

ES Lab

Made in Hong Kong

ES-R10

After years of reverse engineering, material sourcing and research, ES lab present our first ever closed dynamic headphone: ES-R10, a complete replica of the MDR-R10. We aim at bringing an ultimate user experience that is identical to the original MDR-R10 in terms of music presentation, wearing comfort and cosmetic appearance, making an all-time legend and pinnacle in the headphone industry within reach.



Research Roadmap



In our research roadmap, we measured every component in the original MDR-R10 and recreate each of them with modern technology and resources with minimal modification. Not only the signature wood housing, ES-R10 preserves most details that are on the driver, cable, earpads, headband and in the internal structures, making the assembly process delicate and precise.

It has been controversial on the original MDR-R10's performance and whether it can stand up its reputation due to its 30 years' worth of aging and material deterioration in most of the MDR-R10 that still exist, which include degrading foam, stiffening earpad and diaphragm losing structural integrity. What most people hear in the present time is probably of a much-weakened bass and pronounced treble. Only a few who are lucky enough to own a well preserved MDR-R10 are able to hear its true performance.

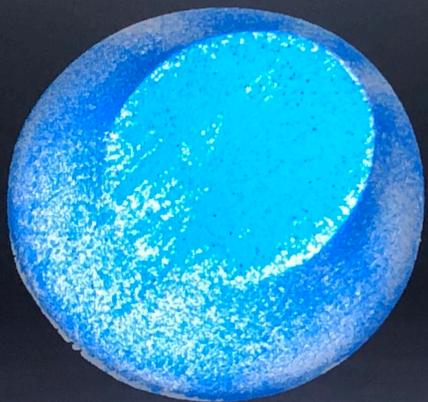
Our one and only goal in tuning the ES-R10 is to replicate the original MDR-R10 without any bits of additional coloration. To achieve that, the ES-R10 is compared to multiple MDR-R10 with varying conditions and serial numbers, including one that has a pair of brand-new original sound absorption foam installed. Through the ES-R10, people could hear how the MDR-R10 sounds as if it is straight out of the factory with the aging factors excluded: balanced and neutral. In fact, some have claimed the ES-R10 exceeds the original's performance for this reason.

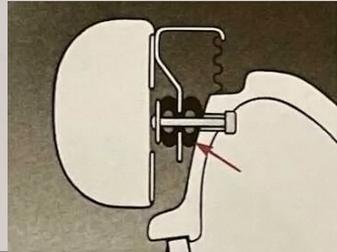




3D Scanning

With the cutting-edge optical 3D scanning technology, ES-R10 resembles the signature wood housing with identical contour, texture and acoustic properties as the original by breaking the surface geometry into millions of faces. Each piece of Japanese Zelkova Wood is hand-picked before going into a series of delicate finishing processes and becomes an essential component forming the ES-R10's natural and euphonic tonality.





Suspension & Driver

ES-R10 features the same 3-point suspension system as inside the MDR-R10 which isolates the resonance of the wooden housing and literally turns the headphone into a musical instrument. To achieve that, great cost has been put on plastic injection molding to recreate the rubber dampers with a complex shape. Only with such a smart mechanism, the ES-R10, just as the MDR-R10, is able to achieve an excellent imaging and soundstage that exceed what most open dynamic headphones are capable of.

As of the original MDR-R10, a pair of 50mm bio-cellulose drivers is used in the ES-R10. Its high sensitivity and low impedance allows the ES-R10 to be powered by most portable devices.



Connection

ES-R10 utilizes a detachable cable design. Gold plated connectors and custom-made Triple-C 4 core cables with layers of vibration-free cladding are used, all to minimize distortion in signal transfer and microphonics.

