

# NEUROSOLUTIONS FOR THE FUTURE

the all-in-one solutions for electrophysiology / injections

ARIS-22

ARM

i4

Stereo  
Drive

NEURO  
STAR

neuro  
Guide

Speed  
Sort

Reco

Histo  
Match



**NEUROSTAR**

NEUROSOLUTIONS FOR THE FUTURE

# ARIS-22

The all-in-one system for *in vivo* electrophysiology

ARIS-22 is a computer controlled hardware solution for *in vivo* electrophysiology. It integrates into a single compact box: preamplifiers, amplifiers, filters, impedance measurement module, stimulus generator and data acquisition module. In combination with the control software **neuro-Guide**, it offers a complete and powerful workstation for *in vivo* electrophysiology.



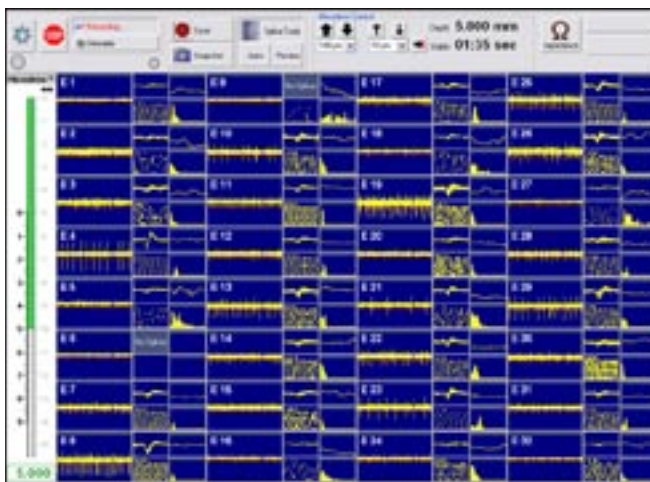
## facts:

- Computer Control
- Recording (4 channels, spikes/LFP)
- Integrated Preamplifiers
- Programmable Stimulus Generator
- Impedance Measurement
- Data Acquisition
- Digital Events

# ARM

Multichannel (64) system for extracellular recordings

ARM is a computer controlled multichannel recording and data acquisition system. It offers amplification, filtering, acquisition of extracellular neuronal activity: 32 action potential channels and 32 LFP channels. ARM is capable of both real-time and off-line spike-sorting and analyses.



## facts:

- Recording (64 Channels)
  - 32 Action Potential
  - 32 LFP
- Data Acquisition Module
- Omnetics Connectors
- Digital Events



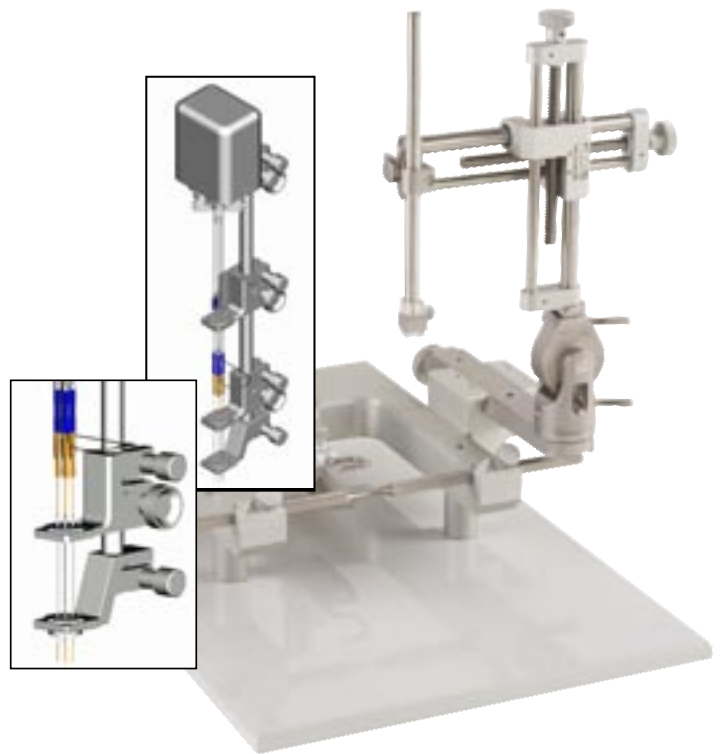
## i4

Micropositioner for 4 independent electrodes  
Single Motor Microdrive also available!

