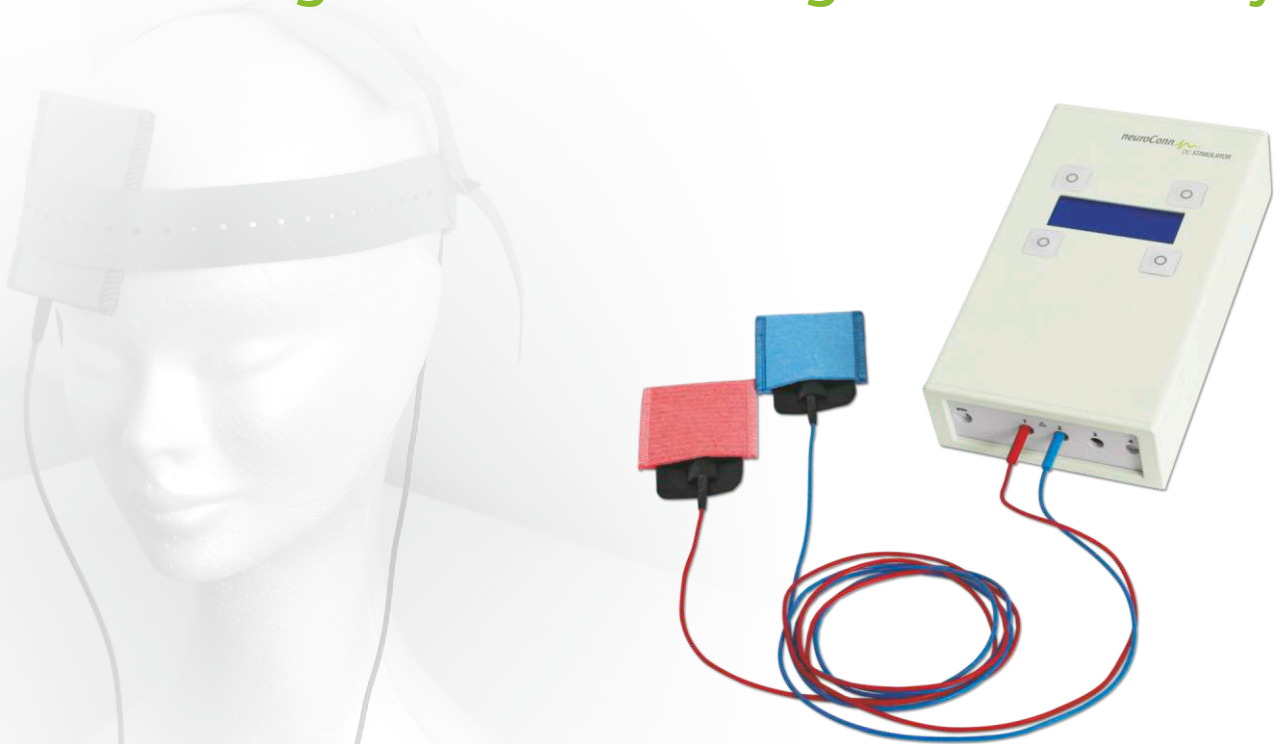


# Measuring and Modulating Brain Activity



## neuroConn DC-STIMULATOR

### Programmable direct current stimulator

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 healthcare 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
- Study mode for double-blind active and sham stimulation\*  
\* optional

Moving thought

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## 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

## DC-STIMULATOR Specifications

- Adjustable current up to 2,000  $\mu$ A in increments of 250  $\mu$ A
- 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 2048 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

