

IR Actimeter for Locomotor Activity and Exploration



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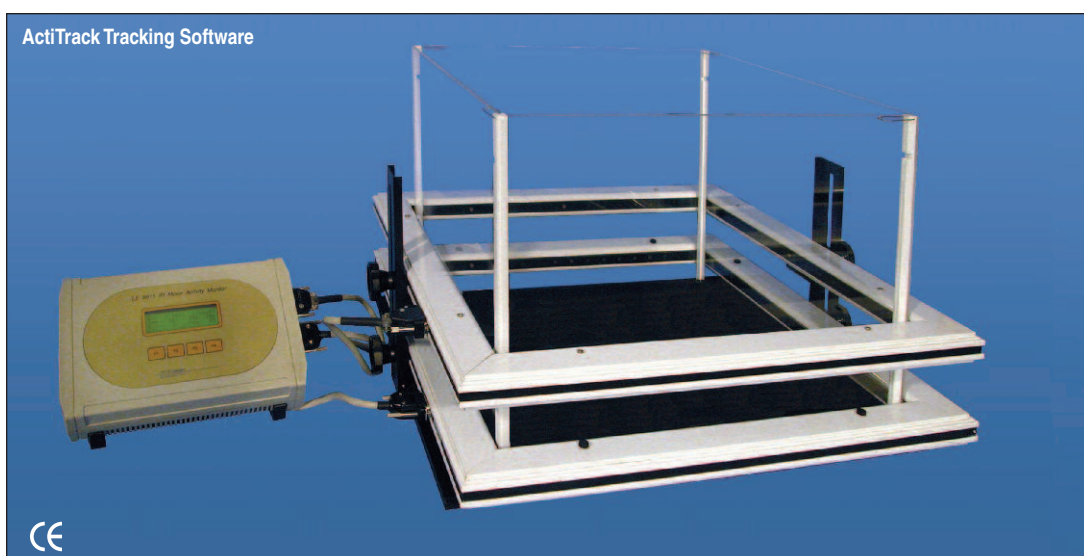
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Key Features

- Minimum maintenance required
- Minimum lighting conditions required
- Interchangeable frames can be used without distinction for either REAR, ACT or POKING modes
- Can be used without any computer (independent control units)
- Dedicated PC optional, not required

Parameters Measured

- Fast/Slow activity; i.e. movements with displacement (control unit)
- Fast/Slow stereotypies; i.e. movements without displacement (control unit)
- Fast/Slow rearings (control unit)
- Fast/Slow nose-spoke (control unit)
- Analysis of animal tracking: distance covered, speed, rearings, permanence time in selected zones, etc. (ActiTrack)
- Intervals of inactivity (ActiTrack)
- Time in zone (ActiTrack)
- Distance travelled (ActiTrack)
- Rearing behavior events and duration (ActiTrack)

Components Included

- IR unit and control unit with RS-232 communications port
- SeDaCom software
- Cables and connectors
- Instruction manual
- Set of spare fuses
- 2 year warranty on hardware

Options

- ActiTrack software, see page 12
- Arena dividers
- Hole poke board
- Transparent acrylic arena

IR Actimeter

The Panlab/Harvard Apparatus Infrared (IR) Actimeter allows the study of spontaneous locomotor activity, rearings and optionally hole-board test parameters for exploration in rodents. A reliable system for easy and rapid drug screening and phenotype characterization in both day and night lighting conditions.

The system is basically composed by a two dimensional (X and Y axes) square frame, a frame support and a control unit. Each frame counts with 16 x 16 infrared beams for optimal subject detection.

The system is completely modular: each frame may be used for evaluation of general activity (one or more animals), locomotor, stereotypic movements, rearings or exploration (nose-spoke detection in the hole-board option). The infrared photocell system can be set with up to 15 levels of sensitivity in order to adapt the frames to the typology of the animal (rats, mice). It can also be set to ignore the beams that are obstructed by objects (e.g. the walls/corners of the home cage).

