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[HD 800]

HD 800 Crafted for perfection.



THE ONE OF A KIND

Good enough was never good enough. The story of the Sennheiser HD 800 began with a dream: to develop headphones that go way beyond conventional equipment to become "music phones", or even perfect "sound phones". The dream of creating a hi-fi device that sounds as brilliant, clear, and undistorted as if you were sitting right next to the source. The dream of creating an acoustic experience more incredible than anything ever heard through dynamic headphones, in spheres that no other category is capable of reaching – right there where perfection begins.

We couldn't go beyond physical boundaries – but we did cross the boundaries of thought. The HD 800 is equipped with a completely new transducer and only the very finest of materials, each part carefully inserted by hand. We are talking about manufacture in the truest sense of the word, right from the initial drafts to individual handcrafting "Made in Germany".

Above all, the Sennheiser HD 800 truly personifies the creative force of the company that created it: by displaying the passion for perfect sound that has been driving Sennheiser innovation over 60 years.

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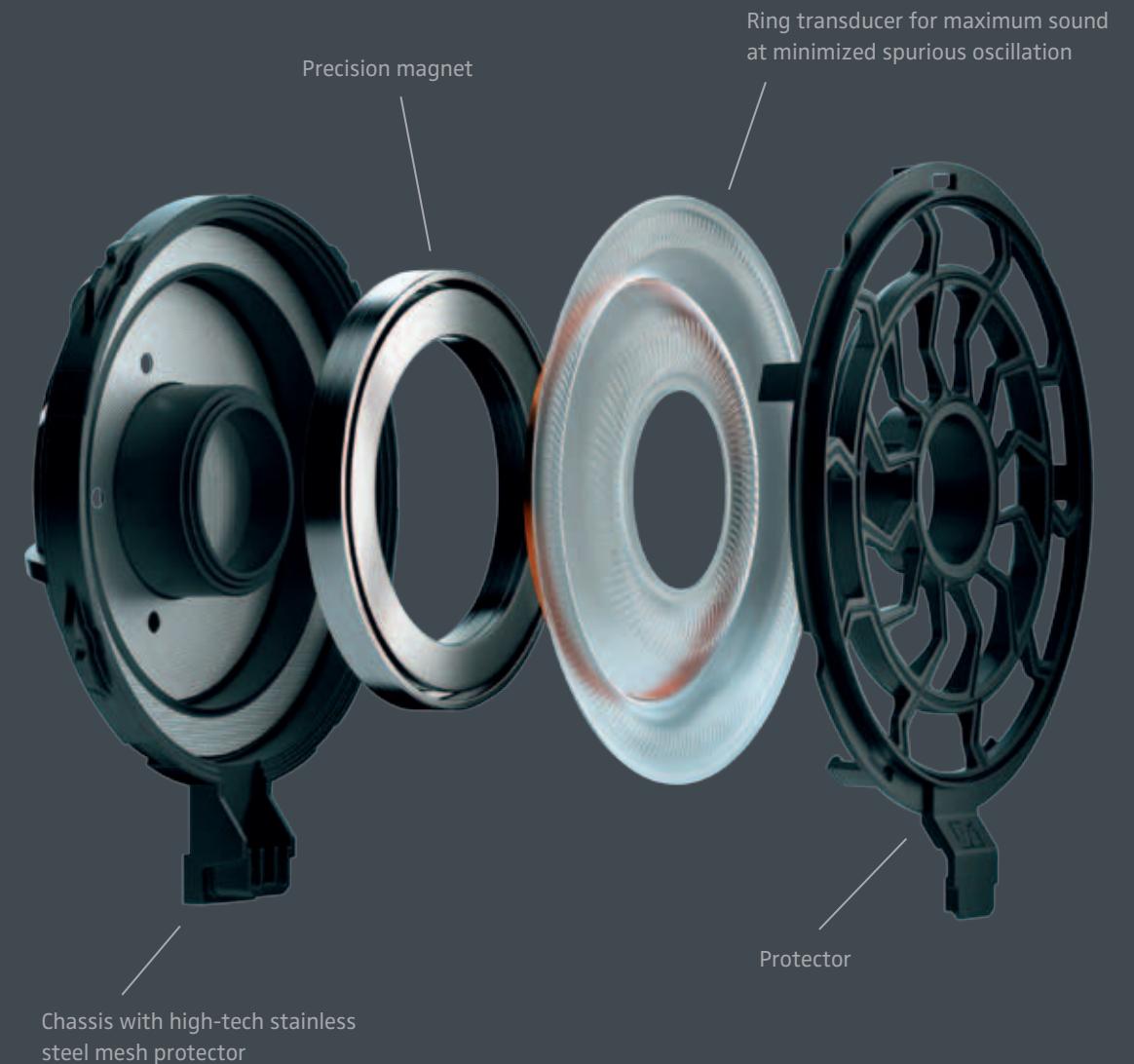
Outstanding technology provides an outstanding sound.

The HD 800's superiority is based on a completely new principle, right at its very heart: The transducer is designed in the shape of a ring. Basically, the larger the surface of the transducer, the purer the sound – particularly when it comes to low notes. At higher frequencies, a large surface area, however, also generates disruptive spurious oscillation at higher frequencies, so-called eigenmodes. This is primarily due to the fact that conventional-sized transducers do not have a satisfactory way of controlling high-frequency oscillations. The new transducer's ring shape effectively solves this dilemma: Its broad area oscillates in an extremely controlled way due to the large coil and the two supporting surfaces. This results in a previously unheard-of degree of freedom from distortion and thus the greatest purity and brilliance of sound.

