



Mimi for Smart Glasses

Complete package of hearing intelligence technology for smart glasses and hearing glasses.

Smart glasses are moving from novelty hardware towards everyday wearable computing.

As the category matures, audio becomes one of the most important interaction layers: users need to communicate clearly, receive voice assistance, enjoy their media, and stay aware of their surroundings without feeling isolated from the world around them.



COMPENSATION

Adjusts for hearing loss while listening to streamed media, assists with real-time voice enhancement for clearer face-to-face speech, and adapts playback in real time to restore details masked by noise.

AWARENESS

Provides a precise hearing test to help you understand your hearing profile.

PROTECTION

Enables listening at safer, more comfortable volumes through advanced processing.



mimi.io

NOISE ADAPT

CLARITY FOR OPEN-EAR LISTENING

Smart glasses are designed for awareness, but noisy environments can make streamed audio difficult to hear. Noise Adapt was built for open listening devices where external noise cannot be controlled.

Rather than trying to remove environmental noise, Noise Adapt focuses on the signal itself, restoring the components that are masked in noisy environments.

Noise Adapt doesn't remove noise; it restores what noise takes away.

By continuously analyzing the environment and incoming audio, Noise Adapt adjusts playback in real time to maintain clarity as noise conditions change, while preserving a natural listening experience.

TECHNICAL OVERVIEW

Non-Linear Processing

Moves beyond fixed EQ by applying level-dependent, multi-band processing that selectively enhances masked signal components in changing acoustic environments

Input Signal Classification

Adapts streamed audio based on levels of environmental noise

Adaptive Gain

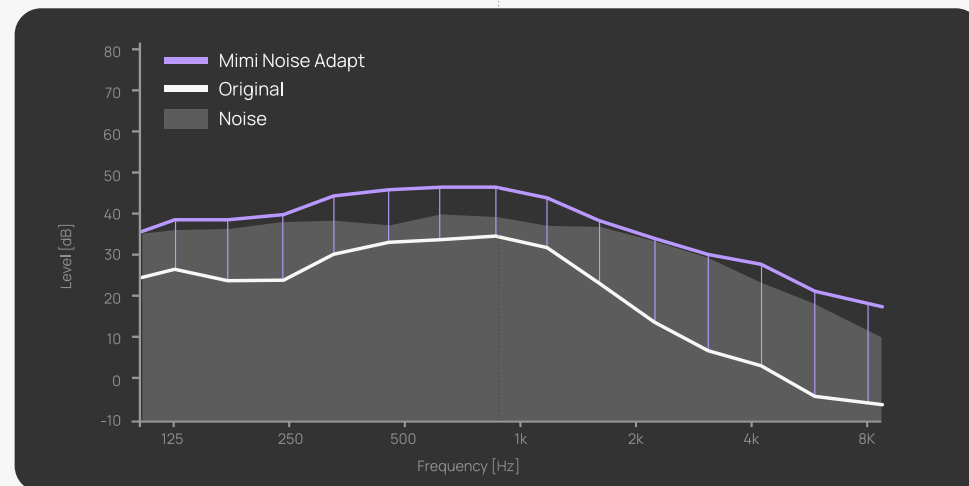
Up to 6.5 dB *

*Adjusted for volume to maintain compliant output.

Compatibility

Available on all established Bluetooth SoCs, including (but not limited to): QCC30x, QCC51x, QCC52x, QCC72x; Airoha: AB15x; BES BES2x; Bluetooth: BT89x; WuQi: WQ70x; Jieli: JL70xx

Original signal levels dynamically amplified in the presence of noise.



SOUND PERSONALIZATION

TURN UP THE DETAILS, NOT THE VOLUME

Adaptive audio technology that personalizes sound to each user's hearing profile, enhancing music, podcasts, and voice calls.

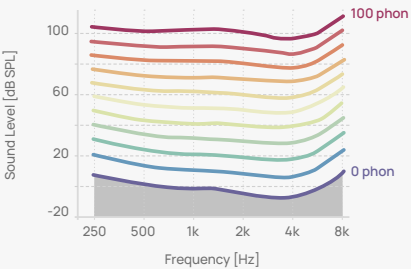
A hearing test is the foundation for a truly tailored audio experience. Brands can integrate one of two Mimi hearing tests: Pure-Tone Threshold (PTT) or Masked Threshold (MT), with results translated into a personal sound profile. Mimi's patented processing uses this profile to simulate the natural function of a healthy cochlea, dynamically adjusting the audio to match the user's unique hearing ability.

This restores lost detail and makes sound clearer and more intelligible. Users can enjoy their content without needing to increase the volume.

Mimi Sound Personalization is integrated into 85+ headphone models worldwide, reaching millions of people. Once users try Sound Personalization, 92% choose to keep it turned on.

No Hearing Loss vs. Age-Related Hearing Loss

Normal Hearing (0 dB HL)



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

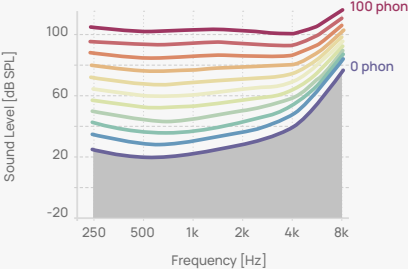
Non-Linear Audio Processing
Restores more detail while reducing sound exposure compared to linear compensation systems

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 and QCC31x, Airoha AB15x, BES BES2x, WuQi70x, ARM

Age-related Loss (80 years)



Hearing loss primarily causes an elevation of absolute threshold and a compression of equal loudness curves.

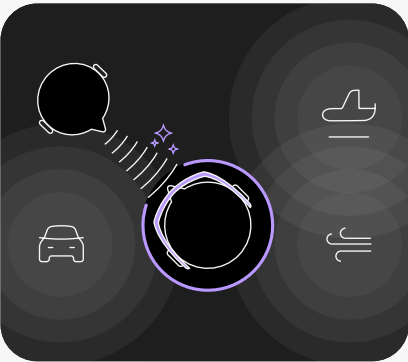
VOICE CLARITY

UNDERSTAND FACE-TO-FACE CONVERSATIONS EFFORTLESSLY

An AI-powered voice enhancement solution that delivers real-time speech isolation and background noise suppression to improve speech intelligibility in complex acoustic environments.

It combines:

- **Spatial Filtering Engine** for direction-aware beamforming
- **Voice Isolation and Noise Management System** for AI-based speech separation
- **Dynamic Processing Engine** for real-time gain and dynamic range control
- **Natural Hearing EQ Module** for tonal balance and spectral consistency
- **Stability and Safety Control Engine** for continuous monitoring of feedback risk, signal stability, and gain limits to ensure distortion-free output
- **Own Voice Management** for detecting the wearer's speech and adjusting amplification to preserve natural self-voice perception, without compromising conversational awareness



TECHNICAL OVERVIEW

Input Signal Classification
Real-time acoustic analysis

Latency
4ms

Acoustic Gain (hardware-dependent)

- 15 dB (OWS)

Beamforming
Focused front beam mode for conversation boost or a mode simulating HRTFs for a natural listening experience.

- Performance: 16 MCPS
- Feedback cancellation: 15-20 dB (OWS)
- Rear noise reduction: 3-5 dB

AI-Based Noise Reduction and Voice Enhancement

- Memory Consumption: code 60k, data 310k, instance 300k
- Performance: ~170mcps

Personalized Live Sound
Powered by Mimi audio processing and customized via a hearing test

Compatibility
HiFi 4 / HiFi 5 or NPU-based architectures (e.g. Qualcomm S5/S7, Airoha, BES, and others)