

Measuring and Modulating Brain Activity



neuroConn THERA PRAX[®] MOBILE

DC-EEG bio- and neurofeedback system

The THERA PRAX[®] MOBILE is a portable, mobile DC-EEG neurofeedback and biofeedback system.

Biofeedback is a treatment method, based on operant conditioning. In this method the patients receive feedback about their physiological states and changes in these states, which mostly cannot be perceived by the patient. Slow Cortical Potential Neurofeedback (SCP-NFB) is a kind of biofeedback and therefore a method in instrument-based behavioral therapy. It allows the patient to perceive and self-regulate their brain activity. SCP-NFB is probably effective in the treatment of ADHD.

In addition, the THERA PRAX[®] MOBILE reliably records multi-channel EEG, ECG, and EMG signals as well as peripheral bio-signals. To individually control the progress of therapy, cognitive evoked potentials can be recorded.

Due to the very close cooperation with leading scientific institutions in the field of neurofeedback, our devices incorporate the latest medical research results.

Advantages of the THERA PRAX[®] MOBILE

- Neurofeedback of the slow cortical potentials (SCP) with automatic online correction of artifacts and eye-movements
- Neurofeedback with frequencies (Delta, Theta, Alpha, Beta, SMR, Gamma and any desired band) and ratios (e.g. beta/theta)
- Biofeedback training with breathing, temperature, GSR, pulse curve
- Standardized, clinically evaluated protocols for training of SCP and frequencies

Moving thought

neuroCare 

THERA PRAX[®] MOBILE Features

- Portable full-band DC-EEG neurofeedback and (optional) biofeedback system
- Complete system consisting of a 13-channel full-band DE-EEG amplifier, a mobile PC with integrated 15" TFT colour display, software for neurofeedback and analysis, keyboard, mouse
- Neurofeedback of the slow cortical potentials (SCP) with online correction of artifacts and eye-movements
- Neurofeedback with frequencies and ratios
- Free choice of frequency band, algorithm and combinations of the two (ratio, arithmetics, correlation, coherence, bicoherence etc.)
- Audio-visual feedback and animation
- Free choice of feedback channel (unipolar, bipolar, source, multi-channel)
- Biofeedback with EMG, ECG and corresponding signals, e.g. heart rate
- Analysis of single session and comparison of multiple sessions
- Patient database with medication and examination calendar, complete documentation of readings

THERA PRAX[®] MOBILE Specifications

Full-band DC-EEG and BIOSIGNALAMPLIFIER

- 24 bit resolution per channel
- Selectable sample rate of 32 to 4,096 sps
- Frequency range of 0 to 1,200 Hz depending on sampling rate
- Power supply via replaceable, rechargeable batteries
- Continuous operation time > 8 h
- Data transmission using optical cable

Please visit www.neuroconn.de for detailed technical specifications.

THERA PRAX[®] MOBILE Options

- Module to correct EEG artifacts (blinking, eye movement, body movement) in real time
- Module for cognitive evoked potentials: CNV, P300, ERN and readiness potential
- Secondary monitor for the patient
- Advanced Analyzer: Modul for the detailed analysis of the therapy of an individual patient or groups of patients
- Biofeedback with breathing, temperature, GSR, pulse curve
- Rimowa trolleys for the save and comfortable transportation

About bio- and neurofeedback in ADHD therapy

Biofeedback is a computer-aided method in which parameters of the patient's body are measured via sensors and translated into visible or acoustic signals on a computer screen. It is well accepted in psychology as a method of operant conditioning and is used in behavioral therapy. Neurofeedback visualizes normally unperceivable brain activity on a display and the patient learns how this activity can be influenced in a systematic manner.

Scientific and clinical studies conducted in recent years have shown neurofeedback to be effective and specific in the non-pharmaceutical treatment of ADHD. The method shows high effect sizes for the ADHD core symptoms of inattention and impulsiveness and positive - though less significant - effects on hyperactivity. Thus, neurofeedback provides a recognized treatment without side effects to children and adults with ADHD.

