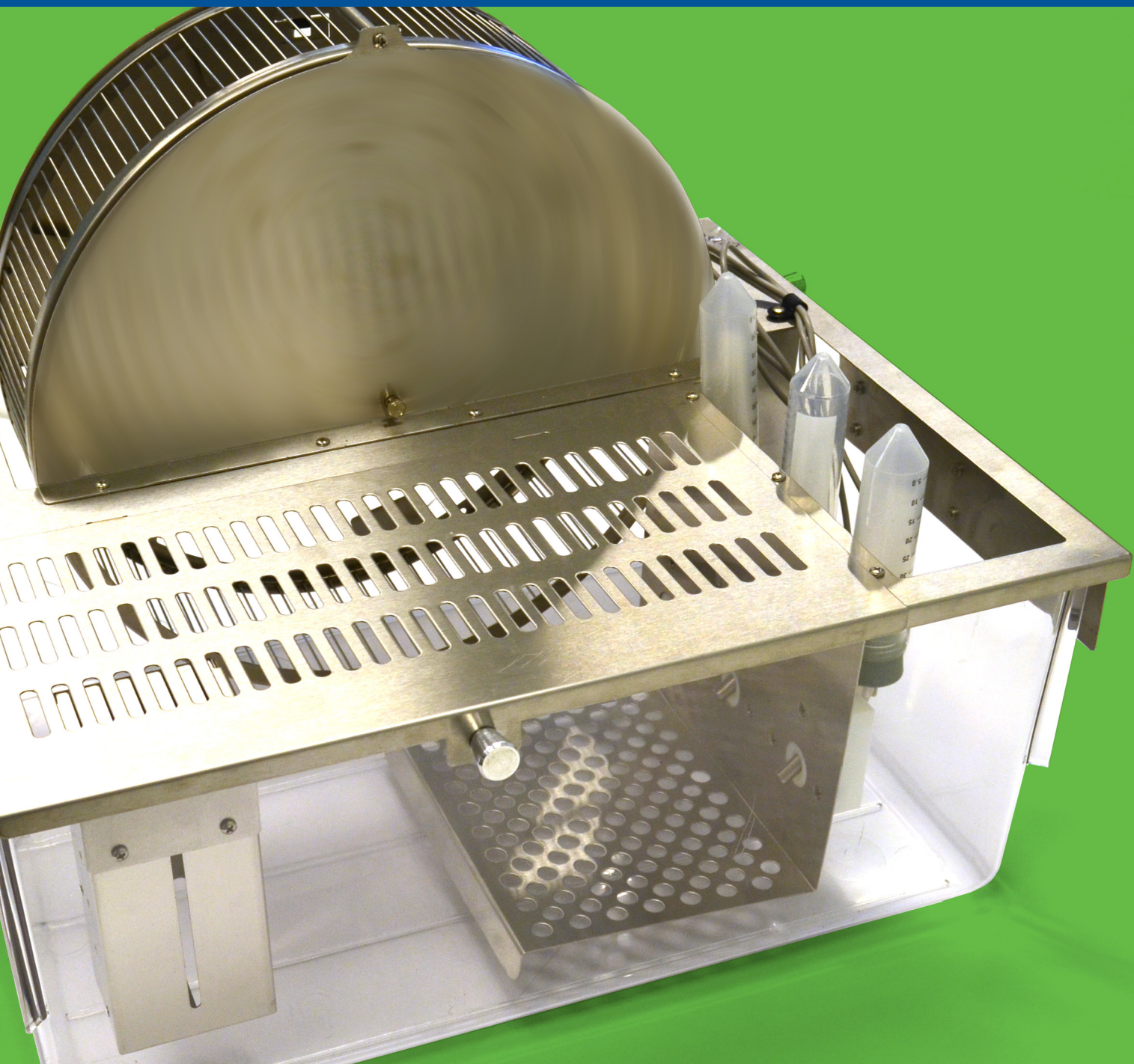


Solutions for Animal Activity and Behavior

Wheel, Maze, Motility, and Lickometer Research



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 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. 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. System specifications are designated in Rat Running Wheel System Specifications table below.

