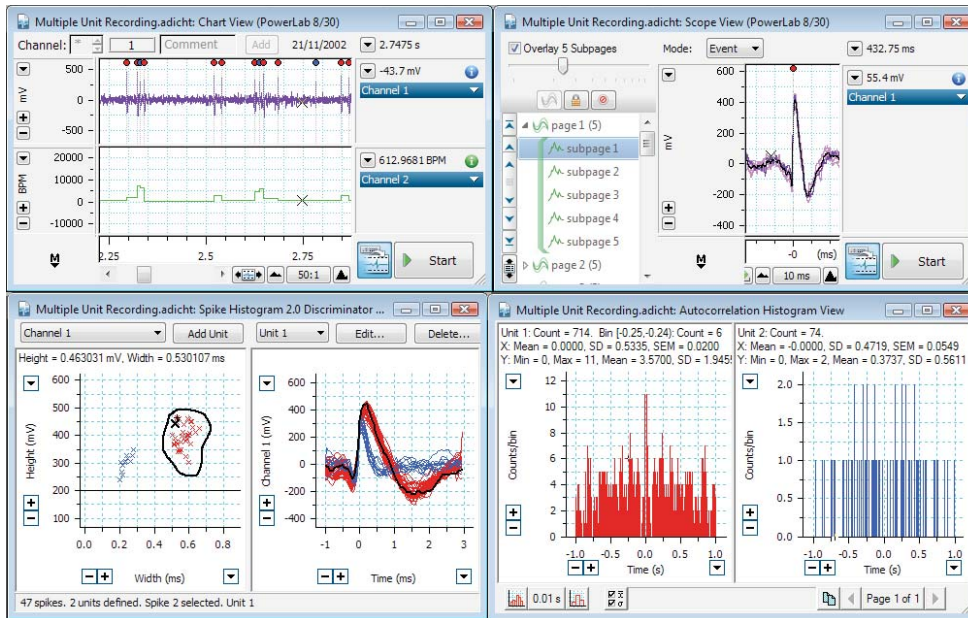


Extracellular Spike Analysis

Spike Histogram Module for LabChart® & PowerLab®



LabChart spike recording (top left) analysis using Spike Discriminator View (lower left) with individual spike units in Scope View (top right) and analysis using Autocorrelation Histogram (lower right).

The MLS062/7 Spike Histogram Module provides the ability to record and analyze extracellular spike data in real time and offline. Discriminating and analyzing extracellular neural spike activity is straightforward with dual height/width discriminator and can be used in studies of sympathetic nerve activity, microneurography and extracellular recordings.

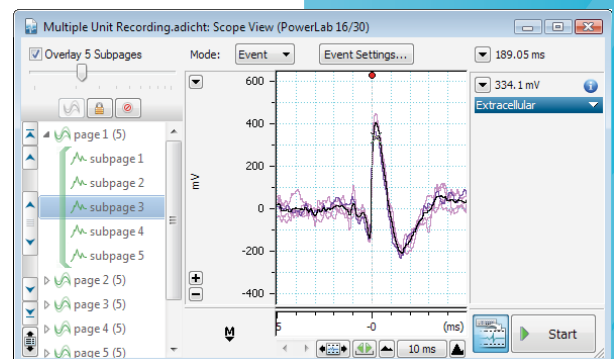
Powerful Spike Discrimination

The Discriminator View window (above, lower left) features two powerful discrimination methods:

- Template Units matches waveforms in the Spike Display pane using the root mean square (RMS) deviation and fit tolerance. Users can define different fit tolerance for multiple template units.
- Contour units are groups of spikes that are hand selected within the Scatter Plot pane. To hand select the spikes, the user can freehand draw any shape around spikes of interest.

Spike Averaging in Scope View

Spike units defined in the Discriminator View window can be used as an Event Source in LabChart Scope View. Defined spike shapes are displayed in real time and can be individually viewed. Spike triggered averaging can be performed using time-based occurrence of spikes.



Spike units defined in Spike Histogram Discriminator Window can be used as an Event Source in LabChart Scope View.

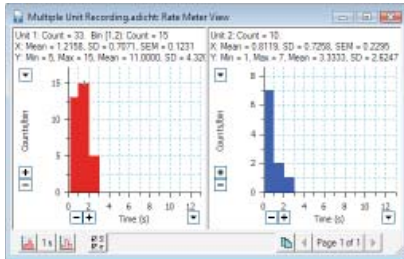
Features & Benefits

- Powerful spike discrimination using:
 - template matching
 - free-hand contour unit drawing
- Multi-channel analysis allowing comparison of physiologic measures
- Seamless integration with Scope View
- Six specialized histogram windows available in real time:
 - Rate Meter
 - Amplitude
 - Interspike Interval
 - Peristimulus Time
 - Autocorrelation
 - Cross-correlation
- Spike data recorded in LabChart can be easily exported into NeuroExplorer® for further analysis

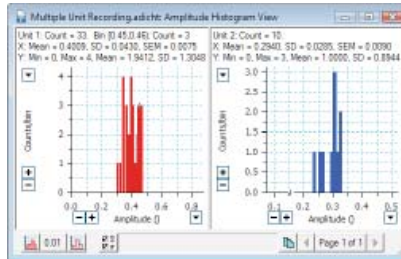
Spike Histogram Module

Specialized Histogram Windows

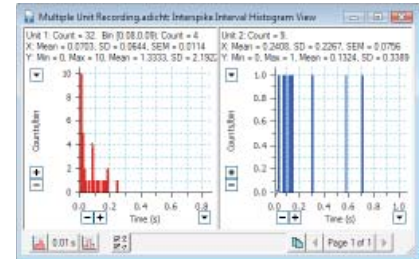
Powerful analysis of discriminated spike units can be performed using six specialized histogram windows. Histogram windows are available in real time and offline and include Rate Meter, Amplitude, Interspike Interval, Peristimulus Time, Autocorrelation and Cross-correlation.



