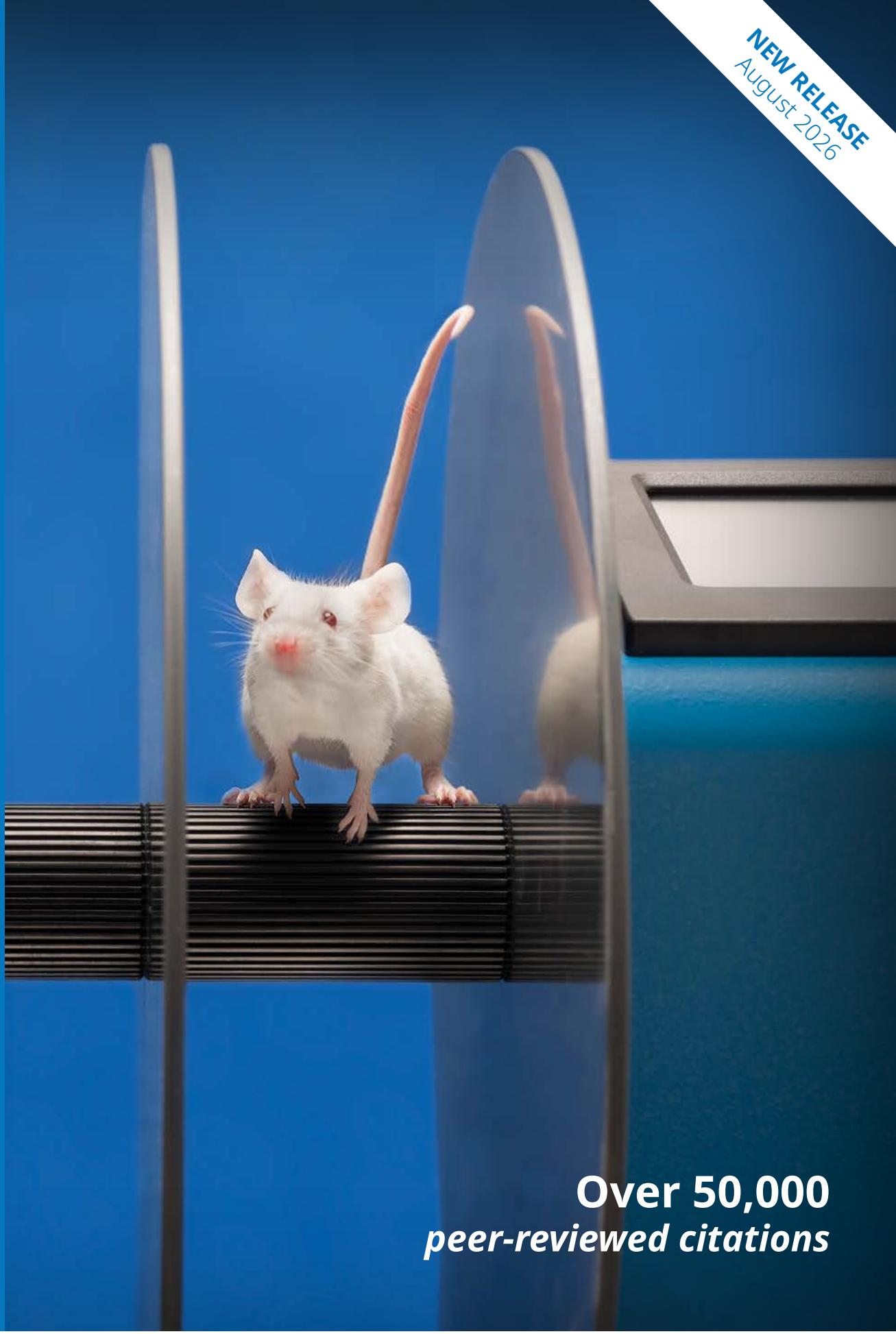
UGO BASILE CATALOGUE

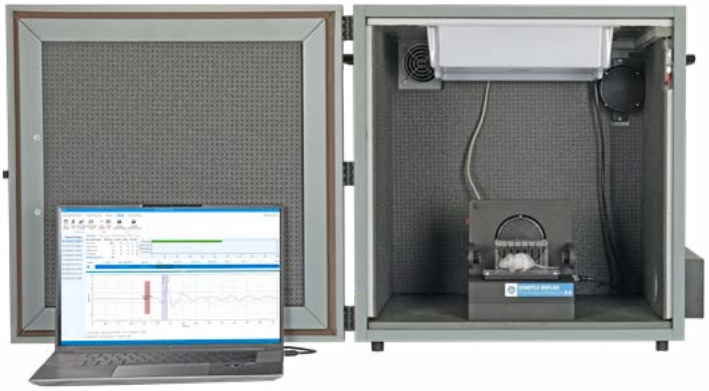
NEW RELEASE
August 2026



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Pre-Pulse Inhibition of Startle Reflex (PPI) 3.0

"New Startle/PPI System, with enhanced performance, ease of use and convertible into Fear Conditioning in 1'"

The lastest 2025 version of Startle/PPI system has been upgraded to provide enhanced precision, flexibility, and ease of use.

The main improvements include:

- easy platform calibration: the load cell sensitivity can be calibarted directly via firmware/software
- sound calibration flexibility: sound levels can be calibrated without user intervention on the electronic board.
- simplified connection between PPI and Fear Conditioning module: switching from PPI to FC now only requires connecting one cable
- optimized auxiliary TTL Signals: signals are now accessible via an optional TTL I/O Interface, offering a cleaner and more customizable setup tailored to the experimental protocol.

The latest software version also includes: fine-tuning of response thresholds, resizable graph in the VIEW page, user-defined cubicle numbering (1, 2, 3, or 4), no longer dependent on the operating system.



Two stimulating/Recording available: one for mouse, one for rat.



Different animal holders to match animal dimension. From left to right: Mouse Holder small (SKU 48003-320), Mouse Holder large (SKU 48003-321), for rodents up to 100gr (SKU 48003-360), for rodents up to 250gr (SKU 48003-370), for rodents up to 450 gr (SKU 48003-390), for rodents up to 800gr (SKU 48003-380).

Application

Deficits of prepulse inhibition of the startle reflex, manifest the inability to filter out from brain integration unnecessary information. This has been linked to abnormalities in sensorimotor gating, noted in psychoses, above all Schizophrenia, Alzheimer's disease, drug use, mutations and others.

Why should I use the Ugo Basile Startle/PPI System?

- High throughput and full automation
- Exceptional flexibility and intuitiveness in the software protocol building
- No environmental interference, thanks to the included highest quality sound and sound isolation cubicles
- High impedance loudspeaker and high sensitivity movement sensors to work with different animal weights

Prepulse Inhibition (PPI) is a neurological phenomenon in which a weaker prestimulus (prepulse) inhibits the reaction of an organism to a subsequent strong stimulus (pulse). The stimuli are usually acoustic, but tactile stimuli and light stimuli are also used. The reduction of the amplitude of startle reflects the ability of the nervous system to temporarily adapt to a strong sensory stimulus when a preceding weaker signal is given to warn the organism.
Can be easily upgraded to Fear Conditioning.

ORDERING INFORMATION

SKU	Description
48101	One animal Startle/PPI system
48101-2	Two animal Startle/PPI system
48101-3	Three animal Startle/PPI system
48101-4	Four animal Startle/PPI system
Systems must be complete by choosing between mouse or rat platform	
48008	Startle PPI platform 3.0 for Mouse, including set of two Mouse Holders
48009	Startle PPI platform 3.0 for Rat, to be completed with Rat Restrainers
Rat Platform must be completed choosin between available rat restainers	
48003-360	Restrainer for rodents up to 100gr
48003-370	Restrainer for rodents up to 250gr
48003-390	Restrainer for rodents up to 450gr
48003-380	Restrainer for rodents 450-800gr

Specifications	
Light	Visible and IR
Sound Intensity + Whitenoise	From 65 dB to 120 dB
Modulated Sound Frequency	From 0.1 to 18KHz
Air Puff	Air Puff stimulus complete system add-on

