HD 4.50BTNC
wireless headphones

SCBT7

Instruction Manual

SENNHEISER

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Important safety instructions

- Read this instruction manual carefully and completely before using the product.
- Always include this instruction manual when passing the product on to third parties.
- Do not use an obviously defective product.
- Only use the product in environments where **Bluetooth®** wireless transmission is permitted.

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. Sennheiser headphones sound exceptionally good at low and medium volume levels.
- Keep the headphones at least 10 cm/3.94″ from cardiac pacemakers or implanted defibrillators. The headphones contain magnets that generate a magnetic field which could cause interference with cardiac pacemakers and implanted defibrillators.
- Keep the product, accessories and packaging parts out of reach of children and pets to prevent accidents and choking hazards.
- Do not use the product in situations which require special attention (e.g. in traffic or when performing skilled jobs).

Preventing damage to the product and malfunctions

- Always keep the product dry and do not expose it to extreme temperatures to avoid corrosion or deformation. The normal operating temperature is from 10 to 40°C/50 to 104°F.
- Only use attachments/accessories/spare parts supplied or recommended by Sennheiser.
- Clean the product only with a soft, dry cloth.
- Use the product with care and store it in a clean, dust-free environment.

Intended use/Liability

These wireless headphones are designed for use with mobile devices (e.g. mobile music players, mobile phones, tablets) that support wireless communication via **Bluetooth**. Compatible **Bluetooth** devices include those that support the following profiles: Hands Free Profile (HFP), Headset Profile (HSP), Advanced Audio Distribution Profile (A2DP), and Audio/Video Remote Control Profile (AVRCP).

It is considered improper use when this product is used for any application not named in the associated instruction manuals and product guides.

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

Safety instructions for the Lithium-Polymer battery pack

WARNING

In extreme cases, abuse or misuse of the Lithium-Polymer battery pack can lead to:

- explosion
- fire development
- heat generation or
- smoke or gas development

	Dispose of products with built-in rechargeable batteries at special collection points or return them to your specialist dealer.
	Only use rechargeable batteries and chargers recommended by Sennheiser.
	Charge products with built-in rechargeable batteries at ambient temperatures between 10 and 40°C/50 and 104°F .
	Switch battery-powered products off after use.
	When not using the product for extended periods of time, charge its built-in rechargeable batteries regularly (about every 3 months).
	Do not heat above 70°C/158°F, e.g. do not expose to sunlight or throw into fire.
	Do not charge a product with built-in rechargeable batteries if the product is obviously defective.

The HD 4.50BTNC wireless headphones

The HD 4.50BTNC wireless headphones offer great sound quality for every day listening on the move. These headphones are the perfect companion for your mobile devices, providing you with unrivalled listening pleasure and easy communication with their **NoiseGard**™ Active Noise Cancellation feature, long-lasting battery life, and robust, foldable design.

Features

- Closed circumaural design featuring **Bluetooth**® wireless technology
- Robust, foldable headband for easy storage on the go
- **NoiseGard**™ Active Noise Cancellation for optimum isolation from background noise and outstanding audio performance
- Immediate pairing to smart devices using NFC
- Up to 25 hours battery life
- Comes with an attachable audio cable for use in environments where **Bluetooth**® connectivity is not permitted

Bluetooth

The headphones comply with the **Bluetooth** 4.0 standard and are compatible with all **Bluetooth** 1.1, 1.2, 2.0, 2.1, 3.0 and 4.0 devices with the following **Bluetooth** profiles: HFP (Hands-Free Profile), HSP (Headset Profile), AVRCP (Audio Video Remote Control Profile) and A2DP (Advanced Audio Distribution Profile). The headphones provide wireless freedom to give hands-free convenience during phone calls or when listening to music.

NFC

Near Field Communication (NFC) is a short-range wireless technology that enables connection and communication between NFC-capable electronic devices by placing them near one another or with a single touch.

NoiseGard

The **NoiseGard**™ active noise compensation system is based on the principle of cancelling out sound using ''anti-sound''. Tiny microphones pick up low-frequency ambient noise near the ear. The **NoiseGard** electronics use this noise to generate a sound wave which is the exact opposite, the effect being that the polarity reversed signal cancels most of the outside noise.

aptX®

With aptX® audio coding, you can be assured of crisp, pure and full stereo sound. It allows you to not only hear, but experience and feel the audio as it was intended. Utilizing aptX®, **Bluetooth** technology can now offer wireless audio quality that is indistinguishable from the highest quality wired connection.

