

# HDVD 800

Pure audio in perfection



Instruction manual

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## Important safety instructions

1. Read these instructions.
2. Keep these instructions. Always include these instructions when passing the apparatus on to third parties.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power supply cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, when the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.
16. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
17. Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.
18. The mains plug of the power supply cord shall remain readily accessible.





### Hazard warnings on the bottom of the product

The label shown on the left is attached to the bottom of the product. The symbols on this label have the following meaning:

Presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

Never open the product as there is a risk of electric shock. There are no user serviceable parts inside. Always refer repairs and servicing to your authorized Sennheiser service partner.

Read and follow the safety and operating instructions contained in the instruction manual.

### Preventing damage to health and accidents

- ▶ Do not listen at high volume levels for long periods of time to prevent hearing damage.
- ▶ Keep the product, accessories and packaging parts out of reach of children and pets to prevent accidents and choking hazards.

### Preventing damage to the product and malfunctions

- ▶ If the product was moved from a cold environment to a warm one, allow the product to stand for approx. half an hour before using it.

### Intended use/Liability

The HDVD 800 is an amplifier for dynamic headphones. It can be connected to different audio sources such as hi-fi systems, turntables with preamplifiers, computers and DVD players.

This product is intended for private domestic use only. It is not suitable for commercial use.

It is considered improper use when this product is used for any application not named in this instruction manual.

Sennheiser does not accept liability for damage arising from abuse or misuse of this product and its attachments/accessories.

## The HDVD 800 headphone amplifier

The state-of-the-art HDVD 800 digital headphone amplifier allows you to fully exploit the potential of your high-end headphones. The HDVD 800's consistently symmetrical signal processing and extremely low harmonic distortion ensures an unadulterated and perfect music enjoyment.

The HDVD 800's output circuitry is designed for use with up to four dynamic headphones. Consistent wiring and the use of XLR-4 sockets ensures an excellent channel separation.

Digital sources such as CD, DVD and Blu-Ray players can be connected optically or coaxially to the HDVD 800. The headphone amplifier features a USB socket for connection to a computer. Analog audio sources such as tuners, open reel machines and turntables with a corresponding preamplifier can be connected to the line input. The input selection rotary switch allows you to switch between the connected audio sources.

The headphone amplifier and the Sennheiser HD 800, HD 700 and HD 650 high-end headphones are optimally matched with regard to technology, design and performance characteristics and fulfil the demands of the most discerning audiophile.

### Features

- Symmetrical signal processing with exact signal transmission over the entire frequency spectrum and extremely low harmonic distortion
- Can be used with up to four dynamic headphones
- 122 dB dynamic range, wide bandwidth and high transient response due to short signal paths
- Balanced XLR-4 sockets and high-quality 1/4" (6.35 mm) jack sockets for connection of headphones
- High flexibility due to different connection possibilities:
  - digital inputs: S/PDIF coaxial/optical, AES/EBU for XLR-3 sockets
  - analog inputs: balanced XLR-3, unbalanced RCA
  - analog output: balanced XLR-3
- USB Audio class 2 (24 bit/192 kHz)
- Automatic adjustment of the sampling rate (44.1 kHz to 192 kHz)
- Outstanding digital-analog converter with a resolution of 24 bits and a sampling rate of up to 192 kHz for crystal-clear and distortion-free sound quality
- High-quality components

## Package contents



1 HDVD 800 digital headphone amplifier



1 quick guide



1 safety guide



1 CD ROM with driver for Microsoft® Windows® and a detailed instruction manual as PDF

### Required accessories



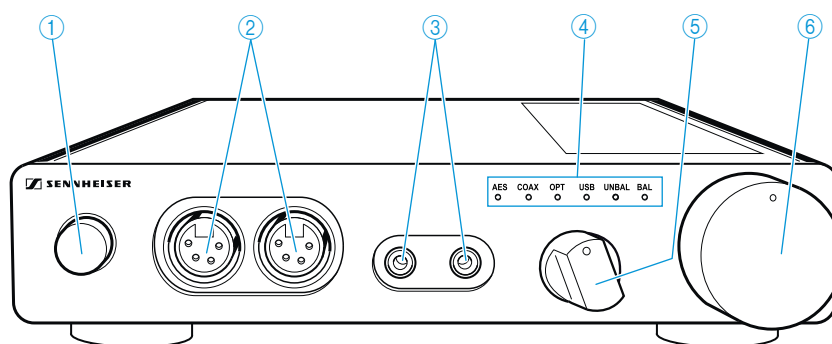
A suitable and approved mains cable is available from your Sennheiser service partner.



