

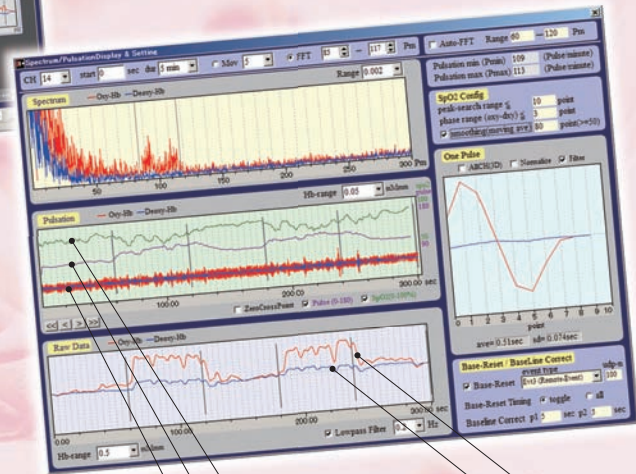


**New Approach from
Cerebral Circulation & Metabolism**

Spectratech OEG-SpO₂

Optical Encephalography
Dedicated use for frontal lobe

Simultaneous measurements of
Hemoglobin (Hb) change and
Apparent SpO₂ (Apparent arterial oxygen saturation)



- Compact
- Low cost
- High performance



Spectratech OEG-SpO₂
(Upward compatible with OEG-16)

- Δ Coxy-L
- Δ Cdeoxy-L
- Apparent SpO₂
- Change in pulse rate
- Amplitude of pulsebeat

Advantages

New design by maximizing the advantage of Spread spectrum technology, and Ultra-high SNR to analyze the ultraweak pulses

Spectratech's world-first Index of multi-point (16ch) measurement of Apparent SpO₂

Simultaneous measurement with the multi-point (16ch) Hb changes (Δ Coxy-L, Δ Cdeoxy-L) which is essentially measured by the existing Spectratech OEG-16

Spectratech OEG-SpO₂

Features

Measurement of the regional cerebral Hb changes and Apparent SpO₂ at the multiple points at the same time

Designed for the dedicated use for the frontal lobe

Very small-sized, low cost, high performance, and mobile operation also available

Use of the spread spectrum modulation that comes from the latest light modulation technology

Ultra-high SNR and fast sampling time for the accurate measurements

Simultaneous measurements by up to 5 units (Hyper-scanning) using the optional distributor

Operation with the battery for up to 1 hour for mobile measurement, or where no AC power supply is available

Real-time measurement and display on PC via USB port

Main specifications

Head module

- 6 light-emitting modules with LED with two built-in wavelengths (840nm and 770nm)
- 6 light-receiving modules with Si PIN photo diode
- 16 simultaneous measurement channels
- 3cm in distance between light-emitting module and light-receiving module
- Stress-free as light as about 250g

Main unit

- Measurement method of biological signals: Hb change (Δ Coxy·L, Δ Cdeoxy·L) and Apparent SpO₂ based on the modified Lambert-Beer Law
- Multiple-light modulation system:
 - Modulation method - Spread spectrum modulation DS (Direct Sequence) system
 - Effective biological signal bandwidth - 0.76Hz for Fine Mode, 6.10Hz for Fast Mode
- Event input function: Manually input at an optional time using the attached event-trigger input box.
- External trigger input function:
 - Two systems of the photo-isolated "External trigger input terminal" to operate with external device
 - Input from another PC via the network using UDP protocol
- Measurement time: 10 hours for AC power supply (Fine Mode), and 1 hour for battery operation
- Power consumption: AC90~240V, 15W ■ External dimensions: 170 (W) x 40 (H) x 180 (D) mm
- Weight: 600g ■ Operating temperature/humidity range: 5~30°C/20~70% (Not condensed)
- 4 x AA battery for Main unit, and 2 x AA battery for the photo isolation part
- PC requirements: Windows XP/VISTA/7/8 with USB port, CD drive, and CPU Intel i5 or above with memory 4GB or above

Mobile operation

- Main unit is compact and light for an easy mobile operation.
- Continuous operation for up to 1 hour
- Measured data are stored for the analysis on PC afterward.
- Also convenient where no AC power supply is available

Spectratech OEG-SpO₂ (Main unit)



Front



Back



Optical Phantom



Mobile bag set



Head module

Wearing mobile set



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