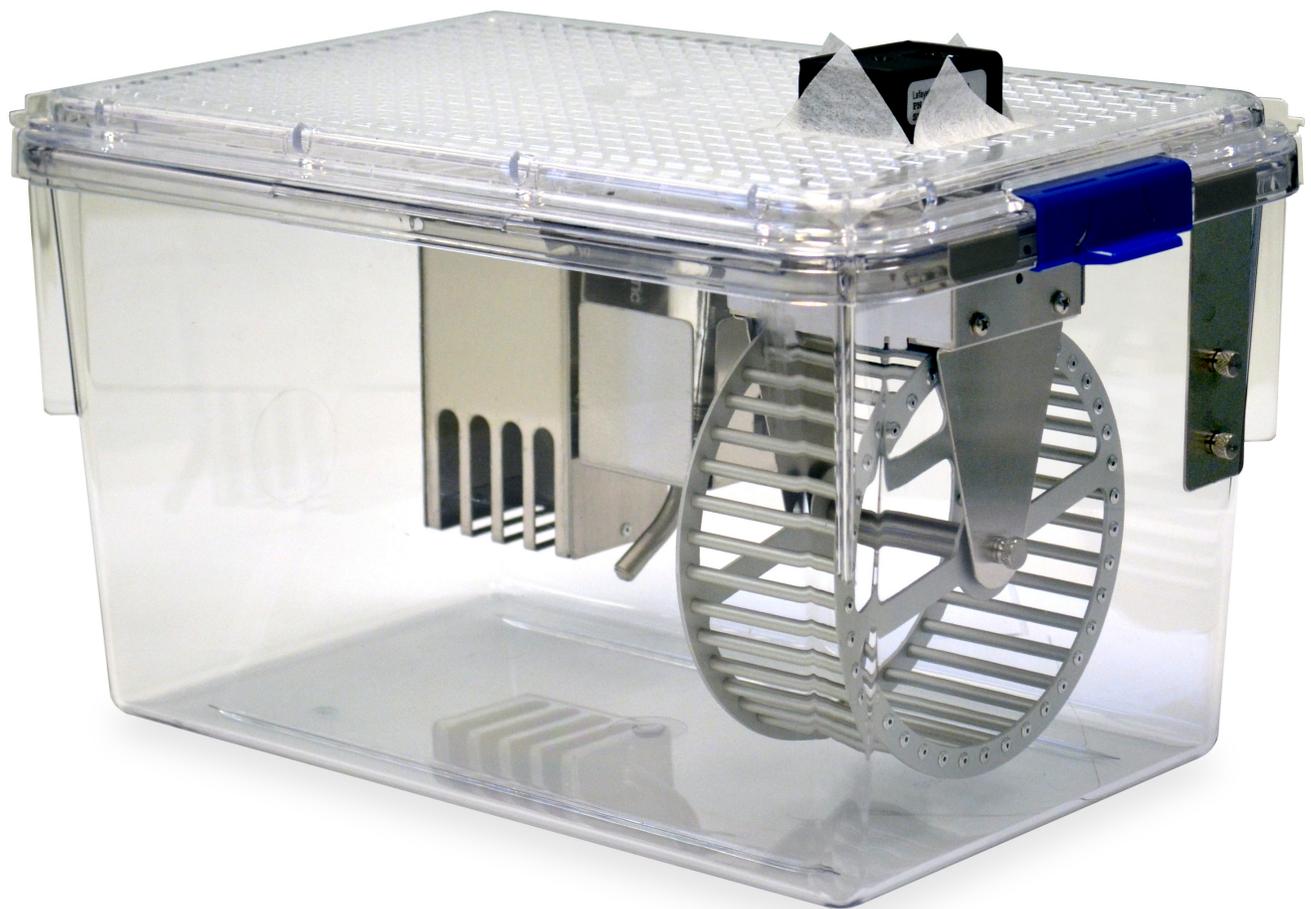


# Solutions for Animal Activity and Behavior

Wheel, Motility, and Lickometer Research



# SCURRY ACTIVITY MONITORING SYSTEM

## Scurry Activity Monitoring Software Model 86165

This software replaced our popular AWM and can be used with all Scurry Activity Systems as well as any AWM activity wheels provided the corresponding interfaces and counters are upgraded.