A list of accessories can be found on the HDVD 800 product page at [www.sennheiser.com](http://www.sennheiser.com). For information on suppliers, contact your local Sennheiser partner: [www.sennheiser.com](http://www.sennheiser.com) > "Sales Partner".

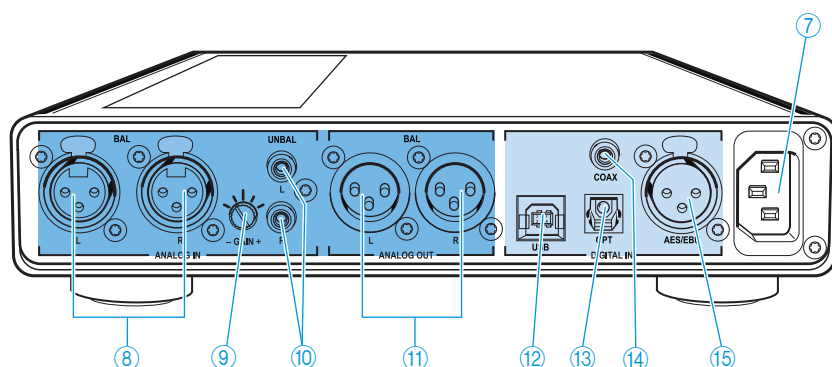
## Product overview

### Overview of the front panel



- ① On/off button
- ② Headphone outputs, XLR-4 socket, balanced
- ③ Headphone outputs, 1/4" (6.35 mm) jack socket, unbalanced
- ④ Input selection LED
- ⑤ Input selection rotary switch
- ⑥ Volume control

### Overview of the rear panel



- ⑦ Mains socket

#### Analog

- ⑧ XLR-3 input socket, balanced (BAL L, R)
- ⑨ Input attenuation rotary switch (-GAIN+) for RCA input
- ⑩ RCA input socket, unbalanced (UNBAL L, R)
- ⑪ XLR-3 output socket, balanced (BAL L, R)

#### Digital

- ⑫ USB socket, type-B
- ⑬ S/PDIF input, optical (OPT)
- ⑭ S/PDIF input, coaxial, (COAX)
- ⑮ XLR-3 input socket for AES/EBU



The type plate and the electrical data can be found on the base of the product.

# Putting the HDVD 800 into operation

## Setting up the headphone amplifier

### CAUTION

#### Risk of staining of furniture surfaces!

Varnish or furniture polish may degrade the feet of the product, which could stain your furniture.

- ▶ Do not place the product on delicate surfaces; if necessary, use a non-slip pad under the product.

- ▶ Place the headphone amplifier on a flat, horizontal surface.
- ▶ Ensure sufficient ventilation. The headphone amplifier generates heat which is dissipated through the housing.

## Connecting the headphone amplifier to audio sources

You can connect several audio sources to the headphone amplifier and switch between these connected sources using the input selection rotary switch.

- ▶ Switch your audio source off.
- ▶ Select a suitable high-quality connection cable for your audio source and, if necessary, a suitable adapter. Please observe the maximum recommended cable length L max.

