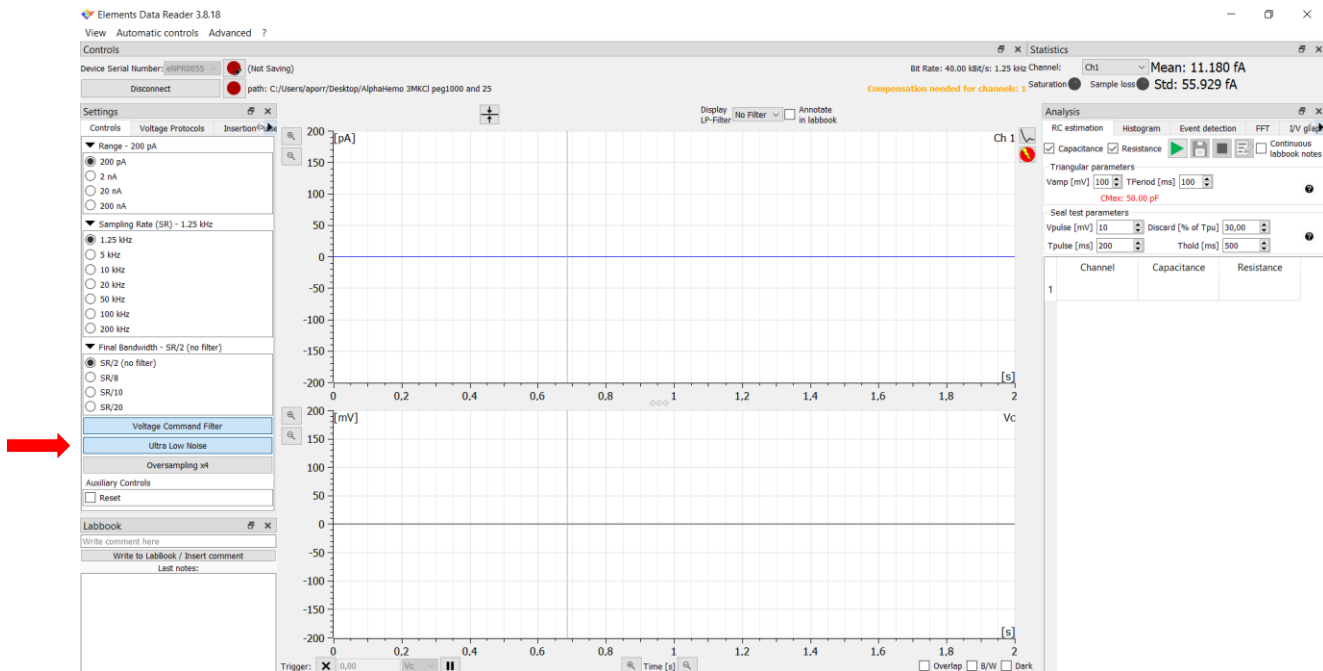


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# **Details of the Low Noise and Ultra Low Noise configurations and how to set in EDR3 software**



The two modalities can be set in EDR3 software by clicking the dedicated button located in the setting widget and pointed by the red arrow in the picture below.



Ultra Low Noise

When blue coloured the Ultra Low Noise mode is enabled

Ultra Low Noise

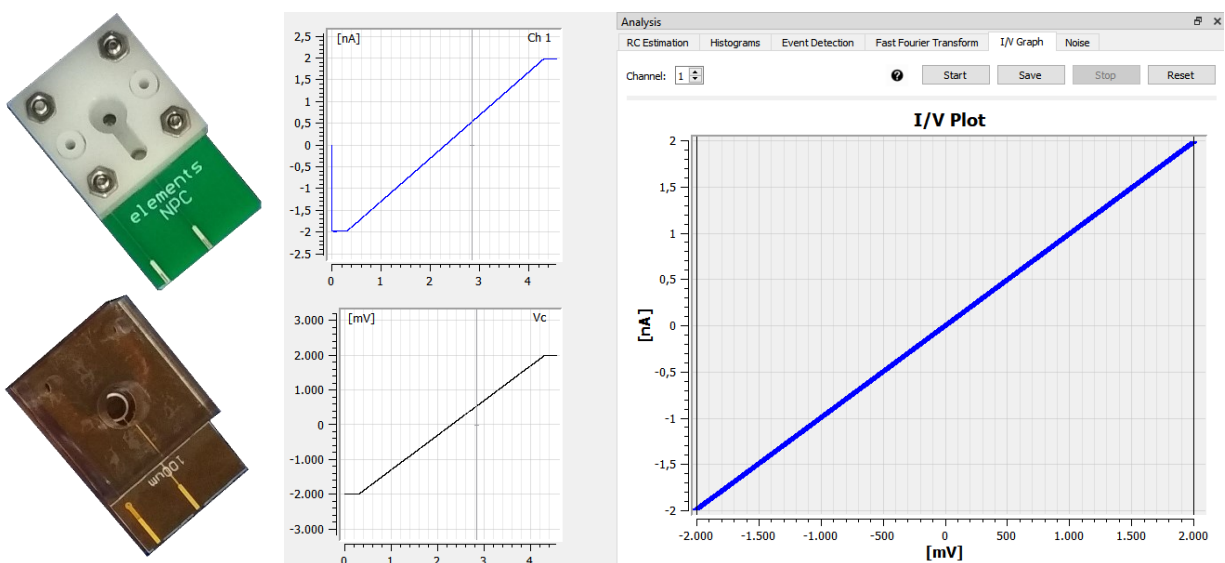
When gray coloured the Ultra Low Noise mode is disabled