References

Bilel, S. et al. (2025), "Acute Effects of the Psychedelic Phenethylamine 25I-NBOMe in C57BL/6J Male Mice", International Journal of Molecular Sciences
Bassi, M. et al, (2024), "Pharmaco-toxicological effects of the novel tryptamine hallucinogen 5-MeO-MiPT on motor, sensorimotor, physiological, and cardiorespiratory parameters in mice—from a human poisoning case to the preclinical evidence", Psychopharmacology
Corli, G. et al. (2023), "MAM-2201 acute administration impairs motor, sensorimotor, prepulse inhibition, and memory functions in mice: a comparison with its analogue AM-2201", Psychopharmacology
Tirri, M et al. (2022), "Effect of -NBOMe Compounds on Sensorimotor, Motor, and Prepulse Inhibition Responses in Mice in Comparison With the 2C Analogs and Lysergic Acid Diethylamide: From Preclinical Evidence to Forensic Implication in Driving Under the Influence of Drugs", Frontiers in Psychiatry



New Illuminator for better lighting and ease of use

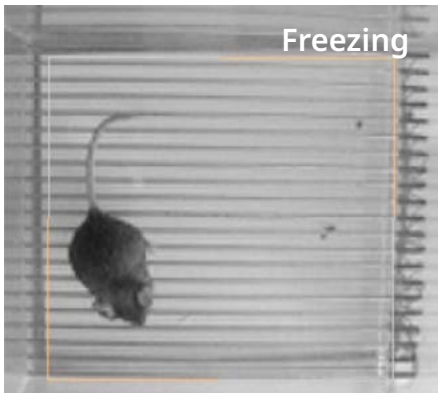


Animal cages are available in different dimensions for rats and mice. Each cage is suitable for tethered animals and includes interchangeable contexts.

Fear Conditioning System

"The most popular Fear Conditioning test in the world, ANY-maze driven"

Complete system for Cued and Contextual fear conditioning tests on rodents. For neuro-behavioral, pharmacological and genetic studies.
Automatic detection of freezing response using ANY-maze special Fear Conditioning licence. Fast set-up and assisted design for multiple animals of experiment protocols. Software controlled light, sound and shock. Easy system expansion.
Automatically detects the freezing response, even in total darkness. Reported information include total freezing time, number and duration of freezing episodes, latency times between stimuli and freezing percentage.The new all-in-one new illuminator offers superior IR/visible lighting homogeneity and effortless cage auto-centering.
Can be easily upgraded to Startle/PPI.



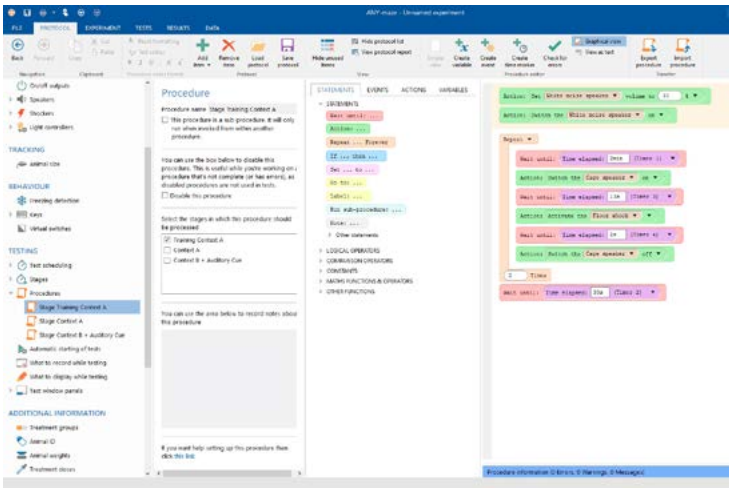
Automated freezing detection

Application

The video-tracking software controls the experimental settings, including light, sound (in the range of 100Hz to 18KHz; 55-100dB or white noise) and shock (constant current pre-settable from 0.1 to 3.0mA). To facilitate easy set up, the software will set up protocol items for you. Simply select the mode in the Protocol and answer the questions about your cage set up.

ORDERING INFORMATION

SKU	Description
46101	Fear Conditioning - 1 Animal System
46101-2	Fear Conditioning - 2 Animal System
46101-3	Fear Conditioning - 3 Animal System
46101-4	Fear Conditioning - 4 Animal System
Available Cages	
46004-D03	Mouse Cage for Tethered Animals
46002-D03	Rat Cage for Tethered Animals
46005	Cage for observational Learning
46004-D01	Cage with frontal vertical door
49603	Operant Cage & Fear Conditioning cage
6000-FC	ANY-maze software Fear Conditioning specific version, limited Fear Conditioning Test only



Easy control and fully automated control via ANY-maze

Specifications	
Shock Intensity	From 0.1 to 2.9mA, in 0.1mA steps
Shock Duration	From 0.5 to 60 seconds
Illumination	Dimmable visible and IR
Sound	100Hz-18KHz, 100dB ± 3dB
White Noise	Adjustable 77dB ± 3dB

Features and Benefits	
One USB cable connection	Seamless installation and connection to PC
High throughput	Expandable from 1 to 16 units for high throughput
Miniaturized USB-IR camera with 2 lenses)	Camera mounted on the ceiling and working in any light conditioning and with any cage dimension
IR and visible illumination	Experiments can be run in light or darkness, also as a tool to alter the context
Same software controls devices and analyses freezing	Fast learning curve in building protocols and automatic detection of freezing

References

La Greca et al. (2026) "Individual differences in prosocial learning are represented in the hippocampal dorsal CA1", Nature Neuroscience.
Molla, H. M. et al. (2024) "Late-adolescent onset of prefrontal endocannabinoid control of hippocampal and amygdalar inputs and its impact on trace-fear conditioning behavior" Neuropsychopharmacology
Speidell, A. at al. (2024), "Accelerated neurodegeneration of basal forebrain cholinergic neurons in HIV-1 gp120 transgenic mice: Critical role of the p75 neurotrophin receptor", Brain, Behavior, and Immunity
Pietrzak, B. et al. (2023), "The Effect of Zonisamide and Ethanol on Various Types of Memory in Rats", International Journal of Environmental Research and Public Health
Wang, Q et al. (2022), "Insular cortical circuits as an executive gateway to decipher threat or extinction memory via distinct subcortical pathways", Nature Communications

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Operant Fear Conditioning

Dual purpose systems to be used for Operant or Fear Conditioning experiments



A standard Fear Conditioning cage has been modified adding an operant wall with 1 pellet dispenser, 2 nose pokes, a house light and 2 cue lights above the nose pokes. The operant wall can be hidden by a removable plastic wall to use the cage as a standard Fear Conditioning.

ORDERING INFORMATION

SKU	Description
49603	Operant Fear Conditioning Cage
49104	Pellet Dispenser

Application

Operant experiments fully programmable with the ANY-Maze software, with protocols ranging from Fixed or Variable Ratio, Fixed or Variable Schedule, Progressive Schedule, Delay Discounting, Extinction, etc.
At the same time, the operant wall can be covered and standard Cued and Contextual Fear Conditioning experiments can be performed with high freezing detection performance, thanks to the ANY-Maze software.
The Operant Wall and the Fear Conditioning set-up can also be used in combination for Avoidance Experiments, for example by partially covering the grid floor with a small plastic platform and measuring the motivation of rodents to leave the platform and get the pellet, in spite of the shock risk (Bravo-Rivera et al., 2014, The Journal of Neuroscience).

Features and Benefits	
The same cage includes pavlovian and operant elements	Both Operant and Fear Conditioning experiments can be run in the same system
The isolation cubicle includes all electronics, shock and lights	One isolation cubicle can be used for multiple types of experiments without any additional module

References

Christian Bravo-Rivera et al. 2014, "*Neural Structures Mediating Expression and Extinction of Platform-Mediated Avoidance*", Journal of Neuroscience

Electric Shock Meter

Measures intensity of the electric shock stimulus in electrified grids



The Electric Shock Meter has been designed to measure the intensity of the electric shock stimulus generated by several Ugo Basile apparatus, to ensure researcher while using multiple devices in parallel that the electric shock intensity is delivered homogeneous on all the devices
The 46000-101 Electric Shock Meter can be used with the following Ugo Basile instruments:

- All the Fear conditioning Ugo Basile systems of any model.
- Active Avoidance set-up for Mice and Rats (Shuttle-Box)
- Passive Avoidance - Step Down for Mice (vibrating platform)
- Vogel Test
- Learned Helplessness

ORDERING INFORMATION

SKU	Description
46000-101	Electric Shock Meter

Application

The 46000-101 Electric Shock Meter is a useful measurement instrument for some of the Ugo Basile instrument having an electric shock stimulus for rodents. Due to electric nature of the electric shock emission through a grid floor, measuring it using a common volt meter is practically impossible; the use of this device will ensure researcher a correct and homogeneous electric stimuli to all the instrument used in parallel.







