

Main Features

- Light-weight waterproof wrist-worn actigraph
- Fast direct USB transfer
- USB data transfer eliminates need for a reader
- Light sensor and event marker included as standard
- User replaceable battery
- Records up to 180 days with a 1 minute epoch*
- Software includes NPCRA function
- All raw and analysed data can be exported to third party programmes

Applications

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



The MotionWatch 8 is the next generation of actigraph 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 activity plots coupled with specialised software serve to quantify the intensity and duration of daily physical activity as an indicator of a particular lifestyle or to monitor the effects on mobility of a medical condition as well as the efficacy of treatment for that condition.

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 is currently undergoing validation against polysomnography. A further validation study is also being conducted to confirm independently that the output from the MotionWatch is comparable to that from the Actiwatch 4 and 7. Full details of both validation studies will be available shortly.

Epoch length	Recording time*
2 seconds	6 days
5 seconds	15 days
15 seconds	45 days
30 seconds	91 days
60 seconds	182 days

*With light enabled, recording times are halved.

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:	6 months run time; simple user change
Memory:	4Mbits non-volatile (182 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

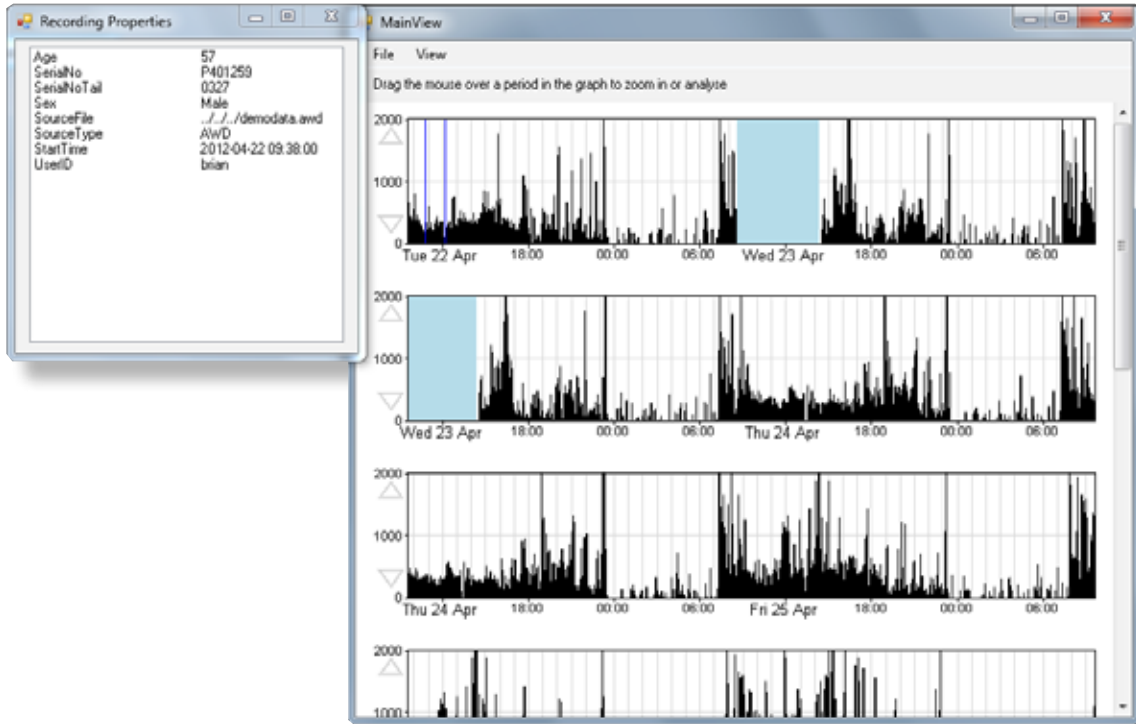
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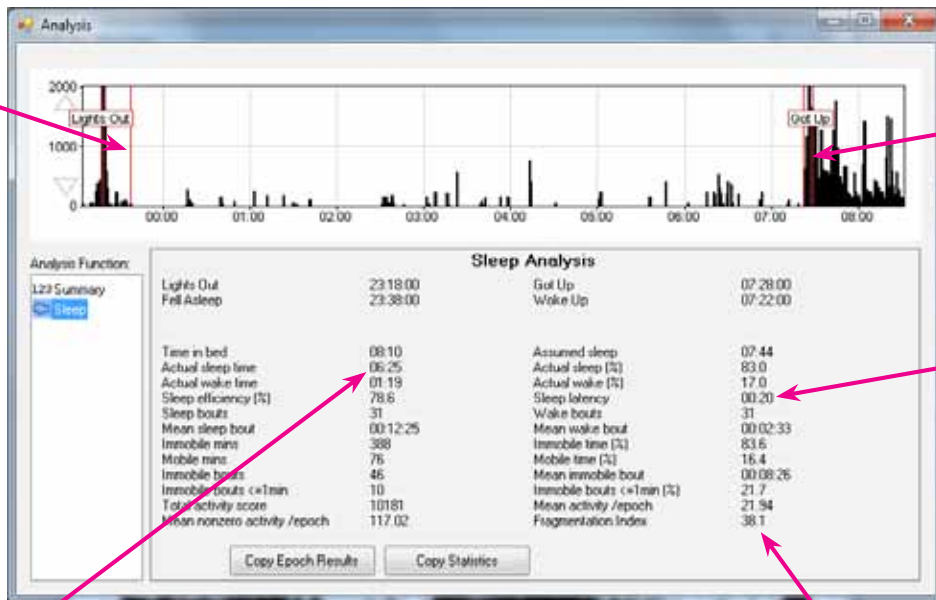
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Circadian Rhythm Analysis



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	Compatible with MotionWatch 8 and PRO-Diary. Windows® XP or Vista or Windows®7	04-112
Batteries	CR2032 Lithium Coin Cell	04-113