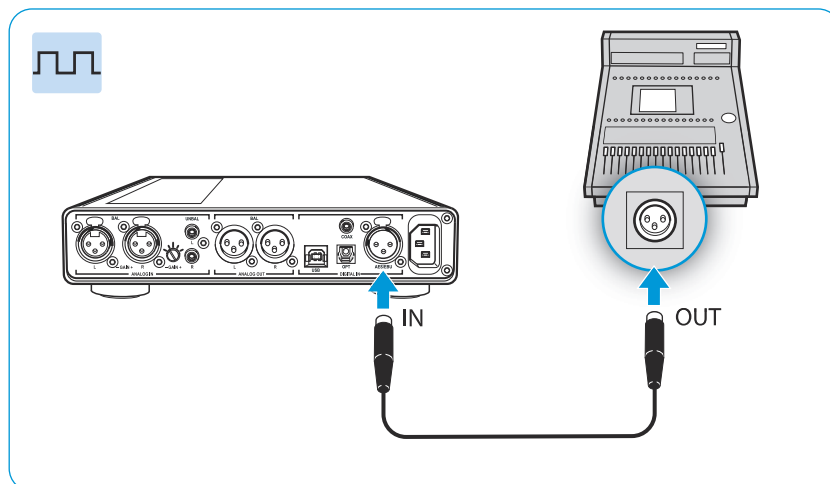
Connection possibilities of the audio source (OUT)		Connection cable/adaptor	L max	Page
<b>A</b>	XLR-3: AES/EBU (digital)	Balanced XLR-3 cable (110 Ω)	10 m	8
<b>B</b>	Coaxial (digital)	Coaxial cable (75 Ω)	5 m	8
<b>C</b>	Optical (digital)	Optical cable	5 m	8
<b>D</b>	USB (digital)	USB 2.0 cable	5 m	9
<b>E</b>	XLR-3 (analog)	2 balanced XLR-3 cables	10 m	9
<b>F</b>	RCA (analog)	Stereo audio cable with 2 RCA plugs on each end	1 m	10

- ▶ Proceed as described in the corresponding chapter.



A

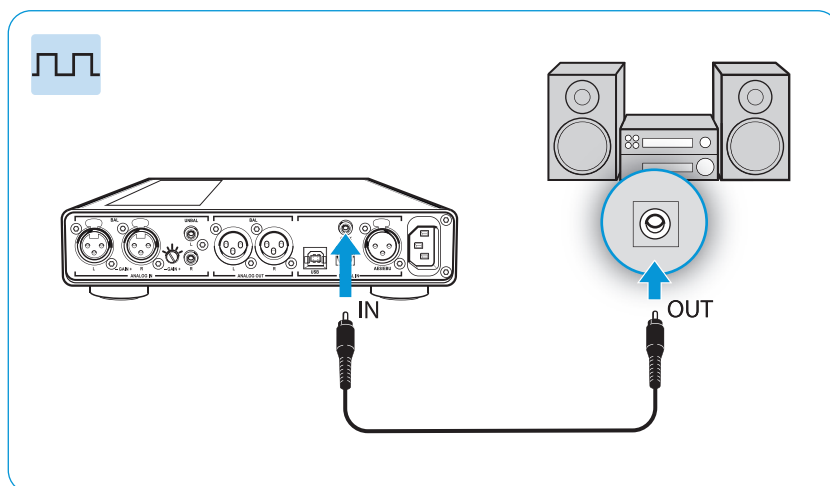
Connection possibility of the audio source: digital (AES/EBU)



Connection cable: balanced XLR-3 cable (110  $\Omega$ )

B

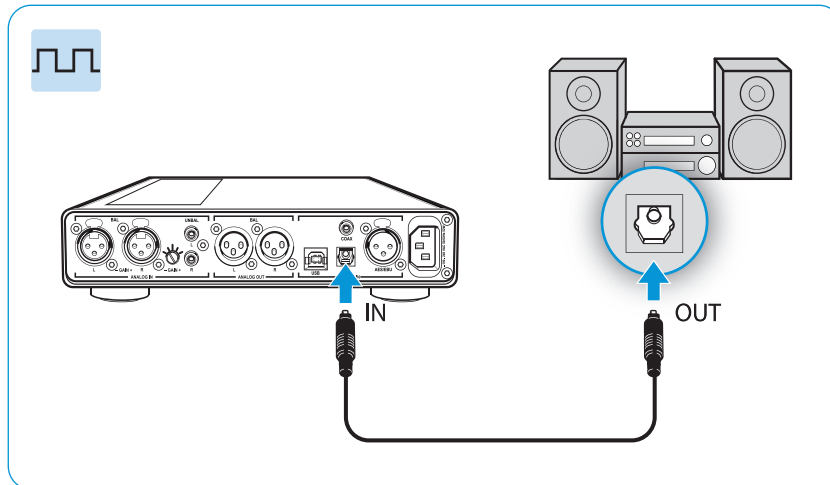
Connection possibility of the audio source: digital (coaxial)



