

Main Features

- Light-weight waterproof wrist-worn actigraphy device
- Fast direct USB transfer eliminates need for a reader
- Light sensor and event marker included as standard
- User replaceable battery
- Records up to 120 days with a 1 minute epoch*
- Software includes NPCRA function
- All raw and analysed data can be exported
- CE marked Class 1 medical device and US FDA cleared (K132764)

Applications

- Detection of sleep disorders
- Circadian rhythm research
- Paediatric sleep
- Psychiatry
- Health Psychology



The MotionWatch 8 is the next generation of actigraphy device from CamNtech, inventors of the Actiwatch. Following discontinuation of the Actiwatch 4 and 7, CamNtech has utilised advances in accelerometer technology to produce the MotionWatch 8 with a tri-axial digital accelerometer.

The MotionWatch is one of the most unobtrusive Actigraphy devices available leading to high patient compliance. With an in-built ambient light sensor and event marker, the MotionWatch provides the ideal solution for long-term recording with no interruptions for battery charging.

Sleep

MotionWare, the new analysis software designed to analyse data from the MotionWatch, allows the user to access data on a full range of sleep and circadian parameters. The MotionWatch uses a new digital tri-axial accelerometer, greatly improved from old Actiwatch devices. Although the activity counts are not identical to activity counts from old Actiwatch devices this gives increased reliability and less variability both between devices and over time.

Validation

The MotionWatch 8 is now validated against polysomnography. Please contact us for further information.

| Epoch length | Recording time* |
|--------------|-----------------|
| 2 seconds | 6 days |
| 5 seconds | 15 days |
| 15 seconds | 45 days |
| 30 seconds | 91 days |
| 60 seconds | 120 days |

*With light disabled.

Technical Specification

| | |
|----------------|--|
| Size mm: | 36(l) x 28.2(w) x 9.4(d) excluding strap |
| Weight: | 9.1 grams (including battery, excluding strap) |
| Sensor: | Tri-axial, MEMs technology. 0.01g to 8g range, 3 – 11Hz |
| Battery: | CR2032 Lithium Coin Cell |
| Battery Life: | 120 days run time; simple user change |
| Memory: | 4Mbits non-volatile (120 days recording @ 1min epoch AW mode - uncompressed) |
| Waterproof: | 3 Bar (suitable for swimming) |
| Marker button: | Yes – with visual feedback |
| Epoch: | 2, 5, 15, 30, 60 secs in AW compatible mode |
| Comms: | Direct USB, uses generic Windows drivers, Micro USB cable. |
| Download: | All data in 50 secs approx. |
| Strap: | Bespoke XL 12mm silicone (245mm overall length) or 12mm nylon |

Integral Light Sensor

| | |
|-------------|---|
| Type: | Digital – human eye response optimised. |
| Range: | Automatic ranging; 0 to 64000lux |
| Resolution: | 0.25lux (0-1000 lux range) |
| Sampling: | 1 sample per second – averaged over epoch |

