neurocare

THERA PRAX® Q-EEG

Measuring and Modulating Brain Activity

for therapeutic application

DC-EEG biofeedback system

The THERA PRAX® Q-EEG is a biofeedback system supporting patients to learn to self-regulate their brain activity (EEG biofeedback). It is intended to be used for EEG biofeedback with the slow cortical potentials (SCP) protocol in the treatment of children with attention-deficit/hyperactivity disorder (ADHD).

In addition, the THERA PRAX® Q-EEG reliably records multi-channel EEG, ECG, and EMG signals as well as peripherical biosignals to describe psychophysiological correlations during relaxation or a stressful situation. 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 bio-feedback, our devices incorporate the latest medical research results .

Advantages of the THERA PRAX® Q-EEG

- biofeedback of the slow cortical potentials (SCP) with automatic online correction of artifacts caused by muscle and eye movements
- biofeedback training with breathing, temperature, GSR, pulse curve
- recording of a quantitative EEG in combination with peripheric signals

Made in Germany

THERA PRAX® Q-EEG Features

- 22-channel full-band Q-EEG, DC-EEG biofeedback system
- DC-EEG feedback of slow cortical potentials (SCP)
- generation of Q-EEG, spectral analysis with interface to "NeuroGuide" software
- EEG biofeedback 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
- analysis of single session and comparison of multiple sessions
- suitable for polygraphy and polysomnography

THERA PRAX® Q-EEG Specifications

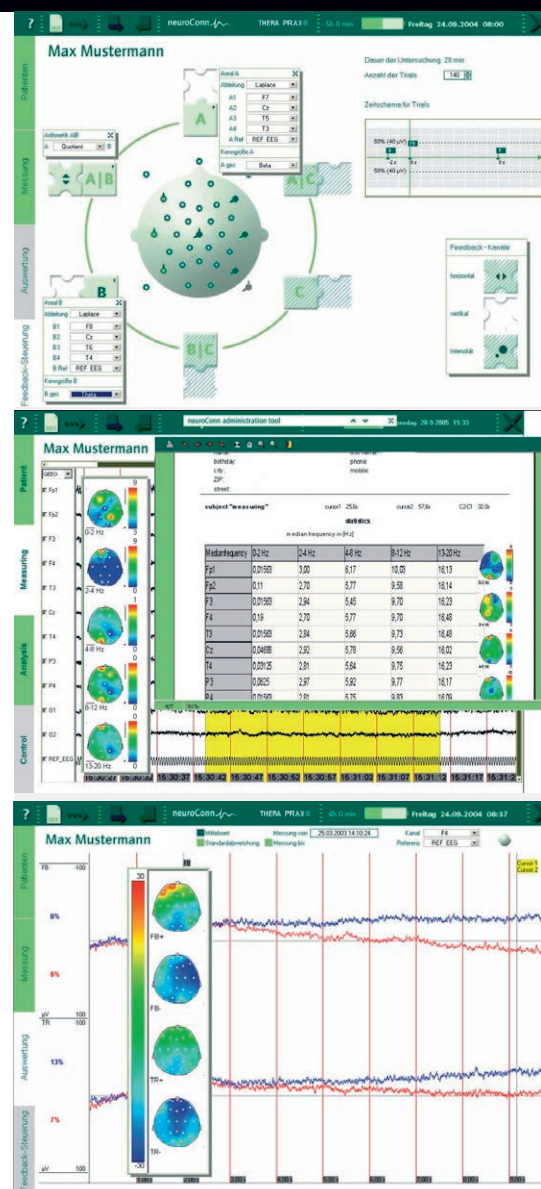### Full-band DC-EEG and BIOSIGNAL AMPLIFIER

- 22 full-band DC channels, referential
- input impedance > 10 G
- 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
- common mode rejection rate (CMRR) > 90 dB @ 50 Hz
- dynamic input range ± 175 mV
- input noise < 0.9 µV (RMS) @ 0 – 110 Hz at 256 sps
- power consumption approx. 0.9 W
- power supply via 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: 0.8 kg
- data transmission using optical cable

PANEL-PC:

- Intel CPU, min. 2 GHz, min. 2 GB RAM, min. 250 GB hard disk, USB 2.0, network connection
- WINDOWS®10 (and later), 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
- cognitive evoked potentials module: CNV, P300, ERN, readiness potential
- multimedia module
- export module for data export
- secondary monitor for the patient
- 4 polygraphy channels: breathing, temperature, GSR, pulse curve
- equipment trolley