OPERON

"Intra/Extra-dimensional (ID/ED) attentional Set-Shifting Task for mice"

Composed of two compartments, divided by an automated sliding door (for easy continuous trial repetition), with an operant wall mounted on each side; this includes 3 automated tridimensional stimulators (visual, odor and texture), left and right, with 2 nose pokes and a pellet dispenser in the middle for the reward.
Innovative Revolving System, which provides automated change of floor tactile stimulation and an Odor Delivery System with 10 different odors in 2 independent channels. Automated reward when the correct choice is made.

Application

Our novel ID/ED OPERON instrument is an effective preclinical tool for drug testing and large genetic relevant screenings to study the executive dysfunctions and cognitive symptoms of psychiatric disorders.
Attentional set shifting is a measure of cognitive flexibility and executive functions, referring to the ability to switch between arbitrary internal rules ("cognitive-attentional sets").
The most widely used neuropsychological tasks for the evaluation of this function in humans are the Wisconsin Card Sorting Test (WCST) and the CANTAB Intra-/Extra-Dimensional set-shifting task (ID/ED).
These tasks have been used to identify specific cognitive abnormalities in a wide range of mental disorders including autism, schizophrenia, Parkinson's disease, obsessive-compulsive disorders and attention deficit/hyperactivity disorders.
The clinical relevance and solid methodological approach of the WCST and the ID/ED tests have attracted interest in preclinical research. Importantly, these tasks allow for the selective measurement of discriminative learning, reversal learning and switching of attention within the same dimension (intradimensional shift [IDS]) and between different perceptual dimensions (extradimensional shift [EDS]) within the same subject.



Pellet dispenser (for each chamber)



Operant wall and floor



Tactile texture revolver



Operant wall with house light on

ORDERING INFORMATION

SKU	Description
49503	Operon Dual Chamber Cage
49550-020	Olfactory Delivery System 10 Channels
49550-005	Air Control System (ACS) for Operon

Specifications Dual Chamber	
Texture revolver	6 different tiles (each wall)
Stimulus lights	2 x 3mm 6-color LEDs (each wall)
Nose pokes	2 x 12mm (each wall)
House Light	1 x LED lamp 220 lux (each wall)

Specifications Olfactory
10 channel odor emission (fragrances can be chosen by customer, usually are paraffin solubles)
10 LEDs indicator of status, one red coloured per each channel
10 master switch, one per each channel, allows the customer to manually shut one single channel

References

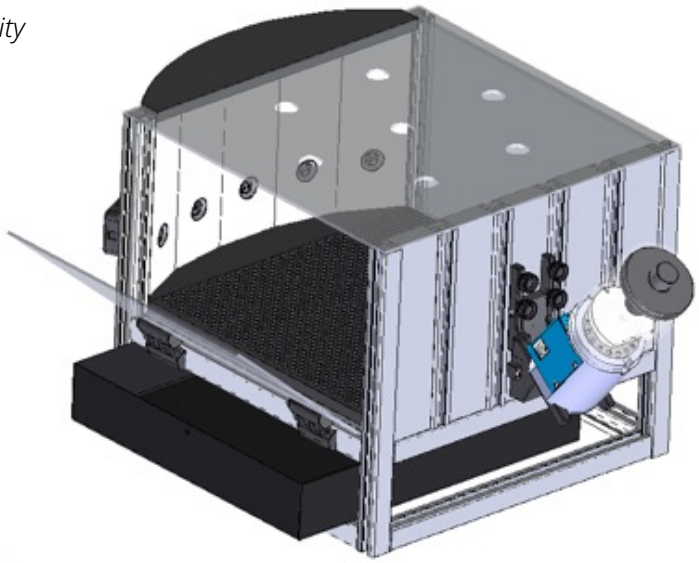
Francesca Zoratto et al. 2023, "Automation at the service of the study of executive functions in preclinical models", Scientific Reports
Francesca Scarsi et al., 2020, "Automated Two-Chamber Operon ID/ED Task for Mice", Current Protocols
Posters
F. Zoratto, E. Pisa, M. Presta, S. Macrì, 2021, "Validation of an automated task to evaluate cognitive flexibility in mice", EBBS Conference (contact us for a copy of the Poster)

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5-Choice Test

5-choice serial reaction time task for attention and impulsivity

The primary goal of the 5-CSRTT is to measure an animal's ability to sustain attention and make rapid, accurate decisions in response to visual cues. The rodent is trained to associate the appearance of a cue in a specific port with a reward, typically a food pellet or a drop of liquid. The animal's task is to quickly and accurately identify the port where the cue appeared and make a nose-poke response in that port to receive the reward. Researchers collect data on various parameters, including response accuracy, response latency, omission errors, and premature responses



ORDERING INFORMATION

SKU	Description
41203-1	1 cage system for 5-choice serial reaction time task (5CSRTT)
41203-2	2 cages system for 5-choice serial reaction time task (5CSRTT)
41203-4	4 cages system for 5-choice serial reaction time task (5CSRTT)

Application

Overall, the 5-choice serial reaction time task is a versatile and widely applied tool in behavioral neuroscience, helping researchers gaining a better understanding of the neural and behavioral mechanisms underlying a range of cognitive processes and their relevance to various health and disease conditions, mainly related to attention and impulsivity, such as ADHD, schizophrenia, addiction, etc.

Specifications	
System fully controlled by software	Both the protocol and the data output are easy to set up and analyze
Multiple cages can be connected to 1 PC	High throughput experiments

Lickometer

Vogel test

The flexible rodent Lickometer - Vogel Test can operate as both a simple software-based lickometer as well as a system for drinking-conflict experiments (coupled with electric shocks). For assessing anxiety and the anxiolytic effect of drugs.
Rat and mouse models. Easy data collection within the included software for windows. Up to 5 cages can be managed by 1 PC.

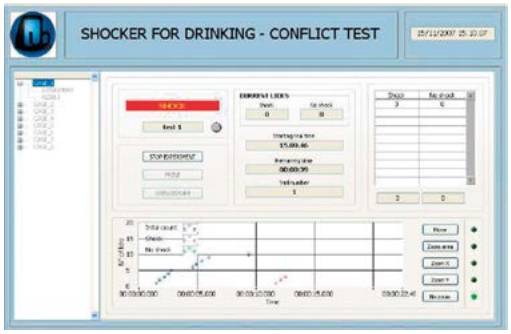


ORDERING INFORMATION

SKU	Description
45100	Lickometer, Drinking Conflict test, for Rats
45150	Lickometer, Drinking Conflict test, for Mice

Application

The Vogel Conflict Test is a conflict based experimental method primarily used in pharmacology. It is used to determine anxiolytic properties of drugs. It predicts drugs that can manage generalized anxiety disorders and acute anxiety states.
Suppressing behavior through punishment is commonly used to determine the anxiolytic properties of drugs. During the Vogel Test, animals randomlyreceive electrical shocks when trying to get water. Therefore the number of times the animal goes to get water decreases. When anxiolytic drugs are injected, the number of times animals go up to get water increases, even though the animals are still punished.



Features and Benefits	
Shock	2-Pole Sine-Wave shocker
Test settings	Trial, initial pause, time intervals, number of licks to deliver a shock

Passive Avoidance

Efficient butterfly door



Passive Avoidance Test is used to assess memory function based on the association between a specific environmental context, which the animal learns to avoid (bright light) and an aversive stimulus – represented by a mild foot shock. Efficient and reliable. Automated and silent sliding door divides the dark and light compartments. Systems for mice or rats. Manage up to 4 cages with one controller.

ORDERING INFORMATION

SKU	Description
40552	Passive Avoidance for Rats (to be completed with Control Unit and Software)
40553	Passive Avoidance Set-Up for Mice (to be completed with Control Unit and Software)
47573	Passive Avoidance mouse cage (step-down); to be completed with Control Unit and Software
40500-001	Control Unit with Touch-screen for SKU 40552, 40553 and 47573
40550-010	Software and activation code for SKU 40552 and 40553
40570-010	Software and activation code for SKU 47573
40500-005	Expansion box for connection of additional cages to controller 40500-001

Application

The spontaneous avoidance of bright environments is exploited to measure memory in mice or rats. This classic method was used in virtually any area of neuroscience, from behavior genetics to psychopharmacology and behavioral toxicology. Currently very common in aging studies for Alzheimer-type dementia, including screening of new drugs attenuating behavioral deficits. The Passive Avoidance task is a one trial fear motivated avoidance task, classically used to assess short term or long-term memory in mice and rats.

