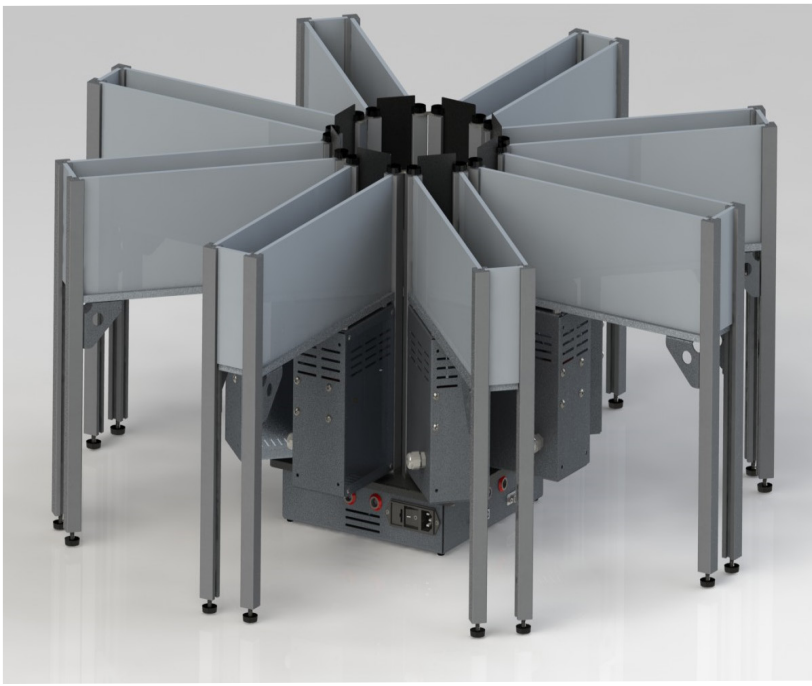
ugo basile®
TRANSFORMING IDEAS INTO INSTRUMENTS

www.ugobasile.com

BEHAVIOUR, MAZES, TRACKING

MULTI-MAZE SYSTEM

Cat. No. 41500



Spatial memory is the ability to create a mental geographical map of the surroundings and to navigate the environment accordingly (Ref). In humans, for example, spatial memory allows one to easily find the way to the right office in a large building.

While the definitions of working and reference memory may be subtle and can be debated among scholars, briefly, working memory is the ability to keep track of which offices we have already visited while looking for someone, while reference memory allows us to remember which of the many rooms is Mary's office.

In rodent studies, spatial memory can be tested by placing animals in mazes composed of 3 or more radially arranged walkways (arms) and observing either spontaneous exploratory behavior or reward-based navigation.

The new **MULTI-MAZE** Cat. No. **41500**, for mouse or rat, will help the researcher to conduct fully automated memory experiments such as:

- Assessing **spatial memory**
- Testing basic **working memory**
- Discriminating working from reference memory
- Evaluating impairments in the working memory

The electronic unit features USB interface, 8 independent TTL inputs and integration with videotracking software.

The proprietary sliding doors retract in the maze floor, ensuring unobstructed animal tracking, while guaranteeing smooth, silent, totally automated up/down movements.

All the animal mazes manufactured by Ugo Basile, feature high-contrast colors and non-reflective coatings, providing optimal results with any videotracking software.

Surface texture was selected for best rodent's comfort.

Our mazes are constructed of sturdy, easy to clean materials, making them the most reliable mazes on the market.

VERSATILE MULTI-MAZE FULLY CONFIGURABLE AS:

- **Y-Maze**
- **T-Maze**
- **8-Arm Radial Maze**

Optimized for Video-Tracking

Ideal for Optogenetics tests

Easily customizable

AVAILABLE FOR MOUSE OR RAT

Main Features

- New proprietary modular system
- Doors slide underneath the floor
- Smooth and silent operation
- Easily cleanable
- Manual or PC-driven operation modes (via TTL or USB connection)
- Interchangeable walls for egocentric or allocentric spatial memory tests (low profile walls are optional)
- Different colors or textures available on request
- Different arm length available on request

Ugo Basile: more than 25,000 citations

MULTI-MAZE SYSTEM for Mouse

No. 41500

System Description

The new **MULTI-MAZE 41500** is a modular system, enabling the user to set-up an electronically controlled maze, by combining one of the different arenas provided, and the required number of arms, in one of the following configurations:

- **Mouse Y-Maze**
- **Mouse T-Maze**
- **Mouse 8-Arm Radial Maze**

This feature is facilitated by the new door-controlling kinematics; the motor for each section is actually an integral part of the arm itself, positioned below the door area, while a control unit, positioned below the central arena, consolidates the motor control board, the interface with the external electronic unit, and the interface with the video-tracking software (ANY-maze, not included).

