

Operant boxes

Sophisticated system for conducting operant conditioning studies



PRODUCT OVERVIEW

The Operant boxes are the result of the Panlab's constant effort to develop a consistent scientific framework for conducting standard and customized operant procedures (e.g. food reinforcement, DMTS, conflict tests, self-administration...).

The modular design of the chamber combined with the exceptional flexibility of the PackWin software provides a broad range of solutions to meet the user needs, from basic procedures to more sophisticated paradigms, providing then a great opportunity for creativity!

The Panlab operant boxes have been successfully adapted to the RS 232/USB technology which represents a great advancement in terms of simplicity of use and cost: no need of PCI Card and associated Interfaces, possibility to work with a laptop, gain of space, fewer cables, easier to install... A unique feature in the market!

The best option to face the new stakes of a research world in perpetual evolution!

Key Features

- Entirely modular system with unmatched versatility
- Easily transformed from rat to mice chamber
- Simplified communications to hardware - no need of PCI card!
- Advanced tools for protocol edition and powerfull data analysis with the PACKWIN software
- Cost-saving solutions available for basic paradigms and teaching purposes

APPLICATIONS

Classical operant conditioning, Food-motivated operant conditioning, Self-administration procedures, Five/Nine hole paradigms, DMTP/DNMTP, DRL-72s, Learned helplessness, Drug discrimination, Vogel test, Latent-inhibition test, Geller Seifter paradigm, conditioned suppression of drinking, Alcohol preference etc...

Operant boxes

BUILD YOUR SYSTEM TO MEET YOUR NEEDS

Entirely modular chambers!

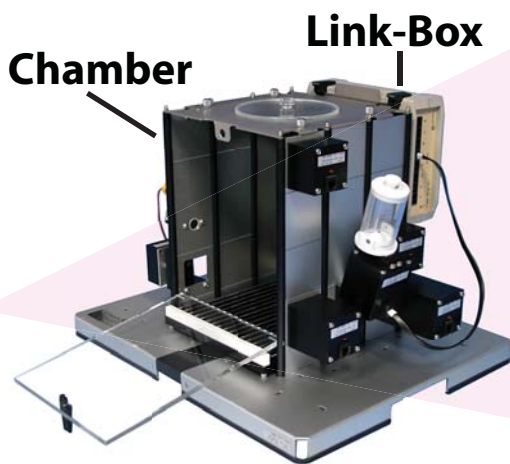
- The operant chamber is made in an entirely modular structure which allows complete disassembling or rearrangement to build a new space of different dimensions/components or to enable storage in the minimum space.
- Each chamber is associated with a Link Box which provides power to up to 8 (expandable to 16) Operant Modules
- Provided with a set of interchangeable wall panels of 3 different sizes (short, medium, long)

A broad choice of Operant modules & accessories

Panlab proposes a broad range of module and accessories choice for adapting the system to both standard and user-designed paradigms (lever or nose-poke manipulanda, light or tone cue stimuli, shock aversive stimuli, pellet, liquid or drug reinforcements...)

Operant modules

Accessories



The Compact Chamber option!

Panlab proposes cost-saving compact chamber packages provided with no modular walls and basic operant module composition.

The cage are delivered mounted with a lever, a light, a food or drink dispenser (user-selected), a shockable grid and a link box.



Sound attenuating box LE26

- Insolation from sounds, lights and exterior shadows.
- Frontal door with a large transparent red glass view.
- Acoustic attenuating capacity of more than 60dB
- Fan ventilator which can be used as source for producing a constant background noise.
- Incandescent 40W light with adjustable intensity by means of an electronic regulator.
- Front and zenithal peepholes

