DY2300 Series Potentiostat/Bipotentiostat

- ***Portable***
- ***High-performance***
- ***Low-cost***
- ***Easy to use***
- ***RDE (RRDE) control***

Hardware

Max. Current Range:	±100mA* (±10nA to ±100mA in 8 steps)
Current Resolution:	0.002% of full scale, with highest resolution of 0.3pA
Potential Range:	±4.000 V
Bias Potential Range:	±4.000 V (for WE2)
Compliance Voltage:	> ±10 V
Input Impedance of electrometer:	> 10^{12} Ω
Potential Bandwidth:	> 30 kHz
I/E Low Pass Filter:	6 ranges (Auto or Manual), depending on sensitivity setting
Input Bias Current:	< 20 pA @ 25 ^{o}C
ADC Sampling Rate:	10kHz-0.1Hz, 0.002% resolution, 15000 data / CH
Cell Control:	Purge, Stir
RDE Rotation Control:	0-10 V
Electrode Configurations:	CE, RE, WE (1 CH), or CE, RE, WE1, WE2 (2 CH)
Dimensions & Weight:	14.5 x 24 x 4.5 cm, 1 kg
Power Requirements:	90-240 VAC, 10W

* Total output current

Software

- **Easy-to-use** user interface for experimental setup, graphic display, data analysis and output file management
- Data Processing (Filter, Smoothing, Remove DC Offset, Math, Plot Segments, FFT, Auto Peak Shape Definition, Peak Par. vs. Scan Rate Plot, Levich Plot , etc.)
- USB connection, requires user-provided PC running *Windows 8/7/ XP*, and a screen resolution of 1024x760 or higher

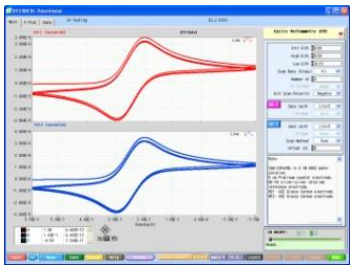
Experimental techniques

(1)	Amperometric i-t curve (**iT**):	*Sampling Rate (Hz) = [0.01 to 10K]*
(2)	Cyclic Voltammetry (**CV**):	*Scan Rate (V/sec) = [1e-5 to 10]*
(3)	Linear Sweep Voltammetry (**LSV**):	*Scan Rate (V/sec) = [1e-5 to 10]*
(4)	Open circuit potential vs. time (**OCP**):	*Sampling Time (sec) = [0.0001 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**):	*Step E (V) = [-4.0, +4.0], Step Width (sec) = [0.005 to 200]*
(8)	Square Wave Voltammetry (**SWV**):	*Step E (V) = [0.001 to 0.1], Frequency (Hz) = [0.01 to 50]*
(9)	Chronoamperometry (**CA**):	*Pulse Width (sec) = [0.001 to 1000], Sampling Time (sec) = [0.00001 to 10]*
(10)	Anodic (Cathodic) Stripping Voltammetry	
(11)	Tafel Plot	
(12)	Run style:	*Single, Auto Repeat or Auto Sequence*

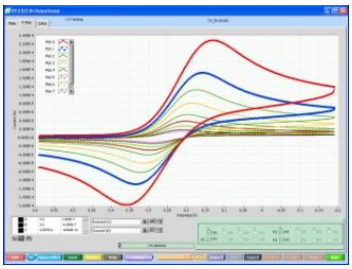
DY2300 Series Models

Function \ Model Number	DY2311	DY2321	DY2312	DY2322
Input Channel No.	1	2	1	2
Electrode Configurations	CE, RE, WE	CE, RE, WE1, WE2	CE, RE, WE	CE, RE, WE1, WE2
Amperometric i-t (**iT**)	X	X	X	X
Cyclic Voltammetry (**CV**)	X	X	X	X
Linear Sweep Voltammetry (**LSV**)	X	X	X	X
Open Circuit Potential vs. Tim (**OCP**)	X	X	X	X
Differential Pulse Voltammetry (**DPV**)			X	X
Normal Pulse Voltammetry (**NPV**)			X	X
Multi-Step Potential (**MSP**)			X	X
Square Wave Voltammetry (**SWV**)			X	X
Chronoamperometry **(CA)**	X	X	X	X
Tafel Plot	X	X	X	X
RDE Control Output (0-10V)	Optional	Yes	Optional	Yes

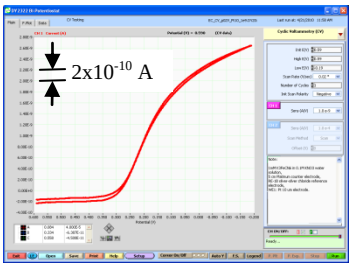
Sample Data



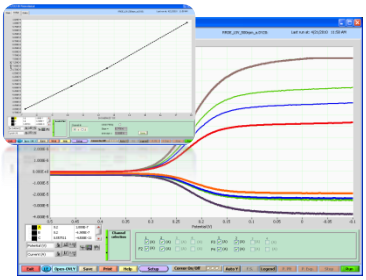
(1) Dual channel, multi-cycle CV scans



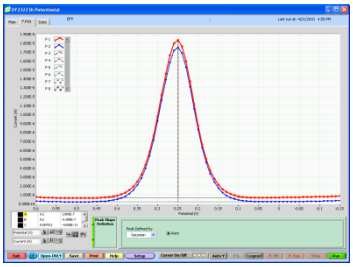
(2) Overlay plot (32-trace max.)



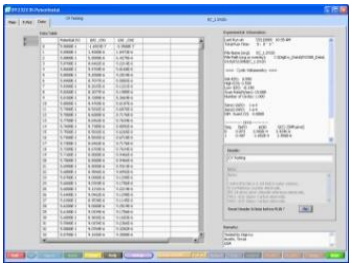
(3) CV scan, Pt 10 µm electrode



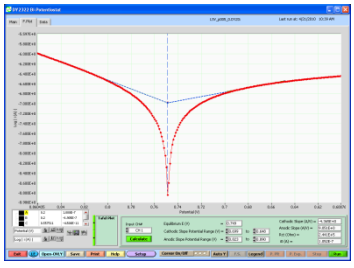
(4) RRDE (500, 1000, 1500, 3000 rpm). Built-in Levich Plot



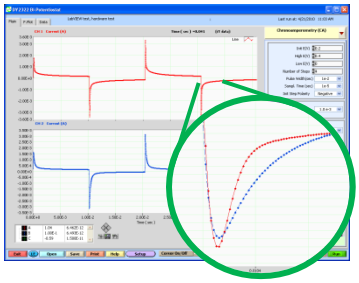
(5) Dual channel DPV, auto Peak (Diffusive, Gaussian, and Sigmoidal) calculations



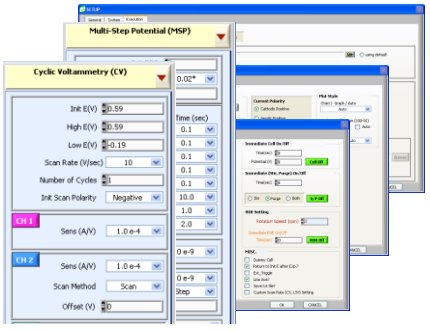
(6) Raw data and calculated parameters display



(7) Tafel Plot, Cathodic Slope, Anodic Slope, Rct, and i0 calculations



(8) Chronoamperometry (CA) data, Fsamp = 100 kHz.



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