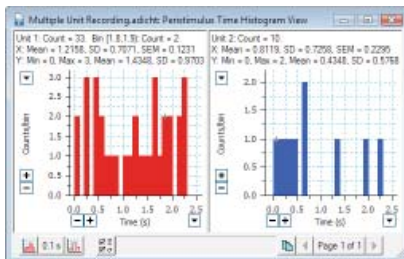
Rate meter plots the firing rate against time.



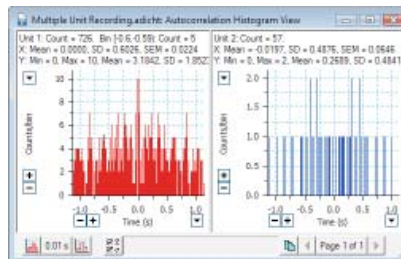
Amplitude displays a histogram of amplitudes.



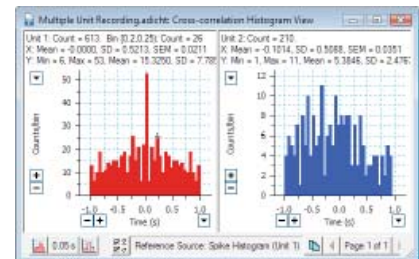
Interspike Interval displays a histogram of interval distribution.



Peristimulus Time displays the frequency and timing of spikes relative to a stimulus or event.



Autocorrelation detects periodicity in an individual unit.

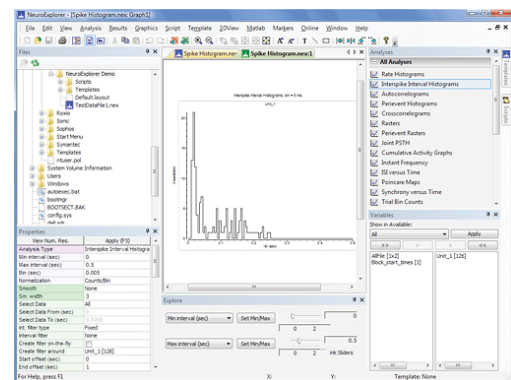


Cross-correlation detects the temporal dependence of two physiologic parameters.

Additional Data Exporting Options

Spike Histogram calculates and places thirteen parameters for each Histogram Window into the LabChart Data Pad for OLE with other applications such as Microsoft Excel. Parameters include bin size, mean X, SD X, SEM X, mean Y and more.

Spike Histogram for Windows has the additional feature of exporting LabChart data in .nex format. With this you can easily transfer your data into NeuroExplorer software for extensive spike train analysis options including Poincare plots, burst and spectral analysis, and more.



Export LabChart data into NeuroExplorer easily.

Spike Histogram Module is available for both Windows and Macintosh platforms.

*Together with PowerLab and LabChart, the GLP Client and GLP Server facilitate GLP and 21 CFR Part 11 compliance.

PowerLab, MacLab, LabChart, LabTutor and LabAuthor are registered trademarks and Chart and Scope are trademarks of ADInstruments Pty Ltd. All other trademarks are the property of their respective owners. SH08/10

PowerLab systems and signal conditioners meet the European EMC directive. ADInstruments signal conditioners for human use are approved to the IEC60601-1 patient safety standard and meet the CSA C22.2 No. 601.1-M90 and UL Std No. 2601-1 safety of medical electrical equipment standards.



ADINSTRUMENTS.com

North America
Tel: +1 888 965 6040
Fax: +1 719 576 39713
info.na@adstruments.com

United Kingdom
Tel: +44 1865 332 050
Fax: +44 1865 332 051
info.uk@adstruments.com

Germany
Tel: +49 6226 970105
Fax: +49 6226 970106
info.de@adstruments.com

North Asia
Tel: +86 21 5830 5639
Fax: +86 21 5830 5640
info.cn@adstruments.com

South East Asia
Tel: +60 3 8024 5296
Fax: +60 3 8023 6307
info.sea@adstruments.com

Japan
Tel: +81 52 932 6462
Fax: +81 52 932 6755
info.jp@adstruments.com

South America
Tel: +56 2 356 6749
Fax: +56 2 356 6786
info.cl@adstruments.com

Brazil
Tel: +55 11 3266 2393
Fax: +55 11 3266 2392
info.br@adstruments.com

South Asia
IN Tel: +91 11 4306 5615
PK Tel: +92 21 3489 2518
info.in@adstruments.com

Australia
Tel: +61 2 8818 3400
Fax: +61 2 8818 3499
info.au@adstruments.com

New Zealand
Tel: +64 3 477 4646
Fax: +64 3 477 4346
info.nz@adstruments.com

International
Tel: +61 2 8818 3400
Fax: +61 2 8818 3499
info.au@adstruments.com

ISO 9001:2008 Certified Quality Management System

