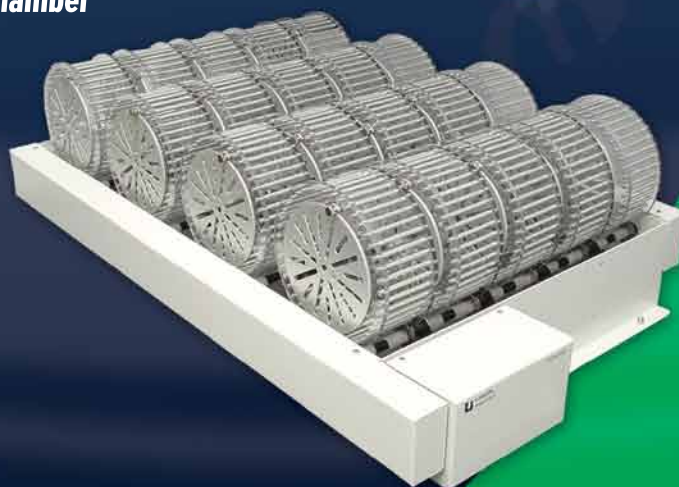
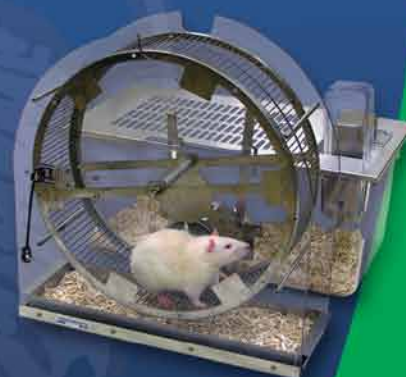
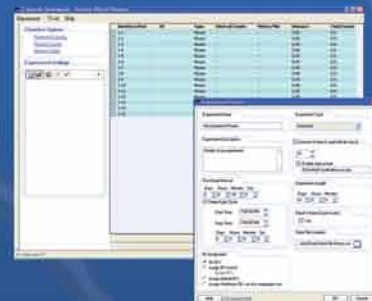


# Solutions for **Animal Activity** **Wheel, Maze and Motility** research

- **Running Wheels**
- **Activity Wheel Monitoring**
- **Forced Exercise**
- **Radial Arm Maze**
- **Elevated Plus Maze**
- **Barnes Maze**
- **Motility Staircases**
- **Automated Mouse Reaching Chamber**
- **Balance Beam Test**



# RAT RUNNING WHEELS

## Activity Wheel and Living Chamber Model 80859

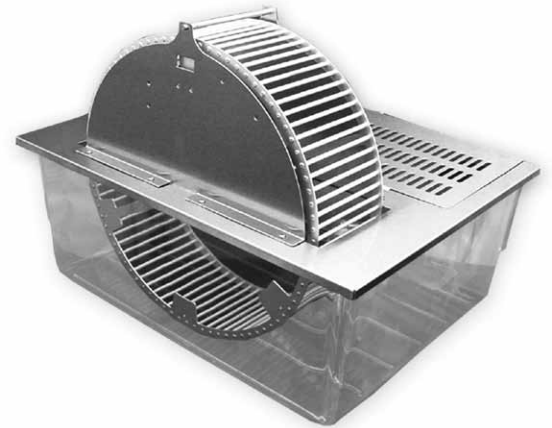
This Rat Activity Wheel with Living Chamber was designed for long term circadian rhythm and general activity studies in rats or similar sized animals. The stainless steel wheel is 14" (35.56 cm) in diameter and turns with less than 6 grams of force. The running wheel is constructed of 0.036" (0.91 mm) stainless steel rims with a running surface of 0.0625" (1.5875 mm) rods on 0.3125" (7.9375 mm) centers (0.25" (6.35 mm) gap) for maximum durability and animal comfort. This system incorporates many features to allow for animal well-being and easy maintenance of system components.

### 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
- Optical sensor included
- Use with optional Servo Brake Model 86070-B2

### Specifications:

- Tub Dimensions: 16" x 20" x 8.25"H (40.64 x 50.80 x 20.96 cm)
- Overall Dimensions: 16" x 20" x 16.5"H (40.64 x 50.80 x 41.91 cm)
- Weight: 13.2 lbs (5.99 kg)
- Wheel Diameter: 14" (35.56 cm) I.D.
- Wheel Width: 4.3" (10.92 cm) internal
- Run Distance: 1.10 m/revolution
- Recommended for animals up to 500 grams



Model 80859



## Large Rodent Activity Wheel and Living Chamber Model 80859L

This Rat Activity Wheel with Living Chamber was designed for long term circadian rhythm and general activity studies in very large rats and non-rat rodents. It is identical to the 80859 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.