The frames can be controlled by independent units or directly through SeDaCom computer Software, which allows easy exportation of data (through RS-232 serial port) in a format compatible with Excel™. Optionally, the ActiTrack software option may be used to analyze animal trajectories (distance, speed, permanence time in selected zones) and then provide additional complementary data to those obtained using the control units.

Specifications

System Dimensions:	
LE 8811	450 (W) x 450 (D) x 200 (H) mm
LE 8812	220 (W) x 220 (D) x 200 (H) mm
Number of InfraRed Beams Per Frame	32 (16 per axis)
InfraRed Photocells Spacing:	
LE 8815	25mm
LE 8816	13mm
Material Composition	Aluminium, polypropylene
Computer Requirements	PC (Windows 95, 98, ME, NT, 2000 and XP) (if SeDaCom is to be Used)
Maximum Number of Stations	32 InfraRed Frames per computer (either SeDaCom or ActiTrack)
Power Requirements	110/220 V, 50/60 Hz
Certifications	CE compliant

Citations

- Sonnier L et al. (2007) Progressive loss of dopaminergic neurons in the ventral midbrain of adult mice heterozygote for *Engrailed1*. *J Neurosci*. 27(5): 1063-1071. (mouse, France)
- Camarasa J et al. (2006) Association of caffeine to MDMA does not increase antinociception by potentiates adverse effects of this recreational drug. *Brain Res*. 1111:72-82. (mouse, Spain)
- Chipana C et al. (2006) Protection against NMDA-induced dopaminergic neurotoxicity in mice by methyllycaconitine: Involvement of nicotinic receptors. (2006) *Neuropharmacol*. 51:885-895. (mouse, Spain)
- Kucerova J et al. (2006) Gender differences in cannabinoid and ecstasy interacting effects in mice. *Homeostasis in health and diseases*. 2006(1-2): 95-96. (mouse, Czech Republic)
- Menendez J et al. (2006) Suppression of Parkin enhances nigrostriatal and motor neuron lesion in mice over-expressing human-mutated tau protein. *Human Molecular Genetics*. 15(13): 2045-2058. (mouse, Spain)
- Simonin Y et al. (2006) An Inhibitor of Serine Proteases, Neuroserpin, Acts as a Neuroprotective Agent in a Mouse Model of Neurodegenerative Disease. *J. Neurosci*. 26(41):10614-10619. (Mouse, Switzerland)

Model	Product	Order #
LE8811	Double IR System, Rats & Mice (Includes LE8825, LE8817, 2 Units LE8815 and SeDaCom)	BH1 76-0121
LE8810	Double IR Activity System, Mice (Includes LE8825, LE8818, 2 Units LE8816 and SeDaCom)	BH1 76-0122
LE8812	Single IR Activity System, Rats (Includes LE8825, LE8817, LE8815 and SeDaCom Software)	BH1 76-0123
LE8809	Single IR Activity System, Mice (Includes LE8825, LE8818, LE8816 and SeDaCom Software)	BH1 76-0124
LE8821	Arena Divider for LE 8815 (Allows Monitoring of 2 Animals at Once)	BH1 76-0125
LE8823	Arena Divider for LE 8816 (Allows Monitoring of 2 Animals at Once)	BH1 76-0126
Options		
ACTITRACK	Enhanced Tracking Software for up to 32 Frames	BH1 76-0003
LE8815	IR FRAME, 450 x 450 mm 16 x 16 IR Beams	BH1 76-0127
LE8816	IR FRAME, 250 x 250 mm, 16 x 16 IR Beams	BH1 76-0128
LE8814	Transparent Arena 440 x 440 mm (Open Field)	BH1 76-0129
LE8813	Transparent Arena 210 x 210 mm (Open Field)	BH1 76-0130
LE8817	Support for LE 8815 Frames	BH1 76-0131
LE8818	Support for LE 8816 Frames	BH1 76-0132
LE8820	Hole Poke Base for LE 8815 Frame	BH1 76-0133
LE8825	Data Logger (up to 200 Hours Memory) and PC Interface	BH1 76-0134