HEAD acoustics

DATA SHEET

Code 2444.1—playBasic Bundle OP I.1 (Open-Back Headphones)

Code 2445.1—playBasic Bundle CL I.1 (Closed-Back Headphones)

playBasic

Binaural Playback Unit

OVERVIEW

playBasic Bundle

Code 2444.1—playBasic Bundle OP I.1
Code 2445.1—playBasic Bundle CL I.1

Bundle consisting of a playBasic playback unit and HD OP I.1 or HD CL I.1 headphones respectively for aurally-accurate binaural playback

Use the playBasic Bundles to benefit from aurally-accurate playback with ease—whether on your computer, smartphone, tablet[1], or during a jury test in a listening studio.

Compared to our other binaural playback systems, playBasic is a cost-effective and portable entry-level option. playBasic can be directly connected to a Windows computer via USB-C. In addition to playback, you can use your computer to perform firmware updates, manage various equalizations, or adjust the limiter, for example. Once you have connected playBasic to another device (such as a smartphone or tablet) via USB-C, it will work like a standard USB playback device.

Operation is solely via software (e.g., HEAD Companion (as of version 3.3), SQala (as of version 4.5), ArtemiS SUITE (as of version 17.5)). playBasic playBasic Bundle is available with the HD OP I.1 open-back headphones or the HD CL I.1 closed-back headphones.

As an open-back headphone model, HD OP I.1 is designed for situations where external influences cannot interfere with your listening experience, e.g., in a quiet office.

We recommend the HD CL I.1 closed-back headphones for situations where external influences should be minimized as much as possible, e.g., in listening studios with multiple participants at the same time.

KEY FEATURES

Handy system

Headphone connector for the headphones that are supplied with the device

Integrated playback equalization

Hardware limiter to protect against hearing damage

Free Field (FF), Diffuse Field (DF), Independent of Direction (ID), earDrum Reference Point (DRP), Linear (LIN, without equalization), and User (USR, user-defined) playback equalizations controlled via the playback software

Model-specific standard equalizations for headphones

Direct Path Audio Output

APPLICATIONS

Aurally-accurate binaural playback

Aurally-accurate playback for SQala

Use as a universal USB playback device

1 Compatible with iPhone and iPad

DETAILS

Binaural Playback

In combination with appropriate playback software, playBasic Bundle is the ideal solution for uncomplicated, aurally-accurate binaural playback. Simply connect the playBasic playback frontend to a Windows computer, smartphone, or tablet via USB, and playBasic will automatically be recognized as an audio device. Now connect the included headphones to playBasic and start playback immediately using the playback software.

The Player of ArtemiS SUITE, SQala, or HEAD Companion is available for playback.

Each bundle comes with the corresponding equalization filter for the included headphones already installed on the playBasic playback frontend.

Interfaces

- 6.3 mm headphone socket on the front to connect compatible headphones, e.g., HD OP I.1 or HD CL I.1
- USB-C connection

Scope of Delivery

- playBasic (Code 2443)
  Binaural playback unit
- Premium headphones
  (depending on the selected bundle)
  - playBasic Bundle OP I.1 (Code 2444.1)
    HD OP I.1 (Code 2511.1)
  - playBasic Bundle CL I.1 (Code 2445.1)
    HD CL I.1 (Code 2521.1)
- CUSB V.1 (Code 5474-1)
  Cable USB-C to USB-C, 1 m
- Manual

Optional Accessories

- CUSB V.xx (Code 5474-xx)
  Cable USB-C to USB-C
  Available lengths: 1 m; 1.5 m

playBasic Bundle OP I.1

playBasic Bundle CL I.1

ELEMENTS ON THE FRONT

Headphone Output

HD OP I.1

HD CL I.1

Connect the supplied headphones to the headphone output and use them for correctly equalized playback.

Available equalizations are Free Field (FF), Diffuse Field (DF), Independent of Direction (ID), earDrum Reference Point (DRP), Linear (LIN, without equalization), and User (USR, user-defined).

The serial number of the corresponding headphones can be found on the underside of the device.

The color of the status LED indicates whether headphones are plugged in, the limiter is engaged, or the output signal is overloaded.

ELEMENTS ON THE BACK

USB Port

Computer

Use the USB-C port to play the data on your playBasic. The corresponding LED indicates whether the power supply is active or whether an error has occurred.

PLAYBACK AND CONTROL

ArtemiS SUITE (as of Version 17.5)

In ArtemiS SUITE, the software for sound and vibration analysis, playback for listening and monitoring is controlled via the Player (included in APR 000, APR Framework), which is easy and convenient to operate. The output of a defined excitation signal in the Recorder (APR 040, Recorder is required) enables precise, high-quality audio output, which is essential for acoustic measurements and analyses.