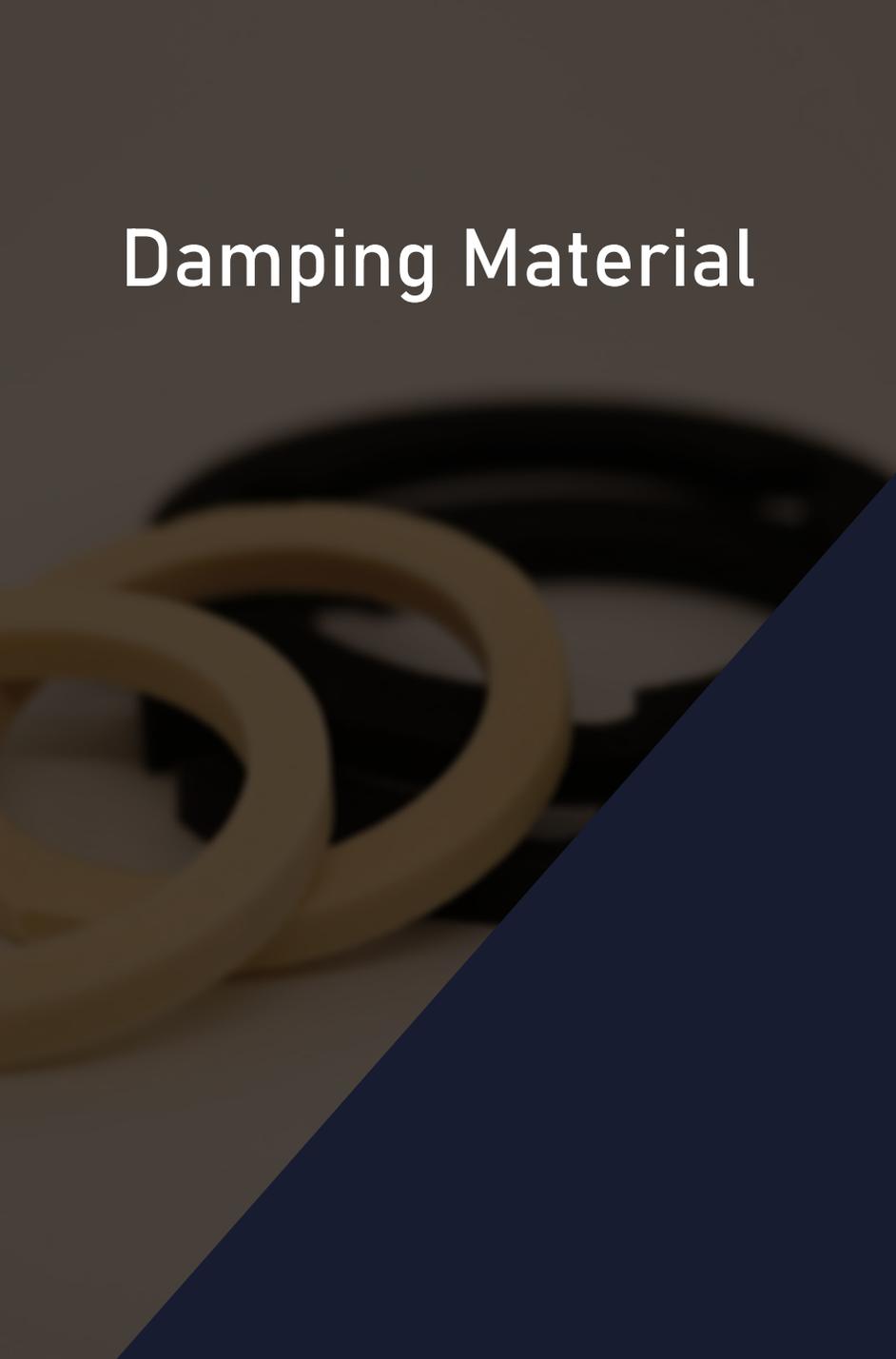
Earpad & Headband

No component alters the sound of a headphone as much as its earpad. To bring the complex contour of the earpad onto the ES-R10, an original earpad from an MDR-R10 is cut open through the stitches and reduced to individual projections for precise replication. Regarding the foam inside, we are the first in the industry who make perforations on foam with a custom-made die tooling to minimize the foam hardness to an extreme that is in line with the original earpad. Above all, earpad assembly has been the trickiest part which takes more than an hour to place 20+ components into a pair.

Wearing comfort and sound quality share the same importance. The earpad and headpad of ES-R10 are made of lamb leather to eliminate any potential pressure point.



Damping Material

A close-up photograph of several yellow, ring-shaped foam damping material pieces. The rings are stacked and slightly offset, showing their porous, cellular structure. The background is dark and out of focus.

Material sourcing has been the greatest challenge in making the ES-R10. In the original MDR-R10, a great variety of materials with customized specifications are used. From foam to wool filter paper, a tremendous amount of effort is put into sourcing the same material with the same physical and acoustic properties one by one. Despite the large amount of sampling material wasted in the selection process, the optimal choice of materials is used on ES-R10, to create an optimal sound.

Specifications

Transducer Type: 50mm Dynamic Driver

Operating Principle: Closed

Frequency response: 20-20000 Hz

Impedance: 36 Ohm

Sensitivity: 103db/mW

Operating Power : 300mW

Maximum Power Capacity: 1000mW

Weight with Cable: 520g

Cable Length: 2m

Connection: Gold Plated 6.5mm Stereo Connector



Same as the ES1A, ES-R10 adopts a Paulownia casing to provide the greatest protection during storage and transfer.

Original MDR-R10 users who are looking for replacement parts or service can reach us for a solution thanks to the high compatibility of components between ES-R10 and MDR-R10.

Every ES-R10 order can enjoy a 1-year warranty. Due to limited supply of Japanese Zelkova, foam and drivers, ES-R10 is of limited production.