### 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
- Optical sensor included

### Specifications:

- Tub Dimensions: 16" x 20" x 8.25"H (40.64 x 50.80 x 20.96 cm)
- Overall Dimensions: 16" x 20" x 20.5"H (40.64 x 50.80 x 52.07 cm)
- Weight: 15 lbs (6.8 kg)
- Wheel Diameter: 18" (45.7 cm) I.D.
- Wheel Width: 5.25" (13.3 cm) internal
- Run Distance: 1.44 m/revolution
- Recommended for animals 600 - 1000 grams



Model 80859L



# RAT RUNNING WHEELS

## Rat Activity Wheel Model 80850

The 80850 Rat Activity Wheel may be used as a stand-alone 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 animal well being and easy maintenance. Monitor rat activity wheel revolutions with the 86061 Counter with Computer Output. Connect multiple counters to the 86056A Interface and control data collection with the 86065 AWM Software. For smaller applications, or where you desire to view the total for each animal at the wheel, substitute model 86060 Digital Display Counter. Model 86060 may also be connected to a computer interface for user controlled downloads from a few seconds to hours over periods up to 120 days.

### Features:

- Wheel portion easily disassembled for cleaning
- Wheel operates on virtually friction free Rulon bearings
- Equipped with external mounting bracket for optional electronic counter
- All stainless steel and polycarbonate construction
- Optional 80852 Living Chamber
- Optional 80854 Transport Cage
- Optional Motor Drive, Model 80851A
- Optional Servo Brake, Model 86070-B2
- Optional items sold separately

### Specifications:

- Wheel:
  - Diameter: 14" (35.56 cm) ID
  - Width: 4.3" (10.922 cm) internal
  - Run Distance: 1.10 m/revolution
  - Run Surface: 0.0625" (1.5875 mm) rods
  - 0.3125" (7.9375 mm) centers
  - 0.25" (6.35 mm) gap
- Weight: 1.75 lbs (793 grams)
- Turning Resistance: less than 6 gms
- Overall Dimensions:
  - 14.2" x 15.6" x 5.3" (39.62 x 36.07 x 13.46 cm)
  - Weight: 9.0 lbs (4.08 kg)



Model 80850 and optional Living Chamber Model 80852



Model 80850L

## Large Rat Activity Wheel Model 80850L

This Large Rat Activity Wheel may be used as is for general activity studies or with an optional living chamber for long term circadian studies. This activity wheel is the same design as the above Standard Rat Activity Wheel (model 80850), but is bigger for large animals.

**Specifications:** • Overall Dimensions: 19.81" x 20.45" x 6.57" (50.33 x 51.94 x 16.69 cm)

- Wheel Diameter: 18" (45.72 cm)
- Wheel Width: 5.25" (13.34 cm)

## Living Chamber (for 80850 Rat Activity Wheel) Model 80852

This clear polycarbonate living chamber attaches to the activity wheel via a SS tunnel. Guillotine doors on the wheel and chamber may be used to restrict animal movement and prevent accidental escape.

**Specifications:** • Cage Size: 19" x 10.5" x 8" (48.3 x 26.7 x 20.3 cm)

- Floor Area: 143 sq. in. (922.3 cm sq.)

## Living Chamber (for 80850L Large Rat Activity Wheel) Model 80852L

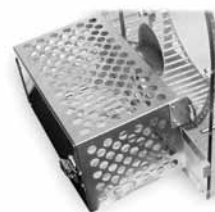
This clear polycarbonate living chamber is identical except that the tunnel opening and tunnel have been increased in size 56.25% (3.0" to 3.75" diameter) to accommodate a larger animal.

## Servo Brake for Rat Activity Wheel Model 86070-B2

An add on option for Models 80859, 80859L and 80850 Activity Wheels the can be programmed to add resistance or to lock the wheel.

## Motor Drive Option for 80850 Rat Wheel Model 80851A

This Activity Wheel Motor Drive is designed to offer forced motor activity to a standard Rat Activity Wheel Model 80850. The flexibility and ease of use of this design will allow for simple transition between a forced and free running system. The 80851A motor drive can be controlled when used with the 86070A Counter and Controller, and 86056A USB Computer Interface for Activity Wheel Counters, with the Activity Wheel Monitor Software Model 86065.



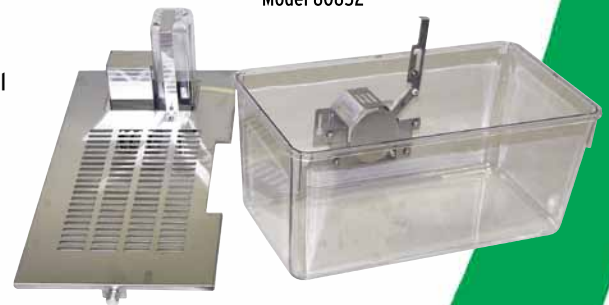
Model 80854

## Loading Cage for Activity Wheel Model 80854

This small, stainless steel transportation-only cage is shown attached to an 80850 activity wheel. Includes Pan.

**Specifications:** • Dimensions: 10.25" x 6.22" x 5.19" (26.0 x 15.8 x 13.2 cm)

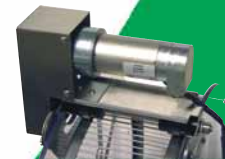
Model 80852



Model 86070-B2



Model 80851A



# RAT RUNNING WHEELS

## Rat Tethered Motorized Wheel Model 80860A

The Tethered Rat Activity Wheel features durable construction from stainless steel and polycarbonate components. The motorized unit uses a non-slip shock absorbing drive belt for forced exercise that is easily removed for free running data collection. 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 Instech 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.