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		

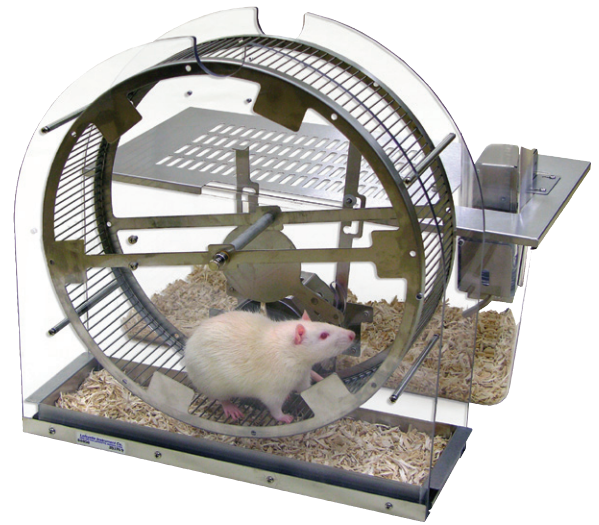
* Does not include optional Model 80852S Living Chamber

** Does not include optional Model 80852LS Living Chamber

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

Rat Activity Wheel Model 80850S

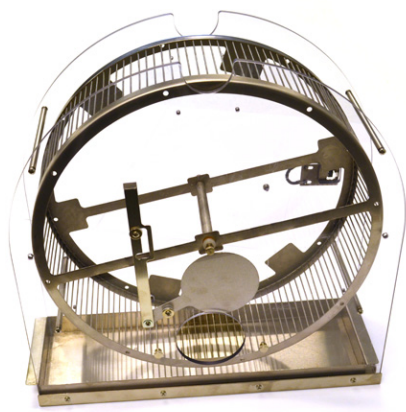
The Rat Activity Wheel may be used as a stand-alone unit for short term measurements or with the optional 80852 Living Chamber for long-term circadian rhythm and general activity studies. Both units have been designed for the animal's well being and easy maintenance. Monitor the rat activity wheel revolutions 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 1.



Model 80850S and optional Living Chamber Model 80852

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



Model 80850LS

Large Rat Activity Wheel Model 80850LS

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 Standard Rat Activity Wheel (model 80850S), but is bigger for large animals. System specifications are designated in Rat Activity Wheel System Specifications table on page 1.

Features

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

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.

Motor Option for 80850S Rat Wheel Model 80851B

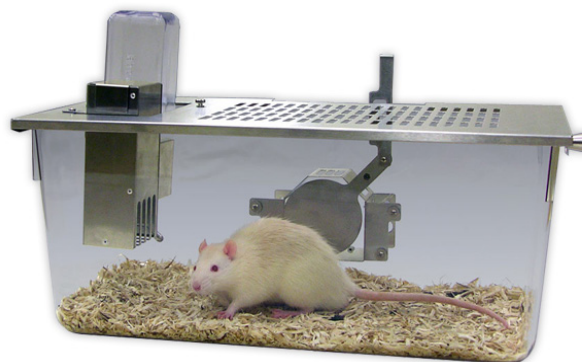
This Activity Wheel Motor Drive is designed to add forced motor activity to a standard Rat Activity Wheel Model 80850S. The flexibility and ease of use of this design will allow for simple transition between a forced and free running system. The 80851B Motor drive must be used with the Model 86100M Scurry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

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 1.

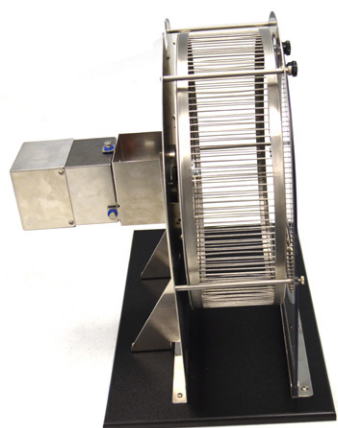


Model 80852

Brake for 80850S Rat Activity Wheel

Model 86125

This add-on option may be used to add resistance or prevent the wheel from turning to limit exercise. The brake may be enabled without condition, after duration, for duration, at time, until time, at distance, at distance or duration, at distance or time, at count, at count or duration and at count or time. Multiple schedule changes may be programmed into a single session.



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 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. 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 1.