Scurry features streamlined, user-friendly electronics with integrated wheel and lick monitoring, programmable brakes with improved control and resolution, and a robust interface with secure data backup.

### Features

- Advanced schedule designer for optional brake control or other operations.
- Windows service for uninterrupted data collection.
- Real time display of summary data for an active session.
- Count data is recorded in 3 second bins.
- Lick data is recorded in 1/4 second bins
- Multiple data export formats.
- View data in an Excel like grid or chart.
- Adjust time bin intervals at analysis for meaningful output.
- Automatic firmware and software updates provided by Lafayette Instrument Company as needed.



Model 86165



Model 86100

## Scurry Interface for Animal Activity Model 86100

The Scurry Interface provides sixteen inputs that are compatible with all Lafayette Instrument Scurry Activity System counter and brake modules. The interface includes a light sensor to automatically log the light dark cycle in the animal room.

The interface is connected to the PC via USB to be setup and programmed for execution. In the event of a computer failure or communication failure during an experiment, the interface will automatically begin backing up all data until a connection is reestablished. This requires a suitable uninterruptible power supply (UPS) with battery backup for the interface (not included). Once a connection has been reestablished, backup data is automatically downloaded to the software. All counter and brake inputs are configured within the software.



Model 86100M

## Scurry Motor Interface for Animal Activity Model 86100M

The Scurry Motor Interface features four Motor Control ports as well as four standard activity monitoring ports identical to the Model 86100. The motor Interface is compatible with legacy AWM motors when used with the Model 86150 Scurry Legacy Motor Adapter.

# MOUSE RUNNING WHEEL SYSTEMS

## Mouse Activity Wheel Chamber

### Model 80820S

The 80820 Series Single Activity Wheel Chamber System was designed for long-term circadian rhythm and general activity studies. The chamber incorporates many features to allow for animal well-being and easy maintenance of system components. The activity wheel sensor is compatible with 86130 Stand Alone Counter, or 86110 Scurry Sensor. The latter unit requires the Model 86100 Scurry Interface and Model 86165 Scurry Software.

### Features

- All components are secured to top cover for one step removal
- Feeder and water bottle are attached to top cover allowing for easy access.
- Removable anodized aluminum wheel is easy to clean and maintain and is virtually friction free running on two Rulon bearings
- Removable access hatch allows for easy access to the animal
- Complete chamber can be easily disassembled for cleaning

### Specifications

- Dimensions: 9.3" x 13.9" x 7.7" (23.62 x 35.3 x 19.56 cm)
- Weight: 5.8 lbs.
- Wheel Diameter: 5.0" ID (12.7 cm)
- Run Distance: 0.40 meters/revolution
- Run Surface: 38 rods 0.188" diameter on 0.4298" centers with a 0.2418" gap (approx. 4.8 mm dia on 10.9 mm centers with a 6.14 mm gap)



Model 80820FS

## Mouse Activity Wheel Chamber with Filter Lid

### Model 80820FS

This unit shares all the features of the 80820S with a specialized lid that holds an effective microbiological barrier. Separate wheel assemblies and food and water assemblies make it easy to remove one or the other as needed.

## Mouse “Miss-Step” Activity Wheel Chamber

### Model 80821S

This unit shares all the features of the 80820S with an activity wheel featuring rungs that can be easily removed to create an uneven running surface. Removing selected rungs is required to perform tests of complex running.

## Mouse Tethered Motorized or Voluntary Wheels

### Model 80840B (Motorized)

### Model 80840WB (Voluntary)

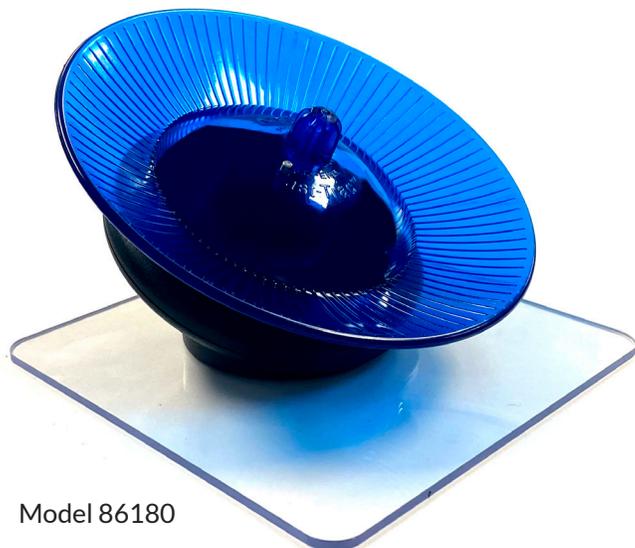
Individual mouse activity wheels suitable for use with tethered animals. They include food and water support and are generally used for scheduled exercise or sleep deprivation studies. Model 80840B is used for forced or voluntary running while Model 80840WB does not include the motor assembly for voluntary running studies only.