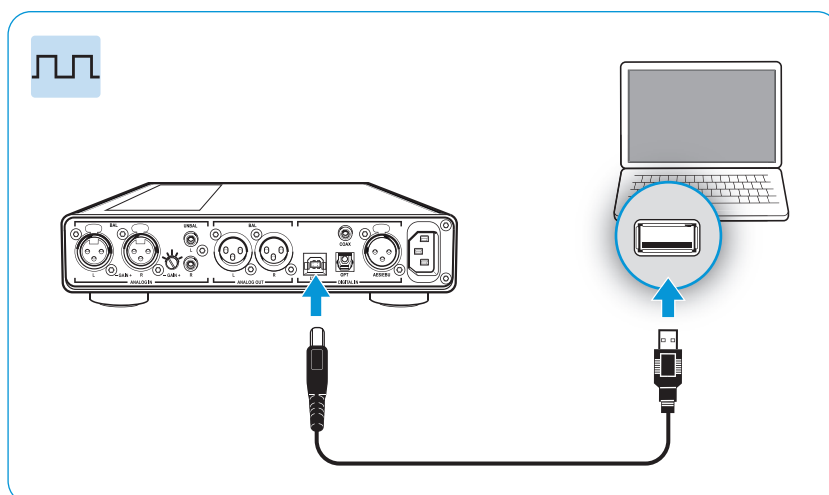
Connection cable: coaxial cable (75  $\Omega$ )

C

Connection possibility of the audio source: digital (optical)



Connection cable: optical cable

**D****Connection possibility of the audio source: USB****Connection cable:** USB 2.0 cable

- ▶ If you are using a Mac computer, select the HDVD 800 as the output device (SENNHEISER USB 2.0 Audio Out). If you are using a Microsoft Windows PC, install the driver and, via the Control Panel, select the HDVD 800 as the output device.

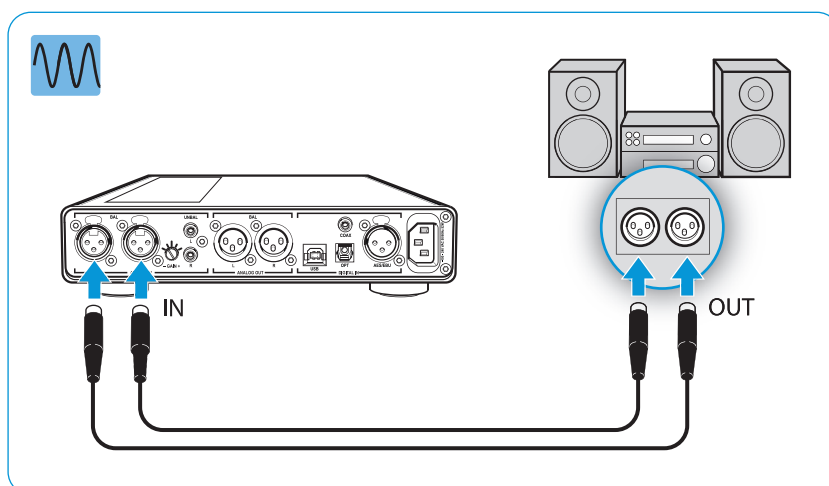
**Installing the driver**

If you are using a Microsoft® Windows® operating system, install the driver from the enclosed CD ROM. For an Apple® OS X® operating system from version 10.6.4 onwards, you do not have to install the driver. The HDVD 800 is automatically recognized.