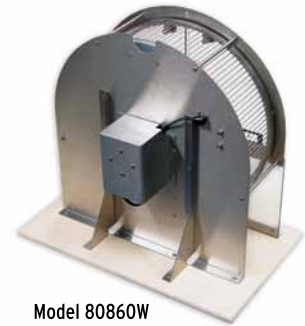
- Specifications:**
- Dimensions: 18" x 14" x 10" (45.72 x 35.56 x 25.40 cm)
  - Wheel Diameter: 14.0" (35.56 cm)
  - Wheel Width (Internal): 4.3" (10.9 cm)
  - Weight: 7 lbs
  - Run Distance: 1.10 meters/revolution
  - Speed: 1 - 25 m/min in 0.5 m/min increments



Model 80860A

## Wheel Only for Tethered Rat Model 80860W

A voluntary running wheel for tethered rats with all the features of the 80860A motorized wheel.



Model 80860W

## Forced Exercise / Walking Wheel Bed Model 80805A

The Forced Exercise/Walking Wheel System for Rats Model 80805A is designed to offer flexibility in conducting paradigms such as sleep deprivation and controlled exercise. This sturdy exercise/ walking bed will support up to (6) Rat Exercise/Walking Wheels Model 80806 that are sold separately. Features of this unit include removable stainless steel waste pans and individual wheel tracks with cushioned non-slip grips. The 80806 wheels used with this bed incorporate a swing-hatch for easy animal loading and removal. The hand held LCD interface allows the user to set a single exercise/walking speed, exercise time, rest time, and number of cycles. A built in USB interface may be connected to a PC running Windows XP™ and optional 86065 AWM Activity Software for complete flexibility of speeds, times, and other aspects of the scheduled activation of the wheels.

- Specifications:**
- Dimensions: 51.0" x 17.9" x 16.9" (with wheels)
  - Weight: 20.0 lbs. (empty), 41.0 lbs. (with 6 wheels)
  - Wheel capacity: 6
  - 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 (wheels sold separately)

## Rat Exercise / Walking Wheel Model 80806

Order 1 to 6 wheels to go with 80805 Forced Exercise/Walking Wheel Bed

- Specifications:**
- Wheel Diameter: 13.38" ID
  - Wheel Width: 4.40" ID
  - Run distance: .07 meters/revolution

## Water Support Option for Forced Exercise Bed Model 80807

Order 1 to 6 Water Bottle Supports with Bottle and Sipper as needed for the Rat Forced Exercise/Walking Beds



Model 80807

# MOUSE RUNNING WHEELS

## Mouse Single Activity Wheel System Model 80820

A complete activity wheel package similar to the 80859 for rats with all stainless steel components except for a light weight aluminum wheel and polycarbonate tub and water bottle.

**Specifications:** • Overall 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)

## Mouse Activity Wheel with Filter Lid Model 80820F

Use in place of 80820 Mouse Activity Wheel if the top of the cage needs a filter.

## Mouse "Miss-Step" Activity Wheel Model 80821

This 80820 style activity wheel and chamber package features rungs that can be easily removed to create an uneven running surface.

## Servo-Brake (for the 80820 Activity Wheel) Model 86070-B1

Use this brake with the 86070 Counter/Control and AWM Software to control wheel drag or to disable the wheel based on: without condition, after duration, for duration, at time, until time, etc.

## Forced Exercise / Walking Wheel Bed Model 80800A

The Forced Exercise/Walking Wheel System for Mice is again very similar in design to the 80805A Bed for rats, but with a capacity of 20 wheels. Exercise time, rest time, and number of cycles are all controllable from a hand held control or from a PC running Windows XP™ and optional AWM Activity Software.

**Specifications:** • Dimensions: 33.9" x 22.25" x 10.875" (with wheels)

- Weight: 25.0 lbs. (empty), 41.0 lbs. (with 20 wheels)
- Wheels: Sold Separately. See Model 80801 Speed Range:
  - 0.9 to 11.4 meters/minute standard
  - 1.8 to 21.0 meters/minute optional
  - 0.1 m/min increments

## Small Forced Exercise / Walking Wheel Bed Model 80800A-10

This version of the Forced Exercise/Walking Wheel System for Mice is identical to 80800A except in a smaller profile with half the wheel capacity.

## Mouse Exercise / Walking Wheel Model 80801

Model 80801 Wheels are 2.25" internal width with an internal running diameter of 6". Run distance is 0.47 m/revolutions.

## 12 Wheel Water Support Model 80803

A water support system for the 80800A or 80800A\*C Forced Exercise/Walking Wheel System for mice. The total/maximum number of wheels that can be used with this option is 12.

## Mouse Tethered Motorized Wheel Model 80840

This activity wheel is an individual mouse activity wheel suitable for use tethered animals including food and water support. It is generally used for scheduled exercise or in a yoked study; however, it can also be used for voluntary running data collection with the drive belt removed.

