

ECT Unit

Cat. No. 57800

General

The ECT apparatus is specially designed for neurochemical and neuropharmacological research.

A constant current output is used, which ensures reproducible results and accurate determination of the EC threshold while also pinpointing any variations in the threshold, brought about by drugs having a specific action on the cortex and subcortical regions.

The shock parameters have been selected after consulting the most recent literature, to supply the most suitable range when operating with mice and rats.

Consistent reproducible current levels are produced by feedback circuitry that adjust for variance in impedance of the contact from animal to animal.

The Electroconvulsive Device is supplied with auricular (ear lobe) electrodes.



**DESIGNED FOR
INDUCING
CONVULSIONS IN
RESEARCH ANIMALS**

**FOR NEUROCHEMICAL
&
NEUROPHARMACOLOGICAL
RESEARCH**

Particularly useful for:-

- General screening of potentially neurotropic substances
- Evaluating the depressant or stimulating action of drugs on the CNS
- Endocrinological investigations on the relationship between the nervous system and the hypophysis

Consistent reproducible current levels are produced by feedback circuitry that adjust for variance in impedance of the contact from animal to animal.

The impedance of the animal can be previously measured and displayed, and a warning signal flashes if the impedance is too great to deliver the desired current level.

The special output circuit enables any type of electrode to be used.

The **auricular electrodes 57800-002**, supplied with the standard package, allow a single operator to deliver shock to a number of animals in a short time.



The above picture features **Corneal Electrodes Cat. 57800-003**, which can be provided as **optional**.

Different types of electrodes can be manufactured on request.

[illegible]

Rectangular Positive

Pulse :	by H.V. transformer
Constant Current :	controlled by a feedback network
Pulse Rise&Fall Time :	20μs
Pulse Width (ms) :	0.1 to 0.9 in 0.1ms steps $\pm 1\%$
Frequency (pulses/s) :	1-299 in 1 pulse/s steps $\pm 1\%$
Shock Duration :	0.1 to 9.9 in 0.1s steps $\pm 1\%$
Pulse Voltage :	2.5KV max.
Current Range :	0-99mA in 1mA steps $\pm 2\%$
Output Resistance :	min 00hm - max. 25KOhm (at max. current)
KOhm Display :	0-199 KOhm - 1KOhm resolution
Power Requirements :	115/230V - 50/60Hz - 70VA

WARNING: due to HIGH VOLTAGE involved, the operator should always wear rubber gloves when handling the electrodes.

An optional Biphasic Unit may be placed between the animal and the Electroconvulsive Device to invert every second pulse. Maximum frequency in this case becomes 100 Hz.

When connection to an oscilloscope or data acquisition system, this useful accessory is required to guarantee a simple and safe way to monitor the ECT output.



The risk of damage to the ECT Unit due to accidental wrong connections is avoided when using the ECT Monitor.

57800 **ECT Unit**, standard package including:

- 57800-001 Pulse Generator
57800-002 Set of Auricular Electrodes
57800-302 Instruction Manual (on USB pen drive)
E-WP 008 **Mains Cord**

Accessories and Spares

- 57800-003** Set of Corneal Electrodes
57800-320 Set of 4 Felt Pads for Auricular Electrodes
57800-010 Bipolar Inverter
57800-015 ECT Monitor

Physical

Instrument Size	27(W)x37(D)x13(H)cm
Weight	3.4Kg
Packing	45x34x26cm
Shipping Weight	5Kg

Bibliography

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- R.J. Schloesser et alia: "Antidepressant-like Effects of Electroconvulsive Seizures Require Adult Neurogenesis in a Neuroendocrine Model of Depression" Brain Stimulation 8(5): 862-867, **2015**
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