



SENNHEISER



HDV 820

Model: HDV 820

Digital headphone amplifier

Instruction manual

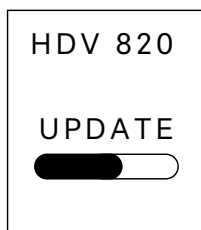
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Important safety instructions

1. Read these safety instructions.
2. Keep these safety instructions. Always include these safety instructions when passing the product on to others.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use the product near water.
6. Only clean the product when it is not connected to the power supply system. Clean only with a dry cloth.
7. Ensure circulating ventilation. The product generates heat which is dissipated through the housing. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other products that produce heat and do not expose to direct sunlight.
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 it exits from the product.
11. Use only attachments/accessories/spare parts supplied or recommended by Sonova Consumer Hearing.
12. Use only with shelves, racks, or tables that can safely support the weight the product (see "Specifications" on page 25).
13. Unplug the product during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the product 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 product, when the product has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **WARNING:** To reduce the risk of fire and electric shock, do not expose the product to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the product.
16. To completely disconnect this product from the AC mains, disconnect the power supply cord plug from the AC receptacle.
17. The plug of the power supply cord and the AC receptacle shall remain readily accessible.
18. Use the product only at altitudes up to 6562 ft/2000 m above mean sea level.



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 fire or electric shock.

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

Never open the product. There is a risk of electric shock when touching live parts. There are no user serviceable parts inside the product. Refer repairs to an authorized Sonova Consumer Hearing partner.

Preventing damage to health and accidents

- ▷ Protect your hearing from high volume levels. Permanent hearing damage may occur when headphones are used at high volume levels for long periods of time. Headphones of the Sennheiser brand sound exceptionally good even at low and medium volume levels.
- ▷ Keep the product, accessories and packaging parts out of reach of children and pets to prevent accidents. Swallowing and choking hazard.
- ▷ Do not use the product in an environment that requires your special attention (e.g. when performing skilled jobs).

Preventing damage to the product and malfunctions

- ▷ Allow the product to stand for at least 2 hours before putting it into operation. Condensation can form inside the product if it is moved from a cold environment to a warm environment.

Notes on driver and firmware updates

We recommend using the latest DAC (digital-to-analog converter) firmware for your headphone amplifier and the latest driver for your operating system (MacOS, Windows). DAC firmware and driver updates can be downloaded free of charge from the Internet at www.sennheiser-hearing.com/download or can be obtained from your Sonova Consumer Hearing partner.

Intended use/Liability

This amplifier for dynamic headphones has been designed for music reproduction from analog and digital high-end devices such as SACD, DVD-A, Blu-ray or CD players or for the reproduction of high-resolution music files from your Mac or PC.

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

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

Sonova Consumer Hearing GmbH is not liable for damages to USB devices that are not consistent with the USB specifications.

Sonova Consumer Hearing GmbH does not accept liability for damage arising from misuse or improper use of the product and its attachments/accessories.

Before putting the product into operation, please observe the respective country-specific regulations.

The HDV 820 headphone amplifier

The HDV 820 headphone amplifier is the result of our many years of audio expertise and the perfect complement to high-end audiophile headphones of the Sennheiser brand for the ultimate in sound quality and performance. The HDV 820 offers consistently symmetrical signal processing and extremely low harmonic distortion to ensure unadulterated and perfect music enjoyment. Designed in Germany, the HDV 820 convinces with its black design and incredible precision and sound quality. The amplifier is manufactured by a team of experts at our factory specialized in headphones and audiophile products in Tullamore, Ireland.

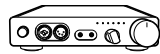
The HDV 820 is equipped with a high-resolution ESS SABRE32 DAC (digital-to-analog converter) that has a resolution of 32 bits and a sampling rate of up to 384 kHz. The amplifier can also process DSD256 files with a frequency of up to 12.3 MHz and features various audio inputs and outputs, allowing you to choose the optimum connection for your audio devices and headphones. The HDV 820 reproduces both digital and analog audio sources with superb sound quality.

Fittingly for a product that gives such an incredibly pure sound experience, the HDV 820 also inspires by its design. With its black anodized housing and white LEDs, the HDV 820 perfectly matches Sennheiser's HD 800 S flagship high-end headphones to deliver the ultimate audiophile listening experience.

Features

- Symmetrical signal processing with exact signal transmission over the entire frequency spectrum and extremely low harmonic distortion
- Dynamic range of more than 120 dB, wide bandwidth and high transient response due to short signal paths
- Outstanding ESS SABRE³² DAC (digital-analog converter) with a resolution of 32 bits and a sampling rate of up to 384 kHz
- Automatic adjustment of the sampling rate (44.1 kHz to 384 kHz)
- USB Audio (up to 32 bits/384 kHz and up to DSD256)
- Can be used with up to four dynamic headphones
- 3 balanced headphone sockets (2 x 4.4 mm jack socket, 1 x XLR-4 socket)
- High-quality XLR-3/¼" (6.35 mm) jack combo socket for connection of unbalanced headphones
- High flexibility due to different connection possibilities:
 - Digital inputs: S/PDIF coaxial/optical, USB
 - Analog inputs: balanced XLR-3, unbalanced RCA
- Analog output: balanced XLR-3, level adjustable (for connection of active loudspeakers or a power amplifier)
- Developed in Germany and manufactured in Ireland

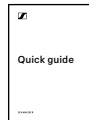
Package contents



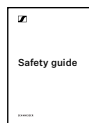
HDV 820 headphone amplifier



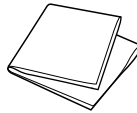
Power supply cable
(depending on region; EU, UK, US, CN, KR)



Quick guide



Safety guide



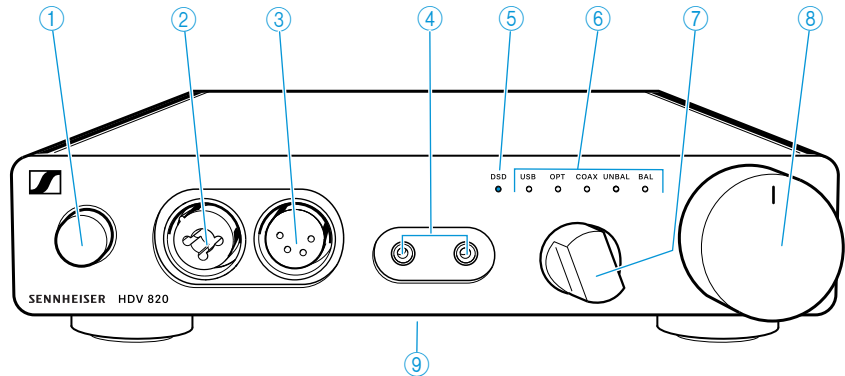
Microfiber cloth



A list of accessories can be found on the HDV 820 product page at www.sennheiser-hearing.com. Contact your local Sonova Consumer Hearing partner: www.sennheiser-hearing.com/service-support