## Low Noise modality

Ultra Low Noise

This modality allows the recording of low noise current traces while applying voltage stimuli in the range  $\pm 2000$  mV, as shown in the oscilloscope snapshot below. When using this modality, the corresponding flowcells must be used (please note the distance between the two gold pads in the two flowcells shown below).



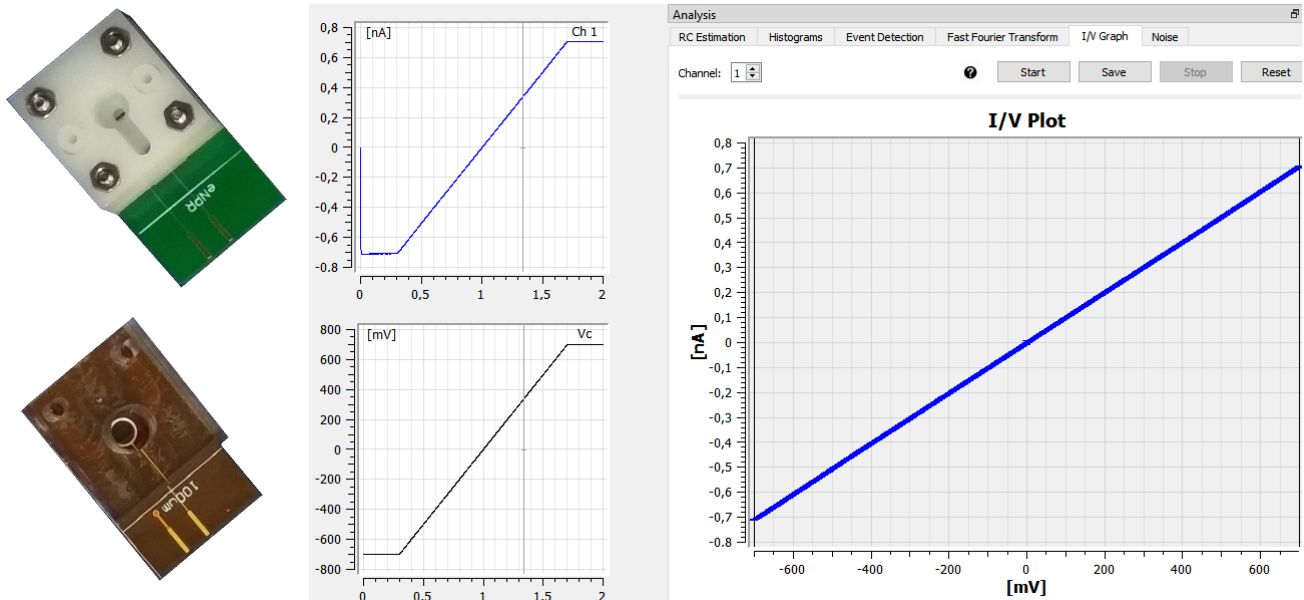
Example noise:  $1\text{G}\Omega$  @ 20ksps  $\rightarrow$  noise = 720fA RMS



## Ultra Low Noise modality

Ultra Low Noise

This modality allows for the recording of current traces with 30% less noise (RMS). The voltage stimulus range is limited to  $\pm 700$  mV. When using this modality the following flow cells must be used (please note that the two gold pads on the PCB are closer compared to the previous flowcells).



Example noise:  $1\text{G}\Omega$  @20ksps  $\square$  noise = 480fA RMS