**System requirements**

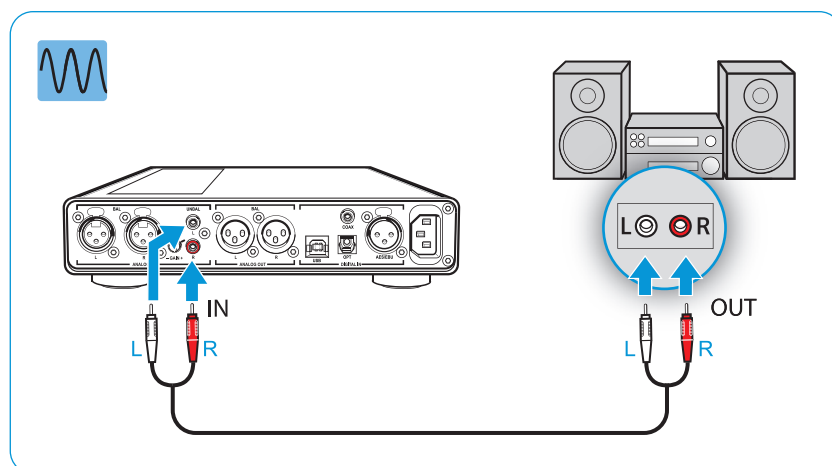
Operating systems	Microsoft Windows XP with SP 3 Microsoft Windows Vista Microsoft Windows 7 Microsoft Windows 8
Processor	Dual-core processor, 1.6 GHz or higher
RAM	1 GB recommended
Hard disk	Min. 20 MB free hard disk memory

- ▶ Select "Installer" or run the setup.exe file on the enclosed CD ROM.
- ▶ Follow the instructions of the install program.

**E****Connection possibility of the audio source: analog, balanced (XLR-3)****Connection cable:** 2 balanced XLR-3 cables

F

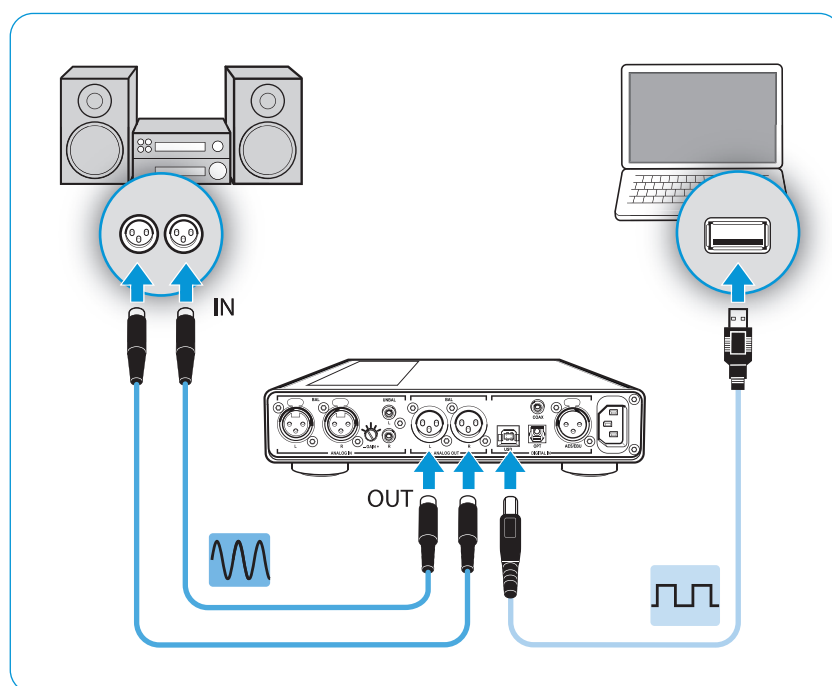
Connection possibility of the audio source: analog, unbalanced (RCA)



**Connection cable:** Stereo audio cable with 2 RCA plugs on each end

## Using the headphone amplifier as a high-quality computer sound card

You can use the HDVD 800 as a high-quality computer sound card in order to achieve a higher volume level and a better precision in audio reproduction.



## Connecting the headphone amplifier to the mains

### CAUTION

#### Danger of damage to the product!

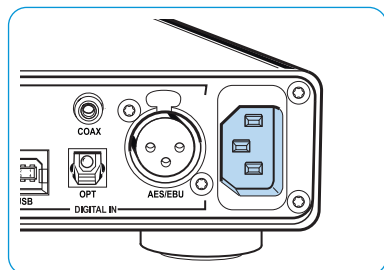
If you use an unsuitable power supply, this can cause damage to the product.

