



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.



**DESIGNED FOR
INDUCING
CONVULSIONS IN
RESEARCH ANIMALS**

**FOR NEUROCHEMICAL
AND
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

General

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

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

The standard auricular electrodes supplied allow a single operator to deliver shock to a number of animals in a short time.

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



The above picture features Corneal Electrodes Cat. 57800-003. Different types of electrodes can be provided on request.

Specifications

Rectangular Positive

Pulse

by H.V. transformer

Constant Current

by feedback network

Pulse Rise&Fall Time

20 μ s

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

max. 2.5 KV

Current Range

10-99 mA in 1 mA steps
 $\pm 2\%$

Output Resistance

min 0 Ohm - max. 25 KOhm
(at max. current)

KOhm Display

0-199 KOhm

Power Requirements

1KOhm resolution

115/230 V - 50/60 Hz - 70 VA

Bipolar Inverter 57800-010

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

ECT Monitor 57800-015

When connection to an oscilloscope or data acquisition system is required, this useful accessory guarantees 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.

Ordering Information

57800	ECT Unit , standard package including:-
57800-001	Pulse Generator
57800-002	Set of Auricular Electrodes
57800-301	Dust Cover
57800-302	Instruction Manual
	Set of 2 Fuses for either 230V or 115V operation

Physical

Instrument Size, cm	27 (W) x 37 (D) x 13 (H)
Weight	3.4 Kg
Shipping Weight	6.5 Kg

Accessories and Spares

57800-003	Set of Corneal Electrodes
57800-320	Set of 4 Felt Pads for Auricular Electrodes

Bibliography

- A.L. Hartman et alia: "Efficacy of the Ketogenic Diet in the 6-Hz Seizure Test" *Epilepsia* 49(2): 334-339, 2008
- J.E. Ploski et alia: "Electroconvulsive Seizure-Induced Gene Expression Profile of the Hippocampus Dentate Gyrus Granule Cell Layer" *J.Neurochemistry* 99 (4): 1122-1132, 2006
- K. Takahashi et alia: "Expression of Ndr2 in the Rat Frontal Cortex After Antidepressant and Electroconvulsive Treatment" *Int. J. Neuropsychopharmacol.* 8: 381-389, 2005

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