

# Системы исследования оперантного обусловливания

## Описание

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# PACKWIN Software (Panlab)

Handy software for standard operant conditioning and behavioral procedures en small laboratory animals.

- Even more user-friendly interface!
- Aperture assistant and experimental tool bar
- Modular structure (targeted to specific experiments or fully customizable)
- Straightforward "State-Editor" tool for protocol configurations (no need of specific programming skills)
- Assistant panels and specific reports for 5/9 holes procedures, Vogel test, fear conditioning and startle reflex studies
- Operant chamber simulator tool (unique feature in the market!)
- Test boxes function for hardware checking purpose
- Built-in Yoked procedure settings
- Optimal data traceability
- Integrated potent analysis module and plot makers
- Batch analysis and direct exportation to Excel (1 session per row)

Item No.	Description
76-0002	(PACKWIN V2.0) Software Platform for behavior/operant boxes – Needs Experimental Modules
76-0592	(PACKWINCS) Customized Experimental Module (Fully Customizable Protocol and Data Report Edition)
76-0593	5/9 Holes Experimental module (5-Choices Serial Reaction Time task)
76-0594	(PACKWINVT) PACKWIN Vogel Test Experimental Module (Standard Asistants and Data Reports for Pre-test y Test Protocols).

**Item No.****Description**

76-0701

Fear conditioning Experimental module

76-0702

Startle reflex Experimental module

**DETAILS**

PACKWIN is a user-friendly and versatile Software platform developed with the aim to offer a powerful tool for conducting a wide range of experiments in different types of behaviour chambers. It typically controls the Panlab standard chambers for operant conditioning, self-administration, 5/9 hole and Vogel test, but its range of compatibility allows working with other behavioural chambers for Active/Passive avoidance and fear conditioning experiments...

Due to his new modular structure, PACKWIN 2.0. can be used in a highly flexible structure (Customised module "CS) allowing the experimenter to build a wide variety of different protocols for the configuration of basic programs for operant procedure (fixed and variable ratio, fixed or variable interval, fixed or variable DRL, positive and negative reinforcement, extinction, probability to obtain a reinforcement, etc.) with or without discriminative stimuli (light, sound) as well as more specific and

complex user-defined protocols (conflict, DMTS, 5 choice serial reaction task etc.). Give the PACKWIN state-editor tool the opportunity to surprise yourself by its straightforwardness (no need of specific programming skills)!! A great number of editable raw data table and output numeric data&graph reports are provided integrated in the all-in-one structure of the software.

PACKWIN 2.0. also offers new specific experimental modules providing convenient protocol editor templates and ready-to-use run panels and data reports directly targeted to specific standard experiments such as the 5-choice Serial Reaction Time Task (5/9 hole module " HO) and the Vogel test.

In PACKWIN 2.0 version, a step ahead has been made in terms of user-interface and features that no other software available in the market can offer right now: new aperture assistant and experimental tool bar for guiding the user along the experimental process, new chamber simulator for checking your protocols without interrupting the data acquired from the real chambers, new batch analysis features for increasing the productivity of your experiment, integrated numerical and graph reports, direct exportation to Excel... and many other essential functions!!!!!! Who told you that performing operant conditioning studies was only reserved to experts?

PACKWIN 2.0 is not exclusive to Panlab chambers! Contact us for more information about how to use PACKWIN with your existing set of operant chambers (compatibility with Coulbourn and Med Associates chambers...)

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# Compact 5/9 Holes Box (Panlab)

The compact 5/9-hole box is commonly used to evaluate attention performance using a visual discrimination task in laboratory animals.

- New frontal easily removable tray
- New modular panel for the house light and reward
- New additional choice of food/liquid dispensers
- New accessory for running mouse test in a rat box
- Up to 9 available holes: allows protocols with different hole position and learning difficulties
- Hole LEDs with adjustable intensity
- Associated with the very complete and flexible software PackWin
- Protocol assistant for configuring a complex 5-CSRT in less than 5 min
- Up to 8 stations can be connected at once to PC through a single cable
- RS232/USB communication

Item No.	Description
76-0940	Mice 5/9 Hole Wall for Rat Cage
76-0651	Mice Pellet dispenser without magazine
76-0592	(PACKWINCS) Customized Experimental Module (Fully Customizable Protocol and Data Report Edition)
76-0353	(LEI00550) Pellets Dispenser with Feeder, Rat
76-0573	0,02 ml spoon for LEI00261 and LEI00561
76-0356	Liquid dispenser (drops) with magazine - Rat
76-0574	0,05 ml spoon for LEI00261 and LEI00561

Item No.	Description
76-0357	Liquid dispenser (spoon) - Rat
76-0928	5-9 Holes Cage, Rat
76-0593	5/9 Holes Experimental module (5-Choices Serial Reaction Time task)
76-0591	0,1 ml spoon for LE100261 and LE100561
76-0338	Liquid dispenser (drops) with magazine - Mouse
76-0002	(PACKWIN V2.0) Software Platform for behavior/operant boxes - Needs Experimental Modules
76-0335	(LE100250) Pellets Dispenser with Feeder, Mouse
76-0929	5-9 Holes Cage, Mice
76-0339	Liquid dispenser (spoon) - Mouse



## DETAILS



The 5/9 holes box is commonly used to evaluate attention performance using a visual discrimination task in laboratory animals.

