

# Desktop Multi-Channel Potentiostat

## Model 8102

The Model 8102 is a laboratory grade, four-channel fixed potential potentiostat. When combined with the free downloadable Pinnacle Acquisition Laboratory software, the 8102 provides a cost-effective, easy to use, and highly accurate system for the development and use of high impedance, amperometric biosensors and biosensor arrays. This potentiostat has been designed with the neuroscientist in mind; it is very well suited for in vitro, brain slices and anesthetized animals. In addition, the 8102 is also useful for a wide range of other measurement applications.

## Advantages

- Specifically designed for high impedance amperometric sensors
- Accurate/high resolution/stable/low noise
- Two terminal with common reference simplifies set-up
- Autocalibration
- Field upgradeable firmware
- Software controlled bias
- Automatic or manual gain control
- Deep 60 Hz (50 Hz software selectable) > 110 dB notch filter
- Synchronous sampling of all channels
- 3 fA resolution and 20  $\mu$ A range
- 4 Hz maximum sample rate
- Free software and firmware upgrades
- Free acquisition software



## Pinnacle Acquisition Laboratory

### Acquiring Data

- Automatic potentiostat detection
- Simple, intuitive interface
- Full graphical feature set
- User controlled sample rate
- Automatic or manual gain control
- Software controlled bias
- Automatic hardware calibration
- Adjustable filters
- Channel to channel math
- Delta measurement
- Full comment handling to mark events
- Efficient data storage
- Data exported to CVS or Excel
- One-click firmware upgrades

### Analyzing Data

- All of the features listed above plus data can be analyzed while acquisition is taking place
- Overview mode provides a low resolution overview of the entire experiment
- Resolution is automatically increased during zooms
- Datasets are always exported at the maximum possible resolution

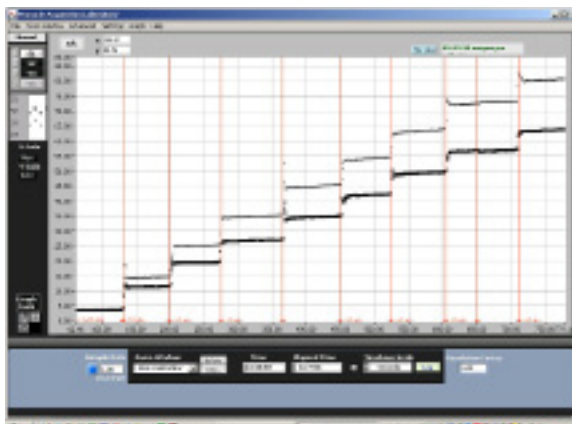


## Hardware Specifications

- Channels: Four independent
- Style: Two terminal, fixed potential
- Maximum Sampling Rate: 4 Hz
- Channel Sampling: Synchronous
- Current Range: 0 - 20  $\mu$ A
  - Resolution: 24 bits (-2.048  $\Rightarrow$  +2.048)
  - Sensitivity: 3 fA
  - Accuracy: +/- (0.25% + 1 mV)
  - 60 Hz Rejection: > 110 dB (50 Hz option)
- Bias Range: -2.048  $\Rightarrow$  +2.048 Volts
  - Resolution: 12 bits
  - Sensitivity: 1 mV
  - Accuracy: +/- (1.25% + 0.5 mV)
- Communications: RS-232 or USB
- Two channels can be converted to analog outputs

### Conditioning

User definable conditioning feature is available for bio-sensors which require this step prior to use. The default set-up is 100 sec/cycle; - 500 to + 500 mV and 10 cycles.



**Pinnacle Technology, Inc**

2721 Oregon Street, Lawrence, Kansas 66046