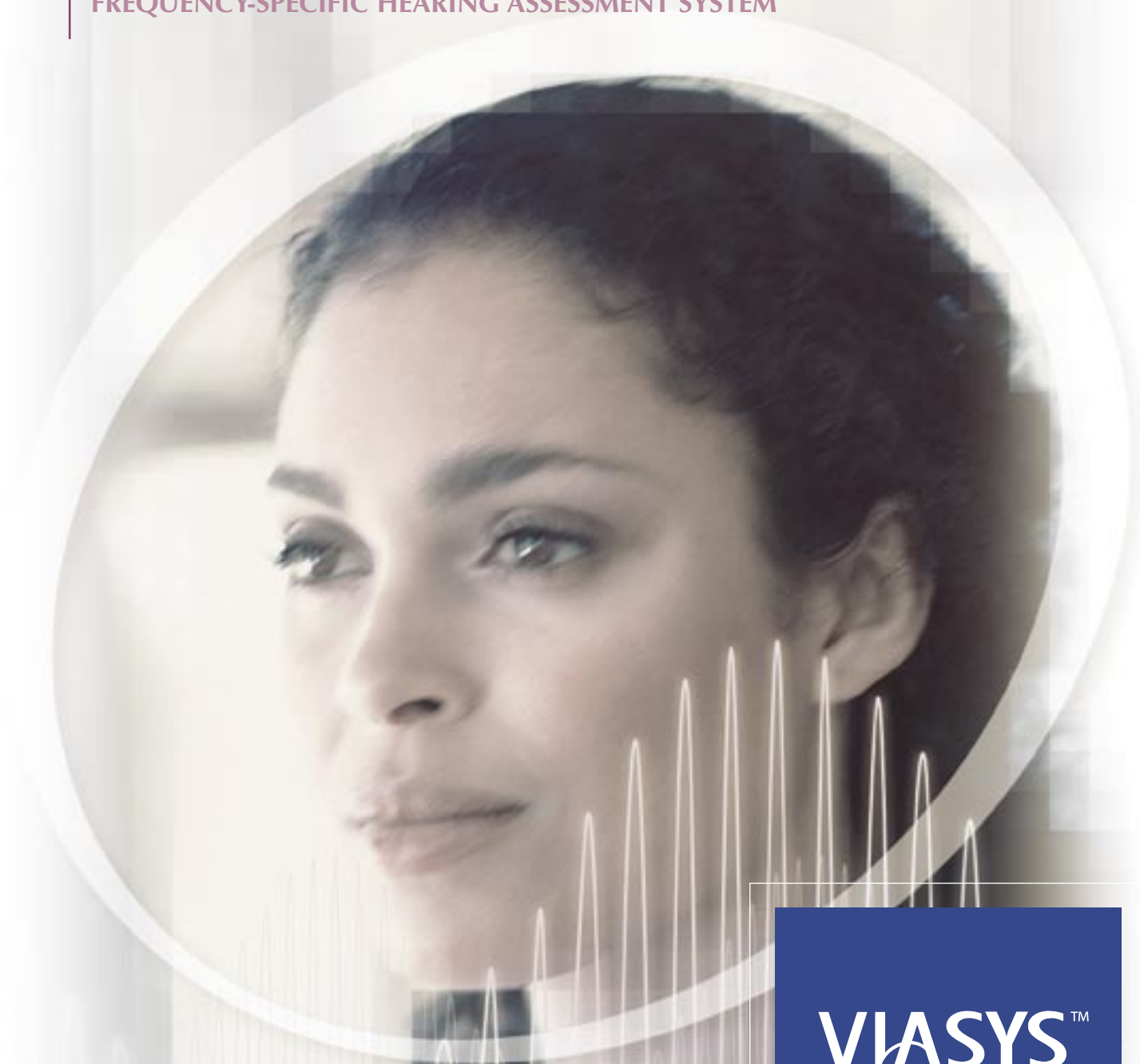


# GSI Audera™

FREQUENCY-SPECIFIC HEARING ASSESSMENT SYSTEM



**VIASYS™**  
HEALTHCARE  
*Excellence For Life*  
NEUROCARE GROUP



*The GSI Audera meets all your needs for Evoked Potential testing by providing a unique combination of Auditory Steady State Response (ASSR) testing and traditional auditory potentials (ABR, ECoChG, AMLR and CAEP).*



## FREQUENCY-SPECIFIC HEARING ASSESSMENT

### THE DEMAND

Universal newborn hearing screening using OAE and ABR technology is expanding globally. The result is that more infants require diagnostic follow-up testing. Consequently, there is a greater demand for accurate and frequency-specific hearing assessment of these infants. In addition, there are applications in older children and adults for frequency-specific objective testing.