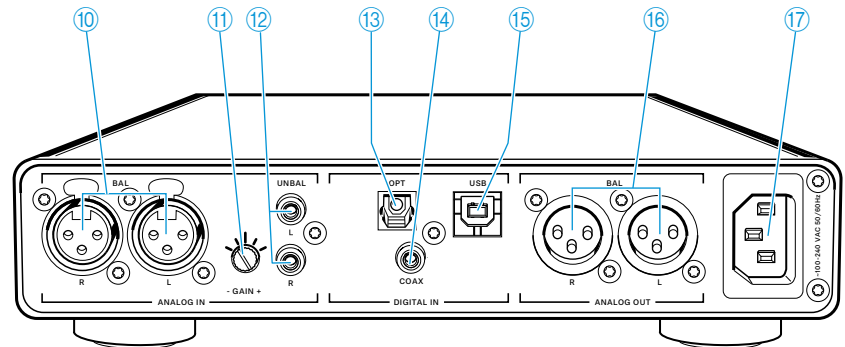
Product overview

Overview of the front panel



- ① On/off button with LED
- ② Headphone output, XLR-3/¼" (6.35 mm) jack combo socket, unbalanced
- ③ Headphone output, XLR-4 socket, balanced
- ④ Headphone outputs, 4.4 mm jack socket, balanced
- ⑤ DSD reproduction LED
- ⑥ Input selection LED
- ⑦ Input selection rotary switch
- ⑧ Volume rotary switch
- ⑨ Type plate (bottom)

Overview of the rear panel



- ⑩ XLR-3 input socket, balanced (BAL R, L)
- ⑪ Rotary switches Input gain rotary switch (-GAIN+) for RCA input
- ⑫ RCA input socket, unbalanced (UNBAL L, R)
- ⑬ S/PDIF input, optical (OPT)
- ⑭ S/PDIF input, coaxial (COAX)
- ⑮ USB input, type B (USB)
- ⑯ XLR-3 output socket, balanced (BAL R, L)
- ⑰ IEC mains socket ~100-240 VAC 50/60 Hz

Putting the HDV 820 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 and low-vibration surface.
 - ▷ Ensure circulating ventilation. The product generates heat which is dissipated through the housing.

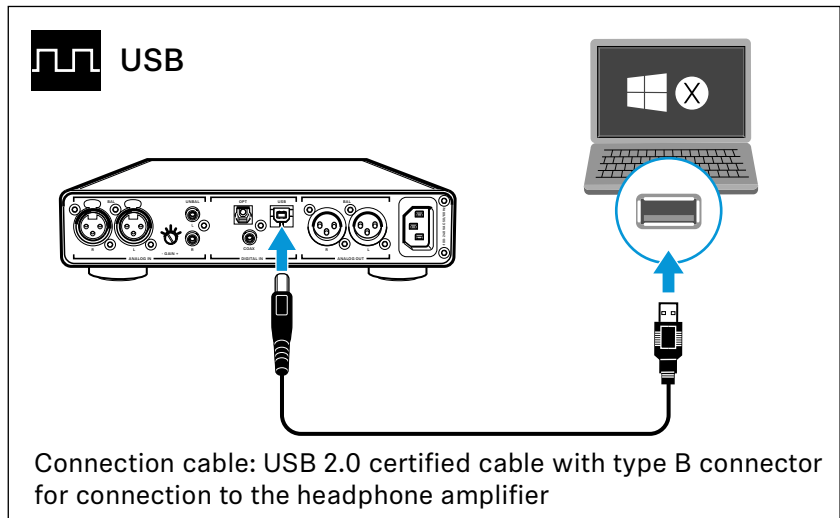
Connecting the headphone amplifier to audio sources

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 sources off before connecting the headphone amplifier.
- ▷ Select a suitable high-quality connection cable for your audio source. For an optimal listening experience, we recommend using cables with a length of 3 m.
- ▷ To connect the headphone amplifier to your audio source, refer to the connection diagram suitable for your audio source (see the following chapters):

| Connection possibility of the audio source (OUT) | | Connection cable | Page | |
|---|----------|------------------|--|----|
|  DIGITAL | A | USB | USB 2.0 certified cable with Type A and Type B connector | 10 |
| | B | Optical (OPT) | Optical cable | 10 |
| | C | Coaxial (COAX) | Coaxial cable (75 Ω) | 10 |
|  ANALOG | D | RCA (UNBAL) | Stereo audio cable with 2 RCA connectors at each end | 11 |
| | E | XLR-3 (BAL) | 2 balanced XLR-3 cables | 12 |

A Connection possibility of the audio source: digital, USB connection



▷ More information on using the headphone amplifier connected to a Mac or PC can be found on page 12.

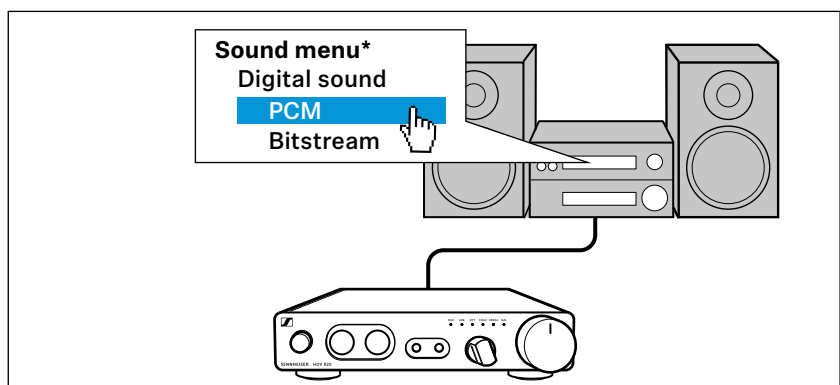
i For best signal transmission and audio quality, use a USB OTG cable (USB On-the-Go; available from your specialist dealer) to connect your mobile HiRes audio player or smartphone.

B **C** Requirements for digital connections

The digital audio inputs DIGITAL IN (OPT or COAX) can receive digital audio signals in PCM format (supported sampling rates: optical: up to 96 kHz, coaxial: up to 192 kHz).

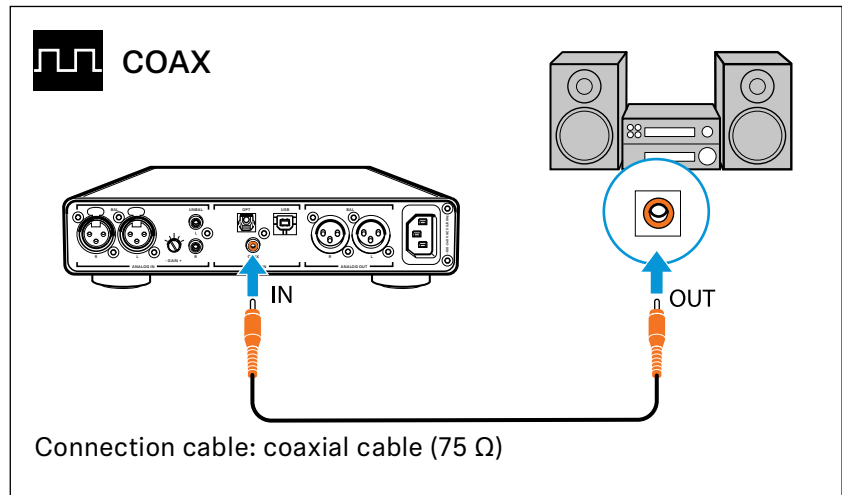
Information on how to set the audio signal of the connected device to PCM can be found in the Sound or Settings menu or in the instruction manual of your device.

