



## Active Avoidance Set-Up (Automatic Reflex Conditioner)

## SPECIFIC CAGES FOR RATS AND FOR MICE

Cat. No. 40530

### General

The new model of **Active Avoidance Set-Up** has been designed to enable the researcher to perform a wide range of avoidance experiments, each according to a flexible schedule.

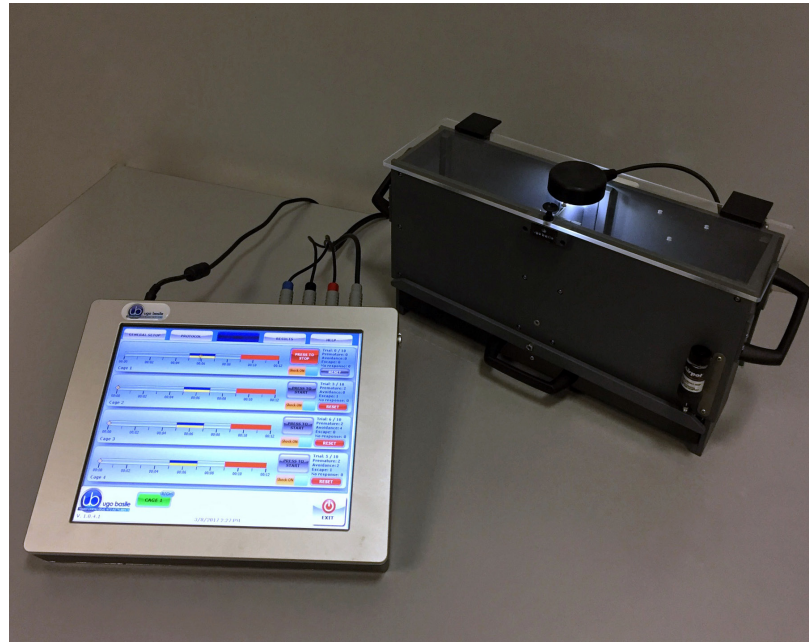
Via the **TIMELINE** feature, the user will be able to configure a number of different tests, according to the specific experimental needs, namely the classical shuttle-box tests in its various modes.

Ugo Basile Active Avoidance set-up instrument basically consists of a Controller, and a Cage for either rat or mouse.

The tests are conducted in a cage, divided into two sections by a partition with an intercommunicating opening at floor level.

The tilting floor ensures a simple and reliable detection mechanism to score the animal's movement across the two compartments.

The electronic unit encompasses all controls for up to 4 cages, and a scrambling shocker.



**NEW VERSION**

**Multiple-Cage Set-up**

**EFFICIENT, RELIABLE INSTRUMENT FOR THE CLASSIC ACTIVE AVOIDANCE TEST**



### Main Features

- **Maximum flexibility:** configure your own Avoidance-Experiment Schedules via the **timeline** function
- The electronic unit encompasses all controls for **up to 4 animal cages!**
- **Reliable tilting-floor detection mechanism**

### NEW on the 2014 version!

- The new "launcher" application, makes it possible to manage other UB behavioral cages with the same **Touch-Screen Controller 40500-001**; just purchase the hardware and the application software for the additional test!
- **Remote Control feature** will make remote service and software upgrades extremely simple!

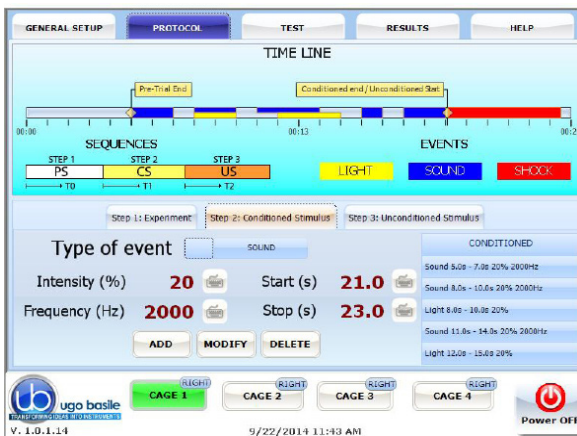
## Instrument Description

Different set-ups, depending on animal (rat or mouse) and number of cages, can be obtained by combining the following elements:

