

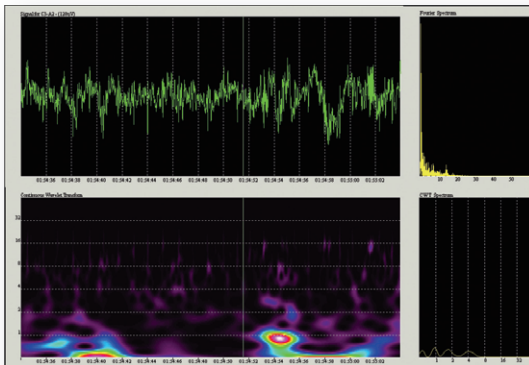
ProFusion Plus is a collection of add-on tools that enhance the capabilities of the ProFusion PSG software so you can get more from your research data.

### Continuous Wavelet & FFT Spectrum Analysis

The **Continuous Wavelet** add-on provides Wavelet and FFT spectrum analysis to selected AC inputs.

This is provided in the form of a View, which is comprised of four panes:

- Input
- Fourier Spectrum
- Wavelet
- CWT Spectrum



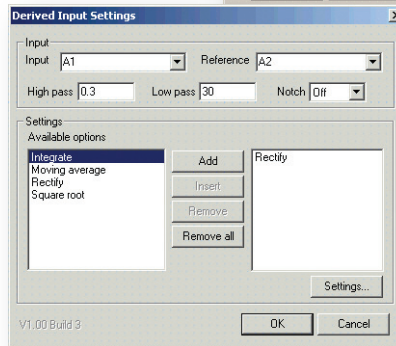
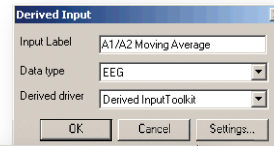
Wavelet View

### Derived Input Toolkit

The **Derived Input Toolkit** allows creation of calculated inputs, which are derived from recorded inputs or other calculated inputs.

Predefined mathematical functions can be performed on each input in sequence. These include integration, moving average, rectification and square root.

Specify Derived Input

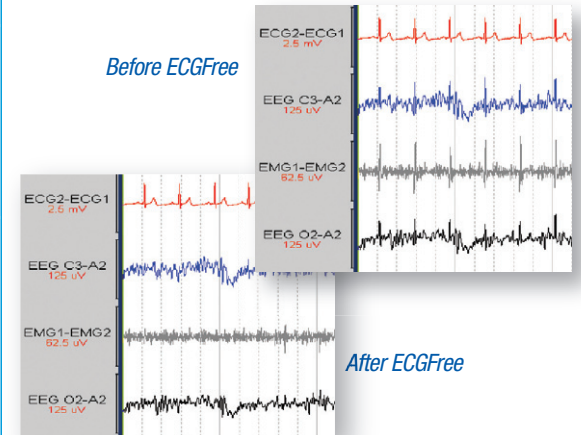


Derived Input Settings

### ECGFree

**ECGFree** removes ECG artifact from non-ECG electrophysiological traces (for example EMG, EOG or EEG), without altering the valid physiological traces.

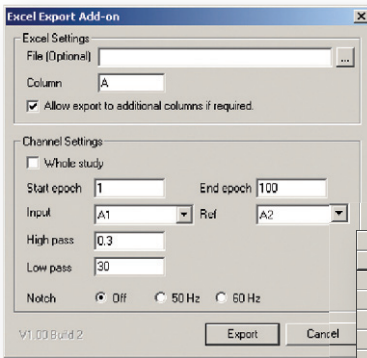
Traditionally it has been possible to minimise ECG artifact by linking the A1 and A2 electrodes, however this method has two disadvantages in that either A1 or A2 must be used as a reference (typically not possible with EMG inputs), and linking A1 and A2 may alter the signal. ECGFree uses the ECG trace, as selected in Input Assignments, as a template in order to identify the R Point of the QRS waveform, and calculates a moving average of the QRS template over a selectable number of beats, which is then used to subtract the ECG artifact component from the desired traces.



After ECGFree

### Microsoft Excel Export

The **Microsoft Excel Export Add-on** allows the user to select a range of data from a PSG recording and export it directly to Microsoft Excel. The exported is selected by epoch range.



Microsoft Excel Export Add-on

Example Data Export

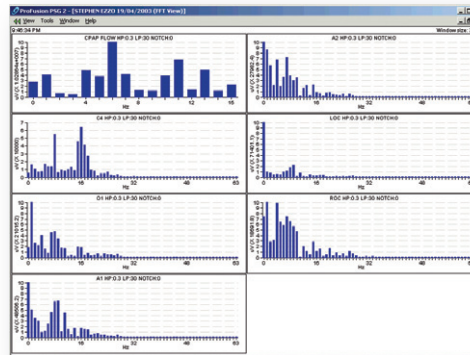
	A
1	A1-A2
2	128
3	9:46:34 PM
4	
5	1.53125E-05
6	1.07031E-05
7	1.44844E-05
8	1.30312E-05
9	1.19844E-05
10	1.18281E-05
11	1.18281E-05
12	1.21094E-05
13	1.22969E-05
14	1.18906E-05
15	1.125E-05
16	1.09844E-05
17	1.16562E-05

### FFT View

The **FFT View add-on** displays a user-configurable range of FFT histograms for any AC input.

The FFT View contains a number of functions and editable display properties:

- Select default sleep or default EEG views, or define custom views by manually adding or deleting individual FFT histograms
- Globally change the spectrum value (horizontal axis) between 5, 10, 20 and 50% of the total sampling rate for each graph
- Add and delete graphs
- Edit the Input, Referential Input and filtering properties on the fly for each individual graph
- Select alternate Windowing modes (Bartlett, Hamming, Hanning or none) on the fly for each individual graph
- Export the graph values to Microsoft Excel

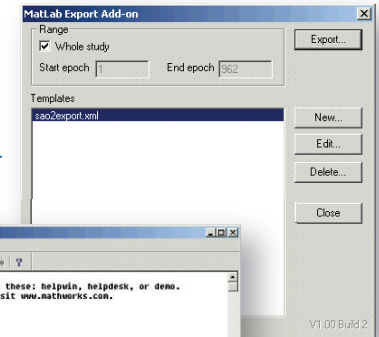


FFT View

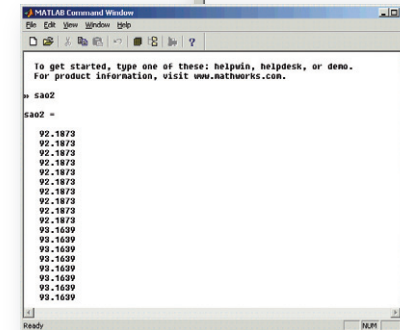
### Mathworks Matlab Export

The **Mathworks Matlab Export** add-on allows exporting of selected rawdata section to the Matlab workspace directly, without the need of additional export medium. The exported data can be for either the full duration of the study or a specified range of epochs.

Exporting is performed using a range of export templates which are pre-programmed by the user. Each template consists of one or more export variables, which are used to specify inputs that are to be exported and filtering parameters. Templates and variables contained within them are saved for future use.



Matlab Export Manager



Matlab Workspace

To find out more about this product, contact your local Compumedics representative.

Part No. 9105-0080-0X