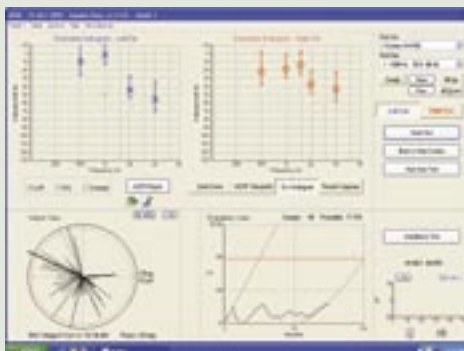
### THE SOLUTION

Auditory Steady-State Response (ASSR) is the solution for frequency-specific hearing assessment for people of all ages. Also called the steady-state auditory evoked potential (SSEP), ASSR meets all the criteria for follow-up diagnostic testing.

### AUDITORY STEADY-STATE RESPONSE

- Can be reliably recorded in sleeping neonates, children and adults
- Are evoked by frequency specific tonal stimuli
- Can be detected objectively using statistical algorithms
- Have thresholds that are highly correlated with behavioral audiogram thresholds

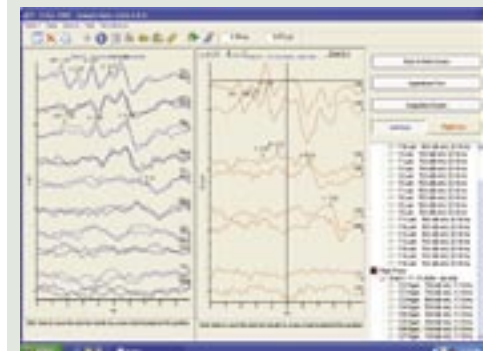
**AND NOW THE ASSR SOLUTION IS AVAILABLE IN A CLINICAL INSTRUMENT — THE GSI AUDERA.**



## ASSR

### Auditory Steady-State Responses

Obtain frequency-specific ASSR results and an estimated audiogram using GSI Audera's testing features. Designed with the user in mind, these features have been refined in more than 10 years of clinical use.



## DELIVERING AEP, ASSR AND OAE

### AEP SOFTWARE FEATURES:

- Click, tone pip and tone burst stimuli with contralateral masking available
- No predefined limits on number of waveforms displayed
- Multiple panels of waveforms displayed simultaneously
- Continuous live display of ongoing input signals
- Display results for different tests, recorded with different time bases, in a single chart
- Unlimited number of user-defined test protocols
- Built-in, one-button electrode impedance measurement
- Data collected with different protocols can be displayed in the same chart or different charts
- User-definable marker/measurement tables

### OAE SOFTWARE FEATURES:

- All DPOAE information is shown in a single display, including the FFT
- IOgrams provide input-output function analysis
- Automatic scoring available for DPOAE
- Spontaneous OAE functionality included
- Easy upgrades for existing GSI Audera systems with software and probe

### ASSR SOFTWARE FEATURES:

- Clinically-validated protocols - University of Melbourne
- All ASSR information is shown in a single display
- Continuous live display allows you to easily monitor the ongoing EEG signals
- Electrode attachment integrity can be assessed with one-button, on-screen impedance measurement
- Evoke the ASSR with AM/FM-modulated tonal stimuli for the 250-8kHz frequency range
- Objective ASSR detection using patented algorithms eliminates tester subjectivity and provides quality control
- ASSR thresholds can be measured to 5dB accuracy
- The behavioral audiogram is estimated using patented algorithms, and a confidence interval is calculated for each threshold
- With one click of a button, change quickly between displaying individual trial results, ASSR threshold plots, and estimated audiograms
- Preview reports on screen and print them in full-size, single-page format in black and white or color