# MOUSE LOW-PROFILE WHEEL SYSTEM

## Mouse Wireless Low-profile Wheel Model 86180

The Actimetrics Wireless Low-profile Running Wheel for mice with the ClockLab Data Collection Software provides activity monitoring in standard shoebox mouse home cages. The low-profile wheel's unique shape supports the rodent's natural and instinctive running behavior. The base of the unit contains a sensor to count wheel revolutions, which are sent to the 86185 Wireless USB Gateway. The Wireless USB Gateway can receive data from up to 1000 wireless wheels, and connects to your laptop or desktop PC via USB.

ClockLab Data Collection and Analysis software is used to record and analyze running data.



Model 86180



Model 86187

## ClockLab Data Collection System Model 86187

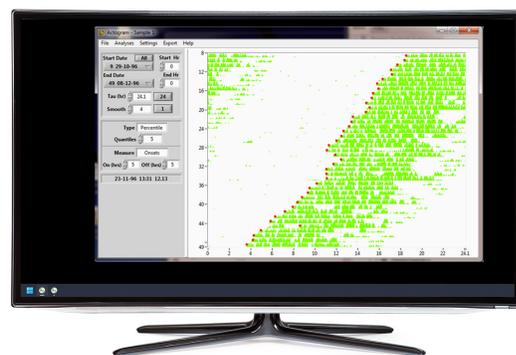
### Features

- **Wireless:** In addition to hard-wired connections via the USB interface, ClockLab can now connect wireless to up to 1000 running wheels or infrared motion sensors.
- **Reliable:** Our systems have logged over millions of hours of operation. Monitor almost any sensor, including running wheels, infrared motion detectors, or any digital signal.
- **Independent:** Each channel can be started and stopped independently. Recording on any channel can be started (or stopped) at any time with a user-selectable file name. Different files can be located in different directories for convenient segregation of multiple, concurrent experiments.
- **Accessible:** To monitor ongoing experiments, download data files over the internet at any time using FTP or Windows network capabilities.

## ClockLab Analysis Package Model 86188

### Features

- **Efficiency:** Combines a point-and-click interface with state-of-the-art algorithms. Embedded controls turn each graph into a powerful interactive tool for data analysis.
- **Automation:** Easily automate Activity Onset/Offset detection for quick period estimation.
- **Adaption:** Batch Export analyses for multiple files either to spreadsheet files or directly to Excel. Access data in multiple formats, including ClockLab, Actiwatch, Dataquest, Minimitter, Trikinetics and many others



Model 86188

# RAT RUNNING WHEEL SYSTEMS

## Rat Activity Wheel and Living Chamber

**Model 80859S**

**Model 80859LS**

This Rat Activity Wheel with Living Chamber was designed for long term circadian rhythm and general activity studies in rats or similar sized animals. The Model 80859S has a 14" (35.56 cm) diameter stainless steel wheel. The Model 80859LS is identical to the 80859S Standard Rat Wheel of this type except for a wheel that is larger in diameter and width. This system incorporates many features to allow for animal well-being and easy maintenance of system components.