If an incompatible digital audio signal is being received, the *Input selection* LED (OPT or COAX) lights up white and the *DSD reproduction* LED flashes white. Music cannot be reproduced.

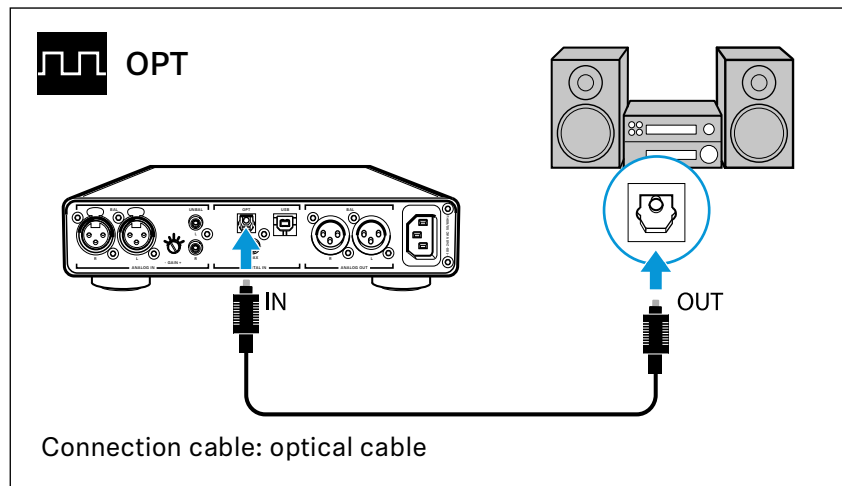


* The appearance of the Sound menu can vary depending on the device you are using

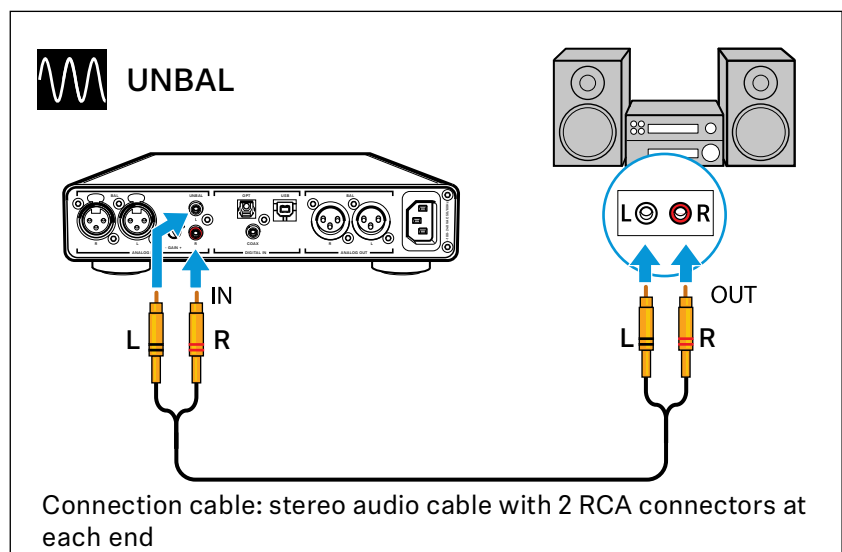
B Connection possibility of the audio source: digital, coaxial connection



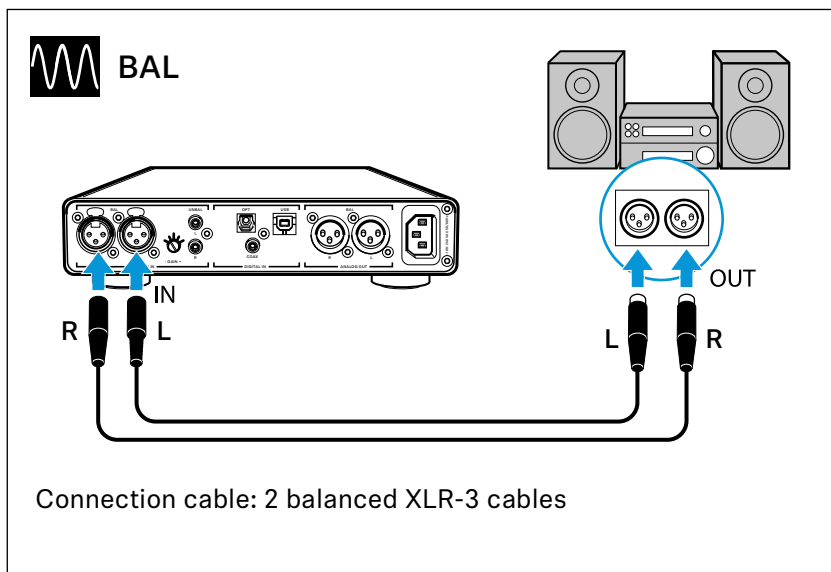
C Connection possibility of the audio source: digital, optical connection



D Connection possibility of the audio source: analog, RCA, unbalanced



E Connection possibility of the audio source: analog, XLR-3, balanced



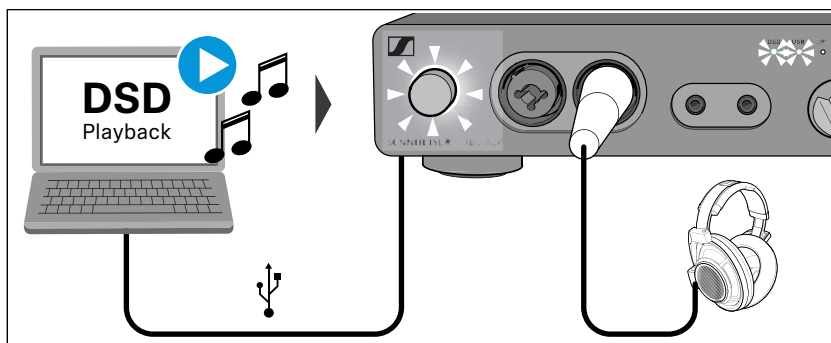
Using the headphone amplifier connected to a Mac/PC

You can connect the HDV 820 via USB (see page 10) directly to your Mac or PC and use it as an audio output device. Depending on the driver and settings used, high-resolution music files can be reproduced via the high-quality DAC (digital-to-analog converter) of the HDV 820.

Notes on DSD reproduction

If you are using your Mac or PC for native reproduction of DSD music files, the *DSD reproduction* LED on the headphone amplifier lights up, indicating the DSD mode of the DAC.

