

OTOACOUSTIC EMISSIONS (OAE)

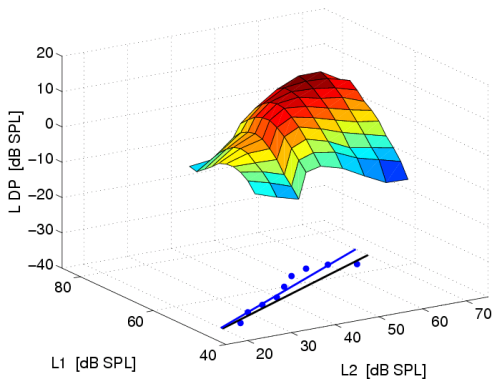
IMPROVEMENTS AND NEW APPLICATIONS - THE NEW GOLD STANDARD.



Photo provided by Global Foundation for Children with Hearing Loss.

THE EVOLUTION TO FMDPOAE™

INVENTIONS AND APPLICATIONS SINCE 1998



OPTIMAL DPOAE STIMULATION

is required in order to detect the DPOAE amplitude easily in noisy environment. "Old school detection criteria of DPOAE" are highly dependant on the used stimuli as displayed in the DPOAE mountain graph above. Optimal combination of level and frequency ratio is needed to record DPOAE amplitudes with good signal to noise ratio (SNR) higher than 6 dB and amplitude higher than -5 dB. PATH MEDICAL co-founder Prof. Dr. Dr. T. Janssen detected the advantages of using the optimal stimulus paradigm (scissor's paradigm) in 1998, which results in easier and robust detection of DPOAE responses. Monitoring the probe fit during the recording helped to apply this patented method in SENTIERO to receive a full cochlear audiogram. This can be used to fit hearing aids of children or non-cooperative patients.

Read more online and get links to literature and validation documents:



MULTIPLE PAIRS OF STIMULI CAN BE COMBINED - MDPOAE!

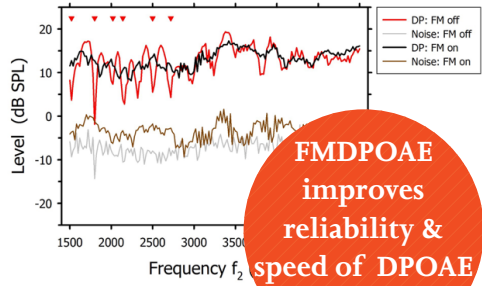
Together with the binaural probe feature, the next evolution step is taken. DPOAE can be measured up to four times faster. This contributes to the improvements of the DPThreshold module- the fully automated objective audiogram. Scan the QR code to read more on the validation data from 2012 by Prof. J. Smurzynski: "Multi-frequency and binaural measurements could be applied to reduce DPOAE testing time considerably."



FREQUENCY MODULATION IS USED TO REDUCE FINE STRUCTURE!

Applying FMDPOAE eliminates all notches in the fine structure diagram displayed below. It is important to note that even a simple screening DPOAE would not have passed at the "notch frequencies" without the patented FMDPOAE™ method. A priori, frequencies of notches are unknown, but often occur in the region of standard screening frequencies.

Consequently FMDPOAE enhances the robustness and speed of DPOAE screening and diagnostic recordings.



FMDPOAE improves reliability & speed of DPOAE screening.

DPOAE & TEOAE

THE NEW GOLD STANDARD



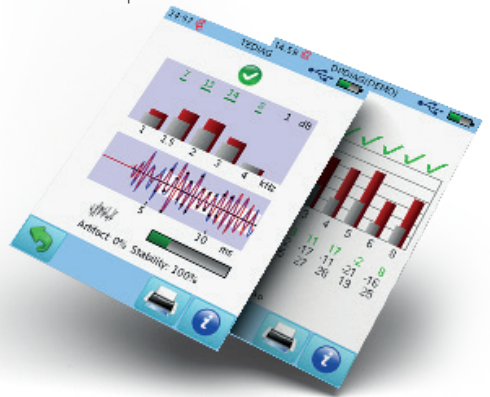
SCREENING APPLICATIONS

are available for both TEOAE and DPOAE modules. Clear indication of valid (PASS) or invalid responses (REFER) is shown after the recordings. Gold standard stimulation methods are applied; probe placement is monitored constantly.

