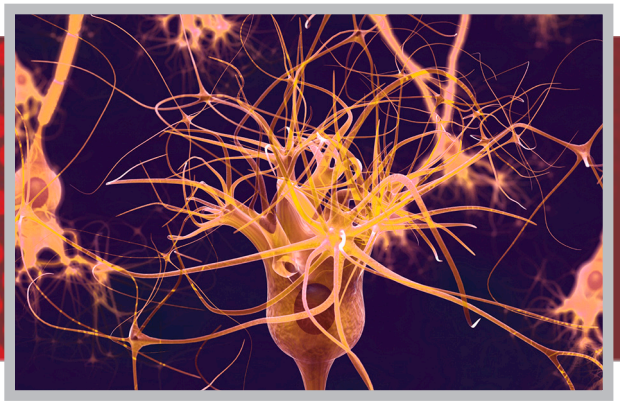
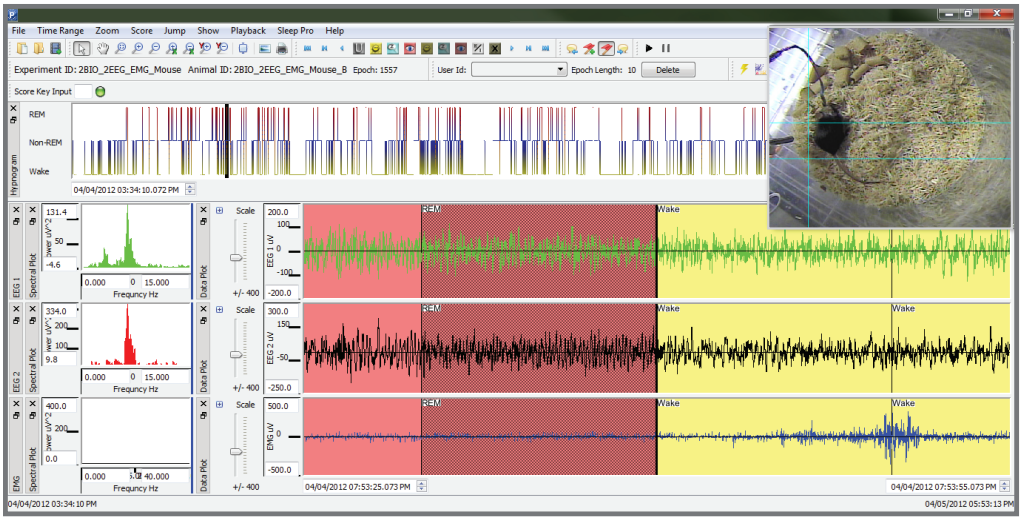
PINNACLE TECHNOLOGY

SIRENIA® SLEEP PRO





SIRENIA® SLEEP PRO was designed to reduce your scoring time and simplify your data analysis. It offers automated power analysis, semi-automated scoring methods, and advanced tabular and graphical analysis for investigating sleep data sets. Custom scoring and analysis are also available. Scoring sessions between two or more users can be easily compared. All EEG/EMG and video data sets recorded with Pinnacle software, as well as third-party EDF files, can be imported.

KEY FEATURES

SCORING TOOLS

- Semi-Automated Scoring:
  - Cluster
  - Threshold
- Customizable Scoring
- Hypnograms
- Export FFT Data with Scores

AUTOMATED ANALYSIS

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

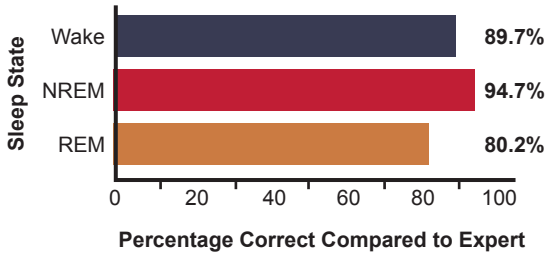
PLOTS & GRAPHS

- Time Comparison Plots
- Multiple Power Bands
- Spectral Plots
- Heat Maps

SCORE MOUSE & RAT DATA IN 75% LESS TIME

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 5 minutes or less with greater than 85% accuracy for Wake and NREM and greater than 75% accuracy for REM.

Contact Pinnacle for your free 30 day trial!