The corridor side walls, made of plastic material, are easily removable, for cleaning purposes. Moreover, it will be easy to switch from high profile to low profile wall (optional), according to the research needs.

Arm dimensions:

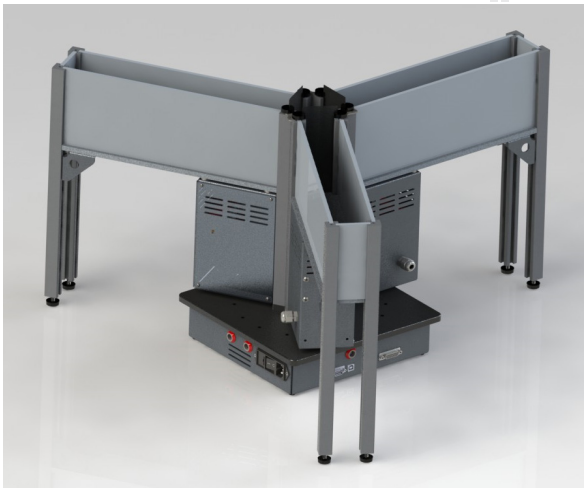
	Mouse	Rat
Length	35cm (**)	60cm (**)
Width	5cm	10cm
Height	12cm	30cm

An automated door is provided on each arm, at the central arena end.

System Configurations

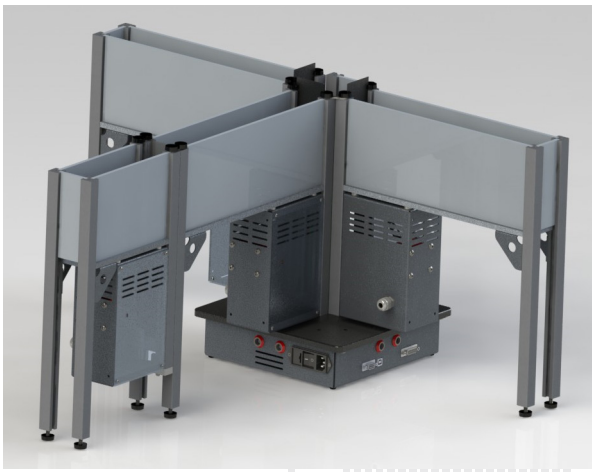
Y-Maze Configurations

	41503 Mouse	41513 Rat	
1	**41500-001**	**41510-001**	Central Control Arena
3	**41500-002**	**41500-012**	Arm with automated door
1	**41153-010**	**41153-010**	Electronic Unit (8 TTL outputs)



T-Maze Configurations

	41504 Mouse	41514 Rat	
1	**41500-001**	**41510-001**	Central Control Arena
3	**41500-002**	**41500-012**	Arm with automated door
1	**41153-010**	**41153-010**	Electronic Unit (8 TTL outputs)
1	**41500-003**	**41500-013**	"Start" compartment



An automated door is provided on each arm, at the central arena end; the "start" compartment with automated door, attached to the end of the stem-arm, completes the T-Maze.

The 41504 /41514 configurations also enable the Y-maze test to be carried out, without any extra accessories.

8-Arm Radial Maze (see front picture)

	41508 Mouse	41518 Rat	
1	**41500-001**	**41510-001**	Central Control Arena
8	**41500-002**	**41500-012**	Arm with automated door
1	**41153-010**	**41153-010**	Electronic Unit (8 TTL outputs)

The 41508/41518 configurations also enable the Y-maze test to be carried out without any extra accessories, and the T-maze with the addition of the Start compartment only.

Ordering Information

Components

Mouse	Rat	
41500-001	**41510-001**	**Central Control Arena,** incorporating motor drive & interface to external unit
41500-002	**41500-012**	**Standard Arm**, provided with automated door, and high profile walls*
41500-003	**41500-013**	**"Start" Compartment** for T-maze, with automated door & high profile walls*
41153-010	**41153-010**	**Electronic Unit** (8 TTL outputs)

Configurations

41503 41513	**3-Arm configuration,** for Y-maze test, high profile walls, automated doors, Y & T arenas
41504 41514	**3-Arm configuration**, and "Start" Compartment, for T-maze test, high profile walls, automated doors, Y & T arenas
41508 41518	**8-Arm configuration**, for Radial-Maze, high profile walls, automated doors; 8-arm, Y & T arenas

Custom accessories/configurations are available on request:

- low profile walls (*) for allocentric memory
- longer arms (**)
- custom made set-ups