DIAGNOSTIC APPLICATIONS

can be configured according to the users' needs. Up to five different protocols can be parametrized and stored on the device to enable applications for:

- High resolution down to 10 Hz
- Ototoxicity - frequencies up to 10 000 Hz
- Cochlear audiogram - patented!
- Preterm or risk babies diagnostics and follow up.



OPTIMIZED MODULES ARE AVAILABLE FOR SCREENING (GREEN) AND DIAGNOSTIC (BLUE).

All SENTIERO TEOAE and DPOAE applications can be operated with a dual probe feature to speed up the recording time.

Be up to 4 times faster than competition!

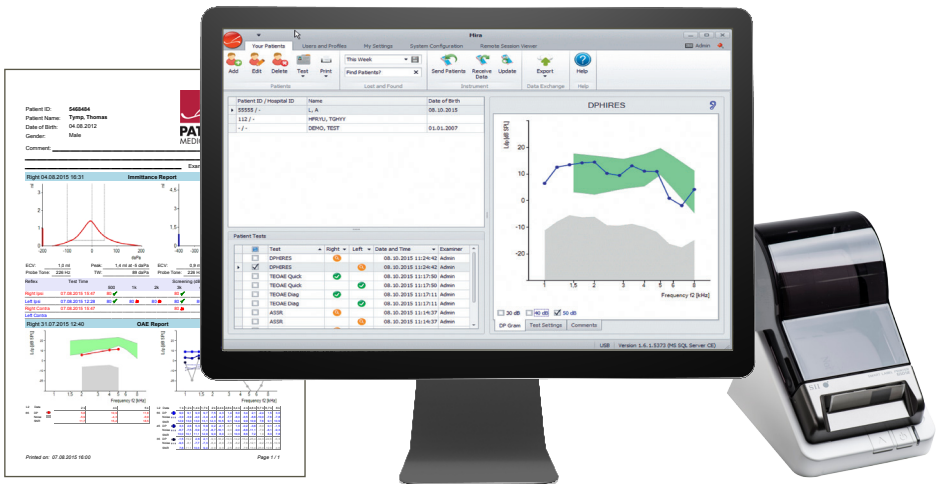
TECHNOLOGY IMPLEMENTED TO MAKE LIFE EASIER. RECORDINGS AND DOCUMENTATION - SIMPLE AS 1, 2, 3!

Get started quickly -
scan this:



**JOB DONE BY
3 BUTTON
PUSHES.**

Watch a complete instruction
video by Terry Foust, AUD:



SENTIERO is the incarnation of cutting edge technology made easy and fun. For screening purposes, the workflow is made easy so that lay people can use it - e.g. for the head start program in U.S.A.. Documentation is made simple. Just one button press on the result screen will bring a full pdf report to your PC's standard printer. Alternatively a label printer can be used to print all relevant information of two ears on a single label.

To manage your electronic medical health records or to manage your tracking and follow up program, an "out of the box modem solution" transfers all quality data to one central point of expertise. Telemedical applications have never been easier!

COCHLEAR AUDIOGRAM

PATENTED, UNIQUE, ADVANTAGEOUS



FOR YOUNGER CHILDREN IT IS AN INTERACTIVE CARTOON

for the examiner it is a simple way to calm down the patient and get quicker results! Without noise even the full cochlear audiogram based on DPOAE is achieved on both ears within 2 minutes. Reproducible, reliable!



Binaural,
up to 4 times
faster.

Torch probe
option!

GENERAL BENEFITS TO THE USER:

- Entertain the younger patients. Try the cartoon mode!
- Quickly retest missing or referred frequencies by touching the retest button on the result screen.
- To screen the other ear press a single button at the bottom of the screen. Workflow optimized!
- 8 hrs continuous testing - guaranteed!
- Test with mains connected or on battery - never worry!
- One foam tip matches 90 % of your pediatric population.
- Very fast, very robust against external noise - watch the video from Dr. Terry Foust! Scan the QR code above to get the direct link or visit the learning section on our homepage.



OAE MODULES ARE AVAILABLE AS STANDARD OR UPGRADE ON THESE PLATFORMS:



SENTIERO
// ADVANCED



SENTIERO
// DIAGNOSTIC



SENTIERO
// SCREENING



SENTIERO
// TYMP SCREENING



SENTIERO
// TYMP DIAGNOSTIC

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