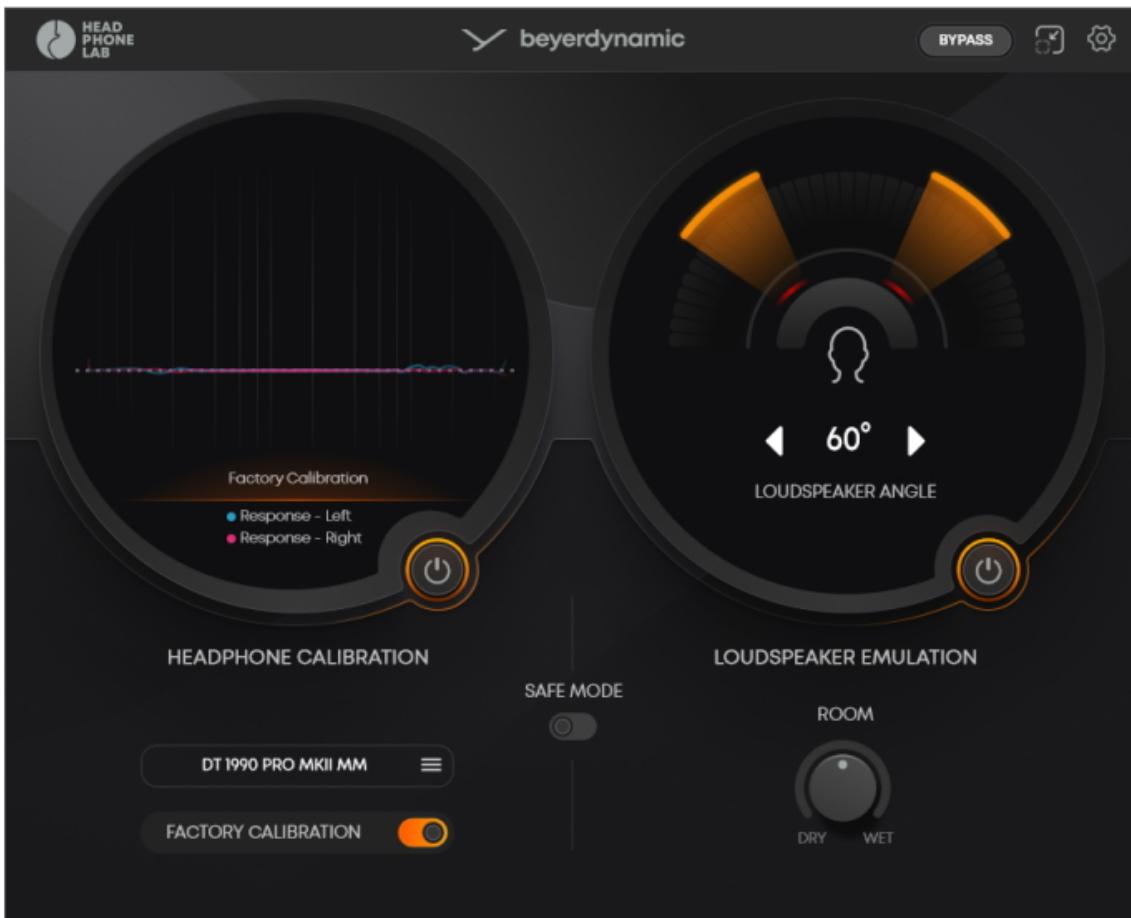# beyerdynamic HEADPHONE LAB

Precise mixing and mastering - even without an acoustically treated room: The new, free DAW plug-in HEADPHONE LAB adds a software-based reference studio to the industry-leading range of studio headphones from beyerdynamic.

The key features of HEADPHONE LAB include:

- Professional mixing and mastering with headphones: Realistic simulation of a high-quality studio environment for reliable mixing decisions in untreated working environments
- Sound calibration to reference level: Optimization of beyerdynamic studio headphones based on a scientifically developed studio sound profile. FACTORY CALIBRATION uses individual production measurement data to enable a high degree of precision
- Natural speaker sound through headphones: Realistic spatial perception instead of the typical "in-head" sound image

Many creators today work in bedrooms, apartments, or home studios. A professional setup with high-quality studio monitors, subwoofers, and acoustic treatment is often not feasible in terms of space or cost, while the demand for songs that can be

played on different systems remains high.

With HEADPHONE LAB, beyerdynamic addresses this need: The plug-in optimizes beyerdynamic studio headphones, turning them into reliable tools for precise mixing and mastering, regardless of space or setup. It combines two key functions: It calibrates the headphone sound to a reference profile for mixing and lays the foundation for a realistic studio simulation. HEADPHONE LAB thus enables professional work using headphones. No room treatment, additional hardware, or expensive monitor setup is necessary.

A key component of HEADPHONE LAB is sound optimization for mixing and mastering. Each model's fundamental sonic character remains intact, but it is refined into a neutral, reliable balance. This is based on a specially developed studio sound profile, resulting from years of research and development as well as collaboration with professional recording studios.

There are two calibration options available: STANDARD CALIBRATION calibrates the respective headphone model to the studio sound profile based on a reference sample ("golden sample") defined by beyerdynamics acoustic experts. For maximum accuracy, HEADPHONE LAB also offers FACTORY CALIBRATION, which adjusts the sound profile to the original production measurement data of the respective headphones, thereby compensating for material and manufacturing variations. This currently exclusive approach from beyerdynamic demonstrates the close integration of hardware and software development.

While STANDARD CALIBRATION supports all DT models from the beyerdynamic studio portfolio, the unique FACTORY CALBRATION is currently available for select beyerdynamic models:

- DT 700 PRO X
- DT 900 PRO X
- DT 1770 PRO MK II
- DT 1990 PRO MK II

A reliable tonal balance lays the foundation for precise mixing decisions – but only realistic spatial imaging completes the picture. Since headphones deliver isolated signals to each ear, spatial listening differs fundamentally from listening through speakers. HEADPHONE LAB counteracts this difference by realistically emulating the listening experience of a high-quality speaker system using beyerdynamic studio headphones. The result is a natural, stable sound image with reliable spatial orientation – precise and completely free of artifacts and phase problems.

HEADPHONE LAB also includes tools designed to support individual listening preferences and precise spatial perception. Users can manually enter ear spacing and head circumference to fine-tune time-of-arrival differences, adjust virtual speaker angles between 40°, 60°, and 80°, and enable optional room simulation for a consistent, dependable reference environment. These features ensure reliable

decision-making even when working in unfamiliar or less-than-ideal spaces. "Our studio headphones have been a benchmark for professional users for decades," says Martin Stahl, Director of PRO Audio at beyerdynamic. "With HEADPHONE LAB, we are expanding this foundation with versatile software. The plug-in enables reliable mixing decisions even in situations where classic studio environments are not feasible."

HEADPHONE LAB is available for Windows and macOS and supports the plug-in formats VST3, AU, and AAX. The software is compatible with all current beyerdynamic studio headphones and is available as a free download for digital audio workstations. Attendees can experience HEADPHONE LAB at NAMM 2026 from January 22 to 24 by visiting beyerdynamic at Booth #10702, Hall A, where beyerdynamic will also be showcasing its entire professional portfolio - from studio headphones and microphones to other audio solutions. Multiple award-winning musician Cory Henry will also be on site to demonstrate beyerdynamic products in professional use.

www.beyerdynamic.com