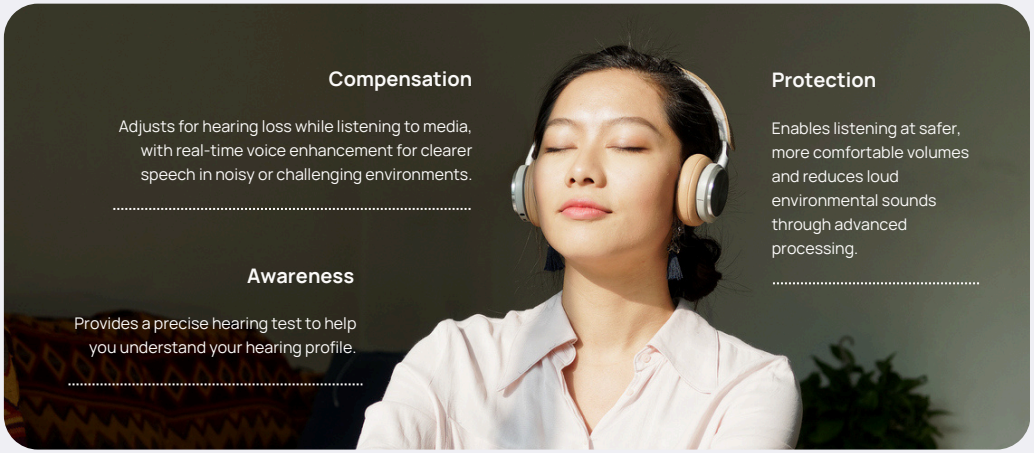
Mimi for Headphones

Everything You Need, Seamlessly Integrated

Awareness of hearing health and its impact on daily life is growing. Mimi helps headphone brands respond with smarter, safer, personalized sound - without compromising quality.

Today's consumers expect more from their headphones than just great sound - they want solutions that protect, personalize, and enhance their listening experience. Mimi's all-in-one approach equips headphone manufacturers with easy-to-integrate features to meet these demands and deliver healthier, more tailored listening experiences.



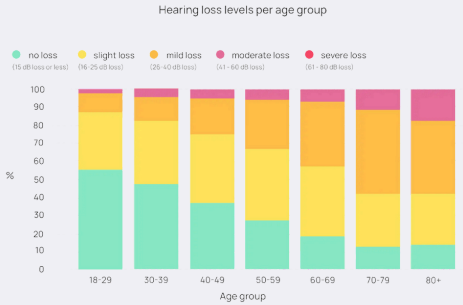
Complete Package of Hearing Enhancement Products

Mimi provides a comprehensive hearing health solution for headphones and TWS earbuds, including testing, fitting, sound personalization, and a customizable voice clarity mode to enhance live conversations. Our modular approach allows you to license individual components or the entire package, with integration support from our expert engineering teams in Europe and China.

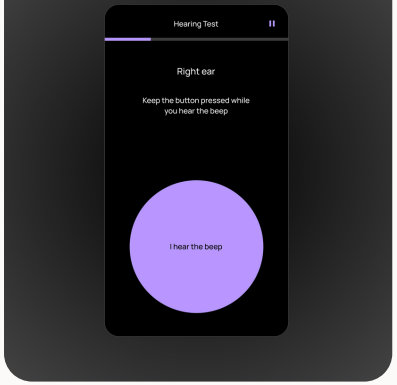
Hearing Test

Learn more about your hearing

Our solution includes a pure-tone threshold (PTT) hearing test, delivering precise results comparable to a medical-grade test. The test is compatible with any headphone and smartphone running on Android or iOS. Users gain valuable insights into their hearing with results including their Hearing Number and a detailed Hearing Sensitivity Graph. With over 6 million Mimi hearing tests already completed and approximately 150,000 new tests conducted each month, this feature is both proven and highly scalable.



Source: Mimi Hearing Test Database 2019 - 2024



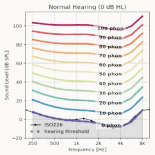
Technical Overview

Native SDK	Available for iOS and Android
Test Frequencies	250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz
Duration	4 minutes total (2 minutes per ear)
Output	• Hearing Number (based on PTA4) • Audiogram data (dB HL per ear)
Accuracy	±5 dB, compliant with ANSI/CTA-2118 standards for consumer electronics, including headphone calibration
Optional	Supports Mimi Hearing ID for device-independent hearing profile

Sound Personalization

Turn up the details, not the volume

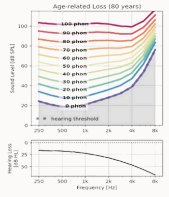
Our patented audio processing technology compensates for mild to moderate hearing loss, enhancing audio experiences such as music, media, voice calls, and broadcast audio via Auracast. By simulating the natural function of a healthy cochlea, the processing restores lost details and makes sounds clearer and more intelligible, allowing users to enjoy their content without needing to increase the volume. To date, this technology has been integrated into over 45 headphone products worldwide and has already reached millions of users. Once users try Mimi Sound Personalization, 92% choose to keep it turned on.

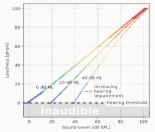


Normal Loudness Perception

Hearing Loss primarily causes an elevation of absolute thresholds and a compression of equal loudness curves.

Impaired Loudness Perception





Loudness Perception across Levels

The higher the signal level, the smaller the effect of hearing loss.

Technical Overview

Personal Sound Profile	Generated from a hearing test with advanced fitting based on the proven loudness-loss concept
Age-Based Fitting	Aligned with ISO 7029:2017 standards
Non-Linear Audio Processing	Restores more detail while reducing sound exposure compared to linear compensation systems. Read: Listening Level Study
Maximum Gain	Up to 3 dB RMS
Fine-Tuning	User-adjustable settings (Softer / Richer / Recommended) based on the 'Just-Noticeable-Difference' concept
Compatibility	Available on all established Bluetooth SoCs, including (but not limited to): Qualcomm QCC51x, QCC31x, Airoha AB15x, BES BES2x, WuQi70x, ARM

Voice Clarity

Hear the world clearly with personalized voice enhancement

Mimi Voice Clarity is an AI-powered voice enhancement solution that ensures clear conversations by preserving speech, such as announcements or people speaking to you, and reducing unwanted noises like wind, keyboard clicks, and construction sounds. Features such as Directional Voice Enhancement, which enhances voice clarity in noisy environments, and Natural Ambience, which preserves spatial cues for better environmental awareness, deliver voices that sound clear, natural, and personalized to your hearing ability.

We offer integration services to fine-tune and customize the transparency signal chain based on each device's specifications, optimizing beamforming, own-voice detection, and spatial naturalness while balancing speech intelligibility and natural sound.

Technical Overview

Input Signal Classification	Adapts audio based on environment
Latency	8ms
Beamforming	Focused front beam mode for conversation boost or a mode simulating HRTFs for a natural listening experience • Microphone spacing 5-35 mm (suitable for TWS earbud and OTE) • Performance: 16 MCPS
AI-Based Noise Reduction and Voice Enhancement	• Memory Consumption: code 60k, data 310k, instance 300k • Performance: ~170mcps
Personalized Live Sound	Powered by Mimi's audio processing and tailored based on a hearing test
Compatibility	Available on Cadence Tensilica Hifi 4 and Hifi 5 DSP (HiFi Mini DSP coming in Q2 2025)
User Control	Flexible and customizable via Mimi SDK