## facts:

- Computer Control
- Standard Stereotaxic Compatible
- Independent Move of 4 Electrodes
- Flexible X-Y-Grid-Positioning
- High Accuracy

i4 was designed to position and advance up to 4 electrodes individually. This lightweight solution can be used on all common stereotaxic frames for rodents. The full integration in the **neuro-Guide** suite guarantees optimal control of each electrode combined with straightforward recording, data acquisition, real-time analysis and visualization.



## StereoDrive

Motorized Stereotaxic System

Designed to adapt conventional stereotaxic systems, StereoDrive allows motorized, computer controlled stereotaxic positioning in all 3 orthogonal axes. Atlas integration and intuitive movement control, enables high accuracy, high-throughput electrophysiology and stereotaxic injections. StereoDrive is fully supported by the **neuro-Guide** software.

## facts:

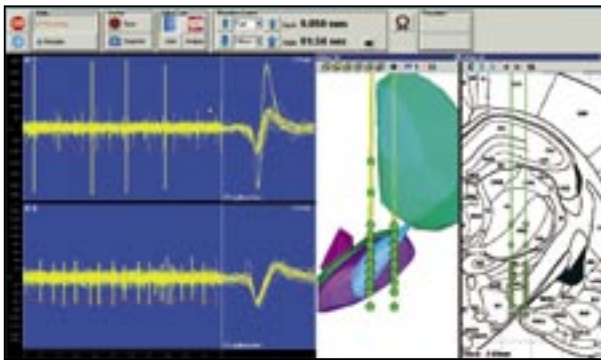
- Computer Control
- Standard Stereotaxic Compatible
- Stereotaxic Positioning in All 3 Axes
- High Accuracy
- High-Throughput



# neuro-Guide

Complete management solution for *in vivo* electrophysiology

neuro-Guide is the complete software platform for electrophysiology. It fully controls recording, stimulation, impedance measurement, signal acquisition, real-time signal analysis, micropositioning. The new atlas-based 2D and 3D views provide real-time visualization of electrode advancement, localization relative to brain regions of interest and recording/stimulation sites along the trajectories. It supports high-throughput screening by unassisted exploration for single-unit neuronal activity. Automated raw-signal file organization and database management enables straightforward subsequent processing with **SpeedSort** and **Reco** analysis and visualization tools.



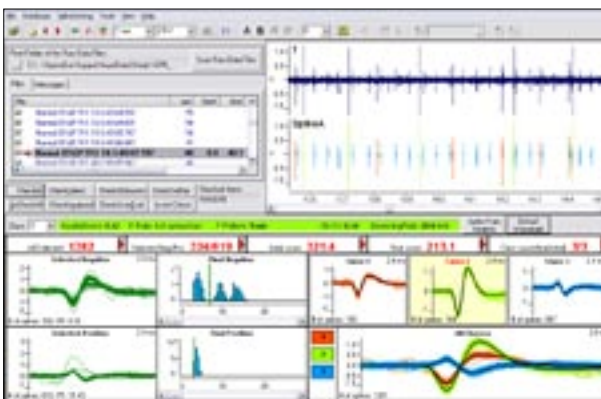
## facts:

- Full Experiment Control
- Micropositioner Control
- 2D/3D Atlas Visualization
- Real-time Automated Spike Sorting
- On-the-fly Scan for Neuronal Activity
- Signal Database
- Management

# SpeedSort

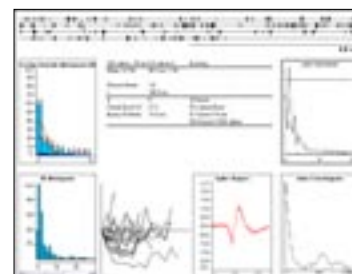
Automated, robust spike-sorting software package with fast batch analysis capabilities

SpeedSort is a fully featured package for robust, reliable and fast spike-sorting and subsequent spike-train analysis. The spike-sorting algorithms are based on multiperspective information (intelligent thresholding, sortability-score, shape, shape statistics, timestamp statistics). The batch sorting mode allows unassisted, unbiased, robust analysis for a large set of signal data. SpeedSort supports data import from **neuro-Guide** and data export to **Reco**.



