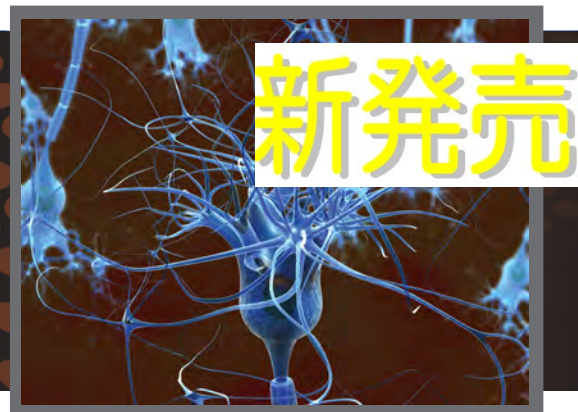


睡眠脳波・痙攣脳波・バイオセンサ自動解析ソフト

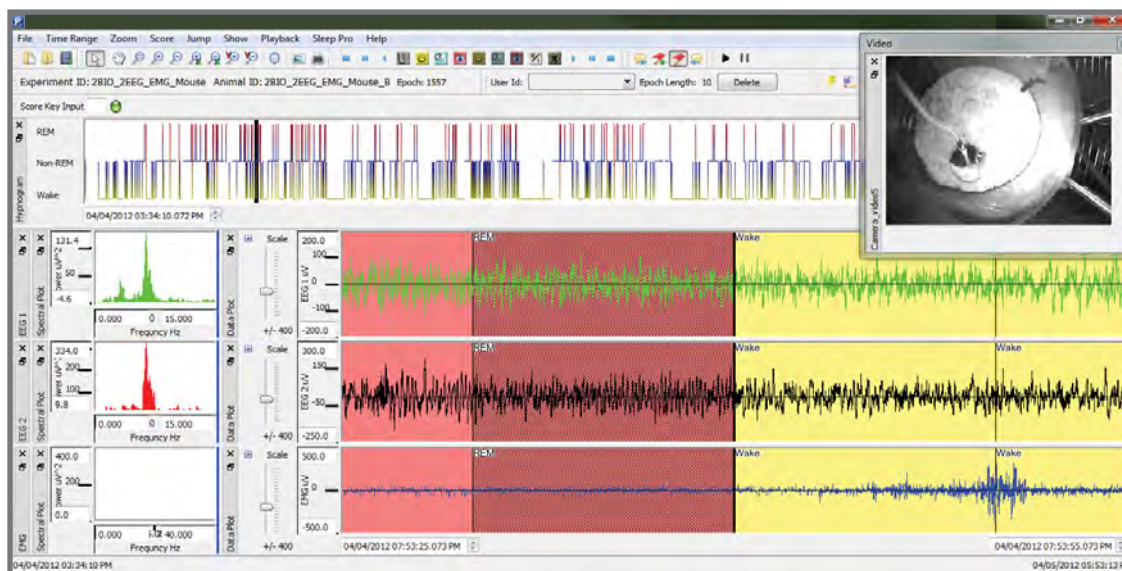
SIRENIA SLEEP PRO

驚異の自動判定精度を実現



Sirenica® Sleep Pro was designed specifically with sleep researchers in mind. It offers automated power analysis, semi-automated scoring methods, and advanced tabular and graphical analysis for investigation of sleep data sets. All EEG/

EMG and video data sets recorded with Pinnacle software, as well as third-party EDF and text files, can be imported for analysis. Look inside to learn more about how this suite of tools can reduce your scoring time and simplify your data analysis.



KEY FEATURES

SCORE MOUSE AND RAT DATA IN 75% LESS TIME

SCORING TOOLS

- Semi-Automated Scoring:
 - Cluster
 - Threshold
- Customizable Scoring Keys
- Real-Time Hypnograms
- Spectral Plots
- Heat Maps

AUTOMATED ANALYSIS

- Power Analysis
- Sleep Stage and Sleep Bout Analysis
- Peak Frequency Analysis
- Compare User Scores