- **Programming/Recording Unit with Shocker**
- **Rat Cage** (up to 4 with one controller)  
or
- **Mouse Cage** (up to 4 with one controller)
- **Expansion Box**, for multiple cage set-up

## Programming/Recording Unit

The **40500-001** Programming/Recording Unit, encompassing all controls, incorporates a constant-current high precision 8-pole shocker, and manages data acquisition: data are stored inside the unit and can be downloaded via the USB key provided as standard, for further processing via Excel, Access, etc.



The Unit, incorporating a 12" touch-screen, manages the Passive Avoidance Test via the **40530-010** Software. Up to 4 cages can be connected to the same Controller. If more than one cage is connected, an expansion box **40500-005** is required for each additional cage.

The trials can be configured via the **TIMELINE** feature, entering the setting via the virtual keyboard: trial number, the acoustic/visual stimulus, delay, shock intensity, and timing of the different experimental sequences:

- PS:** pre-stimulus interval (randomizable)
- CS:** conditional stimulus interval
- US:** unconditional stimulus interval.

## Active-Avoidance Cage (shuttle-box)

Two types of cages are available:

- **40532** designed for **Rats**  
dimensioned 57x27x30(h)cm, I.D. 48x20x22(h)cm
- **40533** designed for **Mice**  
dimensioned 47x18x25(h)cm, I.D. 38x9x17(h)cm

Both cages are provided with acoustic and visual conditioning stimulators. The reinforcement consists of an electrical stimulus applied to the floor bars of the cage by an incorporated 8-pole "scrambling" circuit.

The cage is divided into two compartments intercommunicating by an opening at floor level.

When the animal crosses the door, the cage floor tilts, thus operating a reed arrangement, which cuts out all the stimuli or, if the crossing takes place during the pause, records the intertrial crossing.

## Ordering Information

- 40500-001** Programming/Recording Unit & Shocker
- 40530-010** P.A. Software and activation
- 40532** Rat Cage, complete with catch pan
- 40533** Mouse Cage, complete with catch pan
- 40500-005** Expansion Box, for multiple cage set-up

## Specifications :

Shock Duration	in steps of 0.1s
Shock intensity	0-3mA step 0,1mA
Light intensity	0-100%, in steps of 5
Sound intensity	0-100%, in steps of 5
Sound frequency	100-18.000Hz, in steps of 100Hz
Light, sound, shock start	in seconds, 0,1s precision
Light, sound, shock stop	in seconds, 0,1s precision

## Physical:

Weight	2.7Kg (40500-001)
	5.3Kg (40532)
	3.4Kg (40533)
Shipping Weight	4Kg (40500-001)
	9Kg (40532)
	5.8Kg (40533)

## Bibliography

### Papers which quote Ugo Basile A.A. Test (previous model)

- D. Dimitrova, D. Getova: "Effects of Rivastigmine on Learning and Memory Processes in Rats Active Avoidance Test" *Medicine* 4.1, **2014**
- G.N. Carmona et alia: "The Dense Core Vesicle Protein IA-2, but not IA-2 $\beta$ , is Required for Active Avoidance Learning" *Neuroscience* 269 (6): 35-42, **2014**
- O. Ortiz et alia: "Associative Learning and CA3-CA1 Synaptic Plasticity Are Impaired in D1R Null, Drd1a/ Mice and in Hippocampal siRNA Silenced Drd1a Mice" *J.Neuroscience* 30 (37): 12288-12300, **2010**
- J.I. Lemos et alia: "Involvement of the prelimbic prefrontal cortex on cannabidiol-induced attenuation of contextual conditioned fear in rats" *Behav. Brain Res.* 207: 05-111, **2010**
- N. Seferos et alia: "Mandibular bone density and calcium content affected by different kind of stress in mice" *J Musculoskelet Neuronal Interact.* 10 (3): 231-236, **2010**