Wheel Only for Tethered Rat

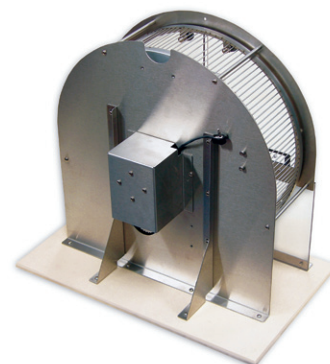
Model 80860WB

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 1.

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.



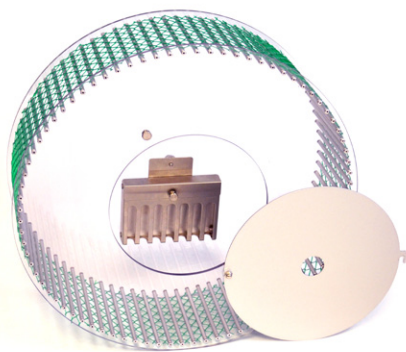
Model 80860WB

RAT FORCED EXERCISE WHEEL SYSTEMS

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 six 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 computer and optional 86165 Scurry Activity Software for complete flexibility of speeds, times, and other aspects of the scheduled activation of the wheels.



Model 80806 with
Model 80806MSH18
and Model 80804

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

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

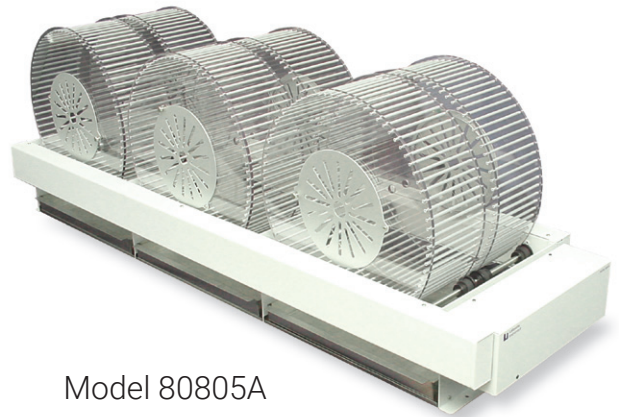
This mesh stretches over the perimeter of the Model 80806 Rat Wheel to prevent the tail from coming out of the wheel and potentially getting pinched under the wheel. This is generally not a problem once animals are trained to run but can be during early stages when the animals are first exposed to the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

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 Bed.

Food Hopper Option for Rat Exercise / Walking Wheel Model 80804

Hanging Food Hopper for use with the Rat Wheels.



Model 80805A

80805A 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

80806 Specifications

- Wheel Diameter (ID): 13.38" (33.985 cm)
- Wheel Width (ID): 4.4" (11.176 cm)
- Wheel Circumference (Run Distance): 1.06 Meters/ Revolution
- Running Surface:
 - Number of Rods: 82
 - Diameter: 0.188" (4.776 mm)
 - Spacing (Ctr/Ctr): 0.526" (13.36 mm)
 - Gap: 0.338" (8.586 mm)

MOUSE RUNNING WHEELS

Mouse Activity Wheel with Filter Lid

Model 80820FS

This activity wheel package shares all the features of the 80820S Mouse Activity Wheel with an added two piece plastic lid to hold an effective microbiological barrier. The two piece polycarbonate top is designed to facilitate changing the 8.25" x 13" (20.95 x 33.0 cm) filter sheet. Separate wheel assemblies and food and water assemblies make it easy to remove one or the other as needed.

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.
- Optional hopper bracket available for hopper only removal when daily weighing is required.
- Feeder has sighting slot on back to view feed level
- Removable lightweight 5" diameter 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

Mouse Single Activity Wheel System

Model 80820S

This 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 chamber includes food and water support and includes free access to the activity wheel.

The activity wheel sensor is compatible with 86130 Stand Alone Counter, or 86110 Scurry Sensor. The later unit requires the Model 86100 Scurry Interface and Model 86165 Scurry Software.

Mouse "Miss-Step" Activity Wheel

Model 80821S

This unit is identical to the 80820S style activity wheel and chamber package. The only difference is that the activity wheel itself features rungs that can be easily removed to create an uneven running surface. Removing selected rungs is required to perform tests of complex running also known as a motor skill sequence (MOSS) test. One application of this wheel is for studies of remyelination in demyelinating diseases. Order Model 80820RW Replacement wheel to quickly and easily change between the standard wheel and the complex wheel.