CUSTOM PLOTS AND GRAPHS

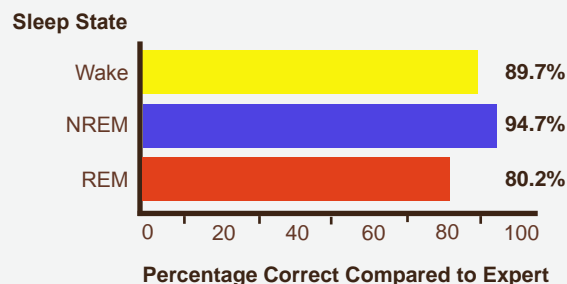
- Time Comparison Plots
- Automatic Graph Generation
- Plot Multiple Power Bands with Hypnogram and Other Data

PLUS

- Export FFT Data with Scores
- Produce High-Quality Images
- Fully Customizable Interface
- Accurate Scoring for Mice and Rats

ACCURACY OF SLEEP PRO SOFTWARE

A combination of cluster, threshold, and manual scoring tools were used by four scorers to separately score three different **mouse data files**. All files were compared to the expert hand-scorer. The overall average agreement of the four scorers for all the files as compared to the expert is shown below.



SCORE FASTER, SCORE SMARTER

Using Sirenia® Sleep Pro’s semi-automated scoring tools, 75-95% of a **24-hour mouse file** can typically be scored in 15 minutes or less with greater than 85% accuracy for Wake and NREM and greater than 75% accuracy for REM. Hand-scoring of the remaining epochs typically takes less than 20 minutes.

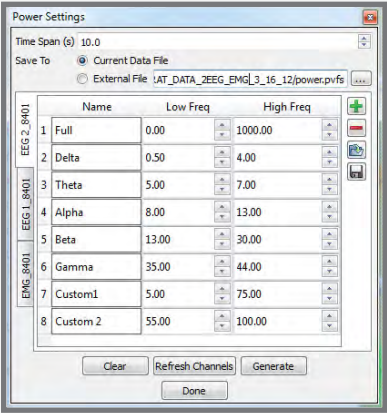
THE FLEXIBILITY OF SLEEP PRO CAN REDUCE YOUR SCORING TIME BY 75% OR MORE

MULTIPLE SCORING METHODS

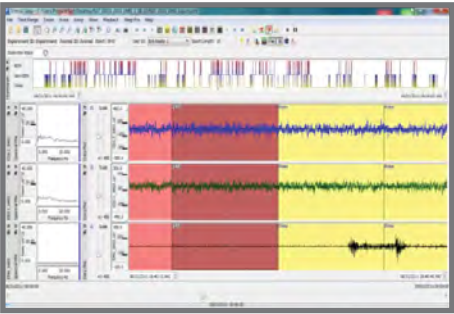
Sleep Pro provides users with three mechanisms for scoring sleep data: manual scoring, cluster scoring, and threshold scoring. Users can combine multiple methods for quickly and accurately scoring both mouse and rat files. Epoch lengths are user-configurable, and numerous scoring sessions can be created for the same file.

AUTOMATED
POWER ANALYSIS

Sirenia® Sleep Pro performs automated power analysis on six default bands (i.e., full, delta, theta, alpha, beta, and gamma) for each data channel. Users can also create customized bands for additional analysis. All raw FFT data can be exported to text files for additional animal-to-animal analysis.

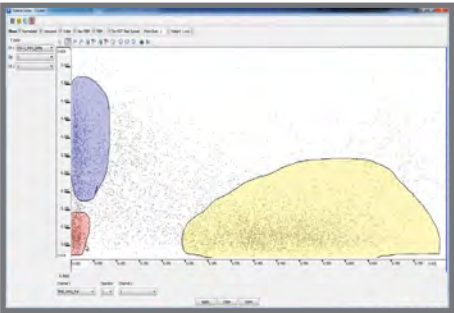


MANUAL



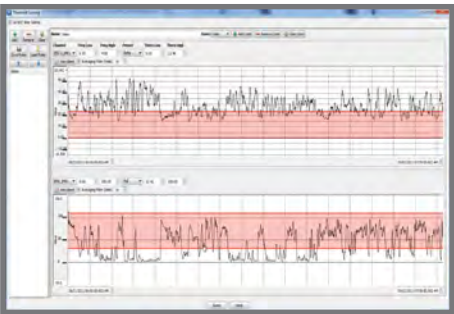
As with Sirenia® Sleep Basic software, traditional manual scoring functionality is available. Quick keys can be configured to individual user preferences, making scoring easy and accessible. Sleep Pro provides the added bonus of real-time hypnograms, epoch-by-epoch heat maps, and spectral plots as visual aids to assist with manual scoring.