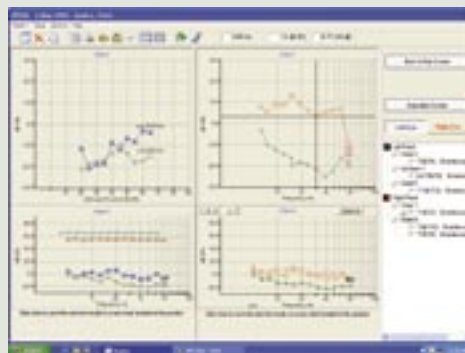
*It is now recognized that early intervention is critical to speech and language development in hearing-impaired infants and children. Available interventions include fitting a hearing aid before six months or performing a cochlear implant as early as one year of age. Selection of the proper plan requires accurate, detailed information about the hearing loss at all frequencies important for speech and language development.*

*This makes it critical that hearing clinicians have an objective, reliable method for measuring frequency-specific hearing thresholds in neonates and infants with mild to profound hearing losses. While various technologies including OAE, ABR, and visual reinforcement audiometry have been used, their limitations prevent them from fully meeting the need.*

### Auditory Evoked Potentials

Use GSI Audera to assess both cochlear and retro-cochlear function with these additional AEP testing capabilities:

- Electrocochleography (ECochG)
- Auditory Brainstem Responses (ABR)
- Auditory Middle Latency Responses (AMLR)
- Long Latency or Cortical Responses (LLR)
- Vestibular Evoked Myogenic Potentials (VEMP)
- Electrical ABR



### Otoacoustic Emissions

With its combination of reliable DP technology, user-friendly graphic interface and easy-to-understand results, the GSI Audera DPOAE is the instrument for otoacoustic emissions testing in hospitals, clinics and offices around the world.



## CONTINUUM OF CONFIDENCE

From the integrity of **VIASYS Healthcare** to the reliability of the data from our equipment, the GSI Audera is the most reliable frequency-specific hearing assessment system available.

### COMPANY

With more than a century of combined experience, our trusted brands, Grason-Stadler, Nicolet and Toennies have provided **innovative technologies** for diagnostic audiology, neurodiagnostic, peripheral vascular and hand-held Doppler equipment.

### EXPERIENCED SUPPORT

With a team of more than 220 global representatives, VIASYS provides **unmatched customer support**. We're committed to helping you get the most out of our diagnostic and monitoring systems.

### HARDWARE

As with all our products, GSI Audera is designed to achieve the perfect balance of **simplicity, ease of use, and flexibility**. Quality amplifiers provide accurate and reliable data.