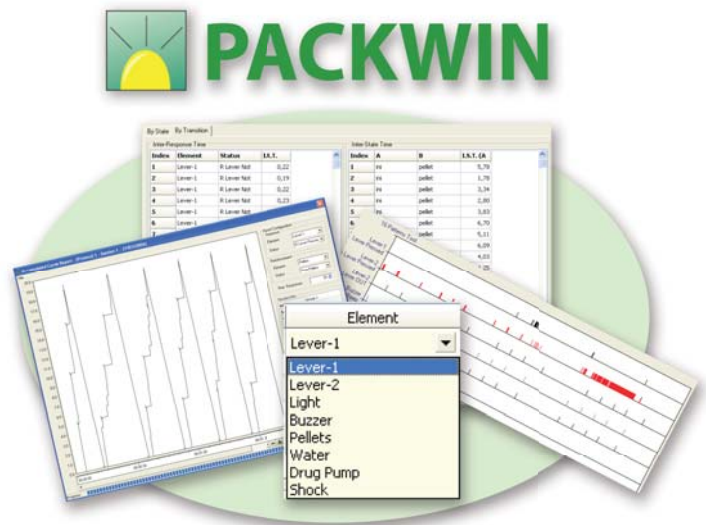


SPECIFICATIONS	WIDTH	DEEP	HEIGHT
LE1002 Chamber dimensions for mice	20 cm	20 cm	25 cm
LE1005 Chamber dimensions for rats	25 cm	25 cm	25 cm
Base Dimensions	44 cm	36 cm	3.5 cm
LE26 dimensions (internal)	60 cm	41 cm	48 cm
LE26 dimensions (external)	66 cm	54 cm	54 cm
Chamber material composition	Stainless steel, aluminium and methacrylate		

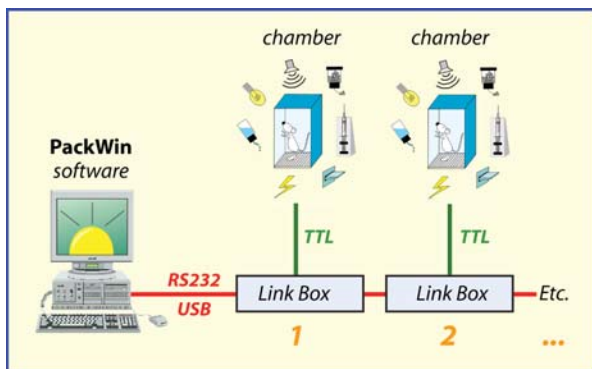
CHAMBER CONTROL & DATA ANALYSIS

Advanced system using the potent PackWin software: unmatched versatility!

- Potent and highly usable protocol editor for building a wide variety of standard and user-customized schedules.
- Subject data base
- The run-time panel displays the list of the subjects associated to each chamber and actualizes the data of the tables in real-time (time, events, state of the protocol, calculations...)
- Built-in data reports and graphs provides general and meaningful data related to the current running experiment.
- Raw data tables can be stores in XLS format for report and further anlysis.



Simplified communications to hardware: a great advancement in terms of simplicity of use and cost!



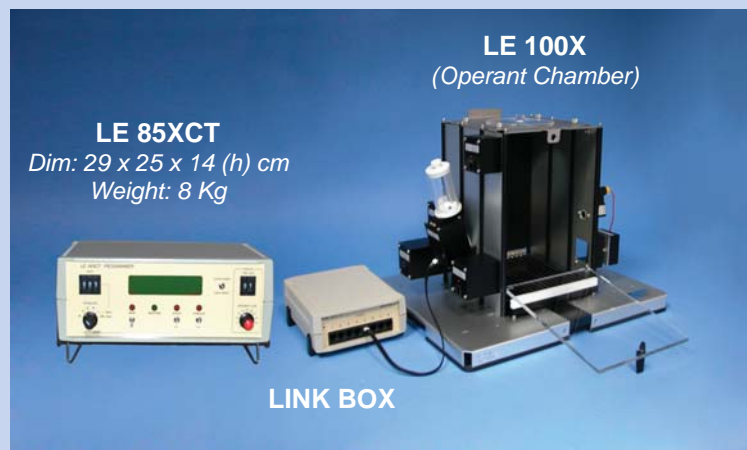
- Only one cable connects the Link Box to the PC through RS232/USB communication
- Only one cable connects the Link Box between them
- No need of PCI card and associated interfaces
- Possibility to work with a laptop
- Easy installation and maintainance



BASIC SYSTEM FOR 1 CAGE: IDEAL SOLUTION FOR TEACHING PURPOSE!

The LE85XCT programmer allows the modular chambers to be controlled for carrying out the all the basic schedules of Operant Conditioning procedures. The programmer control unit is connected to the chamber by only two cables: one for signals control through the link box, the other for the shock. Programme selection is done very simply and immediately by using the frontal controls.

