



DY2200 Series Mini Potentiostat/Galvanostat



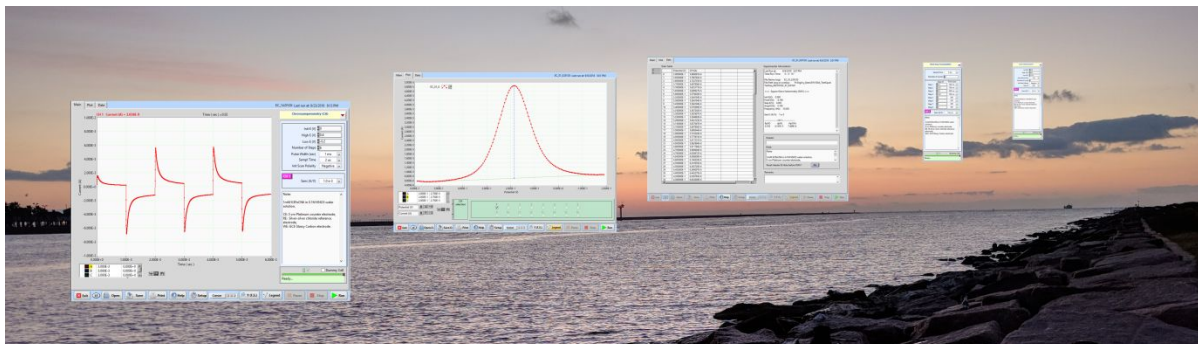
A portable, single channel, high-performance, and very low-cost scientific instrument for picoampere to mA current measurements and high input impedance voltage recording

Hardware

- Electrode Configurations: 3 (CE, RE, WE) with cell On/Off control
- Current Range (Potentiostat): ± 100.0 nA to ± 10.0 mA (full scale) in 6 steps
- Current Range (Galvanostat): ± 1.0 nA to ± 10.0 mA
- Max. CV Scan Rate: 100V/sec
- Min. Sampling Time: 2 μ sec
- Current Resolution: 0.002% of full scale, with highest resolution at 3 pA
- Input Impedance of Electrometer: $> 10^{12} \Omega$
- Potential Range: ± 4.0 V (16-bit DAC)
- Potential Bandwidth: > 100 kHz
- Compliance Voltage: $\geq \pm 10$ V
- I/E Low Pass Filter: 6 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, Tafel Plot, etc.)
- Automatic peak potential, current reporting and charge calculation
- Run style: *Single, Auto Repeat or Auto Sequence*
- Plots overlay and text data export
- Easily add and measure with plot cursors
- Real time display with Pause and Stop Experiment functions
- USB connection, requires a user-provided PC running Windows.



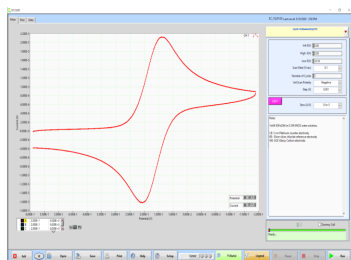
DY2200 Series Models:

Function \ Model Number	DY2211	DY2213	DY2216
Amperometric i-t (iT)	✓	✓	✓
Cyclic Voltammetry (CV)	✓	✓	✓
Linear Sweep Voltammetry (LSV)	✓	✓	✓
Open Circuit Potential vs. Tim (OCP)	✓	✓	✓
Differential Pulse Voltammetry (DPV)		✓	✓
Normal Pulse Voltammetry (NPV)		✓	✓
Multi-Step Potential (MSP)		✓	✓
Square Wave Voltammetry (SWV)		✓	✓
Chronoamperometry (CA)		✓	✓
Potentiometric V-t (V-t)			✓
Chronopotentiometry (CP)			✓
Chronopotentiometry with Current Ramp (CPCR)			✓
Multi-Step Current (MSC)			✓
US Price (USD): Please contact info@digivy.com			

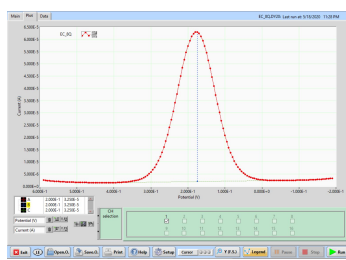
Software Techniques (Potentiostat/Galvanostat)