CLUSTER



Cluster scoring is a semi-automated process that allows rapid scoring of similar epochs based on power analysis plots. The power data for each epoch is graphed, producing clusters of epochs that can be easily scored by drawing circles around similar groups and assigning a stage. Data can be plotted in a number of ways to segregate clusters.

THRESHOLD

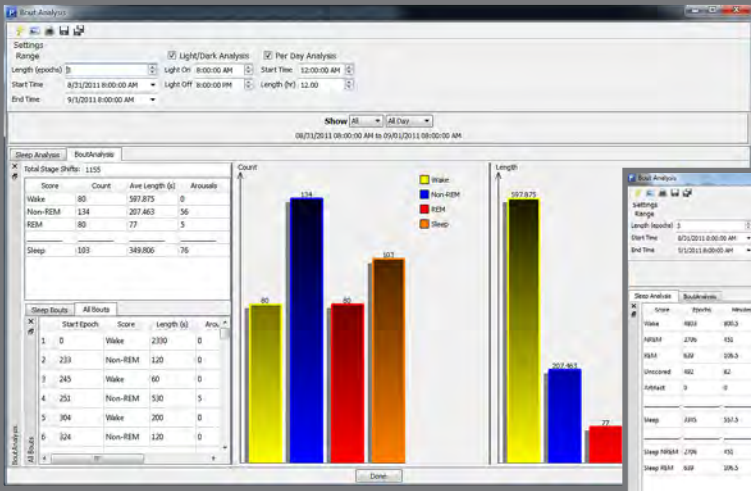


Threshold scoring uses power spectral analysis to create rule sets based on adjustable power boundaries in one or more channels and automatically scores appropriate epochs that fall within those boundaries. Multiple stages can be evaluated using unique criteria for each stage.

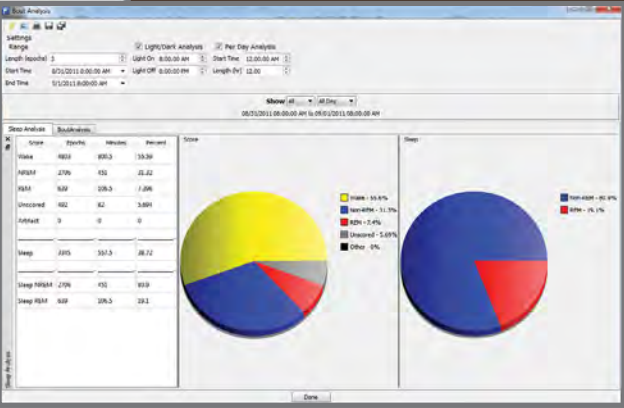
SIMPLIFY ANALYSIS

Stop wasting time and resources on lengthy data analysis. Sirenia® Sleep Pro provides powerful tools to quickly analyze scored sleep data. Sleep stage and sleep bout analysis calculations, peak frequency analysis generation, and a scoring comparison tool are included in the package. In addition, all computed data can be exported for use in external spreadsheet programs, and charts and graphs can be easily saved as high-resolution images for future analysis.

SLEEP STAGE/SLEEP BOUT ANALYSIS

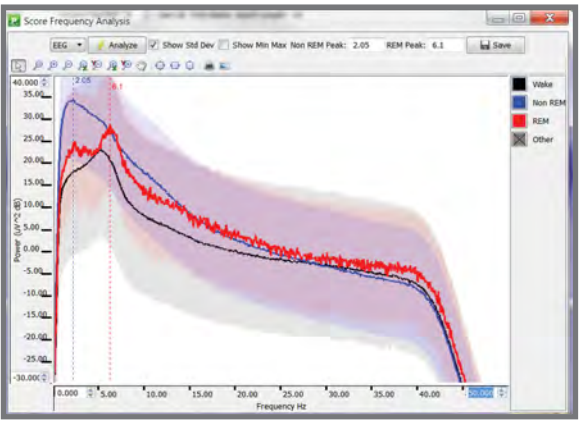


User-configured sleep stage and sleep bouts are automatically generated for fast and easy analysis. Analysis can be broken down into light and dark cycles as well as day-by-day reports.



