A-M Systems



The Neuroprobe Amplifier Model 1600 is a precision-crafted microelectrode amplifier designed especially for the exacting requirements of intracellular neurological studies. It is a self-contained unit with many built-in features that reduce the need for additional instrumentation and provides the research scientist with versatility, accuracy, and ease of operation. The Digital Panel Meter produces a highly accurate display of membrane potential, injected current, or electrode resistance.

The internal Dual-Function Transient Control and the DC balance Control assure extremely precise recordings during current injection without requiring an external bridge or a differential input oscilloscope. The ten-turn potentiometers used for the DC Offset, DC balance, Current Injection, and dual Capacitance Compensation Controls allow high resolution. An internal square-wave generator supplies 100Hz current to test electrode resistance and to adjust capacitance compensation, with the resistance values directly displayed on the Digital Panel Meter.

The Neuroprobe Amplifier's advanced current injection system, adjustable to 0.1nA resolution, allows external switching of both internal and external current sources. The total current from all sources can be displayed on the Digital Panel Meter prior to injection. This capability allows the user to inject the exact amount of current desired. Depending upon the requirements of the experiment, the user can also select either momentary or continuous injection. The Model 1600 has been carefully engineered to eliminate noise that might adversely affect test results. The user has a choice of either AC or battery power. The internal battery offers 10 hours of operation before recharging and isolates the instrument from power-line frequency interference while the floating ground helps to eliminate ground-loop noise.

The Neuroprobe Amplifier can be used with computer equipment or a standard chart recorder to generate a permanent record of injected current and neurological response. It has a direct input for use as a Digital Volt Meter and is also adaptable as a general purpose electrometer, with outputs displayed on the Digital Panel Meter.