Specifications	
Door Delay	From 1 to 300s, in steps of 1s
Delay after crossing the door	From 0.2 to 3.0s
Shock/Pulse Duration	From 0.1 to 9.9s, in steps of 0.1s
Shock Intensity	From 0.1 to 3mA, in steps of 0.1mA

References

Maylin Wong-Guerra et. al. 2021, "JM-20 treatment prevents neuronal damage and memory impairment induced by aluminum chloride in rats", NeuroToxicology

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Active Avoidance

Memory and Learning



A set up for testing active avoidance (also called automatic reflex conditioner or shuttle box), i.e. learning to predict the occurrence of an aversive event, based on the presentation of a specific stimulus.
Enables performance of a wide range of avoidance experiments using a flexible schedule. Precise detection of avoiding aversive event. Manage up to 4 cages with one controller and animal position is simply detected by tilting floor.

ORDERING INFORMATION

SKU	Description
40532	Active Avoidance Set-Up for Rats
40533	Active Avoidance Set-Up for Mice
40500-001	Control Unit with Touch-screen
40530-010	Software and activation code

Application

Behavioral scientists are well acquainted with avoidance methods that have been used for several decades. These procedures incluese systematic studies of the behavioral changes mainly produced by brain lesions or other treatment to define the functions of different C.N.S. sections. Avoidance tests are applied to behavior genetics, psychopharmacology and behavioral toxicology. More recently, such use has become routine in animal model studies of aging and of Alzheimer-type dementia, including the search for new drugs of potential therapeutic value, consisting in attenuation of behavioral deficits.

Specifications	
Shock	Constant current
Shock Intensity	From 0 to 3mA, in 0.1mA steps
Sound frequency	100-18.000Hz, in steps of 100Hz

References

Jordan Marrocco et. al. 2020, "Maternal stress programs accelerated aging of the basal ganglia motor system in offspring", Neurobiology of Stress

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Learned Helplessness



The Ugo Basile Set-Up for Learned Helplessness is based on a sophisticated generator of unpredictable random shocks delivered to the grid floor of a rodent box where no escape is possible. Electric shocks can be randomized in terms of shock length, interval and complex trains can be programmed.

- A sophisticated generator of unpredictable random shocks delivered to the grid floor of a rodent box (dark isolation cube) – rat and mouse models.
- Easy set up using a 12-inch touch screen controller. Randomize shocks based on time duration as well as intervals between shock events. Schedule a complex train of shock events.
- Up to 4 animals can be controlled simultaneously in 4 independent boxes using one touch screen controller.
- Easy data collection. Includes user-friendly reporting software to collect, visualize and export data into spreadsheets such as Excel.
- Optional expansion box available for multiple cages.
- Part of our expandable Beehive Cage-Manager System. Add, manage and monitor other cages in our range using a single touch screen controller.

ORDERING INFORMATION

SKU	Description
47502	Learned Helplessness for Rats
47503	Learned Helplessness for Mice
40500-001	Control Unit with Touch-screen
47500-010	Software and activation code
40500-005	Expansion box for connection of additional cages to controller 40500-001

Features and Benefits	
Great Versatility	The same controller can manage different conditioning tests
Remote Control	Makes remote service and software upgrades extremely simple!

Application

When rodents are exposed to inescapable and unpredictable stress, such as forced swim or inescapable foot shock, they often develop deficits in memory and learning tasks (e.g. Active Avoidance) and/or show analgesic reactions (S.I.A. Stress-Induced Analgesia)

Conditioned Place Preference

Visual and tactile preference

Ugo Basile offers a complete family of CPP systems, including 2-compartment, 3-compartment, and versions for thetered animals. For evaluating the abuse potential of substances and the motivational effects of drugs in mice or rats.
Interchangeable floors, optimized for use with video-tracking software or visual scoring, thanks to the grey, high-contrast color and non-smooth, non-reflective paint.
The systems use quick and easy to change interchangeable tactile floors and visual wall patterns to create robust contextual cues. Designed and optimized for use with any video-tracking software or visual scoring.
Customized sets of walls, with different patterns or textures on request.
Available for cabled animals



2-compartment CPP



3-compartment CPP, with central neutral area

ORDERING INFORMATION

SKU	Description
42552	Conditioned Place Preference for Rats
42552-D03	Conditioned Place Preference for Rats (for tethered and not tethered animals)
43552-D03	Conditioned Place Preference for Rats with central neutral area (for tethered and not tethered animals)
42553	Conditioned Place Preference for Mice
42553-D03	Conditioned Place Preference for Mice (for tethered and not tethered animals)
43553-D03	Conditioned Place Preference for Mice with central neutral area (for tethered and not tethered animals)

Application

The CPP paradigm provides information on the rewarding or aversive effects of visible and tactile contextual cues associated with drugs. This technique has acquired great popularity in research studies involving addiction, being much easier, if compared to drug self-administration procedures. First, the animal is conditioned to identify one of the two compartments with the drug experience. Then the time spent in each compartment is measured; preference or aversion to the drug-paired compartment, hence rewarding/aversive properties of drugs, can be easily deducted. The CPP test only requires the animal to carry out a simple operation to approach or avoid the drug-paired compartment; the animal is expected to spend more time in the drug-paired compartment, if the drug experience produced a positive effect.

References

Marco D. Carpenter et al. 2020 "Nr4a1 suppresses cocaine-induced behavior via epigenetic regulation of homeostatic target genes", Nature Communications



Eleveted Zero maze in grey standard color



IR Eleveted Zero maze and LUX IR Illuminator, with infrared view from the video-tracking software. Notice the exceptional contrast.

Traditional and IR Transparent Mazes

"The perfect devices for your video-tracked behavioural experiments"

Ugo Basile's Animal mazes offer a complete solution to support scientists, making behavioural experiments easy and accurate. All our mazes are made with high quality materials that provide optimal results with video tracking software thanks to their very high contrast, non reflective surface. Not only easy to set up and easy to clean, but all the maze surface textures are selected for rodent comfort. All Ugo Basile's mazes can be built according to specific requirements.

Application

Mazes are among the most popular tests used by researchers working in the field of behavioural research and mainly in the fields of anxiety and stress, memory and learning, spatial memory, activity and exploration.

Features and Benefits	
High-contrast colors	Colors are optimized to give excellent results with any Video-Tracking and any animal color for accurate experiments
Wide range of colors	Mazes are available in grey (standard), blue, white, black, or in any color scientists need
Non-reflecting surface	Optimal camera view avoiding glare caused by light sources
Non-smooth, "warm" surface texture	Non-slippery material to ensure best rodent comfort and minimize glare
IR version with backlit illumination	Delivers the best contrast for optimal Video-Tracking, despite the color of the animal and ambient light

Two approaches to achieve the best contrast

Grey mat color for dark and light animals: Ugo Basile worked on the best color shade to maximize the performance of your video-tracking experiment, regardless of whether you use light or dark animals.
Infrared back-lit illumination: all applications that requires a super-accurate contour of the animal or need darkness will benefit from IR transparent floors and back lit IR illumination offered by LUX Infrared Illuminator



Y maze on LUX IR Illuminator

IR Transparent Mazes

Ugo Basile IR animal mazes are manufactured with a special plastic material transparent to IR illumination but dark for rodents.Thanks to back-lit IR illumination offered by LUX Infrared Illuminator, guarantee a super-accurate contour of the animal while performing video-tracking experiments in any ambient light condition is easy.

IR-mazes are the perfect solution for:

- Scientists that are looking for highest video-tracking performance: IR illumination from below delivers the best contrast for optimal video-tracking.
- Scientists that are careful about the ambient light: Ambient light is often difficult to control and can cause flickering, compromising the performance of video-tracking.
- Scientists that need to run experiments in the darkness
- Running experiments in the darkness contributes to eliminate possible cues or allow to work in alternate light cycles.
- Novel Object Recognition (NOR), where the best possible contrast is needed in order not to confuse head, center and tail and correctly measure object exploration.



IR Elevated Zero maze

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LUX - Backlight for IR Mazes

The LUX 100 is a near infrared light spurce designed to diffuse an homogeneous IR light from underneath using the special series of Ugo Basile "IR transparent" mazes. The IR backlight gives the researcher the possibility to perform behavioral experiment with no or minimal visible light but also get free from room lights conditions using IR filters. This device can be used in conjunction with all IR transparent mazes. This device can be used for mice, rats and other animals that fits the IR transparent mazes.

