



# GSI AUDERA™ AEP/CAEP

## AUDITORY EVOKED POTENTIALS

### Product Specifications

#### General Specifications

- Test Types: AEP, ECoChG, Cortical AEP, AMLR, EABR
- Transducers: Insert earphones, TDH Headphones, Bone vibrator, Loudspeaker
- Protocols: Default and customer specified
- Marker Sets: Default and customer specified
- Reports: Color, Black/White or PDF

#### Stimulus Specifications:

- Stimulus Types: Click, tone burst, tone pip CE-Chirp® and CE-Chirp Octave Bands
- Stimulus Polarity: Condensation, Rarefaction and Alternating
- Masking Types: Absolute or stimulus relative
- Intensity: 0 to 130 dB SPL
- Repetition rates: 0.2 – 100 depending on modality
- High Pass Filtering: RC or Digital Butterworth
- Low Pass Filtering: Butterworth or Digital linear phase

#### GSI Audera Amplifier:

- Dimensions: 3.93"(W) x 7.48"(D) x 1.57"(H)
- Weight: .94lb
- Interface To Main Unit: Proprietary high-speed, serial digital
- Number of Channels: 2 Isolated (type BF) for patient safety
- Electrode inputs: Differential
- Electrode connectors: 5 DIN 42802 safety connectors
- Input Impedance: >1000 MW
- Frequency Response: 0.2-10,000 Hz

#### GSI Audera Main Unit

- Computer Interface: USB - Type I
- Trigger Controls Input/Output: Standard TTL logic level
- Mains Power Supply: 115V, 110V, or 230V; 50-60 Hz
- Power Consumption: 115W, excluding printer

#### Isolated Power:

- a) Main unit includes isolation transformer/ power supply which provides isolated mains power only for supported notebook computer and inkjet printer models.
- b) Main unit provides isolated power to Amplifier/Digitizer or ProbeUnit.
- Dimensions: 12.99"(W) x 10.62"(D) x 1.67"(H)
- Weight: 7.05lb

#### Environmental Limits:

- Operating Temp: 50° F to 104° F  
Relative Humidity: 30 to 75%, non-condensing
- Storage Temp: -40° F to 158° F  
Relative Humidity: 10 to 100%, non-condensing

#### CPU Recommendation

- Operating System: Windows 7 Professional (32 bit & 64 bit), Windows XP Pro (SP3), Vista Business (SP2)
- Processor: 1.6 GHz
- Minimum RAM: 2 GB
- Storage: 11 GB Hard Drive
- Additional Storage: CD R/W drive
- USB Ports: 2
- Graphics: 1024 x 768 pixels (1280 x 1024 for China, Japan, Korea)

#### Supplied Accessories

- GSI Audera Main Unit
- GSI Audera Reference Manual
- GSI Audera 2-Channel Amplifier with 9' cable
- GSI Audera AEP/CAEP Software Application or Licensing key to activate
- GSI Audera AEP/CAEP User's Manual
- Insert Earphones with 9' cable
- GSI Audera Loop-back cable
- Electrodes, 6mm cup, 12 pk
- Electrodes, 10mm cup, 12 pk
- Electrode Linker
- Disposable side snap electrodes, 25 pk
- Electrode Leads, Snap, 5 pk
- NuPrep Gel, 4 oz. tube
- Ten 20 Paste, 4 oz. tube
- Infant eartips, 3.5mm, 20 pk
- Infant eartips, 4.0mm, 20pk
- 3A foam eartips, 10mm, 100pk
- 3A foam eartips, 13mm, 100pk



#### Optional Accessories

- GSI Audera Service Manual
- GSI Audera Laptop Computer
- GSI Audera Desktop Computer
- GSI Audera Laptop Power Kit (cables to power through base unit)
- GSI Audera Isolation Transformer (for customer desktop systems)
- GSI Audera EABR cable

#### Related Part Numbers

- GSI Audera AEP/ASSR System . . . . . 2001-9700
- GSI Audera AEP/DPOAE System . . . . . 2001-9705
- GSI Audera ASSR/DPOAE System . . . . . 2001-9710
- GSI Audera AEP/ASSR/DPOAE System . . . . . 2001-9715
- GSI Audera AEP only System . . . . . 2001-9720
- GSI Audera ASSR only System . . . . . 2001-9725
- GSI Audera DPOAE only System . . . . . 2001-9730
- GSI Audera ASSR Upgrade with Amplifier . . . . . 2001-9661
- GSI Audera ASSR Upgrade without Amplifier . . . . . 2001-9662
- GSI Audera AEP Upgrade with Amplifier . . . . . 2001-9663
- GSI Audera AEP Upgrade without Amplifier . . . . . 2001-9664
- GSI Audera DPOAE Upgrade . . . . . 2001-9665

#### Quality System

- Manufactured, designed, developed and marketed under ISO 13485 certified quality system.

