

Measuring and Modulating Brain Activity



neuroConn  **THERA PRAX[®] Q-EEG**

DC-EEG – Bio- and Neurofeedback System

Neurofeedback is a method that a patient can learn in order to check his/her own brain activity. The brain signals are visualized on a display and the patient learns how this activity can be influenced in a systematic manner. The feedback from the EEG is used to retrain or restore brainwave activity. Scientific and clinical studies conducted in recent years have shown neurofeedback to be a recognized method of therapy for various disorders of the brain that is applied as a therapeutic component in clinical practice.

Areas of Application/Treatments

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|----------------------|--|--|
| ADHD | | Increased levels of attention and reduced levels of hyperactivity and impulsiveness, potential lowering of medication dosage |
| Migraine | | Reduction in the tendency and frequency of migraine attacks |
| Epilepsy | | Reduction and total suppression of attacks, potential lowering of medication dosage |
| Tinnitus | | Reduction in the loudness of and exposure to tinnitus |
| Miscellaneous | | Chronic headache and sleeping disorders |

Moving thought



THERA PRAX[®] Q-EEG Features

- 22-channel full-band Q-EEG, DC-EEG bio- and neurofeedback system
- DC-EEG feedback of slow cortical potentials (SCPs)
- Generation of Q-EEG, spectral analysis with interface to "NeuroGuide" software
- Neurofeedback with frequencies (alpha, theta, beta, delta, SMR and any desired bands) and ratios (e.g. beta/theta)
- Free choice of frequency band, algorithm and combinations of the two (ratio, correlation, coherence, bicoherence etc.)
- Free choice of feedback channel (unipolar, bipolar, source, multi-channel)
- Biofeedback with EMG, ECG, HR
- Audio-visual feedback and animation
- Patient database with medication and examination calendar, complete documentation of readings
- Suitable for polygraphy and polysomnography

THERA PRAX[®] Q-EEG Specifications

Full-band DC-EEG and BIOSIGNAL AMPLIFIER

- 22 full-band DC channels, referential
- Input impedance > 10 GΩ
- 24 bit resolution per channel
- Selectable sample rate of 32 to 4,096 sps
- Frequency range of 0 to 1,200 Hz
- CMRR > 90 dB @ 50 Hz
- Dynamic input range ± 140 mV
- Input noise < 0.9 μV (RMS) @ 0-110Hz at 256 sps
- Max. power consumption 1.3 W
- Power supply from replaceable, rechargeable batteries
- Continuous operation time > 8 h
- Applied part type BF
- Dimensions: 13.5 cm x 23.5 cm x 6.5 cm (W x D x H)
- Weight: 0.9 kg
- Data transmission using optical cable

PANEL PC

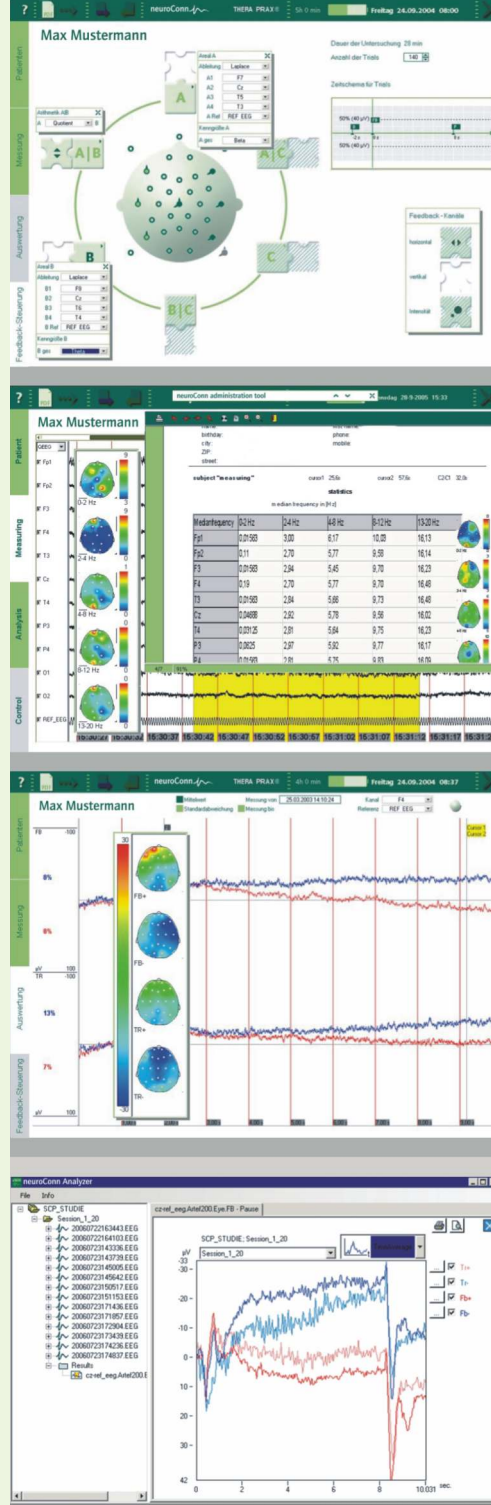
- Intel CPU, min. 1.4 GHz, min. 512 MB RAM, min. 160 GB hard disk, USB 2.0, network connection
- WINDOWS XP[®] Pro. (and later) operating system, min. 15" TFT color monitor, keyboard, mouse
- Dimensions: 42.0 cm x 36.5 cm x 17.0 cm (W x H x D)
- Weight: 6.8 kg

THERA PRAX[®] Q-EEG 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
- Multimedia module
- Export module
- Secondary monitor for the patient
- Biofeedback with HEG, breathing, temperature, GSR, pulse curve
- 4 additional polygraphy channels for respiration, temperature, GSR and pulse curve
- Equipment trolley

Particular Advantages of our Equipment

- Complete systems – and not just individual components – are CE-approved (FDA, PMDA, KFDA etc.) and are certified for use in many countries around the world.
- Our equipment can be used for many application including combined bio- and neurofeedback.
- neuroConn feedback equipment uses clinically evaluated protocols.



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neuroConn supplies equipment for publicly funded multi-center studies into neurofeedback and non-invasive brain stimulation and is also a member of the "National Bernstein Network for Computational Neuroscience".

