



EDCO FORUM[®]

PRESENTING INNOVATIVE PRODUCTS AND SERVICES TO HEALTHCARE PROFESSIONALS

VOLUME 18 NUMBER 35

SEPTEMBER 2011

REPRINT

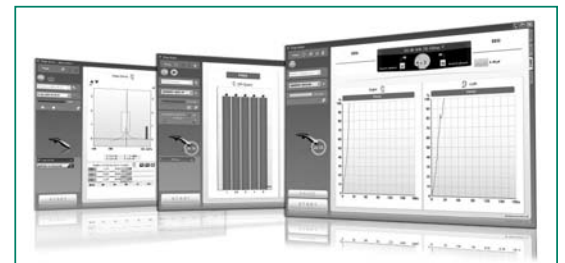
INTERACOUSTICS INTRODUCES UNIQUE COMPUTER-INTEGRATED PRODUCTS FOR MOST EFFECTIVE ANALYSIS OF MIDDLE EAR, AUDITORY PATHWAYS AND VESTIBULAR SYSTEM

Across the audiological spectrum, **Interacoustics** is recognized as a leader in innovative product development, design, manufacturing and professional support. With the recent introduction of new integrative technologies and unique, state-of-the-art hardware, audiology practitioners and patients alike benefit from more advanced, convenient and cost-effective middle ear analysis and balance investigations.

Among ground-breaking advances is a handheld infant screener, just one of the new features of the **Titan Middle Ear Analyzer**, the first portable, truly clinical level, computer-integrated unit of its kind. Imagine evaluating an infant's entire auditory pathway from middle ear to brainstem with a product that will reduce automated Auditory Brainstem Response (ABR) testing time by up to 50 percent. Yet, it is so intuitively designed, it requires only four buttons to do automated ABR, tympanometry and DPOAE (Distortion Product Otoacoustic Emissions) testing.

"For infant testing, this is revolutionary," according to David Speidel, Director of Audiology Services for **Interacoustics** U.S. Operations (Eden Prairie, MN). "By increasing the ease and reliability of initial infant screening, the follow-up time necessary for testing will be significantly reduced, a huge factor for the convenience and stress of parents, baby and practitioner."

The **Titan** Middle Ear Analyzer is available in a diagnostic or clinical version, with multiple probe tones (226, 678, 800 and 1000 Hz), and customizable test protocols. It is available in two versions, one with standard tympanometry,



Left to Right: 1) Titan Impedance module. 2) Titan automated ABR. 3) Titan DPOAE module.

ipsi- and contra-lateral acoustic reflexes, reflex decay and reflex latency, as well as three Eustachian tube function tests. An expanded **Titan** module adds multi-probe tone tympanometry for infant evaluations, acoustic reflex latency and Y.B.G. components of tympanometry. Also included is a new automatic gain control to establish absolute SPL test values during reflex testing.

The automated ABR software module for the **Titan** has been designed using the latest technologies available for fast and reliable automated ABR testing for infants. The default stimulus is the CE-Chirp[®] stimulus. Unlike the traditional click, the CE-chirp provides improved synchronization of the nerve fibers, creating a response with up to double the response amplitude. The result is much faster detection. The test time can typically be reduced up to 50 percent (compared to traditional click stimuli), with a sensitivity of 99.9 percent and a specificity of more than 96 percent.

"**Titan** not only brings the capability of an infant screener into a single middle ear analysis hardware unit, but also integrates it into a single software suite," explains Speidel. "This makes Titan an affordable option for replacing existing testing equipment, upgrading to

perform improved testing, or expanding into newborn testing.”

Equally important, the system is very easy to implement. **Interacoustics** is committed to interfaces with common standards and common terminology, making the learning curve short and simple.

Integrating FireWire® Technology Into VNG

Interacoustics has integrated FireWire® technology into Video Nystagmography (VNG), to deliver dramatically faster, accurate results, analyzed in real time, and graphically displayed instantly to allow quick interpretations of abnormalities during vestibular evaluation.

VNG is considered the gold standard for observation, measurement and analysis of eye movements in the evaluation, management and treatment of dizziness and balance disorders.

“Incorporating FireWire® into VNG protocols is an exciting development in analysis of eye movements as they relate to balance disorders,” according to Cammy Bahner, senior clinical audiologist for **Interacoustics-US**. “We’re now using sampling rates of 105-174 Hz, making it more likely to pick up subtle abnormalities, important in diagnosing pathologies related to dizziness,” she explains.

“FireWire® technology allows us the ability to surpass the ANSI recommendation, as compared to previous sampling rates, which ranged from 30 to 60 Hz,” adds Bahner. The American National Standards Institute (ANSI) advocates for a sample rate of 100 Hz.

By incorporating FireWire® technology into **Interacoustics** infrared recording cameras, recordings can

now approach real-time speeds. Even the smallest eye movements (saccades) are captured more precisely, and the visual resolution is tremendously improved. In binocular mode, the 105 Hz system provides 75 percent more data to analyze, and in monocular mode the 174 Hz system presents 290 percent more data.

Other special features of Interacoustics VNG include:

- Light-weight goggles with disposable foam face cushion. These “light-tight” goggles are more comfortable for the patient, and are more sanitary than traditional goggles.
- Full-field projected stimulation, rather than a traditional light bar.
- Choice of pediatric stimuli, i.e., fire trucks, trains and playgrounds.
- Dual pupil tracking algorithms for added flexibility, including the new Elliptical algorithm for improved pupil tracking and clearer VNG recordings.

New Nydiag Rotary Chair

Rotational testing, typically used during a full balance assessment, is a perfect complement to caloric testing, and is better accepted by some patient groups, such as children. **Interacoustics** new **Nydiag Rotary Chair** provides for a true comprehensive approach to vestibular evaluation, as it easily adjusts to allow for both rotational and VNG testing in one chair. This eliminates the need to move patients to multiple test areas, and reduces required exam space for the practitioner.

Special features of the Nydiag Rotary Chair include:

VNG integration

The chair’s software is fully integrated

with VNG. The FireWire® high resolution cameras connect directly to a desktop computer and provide superior eye image quality.

Authentic rotational stimulus

The physiological rotatory stimulus is similar that which the patient experiences in daily life, making rotational testing particularly suitable for VOR testing.

Vestibular Rehabilitation

Rotary Chair testing can be useful in monitoring the vestibular healing process over time. The *software* can chart improvements across a wide range of frequencies.

Accuracy, convenience and flexibility

With precisely controlled and reproducible stimuli, there is full control over acceleration, velocity and amplitude, for easy design and configuration of individualized protocols.

Full test battery

A full test battery is available, including step rotation test, sinusoidal harmonic acceleration, and VOR suppression.

Space-saving design

Space requirements are minimal. Adding to space efficiency, the chair reclines to various positions to act as a VNG exam table, with easy access to both ears for caloric testing. ♦

For more information about Interacoustics, please call 800-947-6334; visit our website at www.interacoustics-us.com

