starstim NE®

NONINVASIVE WIRELESS tCS NEUROSTIMULATOR

Multi-channel tCS with EEG

High resolution tCS with simultaneous EEG monitoring

What is tCS?

Transcranial current stimulation (tCS) is a form of neuromodulation which uses low current delivered directly to the brain via small electrodes

Applications

- > Chronic Pain
- > Post Stroke Rehabilitation
- > Depression
- > Addictive disorders
- > Learning and cognitive enhancement
- > Basic neuroscience research

NE neuroelectrics®

starstim NE®

NON-INVASIVE WIRELESS tCS NEUROSTIMULATOR

Multi-channel and programmable tCS

- Stimulate using up to 8 electrodes
- Current-controlled tDCS, tACS, tRNS, sham or user-defined waveforms
- Allows flexible electrode placement based on the 10-20 system
- Independent current control of each electrode

Dual use electrodes for stimulation and EEG monitoring

- Stimulate and record at the same site using the same electrodes

A wireless wearable concept for fast and easy setup

- Allows for mobile stimulation and recording away from the clinic/lab
- Quick setup in less than 1 minute

Intuitive user application

- User friendly protocol programming and sequencing
- Provide on-line visualization of EEG features
- Visualize generated electric fields associated with tCS

Number of channels
8 dual use electrodes (EEG and/or Stimulation)

Stimulation type
tDCS, tACS, tRNS, sham, custom waveforms

Maximum current
+/- 2mA per electrode

Current for each channel
Configurable independently at each electrode

Communication
Bluetooth 2.1

Dimensions
60 x 85 x 20 mm

Weight
65 gr

Operating systems
Windows 7, Windows Vista, Windows XP, MAC OS X

EEG data output
EDF+, ASCII data files or TCP/IP raw data streaming

Electrode size
3.14 cm2 Ag/AgCl "Pi" electrodes (gelled) and 25cm2 sponges (saline)

Operating time
tCS+EEG 6 hrs / EEG 9 hrs

EEG bandwidth
0 to 250 HZ

EEG sampling rate
500 S/s

EEG effective dynamic range
24 bits

EEG DC coupled
Yes, measurement band from 0 to 250 Hz

EEG system noise
<1 uV RMS

EEG software
Raw data streaming / spectogram / Live spectrogram / Power Spectrum Diagram (PSD) / Band pass filtering (classical EEG bands) / Line noise filter

Other Technical Specifications
3-axis accelerometer and microSD card for autonomous on-board storage (>24 hour EEG recording time)-Optional

NE neuroelectrics®

For more info contact:
Neuroelectrics, Teodor Roviralta 45
08022 Barcelona - Spain
Tel.+34 93 254 03 66
www.neuroelectrics.com

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