### 80859S Features

- The living chamber includes support for food and water
- System is equipped with external mounting bracket for mounting of an optional electronic counter
- Wheel portion can be easily removed for cleaning
- Wheel operates on virtually friction free rulon bearings
- All stainless steel construction
- Autoclavable polycarbonate tub and bottle
- Use with optional brake Model 86125

### 80859LS Features

- The living chamber includes support for food and water
- System comes equipped with external mounting bracket for mounting of an electronic counter
- Wheel portion can be easily disassembled for cleaning
- Wheel operates on virtually friction free rulon bearings
- All stainless steel construction
- Autoclavable polycarbonate tub and bottle
- Use with optional brake Model 86125



Model 80859S

## Rat Activity Wheel System Specifications

Model	Wheel Diameter	Wheel Width (internal)	Run Distance (m/revolution)	Turning Resistance (g)	Overall Dimensions (LxWxH)	Chamber Dimensions (LxWxH)	Animal Size (g)
80859S	14" 35.56 cm	4.3" 10.92 cm	1.10	< 6	16" x 20" x 16.5" 40.64 x 50.80 x 41.91 cm	16" x 20" x 8.25" 40.64 x 50.80 x 20.96 cm	up to 500
80859LS	18" 45.7 cm	5.25" 13.3 cm	1.44	< 6	16" x 20" x 20.5" 40.64 x 50.80 x 52.07 cm	16" x 20" x 8.25" 40.64 x 50.80 x 20.96 cm	600 - 1000
80850S	14" 35.56 cm	4.3" 10.92 cm	1.10	< 6	15.63" x 5.72" x 16.18" 39.70 x 14.52 x 41.09 cm*	19" x 10.5" x 8" * 48.3 x 26.7 x 20.3 cm*	up to 500
80850LS	18" 45.7 cm	5.25" 13.3 cm	1.44	< 6	19.81" x 6.57" x 20.45" 50.33 x 16.69 x 51.94 cm**	19" x 10.5" x 8" 48.3 x 26.7 x 20.3 cm**	600 - 1000
80860B	14" 35.56 cm	4.3" 10.92 cm	1.10	N/A ***	18" x 10" x 14" 45.72 x 25.40 x 35.56 cm		
80860WB	14" 35.56 cm	4.3" 10.92 cm	1.10	< 6	18" x 10" x 14" 45.72 x 25.40 x 35.56 cm		

\* Not including optional Model 80852S Living Chamber

\*\* Not including optional Model 80852LS Living Chamber

\*\*\* Motor Speed: 1 - 25 m/min in 0.5 m/min increments, independent of animal

# RAT RUNNING WHEEL SYSTEMS

## Rat Activity Wheel

### Model 80850S

### Model 80850LS

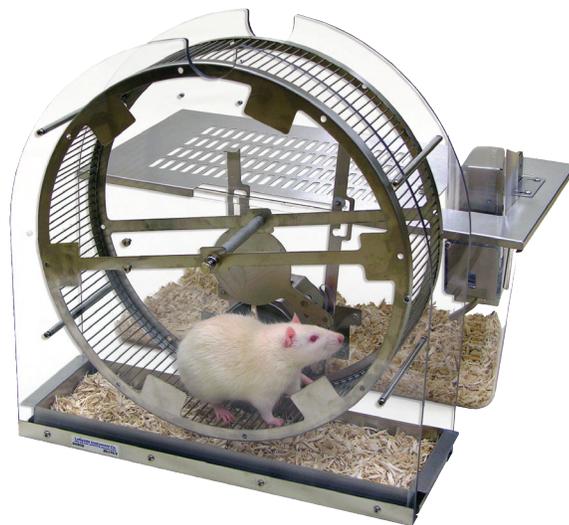
The Rat Activity Wheel may be used as a standalone unit for short term measurements or with the optional 80852 Living Chamber for long-term circadian rhythm and general activity studies. Both units have been designed for the animal's well being and easy maintenance. Monitor the rat activity wheel revolutions with the Model 86115 Rat Activity Counter. Connect multiple counters to the Model 86100 Scurry Interface and control data collection with the Model 86165 Scurry Software. For smaller applications, or where you desire to view only the total revolutions for each animal at the wheel, substitute model 86130 Digital Display Counter. System specifications are designated in Rat Activity Wheel System Specifications table on page 2.

### 80850S Features

- Wheel portion easily disassembled for cleaning
- Wheel operates on virtually friction free Rulon bearings
- Equipped with external mounting bracket for optional electronic sensor/counter
- All stainless steel and polycarbonate construction
- Use with Optional 80852 Living Chamber

### 80850LS Features

- Recommended for animals over 500 grams
- Optional polycarbonate living chamber with food and water support
- Equipped with external mounting bracket for optional electronic counter
- Wheel can be easily disassembled for cleaning



Model 80850S and optional Living Chamber Model 80852

## Motor Option for 80850S Rat Wheel

### Model 80851B

This Activity Wheel Motor Drive is designed to add forced motor activity to a standard Rat Activity Wheel Model 80850S. The flexibility and ease of use of this design will allow for simple transition between a forced and free running system. The 80851B Motor drive must be used with the Model 86100M Scurry Motor Interface and the Scurry Software Model 86165.