- ▶ Use a suitable mains cable to connect the product to the mains (100 to 240 V AC, 50 or 60 Hz).

- ▶ Connect the mains cable to the mains socket and a wall socket.

To disconnect the headphone amplifier from the mains:

- ▶ Unplug the mains cable from the wall socket.



## Using the HDVD 800

### Switching the HDVD 800 on/off



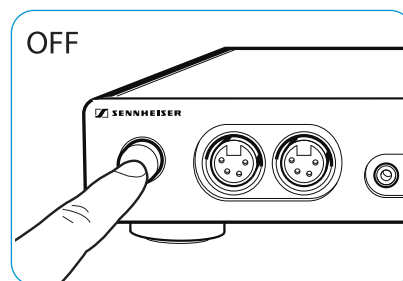
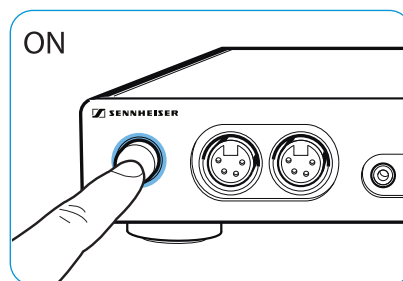
#### WARNING

Hearing damage due to high volumes!

Listening at high volume levels for long periods can lead to permanent hearing defects.

- ▶ Set the volume to a low level before putting on the headphones (see page 14).
- ▶ Do not continuously expose yourself to high volumes.

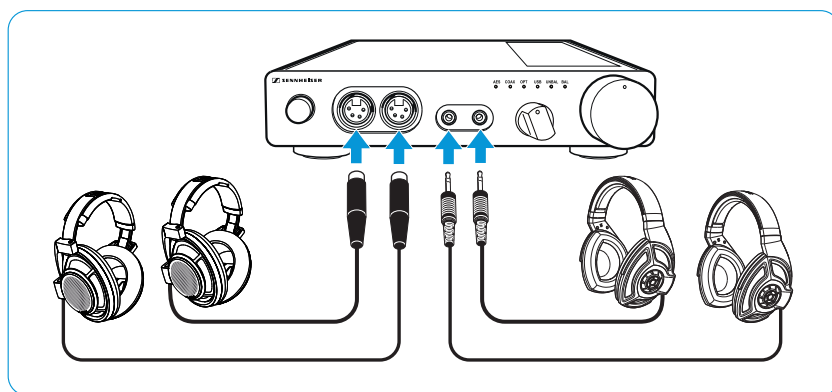
- ▶ Press the on/off button.  
When the headphone amplifier is switched on, the on/off button is backlit. When you switch off the headphone amplifier, the backlighting of the on/off button goes off.



### Connecting headphones

The HDVD 800 features 2 balanced XLR-4 sockets and 2 unbalanced 1/4" (6.35 mm) jack sockets for connecting up to 4 headphones. We recommend using high-impedance headphones for an optimal listening experience.

- ▶ Connect one or several pairs of headphones.



