pello™



Introducing GSI Pello™ Audiometer

The GSI Pello is a new, versatile audiometer from Grason-Stadler that fits your needs now and in the future. Familiar in design, the Pello has many of the features you expect from Grason-Stadler. The Pello can perform the standard audiometric battery and, depending on the configuration, additional tests such as the TEN Test, Quick SIN and High Frequency audiometry. Portable or stand alone, the Pello is ideal for audiology private practices, hearing aid dispensers, ENT offices and satellite clinics.

Product Features

- Air, Bone and Speech Audiometry
- Integrated standard word lists
- Test Type buttons for efficient transitions
- Color display with familiar ergonomic design
- Noah® 4 compatiable with GSI Suite software
- Portable/Stand-alone/PC enabled
- Upgradeable for future needs

Customizable Options to Grow with You

1 Standard

- ✔ Air
- ✔ Bone
- ✔ Speech
- ✔ Integrated Word Lists

2 Speech Plus

- ✔ Autoscore
- ✔ Autoplay
- ✔ BKB-SIN
- ✔ QuickSIN
- ✔ AZ Bio

3 Special Test

- ✔ TEN
- ✔ ABLB/SISI
- ✔ Tone Decay
- ✔ Pediatric Noise
- ✔ Remote Keyboard

4 High Frequency

- ✔ High Hz Headphones
- ✔ Test up to 20 kHz
- ✔ Fine Hz Solutions
- ✔ 1 Hz Steps

Precision Acoustics U4, 29 Enterprise Cres, Malaga WA 6090 ph (08) 9249 2707 www.precision-acoustics.com.au

Grason-Stadler, 10395 West 70th Street, Eden Prairie, Minnesota 55344
800-700-2282 • 952-278-4402 • *fax* 952-278-4401 • *e-mail* info@grason-stadler.com

gsi Grason-Stadler

GSI PELLO™

AUDIOMETER

Technical Specifications

Dimensions and Weight

Screening and Diagnostic Testing

W x D x H: 14.8 inches x 10.5 inches x 13.8 inches (LCD raised) [37.5 cm x 26.7 cm x 35.1 cm]

Height with LCD Lowered: 4.0 inches [10.2 cm]

Weight: 12 pounds [5.4 kg]

Shipping Weight: 20 pounds [9.1 kg]

Power Specifications

Power Consumption: 90 Watts

Voltage & Amperage: 100 Vac 1.0 A and 240 Vac 0.6 A

Frequency: 50 Hz and 60 Hz

Channels - 1.5

Pure Tone

FREQUENCY RANGE

Air Conduction: 125 Hz to 12,000*** Hz

High Frequency*: 8,000 Hz to 20,000 Hz (8 kHz, 9 kHz, 10 kHz, 11.2 kHz, 12.5 kHz, 14 kHz, 16 kHz, 18 kHz*** and 20 kHz***)

Full Frequency Range*: 125 Hz to 20,000 Hz

Bone Conduction: 250 Hz to 8,000 Hz

Sound Field*: 125 Hz to 8,000 Hz

Paired Inserts*: 125 Hz to 8,000 Hz

Frequency Accuracy: ± 1 %

Total Harmonic Distortion: < 2% (earphones and paired insert phones*) < 5% (bone vibrator)

INTENSITY RANGE**

Air Conduction: -10 dB HL to 120 dB HL

High Frequency*: -10 dB HL to 120 dB HL

Bone Conduction (B81):

-10 dB HL to 85 dB HL (mastoid)
-10 dB HL to 75 dB HL (forehead)

Sound Field*: (external amplifier required):
-10 dB HL to 90 dB HL (basic speakers)
-10 dB HL to 102 dB HL (high performance speakers)

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

Masking Intensity Range (Calibrated in effective masking) Narrow Band Noise: Maximum dB HL is 15 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%

Pediatric Noise*: Continuously presented or pulsed

Speech

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 to 100 dB HL

Bone Conduction:
-10 dB HL to 60 dB HL (mastoid)
-10 dB HL to 50 dB HL (forehead)

Sound Field*: -10 dB HL to 90 dB HL (basic speakers)

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

SPEECH NOISE

Air Conduction: -10 dB HL to 100 dB HL

Bone Conduction:

-10 dB HL to 50 dB HL (mastoid)
-10 dB HL to 40 dB HL (forehead)

Sound Field: -10 dB HL to 80 dB HL

WHITE NOISE

Air Conduction: -10 dB HL to 95 dB HL

Bone Conduction:
-10 dB HL to 60 dB HL (mastoid)
-10 dB HL to 50 dB HL (forehead)

Sound Field: -10 dB HL to 80 dB HL

Special Tests*

ALT (ABLB): Tone alternating between Channel 1 and Channel 2: Channel 1 is 400 msec ON, 400 msec OFF followed by Channel 2, 400 msec ON, 400 msec OFF.

SISI: An intensity increment is added to a tone in the selected channel for 200 msec, every 5 seconds. The HL increments are in 1, 2 or 5 dB.

High Frequency: Pure tone testing in the frequency range of 8,000 Hz to 20,000 Hz using circum-aural headphones.

TEN: TEN masking noise will be presented to the test ear. Pure tone stimuli between 500 and 4000 Hz may be used at 1, 2, or 5 dB increments to obtain TEN thresholds.

QuickSIN: Six (6) sentences with five (5) key words per sentence are presented in four-talker babble noise. The sentences are presented at prerecorded signal-to-noise ratios. The SNR's used are 25, 20, 15, 10, 5 and 0.

BKB-SIN: 18 List Pairs. The sentences are presented at prerecorded signal-tonoise ratios that decrease in 3-dB steps. Each list in the pair is individually scored, and the results of the two lists are averages to obtain the List Pair score. Results are compared to normative data to obtain the SNR Loss.

Tone Decay: Presents a continuous pure tone with timer.

Special Tests (User Defined)

Lombard test

Pure Tone Stenger

Speech Stenger

SAL

Communications and Monitoring

Talk Forward: Permits the tester to speak through the test microphone into the selected transducer at approximately the intensity level set by the front panel controls.

Talk Back: Allows the tester to listen to comments from the patient in the testing booth.

Monitor: The monitor headset can be used by the tester to listen to Channel 1, Channel 2, and/or Talk Back signals.

Environmental Requirements

Temperature: +15ºC to 40ºC (59 to 104ºF)

Relative Humidity: 10% to 95% (non-condensing)

Ambient Pressure Range: 98 kPa to 104 kPa

Background Sound Level: <35 dB(A)

Storage Temperature: 0ºC to + 50ºC (32ºF to 122ºF)

Transport Temperature: -20ºC to + 50ºC (-4ºF to 122ºF)

Quality System

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

Compliance/Regulatory Standards

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

ANSI S3.6, IEC 60645-1, IEC 60645-2, ISO 389

ANSI/AAMIES 60601-1 Medical Electrical Equipment: General Requirement for Safety

IEC/EN 60601-1 International Standards for Medical Electrical Equipment: General Requirement for Safety

CSA C22.2 # 601-1-M90

Medical Device Directive (MDD) to comply with EC Directive 93/42/EEC

Notes:

** Optional configuration*

*** The maximum HL values are applicable to the middle frequencies only*

**** RETSPL values interpolated*

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