**Specifications:** • Overall Dimensions: 10.125' x 14" x 10.875" (25.7 x 35.6 x 27.6 cm) Weight: 8.4 lbs

## Voluntary Running Wheel for Tethered Mouse Model 80840W

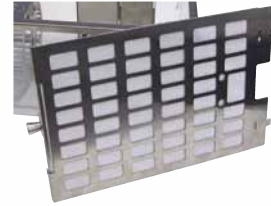
It is identical to the 80840 Motorized Tethered Mouse Activity Wheel without the motor assembly.

## Motor Assembly for Tethered Mouse Wheel Model 80840M

Order this motor assembly to convert a model 80840W to a model 80840. Please contact Lafayette Instrument Company for individual replacement parts if needed.



Model 80820



Model 80820F



Model 86070-B1



Model 80800A  
(shown with 80801 wheels)



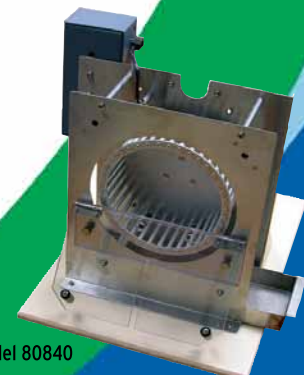
Model 80801



Model 80801



Model 80803



Model 80840

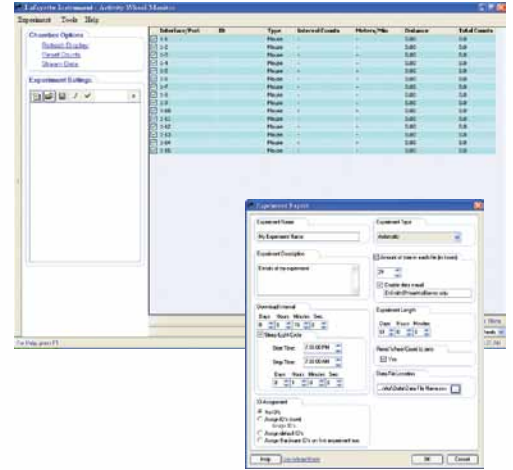
# ACTIVITY WHEEL MONITOR (AWM) SOFTWARE

## Activity Wheel Software Model 86065

This Computer Software package has been written for voluntary running wheels as well as scheduling features for forced wheel beds and individual motors, brakes, etc. A variation of the Activity Wheel Monitor (AWM) Software is also used for lickometer studies.

### Features:

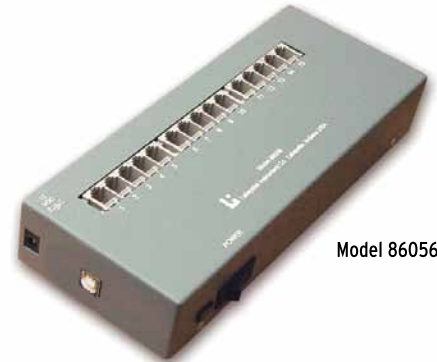
- Supports both Serial and USB interfaces
- Step by step set up wizard for first time users and an expert page for veteran users
- Data collection from up to 12 wheels for up to 120 days. User preference may be set to decimal or whole revolutions
- Record interval counts, average speed, total distance, and total counts in user defined bins in seconds, minutes, hours, or days
- Extensive data display, export and filter features
- and many more!



## AWM HARDWARE & ACCESSORIES

### USB Computer Interface for Activity Wheel Counters Model 86056A

This USB interface connects up to 15 wheels/counters to a single USB port. AWM Software supports up to 8 interfaces or 120 wheels.



Model 86056A

### Activity Wheel Counter Model 86060

This stand alone Activity Wheel Counter features digital display, AC Power Pack, and battery back-up. It is used to monitor the revolutions of the Single Mouse Activity Wheel Model 80820, Single Rat Activity Wheel Model 80850, 80859, 80859L, 80860W, older wheels such as Model 86043 and some wheels from other manufactures. Computer output is also provided. Order cables separately.



Model 86060

### Activity Wheel Counter for Computer Monitoring Model 86061

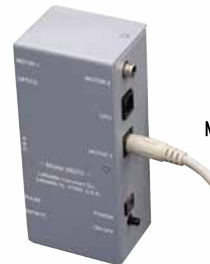
The Activity Wheel Counter Model 86061 is used to monitor the revolutions of activity wheels with an optical sensor. Three decoder switch selections are available to accommodate standard rat and mouse wheels as well as custom wheels. This unit is supplied with a 7' modular cable and must be used with a computer interface.



Model 86061

### Activity Wheel Control and Counter Model 86070A

The Model 86070A Activity Wheel Counter/Controller provides the same data collection function as the 86060 and 86061 units. In addition, it includes a power supply and all the necessary circuitry to control optional items such as motors and servo-brakes. An auxiliary output may programmed to output 3, 6, 9 or 12 V DC as well. Includes 86051-7 Cable for easy connection to Model 86056A AWM Interface and a pulse output (open collector, 5 V 100 k pull-up).



Model 86070A

### Modular Cable for Wheel Counters - 7 ft. Model 86051-7

A 7 foot (2.13 meter) modular cable for AWM Activity Wheel Counters.