If a signal contains information on the equalization and dynamic range used during recording, ArtemiS SUITE will transmit this information to playBasic, thus ensuring that both the equalization and the playback level are automatically set correctly.

SQala Listening Studio (as of Version 4.5)

In listening studios, all the playback systems used are controlled by the SQala jury testing software. SQala uses these systems to ensure precise, high-quality audio reproduction. Playback systems enable SQala to be connected with various audio output devices such as headphones, ensuring that the playback meets the specific requirements of the listening tests.

In listening studios, SQala plays a central role by optimizing the planning, implementation, and evaluation of listening tests. The software is designed to maximize ease of use while delivering precise and reliable results.

HEAD Companion (as of Version 3.3)

Use the license-free HEAD Companion software to perform a wide range of functions that support both the management and the use of audio and measurement data. HEAD Companion enables you to perform firmware updates, for example, to ensure that you can take advantage of the latest features and improvements. The software also supports binaural, aurally-accurate playback of HDF files (HEAD Data File format), which is important for acoustic tests and analyses. HEAD Companion can also be used to configure the limiter, set an equalization, and change equalization filters.

Therefore, HEAD Companion is the ideal tool for users who need a simple and free solution for managing acoustic files, while ArtemiS SUITE is intended for professional users who require comprehensive analysis and editing functions. However, ArtemiS SUITE is vital when it comes to complex acoustic analyses and specific applications.

HEADscape

HEADscape, the software solution for analyzing and classifying soundscape measurements in accordance with ISO 12913-2, also enables aurally-accurate playback.

Equalization Filters

playBasic provides the following equalizations: Free Field (FF), Diffuse Field (DF), Independent of Direction (ID), earDrum Reference Point (DRP), and Linear (LIN, without equalization).

A user-defined FIR filter can also be installed. The FIR filter enables you to create and customize specific transfer functions to optimize the audio quality.

Headphones

HEAD acoustics provides dynamic headphones for aurally-accurate playback. A model-specific standard equalization is already available on playBasic. The serial number of the headphones can be found on the underside of the device.

Usage as a Windows Audio Device

playBasic can be used as a Windows audio device. In this case, playBasic behaves like a normal sound card, making the use of an additional sound card unnecessary. However, aurally-accurate playback cannot be guaranteed in this mode.

TECHNICAL DATA

GENERAL

Data acquisition / data generation connections	1 x headphone output
Communication interfaces	1 x USB device
Supply connection	1 x USB-C
Supply voltage	5 V_{DC}
Reverse polarity protection	Yes
Maximum power consumption during operation	2.5 W
System sampling rate	44.1 kHz, 48 kHz
Max. sampling rate	48 kHz
Operating temperature	-20 °C–+60 °C (-4 °F–+140 °F)
Storage temperature	-20 °C–+70 °C (-4 °F–+158 °F)
Shock according to EN 60068-2-27	20 g (six axes)
Vibration according to EN 60068-2-6	4 g (5 Hz–500 Hz)
Dimensions (W x H x D)	84 mm x 26 mm x 84 mm
Weight	175 g

COMMUNICATION INTERFACES

USB Device

Plug connector	1 x USB-C
Number of interfaces	1
USB specification	USB 2.0
Data rate (gross)	480 Mbit/s
Electrical isolation	No

ANALOG OUTPUTS

Headphones

Plug connector	1 x jack 6.3 mm
Number of channels	2
Output impedance	< 0.3 Ω
DC capable	Yes
Frequency range	0 Hz–22 kHz
Frequency response 20 Hz..20 kHz re 1 kHz	< ±0.06 dB
Digital lowpass filter @ f_s = 48 kHz, proportional to f_s	24 kHz
S/N	> 118 dB(A)
THD+N at 1 kHz	< -94 dB
Crosstalk at 1 kHz	< -120 dB
Phase coherence	< 0.45°, 20 Hz–20 kHz
Resolution	32 bits
Equalization	FF, DF, ID, DRP, LIN, USR (max. 512 taps)
Maximum voltage	10.5 V_p
Maximum level	17 dB(V) 116 dB_{SPL} (depending on the type of headphones)
Maximum output power per channel	0.44 W

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Contact

Ebertstrasse 30a
52134 Herzogenrath, Germany
Phone: +49 2407 577-0
E-Mail: sales@head-acoustics.com
Website: www.head-acoustics.com