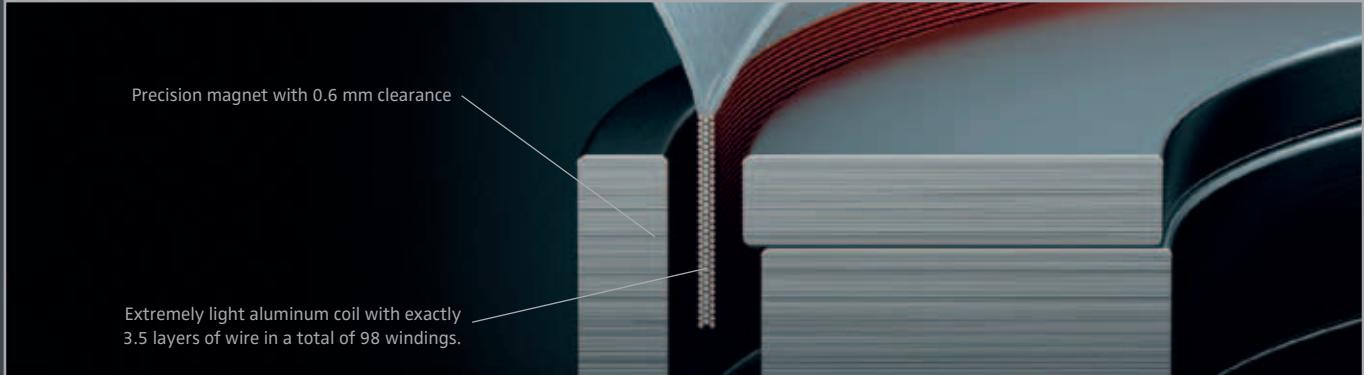
And when it comes to the naked technical facts, the HD 800 doesn't save on superlatives: The 56-mm-wide transducer is the largest of its type. The same goes for the aluminum coil (40 mm) and the 42-mm magnet system.

Ring transducer In contrast to a full-sized transducer, the ring-shaped transducer utilized in the HD 800 greatly enhances the control of the oscillating surface. This results in a more voluminous sound wave and thus far greater clarity!

Conventional transducer Unwanted spurious oscillation can occur in a conventional, large transducer due to eigenmodes. Even resources such as increasingly sophisticated Duofol laminations are unable to completely negate these physical limitations.



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Precision magnet with 0.6 mm clearance

Extremely light aluminum coil with exactly 3.5 layers of wire in a total of 98 windings.

At the heart of the HD 800 The patented ring-shaped transducer forms the heart of the HD 800. The wound precision wire that makes up the coil is only 42 micrometers thick. It consists of 3.5 layers of wire in a total of 98 windings. The space between the two magnets, in which the coil oscillates freely, is only 0.6 mm wide. The work of fitting these parts is done by hand – and the same thing applies to many of the HD 800's other components.

The HD 800's transducer transmits in a frequency band from 6 Hz–51 kHz. Not that anyone is capable of perceiving this sound range, but the pleasant ancillary effect is that the transducer delivers an extremely clean sound in the 16 Hz–20 kHz range.

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Cords and connections The symmetrical cords are designed with twin-core, high-performance, Teflon-insulated connections on each side. They are also surrounded by a dense copper braid. The left- and right-side cables are twisted and wrapped with fabric for a comfortable fit. The jacks are exclusively produced for the HD 800 and feature gold-plated contact-bunches. Gold has the highly positive property of having a very low transfer resistance, thus guaranteeing excellent contact without interference.

Headband The headband consists of a sandwich design in which a metal layer is connected to several layers of plastic, for which a patent has been applied. The high-tech plastic possesses incredible attenuation characteristics and ensures that oscillations are not transmitted to the headphone mountings.

Mountings The HD 800's headphones are only mounted on one side to make sure they fit optimally over the ear. The relocation of their point of balance towards the back of the head also enhances comfort for the wearer.

Spatial listening Wearing the HD 800, you enjoy much more than just a sound experience of outstanding brilliance. You experience a form of spatial listening never heard before. You have the feeling of being in a studio with Thelonius Monk or actually being present at a Berlin Philharmonic rehearsal. The HD 800 makes spatial listening possible by combining the large transducer surface and the angle at which it is suspended. The slightly angled sound front effectively simulates the principle of the spatial sound experience. No other manufacturer comes as close to producing a natural sound experience as Sennheiser with the HD 800.

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Ear pads Fine and robust: The ear pads are handcrafted from high-quality microfiber fabric. This material is extremely comfortable to wear and easy to maintain.



Leona Ultralight, high-rigidity special plastic. Better than any other metal, it combines strength and non-resonance.



High-tech stainless steel mesh The ideal material for three-dimensional sound. It combines all the properties of stainless steel with an incredible degree of transparency.



Technical data

Transmission range	6–51.000 Hz (–10 dB) 14–44.100 Hz (–3 dB)
Transducer principle	dynamic, open
Frequency response	diffuse-field equalized
Nominal impedance	300 Ω
Sound pressure level at 1 kHz	102 dB (1 V _{rms})
Max. nominal long-term input power	500 mW in acc. with EN 60-268-7
Harmonic distortion	≤ 0,02% (1 kHz, 1 V _{rms})
Ear coupling	circumaural
Weight (without cable)	approx. 330 g
Jack plug	1/4" (6.3 mm) stereo
Connecting cable	silver-plated, oxygen-free (OFC) copper cable, symmetrical, Kevlar reinforced, 3 m
Operating temperature	–10°C to +55°C

Target diffuse-field frequency response You can view the individual diffuse-field frequency response for your headphones with your serial number at www.sennheiser.com.

