

BACKGROUND

Over the last decade touchscreen methods for rodents have become an efficient and powerful diagnostic method. Touchscreen is widely used for cognitive testing and therapeutic screening of rodent models for translational research. It permits behavioural, lesion, and pharmacological studies.

Our touchscreen system can be used as a stand-alone product or can be turned into an automated solution using our RFID-based IDsorter. The IDsorter allows the 24/7 testing of tens of individuals at high throughput rates without operator intervention. This minimizes animal-handling and human labour.

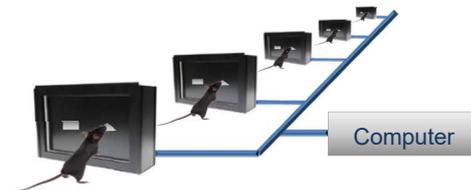
HARDWARE

The Touchscreen Chamber consists of a screen with an infrared-frame, a mask and reward system. The grid in front of the chamber allows space for an ID-Sorter.



SOFTWARE

The basic software allows the experimenter to control multiple Touchscreen Chambers by use of a single computer.



TEST PARADIGMS

- General Touch Screen Pre Training
- 5-Choice Serial Reaction Time Task
- Extinction
- Paired associate learning
- Pattern Discrimination (formerly Location Discrimination)
- Trial-Unique-Nonmatching-to-Location
- Two-Choice Visual Discrimination Learning and Reversal
- Three-Choice Visual Discrimination Learning and Reversal
- Two-Choice "Morph" Visual Discrimination
- Visuomotor Conditional Learning
- Multidimensional Shifts
- Transverse Patterning Task

APPLICATIONS

- Cognitive testing and therapeutic screening with rodent models
- Behavioural, lesion, and pharmacological studies
- High-throughput, 24/7 phenotyping for rats and mice

KEY ADVANTAGES

- Human-equivalent test paradigms
- Low motoric demand
- Large number of experimental paradigms
- Multiple chambers per single computer
- Create own experiments with our software
- Insertion into cage racks is possible

OPTIONS

- Two sizes available: mouse and rat
- Liquid or pellet reward system
- Integrated camera
- Full automation with ID-Sorter, which allows the selective passage of a single animal to the Touchscreen Chamber and back to the home cage. It is controlled by RFID.