#### Compliance/Regulatory Standards

- Designed, tested and manufactured to meet the following domestic (USA), Canadian, European and International Standards:
- UL 60601-1 American Standards for Medical Electrical Equipment
  - IEC 60601-1, EN 60601-1 International Standards for Medical Electrical Equipment
  - CSA C22.2 # 601-1-M90
  - Medical Device Directive (MDD) to comply with "EC Directive" 93/42/EEC

Setting The Clinical Standard

[www.grason-stadler.com](http://www.grason-stadler.com)

Grason-Stadler, 7625 Golden Triangle Drive, Suite F, Eden Prairie MN 55344  
800-700-2282 • 952-278-4402 • fax 952-278-4401 • e-mail [info@grason-stadler.com](mailto:info@grason-stadler.com)





# GSI AUDERA™ ASSR

## AUDITORY STEADY STATE RESPONSE

### Product Specifications

#### General Specifications

- Transducers: Insert earphones, TDH Headphones, Bone vibrator, Loudspeaker
- Protocols: Default Asleep and Awake protocols or customer specified – Estimated Audiogram relies on default protocols
- Display: ASSR Thresholds, Estimated Audiogram, Results Summary, Trials Done
- Reports: Color, Black/White or PDF

#### Stimulus Specifications:

- Stimulus Types: AM/FM
- Masking Types: Absolute or stimulus relative
- Intensity: -10 to 130 dB HL
- Carrier Frequency: 250 – 8000 Hz
- Modulation Frequency: 20 – 200 Hz depending on carrier frequency
- AM Modulation: 0 – 100%
- FM Modulation: 0 – 15%
- Relative Angle: 0 – 359 degrees

#### GSI Audera Amplifier:

- Dimensions: 3.93"(W) x 7.48"(D) x 1.57"(H)
- Weight: .94lb
- Interface To Main Unit: Proprietary high-speed, serial digital
- Number of Channels: 2 Isolated (type BF) for patient safety
- Electrode inputs: Differential
- Electrode connectors: 5 DIN 42802 safety connectors
- Input Impedance: >1000 MW
- Frequency Response: 0.2 – 10,000 Hz

#### GSI Audera Main Unit

- Computer Interface: USB - Type I
- Trigger Controls Input/Output: Standard TTL logic level
- Mains Power Supply: 115V, 110V, or 230V; 50-60 Hz
- Power Consumption: 115W, excluding printer

#### Isolated Power:

- a) Main unit includes isolation transformer/ power supply which provides isolated mains power only for supported notebook computer and inkjet printer models.
- b) Main unit provides isolated power to Amplifier/Digitizer or ProbeUnit.
- Dimensions: 12.99"(W) x 10.62"(D) x 1.67"(H)
- Weight: 7.05lb

#### Environmental Limits:

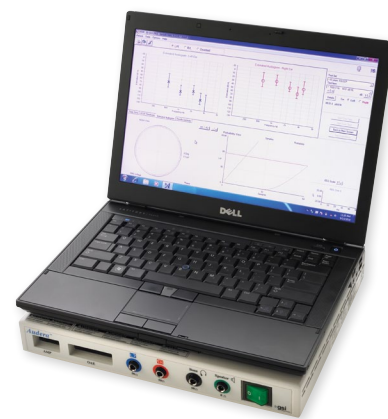
- Operating Temp: 50° F to 104° F
- Relative Humidity: 30 to 75%, non-condensing
- Storage Temp: -40° F to 158° F
- Relative Humidity: 10 to 100%, non-condensing

#### CPU Recommendation

- Operating System: Windows 7 Professional (32 bit & 64 bit), Windows XP Pro (SP3), Vista Business (SP2)
- Processor: 1.6 GHz
- Minimum RAM: 2 GB
- Storage: 11 GB Hard Drive
- Additional Storage: CD R/W drive
- USB Ports: 2
- Graphics: 1024 x 768 pixels (1280 x 1024 for China, Japan, Korea)

#### Supplied Accessories

- GSI Audera Main Unit
- GSI Audera Reference Manual
- GSI Audera 2-Channel Amplifier with 9' cable
- GSI Audera ASSR Software Application or Licensing key to activate
- GSI Audera ASSR User's Manual
- Insert Earphones with 9' cable
- GSI Audera Loop-back cable
- Electrodes, 6mm cup, 12 pk
- Electrodes, 10mm cup, 12 pk
- Electrode Linker
- Disposable side snap electrodes, 25 pk
- Electrode Leads, Snap, 5 pk
- NuPrep Gel, 4 oz. tube
- Ten 20 Paste, 4 oz. tube
- Infant eartips, 3.5mm, 20 pk
- Infant eartips, 4.0mm, 20pk
- 3A foam eartips, 10mm, 100pk
- 3A foam eartips, 13mm, 100pk



