Instruction manual

ACTIVITY WHEELS

ugobasile.com

Cat. No 1800 - 1850

Motory Coordination, Grip Strength, Activity

ugo basile®
TRANSFORMING IDEAS INTO INSTRUMENTS

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Activity Wheels

Cat. No. 1800 / 1850

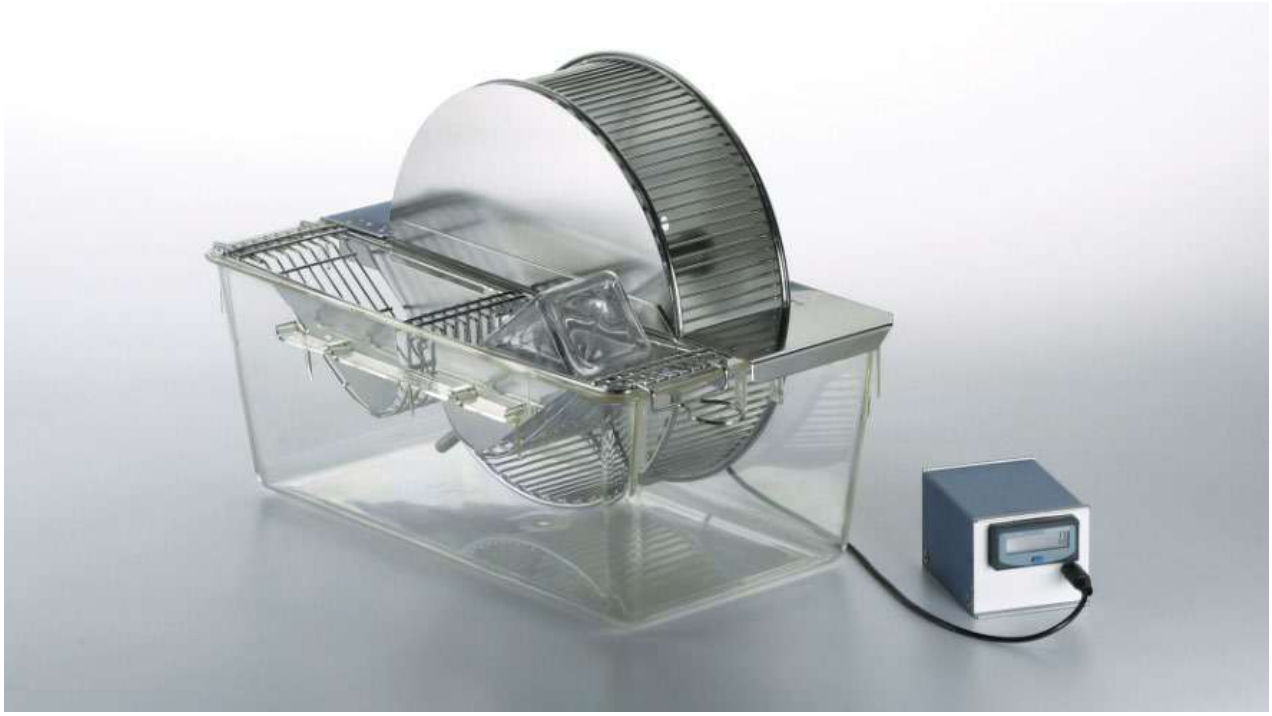
1 GENERAL

The Activity Wheels are designed to provide an easy and convenient method for measuring motor activity in laboratory

rodents, over long periods of time activity, in response to chemical or environmental stimuli.

Especially useful for research on circadian rhythms or motor function, when connected to the 52600 Interface and software

ANYmaze I/O, or to other data acquisition systems.



