Data is collected using a Compumedics Safiro ambulatory collector and outputted to Compumedics ProFusion PSG 2 software for visual assessment of data quality. The ProFusion PSG file (.slp) is converted to a .rec format EDF using Profusion. This EDF is exported with the data corresponding to the inputs as they were recorded. Sandman 10 is used for the visual scoring of the PSG, after Sandman is used to convert the .rec file to the Sandman file format; .san. Sandman down-samples the 16 bit edf to 12 bit .san. Digital min/max and other technical information lost in .rec to .san conversion. Signals are referenced after conversion.

ProFusion .slp -> .rec -> Sandman .san

Each of the three sample studies have the following files included:

1. .rec export
2. Exported event list from scored Sandman file. It is organized by epoch, with time stamp of each epoch provided. We can also provide raw data exports with samples enumerated from the start of recording. This won’t have tags and scoring info, so it would have to be reconciled with the epoch based event list.
3. Two alternative edf exports
   1. The edf file labeled using “ID\_DATE” is the same as the rec file we use.
   2. The file labeled as “ID referenced” is an export with the signals referenced before import into Sandman.

Data channels as collected on Safiro device: EEG, EOG, EMG use standard derivations e.g. C3-M2, E2-M1, chin1 – chin2. LPF is one octave over sampling rate for EEG. Signals sampled at 1024 Hz and stored after digital decimation with true 16 bit resolution.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Channel** | **LFF (HPF)** | **HFF (LPF)** | **60 Hz Notch** | **Location/**  **Variable** | **Sampling** | **P-P range** | **Input Channel** |
| EEG | 0.15 Hz (hardware) | 64 Hz | Off | F3 | 256 | 500 uV | 17 |
| EEG | 0.15 Hz | 64 Hz | Off | F4 | 256 | 500 uV | 18 |
| EEG | 0.15 Hz | 64 Hz | Off | C3 | 256 | 500 uV | 5 |
| EEG | 0.15 Hz | 64 Hz | Off | C4 | 256 | 500 uV | 6 |
| EEG | 0.15 Hz | 64 Hz | Off | O1 | 256 | 500 uV | 7 |
| EEG | 0.15 Hz | 64 Hz | Off | O2 | 256 | 500 uV | 8 |
| EEG | 0.15 Hz | 64 Hz | off | T4 | 256 | 500 uV | 20 |
| EEG | 0.15 Hz | 64 Hz | Off | M1 | 256 | 500 uV | 9 |
| EEG | 0.15 Hz | 64 Hz | Off | M2 | 256 | 500 uV | 10 |
| EOG | 0.15 Hz | 64 Hz | Off | E1 | 256 | 500 uV | 11 |
| EOG | 0.15 Hz | 64 Hz | Off | E2 | 256 | 500 uV | 12 |
| ECG | 0.15 Hz | 64 Hz | On | ECG 1 | 128 | 10 mV | 13 |
| ECG | 0.15 Hz | 64 Hz | On | ECG 2 | 128 | 10 mV | 14 |
| EMG | 0.15 Hz | 128 Hz | Off | chin1 | 256 | 500 uV | 15 |
| EMG | 0.15 Hz | 128 Hz | Off | chin2 | 256 | 500 uV | 16 |
| EMG | 0.15 Hz | 128 Hz | Off | chin3 | 256 | 500 uV | 19 |
| EMG | 0.15 Hz | 128 Hz | Off | right arm | 256 | 500 mV | 22 |
| EMG | 0.15 Hz | 128 Hz | Off | Left arm | 256 | 500 mV | 21 |
| EMG | 0.15 Hz | 128 Hz | Off | right leg | 256 | 500 mV | 2 |
| EMG | 0.15 Hz | 128 Hz | Off | left leg | 256 | 500 mV | 3 |
| EMG | 0.15 Hz | 128 Hz | Off | right foot | 256 | 500 mV | 24 |
| EMG | 0.15 Hz | 128 Hz | Off | left foot | 256 | 500 mV | 23 |
| oximeter | Off | Off | Off | oximeter | 1 | direct | Oximeter |
| belt | 0.05 Hz | 15 Hz | On | thoracic | 32 | 10 mV | 31 |
| belt | 0.05 Hz | 15 Hz | On | abdomen | 32 | 10 mV | 32 |
| nasal pressure | Off | Off | Off | nasal pressure | 32 | fixed | Ext pressure |
| thermistor | Off | Off | Off | thermistor | 32 | fixed | 29 |
| body position | Off | Off | Off | body position | 4 | 500 mV | 1 |