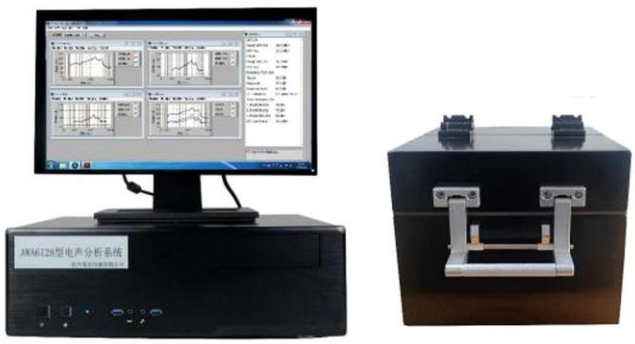
KP6128 HEARING AID TEST SYSTEM

with KP8583 Anechoic Box and 2CC Artificial Ear



KP6128KP main unit + KP8583 anechoic box

Integrated production and quality-assurance platform

The system measures key electroacoustic performance parameters of hearing aids under a controlled acoustic environment, helping manufacturers and inspection teams verify suitability, consistency and delivery quality.

Frequency	200 Hz - 8000 Hz
Input SPL	30 - 130 dBSPL
Output SPL	50 - 130 dBSPL
Resolution	0.1 dB

Brochure Highlights

IEC / ANSI / GB Standard Support	**OSPL90, FOG50, THD, EIN & Delay**	**KP8583 Anechoic Box Integration**
2CC Artificial Ear Measurement	**Battery Current & Telecoil Tests**	**Production, Supply & Delivery QA**

Application Overview

A hearing aid is a compact acoustic amplifier designed to amplify sounds that may otherwise be inaudible, enabling residual hearing to transmit information to the auditory center of the brain. During manufacturing, supply and clinical fitting support, its performance must be evaluated against defined electroacoustic indicators.

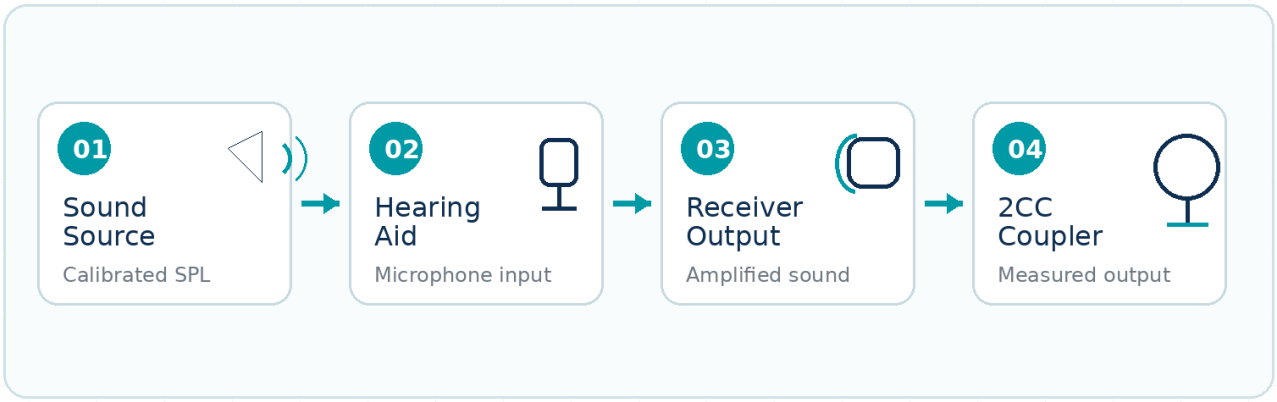
Standards and Measurement Principle

Designed for controlled hearing-aid electroacoustic testing under recognized standards

Applicable standards

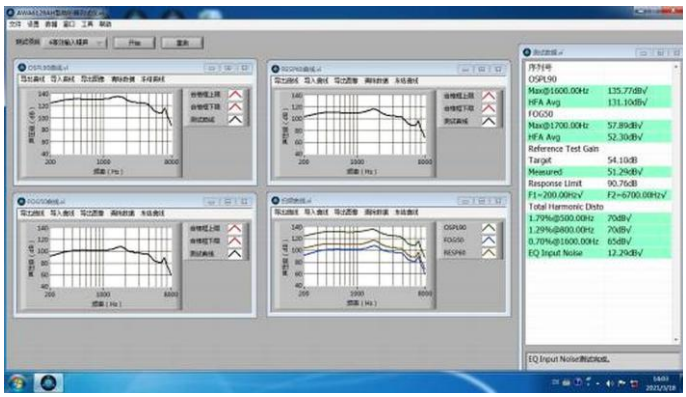
IEC 60118-7:2005; ANSI S3.22-2009; ANSI S3.22-2014; ANSI/CTA-2051-2017 (FDA OTC Hearing Aid Standard); GB/T 25102.100-2010 Electroacoustics - Hearing Aids - Part 0: Measurement of Electroacoustic Characteristics; GB/T 25102.7-2017 Electroacoustics - Hearing Aids - Part 7: Measurement of Performance Characteristics for Production, Supply and Delivery Quality Assurance; JJF 1201-2008 Calibration Specification for Hearing Aid Testers.

