med associates inc

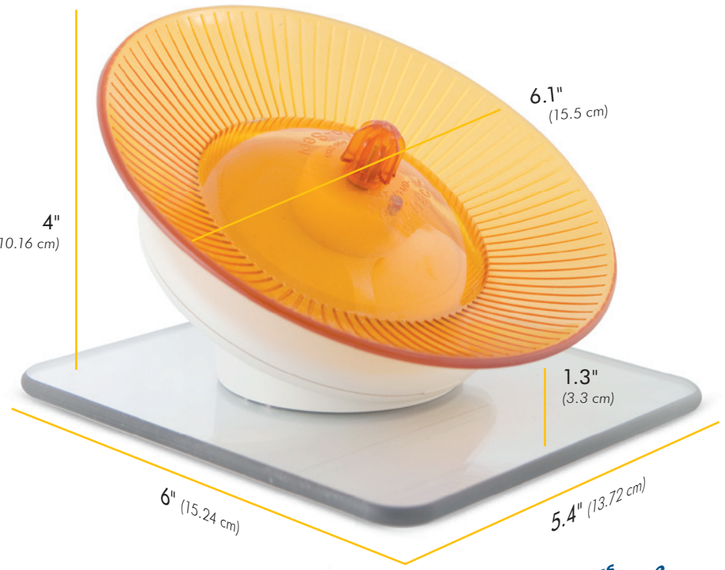
Instrumentation and Software for Research

WIRELESS RUNNING WHEELS

Low Profile 2-3

Vertical. 4-5

Software 6-7



ENV-047
Low-Profile Wireless Running Wheel for Mouse

MONITOR WHEEL RUNNING ACTIVITY WITHOUT RUNNING WIRES.

The current trend of housing mouse colonies in individually ventilated cages (IVCs) has allowed for dramatic increases in housing density, improved environmental control, and better biosecurity. However, the low profile configuration of many mouse IVCs has made it more difficult to add enrichment devices, such as a running wheel, to the mouse home cage. Our wireless low-profile mouse running wheel (ENV-047) represents a state-of-the-art device that enables quantitative measurements of mouse running levels in most standard IVCs. We use the popular Fast Trac™ running wheel surface from BioServ® along with our proprietary wireless transmitter to get running data from the home cage to a computer without any wires or cables.

NOTE: New wheels (ENV-047 & -047V) are compatible with new hub (DIG-807) only. The ENV-047 series wheels will not work with legacy hub (DIG-804).