## Narrow Gap Activity Wheel, for Rats and Mice

### Model 80850MS

This modified 80850S Rat Activity wheel is provided to satisfy the needs of those labs wanting to run mice in the 14" diameter wheel. The only difference is that that gap between the wheel rim and the sides of the wheel support has been reduced to  $\frac{1}{4}$ " (6.35 mm) or less to prevent escape or injury to a mouse. All other specifications remain the same.

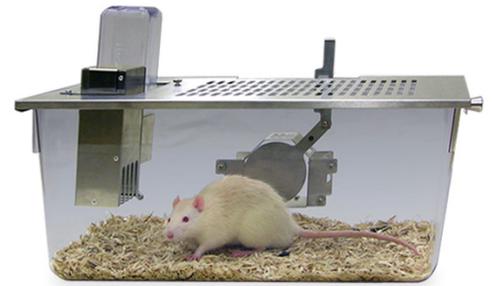


Model 80850MS

# RAT RUNNING WHEEL SYSTEM ACCESSORIES

## Living Chamber for 80850S Rat Activity Wheel Model 80852

This clear polycarbonate living chamber attaches to the activity wheel via a Stainless Steel tunnel. Guillotine doors on the wheel and chamber may be used to restrict animal movement and prevent accidental escape. System specifications are designated in Rat Activity Wheel System Specifications table on page 2.



Model 80852



Model 80860B

## Rat Tethered Motorized Wheel Model 80860B

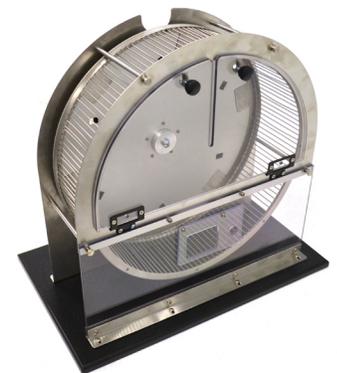
The Tethered Rat Activity Wheel features durable construction from stainless steel and polycarbonate components. The motorized unit may be used with the Scurry Motor Interface (Model 86100M) and Scurry Activity Software (Model 86165) for forced exercise that is easily removed for free running data collection. A sensor/counter is optional. The fold down side provides easy placement and removal of the tethered animal. The narrow side slot will accommodate a drug line or electrode cable connected to a standard swivel or commutator. A mounting bracket is included for the Soloman Insteck Series 375 Support Arms and Swivels; however other arms could be adapted. An easily removed hopper and bottle holder is provided for ad lib access to both food and water. A stainless steel waste pan and polycarbonate water bottle with stainless steel sipper tube are included. This unit has also been used with untethered animals in sleep deprivation studies. System specifications are designated in Rat Activity Wheel System Specifications table on page 2.

## Wheel Only for Tethered Rat Model 80860WB

A voluntary running wheel for tethered rats with all the features of the 80860B motorized wheel. System specifications are designated in Rat Activity Wheel System Specifications table on page 2.

## Motor Assembly for Tethered Rat Wheel Model 80860MB

Use this kit to upgrade an 80860WB Voluntary Tethered Rat Activity Wheel to a Motorized Wheel (80860B). It can still be used as a voluntary wheel by simply removing the drive belt. The 80860MB like the 80860B requires the Model 86100M Scurry Motor Interface and Scurry Software to be fully functional.