Package includes

Headphones

Carry case

Audio cable with 2.5 mm and 3.5 mm jack plug

USB charging cable with micro-USB connector

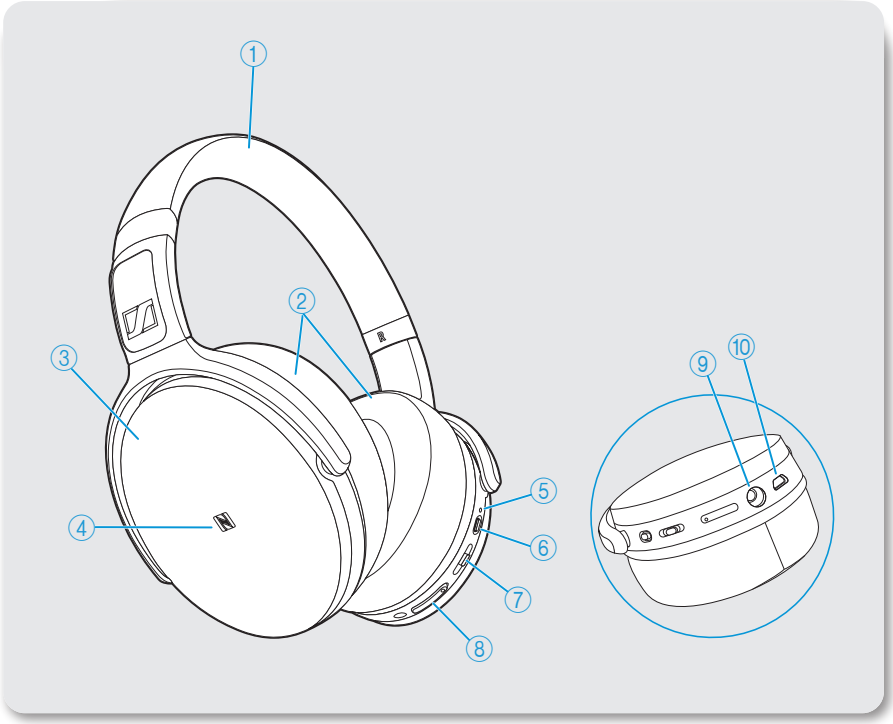
Quick guide

Safety guide

A list of accessories can be found at www.sennheiser.com. For information on suppliers, contact your local Sennheiser partner: www.sennheiser.com > ''Sales Partner''.

Product overview

Overview of the headphones



① Headband
② Ear pads
③ Ear cups
④ NFC panel
⑤ LED
⑥ Power button
⑦ Multifunction button
⑧ Volume +/- buttons
⑨ Audio input
⑩ Micro-USB input

Overview of pictograms

Pictograms for pressing a button

Pictogram	Meaning
	Press and immediately release the button
	Press the button twice
	Press the button and hold for 5 seconds

Pictograms for the LED

Pictogram	Meaning
	The LED lights up
	The intervals signify flashing
•••	The LED lights up/flashes continuously
	The time the LED lights up before blinking

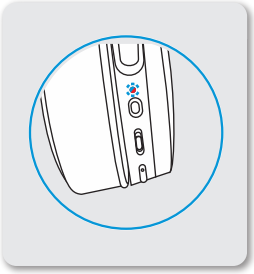
Examples of pictograms that may be used in this manual:

Pictogram	Meaning
	The LED flashes continuously
	The LED lights up for 3 seconds, then off, and repeat
	The LED lights up, then off for 2 seconds, and repeat
	The LED lights up continuously
	The LED continuously flashes blue and red per second

The pictogram "i"

Notes marked with the pictogram "i" provide useful information on the use of the headphones.

Overview of the LED indications



LED indications during operation

LED	Meaning
	The headphones switch on Pairing/connecting with a device is successful
	The headphones switch off The headphones are disconnected from the device The headphones are outside the **Bluetooth** range of the device Pairing with a device is unsuccessful
	The headphones are in pairing mode
	The device is successfully cleared from the headphones **NoiseGard** is activated/deactivated (**Bluetooth** connection)
	The headphones are in idle mode (headphones are paired but not connected to the device)
	NoiseGard is activated (audio cable connection with sufficient battery life)

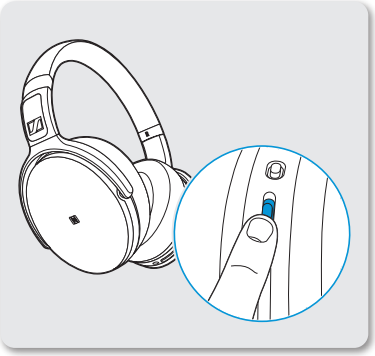
LED indications during calls

LED	Meaning
	Incoming call
	Incoming call with an almost empty battery

Overview of buttons

Power button

Press	Function	Page
2s	Switches the headphones on and off	19
1x	Activates/deactivates **NoiseGard** (audio cable connection with sufficient battery life)	21



Multifunction button

Press	Function	Page
1x	Accepts/ends a call	24
	Accepts an incoming call and holds the active call	24
	Plays/pauses a track	23
2x	Redials the last number called	25
	Holds/unholds a call	24
	Accepts an incoming call and ends the active call	24
	Toggles between 2 active calls	24
2s	Rejects a call	24
	Activates the voice control	26
	Transfers a call between the smartphone and the headphones	25
	Plays the next track	23
	Plays the previous track	23
+ HOLD	Rewinds a track	23
+ HOLD	Fast-forwards a track	23

Volume +/- buttons

Press	Function	Page
	Increases/decreases the volume	19

Getting started

Charging basics

A complete charging cycle takes about 2 hours. Before using the headphones for the first time, charge the headphones for a complete charging cycle without interruption.