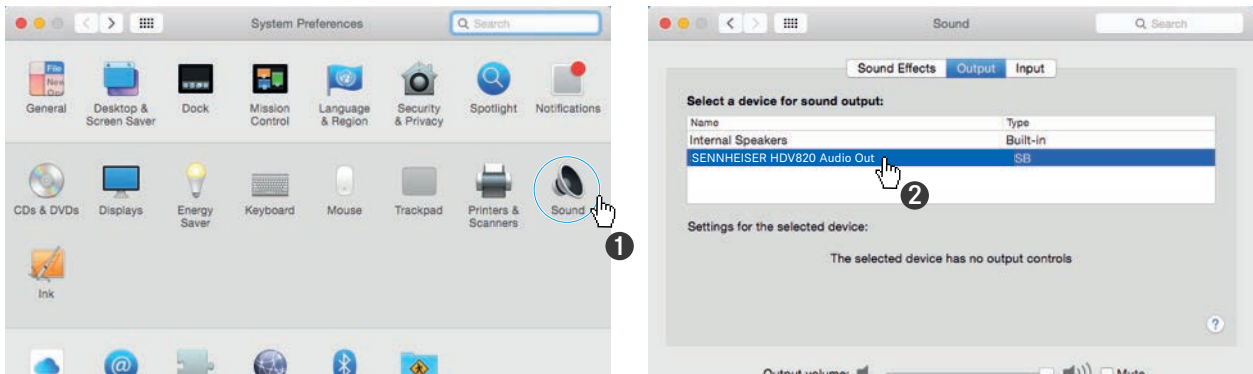
i Information on the possible configuration options for your Mac or PC for native reproduction of DSD music files using third-party software can be found on the HDV 820 product page or at www.sennheiser-hearing.com/download.



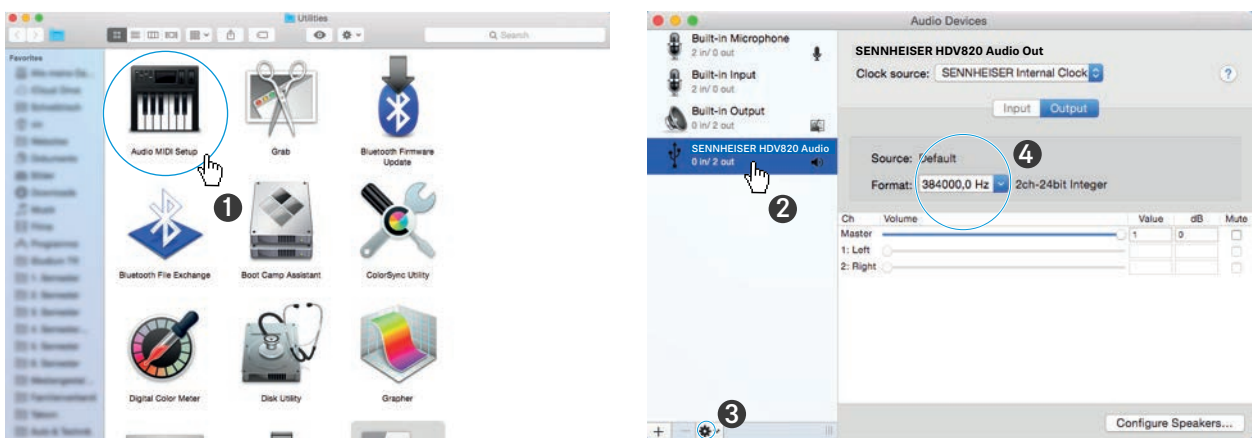
Apple OS X operating system

For an Apple Mac OS X operating system from version 10.6 onwards, you do not have to install a driver. The HDV 820 is recognized automatically.

- ▷ From the System Preferences, select “Sound” and then select “Sennheiser HDV 820” as the default audio output device.



- ▷ Open the “Audio Midi Setup” utility program and select “Sennheiser HDV 820” from the left-side column.



- ▷ From the drop-down menu, select “Use this device for sound output”.
- ▷ In the device settings, select the maximum sample rate from the “Format” drop-down list. Select “384000 Hz” for the best possible sound quality.

Microsoft Windows operating system

If you use a Microsoft Windows operating system, you have to install USB Audio drivers that come with the “HDV 820 USB Audio Software Package”. After installation of the drivers, the HDV 820 is recognized automatically.

System requirements

- Intel Core 2 processor with 1.6 GHz (minimum) or similar processor
- 2 GB RAM (minimum)
- Microsoft Windows 7/8/8.1/10/11 operating system (32 or 64 bit)
- HDV 820 USB Audio Software Package

The software package contains the following components:

- WDM USB audio driver
- ASIO USB audio driver
- Control Panel
- HDV 820 Updater

Notes on the USB audio modes

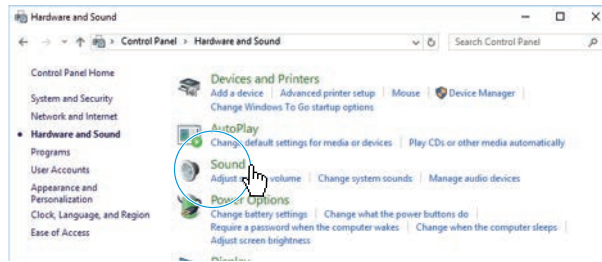
If you use standard software (e.g. Windows Media Player or Apple iTunes), the best possible transmission mode is limited by the operating system (the played music file is mixed with System Sounds and adapted to the sample rate and bit depth set for the WDM driver).

For native reproduction of high-resolution files (without driver-induced adaptation of sample rate and bit depth; 32 bits/up to 384 kHz or DSD files), you require an ASIO driver and special third-party software, which transmits the music file natively from the player software to the DAC of the HDV 820 (see page 12).

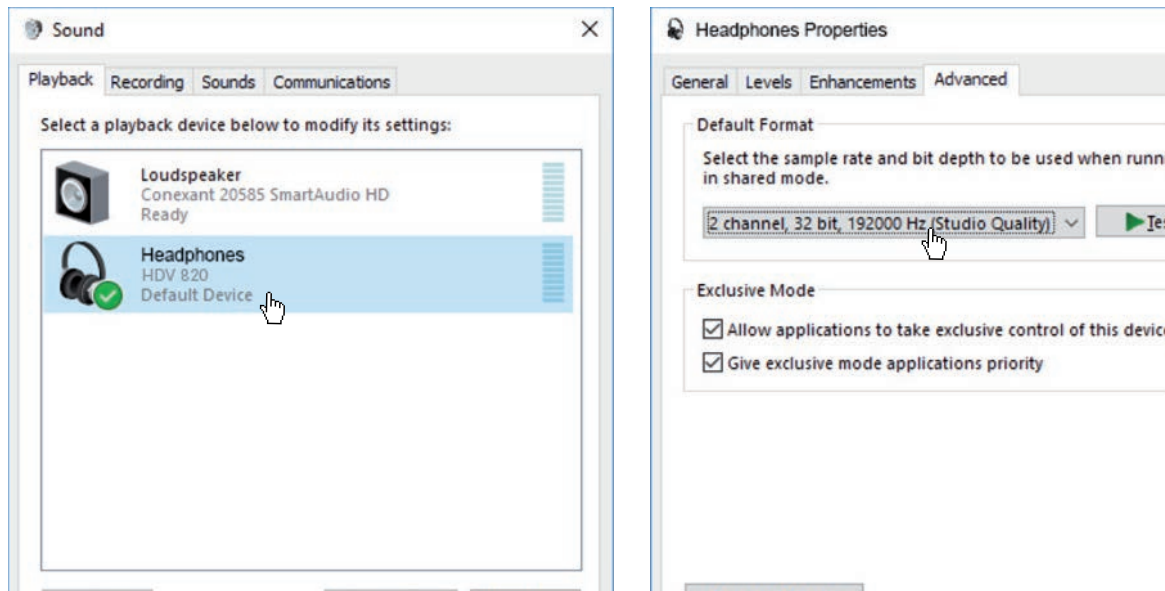
Example: Microsoft Windows 10

To install the “HDV 820 USB Audio Software Package” and to set the HDV 820 as the default audio output device:

- ▷ Install the “HDV 820 USB Audio Software Package”. The software package can be downloaded from the Internet at www.sennheiser-hearing.com/download or be obtained from your Sonova Consumer Hearing partner. You need administrator rights for installation.
- ▷ Open the Control Panel and select “Sound”.



