

- ✓ Integrated research platform
- ✓ Closed loop and 3D stimulation possibilities
- ✓ Expandable channel count

**The Neuro Omega** is the latest technological breakthrough in MER. Innovative software and hardware implemented in the Neuro Omega make this all-encompassing system ideal for both clinical MER applications and advanced research needs.

MER users gain total experimental control while benefiting from Alpha Omega's highest performance, quality and clinical efficacy.



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The new gold-standard in  
MER and the latest innovation in  
neuroscience technology



## Key Qualities

- > Expandable up to 122 channels
- > Online data streaming to MATLAB and C++
- > Closed loop stimulation control through data streaming or direct-to-processor scripting
- > Unparalleled stimulation capabilities including conditional stimulation, programmable stimulation, and arbitrary wave definition
- > Multi-source, multi-polar stimulation allows for 3D stimulation control
- > Single cable exiting the sterile field for electrode positioning, recording and stimulation
- > Online statistics including evoked potentials, firing rates and raster graphs
- > Unique dual screen display and customizable workspace
- > Integrated analog and digital inputs and outputs

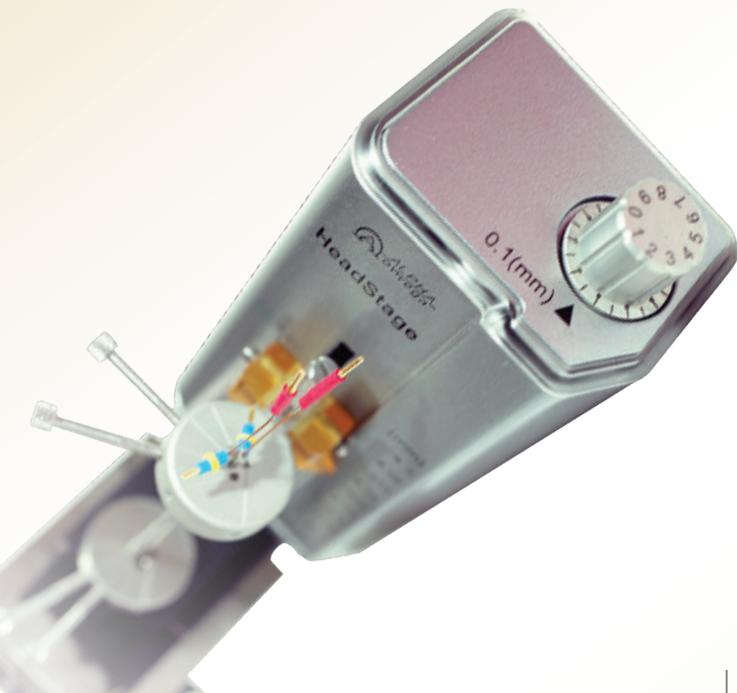
## Headbox Module

- > Up to 7 additional modules
- > 16 channel module with referential and differential recording for EEG, EMG, & ECoG
- > Portable and compact
- > Advanced multi-source stimulation capabilities for peripheral nerve and ECoG
- > Medical grade, industry standard touch proof connectors



## Neuro Omega Drive

- > High amplifier input range allows non-stimulating channels to record throughout stimulation
- > Pre-assembled microdrive for quick and easy setup in the sterile field
- > Built in capability for recording and stimulation
- > Lightweight, low impact on frameless or frame based procedure
- > XY stage and 5-hole bungen allows trajectory adjustments without frame manipulation
- > Direct implantation of DBS electrode without backing up drive or removing cannulae
- > Fully compatible with all stereotactic frames
- > Precision movement with an electronic drive
- > Automatic or manual microdrive capabilities



## User interface

- > **Trajectory map** with pattern recognition for increased neural activity
- > **10 channels built into the microdrive** for recording and stimulation with micro and macro spike and LFP recordings
- > Configurable with up to 122 channels integrated all in one system:
  - > Micro and Macro electrodes
  - > LFP
  - > EEG
  - > EMG
  - > ECoG
- > One click **impedance check** for all channels and electrode types
- > **Flexible stimulation** current ranges for microelectrode test stimulations, peripheral nerve stimulation and other stimulation research requirements
- > Complete **stimulation control** on the basic stimulation parameters and the ability to create unique waveforms
- > **Save** data for post-case analysis in **MATLAB** or other formats
- > User-defined **Events** allow for easy marking and commenting onto data file