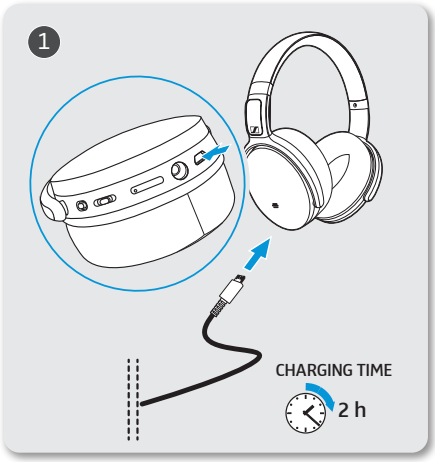
When being charged, the LED lights up as indicated in the following table. When the battery charge drops to a low level, a voice prompt asks you to recharge the headphones.

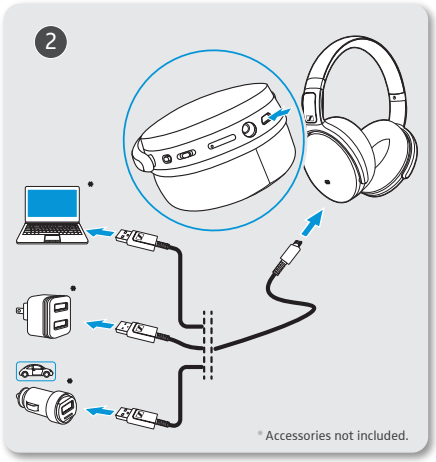
It is recommended to charge the headphones using only the supplied USB cable. If you charge the headphones using an external USB power adapter, it is recommended to use an adapter with an output rating of 500 mA or higher.

LED	Meaning	Voice prompt
	Battery is almost empty (less than 2 % charged)	*"Recharge headset"*
	Battery is less than 11% charged	*"Less than 2 hours play time"*
	Battery is less than 23% charged	*"Between 2 and 6 hours play time"*
	Battery is less than 45% charged	*"Between 6 and 12 hours play time"*
	Battery is more than 45% charged	*"More than 12 hours play time"*
	Battery is fully charged	*"More than 12 hours play time"*

Charging the headphones

1. Connect the micro-USB plug of the charging cable to the micro-USB input of the headphones.
2. Connect the USB plug to the USB port of your computer. If you are using an external power adapter, connect the USB plug to the power adapter or to the USB car charger adapter, and connect to the power source.
   The LED flashes/lights up depending on the battery life of the headphones. The headphones utilize an intelligent battery charging technology that prevents overcharging.





Battery life indicator on your device

The battery life of your headphones may also be displayed on the screen of your smartphone or device.

Pairing the headphones

CAUTION

Danger of malfunction!

The transmitted radio waves of mobile phones can impair the operation of sensitive and unprotected devices.

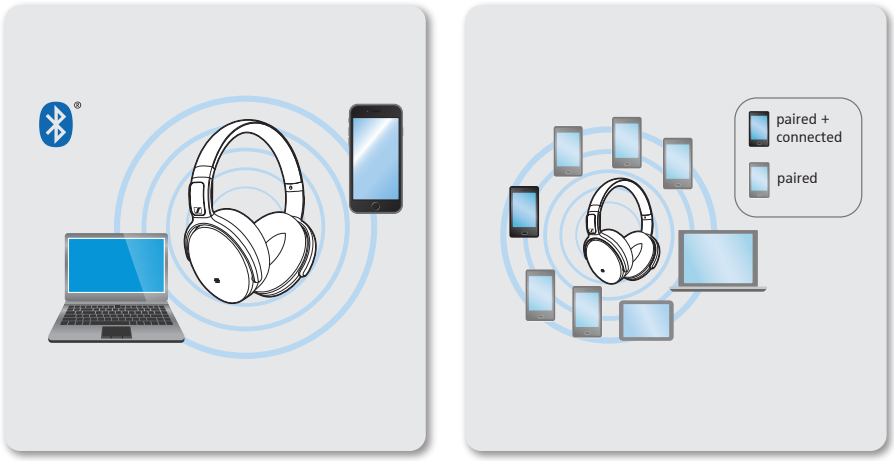
- Only make calls with the headphones in locations where **Bluetooth** is permitted.

