



simplifying **Neurosurgery**

Stereotactic & Functional Neurosurgery

Global leaders for innovative and dependable
microelectrode recording systems

Research Applications

Advance neuroscience research without
sacrificing clinical efficiency

Medical Consumables

NeuroProbe, cannulae, & electrode input cables
for any MER system

Technical Support

On-site and remote case support, training,
maintenance and more

NeuroNav

Compact MER solution for simplicity in the OR

- | Streamlined setup
- | Compact
- | Cost-effective

The NeuroNav is a compact, field-proven MER system, used clinically in the localization of surgical targets for the implantation of Deep Brain Stimulation (DBS) electrodes or ablation of target structures, in the treatment of neurological and psychiatric diseases. The NeuroNav allows for safe and accurate introduction of electrodes into the brain, while recording neural activity, stimulating neural tissue, and guiding the user to the optimal target. This system is ideal for all DBS centers and community hospitals interested in flexible usability, affordability, and compact size.

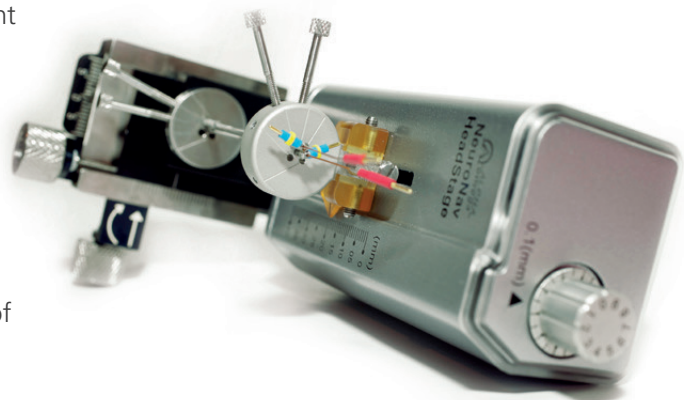
Key Qualities

- > Quick set-up with user friendly interface & seamless operation capabilities
- > Handheld remote allows completely independent operation from within sterile field
- > Straightforward software interface specifically designed to streamline the MER procedure
- > Single cable exits sterile field for electrode positioning, recording and stimulation, which minimizes risk of contamination
- > Minimize impact of MER on O.R. time
- > Optimal signal clarity due to direct connection of electrodes to system amplifiers
- > Available for rental or fee-per-use



NeuroNav Headstage

- > 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

1 Multi-channel recording capabilities.

A total of up to 10 recording channels: up to 5 for spike activity measured from electrode micro contact and up to 5 for local field potentials (LFP) measured at the macro contact

2 Wide stimulation range for micro and macro threshold stimulation tests

3 Switch from recording to stimulation with the push of a button

4 Gradual increase and decrease of stimulation current during stimulation for added safety

5 Current feedback system ensures accurate delivery of stimulation current

6 Clear on-screen trajectory view, automatically builds electrophysiological map as the electrode advances in the brain

7 Electrode depth and distance from target are both clearly displayed on screen, with easy reference to macro and micro tip locations

8 Proprietary On-line Pattern Recognition Algorithm for optimal localization of increased neural activity

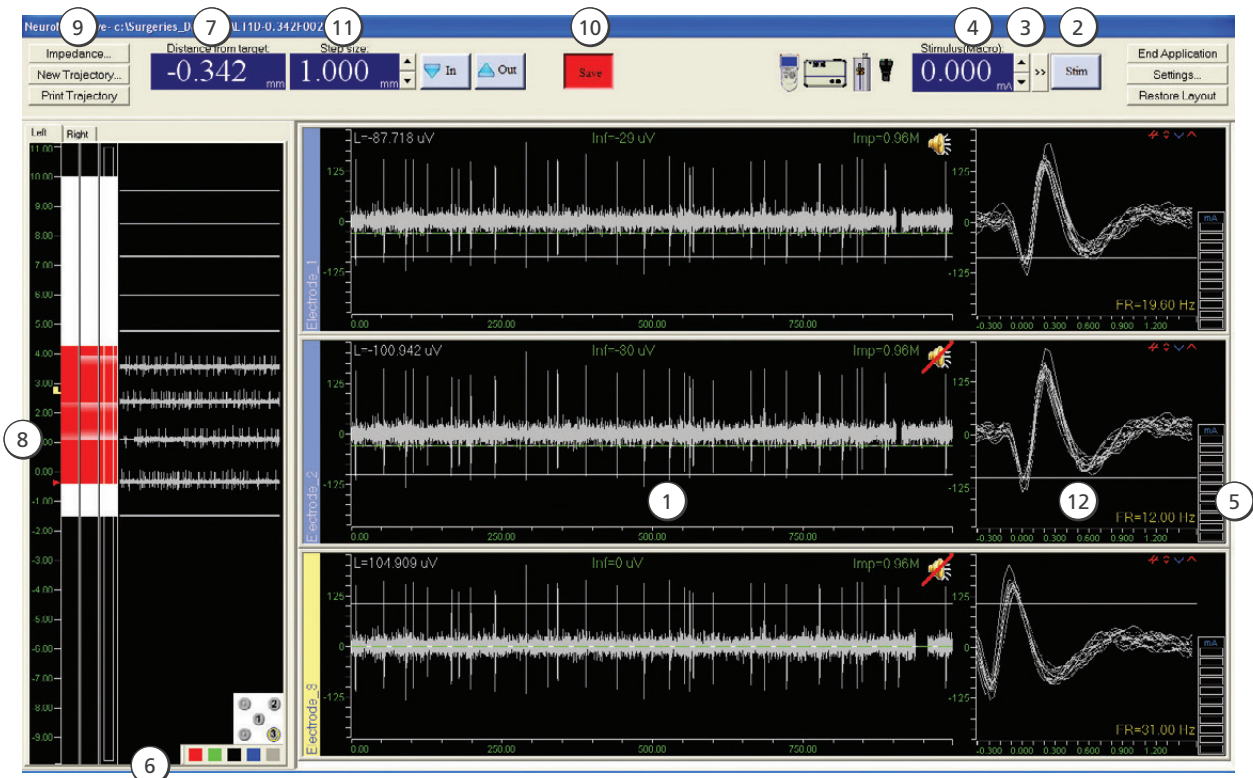
9 Measure the impedance of all micro contacts simultaneously to ensure recording integrity

10 Save data for post-case analysis in MATLAB or other formats

11 Pre-set Step Size option to maximize precision of the microdrive and improve safety and control

12 Adjustable threshold for spike detection

13 User-friendly, handheld remote control allows control of all system functions from outside or inside the sterile zone





North & South America

Alpha Omega Co. USA
5755 North Point Pkwy., Unit 229
Alpharetta GA 30022,
USA
Toll Free (877) 919-6288
Fax (877) 471-2055
info@alphaomega-eng.com

Europe

Alpha Omega GmbH
Ubstadter Str. 28
76698 Ubstadt-Weiher
Germany
Tel: +49 (0) 7251-4406620
Fax: +49 (0) 721-2391034
info@alphaomega-eng.com

Asia Pacific & Middle East

Alpha Omega Engineering
Nazareth Industrial Park Building
Mount Precipice, P.O. Box 2268
Nazareth 1612102, Israel
Tel 972-4-656-3327
Fax 972-4-657-4075
info@alphaomega-eng.com



www.alphaomega-eng.com