

BACKGROUND

It is beneficial for animals to live in groups rather than in single housing. Many behavioural diagnostic tests, however, require an individual animal to be alone while tested. Traditionally, this requires manually placing an animal from a home cage to the test arena and back. With the IDSorter, connecting the home cage to a test arena, this process is fully automated.

Our system can be interfaced to operant systems from other vendors or to video observation systems.

RFID TECHNOLOGY

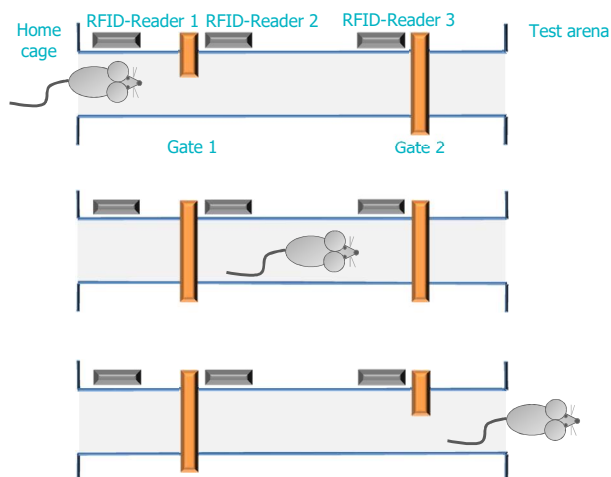
The IDSorter is based on RFID-technology. It allows the selective passage of a single animal to the test arena and back, while individual experiments can be conducted in the operant chamber with independent experimental control software.

Radio-frequency identification (RFID) technology identifies and tracks an individual within a group of animals. All animals have to wear subcutaneous transponders. These transponders require no battery and are powered by the electro-magnetic fields emitted by the RFID-Readers in its proximity.

ID-SORTER



PHASES OF SORTING PROCESS (EXAMPLE)



An animal is detected at RFID-Reader 1. If the experimental protocol gives permission, gate 1 opens.

The animal is detected at RFID-Reader 3. Gate 1 closes when it is safe for the animal. Gates 1 and 2 remain closed for 30 s.

After 30 s gate 2 opens. The animal can enter the operant compartment. Gate 2 closes if the animal is registered at any RFID-Reader within the operant compartment.

APPLICATIONS

- Combining group living with testing arenas
- Fully automated 24/7 experimentation for individual operant procedures
- High-throughput phenotyping

KEY FUNCTIONS

- Based on RFID-technology
- 24/7 operant experimentation and observation system
- Gate position sensors for improved animal wellbeing
- Compatible with operant boxes or mazes from third party vendors

OPTIONS

- Automated body mass measurement with integrated electronic balance
- Two sizes available: ID-Sorter mouse, ID-Sorter rat