The HD 4.50BTNC Wireless headphones comply with the **Bluetooth** 4.0 standard. In order that data can be transmitted wirelessly using **Bluetooth**, you have to pair your headphones with a compatible **Bluetooth** device that supports the following profiles:

- Hands Free Profile (HFP)
- Headset Profile (HSP)
- Audio/Video Remote Control Profile (AVRCP)
- Advanced Audio Distribution Profile (A2DP)

When you switch the headphones on for the first time, they automatically go to pairing mode. If the headphones have already been paired with a few devices, they automatically try to connect to the most-recently connected **Bluetooth** device when switched on. The headphones can save the connection profiles of up to eight **Bluetooth** devices or smartphones.

You can instantly pair the headphones with your device if the device supports NFC.

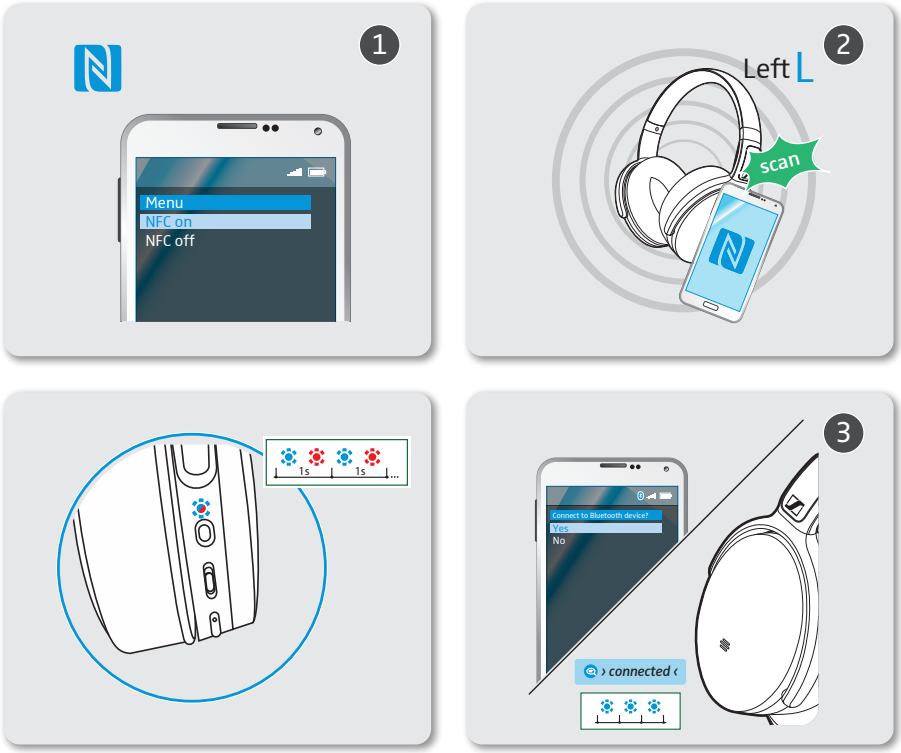


Pairing the headphones with a Bluetooth device using NFC

The following sections describe, using a smartphone as an example, how to pair your HD 4.50BTNC Wireless headphones with a **Bluetooth** device using NFC. If the instructions provided do not work on your device, proceed as described in the instruction manual of the device.

You can pair the headphones with other devices using NFC regardless of the headphones' power state (on or off).

1. Activate NFC on your smartphone.
2. Scan the smartphone to the NFC panel on the left ear cup of the headphones.
   You hear the voice prompt "*power on*" and a beep sound. The LED flashes blue and red.
3. Click "*Yes*" if the pairing confirmation dialog appears on the screen of your smartphone (this step may vary depending on your smartphone).
   If pairing was successful, you hear the voice prompt "*connected*". The LED flashes blue 3 times.