The Panlab 5/9 holes box is composed by a test chamber, food or drink dispenser, a Link Box to connect it to the PC and the PackWin software. The particularity of the Panlab box is that 9 holes positions are available for the test providing an higher protocol flexibility: different number of holes used, different degrees of test difficulty.

The five holes box is assembled with black aluminium walls and a transparent front door. The box is equipped with an arc of 9 contiguous apertures set into the rear wall, a house light, a food pellet dispenser and a pusher to detect the nose-pokes into the food holder. The holes not used in the experiment may be blocked up using a metal insert. Each hole is equipped with photocell beams and internal LED providing visual cues specific to each hole. The intensity of the LED can be adjusted in Link Box using the digital selector. The box is placed on a stainless-steel platform and the associated tray is easily removable to clean animal excrements.

The box has been recently improved providing the following new features:

- New frontal easily removable tray

- New modular panel for the house light and reward
- New additional choice of food/liquid dispensers
- New accesory for running mouse test in a rat box

All Panlab 5/9 hole boxes are associated with the potent and versatile PackWin software in order to control the experiment (protocol configuration, experiment running) and obtain relevant data such as correct responses, incorrect responses, omissions, premature responses, perseverance responses, time out responses, total receptacle head entries, etc.

Different experimental paradigms for sustained attention, animal models of impulsive behaviour and lateralized-discrimination task can be conducted using the nine-hole box.

The 5-choice serial reaction time task (5CSRT task) is a task currently used in this kind of boxes. A specific Packwin software module is available for ready-to-use configurations, Run panel and Data reports directly targeted to 5-choice serial reaction tasks.

SPECIFICATIONS

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Specifications	76-0940	76-0928	76-0929
Subject	Mouse	Rat	Mouse
Cage dimensions (int.)	25 (W) x 28 (D) x 24 (H) cm	25 (W) x 28 (D) x 24 (H) cm	19 (W) x 22 (D) x 24 (H) cm
Cage dimensions (ext.), including the base	44 (W) x 37 (D) x 35 (H) cm	44 (W) x 37 (D) x 35 (H) cm	44 (W) x 37 (D) x 35 (H) cm
Holes dimensions	13 mm diameter; 14 mm deep, (IR beam at 5 mm from entry)	23 mm diameter; 14 mm deep, (IR beam at 10 mm from entry)	13 mm diameter; 10 mm deep, (IR beam at 5 mm from entry)
Material Composition	Plexiglas, aluminium, stainless steel	Plexiglas, aluminium, stainless steel	Plexiglas, aluminium, stainless steel
Power Supply	110V/220V, 50/60Hz	110V/220V, 50/60Hz	110V/220V, 50/60Hz



# Modular Operant / Behavior Box (Panlab)

Modular operant boxes for standard operant conditioning procedures.

- Entirely modular system
- Reduced number of cables
- Possibility of customization
- Up to 8 stations (or more!) can be connected at once to PC through a single cable

Item No.	Description
76-0147	(LE1002CL) Compact Operant Box, Mouse (including Liquid Dispenser, Lever, Light Stimuli, Shock Grid and link box)
76-0146	(LE1002CP) Compact Operant Box, Mouse (including Pellets Dispenser, Lever, Light Stimuli, Shock Grid and link box)
76-0148	(LE1005CP) Compact Operant Box, Rat (including Pellet Dispenser, Lever, Light Stimuli, Shock Grid and link box)
76-0149	(LE1005CL) Compact Operant Box, Rat (including liquid Dispenser, Lever, Light Stimuli, Shock Grid and link box)
76-0152	(LE1005) Modular Operant Chamber, Rat (needs accessories, ask for the list of available accessories)
76-0151	(LE1002) Modular Operant Chamber, Mouse (needs accessories, ask for the list of available accessories)
76-0154	(LE100501) Shockable Grid, Rat

Item No.	Description
76-0153	(LE100201) Shockable Grid, Mouse
76-0652	Standard Grid Floor, Rat
76-0706	Standard grid floor, Mouse
76-0002	(PACKWIN V2.0) Software Platform for behavior/operant boxes – Needs Experimental Modules
76-0592	(PACKWINCS) Customized Experimental Module (Fully Customizable Protocol and Data Report Edition)
76-0593	5/9 Holes Experimental module (5-Choices Serial Reaction Time task)
76-0661	Y connector for LinkBox01 duplication to 1 input and 1 output
76-0594	(PACKWINVT) PACKWIN Vogel Test Experimental Module (Standard Asistants and Data Reports for Pre-test y Test Protocols).
76-0660	Y connector for LinkBox01 duplication to 2 outputs



## DETAILS



For standard operant conditioning and behavioral procedures en small laboratory animals.