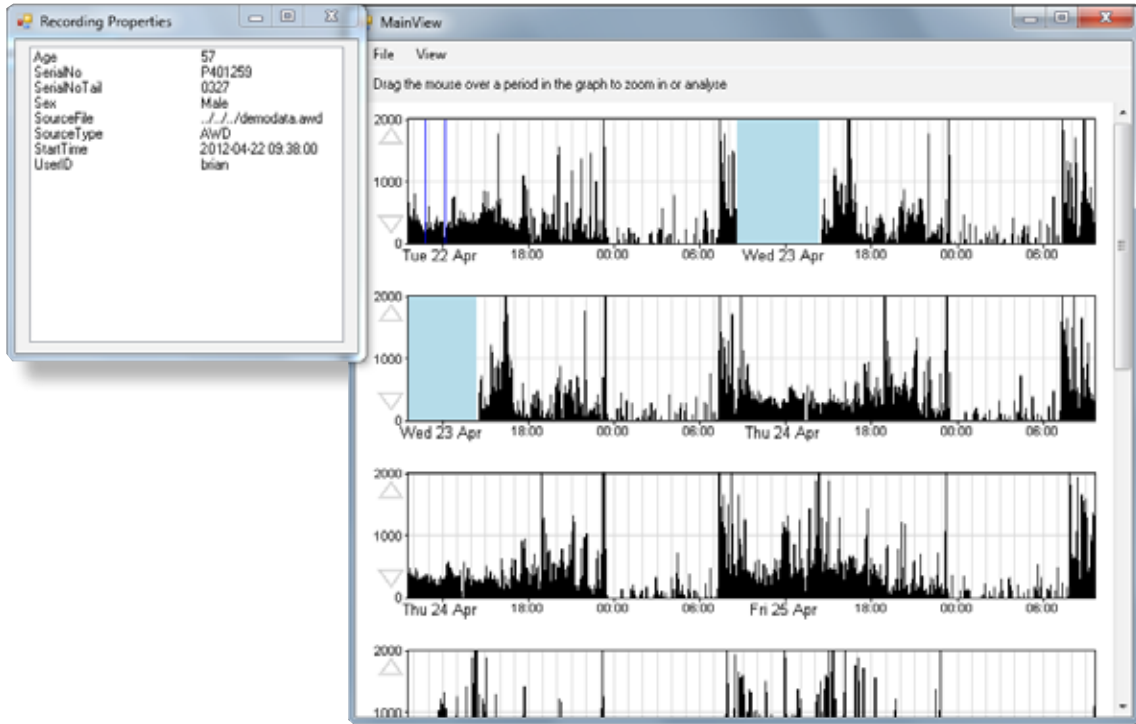
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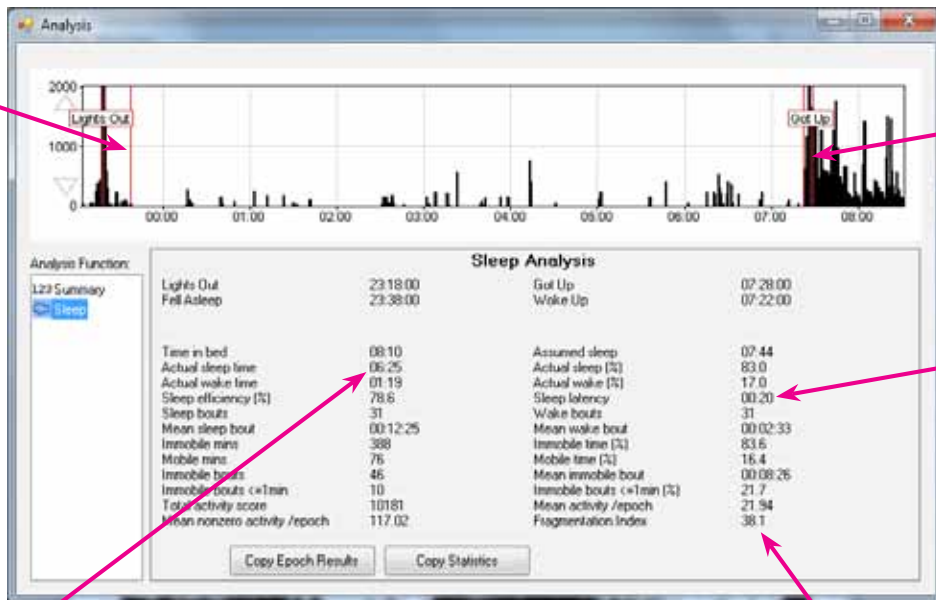
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Circadian Rhythm Analysis



Sleep Analysis

Bed Time Marker



Get-up Marker

Sleep latency
Bed Time - Sleep time

Actual Sleep Time
Assumed Sleep - Actual Wake Time

Fragmentation Index
No. of minutes % + Immobility of 1 min %

Ordering Information

| Part | Description | Order code |
|---------------------|--|------------|
| MotionWatch 8 | MotionWatch 8 including battery | 04-111 |
| MotionWare Software | For MotionWatch 8 and PRO-Diary. Requires Windows® XP, Vista, 7 or 8 | 04-112 |
| Batteries | CR2032 Lithium Coin Cell | 04-113 |