



# Professional sleep and activity monitoring solutions

Actiwatch monitoring systems

# Valid and accurate data collection couldn't be easier

Our scientifically-valid Actiwatch systems are designed to provide accurate and objective activity, sleep, wake, and light-exposure data. Due to the many advantages of Actiwatch technology, thousands of people around the world have worn our devices day in and day out in a multitude of sleep labs, research programs, and clinical trials.



Actiwatch devices are designed to be rugged, waterproof and worn 24/7.

## The Actiwatch advantage:

### Compact, reliable devices that are easy to implement

- Small size, comfortable, and waterproof
- Easy to wear for days, weeks, and even months
- Data is recorded 24/7 to help you obtain real-world insights into subjects' sleep/wake patterns

### Valuable endpoints for a variety of applications

- Collect up to nine different parameters (depending on model)
- Gather important outcome measures for pharma, academic research, and clinical applications
- Record valuable sleep<sup>1,2,3</sup> and activity endpoints for studies in areas such as pain,<sup>4,5,6,7</sup> fatigue,<sup>8,9</sup> and depression<sup>10</sup>

### Scientifically-valid technology from a leader in sleep

- Validated against PSG gold standard for sleep measures<sup>1,2,3</sup>
- Used in hundreds of studies in a variety of environments
- Used on infants through the elderly

# Solutions for the scient

Each Actiwatch model provides different feature combinations so you can select the one that best fits your specific needs. All are comfortable, rugged, and waterproof to fit seamlessly with different lifestyles.



Actiwatch 2 is lightweight and compact – ideal for children.

## Actiwatch 2

### Compact size is ideal for small wrists

Our simplest option for a robust device that collects activity and sleep information along with photopic light and event marker button entries for up to 30 days; great for all ages.

Sleek, comfortable band designed to help enhance patient comfort and acceptance



Event marker button

Integrated light sensor to allow for recording of photopic light

Lightweight and compact (only 43 x 32 x 10 mm and 16 grams)

## Features

- **Three data channels** – illuminance, activity, and event marking
- **Waterproof case** – ultrasonically welded to provide a durable seal
- **Event marker** – record the time of events with a single button press
- **Rechargeable battery** – power to support 30 days of data collection
- **High-quality biocompatible materials** – holds up to daily, weekly and monthly use

# ific professional



Actiwatch Spectrum Plus collects up to seven data channels simultaneously.

## Actiwatch Spectrum Plus

### Wristwatch with advanced sensing capabilities

Collect activity and sleep information along with multiple light measurements, event marker button entries and patient compliance over days, weeks and even months.

Integrated light sensor to record photopic light in Lux



Actiwatch Spectrum PRO can collect subjective numerical rating scale responses (e.g., pain<sup>4,5,6,7</sup>, fatigue<sup>8,9</sup>, depression<sup>10</sup>) in real time from your subjects. These scores can be used in association with, or independently from, other questionnaires.

## Actiwatch Spectrum PRO

### Real-time subjective scoring

Incorporates all of the features of the Actiwatch Spectrum Plus and provides subjective scoring capabilities and audible and vibrational alarms. The alarms remind subjects to enter subjective scores on a pre-programmed schedule or on a manual basis. This capability adds another dimension to data collection when studying parameters such as pain and fatigue.

### Features

- **Off-wrist detection** – software indicates when the device was not worn
- **Long-term recording** – supports months of data recording
- **Advanced light sensing** – records photopic, red, green, and blue light
- **Audible off-wrist reminder** – reminds the user to put the device back on
- **Direct USB connectivity** – enables rapid charging and data retrieval
- **Rechargeable battery** – eliminates need for battery changes
- **Subjective scoring (Actiwatch Spectrum PRO only)** – record two subjective scores manually or on a programmed schedule

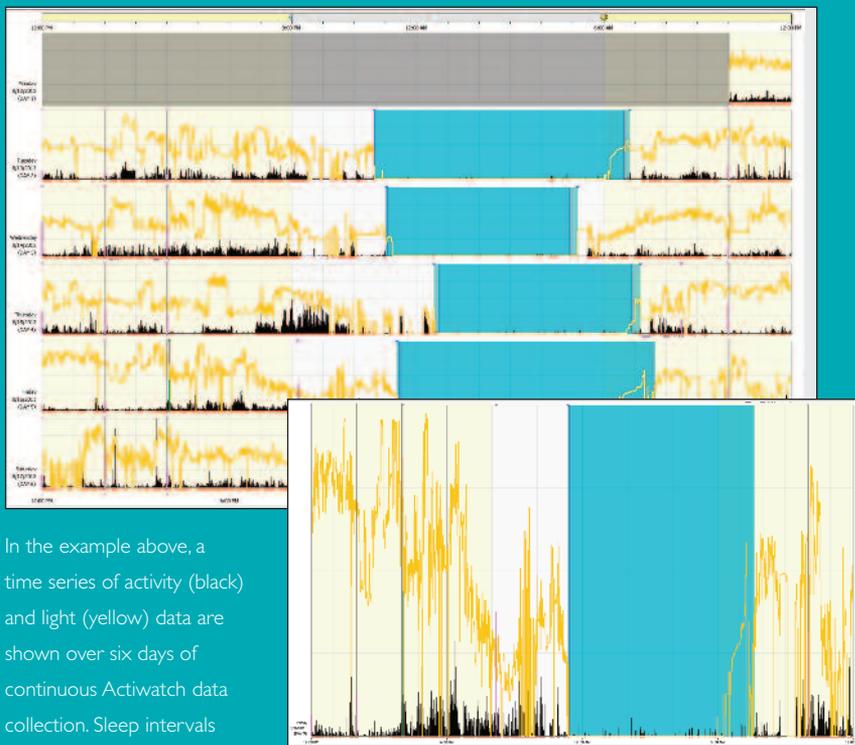
# Which Actiwatch model is right for your needs?

Feature	Actiwatch 2	Actiwatch Spectrum Plus*	Actiwatch Spectrum PRO*
Activity	X	X	X
Waterproof	X	X	X
Rechargeable	X	X	X
Event marker	X	X	X
Light sensing	Photopic	Photopic, RGB	Photopic, RGB
Watch face/status display	NA	X	X
Off wrist	NA	X	X
Audible/vibratory score reminder	NA	NA	2 channels

\*Coming soon

## Actiware software supports all Actiwatch devices

Actiware software simplifies data management, analysis and exportation to help you process data into meaningful endpoints quickly and easily. Data is displayed in an actogram format to help you identify sleep/wake periods visually. Sleep parameters are automatically quantified and displayed in statistics tables and printed reports.



In the example above, a time series of activity (black) and light (yellow) data are shown over six days of continuous Actiwatch data collection. Sleep intervals are indicated in aqua.

In the example above, twelve hours of continuous activity, light, and subjective scores were collected for pain (pink) and fatigue (green). Scores entered in response to automatic reminders are designated by \*; manual entries are designated by diamonds; blue wedges are event marker presses.

## Technology backed by experience, support and services

For more than 15 years, we have helped researchers and pharmaceutical companies around the world, as they implement actigraphy for their small and large scale studies. We take pride in helping your trials go smoothly and reducing the burden on you and your staff.

“The employees were extremely professional, but also extremely personable and I thoroughly enjoyed working with them and would love to work with them in the future.”

– H.M., Vanda Pharmaceuticals, Clinical Research

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Bibliography of publications available on request.

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e-doc SB 8/6/13 MCI 4105737