ORDERING INFORMATION

SKU	Description
LUX70	LUX70 - IR illuminator for backlight
LUX100	LUX100 - IR illuminator for backlight
LUX8060	LUX8060 - IR illuminator for backlight
LUX160	LUX160 - IR illuminator for backlight

Specifications	LUX70	LUX8060	LUX100	LUX160
Dimensions	70x70 cm	80x60 cm	100x100 cm	160x160 cm
Height	17.5 cm	17.5 cm	17.5 cm	17.5 cm

NOR - Novel Object Recognition

The object recognition test is now among the most commonly used behavioral tests for memory studies in rodents. In its simplest design, an animal is presented with two similar objects during the first session and then one of the two objects is replaced by a new object during a second session or is moved to a different location.



Various colors and shapes available

The Novel Object Recognition (NOR) task is used to evaluate cognition, particularly recognition memory, in rodent models of CNS disorders. This test is based on the spontaneous tendency of rodents to spend more time exploring a novel object than a familiar one.

ORDERING INFORMATION

SKU	Description
47000	1 NOR Object for mice assessment of memory performance. White, black or custom colors with different shapes (piramid, cube, cylinder, sphere). Includes bottom magnet and 4 cm side/diameter.
47002	8 NOR Objects for rat assessment of memory performance, with different colours and shapes (piramid, cube, cylinder, sphere). Includes bottom magnet, 4 white objects and 4 black with 8 cm side/diameter. Other colors available on request
47003	8 NOR Objects for mice assessment of memory performance, with different colours and shapes (piramid, cube, cylinder, sphere). Includes bottom magnet, 4 white objects and 4 black. Other colors available on request

Open Fields

Wide family of Open field enclosures, square, round or IR illuminated

The Open Field is used to assess exploratory behavior, activity, anxiety, pain-induced loss of activity, thygmotaxis. Also suited for the novel object recognition (NOR) test for social and short/long term memory.
Decreased anxiety leads to increased exploratory behavior in the center of the open field. Increased anxiety results in less locomotor motion and preference for the edges of the field.

ORDERING INFORMATION

SKU	Description
47100	Open Field Cage 100x100cm
47100-IR	IR Open Field Cage 1000x1000 mm
47140	Circular Open Field for Mice
47140-IR	IR Circular Open Field for Mice
47150	Open Field Cage 100x100cm + Partitions
47150-IR	IR Open Field Cage 100x100cm + Partitions
47432	Square Open Field for Mice Grey Walls
47432-IR	IR Square Open Field for Mice Grey Walls
47433	Square Open Field for Mice Transparent Walls
47433-IR	Square Open Field for Mice Transparent Walls
47434	Open Field Cage 400x400mm
Other colors available on request	





Specifications	47432	47433	47100	47150	47140
Dimensions	44x44 cm	44x44 cm	100x100 cm	100x100 cm	Ø 40 cm
Height	40 cm	40 cm	40 cm	40 cm	40 cm
Partitions	No	No	No	Yes	No

Application

The open field test (OFT) is an experiment used to assay general locomotor activity levels and anxiety in rodents in a broad number of experimental settings.
Increased anxiety, pain, motor disfunction and other conditions. Changes in activity measures are also often used to assess the sedative or stimulant effects of pharmacological agents.

Light/Dark Box (black & white test)

Anxiety screening

To perform Light/Dark Test with rats or mice for assessing anxiety. Useful in identifying and/or screening anxiolytic and anxiogenic agents.
The apparatus consists of a dark safe compartmentnd a illuminated aversive compartment The lit compartment can be made
opaque or transparent. The detection of the time spent in bright compartment Vs the dark one gives a measure of anxiety.



ORDERING INFORMATION

SKU	Description
47442	Light/Dark Box for Rats, Transparent Walls
47442-IR	IR Light/Dark Box for Rats, Transparent Walls
47443	Light/Dark Box for Mice, Transparent Walls
47443-IR	IR Light/Dark Box for Mice, Transparent Walls
47444	Light/Dark Box for Rats, Opaque Walls
47445	Light/Dark Box for Mice, Opaque Walls

Application

The test is based on the innate aversion of rodents to brightly illuminated areas and on their spontaneous preference for dark speces. Time spent in the lit compartment Vs the dark one and the related exploratory behavior are reliable parameters for assessing anxiolytic effects that may be useful in identifying and/or screening of anxiolytic and anxiogenic agents.

Specifications	Mouse	Rat
Dimension	44 cm x 44 cm	50 cm x 100 cm
Wall Height	40 cm	40 cm
Start Box (Internal Dimension)	42 cm x 20 cm x 40 cm	48 cm x 48 cm x 40 cm
Test Box (Internal Dimension)	42 cm x 20 cm x 40 cm	48 cm x 48 cm x 40 cm

References

Keizo Takao and Tsuyoshu Miyakawa, 2006, "Light/dark transition test for mice ", JoVE

Elevated Plus and Zero Mazes

Optimized for video-tracking software

The elevated plus maze (EPM) is used to evaluate anxiety like behavior in rats and mice. The model is based on the rodent's instinctive tendency to explore novel environments and also to avoid unprotected open and elevated spaces. For neurobiological anxiety research.
The Elevated Zero-Maze is an alternative model to the Elevated Plus Maze. Its circular design provides a smoother transition from closed to open space.





Elevated Zero Maze is available with opaque walls and black IR transparent walls

ORDERING INFORMATION

SKU	Description
40142	Elevetad Plus Maze for Rats (Requires 2 cameras)
40142-IR	IR Elevated Plus Maze for Rats
40143	Elevated Plus Maze for Mice
40143-IR	IR Elevated Plus Maze for Mice
40162	Elevated Zero Maze for Rats
40162-IR	IR Elevated Zero Maze for Rats
40163	Elevated Zero Maze for Mice
40163-IR	IR Elevated Zero Maze for Mice
Various colors available, with or without edges on open sides	
All models are also available in IR version	





Elevated Plus Maze is available with opaque walls and black IR transparent walls

Application

The elevated plus-maze test is used as a rodent model of anxiety and is representative of those tests that are based upon the study of spontaneous behavior patterns. The model is based on the test animal's aversion to open spaces. It is a widely used behavioral assay for rodents and it has been validated to assess the anti-anxiety effects of pharmacological agents to define brain regions and mechanisms underlying anxiety-related behavior.

Elevated Plus Maze	Mouse	Rat
Corridor Length	80 cm	110 cm
Corridor Width	5 cm	10 cm
Closed Arm Height	35 cm	40 cm
Height (from ground)	60 cm	60 cm

Elevated Zero Maze	Mouse	Rat
Diameter	60 cm	120 cm
Corridor Width	5 cm	10 cm
Closed Corridors Walls	16 cm	31 cm
Height (from ground)	62 cm	62 cm

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Multi-Maze System

Complete automated device! Fast and easy to assemble.

Versatile, with automated doors and optional pellet dispenser modular device. It empowers researchers to assemble a custom configuration perfectly suited to spatial learning and spatial memory studies in rats or mice.
The same modular device can be transformed into automated radial, Y, T maze by simply rearranging the arms.
Fully controlled by ANY-maze or any other video-tracking software



8 Arms Radial Maze Configuration with Optional Pellet Dispenser

ORDERING INFORMATION

SKU	Description
41503	3 Arms Configuration
41504	3 Arms Configuration + Start Compartment
41508	8 Arms Radial Maze Configuration
Optional	
49104	Pellet dispenser



3 Arms Radial Maze Configuration

Application

Spatial memory is the ability to create a mental geographical map of the surroundings and to navigate the environment accordingly.
In rodent studies, spatial memory can be tested by placing animals in mazes composed of 3 or more radially arranged walkways (arms) and observing either spontaneous exploratory behavior or reward-based navigation, by creating specific training patterns thanks to the automated doors and optional pellet dispensers, all controlled by the ANY-maze software or other software that can send TTLs.

Specifications	
Computer Compatibility	Direct connection to PC
Door control	8 Doors controlled manually, by TTL Input or via PC Connection

Pellet Dispenser

Adaptable to any type of maze or operant chambers.

The Ugo Basile Pellet Dispenser works with pellets between 10 and 20 mg for mice and 20-45 mg for rats. It has an extremely high delivery accuracy thanks to the redundant photobeam check.
An embedded electronic board manages the DC motor and the photodiodes. An ethernet cable connects the Pellet Dispensers to the 8 channel control unit to independently manage up to 8 pellet dispensers.
The delivery is ensured by TTL signals normally delivered by any Video-Tracking software. A button and an LED on the device ensure manual operation and check. The dispensers can be attached to any maze or operant chambers thanks to special mounts.