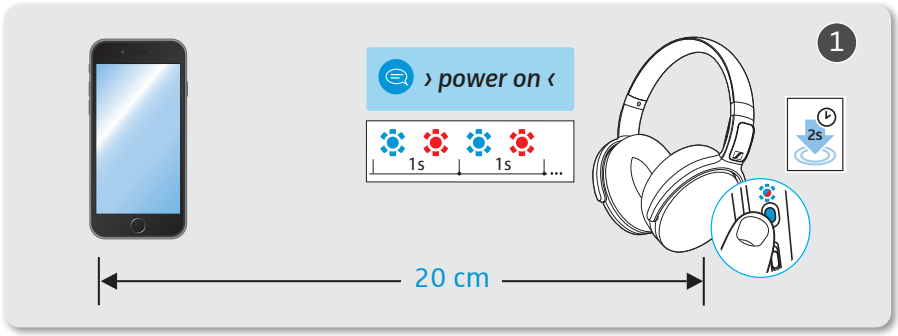


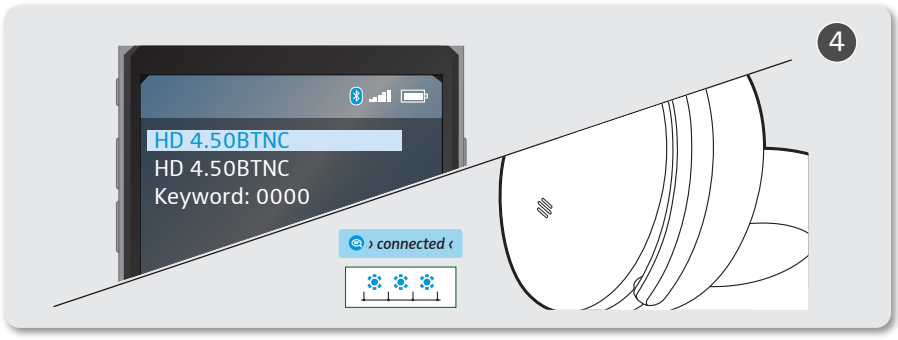
Pairing the headphones with a Bluetooth device

Ensure that the headphones are within the 20 cm range of your smartphone when performing this procedure.

1. Switch the headphones on (see page 19).
   - If you pair the headphones to the device for the first time, they automatically go to pairing mode.
   - If the headphones don't automatically go to pairing mode, switch the headphones off and press the power button again for 4 seconds or until you hear the voice prompt "*power on*" and a beep sound.

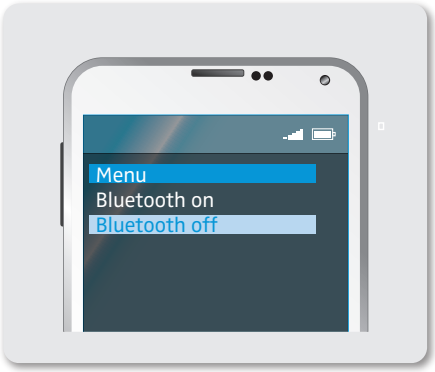
   The LED flashes blue and red. The headphones are in pairing mode.
2. Activate **Bluetooth** on your smartphone.
3. On your smartphone, start a search for **Bluetooth** devices.
   All active **Bluetooth** devices in the proximity of your smartphone are displayed.
4. From the list of found **Bluetooth** devices, select "*HD 4.50BTNC*". If necessary, enter the default PIN code "0000".
   If pairing was successful, you hear the voice prompt "*connected*". The LED flashes blue 3 times.

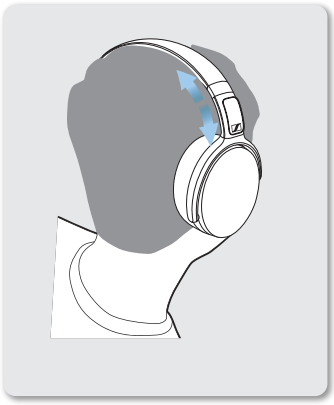




Disconnecting the headphones from your Bluetooth device

▶ Deactivate **Bluetooth** on your smartphone.
The headphones are disconnected from the smartphone. The headphones then search for other paired and connected headphones. If no device is found, you hear the voice prompt "*lost connection*". The headphones go to idle mode.





Adjusting the headband

For good sound quality and best possible wearing comfort, you can adjust the ear pad location on the headband to properly match the size of your head.

- Wear the headphones so that the headband runs over the top of your head.
- Adjust the location of the ear pads by moving the ear cups up and down the headband slider until:
  - your ears are comfortably covered by the ear pads,
  - you feel even, gentle pressure around your ears,
  - a snug fit of the headband on the head is ensured.

Using the headphones

Switching the headphones on

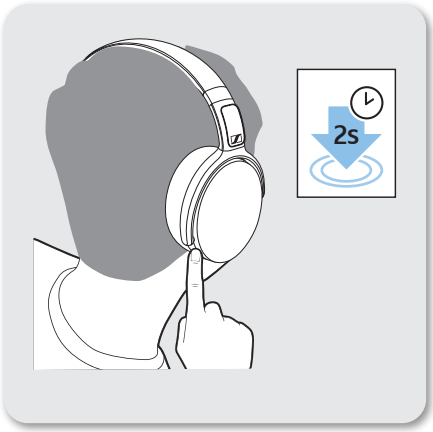
WARNING

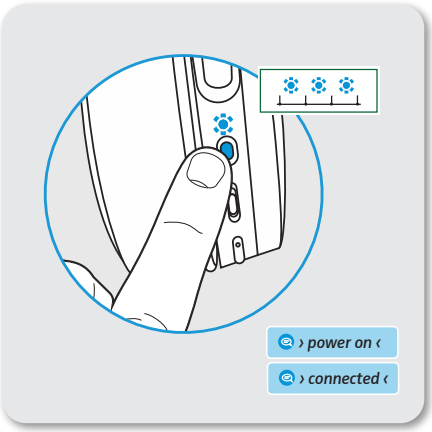
Danger due to high volume levels!