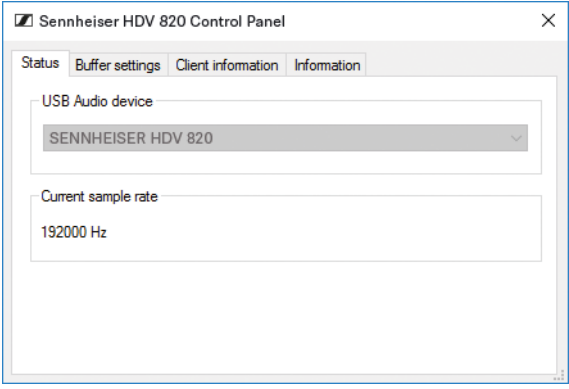
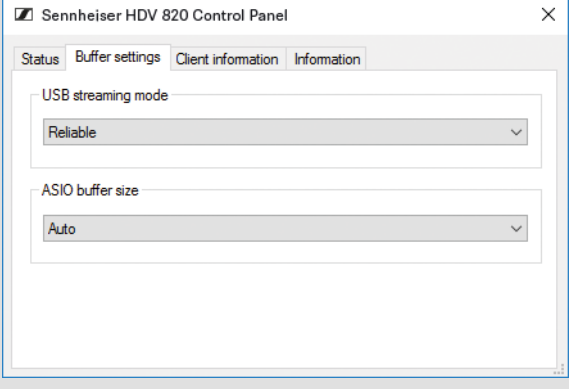
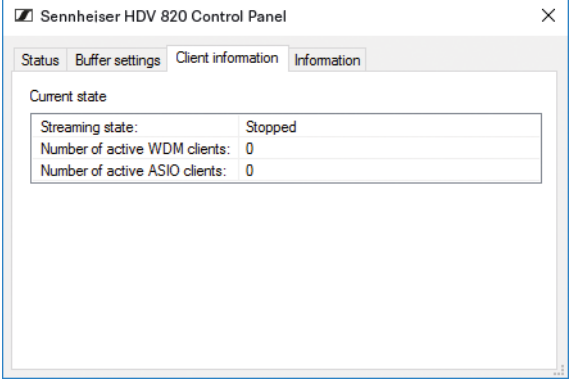
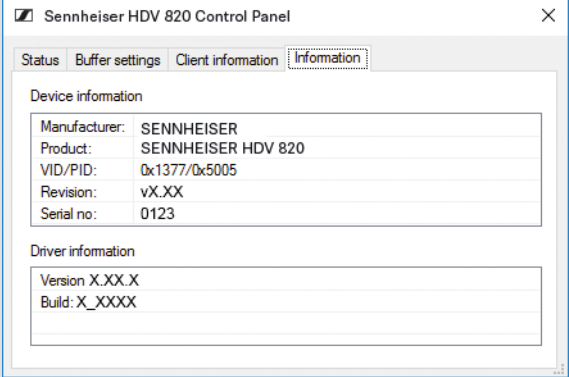
The “Sound” window opens.



- ▷ Select “HDV 820” as the default audio output device.
- ▷ Click on “Properties” and, in the “Advanced” tab, select the maximum sample rate from the “Default Format” drop-down list. Select “2 channel, 32 bits, 192000 Hz (studio quality)” for the best possible sound quality.
- ▷ Click on “OK” to apply the settings.

Using the Sennheiser Control Panel

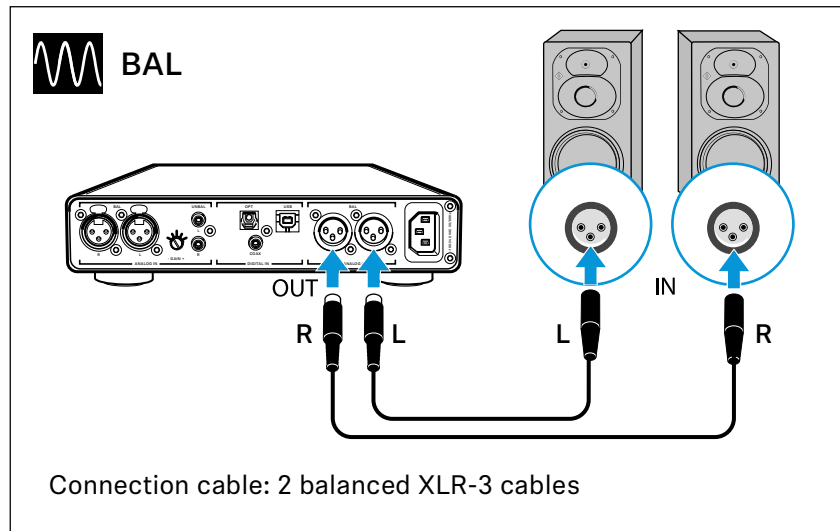
The Control Panel allows you to configure the HDV 820 for the reproduction of high-resolution music files and to monitor the current operating state.

