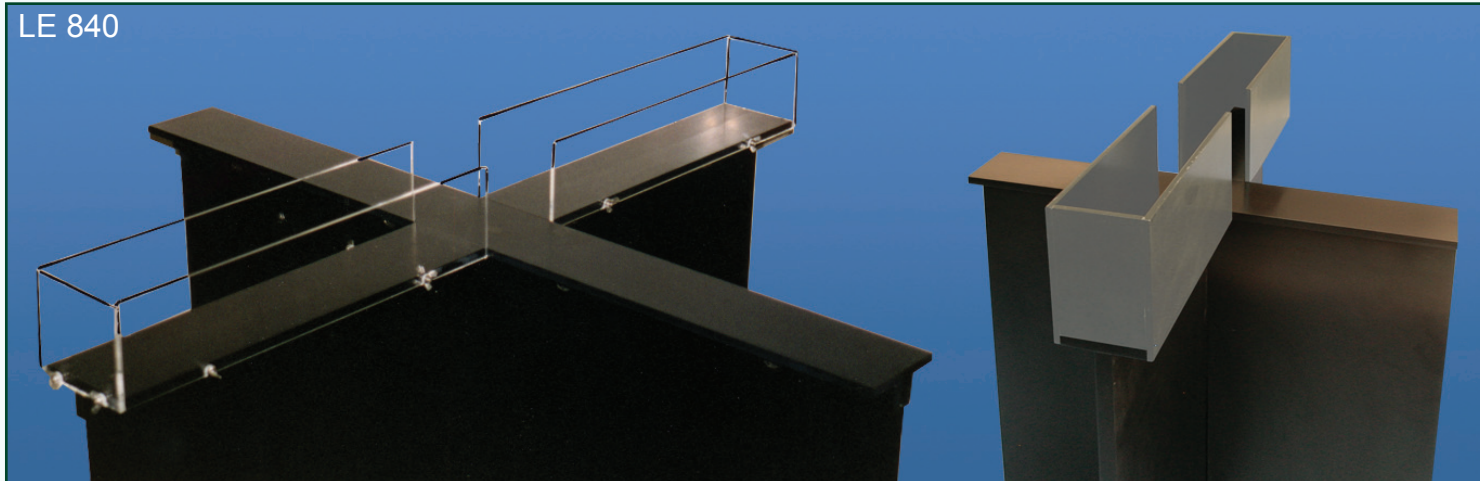


## Elevated Plus Maze

LE 840



Panlab, S.L. has developed basically two Elevated Plus Mazes: one standard and the other automatic, that is, with animal position detection and software analysis.

The Mazes are mounted on supports which give them a certain height from the floor. They form a cross of two arms of equal surface area, but one of them is delimited laterally by walls.

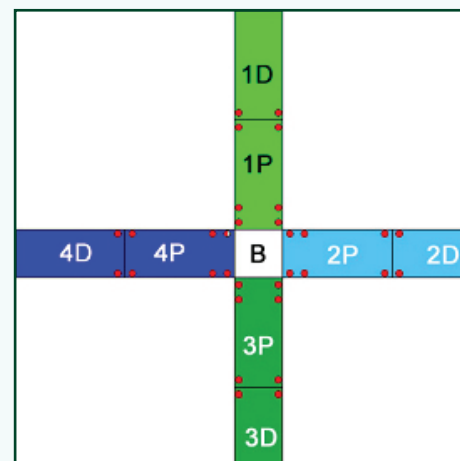
Both models, made of black plexiglass, have the variant for rats and mice. The Mazes for rats are supplied with two types of wall:

- Grey, for standard experiments
- Transparent, for specific experiments aimed to complement the standard analysis of animal position with an “ethopharmacological” analysis of animal behaviour (for details, see Anseloni and Brandao, 1997, Ethopharmacological analysis of behaviour of rats using variations of the elevated plus-maze. Behav. Pharmacol. 8:533-40)

In the automatic apparatus the animal's position is registered by 8 photoelectric cells, arranged in each arm so that they define 9 sectors (see figure).

The MAZESOFT-4 Software with an interface, included in the Maze, control and analyze the behaviour of the animal, as described in the opposite page.