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

- Before putting the headphones on, set the volume to a low level.
- Do not continuously expose yourself to high volume levels.

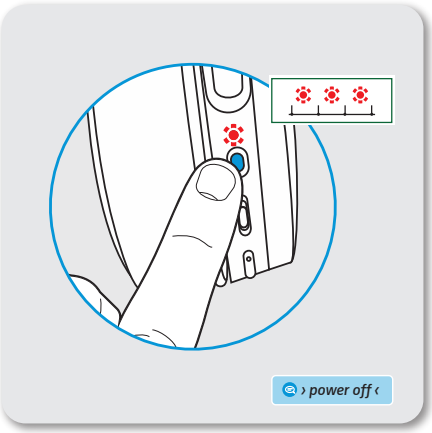
- Press the power button for 2 seconds.
  You hear the voice prompts "*power on*" and "*connected*" and the LED flashes blue 3 times.





Switching the headphones off

- Press the power button for 2 seconds.
  You hear the voice prompt "*power off*" and the LED flashes red 3 times.



Adjusting the volume

WARNING

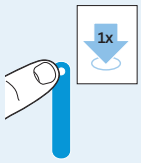
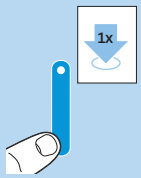
Danger due to high volume levels!

Listening at high volume levels for long periods of time can lead to permanent hearing defects. Switching between audio sources may cause enormous volume jumps that can permanently damage your hearing.

- Before putting the headphones on and before switching between audio sources, adjust the volume to a low level.
- Do not continuously expose yourself to high volume levels.

You can adjust the volume for music and calls.

- Press the Volume +/- buttons once to increase or decrease the volume. You hear a beep sound. When the maximum volume is reached, you hear an alert.

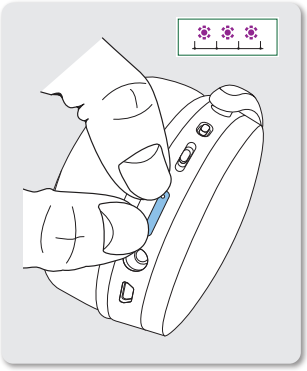
Press	Function		Beep
		Increases the volume	"beep"
		Decreases the volume	"beep"

Using NoiseGard

NoiseGard™

The HD 4.50BTNC Wireless headphones provides excellent attenuation of ambient noise using the **NoiseGard** Active Noise Cancellation technology.

You can activate or deactivate **NoiseGard** if your headphones are connected to the smartphone using **Bluetooth** or the audio cable.



Activating/deactivating NoiseGard when connected via Bluetooth

- Simultaneously press and hold the Volume +/- buttons.
  The LED flashes purple 3 times. **NoiseGard** toggles between on and off.

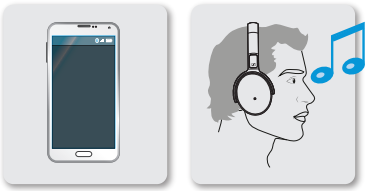
Activating/deactivating NoiseGard when the audio cable is used

- Press the power button.
  The LED lights up blue to indicate that **NoiseGard** is active. **NoiseGard** toggles between on and off.

Playing music

If your audio source supports the aptX® audio codec, the HD 4.50BTNC Wireless automatically plays music wirelessly in stunning aptX® audio quality. If your audio source does not support aptX®, the HD 4.50BTNC Wireless plays music in normal audio quality.

- Pair/connect your headphones with the smartphone, see page 14.
- Play music on your smartphone.
  The music plays through the HD 4.50BTNC Wireless headphones.



Controlling music playback

The following music functions are only available when the headphones and your device are connected via **Bluetooth**. Some smartphones, music apps or players may not support all functions.

Playing/pausing track

▶ Quickly press the multifunction button.

Press	Function	
1x	▶ ⏸	Plays or pauses music

Playing the next/previous track

▶ Push the multifunction button up or down.

Push	Function	
	⏭	Plays the next track in the playlist
	⏮	Plays the previous track in the playlist

Fast-forwarding or rewinding a track

▶ Push and hold the multifunction button up or down.

Push	Function	
+ ⏸ HOLD	⏩	Fast-forwards the track
+ ⏸ HOLD	⏪	Rewinds the track

Making calls on the headphones

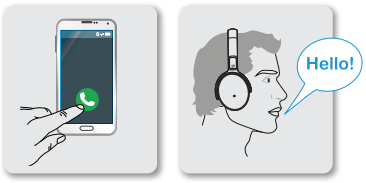
The following call functions are only available if the headphones and smartphone are connected via **Bluetooth**. Some smartphones may not support all functions.

Making a call

▶ Dial the desired number on your smartphone.

If your smartphone does not automatically transfer the call to the headphones, select the HD 4.50BTNC Wireless as the audio source on your smartphone (see the instruction manual of your smartphone if necessary).

