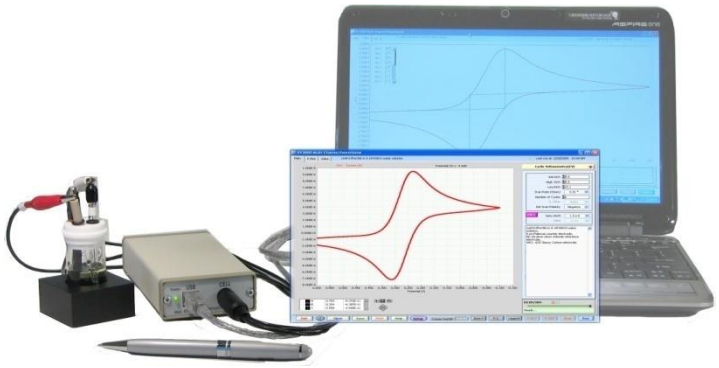
DY2116B Mini Potentiostat/Galvanostat



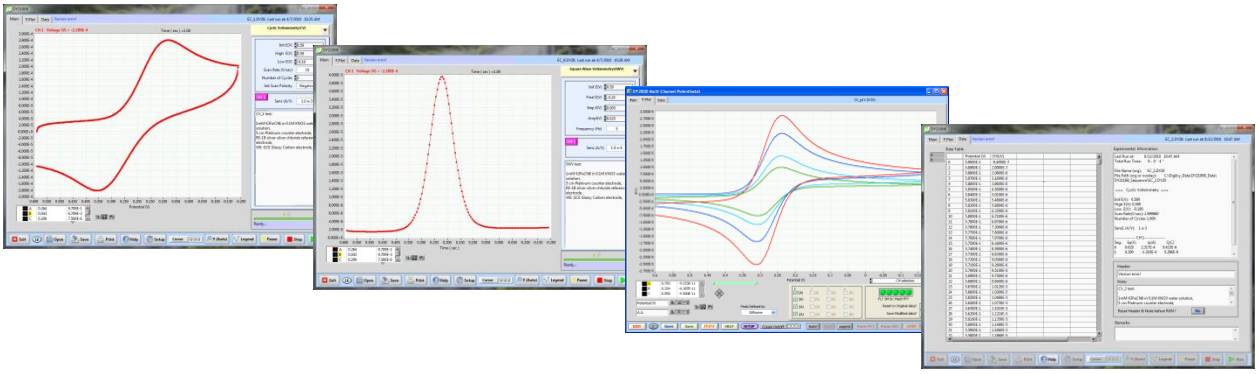
A portable, high-performance, and very low-cost scientific instrument for picoampere to mA current measurements and high input impedance voltage recording

Hardware

- Electrode Configurations: 3 (CE, RE, WE) with cell On/Off control
- Current Range: ±20nA to ±2mA (full scale) in 6 steps
- Current Resolution: 0.002% of full scale, with highest resolution at 0.76 pA
- Input Impedance of Electrometer: > 10^{12} Ω
- Potential Range: ±2.0 V (16-bit DAC)
- Potential Bandwidth: > 100 kHz
- Min. Potential Resolution: 76 µV
- Compliance Voltage: > ±2.2 V
- I/E Low Pass Filter: 4 ranges (Auto or Manual), depend on sensitivity setting
- Input Bias Current: < 30 pA@ 25 °C
- ADC Sampling: 16-bit (60000 data max).
- Dimensions & Weight: 7 x 14 x 3 cm, 260g
- Power Requirements: USB powered

Software

- **Easy-to-use** user interface for experimental setup, graphic display, data analysis and file management
- Data Processing (Filter, Smoothing, Remove DC Offset, Math, FFT, etc.)
- Automatic peak potential, current reporting and charge calculation
- Plots overlay and text data exportation
- Easy cursors define and measurement
- Real time display with Pause Plot and Pause Exp. functions
- USB connection, user provide PC running *Windows 7/ Vista /XP*



DY2116B Mini Potentiostat/Galvanostat Specifications

Hardware

Max. Current Range:	±2.0 mA (±20.0 nA to ±2.0 mA in 6 ranges)
Current Resolution:	0.0019 % of current range, 0.76 pA for 20 nA range
Max. Controlling Voltage:	±2.0 V
Max. Compliance Voltage:	±2.2V
Input Bias Current @ 25 °C:	< 20 pA
ADC Converter:	16-bit
DAC Converter:	16-bit
System Bandwidth:	> 100 kHz
Min. Time Base:	10 µsec
Max. Data Points per CH:	60000
Computer Interface:	USB with PCs running *Windows 7/ Vista /XP*
Dimensions (W x D x H) & Weight:	7 x 14 x 3 cm, 250g
Power Requirements:	USB powered

Software Techniques

1) Amperometric i-t curve (**iT**)
   Sampling Time (sec) = [1e-5 to 100]
2) Cyclic Voltammetry (**CV**)
   Scan Rate (V/sec) = [1e-5 to 100]
3) Linear Sweep Voltammetry (**LSV**)
   Scan Rate (V/sec) = [1e-5 to 100]
4) Open circuit potential vs. time (**OCP**)
   Sampling Time (sec) = [1e-5 to 100]
5) Differential Pulse Voltammetry (**DPV**)
   Step E (V) = [0.001 to 0.1], Amplitude (V) = [0.001 to 0.5], Pulse Period (sec) = [0.02 to 100]
6) Normal Pulse Voltammetry (**NPV**)
   Step E (V) = [0.001 to 0.5], Pulse Period (sec) = [0.02 to 100]
7) Multi-Step Potential (**MSP**)
   Sampling Time (sec) = [1e-5 to 20], Step E (V) = [-2.0, +2.0], Step Width (sec) = [0.001 to 200]
8) Square Wave Voltammetry (**SWV**)
   Step E (V) = [0.001 to 0.1], Frequency (Hz) = [0.01 to 50]
9) Chronoamperometry (**CA**)
   Sampl. Time (sec)=[1e-5, 10] , Number of Steps=[2, 1000], Pulse Width (sec)=[0.001, 1000]
10) Potentiometric V-t (**V-t**)
    Sampling Time (sec) = [1e-5 to 100], Stop at E Limit, Discharge after Run
11) Chronopotentiometry (**CP**)
    Step Current(A)= [1e-9,2e-3], Step Time1 (sec)=[2e-2,1000], Sampl. Time (sec)=[1e-5,10]
12) Chronopotentiometry with Current Ramp (**CPCR**)
    Max. Current (A)=[±2e-3 or ±2e-5], Scan Rate (A/sec) = [1e-2, 1e-8] or [1e-4, 1e-9]
13) Multi-Step Current (**MSC**)
    Sampling Time (sec) = [1e-5 to 20], Step i (A) = [-2e-3, +2e-3], Step Width (sec) = [0.001 to 200]