

Startle & Fear combined system

Polyvalent system for conducting both fear conditioning and startle reflex studies



PRODUCT OVERVIEW

The Startle and Fear combined system is a polyvalent system for conducting both fear conditioning and startle reflex experiments in one same enclosure, regardless the animal is a rat or a mouse.

Basically, the Startle and Fear combined system allows recording and analysis of the signal generated by the animal movement through a high sensitivity weight transducer system.

The analogical signal is transmitted to the specific experimental modules of the PACKWIN V2.0 software through the load cell unit for recording purposes and for posterior analysis in terms of activity/immobility (PACKWINCSFR for freezing detection) or startle response characterization (PACKWINCSST). An additional interface associated with corresponding hardware allows controlling the stimuli (light, sounds, shock, air puff) from the software modules.

The experimental chamber is made with black methacrylate walls and a transparent front door. In fear conditioning experiment, the walls, cover and floor can be of different materials or colors. Moreover, a transparent cylinder can be placed into the experimental chamber in order to modify the contextual spatial perception of the subject during the test phase. Air puff option is available for Startle experiments.

Key Features

- Combined system for startle/freezing and rats/mice
- Unmatched sensitivity for mice!
- One same enclosure for either rat or mouse
- Same weight transducer platform regardless the weight of the animal
- Highly flexible protocol editor
- Accurate and entirely traceable data
- Tone frequency and intensity controlled by software
- Easily removable tray
- Different spatial context configurations available for fear conditioning paradigms
- No PCI cards required (USB connection)
- **NEW** integration of the experimental modules in the PACKWIN V2.0 platform

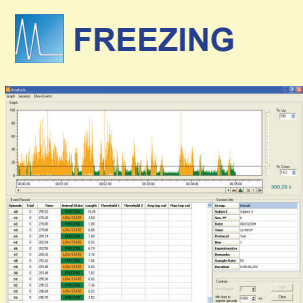
APPLICATIONS

Neurological reflex phenotyping, Sensorimotor gating, Hearing, Startle reflex habituation, Attention, Schizophrenia models, ADHD disease models, Prepulse-inhibition startle reflex, Associated learning, Fear, Tone-dependent fear conditioning, Context-dependent fear conditioning, Fear-potentiated startle reflex

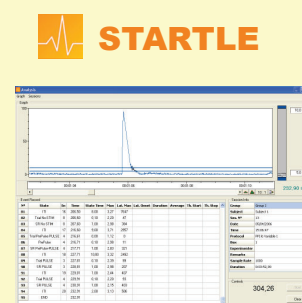
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POWERFUL DATA MONITORING

- Use the PACKWIN V2.0 platform for running up to 8 chambers simultaneously and in a synchronized manner.
- Signal chart and data tables displayed on real-time.
- For matching experimenter criteria, two thresholds can be set for the detection of the animal freezing behavior: activity and time duration.
- Provides standardized startle data (maximum amplitude and latency to maximum) in an automated manner.
- Both signal chart and data tables can be saved and reloaded for recalculating data using different thresholds.
- Directly export data to Excel® for further analysis.



FREEZING




STARTLE

- Time of experiment at which each freezing event has occurred
- Duration of each freezing event
- Summary table of the total amount of freezing in each state of the experiment
- Number and duration of freezing episodes in each user-defined intervals of time.
- Maximum amplitude
- Latency to maximum
- Latency to onset
- Duration
- Average amplitude
- Means for each block of trials



SPECIFICATIONS	
Chamber Dimensions	250 x 250 x 250(h) mm
Soundproof Box Dimensions	670 x 530 x 550(h) mm
Material Composition	Methacrylate, aluminium, stainless steel
Maximum Number of Stations	8 stations connected to PC
Sounds Frequency and Amplitude	Prepulse/Pulse: adjustable from 200 to 10000 Hz – max 120 dB; white noise from 60 to 120 dB
Certifications	CE compliant
Power Supply	110V/220V, 50/60Hz

Accessories



Freezing

- Colored walls
- Smooth floor
- White under-grid base
- Transparent cylinder

Air puff option •

Startle

ORDERING INFORMATION

	LE116	76-0280	FREEZING AND STARTLE Threshold Sensor including Sound Attenuating Box and Standard Electrified Grid
OPTION	LE100501M	76-0240	Special electrified Grid option for Small Mice (6 mm bar-spaced)
	LE111	76-0281	Load Cell Amplifier (one for each chamber)
	LE1184	76-1074	Stimuli Interface Unit (for up to 4 chamber)
	LE1188	76-0283	Stimuli Interface Unit (for up to 8 chambers)
	PACKWIN V2.0	76-0002	PACKWIN Software Platform to Control up to 8 Boxes (needs exp. modules)
	PACKWINCSST	76-0702	PACKWIN Experimental Module for Startle Studies
	PACKWINCSFR	76-0701	PACKWIN Experimental Module for Fear Conditioning/Freezing studies
OPTION	LE100-26	76-0159	Shock Generator with Scrambler. 0-2 mA Output (one for each chamber) - needed for fear conditioning and fear-potentiated startle reflex studies
OPTION	LE115	76-0328	Contextual kit for Fear Conditioning test (FREEZING)
OPTION	LE117MM	76-0675	Mouse Holder for Startle Reflex, 90 (Length) x 30 (Diam.) (up to 25 g)*
OPTION	LE117M	76-0235	Mouse Holder for Startle Reflex, 100 (Length) x 34 (Diam.) (up to 35 g)*
OPTION	LE117RM	76-1056	Mouse/Rat Holder for Startle Reflex, 150 (Length) x 44 (Diam.) (up to 50-100 g)*
OPTION	LE117R	76-0236	Rat Holder for Startle Reflex, 200 (Length) x 64 (Diam.) (up to 150-200 g)*
OPTION	LE117RR	76-0676	Rat Holder for Startle Reflex, 225 (Length) x 74 (Diam.) (up to 300 g)*
OPTION	LE117XRR	76-0917	Large Rat Ceiling Height Reductor for Startle Reflex (>300 g)
OPTION	LE119	76-0286	Air puff Unit for Tactile Stimuli (STARTLE), air source and regulator not included
OPTION	SOUNDMETER	76-1131	Soundmeter

* The correspondance between the holder model and animal weight is given as an approximation - check the size of the holder in order to confirm the one needed for your experiments.