## Selecting an audio source

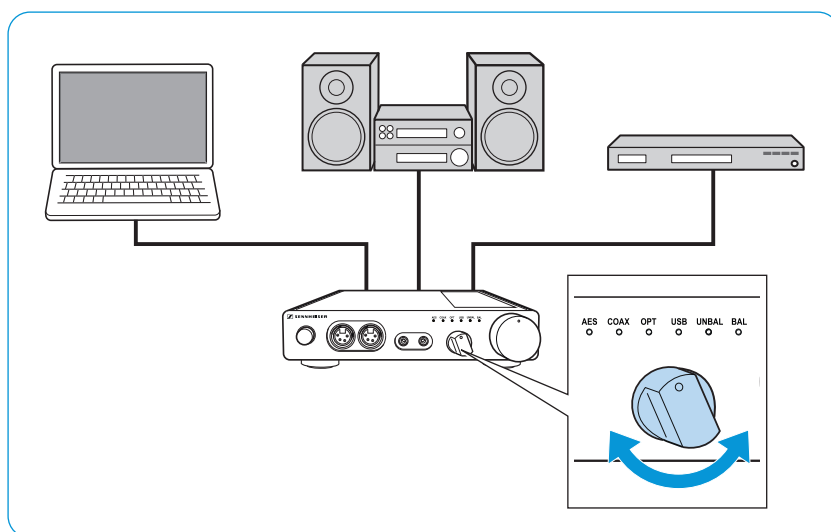


### WARNING

#### Danger of hearing damage!

In order to protect your hearing, before switching to a different audio source, first set the volume on the headphone amplifier to a low level. Different signal sources and different listening material (e.g. different pieces of music on different CDs) can have widely varying signal levels. In the case where you switch to a higher level signal source from a lower one without first reducing the volume level this can lead to high volume levels in the headphones and could damage your hearing.

- Set the volume on the headphone amplifier to a low level (see page 14) before switching to a different audio source.



- Use the input selection rotary switch to select your connected audio source.

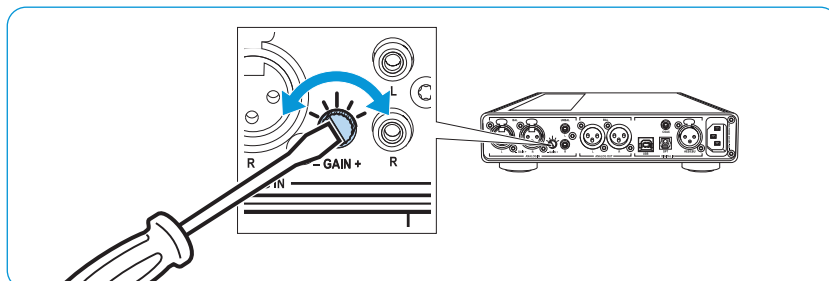
Switch position		Selected input on the headphone amplifier
AES		XLR-3: AES/EBU (digital)
COAX		Coaxial (digital)
OPT		Optical (digital)
USB		USB (digital)
UNBAL		RCA (analog)
BAL		XLR-3 (analog)

## Adjusting the signal level of the RCA input



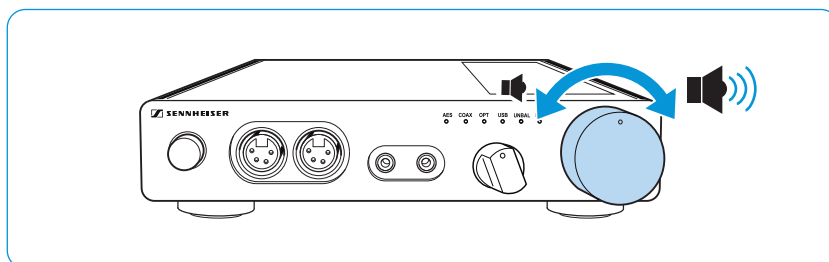
In order to optimally set the gain of the headphone amplifier, you can use the input attenuation rotary switch (-GAIN+) to adjust the signal level of the RCA input.

- ▶ Turn the input attenuation rotary switch (-GAIN+) towards the
  - + sign: if the signal is too low or
  - sign: if the signal is overmodulated.



## Adjusting the volume

- ▶ Use the volume control to adjust the volume.



## Cleaning and maintaining the HDVD 800

### CAUTION

**Liquids can damage the electronics of the product!**

Liquids entering the housing of the device can cause a short circuit and damage the electronics.

- ▶ Keep all liquids far away from the product.
  - ▶ Do not use any cleansing agents or solvents.
- 
- ▶ Disconnect the product from the mains before cleaning.
  - ▶ Only use a dry and soft cloth to clean the product.

## If a problem occurs ...

Problem	Possible cause	Solution	Page
No sound	The input selection rotary switch is between two positions	Set the input selection rotary switch to one of the two inputs.	13
No sound when connected to a computer	A different output device is selected; the driver is not installed	In the operating system, select the HDVD 800 as the output device; install an additional driver for Microsoft Windows	9
No sound when the digital input is selected	The format of the audio source does not correspond to S/PDIF or AES 3	Connect an audio source with a suitable format.	9
RCA input: signal distorted or too low	The sensitivity is adjusted too high or too low	Adjust the signal of the analog audio source.	14
Analog XLR-3 input: signal distorted or too low	The audio signal is adjusted too high or too low at the audio source	Adjust the audio signal directly at the audio source.	-
Windows: HDVD 800 not recognized as sound card	The driver is not installed	Install the driver.	9

If a problem occurs that is not listed in the above table or if the problem cannot be solved with the proposed solutions, please contact your local Sennheiser partner for assistance.

