

5/9 Holes Box

LF0825A

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

Basically, the Box is composed by a test chamber, stimulus lights (5 or 9), food or drink dispenser, house light and a LINK BOX to connect it to the PC and the PackWin software. Alternatively the Box can be equipped with 9 pellets dispenser.



The 5/9 HOLE BOX is assembled with aluminium walls and a transparent front door. The chamber 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 can be blocked up using a metal insert. Each hole is equipped with photocell beams and internal white LED providing visual cues specific to each hole. The intensity of the LED can be adjusted in ten accurate steps, with a digital selector located in the LINK BOX. The box is placed on a stainless-steel platform and the associated tray is easily removable to clean animal excrements.

The nine-hole box is 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, perseverant responses, time out responses, total receptacle head entries, etc.

The box is connected to PC (or Laptop) by RS232/USB port without internal board. Other boxes are connected also by one only cable, one with other (serial linking).

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

As an example, in the 5-choice serial reaction time task, short-lasting stimuli are given in pseudo-randomised order in one of the holes of the cage (commonly, hole 1, 3, 5, 7 or 9). If the animal nose-pokes into the correct hole, a reinforcement (pellet) is given. If the animal nose-pokes into an incorrect hole, a time-out period (no light) is given and next trial begins. The choice accuracy (% of correct responses) gives an idea of the functional integrity of the attention as well as learning processes. These parameters are mostly altered in animal models of schizophrenia and Alzheimer diseases.

Specifications

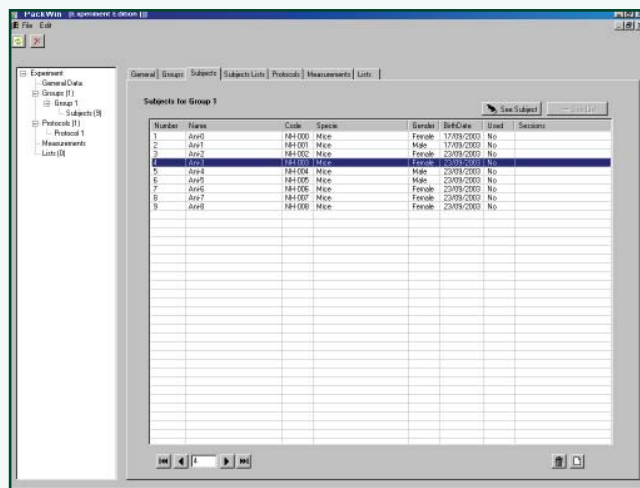
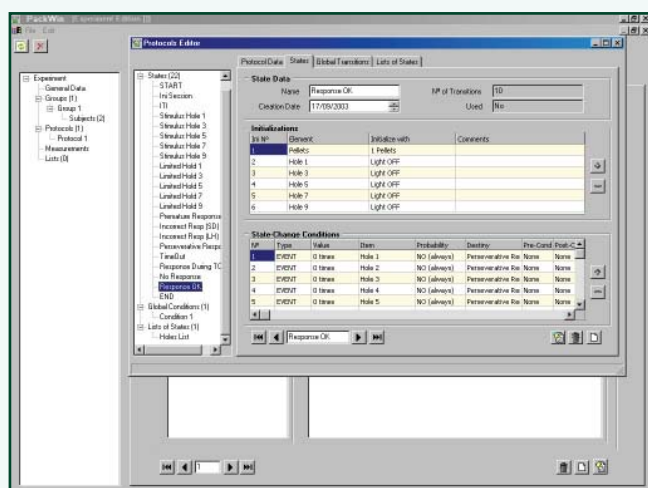
	Internal Dimensions (cm)	External Dimensions (cm)	Hole diameter (mm)	Hole deep (mm)
LE509 Rat Cage	25 x 28 x 24	44 x 36 x 31	23	14
LE507 Mouse Cage	19 x 22 x 24	44 x 36 x 31	13	10

Maximum number of boxes: 8 boxes connected to a PC
 Power Supply: 110V/220V, 50/60Hz
 Certifications: CE Compliant

Packwin Software

PACKWIN is a Software package developed for the Window platform that provides control for up to 8 chambers. It is also possible to define other behavioural trials to be programmed in and run on other kind of chambers.

The Software is easy and intuitive to use: its commands and instructions are directly associated with the specific function assigned to them in experimental, non-IT terms or jargon.



PACKWIN can also be supplied to order using GLP directives and instructions (GLP option).

Protocols can be easily defined by the user according to his needs.

Retrieve easily all requested information about the sessions performed

A powerful analysis module provides data directly related to nine-hole box experiments such as correct responses, incorrect responses, omissions, premature responses, perseverant responses, time out responses, total receptacle head entries, etc.

Parameters Measured

Number of correct responses
 Number of incorrect responses
 Number of persevering actions
 Number of omissions
 Number of anticipatory responses

Number of trials performed
 Responses Latency
 Reinforcement (food, drink) intake latency
 Number of responses during the time-out
 And many user-defined parameters...

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