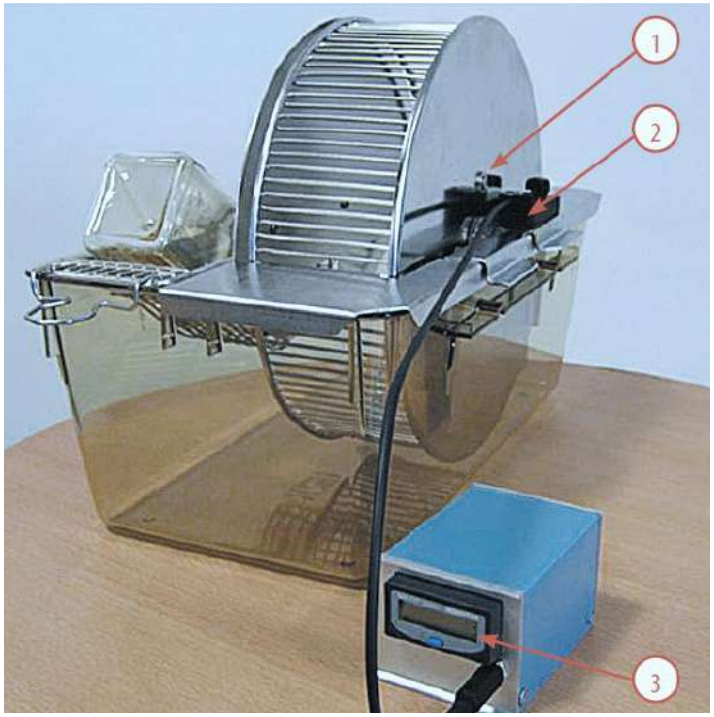
2 INSTRUMENT DESCRIPTION

The Activity Wheels 1800-S and 1850-S include the following components:

1. Polycarbonate cage
2. Stainless steel activity wheel
3. 4 magnets (1) *
4. Magnetic switch (2)

Models 1800 and 1850 also include

5. LCD counter switch (3)



* The magnetic switch counts the revolutions of the activity wheel according to the number of magnets mounted on the wheel:

- 1 magnet: a complete revolution is measured
- 2 magnets: each half revolution is measured
- 4 magnets: each quarter of revolution is measured

2.1 1850 and 1850-S Mouse Cage

The 1850 is the classic 25cm diameter running-wheel made of stainless steel, provided with low friction Teflon bushing, for quite smooth action.

The mouse runs on 2mm bars, placed 7mm apart.

The wheel is housed in a clear polycarbonate cage. A stainless steel wire lid with exclusive lid locks incorporates a U-shaped food hopper for pellets; water bottle is not included.

The **Mouse Cage** is dimensioned **37(h)x26(w)x358d) cm.**

2.2 1800 and 1800-S Rat Cage

The Rat Cage is similar to the mouse model; the running wheel has 35cm diameter. The 2 mm bars are placed 8.8 mm apart.

Dimensions of the **Rat Cage** are **48(h)x32(w)x47(d) cm.**

2.3 Revolution Counter

Each cage is complete with magnetic switch and LCD counter. The switch counts whole revolutions of the activity wheel and operates on an extended-life battery (included).

Cages without counter, models 1800-S and 1850-S, are also available, for data collection via PC, see paragraph below.

3 DATA ACQUISITION

For data acquisition an interface is required.

Our Multifunction Interface NG, Cat. No. 52600 collects data from up to 12 activity wheels.

Data are managed via ANYmaze software (full license or 60000-IO) for further analysis, statistics, etc.

When working with the Multifunction Interface, the counter is not required, so models 1800-S or 1850-S may be considered

4 INSTALLATION

4.1 Unpacking & Preliminary Check

Check the contents of the shipment for completeness, packing list to hand, and visually inspect the instrument as soon you take it out of the packaging. Use the supplied Check List.

If the instrument is damaged, inform the carrier immediately, notifying our company. If after having tested it, the instrument fails to meet rated performances, please contact our after sales service, see paragraph 7.3-Customer Support.

Protect the environment!

Dispose of packaging properly, according to existing and applicable waste management rules and regulations.

4.2 Notes on the Instruction Manual

The Instruction Manual included in the package is necessary for the correct installation and operation of the instrument.

We recommend reading the manual with attention, as it is essential for the correct installation and operation of the instrument.

Please save the manual, ready to be consulted by the qualified personnel who use the instrument. Print it, only if necessary.

Our Instruction Manuals are available as free download on our web. For any additional information and/or assistance, you are welcome to contact our Service Department (see paragraph 7.3-Customer Support), specifying the serial number of your instrument.

4.3 Intended Use

The Rotating Wheels are intended for investigation use on laboratory animals only.

4.4 General Safety Instructions

The following guidelines must be followed to ensure safe operation.

- ! **DO NOT** attempt to open or perform any service work
- ! **DO NOT** connect up human subjects

4.5 Additional Safety Consideration

a. Use original accessories and spare parts only

b. Do not operate the instrument in hazardous environments or outside prescribed environmental limitations (i.e. +18C°/+24C°, 60% relative humidity, non-condensing);

c. Do not spray any liquid on the connectors;

d. Keep inflammables far from the instruments.