Mouse "Miss-Step" Activity Wheel with Filter Lid

Model 80821FS

This unit is identical to the 80820FS with the same wheel used in the 80821S. It features a wheel with removable rungs and a filter lid top.

Mouse Tethered Motorized or Voluntary Wheels

Model 80840B (Motorized)

Model 80840WB (Voluntary)

These individual mouse activity wheels are 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 may be used for forced or voluntary running while Model 80840WB is used without the motor assembly for voluntary running studies only.



Model 80820FS

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 RUNNING WHEEL ACCESSORIES

Standard Replacement Wheel for 80820S & 80821S Systems **Model 80820RW**

This standard replacement wheel may be used with all mouse activity wheel units. It includes axle, axle cover, bearings and thumbscrews. Use to facilitate cleaning or to quickly change between a standard wheel and a complex wheel.

Filter Paper for Mouse Activity Wheels **Model 80820FP**

A package of 100 sheets of filter paper for either 80820FS or 80821FS Mouse Activity Wheels.

Brake for Mouse Activity Wheel **Model 86120**

An optional accessory for the Model 80820S Mouse Activity Wheel.

Scurry Low Profile Sensor Block **Model 80820FSS**

This Sensor Block is required for the Mouse Activity Wheel with Dual Lickometer (Model 80822S) to collect activity data from the Triple Lickometer with Activity Sensor (Model 86135). It is also required with standard Scurry Mouse Wheels (Model 80820S and 80821S) when used as standalone wheels with Digital Display Counter (Model 86130).

Cage Divider for 80820S or 80821S Mouse Activity Wheel **Model 80820DIV**

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

Optional Hatch for Raised Water Bottle **Model 80820RBL**

This hatch cover replaces the standard unit supplied with the 80820S and 80821S Mouse Activity Wheels. These Mouse Activity Wheels feature a 250 ml water bottle that is contained under the hatch. This design is preferred as it eliminates the possibility of a mouse trying to escape between any gap between the bottle and a bottle cutout. If it becomes necessary to raise the water bottle bracket, it is easy to do so once this replacement hatch is incorporated. The only difference between this and the standard hatch is a cutout for the raised bottle to protrude through.

Optional Food Hopper Bracket **Model 80820HBK**

This optional bracket allows you to easily remove the food hopper as needed for weighing and/or cleaning. The standard unit comes with the hopper screwed to the top frame to form a single assembly.

Optical Sensor for Activity Wheels for AWM Systems **Model 86060S**

The replacement optical sensor comes with a short cable and connector. It is compatible with all legacy wheels as well as a few Scurry wheels. Consult your wheel manual or contact Lafayette Instrument Company to see if this Sensor is appropriate.

Sensor Alignment Tool and Wheel Lock for AWM Systems **Model 80820TL**

This formed stainless steel tool is indispensable for aligning the optical sensor in a legacy wheel setup. 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.