Model 80860WB

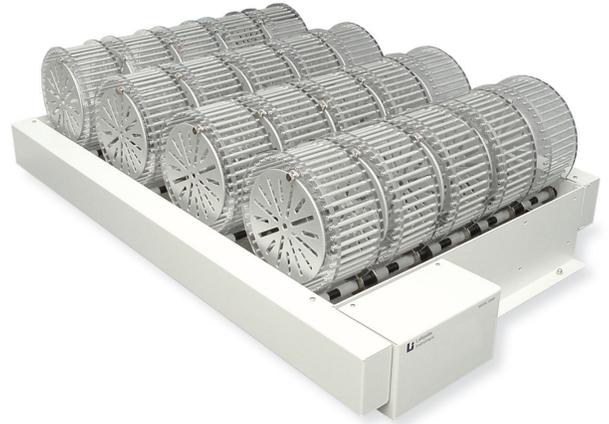
# MOUSE FORCED EXERCISE SYSTEMS

## Forced Exercise / Walking Wheel Beds

### Model 80800A

### Model 80800A-10

The Lafayette Forced Exercise / Walking Wheel System for Mice is designed to offer flexibility in conducting paradigms such as sleep deprivation and forced exercise. Exercise time, rest time, and number of cycles are all controllable from a hand held control or from a PC running optional Scurry Activity Software. The bed provides individual tracks with cushioned non-slip grips for each wheel. The 80801 wheels incorporate a swing-hatch for easy animal loading and removal. The beds support one to twenty (Model 80800A) or one to ten (Model 80800A-10) wheels at a time.



Model 80800A

## Features

- Each wheel is captured in its own running track
- Each wheel is supported on cushioned non-slip grips
- Large removable stainless steel waste pan
- Wheels can be added or removed while operating
- System has rubber feet or can be permanently mounted to a flat surface or workbench
- Optional Water Support (80800A is limited to 12 wheels)

## Bed Specifications

- Speed Range:
  - 0.9 to 11.4 meters/minute standard
  - 1.8 to 21.0 meters/minute optional
  - 0.1 m/min increments
- Exercise Time Range: 1 minute - 24 hrs
- Rest Time Range: 1 minute - 24 hrs
- Cycles: 1 - 999, Continuous
- Power: 15VDC, 2.0A Power Pack (included)

## 80800A Specifications

- Dimensions: 33.9" x 22.25" x 10.875" (with wheels)
- Weight: 25.0 lbs. (empty), 41.0 lbs. (with 20 wheels)

## 80800A-10 Specifications

- Dimensions: 19.25" x 22.25" x 10.875" (with wheels)
- Weight: 18.7lbs. (empty), 26.2lbs. (with 10 wheels)



Model 80801 with  
Model 80801MSH25

## Mouse Exercise / Walking Wheel

### Model 80801

Model 80801 Wheels have an internal running diameter of 5.94" (15.1cm) with a 2.25" (5.7cm) internal width. Each revolution corresponds to 0.47 meters. Incorporates a swing-hatch for easy animal loading and removal.

## Mouse Tail Retention Mesh Netting (25 pieces)

### Model 80801MSH25

This mesh stretches over the perimeter of the Model 80801 Mouse Wheel to prevent the tail from coming out of the wheel and potentially getting pinched under the wheel. This is generally not a problem once animals are trained to run but can be during early stages when the animals are first exposed to the wheel. A single piece of mesh is supplied with each wheel.

# RAT FORCED EXERCISE WHEEL SYSTEMS

## Forced Exercise / Walking Wheel Bed

### Model 80805A

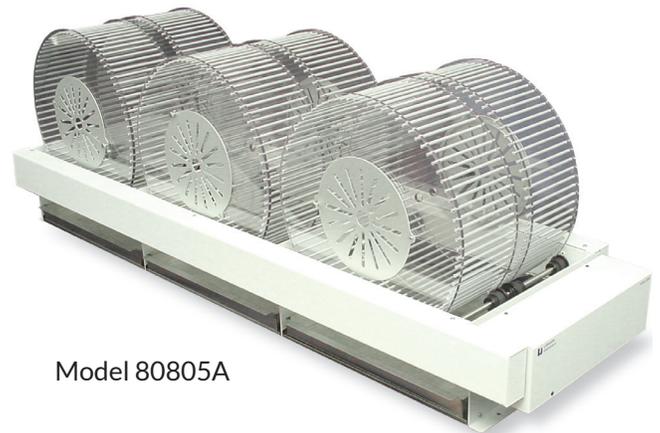
The Lafayette Forced Exercise / Walking Wheel System for Rats is designed to offer flexibility in conducting paradigms such as sleep deprivation and forced exercise. Exercise time, rest time, and number of cycles are all controllable from a hand held control or from a PC running optional Scurry Activity Software. The bed provides individual tracks with cushioned non-slip grips for each wheel. The 80806 wheels incorporate a swing-hatch for easy animal loading and removal. The beds support one to six wheels at a time.