UGO BASILE DOES NOT ACCEPT ANY RESPONSIBILITY FOR PROBLEMS OR HARM CAUSED TO THINGS OR PERSONS, ARISING FROM:

- incorrect electrical supply;
- incorrect installation procedure;
- incorrect or improper use or, in any case, not in accordance with the purpose for which the instrument has been designed and the warnings stated in the instruction manual supplied with the instrument;
- replacement of original components, accessories or parts with others not approved by the manufacturer;
- servicing carried out by unauthorized personnel

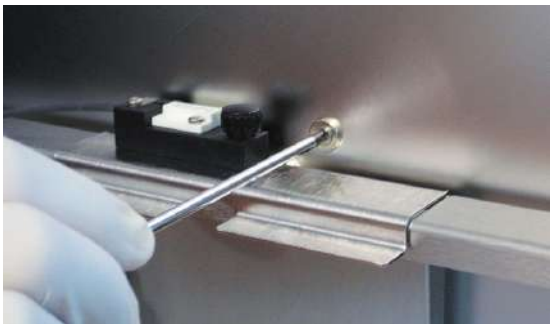
see also paragraph 6-CLEANING AND MAINTENANCE.

4.6 Assembling the Activity Wheels

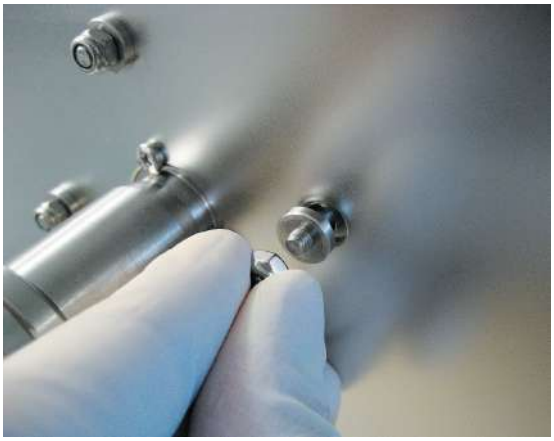
The cages are delivered assembled, but here are some instruction which may be useful in the daily use of the activity wheels

4.6.1 How to Fix the Magnet on the Wheel

- Hold the magnet against the wheel side aligning it with the hole on the wheel
- With a screwdriver, fix the magnet as illustrated here:



- Insert a threaded bolt on the opposite side
- Block it with a self-locking nut.



- To remove the magnet/s, loosen the nut using an adjustable wrench

4.6.2 How to Attach the Magnet Switch

- Put the magnetic switch on the wheel support inserting the thumbscrew into the hole on the wheel support. The white part of the magnetic switch must be positioned next to the wheel.
- Fix the magnetic switch turning the thumbscrew head clockwise as illustrated
- To remove the magnetic switch turn the thumbscrew counter-clockwise.

4.6.3 How to Assemble the Activity Wheel

- Place the lid on the plastic cage.
- Setup the wheel with the desired number of magnets. If necessary, remove the exceeding ones.
- Put the wheel into its housing inside the cage as illustrated

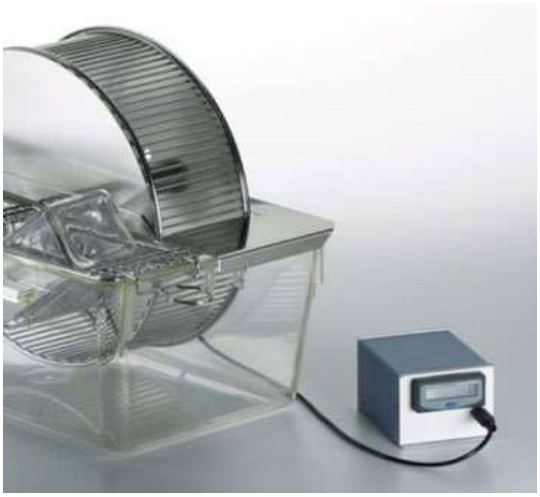
5 OPERATION

Check that the magnetic switch is well fixed on the wheel support.

Connect the magnetic switch to the revolution counter by inserting the connector in its receptacle.

The wheel counts the revolutions depending on the number of magnets assembled (see also paragraph 2-INSTRUMENT DESCRIPTION:

- 1 magnet: a complete revolution is measured



- 2 magnets: each half revolution is measured
- 4 magnets: each quarter of revolution is measured

If necessary, remove the exceeding magnets.

The number of revolutions appear on the LCD display.

To reset the revolution counter, press the press the blue button positioned below the display.