### Modular Cable for Wheel Counters - 14 ft. Model 86051-14

A 14 foot (4.27 meter) modular cable for AWM Activity Wheel Counters.

### Servo-Brake for Activity Wheel Model 86070-B1

An optional accessory for the 80820 Mouse Activity Wheel.

### Servo Brake for Rat Activity Wheel Model 86070-B2

An add on option for 80859, 80859L and 80850 Rat Activity Wheels.



Model 86070-B1

# AWM HARDWARE & ACCESSORIES

## Motor Drive Option for 80850 Rat Wheel Model 80851A

This Activity Wheel Motor Drive is designed to offer forced motor activity to a standard Rat Activity Wheel Model 80850. The flexibility and ease of use of this design will allow for simple transition between a forced and free running system. The 80851A motor drive can be controlled when used with the 86070A Counter and Controller 86056A USB Computer Interface for Activity Wheel Counters and Activity Wheel Monitor Software Model 86065.



Model 80851A

## Motor Assembly for Tethered Rat Wheel Model 80860M

Use this kit to upgrade an 80860W Voluntary Tethered Rat Activity Wheel to a Motorized wheel. It can still be used as a voluntary wheel by simply removing the drive belt. The 80860M like the 80860 require the 86070 Counter/Control, USB Interface and AWM Software to be fully functional.



Model 80860M

## Wheel Lock for Rat Activity Wheels Model 80859LCK (not shown)

Use this stainless steel bracket to lock the 80859 or 80859L Activity Wheels. It attaches with two small machine screws and is easily removed when not needed. Labs have used this lock for control animals or in applications where running is limited. This lock can also be used with the 80850 although that unit also features a guillotine door that can be closed to prevent an animal from entering from the living chamber.



Model 80820DIV

## Cage Divider for 80820 Mouse Activity Wheel Model 80820DIV

This simple stainless steel partition may be used to temporarily block access to the 80820 Mouse Activity Wheel. See 80820TL if you simply want to lock the wheel while allowing access.



Model 80820HK

## Hardware Kit for Mouse Activity Wheel Model 80820HK

One or more of these hardware kits is recommended with the purchase of even small groups of 80820 Mouse Activity Wheels. It includes the parts most often lost when wheels are disassembled for through cleaning as well as a spare optical sensor and sensor alignment tool. The alignment tool can also be used to lock the wheel if needed. Each kit includes one shaft cover, two Rulon-J bearings, one sensor alignment tool, one optical sensor and an assortment of screws.

## Replacement Hatch for Raised Water Bottle Model 80820RBL

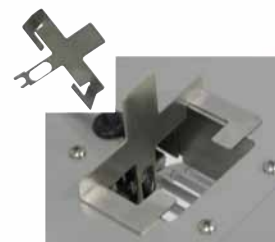
The only difference between this and the standard 80820 Activity Wheel hatch is a cutout for the raised bottle to protrude through. Normally, the supplied 250 ml water bottle is contained under the hatch. This design is preferred as it eliminates the possibility of a mouse trying to escape when the bottle is removed. However, once in a while an ingenious and industrious mouse will mound enough bedding around the water bottle sipper to cause it to flood the cage. Reducing the amount of bedding normally solves this problem; however, if necessary the water bottle bracket is easily raised once this replacement hatch is incorporated.



Model 80820RBL

## Sensor Alignment Tool & Wheel Lock Model 80820TL

This formed stainless steel tool is indispensable for aligning the optical sensor. Simply place the tool over the wheel. Place the sensor on the shelf provided by the tool and tighten the single screw used to hold the sensor in place. The tool may also be captured under the lid to permanently lock the wheel until removed. This may be useful for control groups or in studies where wheel access is restricted.



Model 80820TL

## Replacement Water Bottle Model 80820WB

A 250 ml polycarbonate water bottle with screw cap and stainless steel sipper tube with ball bearing to minimize leakage.



Model 80820WB

## Optical Sensor for Activity Wheels Model 86060S

The replacement optical sensor comes with a short cable and connector. It is compatible with the 86060 and 86061 Counters as well as the 86070 Counter/Controller.



Model 86060S

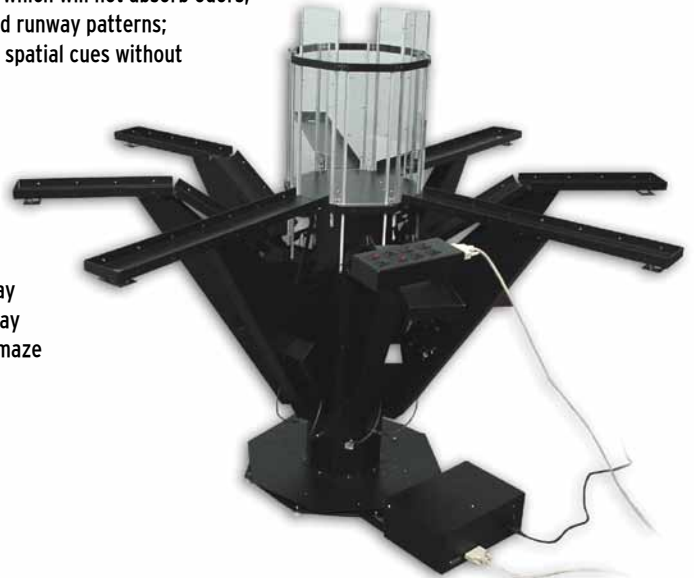
# RAT PATHFINDER RADIAL ARM MAZE

## Motorized Radial Arm Maze (for Rat) Model 89001B

The Pathfinder Maze System is an amazing advancement in controlled learning and memory devices. This maze system allows for control of visual, auditory, and olfactory cues. Less interference leads to quicker learning. The Pathfinder controls variables through standard features, such as:

- A control unit with 25 feet of cable is used to remotely adjust doors and bridges;
- Washable scent/stain-resistant finishes eliminate unwanted stimuli;
- Aluminum construction for a sturdy, durable platform, which will not absorb odors;
- Quick-Lift doors and bridges allow access to pre-selected runway patterns;
- EZ-Turn 359-degree rotation, permits excellent control of spatial cues without restringing wires or cables.

Model 89001B (shown with optional Arena Kit - Model 89117)



The Pathfinder Flex Contain System provides variable levels of animal containment. The Pathfinder can be made into either open or closed configurations with easy to attach clear polycarbonate walls. With such versatility, the maze can be used for training, and with animals that may have impaired senses. The maze may be easily configured for T, Y, X and Plus type mazes, or as a simple runway using the optional Maze Insert Kit. Infrared sensors may be added to any maze configuration with the use of optional mounting brackets.

### Technical Specifications:

Motorized Maze for Rat (89001B)	
<b>General</b>	
Overall Weight	75 lbs (34 kg)
Overall Diameter	70.0" (1.78 meter)
Overall Height	35.0" (88.9 cm)
Min / Max Diameter of the Arena	13.75 / 15.0" (34.9 / 38.1 cm)
Remote Control Unit	8.5"L x 3.5"W x 1.75"H (21.6 x 8.9 x 4.4 cm)
Remote Control Cable	25' (63.5 cm) DB-25 M/F Standard
Power Supply	5 V DC @ 10 Amp
Line Voltage	110-115 V AC @ 60 Hz
<b>Arms</b>	
Length of an Arm	27.5" (69.8 cm)
Outer Width of an Arm	4.12" (10.5 cm)
Inner Width of an Arm	3.87" (9.8 cm)
Height of an Arm Side Channel	0.8" (2 cm)
Height of the Optional Arm Walls	8.0" (20.3 cm)
<b>Doors (with optional arena):</b>	
Height of the Arena Guillotine Doors and Columns	13.75" (34.9 cm)
Clearance Width Through a Guillotine Door	3.87" (9.8 cm)
Clearance Height Through a Guillotine Door	5.0" (12.7 cm)

**Arena Assembly - Clear Model 89117**  
**Arena Assembly - Red Model 89117R**  
**Arena Assembly - Smoked Model 89117S**

With this optional arena the start area of the rat radial arm maze is enclosed with eight clear polycarbonate doors. The bridges of the open system are fixed in place and the motorized linkage normally used to raise and lower the bridges is now connected to the door mechanism. An arena with red tinted or smoked acrylic doors is also available. Other materials available on request.

**Maze Wall Kit - Clear Model 89116**  
**Maze Wall Kit - Red Model 89116R**  
**Maze Wall Kit - Smoked Model 89116S**

**Maze Insert Kit - Clear Model 89115**  
**Maze Insert Kit - Red Model 89115R**  
**Maze Insert Kit - Smoked Model 89115S**

# MOUSE PATHFINDER RADIAL ARM MAZE

## Motorized Radial Arm Maze (for Mice) Model 89002

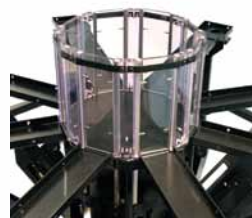
The Pathfinder Maze System provides an amazing advancement in controlled spatial learning and memory devices. This maze system allows for the same control of visual and auditory cues as the Rat Pathfinder Mazes and a unique fixed goal box design to eliminate olfactory cues when the maze is rotated between trials. The small electric servo motor used in this system may be connected to the bridges for a completely open maze or to the doors of the optional arena as shown in the photo [See 89217] for the clear arena. Arenas are also available in red tint and smoked material. The arena can be used with open runways and goal boxes as shown or the runways and goal boxes can be enclosed with clear, red tinted or smoked wall kits. The electrical switch box used to control the bridges or doors features individual switches for each runway plus a master switch that lets you pre-load the door/bridge positions and then activate all motors simultaneously. For countries requiring 220-230V AC 50 Hz operation, - Model 89002\*C is available with localized AC mains cord. International pricing will apply.