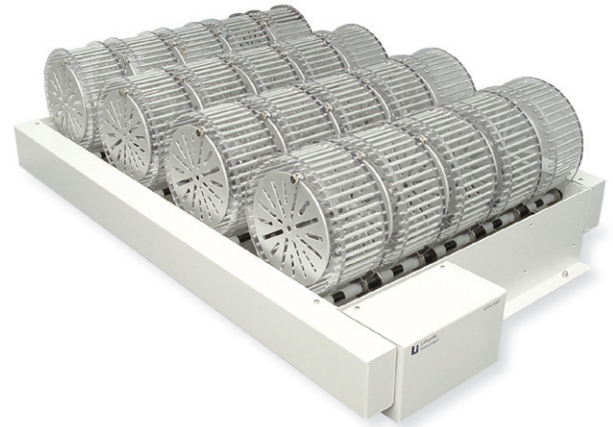
MOUSE FORCED EXERCISE SYSTEMS

Forced Exercise / Walking Wheel Beds

Model 80800A

Model 80800A-10

The 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

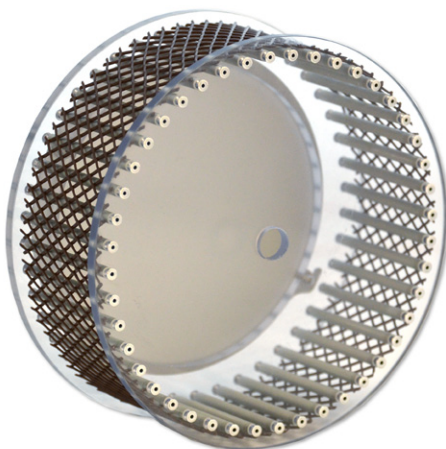
- Speed Range:
 - 0.9 to 11.4 meters/minute standard
 - 1.8 to 21.0 meters/minute optional
 - 0.1 m/min increments
- Exercise Time Range: 1 minute - 24 hrs
- Rest Time Range: 1 minute - 24 hrs
- Cycles: 1 - 999, Continuous
- Run Distance: 0.47 meters/revolution
- Wheel Diameter: 5.94" ID (sold separately)
- Wheel Width: 2.25" ID
- 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.

SCURRY SOFTWARE AND INTERFACES

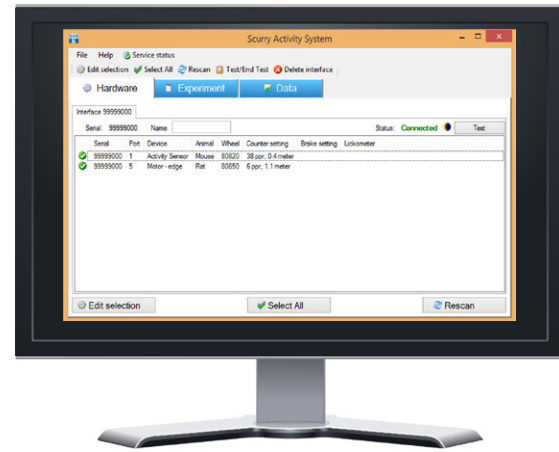
Scurry Activity Monitoring Software Model 86165

This software replaces 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 custom 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

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 86100

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. Interface is compatible with legacy AWM motors when used with the Scurry Legacy Motor Adapter.



Model 86100M

Scurry Legacy Motor Adapter Model 86150

The Scurry Legacy Motor Adapter is used to bridge between legacy AWM motors and the Model 86100M Scurry Motor Interface.



Model 86150

SCURRY ACCESSORIES

Scurry Activity Sensor

Model 86110 (Mouse) Model 86115 (Rat)

Setup as an all-in-one unit, this Activity Sensor provides an output that is recognized by the Scurry Activity System Interface; it is designed to acquire the revolutions of an activity wheel.

Scurry Universal Counter

Model 86118

The Universal Counter is designed to be used with all old Lafayette Instrument Company wheels, other manufacturer's wheels, and some new wheels that are not compatible with the Scurry all-in-one sensor/counter modules.

Scurry Display Counter

Model 86130 (Wheel) Model 86131 (Lickometer)

These Digital Display Counters provides immediate stand-alone data collection for those labs that do not require interval data or information on speed or distance run. The easy-to-read digital display shows total wheel revolutions/licks that are updated in real time.

Scurry Lickometer with Activity Counters

Model 86135 (Triple Lickometer) Model 86136 (Single Lickometer)

Designed to monitor a lickometer device and take the signal from the Model 86060S or 80820FSS Optical Sensors. Model 86135 allows connection from up to 4 data streams (3 Lickometers and 1 Activity), and the Model 86136 allows connection from up to 2 data streams (1 Lickometer and 1 Activity).

Scurry Mouse Brake

Model 86120

All-in-one package that includes a built in sensor. It is designed to "plug-in" the standard Scurry Mouse Wheel chamber top. Provides a single level of resistance designed to prevent the animal from running.

Scurry Rat Brake

Model 86125

Provides up to three levels of resistance to the full line of Lafayette Instrument Rat Activity Wheels. At the same time, it has an input to connect an Rat Activity Counter (Model 86115) or Universal Activity Counter (Model 86118) to pass the wheel revolution counts to the same interface port controlling the brake.



Model 86115



Model 86118



Model 86130



Model 86135



Model 86120



Model 86125

LICKOMETERS

Triple Lickometer Test Chamber Model 80380

The Custom Polycarbonate Chamber (Model 80380) with stainless steel lid and hatch features 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.