6 CLEANING AND MAINTENANCE

6.1 General Precautions

To avoid damaging stainless steel surfaces:

- DO NOT use steel wool or brushes made of other metals or alloys (e.g. common steel, aluminium, brass, etc.) or tools previously used to clean other metals or alloys.
- Stainless steel wool and brushes may be used since they do not affect the surface, but it is necessary to operate with care to avoid scratches. On polished finishes rub or wipe in the direction of the polish lines.
- AVOID contact of ferrous materials with stainless steel surfaces.
- AVOID contact with any product containing chlorine.
- DO NOT use hydrochloric acid (HCl), Sodium hypochlorite (bleach) on stainless steel surfaces.Avoid contact with hydrochloric acid vapours (e.g. due to floor cleaning).
- DO NOT use nitric acid.
- DO NOT use abrasive powder detergents.
- Test products on a small hidden or non-critical area before cleaning.
- De-ionized water may be used to prevent limestone scaling.
- After cleaning dry stainless steel surfaces carefully to prevent any limestone scaling.
- DO NOT use oily rags or greasy cloths to wipe the surfaces.

IMPORTANT

When cleaning stainless steel surfaces wear adequate personal protective equipment in compliance with your Laboratory SOPs and with laws and regulations in terms of personal health and protection in force in the country where

the product is installed. Be extremely careful when handling chemical products. Carefully read and follow safety data sheet instructions before using any chemical product.

6.2 How to Wash the Activity Wheel Tools and Equipment

Use detergent specific for stainless steel surfaces, and apply it by a soft cloth or a soft sponge.

- Remove the magnetic switch.
- Take the wheel off the cage.
- Remove any dust inside the wheel.
- Wipe the surfaces with a soft cloth or a soft sponge, with an appropriate detergent for stainless steel surfaces.
- Rinse with abundant water.
- Wipe dry with a clean soft cloth.

IMPORTANT

DRY STAINLESS STEEL SURFACES AND INTERSTICES BETWEEN THE WHEEL BEAMS VERY CAREFULLY TO PREVENT ANY LIMESTONE SCALING

6.3 How to Remove Limestone Scaling from Stainless Steel

Use non-abrasive product specifically designed to remove limestone scaling from stainless steel surfaces, a soft cloth or soft sponge, demi water.

- Remove the magnetic switch.
- Take the wheel off the cage.
- Remove any dust inside the wheel.
- Wipe the surfaces with a soft cloth or paper towel/wiper dampened with a product specifically recommended to remove limestone scaling from stainless steel surfaces. Wipe the wheel beams carefully.
- Rinse with demi water.
- Dry stainless steel surfaces and interstices between the wheel beams carefully with a paper towel/wiper.

6.4 How to Remove Rust Stains from Stainless Steel Surfces

Rust stains may occur whenever iron or steel objects are left for a long time in contact with stainless steel surfaces. Cleaning methods depend on the rust conditions:

- Remove the magnetic switch
- Take the wheel off the cage

- Remove any dust inside the wheel.
- Apply a cream detergent specifically designed for stainless steel surfaces.
- Gently rub the surface with a soft damp cloth.
- Rinse carefully with demi water.
- Wipe dry with a clean soft cloth.
- If the stain is still present, remove the residual stain with a 3M Scotch-BriteTM abrasive pad.
- Rinse carefully with demi water.
- Wipe dry with a clean soft cloth.
- If none of these solutions work, it might be necessary to apply a passivating or pickling product specific for stainless steel.

6.5 Sterilization

To sterilize the activity wheel autoclave at 121°C. It is possible to autoclave the fully assembled cage at 121°C.

IMPORTANT

ELECTRICAL COMPONENTS ARE NOT AUTOCLAVABLE!

REMOVE THE MAGNETIC SWITCH BEFORE AUTOCLAVING

7 ORDERING INFORMATION

1800 **Rat Activity Wheel**, complete with polycarbonate cage, magnetic switch and LCD revolution counter

1850 **Mouse Activity Wheel**, complete with poly-carbonate cage, magnetic switch and LCD revolution counter

1800-S **Rat Activity Wheel**, complete with polycarbonate cage, magnetic switch, without counter

1850-S **Mouse Activity Wheel**, complete with polycarbonate cage, magnetic switch, without counter

7.1 Data Collection and Management

52600 **Multifunction Interface NG**, for up to 12 activity wheels (1800-S or 1850-S9. It requires ANYmaze softare (full license or 60000-IO)

60000-IO ANYmaze Software for I/O Control

7.2 Physical Specifications

	1800 / 1800-S	1850 / 1850-S
Dimensions	48(h)x32(w)x47(d) cm	37(h)x26(w)x358d) cm
Weight	7Kg	5Kg
Shipping weight	11Kg	7Kg

7.3 Customer Support

For any further information you may desire concerning the use and/or maintenance of the running wheels and accessories, please do not hesitate to contact our **service department** (or our local distributor) either directly of via our support page http://www.ugobasile.com/support.html :

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Before sending any instrument to our factory for repair, please contact our logistics department to obtain a return authorization number (RMA) and shipping/packing instructions.

We may not be held responsible for damages during transport due to poor packing; whenever possible, please use the original packing.