

Datasheet

SA1 Audiometric Headphone

Supra-aural Headphone for Audiological Hearing Loss Measurements

“ The CA1/SA1 headphones, when used in combination with pure-tone audiometers, have been validated as suitable for audiometric applications. ... The results confirm that the headphones provide reliable and accurate measurements, making them suitable for professional audiometry. ”

Dr. Marion Bug, PTB Berlin



Features

- **Sturdy and reliable on-ear headphones**
- **High-quality audio performance, specifically designed for hearing loss testing**
- **Headbands supported: HB-7 (Wilfan), HBA (Radioear), SAHB-1 (Real Ear – new 2026)**
- **Color-coded plugs for clear Left/Right identification**
- **Cover for screws, for medical safety compliance**
- **Cable length 2.5m**
- **Cushions, headband, and cable available as spare part for repair/refurbishment**
- **Full medical certification as Class 2a Medical Device**
- **Biocompatibility ISO 10993-1**
- **RoHS compatible, lead, nickel and latex free**

“ Austrian based audiology experts Audiometrix, has evaluated the Real Ear transducers under simulated real-clinic conditions using professional audiometric calibration procedures and equipment. The transducers demonstrated stable and consistent performance aligned with clinical and industry expectations ”

Auditdata

Technical Specifications (nominal)

Related Standards	IEC-60645-1:2017 and ANSI S3.6:2018 (R2023)
Frequency Range	125 Hz – 8000 Hz
Output Sound Level Range	-10 – 120 dB HL
Output Sound Level Precision*	+/- 3 dB
Sensitivity*	103dB SPL at 1kHz, 1 mW
Distortion*	<2.5% at Recommended Max Levels
Impedance*	10 ohm (+/- 15%)

*At time of manufacturing

Product Specifications

Cable Length	250 cm
Cable Plugs	DIN, Mini-DIN, Mono Jack
Headband pressure	4.5N +/- 0.5N
Dimensions	180x150x80 mm
Dimensions, packaging	295x230x90 mm
Weight	460 g (with packaging)

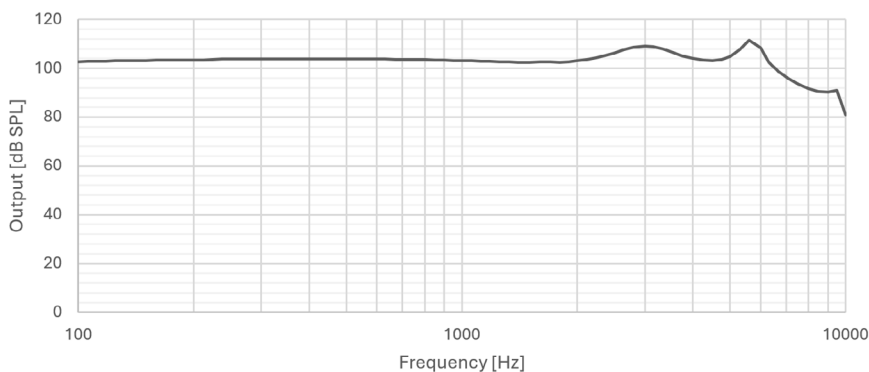
Document References (on special approval and NDA only)

	Doc No.
ETSPLs for Pure Tones by PTB Berlin	DN02778
Audio Performance Report for IEC 60645	DN02901

Measurement Graph

Frequency Response	1mW, 125 - 10kHz, IEC 60318-3 Coupler/ Ear Simulator
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Measurements are done on 3 sample units, with average shown



Data Table

- Pure Tone RETSPL
- Recommended Max Levels (using Measure Fitting Unit)

Freq [Hz]	RETSPL [dB]	Max Level [HL]
125	46.0	85
160	39.0	
200	32.0	
250	23.0	105
315	19.5	
400	15.0	
500	10.0	120
630	8.5	
750	7.5	120
800	6.5	
1000	2.5	120
1250	4.5	
1500	6.5	120
1600	6.0	
2000	5.5	120
2500	7.0	
3000	8.0	120
3150	8.0	
4000	8.5	120
5000	15.5	
6000	22.5	110
6300	21.5	
8000	14.0	110
	Interpolated	

Product Ordering

	Part No.	Plug
SA1 HBA Audiometric Headphone Mini-DIN	100.063	8-pin Red Mini-DIN
SA1 RE-7 Audiometric Headphone Mini-DIN	100.068	8-pin Red Mini-DIN