- Electronic counting of Responses and Reinforcements
- MPS programme (Manual, Continuous or Discriminated Reinforcement), need the MPS push button
- Extinction, Discrimination and Negative reinforcement Schedules
- Ratio, Interval and D.R.L. fixed schedules
- Selectable Ratio from 1 to 99 responses or seconds
- Aversive conditioning (Shock adjustable between 0 and 2 mA, electronic scramber)
- No need of PC!!!!



Operant boxes



ORDERING INFORMATION

MODULAR CHAMBER

LE1002	76-0151	Modular Mice Operant Chamber
LE1005	76-0152	Modular Rats Operant Chamber

OPERANT MODULES AND ACCESSORIES FOR MODULAR CHAMBERS* (X = 2 for mice / X = 5 for rats)

MANIPULANDA			LIGHT STIMULI		
LE100X65	76-0342/6	Lever	LE100X67	76-0343/61	Light stimuli
LE100X64	76-0341/59	Retractable lever	LE100X677	76-0344/62	Adjustable light stimulus (external switch)
LE100X73		Nose-poke	LE100X63		Adjustable led stimulus (software-controlled intensity)
DISPENSERS			SELF-ADMINISTRATION & AUTO-STIMULATION		
LE100X50	76-0335/53	Pellets dispenser with LE100X52 magazine	LE1018		Infusion pump (mice)
LE100X52	76-0337/55	Magazine alone	LE1019		Infusion pump (rats)
LE100X51	76-0336/54	Photoelectric detector of access (for LE100X52 or LE100X58)	LE1020		Infusion pump control (mice)
LE100X53	76-0337/55	Mechanical detector of access (for LE100X52)	LE1021		Infusion pump control (rats)
LE100X60	76-0338/56	Liquid dispenser (drops) with LE100X52-magazine	LE1015	76-0162	Harness Set for Drug Administration
LE100X58		Liquid dispenser (drops) with led (software-controlled intensity) - provided with LE100X52 magazine)	LE1010	76-0160	Harness Set for Electrical Stimulation
LE100X61	76-0339/57	Liquid dispenser (spoon)	LE12605	76-0161	Electrical Stimulator
LE100X68	76-0345/53	Standard bottle module	LE1270X		ICSS Electrical Stimulator (software-controlled intensity and timing)
ACOUSTIC STIMULI			OTHER DEVICES & ACCESSORIES		
LE100X42	76-0331/50	Adjustable buzzer	LE100X01	76-0153/54	Shockable Grid
LE100X44	76-0333/52	6 tones audio generator (external switch)	LE10026	76-0159	Shock generator with scrambler
LE100X41		Audi generator (software-controlled frequency and intensity)	LE1051		Manual switch
LE100X43	76-0332/51	White noise generator	LE100X70	76-0346/54	Lick detector (can be combined with LE100X62)
LE100X45		Clicker	LE10025	76-0334	Lickometer with shocker (can be combined with LE100X62)
LE100X3	76-0330	Click generator	LE100X62	76-0349	Bottle for lickometer (needs LE100X70 or LE10025)
LE100X90		Sonalert			

COMPACT CHAMBERS

LE1002CP	76-0146	Operant Chamber setup for Mice including Pellets Dispenser, Lever, Light Stimuli, Mice Shock Grid and LINK BOX 01
LE1002CL	76-0147	Operant Chamber setup for Mice includes Drop Liquid Dispenser, Lever, Light Stimuli, Mice Shock Grid and LINK BOX 01
LE1005CP	76-0148	Operant Chamber setup for Rats includes Pellets Dispenser, Lever, Light Stimuli, Rat Shock Grid and LINK BOX 01
LE1005CL	76-0149	Operant Chamber setup for Rats includes Drop Liquid Dispenser, Lever, Light Stimuli, Rat Shock Grid and LINK BOX 01

PROGRAMMER OPTIONS (for 1 chamber)

OPTION	LE85XCT	76-0158	PROGRAMMER with ratio & interval schedules and shocker
OPTION	LE1050	76-0155	MPS Push Button

PACKWIN SOFTWARE OPTIONS (for up to 8 chambers; expandable to 12*)

OPTION	PACKWIN	76-0002	PC software to control the Operant Chambers
OPTION	LINKBOX01	76-0156	Link & power (1 per chamber)

SOUND ATTENUATING BOX

OPTION	LE26	76-0157	Sound attenuating box
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*Contact us for more information about the modules available for our modular chambers and about set-ups larger than 8 stations.

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