



Fear Conditioning System

Cat. No. 46100

General

The Ugo Basile Fear Conditioning System 46000 includes all the components to run experiments on mice or rats, according to the paradigms:

- Contextual Fear Conditioning
- Acoustically-Cued Fear Conditioning

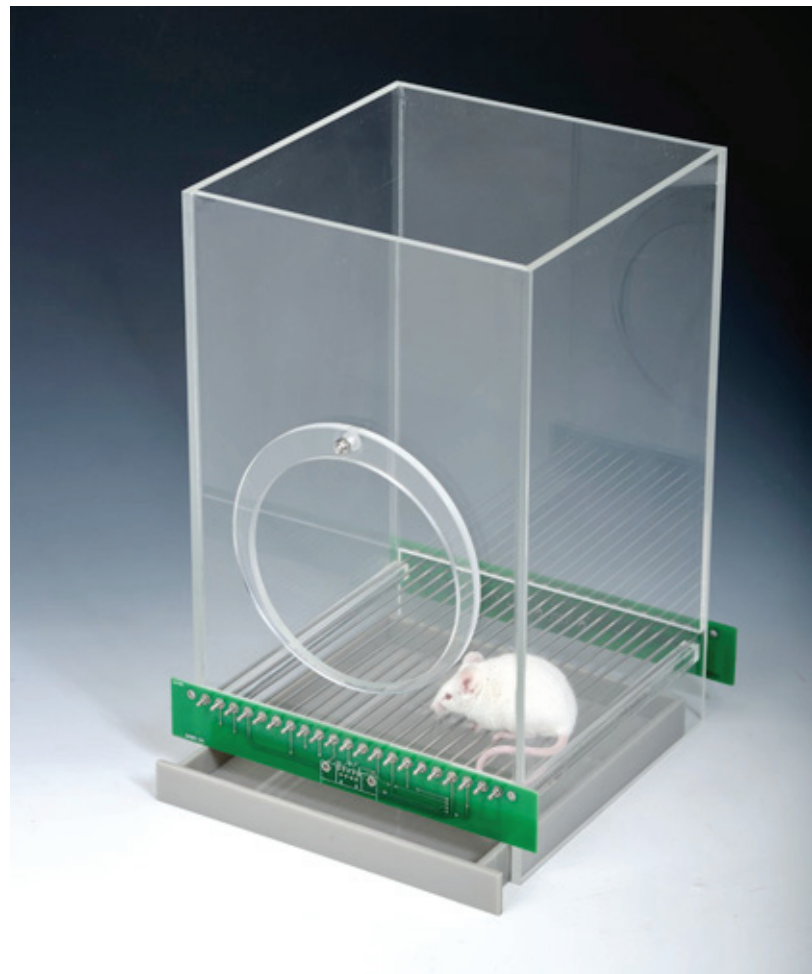
The detection of Freezing is automated and based on video analysis. The shocker and the sound generator can be controlled by software (USB) or manually.

System Configuration

A typical Complete System consists of:

- Software and IR-CCD camera
- Sound Generator and Shocker
- Animal box with electrified floor
- Context Kit (3 floors, 6 walls)
- Isolation Cubicle, lights (IR and visible) and fan
- Preinstalled PC (optional)

Basic systems, without software and CCD camera are available (see ordering information).



Memory

Behaviour

AUTOMATIC
Detection of Freezing
also in total DARKNESS

Main Features

- AUTOMATIC detection of FREEZING also in Total Darkness
- Specific versions for rats or mice
- MULTIPLE ANIMALS (up to 4)

System Componets

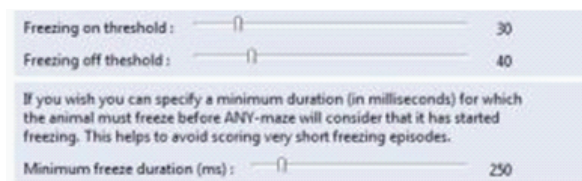
Software and IR-CCD camera

The Ugo Basile Fear Conditioning system includes a specific version of the Any-maze software to control the Ugo Basile hardware (i.e. the Sound Generator and the Shocker), automatically detect Freezing behavior and analyze the results across time.