### Features:

- Control bridges or doors (optional) with 25 feet of separation between the operator and the maze
- Washable scent/stain-resistant finishes on High-Strength, Lightweight Aluminum eliminate unwanted stimuli
- Aluminum arena, runways and goal boxes provide a sturdy durable platform that will not absorb odors
- EZ-Turn design lets you rotate the arena and runways 359 degrees to control olfactory cues without moving the goal boxes.
- Optional arena with doors and optional side walls available in clear polycarbonate, red tinted or smoked acrylic.
- Connections provided for optional interface control.

### Optional Accessories:

- Arena with Doors: Model 80217 Clear, 80217R Red, 80217S Smoked
- Runway & Goal Box Wall Kit: Model 80216 Clear, 80216R Red, 80216S Smoked
- Insert Kit (90°, 135°, & 180°): Model 80215 Clear, 80215R Red, 80215S Smoked



Technical Specifications:	
<b>General</b>	
Overall Weight	65 lbs (29.48 kg)
Overall Diameter	39.0" (approx. 1 meter)
Overall Height	35.0" (88.9 cm)
Min/Max Diameter of the Arena	8/9" (20.3/22.9 cm)
Remote Control Unit	8.5"L x 3.5"W x 1.75"H (21.6 x 8.9 x 4.4 cm)
Remote Control Cable	25' (63.5 cm) DB-25 M/F Standard
Power Supply	5 V DC @ 10 Amp
Line Voltage	110-115 V AC @ 60 Hz
<b>Arms</b>	
Length of an Arm	12" (30.5 cm)
Outer Width of an Arm	2.25" (5.715 cm)
Inner Width of an Arm	2.125" (5.4 cm)
Height of an Arm Side Channel	0.5" (1.27 cm)
Height of the Optional Arm Walls	6" (15.24 cm)
<b>Goal Boxes</b>	
Goal Boxes	3"L x 3"W (7.6 cm)
Food Cups	1.25" dia. x 0.6875 deep (3.2 x 1.75 cm)

# ELEVATED PLUS MAZE

## Automated Elevated Plus Maze System (for Rats) Model HEMP1001 Automated Elevated Plus Maze System (for Mice) Model HEMP2001

These mazes have a higher resolution and specially created measures which enhance the ability to quantify anxiety. Use multiple zones to report how far an animal retreats from the intersection into closed arms and how far it dares into the open arms. This may be adjusted between multiple analysis on a locked data set for quantifying the animal's emotionality. An exclusive under the floor hidden tracking system means no visible sensors and no chance of sensor damage from the animals. Proprietary filters are designed to detect and ignore feces and other matter on the floor while precisely tracking and counting only the animals movements and positions. This unit runs on the HMM100 Motor Monitor Interface and software along with a number of other devices. Features include user definable intervals, distance traveled in inches or centimeters, fine movements, average speed, maximum speed, movement episodes. Total distance traveled, speed and time spent in zones can also be used to quantify activity and exploratory behavior.



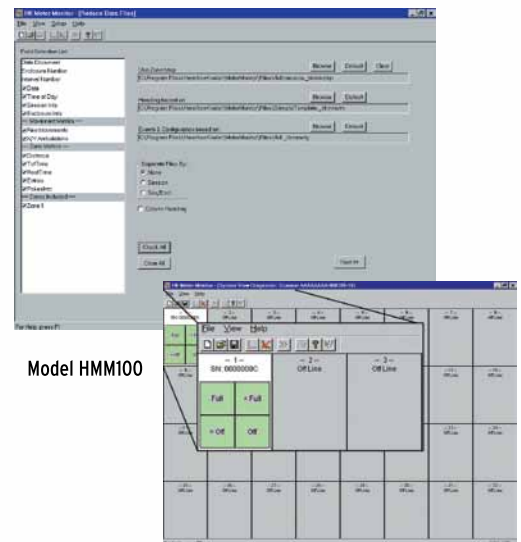
Model HEMP1001 and HEMP2001

## Motor Monitor System Control & Software Model HMM100

The HMM100 MotorMonitor(TM) package consists of an eight channel interface, power supply, cables and software to run a number of behavioral tests that use photo beam input to record an animals movements. This includes the Cage Rack frames, Open Fields, Elevated Plus Mazes, Large Animal Open Field, and Forced Swim tanks. All tests sold separately. Up to eight stations of the same configuration may be run at the same time.

## Elevated Plus Maze (maze only - for Rat) Model HEMP1000B Elevated Plus Maze (maze only - for Mouse) Model HEMP2000B

These elevated plus maze platforms for rats and mice are provided for those individuals that prefer to score animals manually or with a video tracking system.



Model HMM100

# BARNES MAZE

## Barnes Maze for Mice Model HBM1000 Barnes Maze for Rats Model HBM2000

The Barnes maze is a popular test for assessing spatial learning and memory in rats and mice. The test involves making the surface of the maze aversive using bright illumination. The animal is given the opportunity to escape the maze surface by crawling through the correct hole, under which is located a "safe box." The amount of time required for the animal to locate the safe box may be measured with a video tracking system or measured by the researcher.