| Tab | Control Panel view | | | | | | | | | | | | | | | |
|--------------------------------|---|--|--|----------|-------------------------------|----------|--------------------------------|-----------|---|-------------|------|---------|--------|-------|--------|---|
| Status |  <p>The screenshot shows the 'Status' tab of the Sennheiser HDV 820 Control Panel. It features a 'USB Audio device' dropdown menu with 'SENNHEISER HDV 820' selected. Below it, the 'Current sample rate' is displayed as '192000 Hz'.</p> | <p>USB Audio device Currently connected and used device. If several devices are connected simultaneously, you can select the desired device here.</p> <p>Current sample rate PCM: 44100, 48000, 88200, 96000, 176400, 192000, 352800, 384000 Hz DSD: 2822400, 5644800, 11289600 Hz</p> | | | | | | | | | | | | | | |
| | Buffer settings |  <p>The screenshot shows the 'Buffer settings' tab. It includes a 'USB streaming mode' dropdown set to 'Reliable' and an 'ASIO buffer size' dropdown set to 'Auto'.</p> | <p>USB streaming mode The buffer of the USB streaming mode controls the latency of the music signal from the file source (PC client) and the DAC (HDV 820). The lower the latency, the more CPU power the PC client has to allocate to this process. Recommended setting: "Reliable".</p> <p>ASIO buffer size The ASIO buffer size controls the data transfer between the driver and the playback software. The ASIO buffer size depends on the buffer of the USB streaming mode. Recommended setting: "Auto".</p> | | | | | | | | | | | | | |
| Client information | |  <p>The screenshot shows the 'Client information' tab. It displays the 'Current state' with a table:</p> <table border="1" data-bbox="300 1377 810 1467"> <tr> <td>Streaming state:</td> <td>Stopped</td> </tr> <tr> <td>Number of active WDM clients:</td> <td>0</td> </tr> <tr> <td>Number of active ASIO clients:</td> <td>0</td> </tr> </table> | Streaming state: | Stopped | Number of active WDM clients: | 0 | Number of active ASIO clients: | 0 | <p>Current state Information on the PC client on which the Control Panel is installed and on the streaming state ("Active" or "Stopped"). The type of driver used is displayed via the number of active WDM or ASIO clients.</p> | | | | | | | |
| | Streaming state: | Stopped | | | | | | | | | | | | | | |
| Number of active WDM clients: | 0 | | | | | | | | | | | | | | | |
| Number of active ASIO clients: | 0 | | | | | | | | | | | | | | | |
| Information |  <p>The screenshot shows the 'Information' tab. It is divided into 'Device information' and 'Driver information' sections.</p> <p>Device information</p> <table border="1" data-bbox="300 1803 810 1915"> <tr> <td>Manufacturer:</td> <td>SENNHEISER</td> </tr> <tr> <td>Product:</td> <td>SENNHEISER HDV 820</td> </tr> <tr> <td>VID/PID:</td> <td>0x1377/0x5005</td> </tr> <tr> <td>Revision:</td> <td>vX.XX</td> </tr> <tr> <td>Serial no.:</td> <td>0123</td> </tr> </table> <p>Driver information</p> <table border="1" data-bbox="300 1960 810 2027"> <tr> <td>Version</td> <td>X.XX.X</td> </tr> <tr> <td>Build</td> <td>X_XXXX</td> </tr> </table> | Manufacturer: | SENNHEISER | Product: | SENNHEISER HDV 820 | VID/PID: | 0x1377/0x5005 | Revision: | vX.XX | Serial no.: | 0123 | Version | X.XX.X | Build | X_XXXX | <p>Device information/Driver information Information on the currently connected device and the driver.</p> |
| Manufacturer: | SENNHEISER | | | | | | | | | | | | | | | |
| Product: | SENNHEISER HDV 820 | | | | | | | | | | | | | | | |
| VID/PID: | 0x1377/0x5005 | | | | | | | | | | | | | | | |
| Revision: | vX.XX | | | | | | | | | | | | | | | |
| Serial no.: | 0123 | | | | | | | | | | | | | | | |
| Version | X.XX.X | | | | | | | | | | | | | | | |
| Build | X_XXXX | | | | | | | | | | | | | | | |

Connecting the headphone amplifier to a power amplifier or to active loudspeakers

You can use the headphone amplifier as a preamplifier and connect it to a power amplifier or to active loudspeakers using analog XLR-3 cables. The output level can be adjusted via the *Volume* rotary switch.

- ▷ Switch your audio devices off before connecting the headphone amplifier.



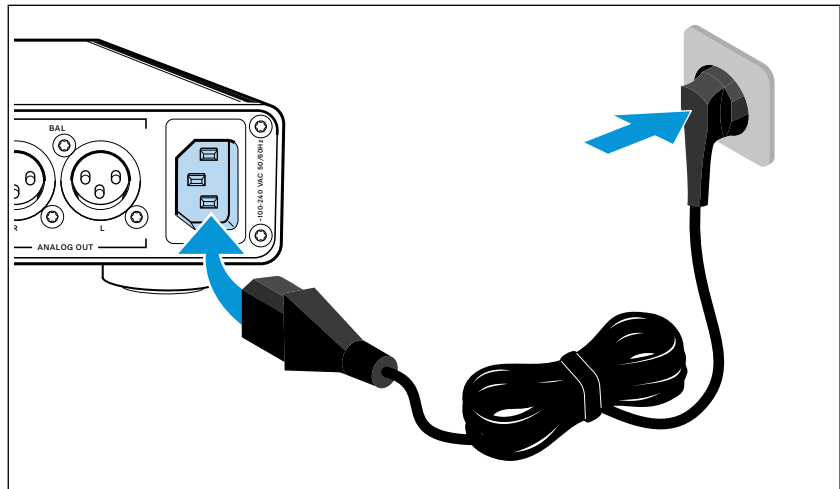
Connecting the headphone amplifier to the power supply system

CAUTION

Danger of damage to the product!

If you connect to an unsuitable power supply, the product can be damaged.

- ▷ Use a suitable power cable (supplied) to connect the product to the power supply system (100 to 240 V AC, 50 or 60 Hz).
- ▷ Connect a suitable power cable (supplied) to the IEC mains socket and a wall socket.



To completely disconnect the headphone amplifier from the power supply system:

- ▷ Unplug the power supply unit from the wall socket.

Using the HDV 820

Switching the HDV 820 on/off

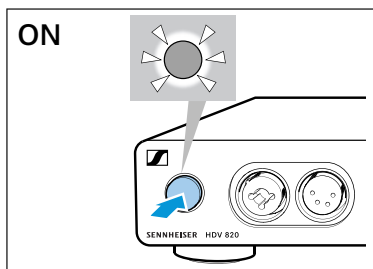


WARNING

Danger of hearing damage!

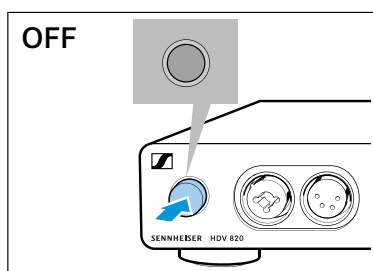
Listening at high volume levels for long periods of time can lead to permanent hearing defects.

- ▷ Before putting your headphones on, adjust the volume to a low level (see page 22).
- ▷ Do not continuously expose yourself to high volume levels.



To switch the HDV 820 on:

- ▷ Press the on/off button.
When the headphone amplifier is switched on, the on/off button is backlit in white.



To switch the HDV 820 off after use:

- ▷ Press the on/off button.
The headphone amplifier and all LEDs go off.

To completely disconnect the HDV 820 from the power supply system:

- ▷ Unplug the power plug from the wall socket,

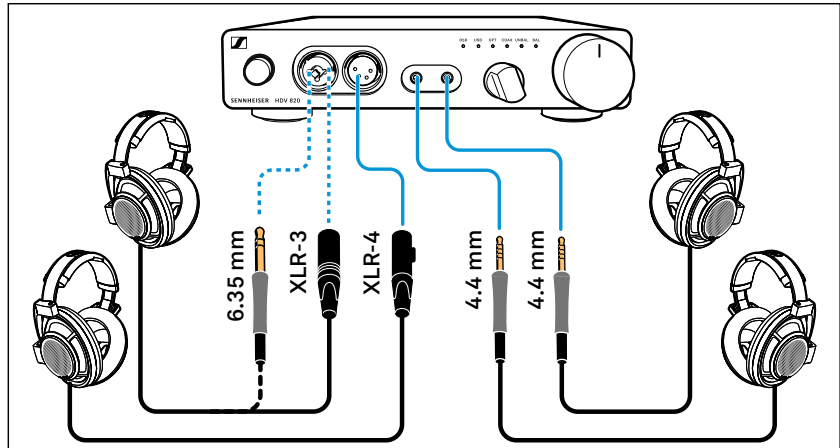
Connecting headphones

The HDV 820 features a total of 4 headphone sockets for dynamic headphones:

- 1 unbalanced XLR-3/¼" (6.35 mm) jack combo socket
- 1 balanced XLR-4 socket
- 2 balanced 4.4 mm jack sockets

The volume setting and the settings of the audio source apply to all headphones. For an optimal listening experience, we recommend using high-impedance headphones and cables with a length of 3 m.