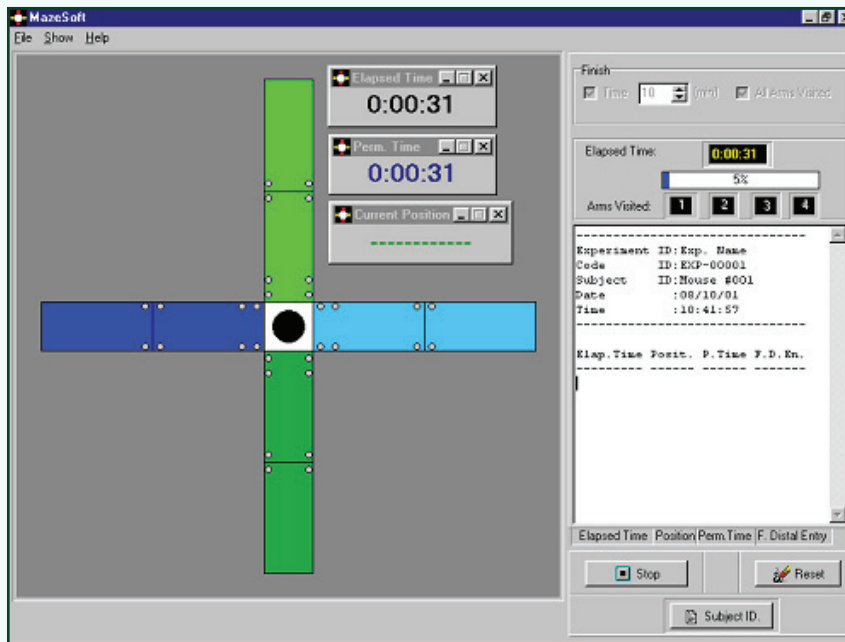
The automatic Maze for mice is equipped with an accessory which allows it to have two sizes of arm lengths.



| Model  | Description     | Arm Length       | Height Walls   | Height from floor | Remarks                      |
|--------|-----------------|------------------|----------------|-------------------|------------------------------|
| LE 840 | Standard. Rats  | 100 x 10 (W)     | 10 Transparent | 75                |                              |
|        |                 |                  | 50 Grey        |                   |                              |
| LE 842 | Standard. Mice  | 65 x 5 (W)       | 15 Grey        | 55                |                              |
| LE 846 | Automatic. Rats | 100 x 10 (W)     | 10 Transparent | 75                | Includes MAZESOFT-4 Software |
|        |                 |                  | 50 Grey        |                   |                              |
| LE 848 | Automatic. Mice | 65 or 37 x 5 (W) | 15 Grey        | 55                | Includes MAZESOFT-4 Software |

Measures in cm

# Mazesoft-4



MazeSoft-4 is a program designed for showing the subject position on a four arms radial maze, using a digital I/O card installed in the PC-Computer to ensure communication between both devices. MazeSoft-4 is designed for running only under Windows98® Windows Millenium®, WindowsNT®, Windows2000® or WindowsXP.

This software ensures the control of the animal's position in the maze, and allows loading up to three specific windows which show additional information of the experiment:

- the total elapsed time in a trial
- the current position of the animal
- the permanence time in a section of the maze.

This information is also showed in numeric format, and can be saved in files for further analysis purposes.

For each trial, the following information is showed:

- Header of the trial (name of the experimenter, code identification, etc.).
- For each arm, the information is separately given for the proximal zone, for the distal zone, and for both of the zones of the arm. Identical information is shown for the base zone in the middle of the Plus-Maze, and the same is done for the union of opposite arms: arms 1 and 3 (with walls), and arms 2 and 4. In all these cases, the following statistics are shown:
- Number of visits to the zone (or union of zones).
- Percentage of the number of visits to this zone (or union of zones) in respect to the total number of visits to all the zones.
- Total time elapsed in a zone (or union of zones).
- Percentage of the total time elapsed in a zone (or union of zones), in respect to the total time elapsed in a trial.
- Mean time spent in a zone (or union of zones) for each visit.
- Same as before, but expressed in percentage in respect to the total time elapsed in a trial.

This information is totalised separately for "open / closed" (without / with walls, respectively) arms. Experimental data is permanently stored and battery fed: its integrity is thus guaranteed regardless of the main supply.