



Lesion Making Device

Cat. No. 53500

General

This compact, **solid state DC Lesion Maker** has been designed for the production of localized lesions in small animals, when direct current (DC) is preferred to RF.

It features a regulated power supply combined with a constant DC current generator which operates on either continuous or timed mode.

The Lesion Making Device provides constant DC current in mA from 10 μ A to 99 mA. The pulse duration may be timed by the instrument between 1 and 99 seconds, or manually controlled.

The current generator is protected against short circuit, preventing the electronics to get damaged due to the electrodes coming accidentally in contact with each other.

Particular emphasis has been placed in the design of a good circuit output/ground insulation; this feature also minimizes spurious current field lines across the tissue, outside the pattern preset by the operator.



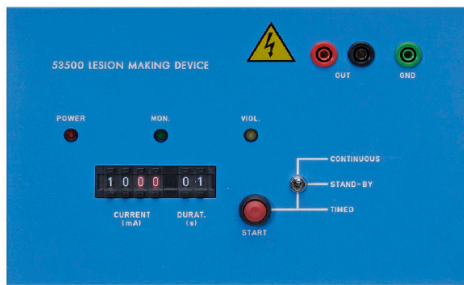
New Model!

A precision instrument, which provides constant DC current in mA

Main Features

- Violation warning circuit
- Current Range : from 10 μ A to 99 mA
- 3 modes of Operation
- Digital setting of constant current and time duration
- Pulse Duration : timed between 1 and 99 seconds

Controls



The instrument controls are all placed on the top panel; the parameter are set by two thumb-wheel switches:-

- **Current output adjustment**, in the range 10µA to 99mA
- **Pulse duration** from 0.1 to 99 seconds.

The mode of operation can be selected via a 3-position switch:-

- **Continuous:** the current flows through the preparation in a continuous mode
- **Stand-By:** the instrument is ready to operate but the output stage is not energized
- **Pre-set Duration:** the current flow is timed according to the setting

Three binding posts are located at the upper right of the Lesion Maker: either the red (+) and the black (-) can be connected to the lesion making electrode.

The other binding post is usually connected to a pad electrode with electrolyte on the preparation. Either red (+) or black (-) may be grounded via the green binding post.

Led Indicators

Three LED indicators are embodied on the top panel:-

- **POWER** (green) which lights when the unit is ON
- **MONIT.** (red) which monitors the presence of lesion current
- **VIOL.** (yellow) which indicates when the current does not correspond to the setting

Electrodes

Usual needle electrodes, prepared by the researcher according to his/her experimental needs can be used in conjunction with the 53500 Lesion Making Device.

We have the capability and will to manufacture electrodes based on the customer's request.

Ordering Information

53500	Lesion Making Device standard package, including:-
53500-310	Set of 3 output plugs
53500-302	Instruction Manual
E-WP 008	Mains Cord

Technical Specifications

Current Range	from 10 µA to 99 mA
Pulse Duration	timed between 1&99 seconds or manually controlled
Compliance Voltage	200 V DC
Max. Electrode R	20MΩ(10µA) down to 2KΩ (100 mA)
Mains Supply	115 or 230V / 50-60 Hz
Power Consumption	20 W max.

Physical

Dimensions	25x15x11 cm
Weight	1.5Kg
Shipping Weight	2.8Kg approx.
Packing	45x34x26cm

Bibliography

- S.M. Fortin et alia: "UNIT 7.25 Sampling Phasic Dopamine Signaling with Fast-Scan Cyclic Voltammetry in Awake, Behaving Rats" *Current Protocols in Neuroscience*, Jan. **2015**
- V. Campese et alia: "Modulation of Instrumental Responding by a Conditioned Threat Stimulus Requires Lateral and Central Amygdala" *Frontiers in Behav. Neurosc.* 9(293), **2015**
- S.M. Fortin et alia: "Sampling Phasic Dopamine Signaling with Fast-Scan Cyclic Voltammetry in Awake, Behaving Rats" *Current Protocols in Neuroscience*, UNIT 7.25, published online 5 Jan **2015**
- V.D. Campese et alia: "Lesions of Lateral or Central Amygdala Abolish Aversive Pavlovian-to-instrumental Transfer in Rats" *Front Behav Neurosci.* 8: 161, **2014**
- M.G. McCue et alia: "Medial Amygdala Lesions Selectively Block Aversive Pavlovian-Instrumental Transfer in Rats" *Front Behav Neurosci.* 8: 329, **2014**
- Stroobants et alia: "Increased Gait Variability in Mice With Small Cerebellar Cortex Lesions and Normal Rotarod Performance" *Behav. Brain Res.* 241: 32-37, **2013**
- L.B. Cruz et alia: "Effect of the Bone Marrow Cell Transplantation on Elevated Plus-Maze Performance in Hippocampal-Injured Mice" *Behav. Brain Res.* 248: 32-40, **2013**
- M.E. Wang: "Long-Term Stabilization of Place Cell Remapping Produced by a Fearful Experience" *J. Neurosci.* 32(45): 15802-15814, **2013**