ENV-044-01

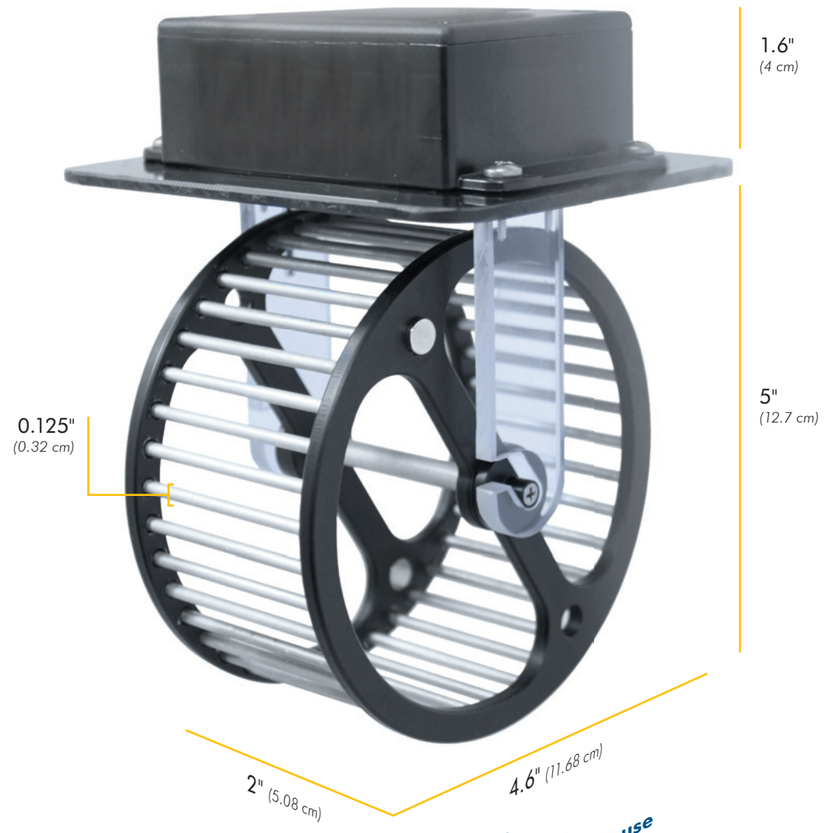
LOW-PROFILE WIRELESS RUNNING WHEEL

ENV-047 MOUSE

LOW-PROFILE WIRELESS RUNNING WHEEL NON-COUNTING

ENV-044-02 MOUSE

- Measure circadian rhythms while adding environmental enrichment
- Quantify running levels to determine how they correlate with behavioral changes
- Fits easily into most standard mouse ventilated rack cages
- Open running surface enables wheel running studies on mice that are instrumented or tethered
- Each hub monitors up to 40 wheels, with four hubs per computer
- Energy efficient and nearly maintenance-free *(powered by three AAA batteries)*
- Affordable and economical
- Easy to clean: hand wash wheel surface and plastic support base, wipe wheel transmitter with sanitation cloths
- Having spare wheels *(ENV-044-01)* on hand increases efficiency of cage changes



ENV-047V
Vertical Wireless Running Wheel for Mouse

MONITOR WHEEL RUNNING ACTIVITY WITHOUT RUNNING WIRES.

Our easy to use & lightweight anodized aluminum wheels fit on any standard wire-topped home cage, and require no tricky set-up or configuration. Perfect for long-term circadian rhythm studies, these wheels are an affordable option for your lab. These wheels are also compatible with our low profile wireless running wheel interface system.

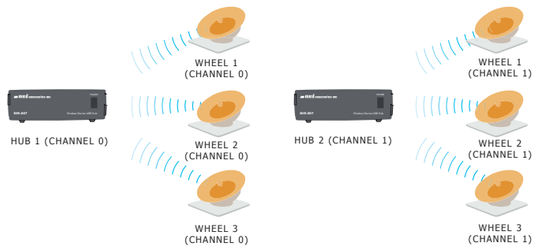
NOTE: New wheels (ENV-047 / -047V) are compatible with new hub (DIG-807) only. The ENV-047 series wheels will not work with legacy hub (DIG-804).

VERTICAL WIRELESS RUNNING WHEEL

ENV-047V MOUSE

- Fits onto conventional wire-topped cages
- Measure circadian rhythms with 30 second resolution while adding environmental enrichment
- Enables quantification of running levels and how they correlate with behavioral changes
- Lightweight but heavy duty aluminum vertical wheel revolves on a smooth frame which protrudes through the wire cage top
- Easy-to-clean design
- Designed to be affordable, economical, energy efficient, and nearly maintenance free
- Having spare wheels *(ENV-044V-01)* on hand increases efficiency of cage changes