### Features

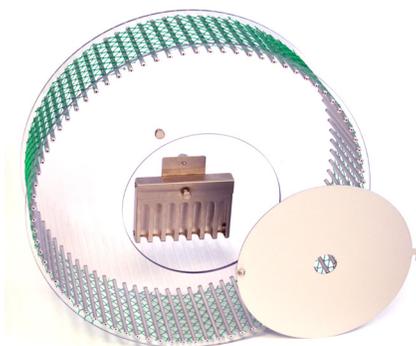
- Each wheel is captured in its own running track
- Each wheel is supported on cushioned non-slip grips
- Three removable stainless steel waste pans
- Wheels can be added or removed while operating
- System has rubber feet or can be permanently mounted to a flat surface or workbench
- System is easily disassembled for cleaning
- Optional per wheel Water Support (Model 80807)
- Optional per wheel Food Support (Model 80808)

### Specifications

- Dimensions: 51.0" x 17.9" x 16.9" (with wheels)
- Weight: 20.0 lbs. (empty), 41.0 lbs. (with 6 wheels)
- Supports up to 6 wheels
- Speed Range: 1.0 m/min to 28.0 m/min
- Speed Resolution: 0.5 m/min
- Test Time Range: 0-24 hours
- Rest Time Range: 0-24 hours
- Timing Resolution: 1 sec
- Cycles: 1 - 99, continuous



Model 80805A



Model 80806 with  
Model 80806MSH18 and  
Model 80808

## Rat Exercise / Walking Wheel Model 80806

These wheels feature durable polycarbonate sides with a large aluminum hatch for easy animal removal and aluminum rungs for a comfortable running surface. Each wheel has an internal running diameter of 13.38" (33.985 cm) with a 4.4" (11.176 cm) internal width. Each revolution corresponds to 1.06 meters.

## Rat Tail Retention Mesh Netting (18 pieces) Model 80806MSH18

This mesh stretches over the perimeter of the Model 80806 Rat Wheel to prevent the tail from coming out of the wheel and potentially getting pinched under the wheel. This is generally not a problem once animals are trained to run but can be during early stages when the animals are first exposed to the wheel. A single piece of mesh is supplied with each wheel.

# LICKOMETERS

## Triple Lickometer Test Chamber Model 80380

This chamber features a stainless steel lid and hatch and a stainless steel food hopper on one side of the tub with an area for standard bedding. The other end of the chamber presents up to three 50 ml polycarbonate bottles with stainless steel sippers. This end of the chamber is fitted with a stainless steel floor to provide contact for the lickometer circuits. Cover plates are provided if fewer than three liquids are needed. Bottles may be easily removed for cleaning, measuring and refilling without disconnecting any wires. Counters, Interface, and Software sold separately.



Model 80380

### Specifications

- Chamber Dimensions: 19.0" x 10.5" x 8.0" (48.3 cm x 26.7 cm x 20.3 cm)
- Animal Workspace: 14.0" x 10.5" x 8.0" (35.6 cm x 26.7 cm x 20.3 cm)



Model 80862S

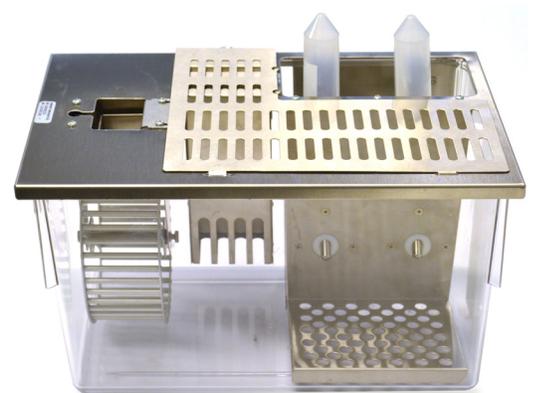
## Rat Activity Wheel with Triple Lickometer Model 80862S

This unit combines all the features of the 80859S Rat Activity Wheel Chamber with those of the 80380 Triple Lickometer.

