

NeuroTrace

Program for recording, visualization of low frequency potentials (LFP) including EEG (ECoG), ERP and EP

Two channels LFP recording

Four channels online signal presentation scope

Four channel for EEG/EP/ERP recording

Simultaneous recording of LFP and ECoG in one electrode

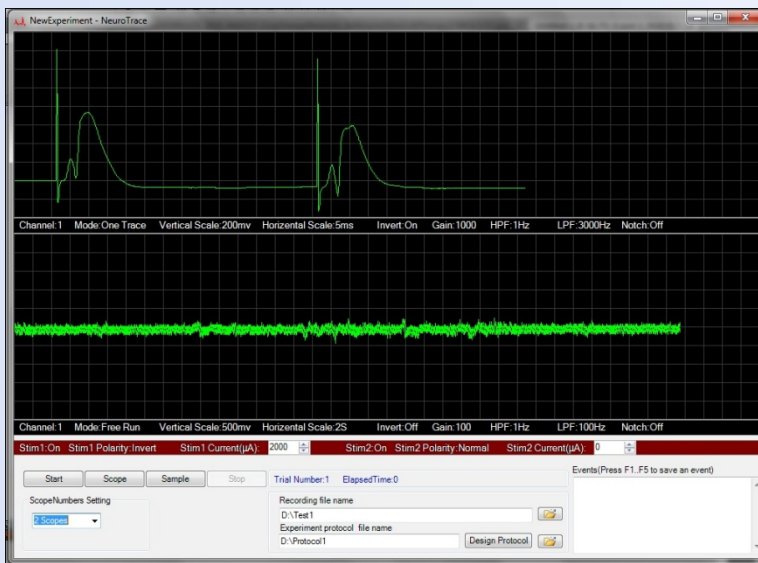
Powerful controller of stimulus pattern maker

Digital tuning of amplifier and stimulator

Event marker for defining time and characteristics of events during experiments

User friendly installation and application

Complete manual for installation, application and analysis



Field potentials

Extracellular field potentials are local current sinks or sources that are generated by the collective activity of many cells. Usually, a field potential is generated by the simultaneous activation of many neurons by synaptic transmission. The diagram to the right shows hippocampal synaptic field potentials. At the right, the lower trace shows a negative wave that corresponds to a current sink caused by positive charges entering cells through postsynaptic glutamate receptors, while the upper trace shows a positive wave that is generated by the current that leaves the cell (at the cell body) to complete the circuit. For more information, see local field potential

Electrocorticography (ECoG) is the practice of using electrodes placed directly on the exposed surface of the brain to record electrical activity from the cerebral cortex. ECoG may be performed either in the operating room during surgery (intraoperative ECoG) or outside of surgery (extraoperative ECoG). Because a craniotomy (a surgical incision into the skull) is required to implant the electrode grid, ECoG is an invasive procedure. ECoG is currently considered to be the “gold standard” for defining epileptogenic zones in clinical practice.