To find a Sennheiser partner in your country, search at [www.sennheiser.com](http://www.sennheiser.com) > "Service & Support".



## Specifications

Dimensions (W x H x D)	approx. 224 x 44 x 306 mm
Weight	approx. 2.25 kg
Max. output power	approx. 480 mW @ 1 kHz and 600 $\Omega$ load at the XLR-4 output
Frequency response	< 10 Hz to > 100 kHz
Crosstalk attenuation	min. 93 dB @ 1 kHz
THD+N	< 0.001%
Gain	adjustable
RCA input/XLR-4 output	14 dB, 22 dB, 30 dB, 38 dB, 46 dB
Gain	
XLR input/XLR-4 output	16 dB
Dynamic range	> 115 dB @ 600 $\Omega$ load (A-weighted)
Operating temperature range	0° – 45°C
<b>Power supply</b>	
Voltage range	100 – 240 V~, 50 – 60 Hz
Power consumption	nom. 9 W (2x 300 $\Omega$ headphones connected to the XLR-4 outputs) max. 18 W (2x 16 $\Omega$ headphones connected to the ¼" (6.35 mm) jack outputs)
<b>Analog input (XLR-3)</b>	
Max. input voltage	18 dBV
Impedance	20 k $\Omega$
<b>Analog input (RCA)</b>	
Max. input voltage	20 dBV (with minimum gain)
Impedance	10 k $\Omega$
<b>Digital inputs</b>	
S/PDIF (coaxial/optical), AES/EBU (XLR-3)	
Supported sampling rates	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz (S/PDIF optical: max. 88.2 kHz)
<b>USB , type-B</b>	
USB standard	min. USB 2.0
USB Audio class	USB Audio 2.0
<b>Headphone outputs (XLR-4)</b>	
Pin assignment	1: L+, 2: L-, 3: R+, 4: R-, screen: GND
Impedance	min. 16 $\Omega$
<b>Headphone outputs (¼")</b>	
Pin assignment	tip: left, ring: right, sleeve: GND
Impedance	min. 16 $\Omega$

## Manufacturer declarations

### Warranty

Sennheiser electronic GmbH & Co. KG gives a warranty of 24 months on this product. For the current warranty conditions, please visit our website at [www.sennheiser.com](http://www.sennheiser.com) or contact your Sennheiser partner.

### In compliance with the following requirements

- WEEE Directive (2002/96/EC)




Please dispose of this product at the end of its operational life-time by taking it to your local collection point or recycling center for such equipment.

### CE Declaration of Conformity

- EMC Directive (2004/108/EC)
- Low Voltage Directive (2006/95/EC)
- ErP Directive (2009/125/EC)
- RoHS Directive (2011/65/EU)

The declaration is available at [www.sennheiser.com](http://www.sennheiser.com).

### Statements regarding FCC and Industry Canada

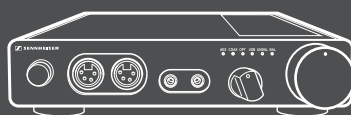
<b>FCC Declaration of Conformity (DoC)</b>	
We,	 <b>SENNHEISER</b> Model No: HDVD 800
	Sennheiser Electronic Corporation One Enterprise Drive • Old Lyme • CT 06371 • USA Tel: +1 (860) 434 9190, ext. 144 Fax: +1 (860) 434 1759
declare the above device comply with the requirements of Federal Communications Commission.	
This device complies with Part 15 of the FCC rules. Operation is subjected to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.	
Responsible Party: John Falcone	

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This class B digital apparatus complies with the Canadian ICES-003. Changes or modifications made to this equipment not expressly approved by Sennheiser electronic Corp. may void the FCC authorization to operate this equipment.

### Trademarks

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