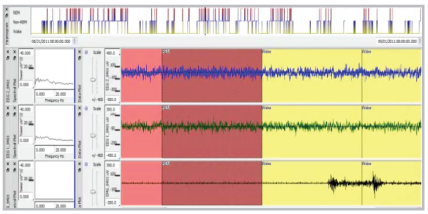
PINNACLE TECHNOLOGY | WWW.PINNACLET.COM | (785) 832-8866 | SALES@PINNACLET.COM |

SCORING TOOLS & AUTOMATED ANALYSIS

MULTIPLE SCORING METHODS

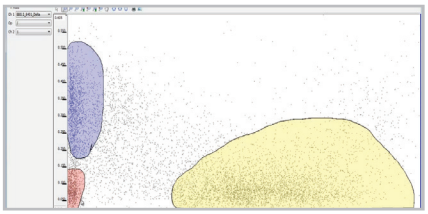
Sirenia® Sleep Pro provides users with three mechanisms for scoring sleep data: manual scoring, cluster scoring, and threshold scoring. Users can combine multiple methods for quickly and accurately scoring both mouse and rat files. Epoch lengths are user-configurable, and numerous scoring sessions can be created for the same file. Sirenia® Sleep Pro performs automated power analysis on six default bands for each data channel with the option to create customized bands for additional analysis and export to text files for additional animal-to-animal analysis.

MANUAL



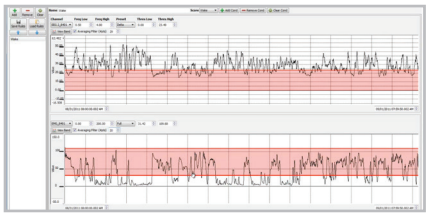
Traditional manual scoring is available. Quick keys can be configured to individual user preferences, making scoring easy and accessible. Sirenia® Sleep Pro provides hypnograms, epoch-by-epoch heat maps, and spectral plots as visual aids to assist with manual scoring.

CLUSTER



Cluster scoring is a semi-automated process allowing rapid scoring of similar epochs based on power analysis. Power data for each epoch is graphed, producing clusters of epochs that can be scored by circling similar groups and assigning a stage. Data can be plotted many 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.

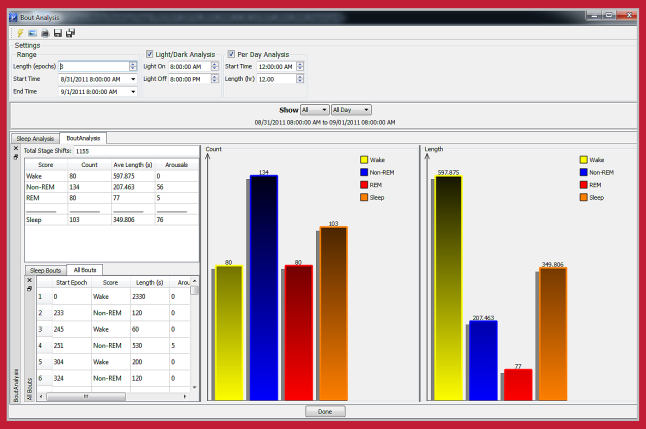
SIMPLIFY ANALYSIS

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. 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.

Custom Plots - Power spectra bands, hypnograms, and other available data can be placed on one easy-to-view plot. Multiple plots can be overlaid and modified per user specifications.

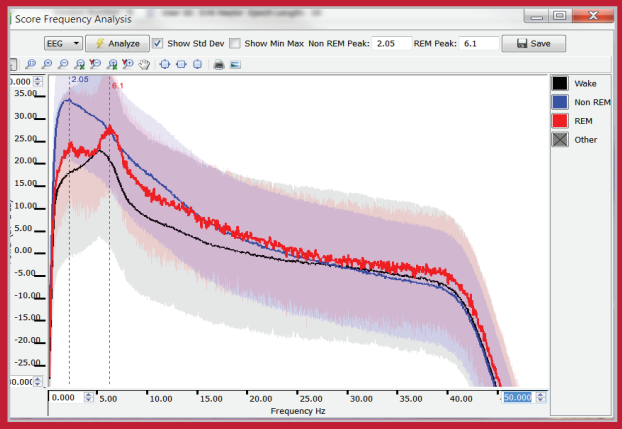
Time Comparison Analysis - This tool plots total time in each sleep/wake stage as well as total power per band over user-configured periods, creating informative graphs in seconds.

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.

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.