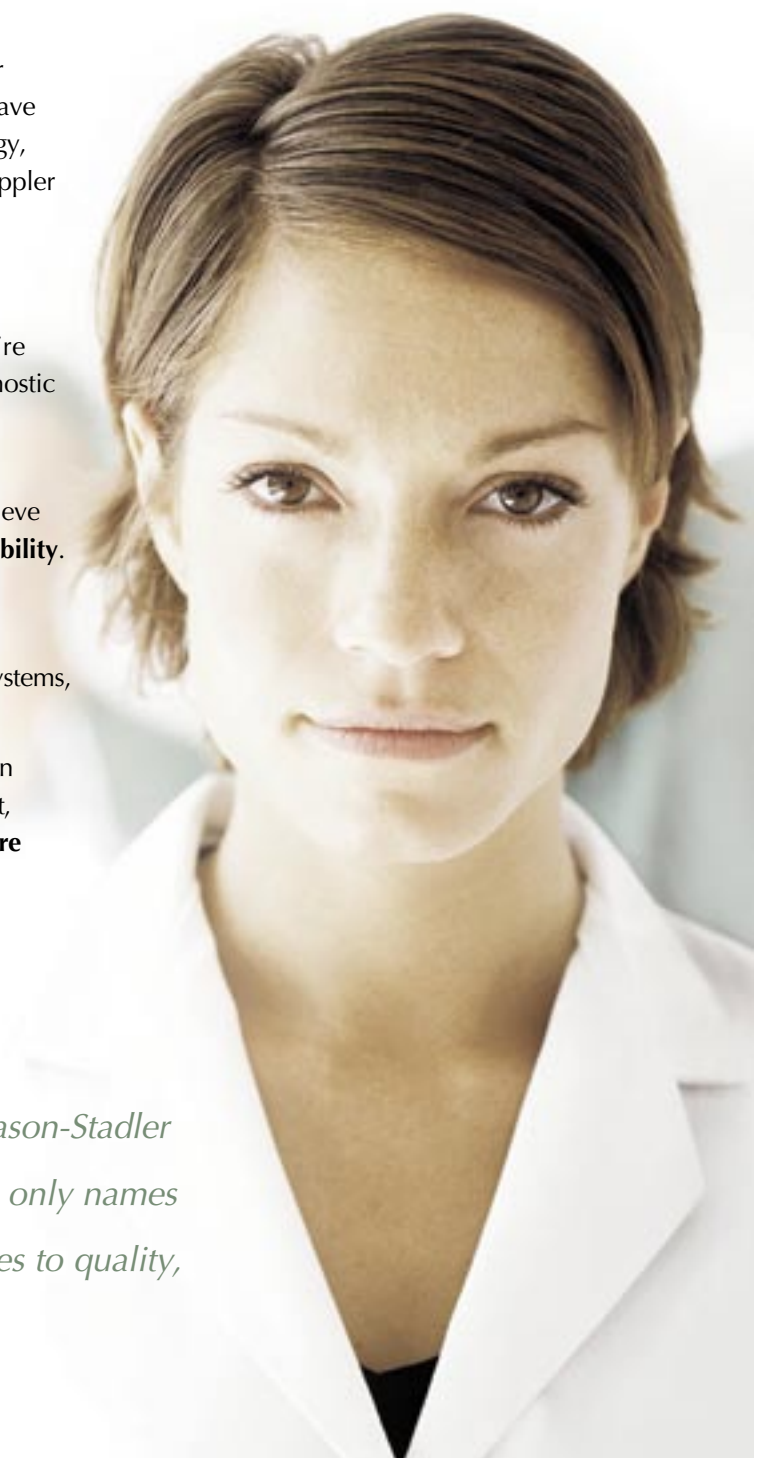
### SUPPLIES

To complement the performance offered by all of our systems, we offer a full line of quality electrodes and supplies.

Excellence in life, excellence in design, and excellence in support: VIASYS Healthcare provides premier equipment, supplies, and services to help you offer the **quality of care** your patients expect.



*"VIASYS Healthcare, Grason-Stadler and GSI Audera are the only names that I trust when it comes to quality, service and solutions."*



## FEATURES

### GSI AUDERA MAIN UNIT

- Separate output jacks for left, right and bone transducers, and a free-field speaker output eliminates time wasted switching between transducers
- Built-in mains isolation transformer for safety provides isolated power for a notebook computer and an inkjet printer
- Standard USB interface connects to virtually all of the latest computers
- High-speed serial interface connects to the GSI Audera digital amplifier subsystem

### GSI AUDERA DIGITAL AMPLIFIER SUBSYSTEM

- Small size and weight facilitates convenient placement near the patient
- Full two-channel capability for ipsilateral/contralateral ABR recordings
- Isolation for patient safety
- Digital connection to main unit minimizes interference from external noise sources
- Built-in impedance measurement with LED readout at the amplifier minimizes preparation time

### GSI AUDERA OAE PROBE

- Superior probe design for neonatal to adult testing
- LED indicates test status
- Backward compatible with all GSI Audera systems

### GSI AUDERA IS COMPATIBLE WITH MOST PERSONAL COMPUTERS

- 32-bit application software operates in several versions of Windows
- Operates with display resolution of 1024 x 768 or higher
- Uses standard Windows drivers for printing on the device of your choice
- Patient database can be backed up on most Windows-compatible archiving devices

### GSI AUDERA'S STANDARD TIP-50 INSERT TRANSDUCERS

- Foam tips of various sizes eliminate the problem of collapsing ear canals
- Soft 2.5 and 3 mm tips included for tiny infant canals
- Silicone tubes create an acoustic delay, minimizing the click stimulus artifact in ABR recordings
- Stimuli are calibrated in dB HL for ASSR testing and in dB nHL for AEP. Calibration data is provided for each transducer set



*The fully portable configuration allows you to use the GSI Audera in multiple locations, even at bedside*





## VIASYS HEALTHCARE—*EXCELLENCE FOR LIFE*

For more information about our audiology, neurodiagnostic, peripheral vascular and monitoring equipment, contact your VIASYS Healthcare professional. Offices in the U.S., United Kingdom, Netherlands, Germany, and Japan with representative organizations worldwide.

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