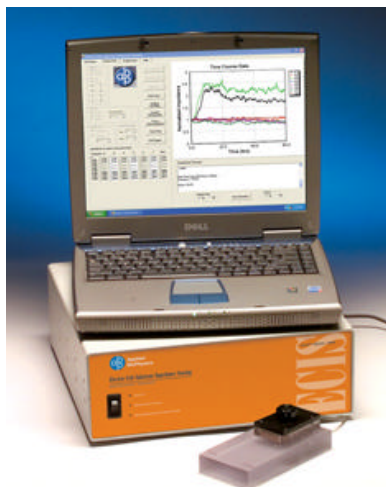


## Applied Biophysics ECIS Model 800E



The ECIS Model 800E has been designed specifically as an educational unit. This instrument is intended for hands-on, advanced undergraduate and graduate laboratory courses in tissue culture, cell biology, advanced biological methods or biotechnology. Students can be exposed to a variety of cell-based assays including measurements of in vitro toxicology, cell migration, cell-ECM interactions, extravasation of normal cell layers by cancer cells and signal transduction.

The impedance of small active electrodes in each well is measured in real time to record cell activity and response to agents. This instrument monitors the simple (rather than complex) impedance at one fixed frequency where impedance changes due to the presence of the cells are readily detected.

In addition to monitoring cells non-invasively, this instrument is equipped with the Elevated Field Module allowing the performance of automated wound-healing (cell migration) assays [PNAS 101: 1554-1559 (2004)] and experiments involving electroporation of membrane-impermeable compounds.

The electronics are consolidated in a single case that sits beside a tissue culture incubator. One lead connects the electronics to an electrode array holder within the incubator space – this, in turn, makes contact with a single consumable array. A USB cable provides communication to a PC that controls all data acquisition, storage and analysis. In addition to the ECIS electronics and software, the system is supplied with a state-of-the-art laptop PC, an initial supply of electrode arrays, as well as an ECIS workbook with 5 cell-based exercises for biology students to start learning cell impedance measurements.

The user-friendly ECIS software runs on a Window's XP Profession platform for all operations. In addition to using the ECIS analysis and plotting programs, one can readily convert data to text files for export to other data analysis systems.

### Specifications

**Maximum number of wells:** 8

**Frequency range:** fixed - 15kHz

**Operating System:** Windows XP Professional

**System Controller:** Laptop PC

**Front Panel Controls:** Power on/off

**Front Panel Indicators:** Power, Measurement in Progress, Wounding/Electroporation Mode Activated

**PC to 800 communications:** USB

**Power:** 120-240 VAC 50/60Hz

**Dimensions:** 13 x 4.5 x 13 inches (WxHxD)

**Weight:** 6 lbs

**System includes:** single slot array holder, laptop PC, Elevated Field Module with fixed wounding & electroporation parameters

**Array Holder dimensions:** 5.5 x 1.5 x 6.0 inches (WxHxD)

**Array Holder material:** Lexan ® polycarbonate

**Array holder to instrument cable length:** 4.5 ft (a port in the incubator is desirable; 5/8 inch diameter minimum)