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# **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.

If 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  $\mu$ 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.

## MISCELLANEOUS, ECT, LMD



New Model!

A precision instrument, which provides constant DC current in mA



#### **Main Features**

- Violation warning circuit
- Current Range : from 10 µA to 99 mA
- 3 modes of Operation

- Digital setting of constant current and time duration
- Pulse Duration : timed between 1 and 99 seconds

## Ugo Basile: more than 10,000 citations

## **LESION MAKING DEVICE**

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#### 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 seco
	or manually controlled
Compliance Voltage	200 V DC
Max. Electrode R	$20M\Omega(10\mu A)$ down to $2K\Omega$
	(100 mA)
Mains Supply	115 or 230V / 50-60 Hz

Power Consumption 20 W max.

**Physical** 

Dimensions2Weight1Shipping Weight2Packing4

25x15x11 cm 1.5Kg 2.8Kg approx. 45x34x26cm

#### Bibliography

- S.M. Fortin et alia: "UNIT 7.25 Sampling Phasic Dopamine Signaling with Fast-Scan Cyclic Voltammetry in Awake, Behaving Rats" <u>Current Protocols in Neuroscience</u>, Jan. 2015
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