▷ Connect one or several pairs of headphones.



Selecting the audio source

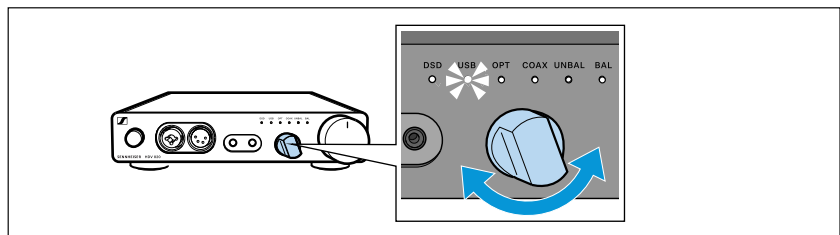


WARNING

Danger of hearing damage!

Before switching to a different audio source, first set the volume on the headphone amplifier to a low level. Different audio sources and different listening material (e.g. different pieces of music on different CDs/sound carriers) can have widely varying signal levels. In the case where you switch to a higher level audio 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 22) before switching to a different audio source.



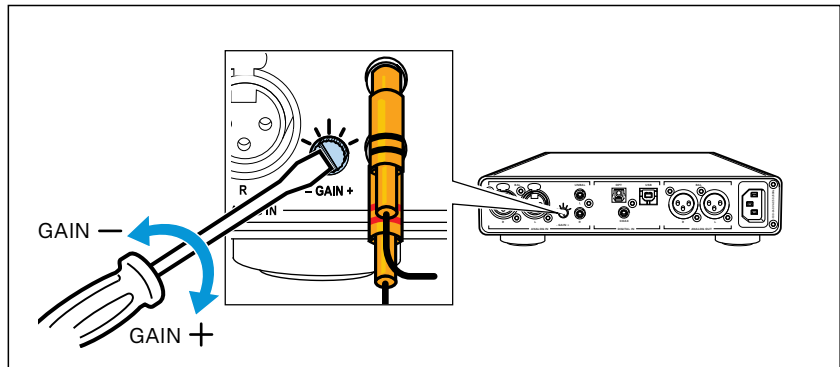
- ▷ Use the *Input selection* rotary switch to select your connected audio source.
The *Input selection* LED lights up white, indicating the selected audio source.

| Selection | Selected audio source on the headphone amplifier |
|-----------|--|
| USB | USB (digital), the <i>DSD reproduction</i> LED might also light up white (see page 12) |
| OPT | Optical (digital) |
| COAX | Coaxial (digital) |
| UNBAL | RCA (analog) |
| BAL | XLR-3 (analog) |

Adjusting the signal level of the RCA input (UNBAL)

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

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



Adjusting the volume

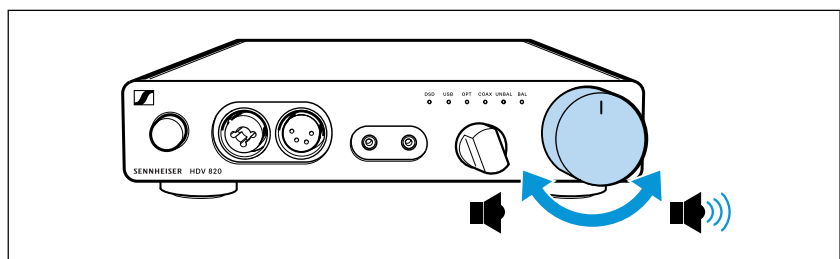


WARNING

Danger of hearing damage!

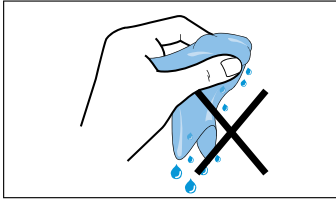
Listening at high volume levels for long periods of time can lead to permanent hearing defects.

- ▷ Before putting your headphones on, adjust the volume to a low level.
- ▷ Do not continuously expose yourself to high volume levels.
- ▷ Use the volume control to adjust the desired volume.



The volume setting applies to the headphone connections and the audio outputs (ANALOG OUT). If you have connected several identical headphones to the headphone amplifier, the volume setting applies to all headphones.

Cleaning and maintaining the HDV 820



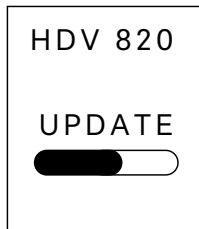
CAUTION

Liquids can damage the electronics of the product!

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

- ▷ Keep all liquids far away from the product.
 - ▷ Do not use any solvents or cleansing agents.
-
- ▷ Disconnect the product from the power supply system before cleaning.
 - ▷ Clean the product with a soft, dry cloth (supplied).

Installing firmware updates



The DAC (digital-to-analog converter) firmware can be updated using the free of charge “Sennheiser HDV 820 Updater” program. The program can be downloaded from the Internet at www.sennheiser-hearing.com/download or be obtained from your Sonova Consumer Hearing partner. The program is available for Windows and Mac operating systems.

- ▷ Make sure that the HDV 820 is connected to your Mac or PC via USB and that it is switched on.
- ▷ From Windows or MacOS, start the “Sennheiser HDV 820 Updater” program and follow the instructions on the screen.
- ▷ The program automatically checks if the new DAC firmware is compatible with your HDV 820. If this is the case, the program guides you through the installation steps and then confirms successful installation.

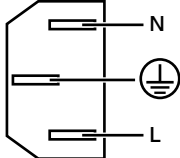
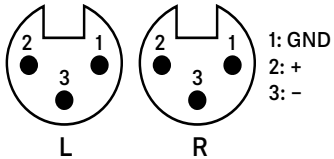
If a problem occurs ...

| Problem | Possible cause | Corrective action | Page |
|--|--|---|------|
| No audio signal | The HDV 820 is switched off | Switch the HDV 820 on. | 19 |
| | The <i>Input selection</i> rotary switch is set to a different audio source | Set the INPUT rotary switch to the desired audio source. | 21 |
| | The <i>Input selection</i> rotary switch is between two positions | Set the <i>Input selection</i> rotary switch to one of the two inputs. | 21 |
| | The volume is adjusted to low | Increase the volume. | 22 |
| No sound when the digital input (OPT or COAX) is selected | The data format of the digital audio source is not PCM | Set the audio source to PCM data format. | – |
| The audio signal is very low or distorted when an analog audio source is connected | The volume of the audio signal on the audio source is adjusted too low or too high | If possible, adjust the volume of the audio signal on the audio source to a medium level. | – |
| | The signal level of the audio input is adjusted too low/too high | Increase or reduce the signal level of the ANALOG IN UNBAL audio input. | 22 |
| Audio signal only on one ear | The analog audio cable is not properly connected | Properly connect the audio cable to the playback device. | 9 |
| | The headphone plug is not properly connected | Properly connect the headphones to the headphone amplifier. | 20 |
| The PC does not recognize the HDV 820 as the audio output device | No driver is installed | Install the USB Audio driver. | 12 |
| No audio signal when the HDV 820 is connected to a PC or Mac via USB | Another audio output device is selected on the PC or Mac | Select “Sennheiser HDV 820” as the audio output device. | 12 |
| Sound dropouts when connected via USB | The USB cable is not properly shielded | Use a USB cable that is at least USB 2.0 certified. | – |

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 Sonova Consumer Hearing partner for assistance.

