

A Complete Solution to Your Electrophysiology Needs

The NeuroLog System provides a modular and highly versatile means of carrying out **intracellular, extracellular or transducer-based recordings, signal conditioning, pulse generation or electrical stimulation** within one compact device.



The **NL900D Case & Power Supply** unit allows up to thirteen modules to be installed. This means that a single NeuroLog System can be used to amplify several different parameters, such as extracellular spikes, intracellular potentials or even blood pressure, as well as produce outgoing trigger pulses to other pieces of equipment or electrically stimulate a preparation.

Amplification & Signal Conditioning

The NeuroLog System provides AC or DC coupled amplification of biological signals from transducers, single electrode or multi electrode configurations. DC coupled amplifiers output absolute voltage levels and are most commonly employed for intracellular or transducer recording where baseline membrane potentials or slow voltage shifts are of interest.

With AC coupled amplifiers, the "DC baseline" is removed by high-pass filtering. Such amplifiers are used for extracellular recording of action potentials in neuronal preparations, ECG, EMG or EEG waveforms. The variety of NeuroLog pre-amplification and amplification modules means that users can develop systems specifically suited to their particular application. The NeuroLog range also contains a number of filter and signal conditioning modules which can be used prior to final data acquisition.



Extracellular AC Recording

The **NL100AK** head-stage and **NL104A AC PRE-AMPLIFIER** provide an excellent combination suitable for extracellular recordings from neuronal preparations with sharp electrodes. They can be used in single-sided or differential recording modes, provide impedance matching for micro-electrode recording and feature low noise amplification. Continuously adjustable bandpass filtering from 0.1Hz to >50kHz is available through the **NL125/6 FILTERS**. In addition, the **NL201 SPIKE TRIGGER** can be used to convert spikes into uniform TTL pulses which can then be counted, converted to frequency or further analysed using other modules. Use of the **NL120S AUDIO AMPLIFIER** and **NL985S LOUDSPEAKER** would allow the spikes to be monitored audibly.

Extracellular DC Recording

As an alternative, an **NL100A** head-stage can be coupled to the **NL107 RECORDER AMPLIFIER**, providing a DC coupled amplification system. This particular configuration is particularly suited to grease-gap recording in neuronal preparations. Under these conditions, pharmacological studies of drug-induced DC shifts can be measured.



