Spread Spectrum technology (Sp2) makes your application robust!

In telecommunication and radio communication, spread-spectrum techniques are methods by which a signal generated with a particular bandwidth is deliberately spread in the frequency domain, resulting in a signal with a wider bandwidth. This increases resistance to natural interference, noise and signal jamming, to prevent detection, and to limit power flux density.

Recording evoked potentials means recording signals in the range of nV! Even small sources of interference (mobile phones, lights, computers, elevators in the vicinity, monitors, any electrical equipment) might influence and disturb the recording. SENTIERO users do not need to worry about this problem as spread spectrum technology takes care of these interferences!

If you do not believe it try and compare against any competing device in any environment. SENTIERO can record faster and with less interference from environmental conditions.

SENTIERO can also be an all-in-one integrated handheld instrument with ASSR, Distortion Product Otoacoustic Emissions (DPOAE), TEOAE and Pure Tone Audiometry. Many speech audiology options are available too!

With SENTIERO, the user can customize DPOAE protocols with twelve frequencies or more up to 30 points per octave between 800 Hz and 10 kHz. Adjusting the cochleas is much faster using patented FMDPOAE® (frequency modulated DPOAE), multichannel technology and conducting measurements on both ears simultaneously using the dual probe feature.
MULTIFREQUENCY AND MULTIRATE ASSR STIMULI - ADVANTAGES:

- Multiple ASSR stimulus rates and rates are configurable to your individual setup, the EEG frequencies can be applied at the same time.

- It is well known that multiple stimulus types improve the signal-to-noise ratio and increase specificity.

ASSR:

- Artifact rejection: weighted averaging, achieving, including up to 57 window.
- Number of averages: 45 to 900 s; step size: 15 s.
- Response detection: weighted averaging, including, artifact rejection.
- Display and storage of statistics graph, impedance, artifact rejection, modulation frequency.
- Stimulus level fixed: 10 to max. 100 dB nHL or transducer sensitivity (with frequency); spread spectrum: ± 2%.
- Number of averages: 45 to 900 s; step size: 15 s.
- Averages: 1000 up to 20000; step size: 1000.
- Sample rate: 48 kHz (stimulus), 16 kHz (response).
- Sample rate: 48 kHz (stimulus), 16 kHz (response).

General features:

- Color touch screen (3.5” graphic LCD)
- Ultracompact less than 4” wide and only 8.5” high
- QWERTY keyboard allows inputting patient demographics online, as well as the patient’s exam date and time.
- Test results can be sorted by birthdate, name, patient ID, examination test type, and examination date.
- Technical manual (rev 11 per 08/2017) available online.
- Printer via pdf direct print directly to your PC / office printer.
- Pure Touch interface and SVG design made for Children - seamless interface at its best.
- Multiple stimulus options including monaural headphones, insert phones and bone conduction.
- Multiple upgrades available.

Technical Specifications:

- Weight: 1.9 x 22 cm, 500 g.
- Display: 240 x 320 pixel, graph 3D, 12 bit, touch screen, 110° field of view.
- Single and dual channel versions (1, 2, 3, 4, 5 kHz bandwidth; 1, 2, 3, 4, 5 kHz frequency bands).
- Memory capacity, up to 1000 patients, 1000 kHz sampling rate, data can be downloaded.
- Software available in English, Spanish and French.
- Power supply, mini USB, or external power supply.
- Upgrade software and OAEs and TEOAEs, via DPOAE threshold cochlear audiogram (order #101101):
  - Frequencies: 1, 1.5, 2, 3, 4, 5, 6 kHz.
  - Stimulus level: 20 to 65 dB SPL (bilateral or single ear selection).

DPOAE threshold cochlear audiogram (order #10111):

- Frequencies: 1, 1.5, 2, 3, 4, 5, 6 kHz.
- Stimulus level: 20 to 65 dB SPL (bilateral or single ear selection).
- Minimum stimulus level: 20, 25, 30, 35, 40, 45 dB SPL (bilateral or single ear selection).

Contact us for further information.