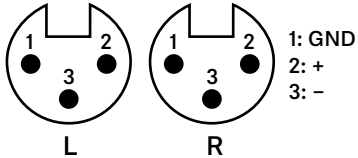
To find a partner in your country, search at www.sennheiser-hearing.com/service-support.

Specifications

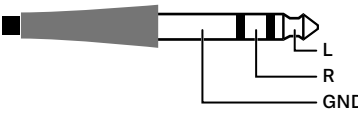
| | |
|--|---|
| Dimensions (W x H x D) | approx. 224 x 44 x 306 mm |
| Weight | approx. 2.25 kg |
| Max. output power | approx. 480 mW @ 1 kHz and 600 Ω load at the XLR-4 output |
| Frequency response | < 10 Hz to > 100 kHz |
| Crosstalk attenuation | min. 93 dB @ 1 kHz |
| THD+N | < 0.001 % |
| Gain UNBAL input/XLR-4 output | adjustable 14 dB, 22 dB, 30 dB, 38 dB, 46 dB |
| Gain BAL input/XLR-4 output | 16 dB |
| Dynamic range | > 115 dB @ 600 Ω load (A-weighted) |
| Temperature range | operation: 5 to 45 °C storage: -20 to 70 °C |
| Relative air humidity (non-condensing) | operation: 10 to 80 % storage: 10 to 90 % |
| Power supply | |
| Voltage range | 100 – 240 V~, 50/60 Hz |
| Power consumption | 12 W nominal (2 x 300 Ω headphones connected to the 4.4 mm outputs) max. 18 W (2 x 16 Ω headphones connected to the 4.4 mm outputs) |
| Pin assignment of IEC mains socket |  |
| Analog input BAL (XLR-3) | |
| Pin assignment |  |
| Max. input level | 18 dBV |
| Input impedance | 20 k Ω |
| Analog input UNBAL (RCA) | |
| Max. input level | 20 dBV (with minimum amplification GAIN) |
| Input resistance | 10 k Ω |

| Digital inputs COAX/OPT (coaxial/optical) | |
|---|--|
| Standard | S/PDIF |
| Supported data streams | PCM |
| Supported sample rates | coaxial/optical: 44.1; 48; 88.2; 96 kHz coaxial: 176.4; 192 kHz |

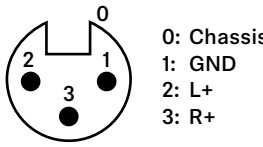
| Digital input USB (USB Type B) | |
|--------------------------------|--|
| USB standard | min. USB 2.0 |
| USB audio class | USB Audio Class 2 |
| supported file formats | PCM: 32 bits, 44.1; 48; 88.2; 96; 176.4; 192; 352.8; 384 kHz DSD: 64 (2,822,400 Hz), 128 (5,644,800 Hz), 256 (11,289,600 Hz), |

| Analog output BAL (XLR-3) | |
|---------------------------|---|
| Pin assignment |  <p>1: GND 2: + 3: -</p> |
| Max. output level | 20 dBV |
| Output impedance | 270 Ω |

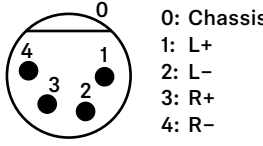
| | |
|-------------------|--------|
| Max. output level | 20 dBV |
| Output impedance | 270 Ω |

| Headphone output (jack socket, 1/4" (6.35 mm)) | |
|--|---|
| Pin assignment |  |
| Impedance | min. 16 Ω |


| | |
|-----------|-----------|
| Impedance | min. 16 Ω |
|-----------|-----------|

| Headphone output (XLR-3) | |
|--------------------------|--|
| Pin assignment |  <p>0: Chassis 1: GND 2: L+ 3: R+</p> |
| Impedance | min. 16 Ω |

| | |
|-----------|-----------|
| Impedance | min. 16 Ω |
|-----------|-----------|

| Headphone output (XLR-4) | |
|--------------------------|---|
| Pin assignment |  <p>0: Chassis 1: L+ 2: L- 3: R+ 4: R-</p> |
| Impedance | min. 16 Ω |

| | |
|-----------|-----------|
| Impedance | min. 16 Ω |
|-----------|-----------|

| Headphone output (jack socket, 4.4 mm) | |
|--|---|
| Pin assignment |  |
| Impedance | min. 16 Ω |

Manufacturer declarations

Warranty

Sonova Consumer Hearing GmbH gives a warranty of 24 months on this product.

For the current warranty conditions, please visit our website at www.sennheiser-hearing.com/warranty or contact your Sonova Consumer Hearing partner.

In compliance with the following requirements

- General Product Safety Regulation (EU) 2023/988

EU declaration of conformity



- EMC Directive (2014/30/EU)
- ErP Directive (2009/125/EC)
- Low Voltage Directive (2014/35/EU)
- RoHS Directive (2011/65/EU)

The full text of the EU declaration of conformity is available in English language at the following Internet address: www.sennheiser-hearing.com/download.

UK declaration of conformity



- EMC Regulations (2016)
- The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations (2019)
- Electrical Equipment (Safety) Regulations (2016)
- RoHS Regulations (2012)

Notes on disposal



- EU: WEEE Directive (2012/19/EU)
- UK: WEEE Regulations (2013)

The symbol of the crossed-out wheeled bin on the product, the battery/rechargeable battery (if applicable) and/or the packaging indicates that these products must not be disposed of with normal household waste, but must be disposed of separately at the end of their operational lifetime. For packaging disposal, observe the legal regulations on waste segregation applicable in your country. Improper disposal of packaging materials can harm your health and the environment.

The separate collection of waste electrical and electronic equipment, batteries/rechargeable batteries (if applicable) and packagings is used to promote the reuse and recycling and to prevent negative effects on your health and the environment, e.g. caused by potentially hazardous substances contained in these products. Recycle electrical and electronic equipment and batteries/rechargeable batteries at the end of their operational lifetime in order to make contained recyclable materials usable and to avoid littering the environment. Further information on the recycling of these products can be obtained from your municipal administration, from the municipal collection points, or from your Sonova Consumer Hearing partner. You can also return electrical or electronic equipment to distributors who have a take-back obligation. Herewith you make an important contribution to the protection of the environment and public health.

Trademarks

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Sonova Consumer Hearing GmbH
Am Labor 1, 30900 Wedemark, Germany
www.sennheiser-hearing.com

Publ. 01/25, 596659/A02