Model HBM1000 and HBM2000

# MOTILITY TESTING

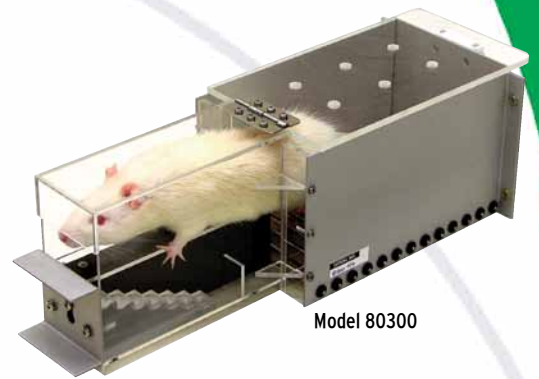
## Rat Staircase Model 80300

The overall dimensions of the unit are 360 mm x 120 mm (14 x 4.75 inches).

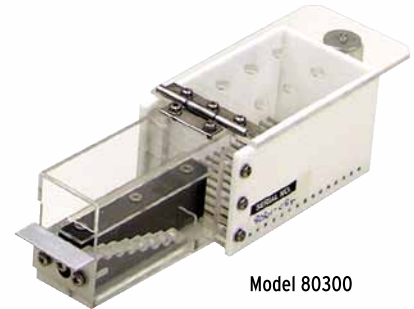
## Mouse Staircase Model 80301

The overall size of the unit is 145 mm Long x 55 mm Wide x 51 mm High (7.625 x 2.125 x 2 inches).

The staircase apparatus provides a simple, efficient and easy way to quantify the testing of skilled paw reaching for both the rat (see Model 80300) and the mouse (see 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.



Model 80300

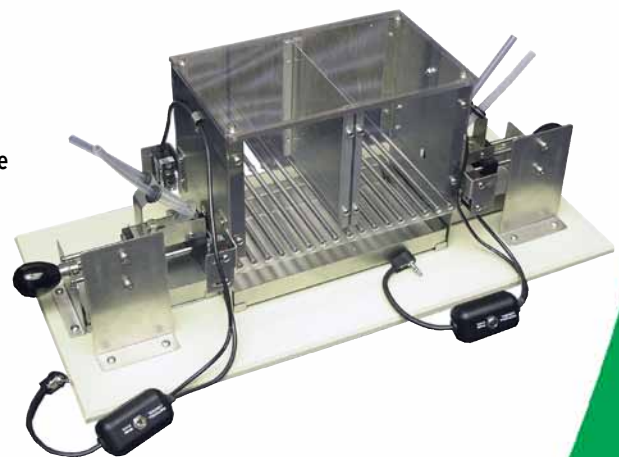


Model 80301

## Automated Mouse Reaching Chamber Model 80870

The automated mouse reaching chamber allows researchers to simultaneously measure motor behavior, cognitive processing and motivation. The two chamber design allows you to test two animals at the same time. Use the 80875 Home Cage Training Hopper to facilitate training. Most labs add the 86060 Counter with Digital Display for a simple count of reach attempts. However, the counter could be connected to an AWM Interface for placing reach attempts in time bins, or the photo beams could be connected directly to an ABET Interface Package to time stamp and count reach events. With the chamber divider removed, and additional stimulus lamps, feeders etc. the reach task could be combined with a learned alternation task under ABET program control.

- **Motor Behavior:** Skilled forepaw reaching behaviors are required to retrieve pellets from the food hopper.
- **Cognitive Processing:** Two reaching holes on opposite walls allow researchers to alternate baited and non-baited hoppers within or between trials.
- **Motivation:** Latency measures from chamber introduction to the first reach attempt indicates motivation to retrieve pellets.



Model 80870

## Home Cage Training Hopper (for Mouse Reaching Chamber) Model 80875

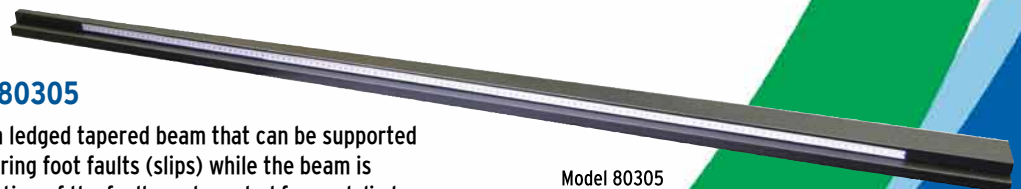
This stainless steel hopper is designed in such a way that the animal must grasp individual pellets in a manner similar to that required by the Paw Reach Test Chamber. This is an inexpensive way to bring animals to criterion on the reach and grasp task prior to treatment.



Model 80875

## Balance Beam Test for Rats Model 80305

The 80305 Balance Beam for Rats consists of a ledged tapered beam that can be supported between any open space. The test involves scoring foot faults (slips) while the beam is traversed. The beam is marked so that the location of the fault can be noted for each limb within each of three color coded 45 cm bins of increasing difficulty. A 15 cm. "loading" and "unloading" section is provided at the beginning and end of beam which are not scored. A dark box or home cage may be placed at the end of the beam to act as a reinforcer. A 2 cm ledge runs the length of the beam on both sides providing a crutch for the animal to use when there is a deficit. Without the ledge crutch, the animal would be forced to alter its posture and weight distribution so that it relies on the non-impaired limbs.



Model 80305



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