ENV-044V-01

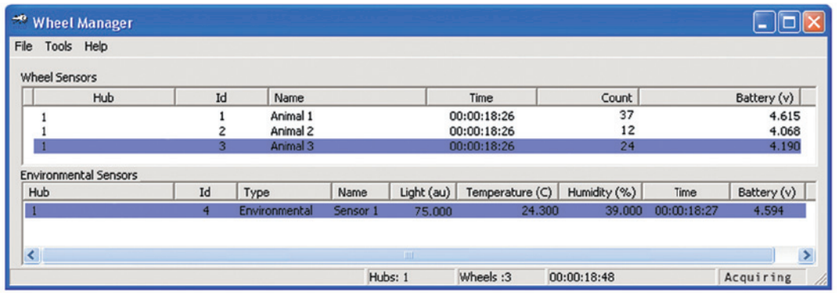


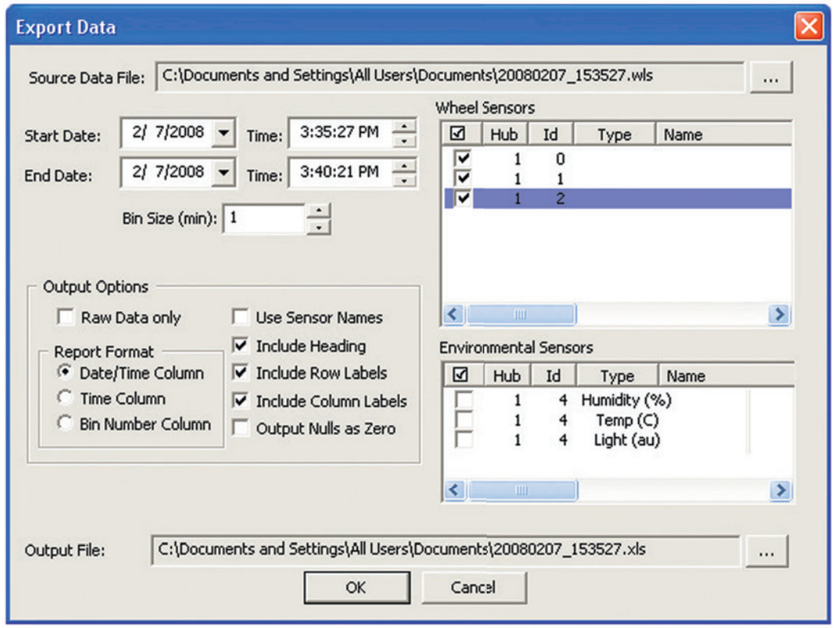
WIRELESS DEVICE USB HUB

DIG-807 MOUSE

This device connects to the data acquisition computer via a USB cable. The hub must be set to one of eight available addresses and all sensors must be set to the same address as the hub with which they communicate.

- Manage up to 40 wheels per hub, with four hubs per computer
- Hub receives messages once every 30 seconds from the wireless wheels
- Hub relays data to Wheel Manager Software *(SOF-860)* for data storage and retrieval
- Can be used with both vertical and low-profile wireless running wheels





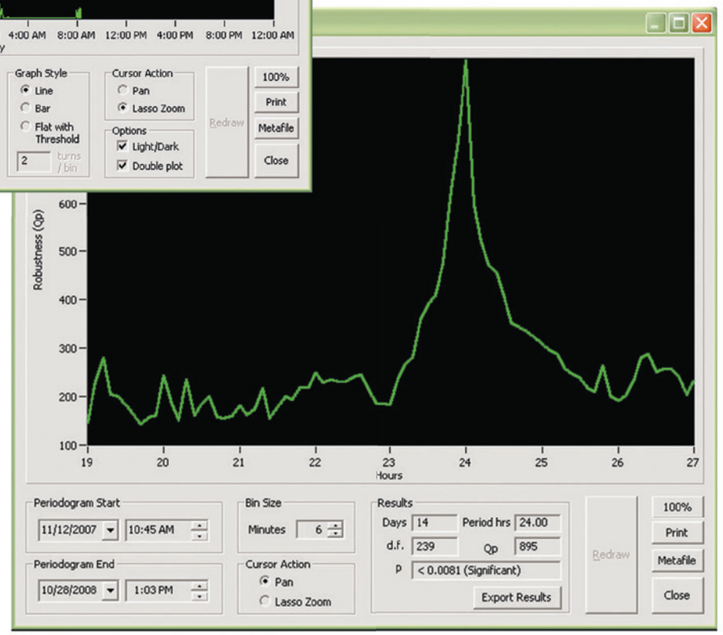
Export data screen with source data selected

WHEEL MANAGER DATA ACQUISITION SOFTWARE

SOF-860 MOUSE

- Record running wheel data from wireless running wheels to your computer
- Seamlessly export wheel manager data to Microsoft® Excel or other data analysis software to generate actograms and periodograms
- Export either the entire file or a user-definable time bin/selected time range

Actogram



Periodogram

WHEEL ANALYSIS SOFTWARE

SOF-861 MOUSE

- Complements our mouse wireless running wheels and Wheel Manager software toanalyze circadian rhythms
- Designed for circadian rhythm analysis in real-time during acquisitino or offline from saved Wheel Manager data
- Generates actograms and periodograms

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p: 802.527.9724 | f: 802.524.2110 | www.med-associates.com | e: sales@med-associates.com