## facts:

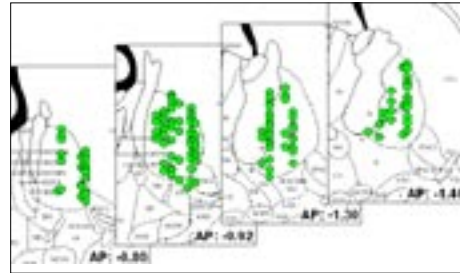
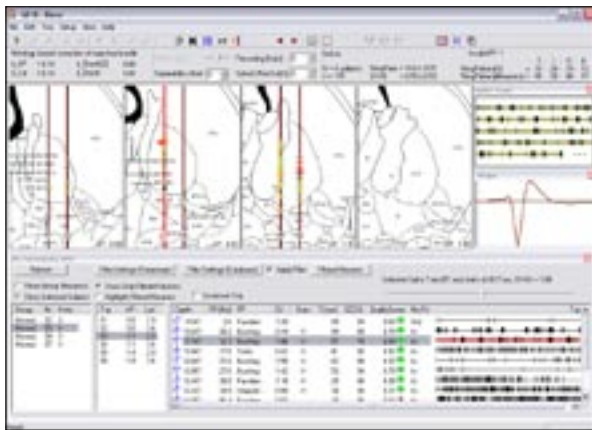
- Automated Spike-Sorting
- Reliable, Robust Spike Classification
- Batch Sorting, High-Throughput
- Firing Pattern Analysis
- Extended Spike-Train Analysis



## Reco

Tool for comprehensive overview of electrophysiology data and histology-based reconstruction of recording sites

Reco is an innovative tool for suggestive visualization of the analysis results for a whole group of electrophysiological experiments. Furthermore it supports optimal recording sites reconstruction due to advanced atlas/histology matching. Reco improves and accelerates the evaluation and interpretation of the experimental results by a comfortable presentation of the results overview and by a user-friendly interactive selection of analysis details.



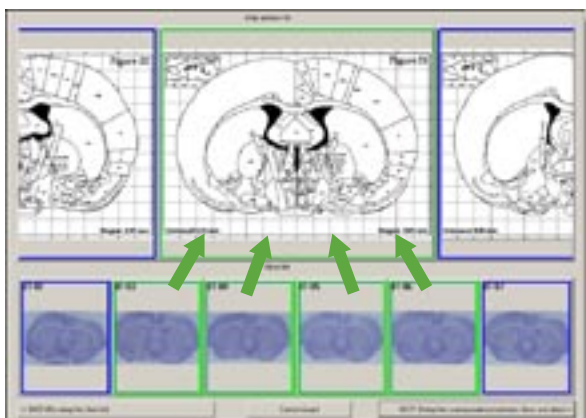
### facts:

- Atlas/histology Matching
- Reconstruction of Recording Sites
- Comprehensive Result-Overview
- Integrated Statistics
- Image-Export for Publishing

## HistoMatch

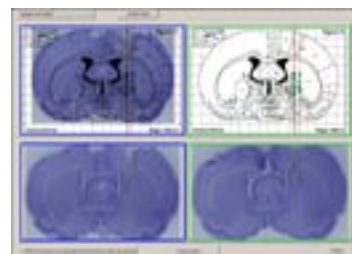
Dedicated software for atlas/histology matching and reconstruction of injection/lesioning/recording sites

HistoMatch is a powerful, easy-to-use software tool for interactive atlas/histology matching. It supports straightforward digitization of histological preparations, rapid identification, assignment and fitting of the „best“ histological slice containing the brain region of interest to the correspondent atlas slice.