Measurement Principle



Test principle

Inside the anechoic box, the test microphone is used to calibrate the sound source so that specified sound pressure levels are generated at selected frequencies. The hearing-aid microphone receives the sound, the hearing aid amplifies it and drives its receiver, and the microphone inside the artificial ear measures the acoustic output. The software then calculates the electroacoustic indicators.



Software interface for curve display and result calculation

Technical Performance Specifications

Core acoustic, electrical, telecoil and environmental parameters

1. Acoustic Input - Test Microphone

em	Specification
requency range	200 Hz - 8000 Hz
easurement range	30 dBSPL - 130 dBSPL, Z-weighted; microphone reference sensitivity -26 dBV/Pa
esolution	0.1 dB
mplitude error	The SPL deviation of the test microphone relative to 1 kHz shall not exceed +/-1.0 dB from 200 Hz to 3 kHz, and shall not exceed +/-2.0 dB from 3 kHz to 8 kHz.

2. Acoustic Output - Test Sound Source

em	Specification
requency range	200 Hz - 8000 Hz, 100 Hz interval
requency error	Better than 0.5%
utput amplitude	50 dBSPL - 130 dBSPL
mplitude error	By comparison method referenced to SPL: not more than +/-1.5 dB from 200 Hz to 3 kHz, and not more than +/-2.5 dB from 3 kHz to 8 kHz.
otal harmonic distortion	From 200 Hz to 8 kHz: at 70 dB SPL, THD shall not exceed 1.0%; above 70 dB SPL and no exceeding 90 dB SPL, THD shall not exceed 2.0%.

3. Dynamic, Telecoil and Battery Measurement

em	Specification
ttack / release time	Measurement range: 50 ms - 5 s; accuracy better than +/-10% or +/-2 ms, whichever is greater.
elecoil output	MASL magnetic field strength: 10 mA/m; ETLS magnetic field strength: 31.6 mA/m.
attery current	Measurement range: 0.00 mA - 10.00 mA; available current greater than 10 mA; accuracy + 5% of reading.
attery voltage	Provided voltage: 0 - 10 V; voltage error: +/-0.2 V open circuit.

4. Physical Data and Operating Environment

em	Specification
ain unit dimensions / weight	440 mm x 325 mm x 151 mm (W x D x H); approximately 8 kg.
P8583 anechoic box dimensions / weight	345 mm x 300 mm x 260 mm (W x D x H); approximately 20 kg.
ransport / storage humidity	5% - 95% relative humidity, non-condensing.
ransport / storage temperature	-20 deg C to 60 deg C.
perating humidity	20% - 90% relative humidity, non-condensing.
perating temperature	0 deg C to 40 deg C.

Test Items and System Configuration

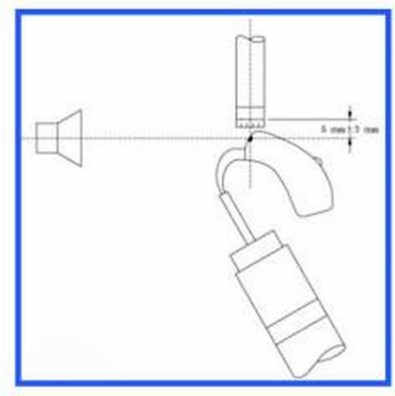
Complete supply scope for hearing-aid performance measurement

Measurement Functions

OSPL90 saturated SPL	**FOG50 full-on gain**	**Reference test gain**
Frequency response range	**Total harmonic distortion**	**THD + noise**
Equivalent input noise	**Maximum saturated SPL**	**Attack and release time**
Battery current	**Telecoil / inductive output**	**Delay time**

System Configuration / Supply Scope

odel	Description	Qty.	Notes
6128KP	Hearing Aid Tester	1 set	Includes main unit, hearing aid test software, preamplifie test microphone, monitor, keyboard and mouse.
6161F	Artificial Ear (2CC)	1 set	Includes HA-1, HA-2 and CIC couplers.
8583	Anechoic Box with telecoil test capability	1 pc	Includes test sound source and cables.
	Dummy battery cable	1 set	For battery-current and power-related measurement.
6021A	Sound Calibrator	1 unit	Optional accessory.



Original fixture schematic reference

Recommended Use

Use the KP6128KP system for incoming inspection, production line sampling, outgoing quality verification and documentation of electroacoustic performance before delivery. Keep the anechoic box closed during measurement and follow the selected standard test sequence in the software.

Note: Product configuration may be customized according to the selected standard, test item and accessory package.