The food hopper has been placed on a hanging bracket so that it is easily removed from the chamber when not needed. The end of the chamber formerly reserved for the hopper and one water bottle is now fitted with a stainless steel floor to provide contact for up to three Lickometer counters and three 50 ml bottles with sipper tubes. Bottles may be easily removed without disconnecting any wires. Cover plates are included for studies requiring fewer than three tubes. An area for standard bedding is provided at the other end of the tub. Add one 86135 Triple Lickometer sensor for data collection through Scurry Interface (Model 86100) and Scurry Software (Model 86165). Counters, Interface, and Software sold separately.

## Mouse Activity Wheel with Dual Lickometer Model 80822S

This unit combines all the features of the 80820S Mouse Activity Wheel Chamber with those of the 80380 Triple Lickometer. The chamber is fitted with two sipper tubes due to the size limitation. The food hopper has been placed on a hanging bracket so that it is easily removed from the chamber when not needed. The end of the chamber formerly reserved for the hopper and one water bottle is now fitted with a stainless steel floor to provide contact for the two 50 ml bottles with sipper tubes. Bottles may be easily removed without disconnecting any wires. Cover plates are included for studies requiring fewer than two tubes. An area for standard bedding is provided at the other end of the tub. Counters, Interface, and Software sold separately.



Model 80822S

# FEEDING, DRINKING, AND ACTIVITY

## Feed and Water Intake and Activity Monitor Model HM-2

The HM-2 Feed and Water Intake and Activity Monitor Systems automatically measure and record the undisturbed, real-time feed and water intake and the feeding and activity behavior of multiple rodent groups housed in a standard home cage environment around the clock.

### Features

- Designed for high standards of hygiene in home cage environment, ease of feed and water filling and cleaning and control of spillage.
- RFID tag identification of individual animals housed in groups
- Full operational control at the HM-2 allows individual experiments to be started and stopped directly from the individual HM-2 station.
- Simple power and network cable connection to the data network and central Lab-PC.
- Up to 48 HM-2 stations may be connected through the network to the HM02Lab program at the central Lab-PC.
- Data collection in HMBase SQL database allows robust collection of information, which is made available by HMView or via interface filters to Excel®, SigmaPlot® and Graphpad Prism®.
- Simple station validation and tare function from the individual station keypad or system wide from the Lab-PC.
- Low power units with light dimmer on control and lamps enable easy rack-integration and use in shifted daylight applications.
- A built-in calibration function allows load cell calibration to meet company quality standards.



Model HM-2

### Research Applications

- Obesity
- Diabetes 2
- General metabolic process
- Feed and liquid preference
- Eating behavior
- Activity behavior
- Impact of treatment on health and behavior

# MOTILITY TESTING

## Rat and Mouse Staircases

### Model 80300

### Model 80301

The staircase apparatus provides a simple, efficient and easy way to quantify the testing of skilled paw reaching for both the rat (Model 80300) and the mouse (Model 80301). Two food pellets are placed onto each step of two staircases located one on either side of a central platform (two widths supplied). The animals are placed in a box relevant to their size and can reach down either side of the platform to grasp, lift and retrieve food pellets from the steps of the staircase. The numbers of pellets removed provides a quantifiable measure of the distance and efficiency of reaching skill. The design allows separate measurements of reaching capacity with the left and right paws, and does not require any constraint or restriction of the contralateral limb to measure performance on the two sides separately. The test is sensitive to unilateral lesions of the striatum, forebrain dopamine systems and sensorimotor cortex, as well as focal ischaemia.

The overall dimensions of the Rat unit are 360 mm x 120 mm (14 x 4.75 inches). The overall size of the Mouse unit is 145 mm Long x 55 mm Wide x 51 mm High (7.625 x 2.125 x 2 inches).



Model 80300



## Contact Us for a Quotation or More Information

### Worldwide Office

3700 Sagamore Pkwy N  
Lafayette, IN 47904  
USA

Phone: (765) 423-1505  
[sales@lafayetteinstrument.com](mailto:sales@lafayetteinstrument.com)  
[www.lafayettelifesciences.com](http://www.lafayettelifesciences.com)

### European Office

P.O. Box 8148  
Loughborough,  
Leics. LE12 7XT  
England

Tel: +44 1509 814790  
[sales@campdeninstruments.com](mailto:sales@campdeninstruments.com)  
[www.campdeninstruments.com](http://www.campdeninstruments.com)