#### Optional Accessories

- GSI Audera Service Manual
- GSI Audera Laptop Computer
- GSI Audera Desktop Computer
- GSI Audera Laptop Power Kit (cables to power through base unit)
- GSI Audera Isolation Transformer (for customer desktop systems)

#### Related Part Numbers

- GSI Audera AEP/ASSR System . . . . . 2001-9700
- GSI Audera AEP/DPOAE System . . . . . 2001-9705
- GSI Audera ASSR/DPOAE System . . . . . 2001-9710
- GSI Audera AEP/ASSR/DPOAE System . . . . . 2001-9715
- GSI Audera AEP only System . . . . . 2001-9720
- GSI Audera ASSR only System . . . . . 2001-9725
- GSI Audera DPOAE only System . . . . . 2001-9730
- GSI Audera ASSR Upgrade with Amplifier . . . . . 2001-9661
- GSI Audera ASSR Upgrade without Amplifier . . . . . 2001-9662
- GSI Audera AEP Upgrade with Amplifier . . . . . 2001-9663
- GSI Audera AEP Upgrade without Amplifier . . . . . 2001-9664
- GSI Audera DPOAE Upgrade . . . . . 2001-9665

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# GSI AUDERA™ DPOAE

## DISTORTION PRODUCT OTOACOUSTIC EMISSIONS



### Product Specifications

#### General Specifications

- Test Types: Distortion Product Otoacoustic Emissions, Spontaneous OAE, Input/Output DPOAE
- Protocols: Default Diagnostic and Screening, Customer Configurable
- Display: DPgram, FFT plot, I/Ogram, Signal/Noise Ratio of selected point, Compare Test (sequential test comparisons, multiple test, multiple days)
- Reports: Color, Black/White or PDF
- DPOAE Stimulus Tones:
  - Frequency: 500 – 12, 000 Hz
  - Level: 20 – 80 dB SPL, in 5 dB steps
  - Accuracy:  $\pm 3$  dB
  - Harmonic Distortion:  $\leq 1.8\%$  at 80 dB SPL, IEC 711 coupler, 500 – 12,000 Hz
  - Dynamic Range: 85 dB SPL, IEC 711 coupler, 500-12,000 Hz, F1 & F2 = 65 dB SPL
  - Octave Ranges: 500-1000, 1000-2000, 2000-4000, 4000-8000, 8000-12000 Hz
  - Points per Octave: 1 – 12 points
  - F2/F1 Ratio: 1.1 – 1.8
- Test Time: Varies, depending on test parameters, environment, and scoring options

#### Status Indicators:

- Probe LED:
  - Green solid – test in progress
  - Yellow solid – seal check in progress
  - Yellow flashing – test stopped, probe problem/ seal check failed

#### OAE Pod/Probe:

- Dimensions: 1.69”(W) x 1.18”(D) x 4.17”(H)
- Weight: .44lb
- Interface to GSI Audera Base: 25 pin D-SUB connector

#### GSI Audera Main Unit

- Computer Interface: USB - Type I
- Trigger Controls Input/Output: Standard TTL logic level
- Mains Power Supply: 115V, 110V, or 230V; 50-60 Hz
- Power Consumption: 115W, excluding printer

#### Isolated Power:

- a) Main unit includes isolation transformer/ power supply which provides isolated mains power only for supported notebook computer and inkjet printer models.
- b) Main unit provides isolated power to Amplifier/Digitizer or ProbeUnit.
- Dimensions: 12.99”(W) x 10.62”(D) x 1.67”(H)
- Weight: 7.05lb

#### Environmental Limits:

- Operating Temp: 50° F to 104° F  
Relative Humidity: 30 to 75%, non-condensing
- Storage Temp: -40° F to 158° F  
Relative Humidity: 10 to 100%, non-condensing

#### CPU Recommendation

- Operating System: Windows 7 Professional (32 bit & 64 bit), Windows XP Pro (SP3), Vista Business (SP2)
- Processor: 1.6 GHz
- Minimum RAM: 2 GB
- Storage: 11 GB Hard Drive
- Additional Storage: CD R/W drive
- USB Ports: 2
- Graphics: 1024 x 768 pixels (1280 x 1024 for China, Japan, Korea)

#### Supplied Accessories

- GSI Audera Main Unit
- GSI Audera Reference Manual
- GSI Audera OAE Probe/Pod with Test Cavity
- GSI Audera OAE Calibration CD
- GSI Audera DPOAE Software Application or Licensing key to activate
- GSI Audera DPOAE User's Manual
- GSI Audera Shoulder Mount Kit
- Eartip Kit, Infant
- Eartip Kit, Child/Adult
- Eartip Kit, Adult
- Probe Cleaning Floss & Instructions

#### Optional Accessories

- GSI Audera Service Manual
- GSI Audera Laptop Computer
- GSI Audera Desktop Computer
- GSI Audera Laptop Power Kit (cables to power through base unit)
- GSI Audera Isolation Transformer (for customer desktop systems)

#### Related Part Numbers

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