View of the two sides of pellet dispenser

ORDERING INFORMATION

SKU	Description
49104	Pellet dispenser 2.0 to be used with Ugo Basile MultiMaze for Mice and Rats (Needs to be completed with the Control Unit for pellet dispensers) no power supply included.
49104-A	Pellet dispenser 2.0 for Mice and Rats (to be used with ANY-maze Digital interface or TTL signal) external power supply included.
49101	Control Unit for Pellet Dispenser, via USB, BNC TTLs and manual

Application

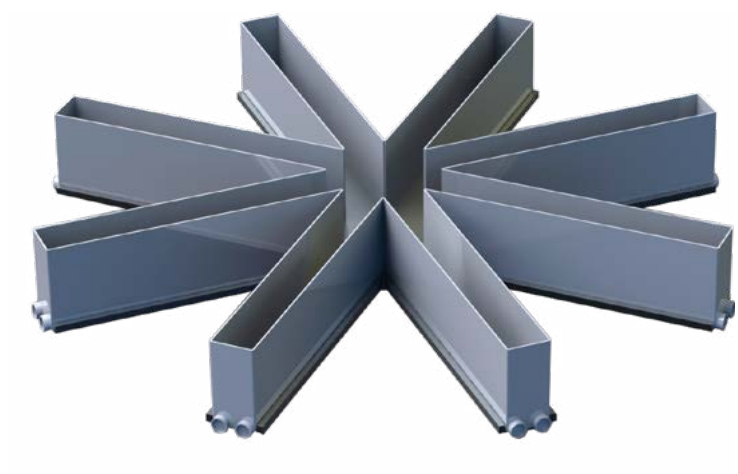
Learning and memory can be studied through punishments or positive reinforcements. The latter require the delivery of rewards in response to specific animal behaviors in applications like reward-enforced T-Maze or Y-maze, Radial Maze, Multi-maze, Delta-maze and Operant chambers like the Operant fear conditioning or traditional Operant cages.

Features and Benefits	
Photobeam-based delivery control	Very high pellet delivery accuracy
Special mounts for each maze	x Adaptable to any type of maze or operant chambers
Compatible with 10-45 mg pellets	Mouse and Rat version with broad range of pellets compatible
8-channel control unit, TTL-driven	Ideal for any maze up to 8-arm radial mazes and compatible with all video-tracking software capable of delivering TTLs

8 Arm Radial Maze

Optimized for video-tracking

The Radial Arm Maze has 8 equally spaced arms radiating from a central circular compartment.
It can be used for several sophisticated protocols to study spatial, working and reference learning and memory.
The animal can rely on egocentric or allocentric strategies. Working versus reference memory can be assessed by adopting intra or inter trial protocols.



ORDERING INFORMATION

SKU	Description
40152	8 Arms Radial Maze for Rats
40152-IR	IR 8 Arms Radial Maze for Rats
40153	8 Arms Radial Maze for Mice
40153-IR	IR 8 Arms Radial Maze for Mice

Application

The animal can rely on egocentric or allocentric (cues outside of the maze) strategies and working versus reference memory can be assessed by adopting intra- or inter-trial protocols. It is an appetitive test and in fact the motivation for the animal (mice or rats) is to find a food reward in one or more arms.

For example, the visit of each arm only once within a trial, indicates a good working memory, while visits to non-baited arms indicate errors in reference memory.

In short, the many variants of the radial arm maze allow the experimenter to assess spatial memory in mice and rats by measuring the avoidance of re-entry in already visited and non-baited arms. Both intra-maze and external cues can be used and optional feeders or doors can be added to the maze to separate the central arena from the arms and deliver the reward only when the task has been completed.



Specifications	Mouse	Rat
Arm Length	36 cm	50 cm
Wall Height	15 cm	20 cm
Arm Width	10 cm	10 cm

T-Maze & Y-Maze

Optimized for video-tracking

The T- and Y-maze are made of sturdy mat plastic (walls) and painted metal floor, so that they are non-reflective and optimized for animal comfort, ease of cleaning and video-tracking contrast.
The design is basically the same for the two mazes, although the Y-maze presents a smoother angle for easier arm alternation. The alternation between the two goal arms is spontaneous, but can also be reinforced through the utilization of rewards in the correct arm. The duration of the trial should be short to assess working memory, assuming that, if working memory is not impaired, on the second trial the animal tends to choose the arm not visited before.



T-Maze with mat plastic walls and opaque metal floor



Y-maze with IR transparent walls and floor on LUX IR Illuminator

ORDERING INFORMATION

SKU	Description
40132	T-Maze for Rats
40132-IR	IR T-Maze for Rats
40133	T-Maze for Mice
40133-IR	IR T-Maze for Mice
40172	Y-Maze for Rats
40172-IR	IR Y-Maze for Rats
40173	Y-Maze for Mice
40173-IR	IR Y-Maze for Mice
Other colors available on request	

T-Maze	Mouse	Rat
Short arm length	35 cm	50 cm
Long arm Lenght	65 cm	90 cm
Wall height	15 cm	20 cm

Y-Maze	Mouse	Rat
Arm Length	35 cm	50 cm
Wall Height	25 cm	20 cm

Application

The T and Y-maze are used in protocols to assess cognitive abilities of rodents. When they start from the base of the T, they then tend to explore first one arm and then the other one, producing the alternation of the choice of the goal arm across repeated trials. It follows that the alternation of arm choices depends on the memory of the animal for the arm visited before. For this reason, this is a test that can be used for spatial memory and it is quite simple to set-up, not needing rewards or training. Specifically, the T- and Y-maze serve the purpose of studying spatial working memory, i.e. the short term memory "buffer", as opposite to the longer term reference memory.

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Cincinnati Maze

Quantitative Spatail Memory



The Cincinnati Maze consists of 9 T-mazes interconnected.
It is filled with water to avoid scent issues and is used on rats to study egocentric navigation (memory). In order to avoid any possibility of external cue use, the maze is constructed in IR-transparent Perspex to run the experiment in full darkness and ensure that movements are due to egocentric and not allocentric mechanisms.
The Ugo Basile Cincinnati Maze for rats is a 2x2 mt arena with a training corridor and 9T-mazes interconnected. It is filled with water, has drain and overflow included, together with wheels for easy movement. The materials used are transparent with IR illumination, to ensure experiments in the darkness. IR-transparents lenses, IR-sensitive cameras and ceiling IR illumination systems can also be provided with Video-Tracking software.

ORDERING INFORMATION

SKU	Description
42500	Cincinnati water maze Rat - IR transparent walls (9 T-maze)

Application

The ability to learn and remembering different locations is encoded in the brain by two systems: one which uses external cues (allocentric) and one using internal cues (egocentric. The structures of the brain involved in the two types of memory are different and hence the ability to run tasks that can dissect them is important. Through the asymmetrical T-mazes which constitute the Cincinnati maze, the number of errors to reach the goal, the time and distance spent are measured to get an index of such memory and ability after an initial training period. Applications are many, from Alzheimer to epilepsy and all those neural phenomena which involve spatial memory, especially when the areas of the brain governing egocentric navigation are to be investigated. An advantage versus the more commonly used Water Maze is that it focuses essential on external cues and it is not possible to count the number of errors as endpoint.

Specification	
Dimensions	2x2 mt, height 51 cm (maze walls), height 86,5 cm (maze walls + maze base with wheels)
Total Weight	486 kg



Delta Maze

Unique Ugo Basile Product

It is a fully automated T-maze with return arms, automated doors and optional pellet dispensers. The special design with automated doors sliding underneath the floor make is compatible with cabled animals for electrophysiology and optogenetics applications. Once the animal has made its arm choice, it can then come back to the starting box without any external interference. Requires two cameras for optimal tracking.

ORDERING INFORMATION

SKU	Description
41505	Delta Maze Complete System

Application

The idea behind the design of the Delta-Maze was to find a way to avoid handling implanted animals during a standard T-Maze test, with the returning arms and software controlled sliding automated doors allowing for special training and task procedures. Our multi-maze set-up was used as its proprietary system of doors sliding underneath the floor eliminates any hindrance to animals moving around, even when connected to an optogenetics or other wired set-up and facilitates video-tracking.



