



# TWO CHANNEL CLINICAL AUDIOMETER



AUDIOSTAR PRO

# THE AUDIOMETER PERFECT FOR EVERY PATIENT POPULATION

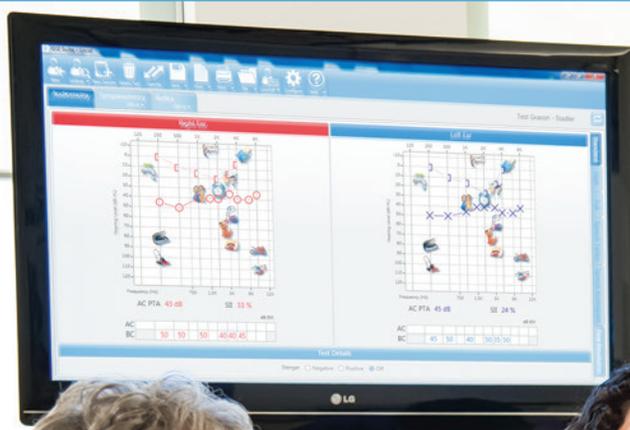
## GSI AUDIOSTAR PRO FAST AND EFFICIENT

The GSI AudioStar Pro™ continues the tradition of excellence in clinical audiometry by maintaining the Grason-Stadler legacy of fast, efficient, and familiar navigation. The one button, one function front panel of the AudioStar Pro is recognized worldwide as the gold standard of user-friendly design, allowing audiologists to test with confidence.



## GSI SUITE OFFERS REPORTING AND COUNSELING

Audiometric results are easily transferred from the AudioStar Pro to GSI Suite software where audiometric, tympanometric, and OAE test results may be combined into a single comprehensive report. Counseling overlays such as the speech banana or hearing loss levels assist the clinician with explaining the results to the patient and family members.





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## 3 KEY BENEFITS

### ✓ **IMPROVE EFFICIENCY**

Features such as speech auto play, auto advance, and auto frequency selection allow the examiner to improve productivity and patient flow. Configure your digital word lists for reliable recorded speech testing. Eliminate the need to manually calculate SII or PTA. Quickly compare pure tone thresholds and speech audiometry to determine reliability of the patient responses.

### ✓ **FAMILIAR NAVIGATION**

In order to effectively evaluate every patient, familiarity with audiometry equipment is essential for every clinician. With the recognizable control panel, intuitive display, single button, single function front panel navigation, clinicians will feel an immediate connection with the instrument and be able to quickly and accurately test with confidence.

### ✓ **CUSTOMIZE PREFERENCES**

Personalize facility preferences through the configuration application. Test type buttons, digital word lists (.Wav files), power up preferences, and other options ensure the AudioStar Pro will enhance every facility's testing and reporting needs by adding efficiency and consistency.



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# KEY FEATURES

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## **AUTOMATIC SPEECH FUNCTION**

Ensure consistent and reliable recorded speech testing with over 50 common wordlists that can be organized into favorites.

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## **PEDIATRIC NOISE**

Pediatric audiologists can move quickly between warble, pulsed, and pediatric noise to keep young patients on task.

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## **STAND-ALONE PC ENABLED**

Seamlessly transfer data to a computer. In the event of a network failure or computer lock up, patient data is stored and audiometric testing may continue without interruption.

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## **DIRECT PRINT**

Expedite the data entry and test administration by using the external keyboard and mouse to enter patient demographics and session comments. Print a complete report directly to a connected printer or USB flash drive.

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## **CUSTOM CONFIGURATION**

Configurable tests and preferences improve workflow and optimize speed of testing. Select preferences such as start up test, auto Hz advance, and wordlist favorites.

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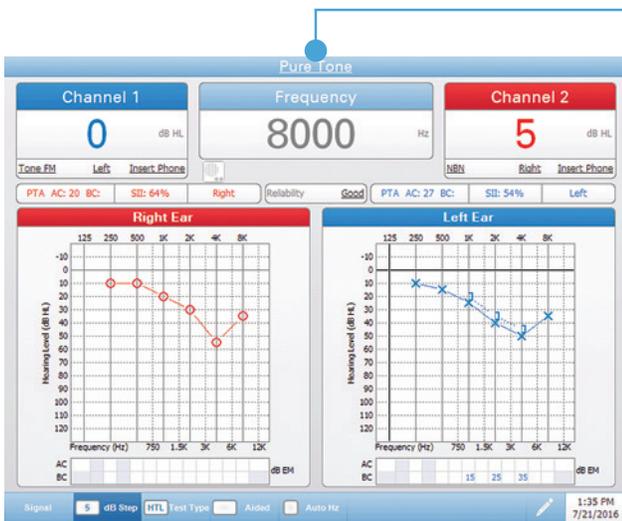
## **SPECIAL TESTS**

Multiple special testing is available, including QuickSIN, BKB-SIN, SIS, TEN ABLB, and Tone Decay.