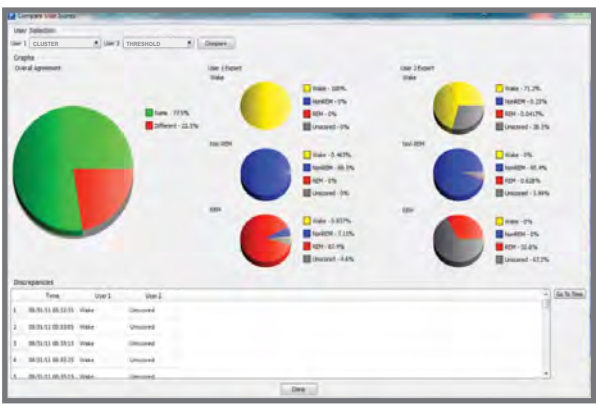
- Adjustable Parameters:
- Bout Length
 - Light/Dark Timing
 - Day Length
 - Multiple Days

PEAK FREQUENCY ANALYSIS



Average peak frequency of each scored stage is calculated and graphed for each data channel. Standard deviation and minimum/maximum values are optional views for complete analysis.

COMPARE USER SCORES

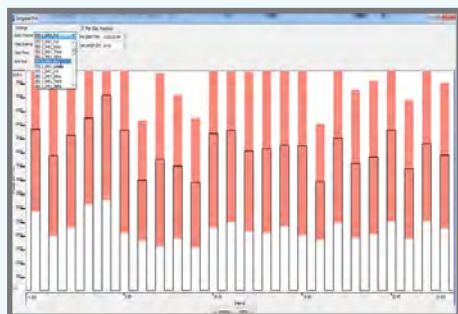


As an added bonus, Sirenia® Sleep Pro automatically compares scoring sessions. Users can compare sleep scores between two different scorers or two different methods. This tool also allows users to jump to epochs of discrepancy for careful review.

YOU CONTROL YOUR DATA

TIME COMPARISON ANALYSIS

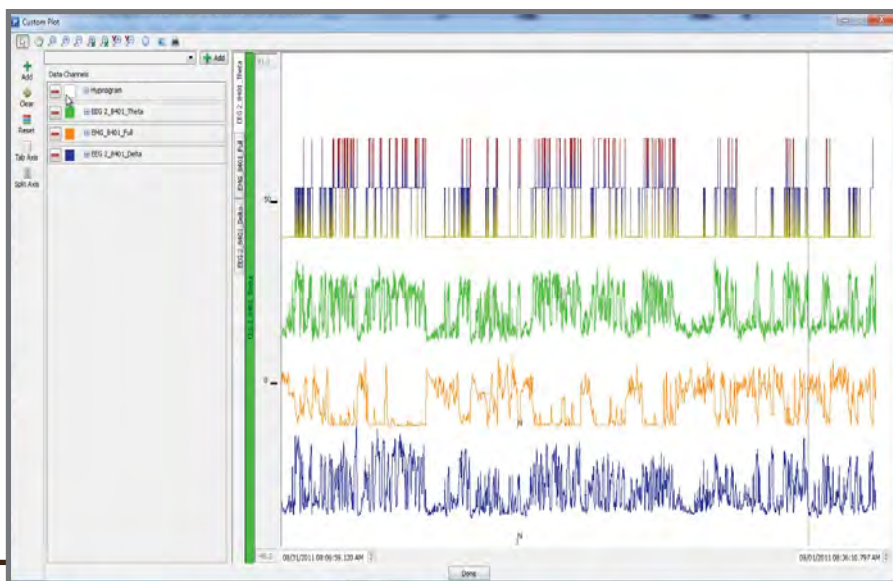
The Time Comparison Analysis tool plots total time in each sleep/wake stage as well as total power per band over user-configured periods, creating informative graphs in seconds.



**ALL CHARTS AND GRAPHS CAN BE SAVED AS HIGH-RESOLUTION IMAGES
PERFECT FOR PAPERS AND PRESENTATIONS**

CUSTOM PLOTS

Customizable plots and graphs provide users with an exciting and innovative way to review and analyze data. Using this tool, power spectra bands, hypnograms, and other available data can be placed on one easy-to-view plot. Plots can be arranged in any configuration and can be zoomed in and out to view detailed changes in the data.



Download the 30-day free software trial and try it for yourself. You'll be scoring and analyzing sleep data faster than ever.

Contact a Pinnacle representative for your key:
785-832-8866 or sales@pinnaclet.com

**30-DAY
FREE
TRIAL**

 <http://www.neuro-s.co.jp>
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