Features and Benefits	
New proprietary modular system	Easy to design custom units on request
Doors slide underneath the floor	Unobstructed view for optimal videotracking even in optogenetics studies
Each arm provided with its own motor	Smooth and silent operation

Atlantis Platforms

Hydraulic system to move the platforms



Atlantis System allows platforms in a Morris Water Maze to rise gently to the surface or go down automatically, using the manual controller or TTL signals. From one to four platform systems available. Enables extinction protocols on rats or mice. No need to stop the test to manually remove or reposition platforms.

ORDERING INFORMATION

SKU	Description
40100	Atlantis with 1 Platform, Complete System
40400	Atlantis with 4 Platform, Complete System
40101	Additional platform and motor assembly

Application

As described in the paper "*The Atlantis Platform: A New Design and Further Developments of Buresova's On-demand Platform for the Water Maze*" (1994) by R.I.W. Spooner et alia, in the widely used spatial learning task of the water maze a (Morris 1981, 1984) rat (or mouse) will rapidly learn to take relatively direct paths to the platform, indicating they may have learned its spatial location.
Transfer tests, sometimes called probe tests, in which the platform is removed from the pool, offer further evidence of true spatial learning, as trained animals display a search pattern focusing on the platform location in the training quadrant.



Specifications	
Number of Channels	4 Indipendent Channels
Platform Vertical Range	From 25 to 35 cm
Vertical Speed	10 mm/second
Platform Diameter	10 cm
Platform Movement	Hydraulic, no electricity in the pool

References

D. Ryan et. al., 2013, "*Spatial learning impairments in PLB1$_{Triple}$ knock-in Alzheimer mice are task-specific and age-dependent* ", Cellular and Molecular Life Sciences

Tail Suspension Test

The classic test for depression assessment in mice



Antidepressant drugs and depression animal model genetic screening are commonly conducted by using the Tail Suspension Test (TST). This test is based on the aversive effect of hanging a mouse of rat by the tail, which elicits its struggling moving upwards in an attempt to escape (which is obviously not possible). A video-tracking system and a camera allow the measurement of immobility in one or more animals at the time. The measurement of immobility gives an indication of the depression state of the animal.

ORDERING INFORMATION

SKU	Description
40183	Tail Suspension for Mice
40182	Tail Suspension for Rats
60000-FST	ANY-maze for Forced Swim and Tail Suspension

Application

The translational power of the test has been questioned because the human depression condition is a long-lasting condition, while the TST test is a short experiment. For this reason, some prefer to use it as a tool to measure antidepressant effects of drugs, rather than a proxy for depression states.
In any case the TST, together with the Porsolt Forced Swim test are still the most used test to assess depression in rodents, as shown by the amount of citations exceeding 50,000.

Features and Benefits	
Multiple animal immobility can be tracked at once	High throughput
Combination package with Forced Swim Test (Porsolt))	A battery of test can be run by just purchasing the other component of the combo (lid with a hook or water cylinder

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Porsolt - Forced Swim Test

The classic test for depression measurement in mice and rats

The Porsolt Forced Swim Test (FST), or Porsolt Swim Test (PST), also known as the Behavioral Despair Test, is centered on the way rodents respond to their threat of drowning. This has been correlated to their mood, or, more precisely, to their level of depression, with non-depressed animals that swim longer than depressed animals, who, instead, give up and float immobile. Immobility is measured by a video-tracking software and a camera, which can score several animals at the time, by simply imaging several cylinders at the time separated by dividers.

ORDERING INFORMATION

SKU	Description
40122	Porsolt for large Rats
40123	Porsolt for Mice and Rats
60000-FST	ANY-maze for Forced Swim and Tail Suspension

Specifications	Mouse	Rat
Diameter	20 cm	30 cm
Height	42 cm	62,5 cm
Water Capacity	11 l	39,5 l

Application

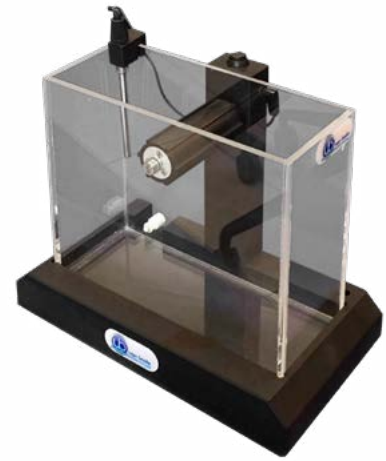
It is primarily used to assess depressive-like behavior and to screen potential antidepressant drugs, as immobility is interpreted as a sign of despair and swimming as indicators of resilience. While the primary focus is on depression-related behaviors, the FST can also provide insights into anxiety-like behaviors in rodents. Some drugs that reduce immobility in the test may have anxiolytic effects.
It's important to note that the FST has been a subject of ethical concerns related to animal welfare, and alternative behavioral tests with potentially less distress to animals are being explored.

Features and Benefits	
Plastic cylinder with drain and dividers	Easy to empty and multiple animals can be assessed at the time
Combination version with Tail Suspension	Just add the plastic cylinders and use the tail suspension as dividers for high throughput and convenience

Nomura Forced Swim Test

Quantititative assessment of depressive behaviour

This test is not based on immobility tracking but rather on the wheel rotations of a wheel that the animal must grasp while in the water, as an escape behaviour. Can deliver high throughput with up to 40 units at the time. The automated scoring of wheel rotations eliminates the partial subjectivity of immobility measurement, as stated by Nomura et al. (1982) "... this water wheel test is more appropriate as a screening test for antidepressants than Porsolt's test with regard to both objectivity and specificity."



ORDERING INFORMATION

SKU	Description
40803	Nomura Forced Swim Test, complete
60000-FST	ANY-maze for Forced Swim and Tail Suspension

Application

The Nomura test was designed to screen potential antidepressant drugs, with higher objectivity and specificity than the Porsolt test and the Tail suspension. Turning the wheel reveals animal struggle instead of despair when it gives up or turns them left. It is also applicable to phenotyping and welfare screening.

Specifications	
Connection to PC	USB
Scoring	via rotation encoder (CW & CCW rotations)
Data collection & analysis	via ANYmaze FST module
Operating Temperature	10° to 40°C
Sound Level	Negligible
Dimensions	24(w)x12(d)x21(h)cm



Application

Carol Barnes developed a maze test for spatial learning and memory in 1979 where animals escaped from a brightly lit, exposed circular open platform surface to a small dark recessed chamber located under one of the holes around the perimeter of the platform. Although it was initially invented for rats, the Barnes maze has become more popular to assess spatial memory in mice, taking advantage of their superior abilities to find and escape through small holes.

Specifications	Mouse	Rat
Diameter	100 cm	130 cm
Number of Holes	20	20
Hole Diameter	5 cm	10 cm
Height (from floor)	60 cm	60 cm
Shelter	Included	Included

Barnes Maze

Spatial learning and memory

The Barnes Maze is a valid alternative to the Water Maze to study spatial learning and memory. The motivational drive is the rodent's instinctive aversion for open spaces and natural preference for dark, "sheltered" spaces.Magnetic shelter included.
Reliable and durable. Optimized for use with video-tracking software. Available for mice or rats. Easy to set up, easy to clean.

ORDERING INFORMATION

SKU	Description
40192	Barnes Maze for Rats
40193	Barnes Maze for Mice
40196	Barnes Maze random holes for Mice
40192/3-320	Optional Black Cups for Barnes Maze (fake shelters)
Other colors available on request	



Shelter with steps to facilitate the entrance

Morris Water Maze

Designed to operate with Atlantis platforms

The classic test for spatial learning and long-term memory in rodents. For research into neurocognitive disorders and treatments, aging, drug-abuse, neural systems, neurotransmitters and brain development.
High quality, strong and low weight. Embedded wheels for easy movement. Easy to drain and clean. Add optional Atlantis System to extend test capabilities. Different colors available.

