



INTELLIGENT HEARING

S Y S T E M S



The Fast and Affordable Steady State Auditory Evoked Potential System



SmartEP-ASSR

What are ASSR Responses?

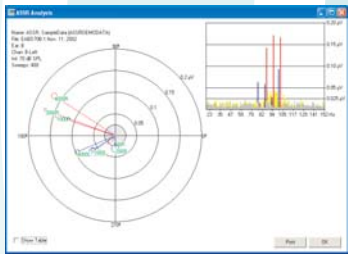
Auditory Steady State Responses are auditory evoked potentials elicited by the use of repetitive stimuli. The use of these methods allow for accurate threshold detection and objective audiogram generation.

Why Use Steady State Responses?

Steady State responses are ideal for objective frequency specific hearing evaluation. Unlike transient responses that are analyzed in the time domain, ASSR are using spectral and statistical analysis techniques, reducing the potential for human error. The technique also allows for multiple frequencies to be evaluated in both ears simultaneously, reducing test times.

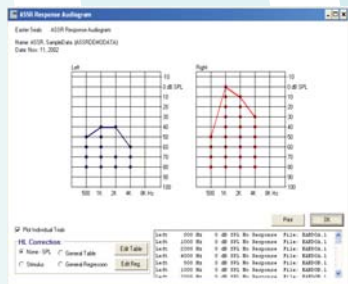
Easy Response Interpretation:

The system provides a Response / No Response output evaluation for each frequency and intensity level tested. Unlike conventional transient responses such as ABR, the steady state responses do not require tedious interpretation of time domain signals. The responses are automatically evaluated by comparing the response strength to the background EEG noise.



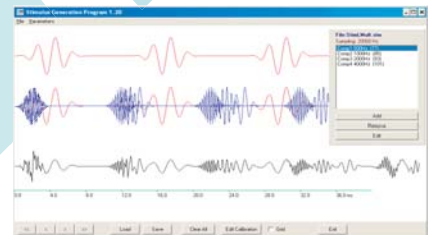
Multiple Response Graphs:

SmartEP-ASSR provides illustrative graphs and tables to simplify analysis of the acquired responses. An easy to read color-coded phasor diagram is used to illustrate the response strength for each stimulus frequency. A Phase-Intensity analysis graph shows the effect of intensity on the response latency. The Response Audiogram helps determine hearing thresholds automatically.



User definable stimuli:

Researchers and advanced users may generate customized complex stimuli for steady state acquisition, selecting up to eight simultaneous test frequencies can be used for each ear.



Software Specs

Smart Choices

Software Features

- Windows Interface with multi-tasking capabilities
- Integrated shared database for all IHS programs with exporting capabilities to other medical databases
- User definable stimuli
- Advanced stimulus generation utility
- Built-in system calibration, self check and diagnosis modules
- Automatic default parameters allow for fast start-up and testing
- User-selectable artifact rejection region.
- Automated response detection and threshold information for each tested frequency with the use of computerized spectral techniques
- Multiple graphical response displays, including time and spectral data representation
- Audiogram displays electrophysiological audiometric results based on automatic response detection
- Phasor diagram to illustrate response strength
- Phase-Intensity graph for tracking response delays
- Prints reports including demographics and testing parameters to any windows supported printer
- Screening module available

Stimulus Specifications

- Up to eight simultaneous frequencies per ear: 250 - 8kHz
- Click stimulus available
- Single or dual ear stimulation
- Intensity: 0 - 125 SPL in 1dB increments
- User-defined repetition rates (modulation)
- Output in SPL
- Contralateral Masking
- User-modifiable frequency-specific SPL to nHL conversion tables

Computer Requirements

- Personal Computer or Laptop
- One free USB port
- Minimum 64MB RAM
- Minimum 20MB free hard drive space
- CD-ROM drive
- Windows 98SE, Me, 2000 or XP operating systems

Universal Smart Box

Features

- Light and portable. Size:
- Connects to any Windows® USB compatible computer
- Up to eight channel AEP
 - High frequency option
 - Ipsilateral masking option
- Up to one channel OAE
 - High frequency option
 - Suppression option
- Use inserts, headphones, bone vibrator, high frequency inserts, high frequency transducers and/or OAE probe
- Upgradable to include SmartEP, SmartScreener, IVRA, SmartAud, SmartDPOAE, SmartTrOAE.



Universal Smart Box Jr

Features

- Light and portable
- Connects to any Windows® USB compatible computer
- Up to two channel AEP
- Up to one channel OAE
- Use inserts, headphones, bone vibrator and/or OAE probe
- Upgradable to include SmartEP, SmartScreener, SmartAud, SmartDPOAE, SmartTrOAE.



*Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries



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