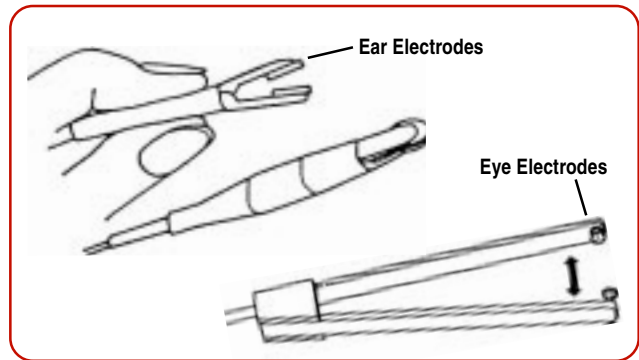


Rodent Shocker Sine-Wave Shock Generator



Cerebral seizures, preferably in mice, are produced using constant sinusoidal alternating current to determine the effect of anticonvulsant drugs. For the reliable induction of seizures it is necessary to achieve satisfactory current flow. Eye electrodes and (especially in mice) ear electrodes are used for this purpose. The ear electrodes offer the advantage that the course of the seizure can be observed more clearly, but have the disadvantage of a larger contact resistance. It is important that the electrodes are properly moistened! Normally the output circuit for constant current ensures the required stimulus response even for different impedances (a.c. resistances) of the animal on test. The stimulation voltage is increased inside the unit until the selected stimulation current is produced. After application the current actually used can be indicated. The stimulus duration can also be pre-set and the elapsed time is monitored on a bargraph (line of LEDs). The parameter evaluated is the percentage frequency of convulsions in a group of rodents at constant current.

- For testing anticonvulsant drugs
- For mice and rats
- Two types of electrodes are available: for eyes or ears
- Foot Switch operation

The stimuli produced are not without danger to the operator; with an open output circuit (no animal connected to the unit) the stimulation voltage at stage 3 can reach its maximum of 750 Volt. In order to ensure operator safety the stimulus can only be triggered when two separate buttons 'RELEASE' (unblocking the inhibit circuit) and 'START' are operated in sequence. In addition the stimulus output is floating and has no connection to ground. The current can therefore flow only between the two electrodes! As a further safety measure the output is automatically switched off if it is not connected to an object or if the contact between electrode and tissue is interrupted during stimulation. To increase the stimulation current the CURRENT SETTING button is pressed and the control to the right of it rotated to obtain the required stimulation current. This additional measure has been introduced in order to remind the user of the increasing danger. Rubber gloves must be worn when working with the unit. A foot switch is supplied for triggering the stimulus; when working with the eye electrode one hand is used to hold the animal while the other holds the flexible forceps-shaped eye electrode. The output sockets are protected against contact. Only HSE shock electrodes with the original HSE safety banana plugs may be used. There are two types of shock stimulation electrodes for applying electric shock to mice and rats for testing anticonvulsant drugs. Eye and ear electrodes.

The eye electrodes for mice are bipolar. They are made from a flexible plastic 'forceps'. Each forcep end has a stainless steel button covered by thin leather. The leather must be moistened with saline solution prior to use. Only a low shock energy is required since the eye is a highly conductive point.

The ear electrodes for mice consist of two well-insulated nickel-plated crocodile clips. The contact points are formed by two chlorided silver discs 6 mm diameter and 1 mm thick. This type of application requires a large shock energy since the contact resistance to the tissue is relatively high even when the skin is moistened. The advantage of this method is that the mice can be raised up by the electrodes so that the convulsions can be observed closely.

Specifications

Stimulation Frequency	50 Hz or 60 Hz according to supply frequency
Stimulus Duration	0.1 sec to 9.9 sec in steps of 0.1 sec, selected after pressing a button, the selected time is indicated
Stimulus Energy	Up to 75 W
Output	Constant current, fully floating
Output Current	0 to 300 mA, 0 to 150 mA, 0 to 100 mA depending on maximum stimulation voltage selected, the setting is made on a 10-turn potentiometer and the selected value is shown on the digital display
Limitation of Maximum Stimulation Voltage	250 V, 500 V, 750 V in 3 steps, selected by button
Digital Display	The selected stimulation current is indicated continuously in mA, the actual current applied is shown during application and can be called up later by pushing a button, the selected stimulation time is shown on pressing the TIME button, bargraph indicates the course of the stimulation time.
Supply	110 V, 60 Hz or 220 V, 50 Hz
Dimensions, H x W x D	150 x 260 x 360 mm (38.1 x 10.2 x 14.2 in)
Weight	5 kg (11 lb)

Catalog No.	Product
CGS 8187.70	Rodent Shocker Sine-Wave Shock Generator with Foot Switch, 115 VAC, 60 Hz
CGS 8188.70	Rodent Shocker Sine-Wave Shock Generator with Foot Switch, 230 VAC, 50 Hz
Descontinuado CGS 8189.70	Ear Shock Electrodes for Mice, pair
Descontinuado CGS 8190.70	Eye Shock Electrode for Mice
Descontinuado CGS 8191.70	Ear Shock Electrodes for Rats, pair
Descontinuado CGS 8192.70	Eye Shock Electrode for Rats