

# THERA PRAX<sup>®</sup> Q-EEG

## Measuring and Modulating Brain Activity

for therapeutic application



### DC-EEG biofeedback system

The THERA PRAX<sup>®</sup> Q-EEG is a biofeedback device according to the FDA Regulation Number 882.5050, 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 addition, the THERA PRAX<sup>®</sup> Q-EEG reliably records multi-channel EEG, ECG, and EMG signals as well as peripheral 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 biofeedback, our devices incorporate the latest medical research results .

### Advantages of the THERA PRAX<sup>®</sup> 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

### THERA PRAX<sup>®</sup> 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<sup>®</sup> Q-EEG Specifications

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

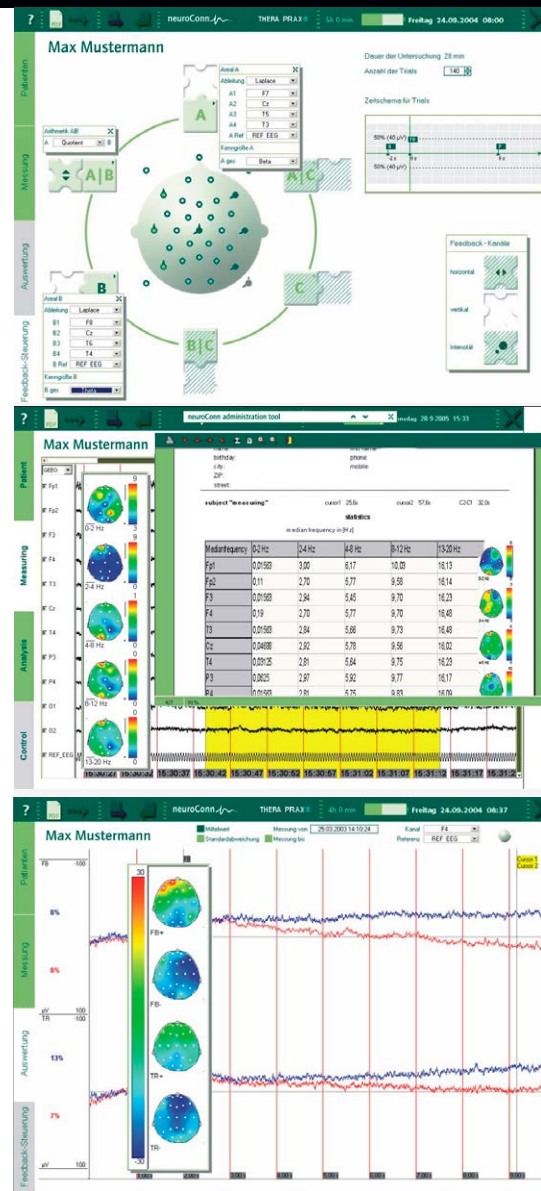
- 22 full-band DC channels, referential
- input impedance > 10 G
- 24 bit resolution per channel
- selectable sample rate of 32 to 4,096 sps
- frequency range of 0 to 1,200 Hz depending on sampling rate
- common mode rejection rate (CMRR) > 90 dB @ 50 Hz
- dynamic input range ± 175 mV
- input noise < 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<sup>®</sup>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<sup>®</sup> 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



neurocare group America, Inc.  
 125 Townpark Drive NW, Suite 300  
 Kennesaw, GA, United States  
 info@neurocaregroup.com  
 T +1-404-394 9672  
 www.neurocaregroup.com

neuroConn GmbH  
 Albert-Einstein-Str. 3  
 98693 Ilmenau  
 Germany



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