The Panlab Operant Chamber is an entirely modular experimental enclosure designed to conduct operant conditioning procedures (e.g. food reinforcement, DMTS, conflict tests, self-administrationâ€¦).

The operant chamber is made in an entirely modular structure which allows complete disassembling or rearrangement to build a new space of different dimensions/components or to enable storage in the minimum space. It can be easily transformed from rat chamber to mice chamber (or vice versa) with a reduced cost.

A frontal door offers a total accessibility inside the chamber. Walls and cover can be of different material or colour, since they are totally removable.

Each chamber is associated with a Link Box which provides power to up to 8 (expandable depending of the customer configuration) Operant Modules (levers, lights, sound, dispensers, electrical shock...) conferring to the chambers a full autonomy.

Only one cable connects the Link Box to the PC (PackWin Software), this last for standard and advanced protocol configuration and running.

Please contact us for a complete list of the accessories available for the boxes.

# Self Administration box (Panlab)

The Panlab self-administration box is an entirely modular experimental enclosure designed to conduct a wide variety of different schedules for studying reward and addiction in laboratory animals.

- Entirely modular system
- Reduced number of cables
- Up to 8 stations (or more!) can be connected at once to PC through a single cable

Item No.	Description
76-0342	(LEI00265) Lever, Mouse
76-0360	(LEI00565) Lever, Rat
76-0336	(LEI00251) Photoelectric Detector of Access (Feeder, Drink, and Nose Poke), Mouse
76-0354	(LEI00551) Photoelectric Detector of Access (Feeder, Drink, and Nose Poke), Rats
76-0343	(LEI00267) Light Stimuli, Mouse
76-0361	(LEI00567) Light Stimuli, Rat
76-0335	(LEI00250) Pellets Dispenser with Feeder, Mouse
76-0353	(LEI00550) Pellets Dispenser with Feeder, Rat
76-0162	(LEI015) Harness Set for Drug Administration



## DETAILS



The Panlab Operant Chamber is an entirely modular experimental enclosure designed to conduct operant conditioning procedures (e.g. food reinforcement, DMTS, conflict tests, self-administrationâ€™).

The operant chamber is made in an entirely modular structure which allows complete disassembling or rearrangement to build a new space of different dimensions/components or to enable storage in the minimum space. It can be easily transformed from rat chamber to mice chamber (or vice versa) with a reduced cost.

A frontal door offers a total accessibility inside the chamber. Walls and cover can be of different material or colour, since they are totally removable.

Each chamber is associated with a Link Box which provides power to up to 8 (expandable depending of the customer configuration) Operant Modules (levers, lights, sound, dispensers, electrical shock...) conferring to the chambers a full autonomy.

Only one cable connects the Link Box to the PC (PackWin Software), this last for advanced protocol configuration and running.

# Compact Shuttle Box (Panlab)

Compact shuttle box for carrying out conditioned reflexes (Active and Passive Avoidance tests) in learning and memory studies.

- Highly sensitive weight transducer system for accurate animal detection
- Easy to set up different wall shapes and colours
- Optional guillotine door
- Compartments with independent grid floor
- Frontal and top doors for an easy access inside the box
- Up to 8 Active Boxes can be controlled at once from a PC
- No PC card is required (USB coms)
- Safety System which guarantees that the shock intensity received by the animal is always the same value independently of the grid bars treaded

Item No.	Description
76-0251	(LE918) Shuttle Box, Mouse
76-0252	(LE916D) Guillotine Door, Rat
76-0202	ShutAvoid Software, up to 8 boxes
76-0159	(LE10026) Shock Generator with Scrambler
76-0250	(LE916) Shuttle Box, Rat
76-0253	(LE918D) Guillotine Door, mouse
76-0607	White contextual kit, Rat (includes 3 white walls, a smooth floor and 1 white under-grid floor)
76-0606	White contextual kit, Mouse (includes 3 white walls, a smooth floor and 1 white under-grid floor)



## DETAILS



Panlab Compact Shuttle Boxes LE916 (Rats) and LE918 (Mice) provide the ideal environment to carry out conditioned reflexes (Active and Passive Avoidance) in learning and memory studies.

Basically, the Panlab Shuttle box (LE916-918) consists of two equally sized compartments with two independent grid floors. A frontal door, in addition to the top ones, allows an easy access inside the box. The cage contains a general sound generator and a visual stimulus (light) for each compartment.

The Animal is detected by two Weight Transducers located above the static grids, avoiding the problems inherent to photoelectrical or grid tilting systems (high speeds of displacements in mice, tail detection in rats).

Reconverting them to traditional Passive Box is quite straightforward by adding a sliding door (LE916D for mice or LE918D for rats). Furthermore, it is possible to set up different wall shapes or colours in order to further condition the subject of study either visually or spatially.

The shuttle boxes are controlled by the (ShutAvoid) software allowing to run active avoidance and passive avoidance experiments in several boxes simultaneously. It is not necessary the interface

neither the use of board installed into the PC. The link is carried out by one only cable from one Box to the other. The first Box is connected to PC or Laptop by the port RS 232 or USB.



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