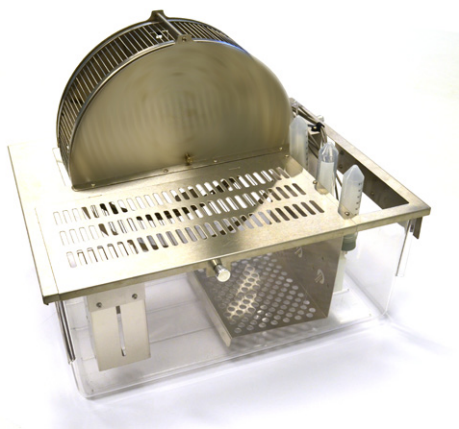


Model 80380

Select from two counter models. The Model 86131 features a digital display and battery backup as well as computer output. The Model 86135 is only suitable for computer data collection, but is considerably less expensive. Both connect to the same USB Interface (Model 86100) and run on the same software (Model 86165) used for activity monitoring. Counters, Interface and Software sold separately.

Specifications

- Lickometer-Counter:
 - Total Lick Counts: Unlimited - counter rollover value at 9,999,999
 - Input Resistance: 22 M Ω
 - Subject Resistance: 30 M Ω Maximum
 - Auto Increment: 8 Hz
 - Debounce Filter: 10 ms ON and OFF - eliminates false readings or "ringing"
- Power: Provided through the Scurry Interface
- External Interface: USB Interface (sold separately)
- Software Required: Scurry
- Dimensions:
 - Chamber: 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)
 - Counter: 1.7" x 3.4" x 1.5" (4.32 cm x 8.64 cm x 3.81 cm)



Model 80862S

Rat Activity Wheel with Triple Lickometer Model 80862S

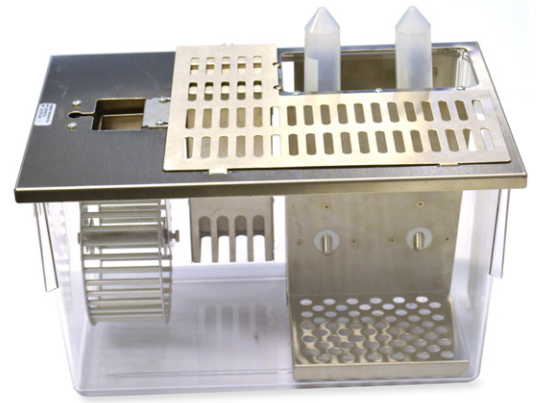
This unit combines all the features of the 80859S Rat Activity Wheel Chamber with those of the 80380 Triple Lickometer. The polycarbonate living chamber measures 16" x 20" x 8.25"H (40.64 x 50.80 x 20.96 cm). The stainless steel wheel is 14 inches (35.56 cm) in diameter and turns with less than 6 grams of force. The running wheel is constructed of 0.036 in (0.91 mm) stainless steel rims with a running surface of 0.0625 in (1.5875 mm) rods on 0.3125 in (7.9375 mm) centers (0.25 in (6.35 mm) gap) for maximum durability and animal comfort.

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 polycarbonate living chamber measures 13.9"L x 9.25"W x 7.875"H (35.3 23.5 x 20 cm). The light weight aluminum running wheel measures 5.0" ID (12.7 cm) by 2.25" (5.72 cm) width (Inside) for a Run Distance of 0.40 meters/revolution. The run surface consists of 38 rods 0.188" diameter on 0.4298" centers with a 0.2418" gap. The metric equivalent is approximately 4.8 mm dia on 10.9 mm centers with a 6.14 mm gap.

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 three 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 rodents group 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 HMO2Lab 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.

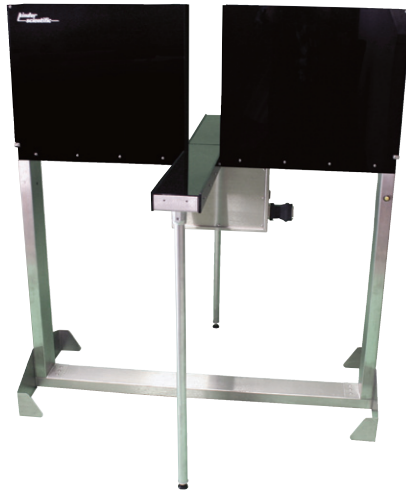


Model HM-2

Research Applications

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

ELEVATED PLUS MAZE



Model HEPM1000
and HEPM2000



Model S60240
and S60140

Automated Elevated Plus Maze System for Rats and Mice

Model HEPM2000

Model S60240

Model HEPM1000

Model S60140

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 HBSC100 Behavioral System Core Interface with H2050-0024 Motor Monitor II 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. Contact Lafayette Instrument Company for complete system details.