ORDERING INFORMATION

SKU	Description
40105	Water Maze Ø 100cm - Height 60 cm
40125	Water Maze Ø 120cm - Height 60 cm
40155	Water Maze Ø 150cm - Height 60 cm
40185	Water Maze Ø 180cm - Height 60 cm
40125-010	Basic Platform
40111	Optional heater for Water Maze
Other colors available on request	





Application

The "Water maze" test was developed by Richard Morris as a test for spatial learning in rodents. It relies on intra-maze or extra-maze cues to navigate from start locations around the perimeter of an open swimming arena to locate a submerged escape platform.
Use video-tracking software for measurements such as total distance swum, thigmotaxis duration, speed, latency to platform, time spent in quadrants. Made with high quality alimentary-grade fiberglass selected for its high strength, durability, low weight and easy cleanability. Easy to move and store pool with embedded wheels.
Easy to fill, easy to empty, water drain is positioned below the tank. Optional heater available

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Sociability

3-Chambers Test

A valuable tool to study social behavior in rodents. It is especially useful for research on autism disease, parental behavior, sociability, dominance and social memory (social novelty).
High quality mouse and rat grids are easy to use and to clean. The specific grey base provides unsurpassed contrast for the best video-tracking outcome. Non-smooth surface texture for best rodent comfort and natural environment.



ORDERING INFORMATION

SKU	Description
46503	Sociability Test for Mice - Transparent walls, partitions and lids, with 2 grey lid cages with cone-shaped lid
46513	Sociability Test for Mice - Transparent walls, partitions and lids, with two white lid cages with cone-shaped lid
46533	Sociability Test for Mice - Grey opaque walls and transparent internal partitions
46553	Sociability Test for Mice - Opaque Cage
46502	Sociability Test for Rats - Transparent Cage
46552	Sociability Test for Rats - Opaque Cage
46512	Sociability Test for Rats XL - Transparent Cage
46562	Sociability Test for Rats XL - Opaque Cage

Specifications	Mouse	Rat	Rat XL
Dimension	60 x 40 x 25 cm	120 x 58,5 x 40 cm	120 x 78,5 x 40 cm
Cage Internal Diameter	7 cm	15 cm	15 cm
Cage Height	15 cm	25 cm	25 cm



Application

Research has shown that, although human social behavior is generally more complex, humans and animals share some aspects of social behavior. The 3-chambered test is a valuable tool to assess general sociability and interest in social novelty in rodent models with CNS disorders.
Rodents normally prefer to spend time with another rodent (sociability) and will investigate a novel intruder more than a familiar one (social novelty). Based on these inclinations, the Three Chamber Test can help identify rodents with deficits in sociability and/or social novelty/memory.

Agora Maze

Complex sociability interactions

Based on where a mouse with free movement spends its time in a central arena area with stimulus animals (familiar/unfamiliar/dominant/different gender) positioned in chambers on the outer edge.
For research into impairments in social skills that are central to mental disease and developing tools for their assessment in mouse models as well as smell related behavior (anosmia).
Ideal surface for video-tracking software.



ORDERING INFORMATION

SKU	Description
46573	Agora Maze for Mice

Application

"*A fundamental prerequisite for living in social communities is a highly complex set of social skills that governs interactions between individual members of a group. In consequence, impairments in these social skills, prominently prevalent in human psychiatric disorders such as autism and schizophrenia, have devastating consequences for individuals and society*" (Krueger-Burg, 2016).
The experimental design of the new Agora Maze allows evaluation of preference for social novelty or the propensity to spend time with a previously un-encountered mouse rather than with a familiar mouse.



Specifications	
Dimensions	61x58 cm
Height	25 cm
Chambers	5
Chambers Dimension	11,5 x 8.5 cm
Internal Arena	Ø 34 cm
Color	Grey (Best for video-tracking)

References

Meghan Cum et. al. 2024, "*A systematic review and meta-analysis of how social memory is studied*", Scientific Reports

Dominance Tube Test

Assess social hierarchy and dominance in rodents

It is commonly employed in laboratory settings to study social behaviour and interactions in a controlled environment. It can be used with or without food rewards to incentivize the animals to move through the tube. In the simple version, without rewards, two animals are placed at the extremities of a plastic tube and the animals will interact at the center of the tube with one of the two showing aggressive behaviour and force its opponent out of the tube.



ORDERING INFORMATION

SKU	Description
4010	Dominance Tube Test
4010 -010	2 Starting Boxes
4010-16	4 x 16 cm tube
4010-30	1 x 30 cm tube
4010-60	1 x 60 cm tube

Specifications	
Starting box	15 x 15 x15 cm
Tubes	1 tube 60 cm, 1 tube 30 cm, 4 tubes 16 cm

Application

The test is frequently used to test effect of drugs on aggressiveness or in comparative studies to examine differences in social dominance and aggression between rodent strains. Also longitudinal studies can be performed to to track changes in dominance across time. In a battery of social interaction tests, the tube dominance test would normally be included within the phenotyping process.

Features and Benefits	
2 Doors located at the center	Full control of the experiment
Slotted top part of the tube	Works for tethered animals

Visual Cliff

A simple way for preliminary visual assessment

Before engaging into complex visual assessment tests, the Visual Cliff is a classic device to evaluate the presence of severe visual impairments. It uses a glass or plexiglass surface that creates the illusion of a sudden drop-off, thanks to the fact that the surface is divided into two sections. One section is at a higher level than the other, creating a visual cliff. The animal can see the difference in depth between the two sections due to the clear surface.



ORDERING INFORMATION

SKU	Description
48071	Visual Cliff

Specifications	
Dimension	60 x 40 x 40 cm



Application

The key question the visual cliff test seeks to answer is whether animals show a natural aversion to the perceived drop-off, indicating an innate depth perception ability. Typically, if depth perception has developed, animals will hesitate or avoid walking over the visual cliff, while those who lack this ability will not show the same level of caution and may proceed without hesitation. The test can be used to assess the effect of drugs, the development of depth perception with age, genetic research, etc.

Features and Benefits	
Simple instrument	Gives a rough indication of visual acuity and is not expensivet
Customizable	Being a purely mechanical device it can be customized according to scientist preferences

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USB Camera & Optics

Day and night Camera

High quality camera for rodent video-tracking. Provides precise results for tracking softwares in normal and IR conditions. Easy to install and very fast data transmission.
B/W USB Camera, including 2.8-12mm Day & Night Varifocal lens, 5m USB cable and Ceiling Support. Tripods for frontal or lateral view available on request.





B/W USB Camera close-up



B/W USB Camera complete kit



Camera mounted on optional small tripod



Camera mounted on optional large tripod

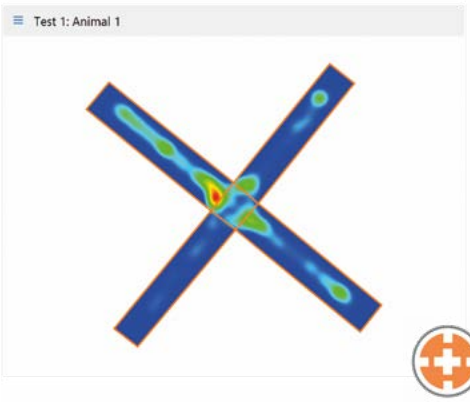
ORDERING INFORMATION

SKU	Description
47400-040	B/W USB Camera, including 2.8-10mm day&night varifocal lens, 5m USB-C cable and ceiling support
47400-050	B/W USB Camera, including 2.1mm & 4.3mm lenses with visible light block filter, M12 Lens Adaptor (for Fear Conditioning)
47400-100	Optional Small Tripod for bench use
47400-200	Optional Large Tripod as alternative to ceiling mount

Specifications	
Resolution	744 x 480 px (0,4 MP)
FPS	76
Sensitivity	4.8 V/Lux-Sec
Dynamic Range	8 bit
Color Format	Y800
Shutter	Global
Format	1/3”
Pixel Size	H: 6 µm, V: 6 µm
Lens Mount	C/CS
Dimension	36 x 36 x 25 mm
Mass	70 g

Application

The monochrome camera has a USB 2.0 interface and is the perfect solution for experiments in visible and IR light. The camera includes a C to CS mount adapter, making it compatible to C and CS mount lenses. Different set of lenses ara available for the different applications. High frame rates (500 fps) can be achieved with special cables and included software.



Video-tracking software Any-Maze

Flexible and advanced

This software enables researchers to study behavior in a more reliable and consistent way and over longer time periods than if they were using direct observation or manual recording.
Highly advanced, comprehensive video-tracking system. The software couples an unrivalled depth of features with a simple, familiar design, to provide automated testing in virtually any behavioral test.

ORDERING INFORMATION

SKU	Description
60000	ANY-Maze flexible video tracking system

Application

Video tracking is the process of locating a moving object (or multiple objects) over time using a camera.
It has a variety of uses and it has been found of great advantage to match the need for automating behavioral observations.

Easy to use, fully featured without the need of expensive modules or add-ons. Provides excellent results when used with the Ugo Basile’s range of high contrast, non reflective mazes.