Accepting/rejecting/ending a call



If your headphones are connected to a smartphone and you receive a call, you hear a ring tone in the headphones and the LED flashes blue. If the battery life of the headphones is low, the LED flashes red.

If you are playing music when you receive a call, the music pauses until you end the call.

▶ Press or push the multifunction button accordingly:

Press	Function		Voice prompt
1x		Accepts a call	
		Ends a call	*"call ended"*
		Accepts an incoming call and holds the active call	
2s		Rejects a call	*"call rejected"*
		Rejects an incoming call and continues the active call	
2x		Puts the call on hold	
		Accepts an incoming call and ends the active call	
		Toggles between 2 active calls	

Transferring a call to/from the headphones

When a call has been established, you can transfer the call between the headphones and the smartphone.

▶ Press the multifunction button and hold for 2 seconds.

Press	Function	
		Transfers a call from the headphones to the smartphone
		Transfers a call from the smartphone to the headphones

Redialing

The redialing function must be supported by your smartphone or **Bluetooth** device (with HFP profile). This function may be required to be activated on your smartphone.

You can use this function when the headphones are not actively playing music or are used for making calls.

▶ Press quickly the multifunction button twice.

Press	Function		Voice prompt
		Redials the last number called	*"redialing"*
		Cancels redialing	*"call ended"*

Voice control function

The voice control function is only supported by **Bluetooth** smartphones with HFP profile.

You can use this function when the headphones are not actively playing music or are used for making calls.

1. Press the multifunction button and hold for 2 seconds.

Press	Function		Voice prompt
		Starts voice control	*"voice dialing"*

2. Say your voice command, such as *"Call Jane"*.
   The **Bluetooth** smartphone calls Jane.

Using the audio cable

Use the audio cable to listen to music when the headphones are running out of battery or when **Bluetooth** transmission is restricted or not allowed.

The headphones immediately switch off once the audio cable is plugged into the audio input.

If the battery of the headphones is sufficient, you can switch **NoiseGard** on to benefit from the noise cancelling feature of the headphones. To activate or deactivate **NoiseGard** when the audio cable is connected, see page 21.

Inserting the audio cable

1. Insert the 2.5 mm jack plug into the audio input of the headphones. **Bluetooth** is deactivated.
2. Connect the 3.5 mm jack plug to the audio output of your smartphone.

Care and maintenance

CAUTION

Liquids can damage the electronics of the product!

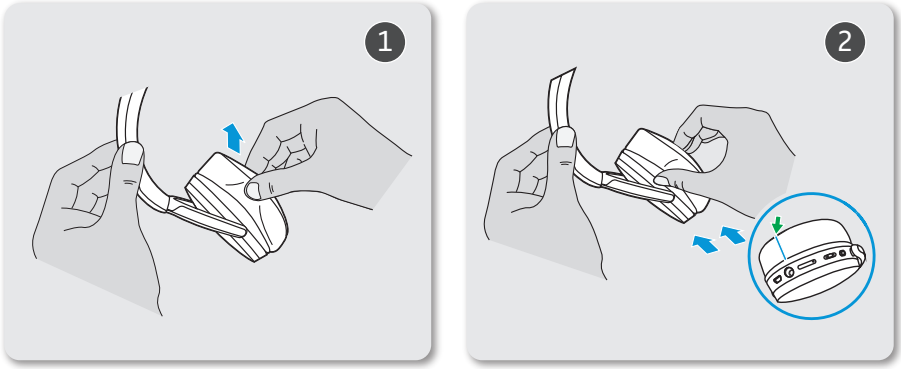
Liquids entering the housing of the product can cause a short-circuit and damage the electronics.

- Keep all liquids away from this product.
- Do not use any solvents or cleaning agents.

Replacing the ear pads

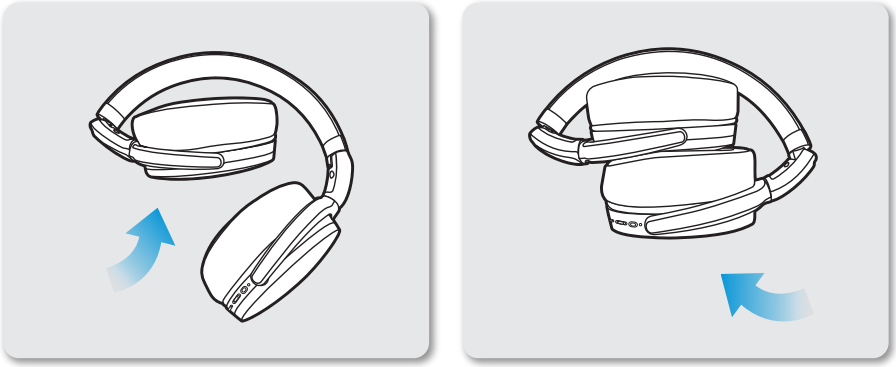
For reasons of hygiene, you should replace the ear pads from time to time. Spare ear pads are available from your local Sennheiser partner.

