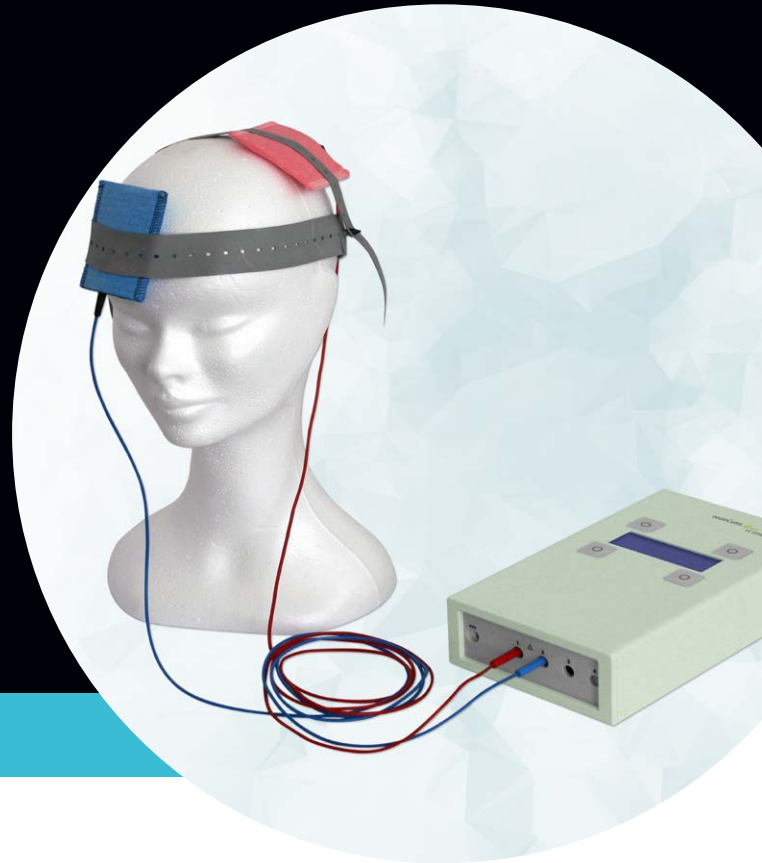


DC-STIMULATOR

Measuring and Modulating Brain Activity

for therapeutic application



Programmable direct current stimulator for use in clinics and practices

The DC-STIMULATOR is a stimulator for cranial electrotherapy that provides a stimulation using weak direct current (transcranial Electrical Stimulation - tES) within non-invasive interventional Neurophysiology. The electrical charge and current density applied through a constant current source are far below the threshold for releasing a stimulus and have a modular effect on existing neuronal elements.

Depending on duration, used current, current density and frequency the stimulation is effective on inhibiting or activating cortical activity. If established treatments fail, a supporting therapeutic effect on depression is probable.

The DC-STIMULATOR is intended for use strictly under the supervision of qualified health-care practitioners.

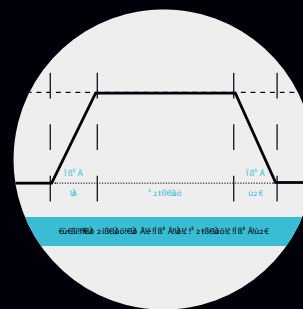
Advantages of the DC-STIMULATOR:

- highest patient safety standards due to multistage monitoring of the current path, automatic termination of the stimulation as well as continuous monitoring of the electrode impedance
- intuitive menu navigation via display and four buttons
- individual setting and saving of the stimulation parameters
- optional: study mode for double-blind active and sham stimulation

DC-STIMULATOR Features

- microprocessor-controlled constant current source
- 1 channel (anodal and cathodal stimulation possible)
- high safety standard through multistage monitoring of the current path
- stimulation mode: tDCS (continuous stimulation, adjustable, fade in and fade out)
- study mode for „blind“ operation of real and pseudo stimulation, encoded from a code list of 200 codes, independently adjustable settings (can be saved to avoid accidental modification of study parameters)*
- external trigger input*

* optional



tDCS: total stimulation time =
fade in + duration + fade out

DC-STIMULATOR Specifications

- adjustable current up to 2,000 μA in increments of 250 μA
- adjustable application time up to 30 min
- max. 1 % relative direct current fault tolerance
- max. 0.02 % direct current fluctuation
- internal 16 bit D/A conversion
- internal time resolution < 1 ms (sample rate 2,048 sps)
- "tDCS" stimulation mode: duration 1,800 s, increment 30 s, duration of fade in / fade out 1-120 s, increment 1 s
- power supply from built-in rechargeable batteries
- approx. 6 h stimulation time @ 1 mA, approx. 7 h for complete recharging
- alphanumeric display with backlight
- membrane keypad with 4 keys
- contact-protected electrode connection in accordance with DIN 42802-2 (\varnothing 1.5 mm)
- power consumption approx. 0.5-1.5 W (depends on display brightness and applied current)
- dimensions: 13.5 cm x 22.5 cm x 5.5 cm (W x D x H)
- weight (incl. batteries): 0.8 kg

DC-STIMULATOR Option

- Trigger module to connect external trigger safely



DC-STIMULATOR with
rubber electrodes and sponges



Direct current stimulation with
rubber electrodes and sponges



Direct current stimulation with
electrode cap

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