Measured parameters include:

- Total Freezing time
- N° and duration of freezing episodes across time



The CCD camera provided, is sensitive to IR light and allows for freezing detection also in total darkness. The camera can be positioned on any wall of the isolation cubicle (top, side, door) by provided suction cups.



Wide angle lenses and IR light are also included.

Sound Generator

- Two channels to deliver frequency sounds (100Hz-40KHz; 1-150dB) or white noise (1 speaker included)
- Two TTL output to drive external devices, e.g. two Ugo Basile shockers
- Each channel can be operated via USB (with the provided software), via 5V TTL signals, or manually

Shocker

- Constant current (from 0.1 to 2.9 mA in 0.1 mA steps)
- Manual or external operation (via 5V TTL signals)

Animal Box with Electrified Grid Floor

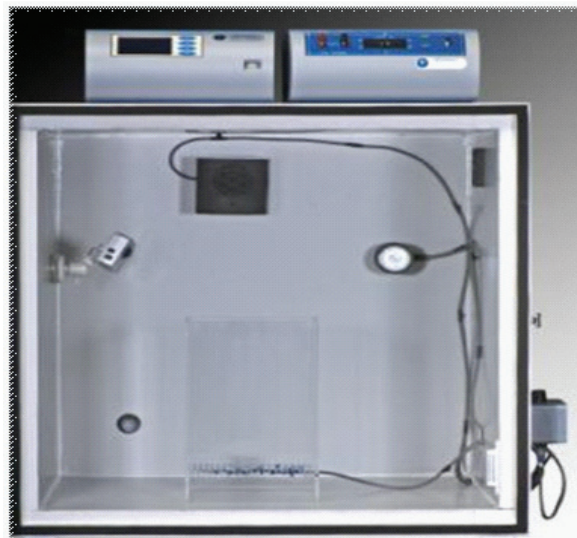
- Mouse Box inside dimensions: 17x17x25(h) cm
- Rat Box inside dimensions : 26x26x30(h) cm

Context Kit

A complete set of removable contexts is provided to alter the colour and texture of the box walls and floor. Each ani-mal box includes a kit with: 4 striped walls, 4 checker-board walls, 3 plastic floors (white, black, grey). Custom contexts are available on request.

Isolation Cubicle

- Includes visible light, IR light, light controller and fan
- The speaker, the IR CCD camera and the lights can be freely positioned within by suction cups (included).



Preinstalled PC (optional)

The Ugo Basile Fear Conditioning systems can be used with both Windows-based laptop or desktop PCs (fire-wire and USB ports are required). Desktop PCs are suggested for multiple configurations (2, 4 animals) and can also be purchased directly from Ugo Basile, with all software and hardware pre-installed and ready to use.

Ordering Information

COMPLETE SYSTEMS (with software and CCD-camera)

MOUSE	RAT	
46150	46160	Complete Fear Conditioning system, for 1 animal
46250	46260	Complete Fear Conditioning system, for 2 animals
46450	46460	Complete Fear Conditioning system, for 4 animals

BASIC SYSTEMS (without software and CCD-camera)

MOUSE	RAT	
46100	46110	Complete Fear Conditioning system, for 1 animal
46200	46210	Complete Fear Conditioning system, for 2 animals
46400	46410	Complete Fear Conditioning system, for 4 animals

Single items (e.g. Shocker, Sound Generator, Speakers) parts can be ordered separately from systems on request.

Ordering Information

- P. Bianchi *et al.*: "Early Pharmacotherapy restores neurogenesis and cognitive performance in the Ts65Dn Mouse Model for down Syndrome". *The Journal of Neuroscience* (2010), 30(26):8769-8779