

personal mobile system
for transcranial electrical stimulation



tES4me is a personal system for transcranial electrical stimulation intended for physiotherapy and rehabilitation of patients with neurological and psychiatric diseases by means of transcranial electrical stimulation (tES) in accordance with stimulation protocol prescribed by the attending physician.

Weak constant or pulsating electrical stimuli from surface electrodes are delivered to the brain during tES procedure. It is known that properly selected tES procedure improves the quality of life and corrects such clinical conditions as anxiety, depression, insomnia, addiction and can also be used to create a state similar to chemically induced anesthesia.

tES4me can be used by the patient independently at home after preliminary programming of the personal stimulator by the doctor.

Advantages

- Programming scenarios up 30 unique procedure, up to 5 stages in the procedure
- From 2 up to 8 electrodes can be connected to current generator poles in arbitrary order
- Individual tES modes for each stage:
 - tDCs - Transcranial direct current stimulation
 - toDCS - Transcranial oscillatory direct current stimulation
 - tACS - Transcranial alternating current stimulation
 - tPCS - Transcranial pulsed current stimulation
 - tRNS - Transcranial random noise stimulation
 - HD-tES - High density transcranial electrical stimulation
 - Sham stimulation
- Current generation with direct digital synthesis (DDS) up to 4000 μA
- Precise current adjustment 1 μA
- Smooth increasing and decline of stimulation current
- Continuous impedance measuring during TES procedure
- Simple device operation – one button solution



System include:

- tES4me stimulator
- Adapter tES4me with 8 electrodes
- textile cap MCScap light
- Sponge D22 (50 pcs.)
- USB cable for tES4me
- User manual
- tES4me box

Specification

Number of procedures in the course / stages in the procedure	1-30 / 1-5
Duration of the procedure / stage	1-60 min.
Setting of minimum rest time after the procedure. Device is blocked during this time	0, 1, 6, 12, 24, 48, 72 hours
Smooth rise and fall of stimulation current	Off, 10, 20, 30 sec.
Stimulation current	10-4 000 μ A
tES modes	tDCS, toDCS, tACS, tPCS, tRNS, HD-tES, Sham stimulation
Maximum allowable impedance for maximum stimulation current/generator voltage	9.5 k Ω /38 V
DDS generator sampling frequency/digit capacity	8 kHz / 13 bit
Checking of the electrode connection before stimulation	Impedance less 8 k Ω @ 30 Hz, measurement current 30 μ A
Shape (for tACS and toDCS modes)	Sine, Random, Square, Ramp, Trap, Sin(X)/X, Gauss
Frequency (for tACS and toDCS modes)	1-1 000 Hz
Lower cutoff frequency for tRNS mode @-3dB	10 Hz, 50 Hz, 100 Hz, 200 Hz, 300 Hz, 500 Hz
Upper cutoff frequency for tRNS mode @-3dB	50 Hz, 100 Hz, 200 Hz, 300 Hz, 500 Hz,1000 Hz
Wireless interface	BLE 4.2
Wireless certification	CE, FCC USA, Canada, Japan, Korea, Taiwan
Battery charging	2.5 hours from USB 5V = 2A(max)
Dimensions (LxWxH)	87 x 56 x 17 mm
Net weight	65 g
Mobile application platform	iOS, Android, Windows store
User authorization in doctor application	Under a personal license after confirmation of medical qualification
Main functions of the doctor application	Programming of stimulation courses and course templates, uploading of protocols and condition assessments, operation with a patient database
Main functions of the patient application	Schedule of procedures with mark after completion, assessment of the state after procedure (1-5 points), indication of stimulation process
Diameter / surface area of electrode CS22-SS	22 mm / 3.80 cm ²
Diameter / surface area of electrode CS13-SS	13 mm / 1.32 cm ²
Available cap sizes	XL (60-66 cm), XL/L (57-63 cm), L (54-60 cm), L/M (51-57 cm), M (48-54 cm), M/S (45-51 cm), S (42-48 cm), S/XS (39-45 cm), XS (36-42 cm)



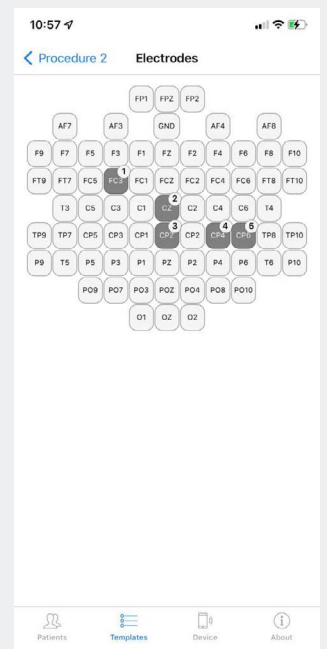
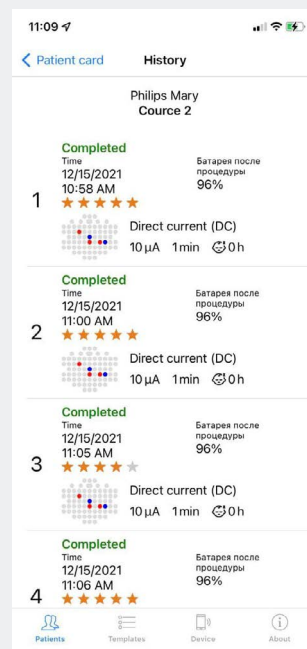
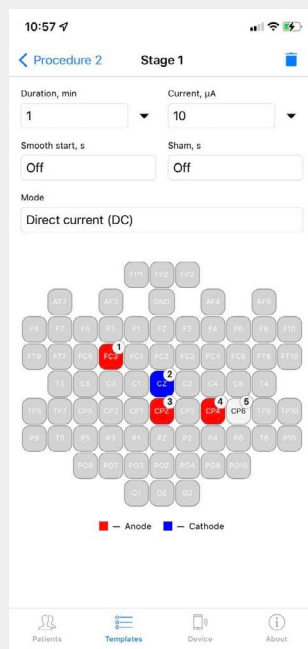
Wide range of MScap accessories for tES



Doctor mobile application for setting up the protocol of stimulation



Patient mobile application for online monitoring of stimulation procedure parameters



Offline operation by pre-configured and loaded protocol into the internal memory of the device