

A step above traditional activity monitoring

Actical wireless noninvasive physical activity and energy expenditure activity monitoring system

Actical is a small, omni-directional accelerometer that accurately measures a subject's physical activity energy expenditure level and step count. It enables real-time ambulatory monitoring and is as efficient in quantifying energy expenditure as doubly-labeled water (DLW)¹ and VO_2 consumption², but at a fraction of the cost.

¹ C.A. Blanton, M.J. Kretsch, D.J. Baer, R.C. Staples. *Measuring Physical Activity Energy Expenditure in Normal-Weight, Premenopausal Women*, FASEB Journal 17:A290.7, 2005.

² D. Heil, *Predicting Activity Energy Expenditure Using the Actical Activity Monitor*, Research Quarterly for Exercise and Sport, American Alliance for Health, Physical Education, Recreation and Dance, 77: 1, 64-80, 2006.
N. Butte et al., *Prediction of Activity Energy Expenditure Using Accelerometers in Children*, USDA/ARS Children's Nutrition Research Center Department of Pediatrics, Baylor College of Medicine, Houston, TX.
K. Pfeiffer et al., *Validity of the Actigraph and Actical Accelerometers in 3-5 year-old Children*, North American Society for Pediatric Exercise Medicine, 2004.

PHILIPS

RESPIRONICS

Practical, versatile and easy-to-use

Actical is the only waterproof activity monitor that measures quantitative activity at various epochs. It calculates and records Active Energy Expenditure (AEE), Metabolic Equivalents per Time (METs) and step counts to enable you to review activity levels and patterns that were monitored. It also allows you to easily identify the time points when each activity occurred throughout the day.

Lightweight, small and durable, Actical is practical for all ages and activities, and can be used indoors or outdoors.

Data you can count on

The Actical software provides detailed analysis reports on AEE occurring over time. These reports supply information regarding your subject's activity levels to help you determine how well the subject is complying with prescribed therapies, treatments or research protocols. You can view data in either:

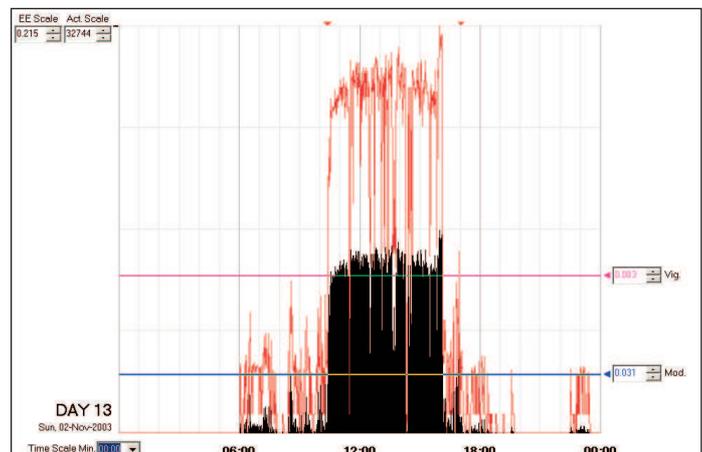
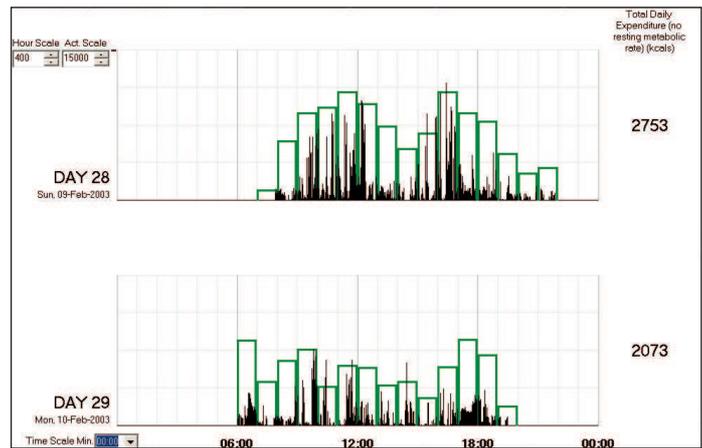
- ASCII compatible data files
- Visual displays of daily activity
- Kilocalorie energy expenditure outputs per day

The Actical data collection and analysis feature enables you to:

- Incorporate user-defined epoch length and data resolution
- Tag specific events with the event marker
- Record daily distribution of activity, energy expenditure and steps
- Document changes in activity and energy expenditure patterns
- Create automated analysis on an hourly or daily basis for the entire data set
- Use the custom interval section for specialized analysis

Actical components:

- ActiReader – PC serial port interface facilitates telemetric data transfer from the Actical
- Wrist, waist and ankle bands – neoprene material with elastic insert; available in two sizes to enable easy and secure mounting



- = Activity
- = Hourly energy expenditure
- = Energy expenditure



For more information, please visit: actical.respironics.com

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