



DATA SHEET

Open, dynamic headphones

- HD VIII (Code 2498)
- HD VII (Code 2497)
- HD IV.2 (Code 2481)
- HD IV.1 (Code 2380)

Overview

HEAD acoustics offers several open, dynamic headphones from renowned manufacturers for a correct playback of binaural recordings. The top class headphones have optimal sound characteristics, a natural, spatial sound with high timbre fidelity, a high wearing comfort, and much more.

In order to ensure the accurate playback of binaural recordings, the headphones and the playback devices must be matched. To achieve an acoustic impression resembling the original sound field, the playback devices have model-specific equalization filters for suitable headphone models. In addition, HEAD acoustics offers an individual level calibration as well as an individual equalization for each headphone.

Playback devices from HEAD acoustics

- Equalizer
 - labP2
 - labP2-V1
 - labO2-V1
- Front ends
 - SQadriga III
 - SQobold (via Adapter CLJ I)
 - SQadriga II
- Artificial head measurement system
 - HMS IV.0

Headphone amplifiers from HEAD acoustics

- (via equalizer labO2 or labO2-V1)
- HDA IV.1
 - HDA IV.2

Features

Open, dynamic headphones for playback of binaural recordings

• HD VIII



- Extremely high dynamic range thanks to the 53 mm transducer, the strong 1.5 Tesla magnet system, and the ultra-lightweight two-layer copper-covered aluminum voice coil
- Exceptionally large frequency range

• HD VII



- Specially-tuned, highly efficient drivers capable of delivering high sound pressure levels
- Low THD achieved by top-notch and extremely stable internal damping element
- Wide transmission range

• HD IV.2



- Balanced, defined bass and real low-bass playback
- Extremely lightweight aluminum coils for maximum pulse fidelity
- High degree of efficiency

• HD IV.1



- Computer optimized magnet systems minimize harmonic and intermodulation distortion
- Neodymium ferrous magnet systems ensure optimum sensitivity and an excellent dynamic response

Equalized playback of binaural recordings

A matched and equalized playback chain is essential for correct playback of binaural recordings. Only the combination of a HEAD acoustics' playback device and a suitable headphone ensures that the playback of binaural recordings can be equalized correctly.

To achieve this, the playback devices provide different headphone equalization filter sets with model-specific equalizations, which take into

account the various sound fields (ID, DF and FF), the original timbre, and the complete spatial mapping of a sound field.

In addition to the model-specific equalization, an individual level calibration for playback at the correct level can be created for each headphone, if the headphone is purchased together with a playback device.

Furthermore, for each headphone HEAD acoustics offers the option to generate an individual equalization filter. This equalization includes an individual level calibration as well as an individual equalization for each headphone. This allows to compensate possible design-related differences in the transmission properties between headphones of the same model too, which may result from divergences during the production of a headphone model.

Headphones and playback devices/headphone amplifiers: Equalization options for the accurate playback of binaural recordings

(✓ = model-specific equalization, individual level calibration, individual equalization)

	HD VIII 	HD VII 	HD IV.2 	HD IV.1 
labP2 	✓	✓	✓	✓
labP2-V1 	✓	✓	✓	✓
labO2-V1 	✓	✓	✓	✓
SQuadriga III 	-	-	model-specific equalization & individual level calibration	model-specific equalization & individual level calibration
SQobold (via CLJ I) 	-	-	model-specific equalization & individual level calibration	model-specific equalization & individual level calibration
SQuadriga II 	-	-	model-specific equalization & individual level calibration	model-specific equalization & individual level calibration
HMS IV 	-	-	model-specific equalization	model-specific equalization
HDA IV.1 oder HDA IV.2 (via labO2/labO2-V1) 	-	-	model-specific equalization: labO2/labO2-V1 & individual level calibration: HDA IV.2	model-specific equalization: labO2/labO2-V1 & individual level calibration: HDA IV.2

Scope of supply

- HD VIII (Code 2498)
- or
- HD VII (Code 2497)
- or
- HD IV.2 (Code 2481)
- or
- HD IV.1 (Code 2380)

Recommended software

- ArtemiS SUITE
Software solution for sound and vibration analysis
 - ArtemiS SUITE Advanced Playback Module (Code 5011)
 - ArtemiS SUITE Basic Framework (Code 5000)

Recommended hardware

- *labP2* (Code 3732)
Binaural headphone equalizer with USB interface
- *labP2-V1* (Code 3732-V1)
Binaural headphone equalizer with USB interface
- *labO2-V1* (Code 3731-V1)
2-channel playback equalizer with Line outputs, headphone connector, and USB interface
- SQadriga III (Code 3324)
Mobile recording and playback system - suitable as stand-alone system or USB front end
- SQobold (Code 3302)
Mobile 4-channel recording and playback system
via CLJ I (Code 9858)
Adapter LEMO 14-pin ↔ 3.5 mm jack
- SQadriga II (Code 3320)
Mobile recording and playback system - suitable as stand-alone system or USB front end

Recommended hardware

- HMS IV.0 (Code 1500)
Digital artificial head measurement system with CompactFlash and USB interface
- HDA IV.1 (Code 2488)
HEADphone Distribution Amplifier for 4 headphones
via *labO2/labO2-V1*
- HDA IV.2 (Code 2489)
HEADphone Distribution Amplifier for 8 headphones
via *labO2/labO2-V1*

For using HDA IV.1 and HDA IV.2 the equalizer *labO2* or *labO2-V1* is needed

- *labO2* (Code 3731)
2-channel playback equalizer with Line outputs and USB interface
- *labO2-V1*

Technical Data (according to the manufacturer)

	HD VIII 	HD VII 	HD IV.2 	HD IV.1 
Transducer principle	dynamic, open	dynamic, open	dynamic, open	dynamic, open
Ear coupling	circumaural	circumaural	circumaural	circumaural
Frequency response	5 - 54 000 Hz	15 - 40 000 Hz (-3 dB) 8 - 44 000 Hz (-10 dB)	10 - 41 000 Hz	12 - 40 500 Hz
THD, total harmonic distortion (1 kHz)	-	0.03 %	0.05 %	0.1 %
Nominal impedance	36 Ω	150 Ω	300 Ω	300 Ω
Contact pressure	-	-	2.5 N	2.5 N
Equalization	individual	individual	individual	individual
Jack plug	3.5 mm	6.3 mm	6.3 mm	3.5 mm
Adapter included	3.5 mm → 6.3 mm	-	6.3 mm → 3.5 mm	3.5 mm → 6,3 mm
Cable length	3 m	3 m	3 m	3 m
Weight (without cable)	390 g	270 g	260 g	260 g