- 1) Amperometric i-t curve (iT)**
Sampling Time (sec) = [2e-6 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) = [2e-6 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) = [0.001 to 100]
- 6) Normal Pulse Voltammetry (NPV)**
Step E (V) = [0.001 to 0.5], Pulse Period (sec) = [0.001 to 100]
- 7) Multi-Step Potential (MSP)**
Sampling Time (sec) = [2e-6 to 20], Step E (V) = [-4.0, +4.0], 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 1000]
- 9) Chronoamperometry (CA)**
Sample Time (sec) = [2e-6, 20], Number of Steps = [2, 1000], Pulse Width (sec)=[0.001, 1000]
- 10) Potentiometric V-t (V-t)**
Current (A) = [1e-9, 0.01], Sampling Time (sec) = [2e-6 to 100]
- 11) Chronopotentiometry (CP)**
Step Current (A) = [1e-9, 0.01], Step Time (sec) = [1e-3, 10000], Sample Time (sec) = [2e-6, 100]
- 12) Chronopotentiometry with Current Ramp (CPCR)**
Current (A) = [1e-9, 0.01], Scan Rate (A/sec) = [2e-9, 1.0]
- 13) Multi-Step Current (MSC)**
Sampling Time (sec) = [2e-6 to 20], Step i (A) = [-0.01, +0.01], Step Width (sec) = [0.001 to 200]

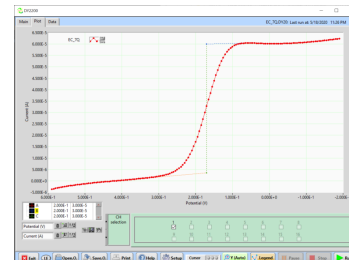
Sample Data:



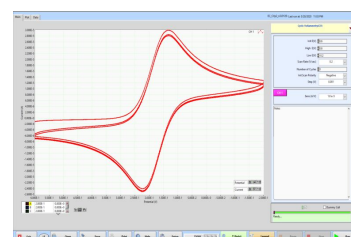
(1) CV scan (WE: 3mm glassy carbon)



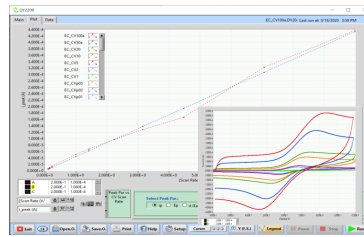
(2) DPV data



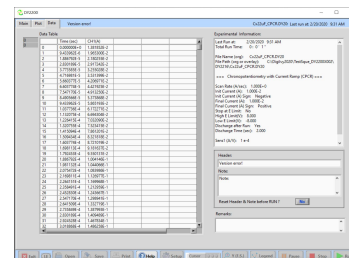
(3) NPV data



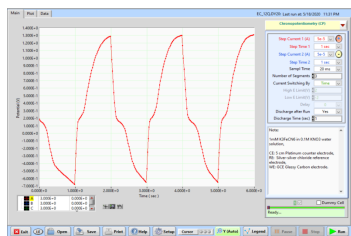
(4) Multi-Cyc CV scan (WE: 2mm Pt)



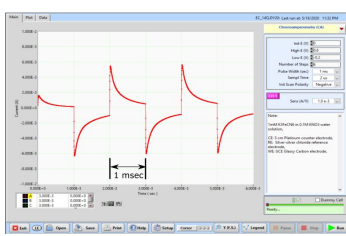
(5) Overlay CVs with variable scan rate and plot Peak Current vs. Scan Rate



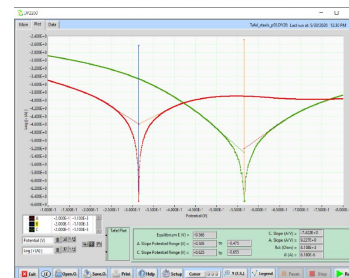
(6) Raw data and calculated parameters



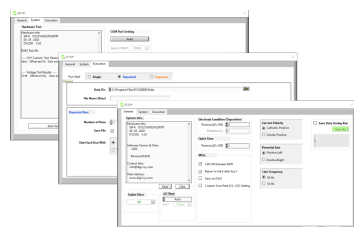
(7) Chronopotentiometry (CP)



(8) Chronoamperometry (CA)



(9) Tafel Plot



(10) Very easy to use, with many flexible configurations