# PATIENT FOCUSED AUDIOMETRY

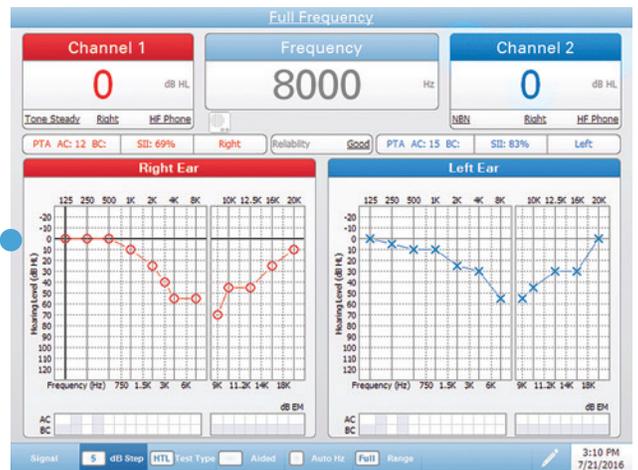
## PURE TONE

The Tone Test Type button prepares the AudioStar Pro for pure tone air and bone conduction testing from 125 - 20,000 Hz. Pure tone test settings such as transducer, frequency range, and automatic frequency advance may be customized using the configuration application.



## FULL FREQUENCY

Select the desired frequency range of 8000 - 20,000 or 125 - 20,000 Hz for high frequency audiometry. Access fine frequency resolution such as 1/3 octave bands when performing ototoxic monitoring or tinnitus evaluations.



# SPEECH TESTING

The Speech Test Type button enables customized test settings such as wordlist favorites for each test type and automatic scoring preferences. Over 100 integrated wordlists are included for repeatable and reliable recorded speech testing.

The screenshot shows the 'Speech' testing interface. Channel 1 has a score of 65 dB HL and Channel 2 has a score of 0 dB HL. The 'Score - WRS' is 0%. Below the channels are 'Speech Test Results' tables for both ears. Channel 1 results show a score of 25 for Spondee A and 60 for WRS. Channel 2 results show a score of 30 for Spondee A and 65 for WRS. At the bottom, there is a 'Basic Auditory Tests - Adult - MI & LIST 3A' section with a word list table.

Word	Word	Word	Word	Word	Word	Word	Word
base	mess	cause	mop	good	luck	walk	
youth	pain	date	pearl	search	ditch	talk	
ring	germ	life	team	lid	pole	road	
shall	late	cheek	beg	gun	jug	sheep	
five	rush	rat	void	wire	half	note	
when	name	thin	tell	bar	mouse	hire	

The screenshot shows the 'QuickSIN' testing interface. Channel 1 has a score of 70 dB HL and Channel 2 has a score of 0 dB HL. Below the channels are 'Test Results Group 1' tables for both ears. Channel 1 results show SNR loss averages of 11.5 and 9.5. Channel 2 results show SNR loss averages of 10.5 and 8.5. At the bottom, there is a 'QuickSIN - List 10 (Track 12)' section with a word list table.

Word	Word	Word	Word	Word	Word	Word	Word
DOTS	of	LIGHT	BETRAYED	the	BLACK	CAT	
PUT	the	CHART	on	the	MANTEL	and	TACK
The	STEADY	DRIP	is	WORSE	than	a	DRENCHING
A	FLAT	PACK	takes	LESS	LUGGAGE	SPACE	
The	GLOSS	on	TOP	MADE	it	UNFIT	to
SEVEN	SEALS	were	STAMPED	on	GREAT	SHEETS	

## QUICK SPEECH-IN-NOISE

The QuickSIN and BKB-SIN tests are included in the AudioStar Pro. Automatic scoring and calculation of the signal-to-noise ratio loss make it easy to perform speech-in-noise testing on every patient. The BKB-SIN test includes normative data for children as young as five years old.



# TWO CHANNEL CLINICAL AUDIOMETER

## TECHNICAL SPECIFICATIONS

### DIMENSIONS AND WEIGHT

**W x D x H (LCD raised):** 20.1 in x 14.6 in x 13.2 in  
(51 cm x 37 cm x 33.5 cm)

**Height (LCD lowered):** 5.5 in (14 cm)

**Weight:** 17 lb (7.7 kg)

**Shipping Weight:** 27 lb (12.25 kg)

### CHANNELS

Two Independent Channels

### PURE TONE – CHANNELS 1 AND 2

#### FREQUENCY RANGE

**Air Conduction:** 125 Hz - 20,000 Hz\*

**Bone Conduction:** 250 Hz - 8,000 Hz

**Sound Field:** 125 Hz - 8,000 Hz

**Paired Inserts:** 125 Hz - 8,000 Hz

**Frequency Accuracy:** ±1%

**Total Harmonic Distortion:**

- < 2% (earphones and paired insert phones)
- < 5% (bone vibrator)

