



earHD®

UPGRADE YOUR EARS

FLATE®

earHD®

DATA SHEET

earHD are revolutionary focusing device.

Using a accurate acoustic lens and reflector we are able to passively improve direction hearing, reduce distortion and improve speech intelligibility.

Perfect for

- Live events
- Playing music
- Watching TV
- ASMR
- Nature
- Conversation
- Speakers

Three Variants:

earHD Acetal: Injection moulded and polished for a high gloss finish

earHD Aluminium: Milled from aerospace aluminium

earHD Titanium: Milled from grade 5 titanium

Technical Specification

(Without tip)

Length: 23mm

Width: 23mm

Weight- 1.43g

What's included

earHD Polymer

- 1x pair of earHD Acetal
- 1x mesh pouch
- Three sizes of Silicone tips: Small, Medium and Large.
- 100% recyclable packaging

earHD Aluminium

- 1x pair of earHD Aluminium
- 1x hard case
- A range of replaceable silicone and memory foam tips in three sizes each.

earHD Titanium

- 1x pair of earHD Titanium
- 1x hard case
- A range of replaceable silicone and memory foam tips in three sizes each.

ACETAL



ALUMINIUM



TITANIUM



earHD®

INDEPENDENT TESTING



Scan QR code to view full ISVR Consultancy Report

UNIVERSITY OF Southampton
Institute of Sound and Vibration Research

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ISVR

earHD was independently tested at the Institute of Sound and Vibration Research over at The University of Southampton.

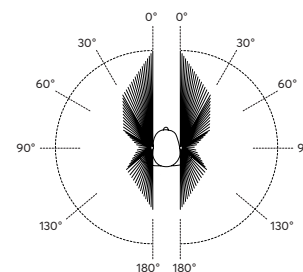
The three key areas tested were.

- Directionality of hearing
- Frequency response
- Speech intelligibility

The full research paper can be found by scanning the QR code.



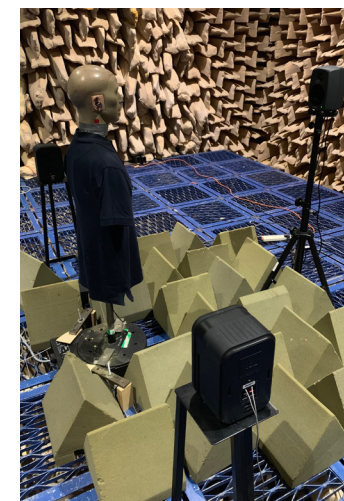
DIRECTIONALITY



earHD is designed to focus on sounds coming from in front of the listener.

This allows the user to focus on sound they look at.

The table below shows how sound coming from the front (0 degrees) is unaffected and sound coming from varying angles is reduced.



earHD was tested under strict conditions at the Institute of Sound and Vibration Research

Angle of sound (degrees°)	Average reduction in sound (-dB)
0	0.0
30	-5.6
60	-9.7
90	-12.8
130	-9.6
180	-5.3

Source: ISVR Consultancy Report (ref. 10653-R01), section 4.2/ page 15

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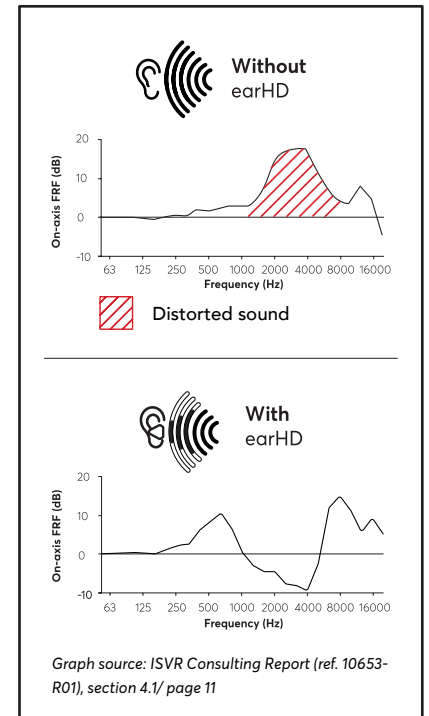
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FREQUENCY RESPONSE

Our ear canal has a natural resonance between 1.5kHz and 6kHz as well as reduced high frequencies, particularly as we get older. This resonance presents itself as distorted sound.

When earHD is used, the 1.5kHz to 6kHz resonance is drastically reduced and high frequencies above 6kHz are boosted, revealing previously hidden detail.



SPEECH INTELLIGIBILITY

Speech intelligibility measures how well earHD can receive a human voice emanating from the front.

The natural human ear is rated in the 'fair' category at an average of 0.49.

Using earHD improves this with an average of 0.62 for female voices and 0.64 for male voices

Without earHD	With earHD
Average: Fair	Average: Good
0.49	Female 0.62
	Male 0.64
Speech Transmission Index	Speech Intelligibility
0.00 - 0.30	Bad
0.30 - 0.45	Poor
0.45 - 0.60	Fair
0.60 - 0.75	Good
0.75 - 1.00	Excellent

Source: ISVR Consultancy Report (ref. 10653-R01), section 6.2/ page 23