1. Lightly pull the ear pad away from ear cup until it is detached.
2. Secure the new ear pad by inserting the fixation band in the space on the ear cup. Ensure that the stitched line on the ear pad is positioned at the bottom.



Storage and handling

To keep the headphones in good condition and to avoid nicks and scratches, fold the ear cups inwards towards the headband and store the headphones in the carry case when not in use or when carrying them around.



Replacing/removing the rechargeable battery

CAUTION

Danger of damage to the product!

During the warranty period, the rechargeable battery must only be replaced by an authorized Sennheiser service center, otherwise the warranty will be null and void.

- Contact your Sennheiser service center if the rechargeable battery needs to be replaced or removed. To find a Sennheiser service partner in your country, visit www.sennheiser.com.

Outside the warranty period, the rechargeable batteries may be replaced or removed by any qualified service center in an appropriate manner. Instructions on how to replace or remove the batteries for qualified service centers are available from the Sennheiser service partner.

Troubleshooting

Problem	Possible cause	Possible solution	Page
Headphones cannot be switched on	Battery is empty	Charge the headphones	13
	Battery is completely exhausted/worn out	Visit an authorized Sennheiser service center for battery replacement	
No audio signal	Headphones are not paired with your device	Check if the headphones are paired. If necessary, pair the headphones with the device again	14
	Volume too low	Increase the volume	20
	Headphones are switched off	Switch the headphones on	19
Headphones cannot connect	Pairing does not work	Check if your smartphone supports the HFP or HSP **Bluetooth** profile	
	Smartphone is switched off	Switch your smartphone on	
	Bluetooth is deactivated on your smartphone	Activate **Bluetooth** on your smartphone	
Headphones do not respond to any button press	Headphones are not functioning properly	Restart the headphones by switching them off and on again.	19
No audio signal	Headphones are not paired with your device	Check if the headphones are paired. If necessary, pair the headphones with the device again	
	Volume too low	Increase the volume	
	Headphones are switched off	Switch the headphones on	
Headphones do not automatically go to pairing mode	Headphones must have been paired previously to some devices	Switch the headphones off and press the power button for 4 seconds	16

If you encounter a problem that is not listed in the table, or if the solutions provided do not work, please contact an authorized Sennheiser service partner for assistance.

To find a Sennheiser service partner in your country, visit www.sennheiser.com.

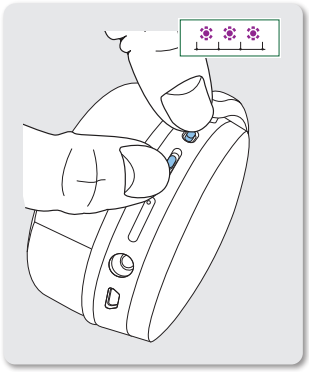
Leaving the Bluetooth transmission range

Wireless calling and streaming are only possible in the **Bluetooth** transmission range of your smartphone. The transmission range largely depends on environmental conditions such as wall thickness, wall composition etc. With a free line of sight, the transmission range of most smartphones and **Bluetooth** devices is up to 10 meters.

If the headphones leave the **Bluetooth** transmission range of the smartphone, the sound quality deteriorates and you hear the voice prompt "*lost connection*". At this point, the connection breaks down completely. You can re-establish the connection if you re-enter the **Bluetooth** transmission range and you hear the voice prompt "*connected*".

- To re-establish the connection, press the multifunction button.

Clearing previously paired devices



- Set the headphones to pairing mode, see page 16.
  The LED flashes blue and red. The headphones are in pairing mode.
- Simultaneously press the multifunction button and the power button for 4 seconds.
  The LED flashes purple 3 times. The headphones are permanently disconnected from all devices and immediately go into pairing mode.

Specifications

HD 4.50BTNC

Ear coupling	closed, circumaural
Frequency response	18 - 22,000 Hz
Transducer principle	dynamic
Sensitivity (microphone)	100 - 10,000 Hz
Sound pressure level (SPL)	113 dB (1 kHz/ 1 V_{rms})
THD (1 kHz, 100 dB)	< 0.5 %
Pick-up pattern	dual omni-directional microphones
Noise compensation	**NoiseGard**™ active noise cancellation
Input power	*3.7 VDC, 600 mAh:* built-in rechargeable Lithium-Polymer battery *5 VDC, 400 mA:* USB charging
Operating time	19 hours (**Bluetooth** and **NoiseGard** on) 25 hours (**Bluetooth** only)
Charging time	approx. 2 hours
Weight	approx. 238 g
Battery	Lithium Polymer
Connectivity	**Bluetooth** version 4.0/NFC pairing
Audio cable (optional/detachable)	1.4 m audio cable, 3.5 mm angled plug, gold-plated
Connector	USB charging cable

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