#### HEARING LEVEL RANGE

**Air Conduction:** -10 dB HL - 120 dB HL

**Bone Conduction:**

- **Mastoid:** -10 dB HL - 90 dB HL
- **Forehead:** -10 dB HL - 80 dB HL

**Sound Field:**

- -10 dB HL - 90 dB HL (basic speakers)
- -10 dB HL - 96 dB HL (high performance speakers)
- -10 dB HL - 102 dB HL (high performance speakers and external booster amplifier)

**Paired Inserts:** -10 dB HL - 120 dB HL

**Masking Intensity Range**

(Calibrated in effective masking):

- **Narrow Band Noise:** Maximum dB HL is 15 dB below tone
- **White Noise:** Maximum dB HL is 30 dB below tone

#### SIGNAL FORMAT

**Steady:** Tone continuously present

**Pulsed:** Tone pulsed 200 msec ON, 200 msec OFF

**FM:** Modulation Rate: 5 Hz

Modulation Depth: +/- 5%

**Pulsed/FM:** Pulsed and modulated

**Pediatric Noise**

**Pediatric Noise Pulsed**

### SPEECH – CHANNELS 1 AND 2

**Microphone:** For live voice testing and communications

**INT/EXT A & INT/EXT B:** Can be utilized for internal wave files or recorded speech material from an external digital device

#### INTENSITY RANGE

**Air Conduction:** -10 dB HL - 100 dB HL

**Bone Conduction:**

- **Mastoid:** -10 dB HL - 60 dB HL
- **Forehead:** -10 dB HL - 50 dB HL

**Sound Field:** -10 dB HL - 90 dB HL

**Paired Inserts:** -10 dB HL - 95 dB HL

#### MASKING INTENSITY RANGE

**Speech Noise:**

- **Air Conduction:** -10 dB HL - 95 dB HL
- **Bone Conduction:**
  - 10 dB HL - 50 dB HL (mastoid)
  - 10 dB HL - 40 dB HL (forehead)
- **Sound Field:** -10 dB HL - 85 dB HL

**White Noise:**

- **Air Conduction:** -10 dB HL - 95 dB HL
- **Bone Conduction:**
  - 10 dB HL - 60 dB HL (mastoid)
  - 10 dB HL - 50 dB HL (forehead)
- **Sound Field:** -10 dB HL - 80 dB HL

### SPECIAL TESTS

ABLB

SISI

High Frequency Audiometry

TEN Test

QuickSIN

BKB-SIN

Tone Decay

AMTAS Pro

### SPECIAL TESTS (USER DEFINED)

MLB

Lombard test

Pure Tone Stenger

Speech Stenger

SAL

Doerfler - Stewart Test

### PC ENABLED/STAND-ALONE

Transfer data to connected PC with an E-Record solution software

Print complete report directly to a compatible USB printer

### COMMUNICATIONS AND MONITORING

**Talk Forward:** Permits the tester to speak through the examiner microphone into the selected transducer

**Talk Back:** Allows the examiner to listen to comments from the patient in the testing booth

**Monitor:** The monitor headset or monitor speaker built into the instrument housing may be used by the examiner to listen to Channel 1, Channel 2, Aux intercom, and/or Talk Back signals

**Aux Intercom:** The built-in Auxiliary Intercom and assistant headset allows the examiner to speak directly to an assistant and allows the assistant to hear what is being presented to the patient

**On-Board VRA Control:** The built-in VRA controls facilitate fast and simple activation of VRA systems

### STANDARD ACCESSORIES

Wireless Keyboard and Mouse

Gooseneck Microphone

### POWER

**Power Consumption:** 90 Watts

**Voltage & Amperage:** 100-240, 1.0 A max

**Frequency:** 50 Hz and 60 Hz

### ENVIRONMENTAL

**Temperature:** +59° F (15° C) to +104° F (40° C)

**Storage Temperature:** -4° F (-20° C) to +140° F (60° C)

**Relative Humidity:** 5% to 90% (non-condensing)

**Ambient Pressure Range:** 98 kPa to 104 kPa

**Background Sound Level:** < 35 dB(A)

**Frequency of Use:** Once a year to multiple times per day

### QUALITY SYSTEM

Manufactured, designed, developed, and marketed under ISO 13485 certified quality systems

### COMPLIANCE

Designed, tested, and manufactured to meet the following domestic (USA), Canadian, European and International Standards:

- ANSI S3.6, ANSI S3.43, IEC 60645-1, IEC 60645-2, ISO 389
- UL 60601-1 American Standards for Medical Electrical Equipment
- IEC/EN 60601-1 International Standards for Medical Electrical Equipment
- CSA C22.2 # 601-1-M90
- Medical Device Directive (MDD) to comply with 93/42/EEC

\*Testing above 8,000 Hz requires HF transducer option