

System Specifications

ACS 100, 200, 600 and 102 · SA3 series



REVISED 10/2026

< ±0.2 dB

Amplitude accuracy

< ±1.0 Hz

Frequency accuracy

20–22,000 Hz

Frequency range

< –80 dBr

Crosstalk

Class 1

Meets or exceeds ANSI S1.11-2004

01 System configurations

MODEL	MICROPHONES	MASTOID	BEST FOR
ACS 100 SA3	● 1 (Type 1)	1	Clinical audiometer and tympanometer calibration for hearing clinics and medical centers
ACS 200 SA3	●● 2	1	Dual-microphone measurements, enhanced headphone verification and flexible instrument support
ACS 600 SA3	●●●●●● 6	1	High-throughput lab, production and service work with multiple simultaneous measurement points
ACS 102 SA3	Type 2	—	Screening audiometer calibration with standard headphone measurement

02 Measurement limits & tolerances

Frequency range	20 Hz to 22,000 Hz
Frequency accuracy	< ±1.0 Hz
Frequency uncertainty	0.11 Hz 95% confidence level, k=2
Amplitude accuracy	< ±0.2 dB
Amplitude uncertainty	0.05 dB 95% confidence level, k=2
Distortion	< 0.20% @ 125 Hz
Crosstalk	< –80 dBr
Linearity test limits	+120 HL to –10 HL
Sound level measurement	Class 1 Meets or exceeds ANSI S1.11-2004

03 Standards supported

ANSI S3.6	1969, 1989, 1996, 2004, 2010, 2018, 2025
IEC 60645 with ISO 389	2002, 2012, 2017
Factory specifications	Grason-Stadler Interacoustics (2018 and 2025)
Tympanometry	ANSI S3.39 (1987, 2007) IEC 60645-5
Room acoustics	ANSI S3.1 (2008) OSHA

04 Computer & interfaces

Operating system	Windows 11 and Windows 10
ACS hardware	USB
Audiometer control	USB, RS-232 or Bluetooth

05 Test modes

Manual

The software prompts for frequency, level and channel at each test point, with audible feedback, and waits until the audiometer is within a user-set threshold.

User controlled*

The software sets and adjusts the audiometer at each test point. The technician chooses which test sections to run.

Fully automatic*

The software runs the complete test battery on its own. The technician is only prompted to change transducers.

* For supported audiometers with a USB, RS-232 or Bluetooth link. Instruments without a built-in setup can be calibrated with a User Defined routine.



06 Supported tests

Audiometer, acoustic	Output level, distortion, narrowband noise, white noise, speech noise, speech level
Audiometer, electrical	Frequency, distortion, off level, rise time, fall time, overshoot, crosstalk, linearity, warble, pulse width, SISI
Tympanometer	Probe output level and distortion, compliance, pressure, reflex output level, distortion, narrowband level, switching (rise, fall, overshoot, off), linearity
ABR and OAE	Output level, distortion, intermodulation, linearity (ABR probe and headset, OAE probe)
Other	Handswitch, room acoustic levels (1/3 octave)

07 Transducers supported

Headphones	TDH-39/39P, TDH-49/49P, TDH-50/50P, DD45, Beyer DT48, Holmco 8103, Sennheiser HAD-280, Sennheiser HDA 200, Sennheiser HDA 300, Radioear DD450, Radioear DD65v2, Oscilla H210A, DD45 Mono Masking, Auditdata CA1, SA1
Insert phones	EAR 2, EAR-3A, EAR-5A, IP30, CIRR-22 Insert Masking Phone, Danavox Single Insert, EARTone ABR Earcups, IP30 Insert Masking, ER-3c, Auditdata IN1
High frequency phones	Sennheiser HDA-200, HDA-280, HDA-300, Koss HV/1A, Kross R80, Radioear DD65v2, Holmco 9501, Auditdata CA1, CA1-HF
Bone oscillators	Radio Ear B-71, B-81, Oticon A20 (forehead or mastoid position), Auditdata BC1
Probes	IOW Probe, IOWA Probe, OWA Probe, SnapPROBE, manufacturer provided, custom probe
Contralateral phones	Telephonics TDH-39/39P, TDH-49/49P, TDH-50/50P, Radioear DD45, DD65, Eartone 3A, 5A, Danavox Insert Phone, IP30, Button Phone, CIR Contra Phone, custom contra
Free field	Degrees of incidence: 0°, 45°, 90°

08 Couplers & artificial mastoids

Headphones	NBS-9A / IEC 60303 / IEC 60318-3, IEC 60318-1
Insert phones	IEC-126 / HA-2 / DB-0138, IEC-711, HA-1
High frequency phones	IEC 60318-2 Type 1 and Type 2
Artificial mastoids	ACS-M1, B&K 4930, Larson Davis AMC493 (with temperature and humidity compensation)

09 System inputs

ACS 100	Microphone input, Audiometer Left and Right, Transducer Left and Right, Bone Oscillator In and Out, Mastoid input, Handswitch/Continuity input
ACS 200	Same as the ACS 100, with separate Left and Right microphone inputs
ACS 600	Headphone, insert phone and high frequency stations , each with Microphone Left and Right, Audiometer Left and Right, Headphone Left and Right Plus: Mastoid input, Bone Oscillator In and Out, Handswitch/Continuity

10 Software

Database	Microsoft Access format with Customer, Audiometer and Calibration Data tables. Flexible import and export. Can be stored on a network drive and shared by several systems.
Reports	Multipage calibration certificates and calibration reports for customer and audiometer management
Tools	Signal analyzer with tone, noise and click modes and real-time spectrum and time series plots. Continuity test.