

Model 1200C Series Hand-held Potentiostat / Bipotentiostat

The Model 1200C series is a computerized hand-held potentiostat/bipotentiostat. The system contains a digital function generator, a data acquisition system, and a potentiostat/bipotentiostat, and it is well suited for electroanalysis and sensor studies. The potential range is ± 5 V and the current range is ± 50 mA. This series is capable of measuring current down to 100 pA. The steady state current of a 10 μ m disk electrode can be readily measured. The size of the instrument is 7" (L) \times 4.5" (W) \times 1" (H). The instrument is powered by the USB port of an external computer, without need of an AC adapter or batteries. Due to its small size, light weight, and low cost, it is particularly useful for field applications and teaching laboratories.

The model 1200C series allows ± 11 V compliance voltage, which ensures its working potential range of ± 5 V for most electrochemical systems. It also uses dual 16-bit DAC and 16-bit ADC for high resolution and accuracy.

The instrument provides many powerful functions, such as straightforward file handling, extensive experimental control, flexible graphics, various data analysis, and efficient digital simulation. Some of the unique features include macro commands, working electrode conditioning, color, legend and font selection, data interpolation, visual baseline correction, data point removal, visual data point modification, signal averaging, Fourier spectrum, and a convenient technique-specific electrochemical equation viewer.

The 1200C series provides various instrument models to meet different applications and budgets, and is available in potentiostat (1200C, 1210C, 1220C, 1232C, and 1240C) and bipotentiostat versions (1202C, 1212C, 1222C, 1232C and 1242C).

Specifications

Potentiostat / bipotentiostat	CV and LSV scan rate: 0.000001 to 80 V/s
Maximum potential range: ± 5 V	CA and CC pulse width: 0.001 to 1000 s
Compliance voltage: ± 11 V	CA and CC Steps: 1 - 320
Current range: ± 50 mA	DPV and NPV pulse width: 0.001 to 10 s
Reference electrode input impedance: 1×10^{12} ohm	SWV frequency: 1 to 5000 Hz
Sensitivity scale: 1×10^{-9} - 0.01 A/V in 8 ranges	Low-pass filter for current measurements
Input bias current: < 100 pA	Maximum data length: 128K-16384K selectable
Current measurement resolution: < 1 pA	Power: USB port
Data acquisition: 16-bit @ 100 kHz	Chassis dimension: 7" (W) \times 4.5" (D) \times 1" (H)

Differences of 1200C Series Models

Functions	1200C /1202C	1205C /1206C	1207C /1208C	1210C /1212C	1220C /1222C	1230C /1232C	1240C /1242C
Cyclic Voltammetry (CV)*	●	●	●	●	●	●	●
Linear Sweep Voltammetry (LSV) &*	●	●	●	●	●	●	●
Chronoamperometry (CA)*	●				●	●	●
Chronocoulometry (CC)	●				●	●	●
Differential Pulse Voltammetry (DPV) &*				●	●	●	●
Normal Pulse Voltammetry (NPV) &*				●	●	●	●
Differential Normal Pulse Voltammetry (DNPV) &*						●	●
Square Wave Voltammetry (SWV) &*					●	●	●
AC Voltammetry (ACV) &							●
2nd Harmonic AC Voltammetry (SHACV) &							●
Amperometric i-t Curve (i-t)*		●	●			●	●
Differential Pulse Amperometry (DPA)			●			●	●
Double Differential Pulse Amperometry (DDPA)			●			●	●
Triple Pulse Amperometry (TPA)			●			●	●
Sweep-Step Functions (SSF)							●
Multi-Potential Steps (STEP)							●
Open Circuit Potential - Time (OCPT)	●	●	●	●	●	●	●
Full version of CV simulation and fitting program						●	●
Limited version of CV simulation and fitting program	●	●	●	●	●		

&: Corresponding stripping mode can be performed.

*: Second channel (bipotentiostat mode) can be performed.