Elevated Plus Maze Specifications

	HEPM1000*	HEPM2000*	S60240**	S60140**
	Rat	Mouse	Rat	Mouse
Table Height	33.5" (85.1cm)	30.5" (77.5cm)	15.75" 40cm	15.75" 40cm
Arm Length	19.75" (50.2cm)	14.0" (35.6cm)	19.7" (50cm)	13.8" (35cm)
Arm Width	4.25" (10.8cm)	2.0" (5.1cm)	3.94" (10cm)	1.97" (5cm)
Intersection	4.25" square	2.0" square	10cm square	5cm square
Wall Height	15.75" (40.0cm)	6.0" (15.2cm)	15.75" 40cm	5.9" 15cm

* As described and shown for IR Tracking

** Not shown, for Manual or Video Tracking

BARNES MAZE



Model HBM1000
and HBM2000



Model S60170
and S60270

Barnes Maze

Model HBM1000
Model HBM2000

Model S60170
Model S60270

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.

Barnes Maze Specifications

	HBM2000	HBM1000	S60270	S60170
	Rat	Mouse	Rat	Mouse
Table Diameter	48" (122cm)	48" (122cm)	48" (122cm)	35.8" (91cm)
Table Height	24" (61.0cm)	24" (61.0cm)	35.5" (90cm)	35.5" (90cm)
Hole Diameter	4" (10cm)	2" (5cm)	4" (10cm)	2" (5cm)
Number of Holes	18	40	20	20
Goal Boxes	1	1	1	1
Goal Locations	6	6	20	20
False Goals	0	0	19	19

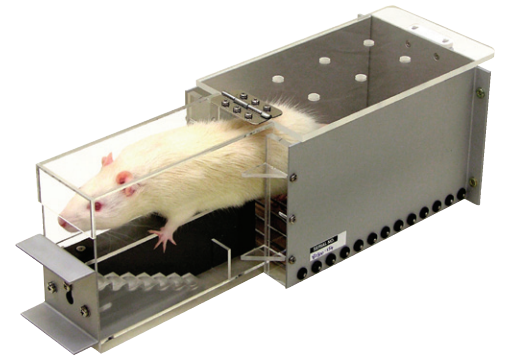
MOTILITY TESTING

Rat and Mouse Staircases

Model 80300

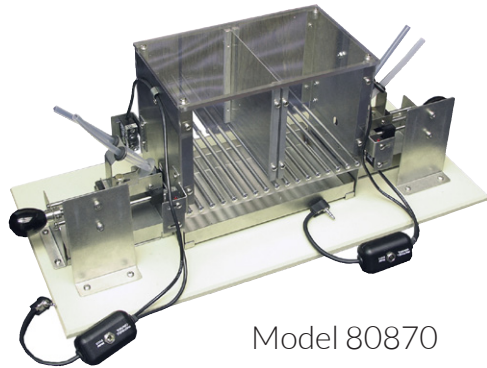
Model 80301

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.



Model 80300

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).



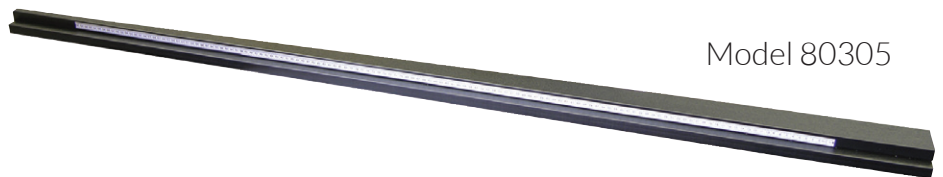
Model 80870

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 86130 Counter with Digital Display for a simple count of reach attempts. The counter could be connected to a Scurry 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 80305

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 unscored “loading” and “unloading” section is provided at the beginning and end of the beam. 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.

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