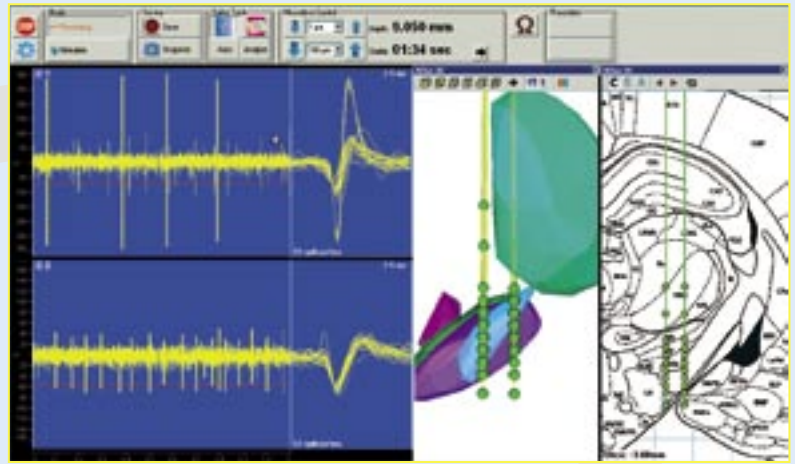
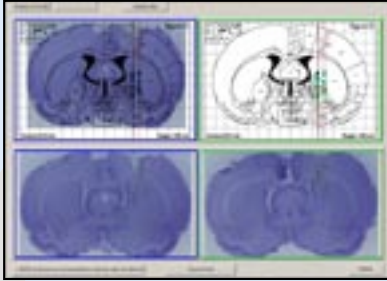
### facts:

- Atlas/Histology Matching
- Straightforward Digitization/Sorting of Brain Slices
- Reconstruction of Injection/Lesioning/Recording Sites
- High-Throughput



## neuro-Guide

Full Experiment Control  
Real Time Spike Sorting  
Micropositioner Control  
Atlas/Histology Matching

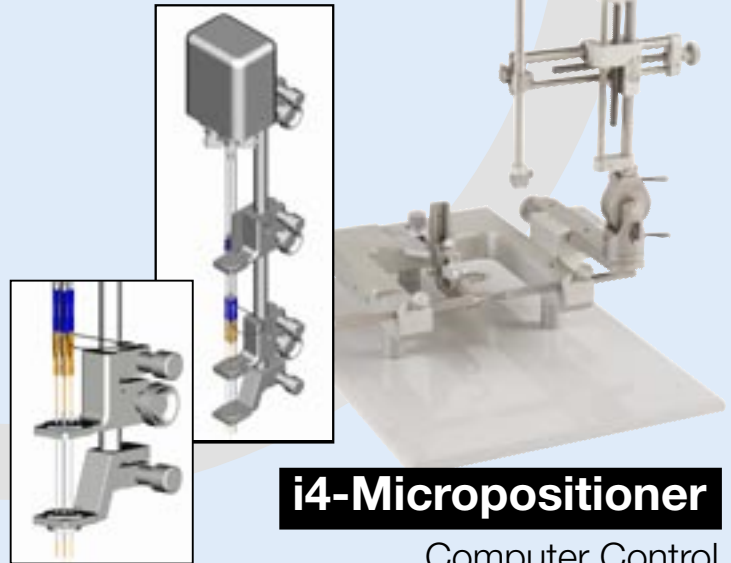


**all-in-one workstation**  
**electrophysiology/injections**  
**high-throughput**  
**straightforward**



### ARIS-22

Computer Control  
Recording (4 to 64 channels)  
Impedance Measurement  
Stimulation  
Data Acquisition



### i4-Micropositioner

Computer Control  
Standard Stereotaxic Compatible  
Independent Movement of 4 Electrodes  
Flexible X-Y Grid Positioning