ECIS™ Model 9600 (6x16) package

Specialized software and multiple array holders convert the ECIS™ 9600 instrument to function in a 6x16 mode. This arrangement is designed to accommodate up to six ECIS users each monitoring up to 16 wells in concurrent, independent experiments. Six experimental stations are located in the incubator, each capable of accepting two 8 well ECIS arrays. These six stations are independent. Experiments may be started and terminated or data may be analyzed, plotted or converted from each of the six stations at any time without regard to the activity at the other 5 stations.

The impedance of small active electrodes in each well is measured in real time to record cell activity and response to agents. Like the ECIS™ 1600 instrument, the 6X16 mode monitors the simple (rather than complex) impedance of the ECIS electrodes at one of three fixed frequencies covering the range where impedance changes due to the presence of the cells are strongest. In addition to noninvasive measurements, the ECI™S 9600 in the 6x16 mode can also be programmed to apply elevated fields for cell migration measurements via an automated wound-healing assay [PNAS 101: 1554-1559 (2004)]. High fields can also be used at shorter duration for electroporation of membrane-impermeable compounds into cells.

The ECIS ™ 9600 instrument sits beside the tissue culture incubator. Twelve leads connect the main instrument to the six array holder stations within the incubator space. 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 PC/monitor (or laptop), color ink jet printer and an initial supply of electrode arrays.

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.
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The package can be purchased complete with the Model 9600 electronics or separately if one already owns or plans to buy the standard Model 9600 system as well.

The (6X16) package allows one to have the equivalent of six ECIS™ 1600 instruments complete with elevated field applications but at great cost savings.

Instrument comparison chart

Specification

Maximum number of wells: 6x16 or 96 wells total
Frequency range: fixed - 15kHz, 30kHz, 45kHz
Operating System: Windows XP Professional
System Controller: Desktop or laptop PC
Front Panel Controls: Power on/off
Front Panel Indicators: Power, Measurement in Progress, Wounding/Electroporation Mode Activated
PC to 9600 (6x16) communications: USB
Power: 120-240 VAC 50/60Hz
Dimensions: 17.25 x 8.5 x 20 inches (WxHxD)
Weight: 40 lbs
System includes: 6 dual slot array holders, color matrix printer, laptop or desktop PC
Array Holder dimensions: 5.5 x 1.5 x 6.0 inches (WxHxD)
Array Holder material: Lexan ® polycarbonate, Delrin
Array holder to instrument cable length: 4.5 ft (a port in the incubator is desirable; 1 inch diameter minimum)