

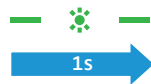
Using the RS 160

To switch the product on and to listen to your sound source, proceed as follows:

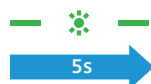
Sequence of steps	Page
1. Make sure that the rechargeable batteries are charged.	16
2. Switch your sound source on.	–
3. Switch your transmitter on.	18
4. Switch your headphones on.	20
5. Adjust the desired volume.	21

Switching the transmitter on and off

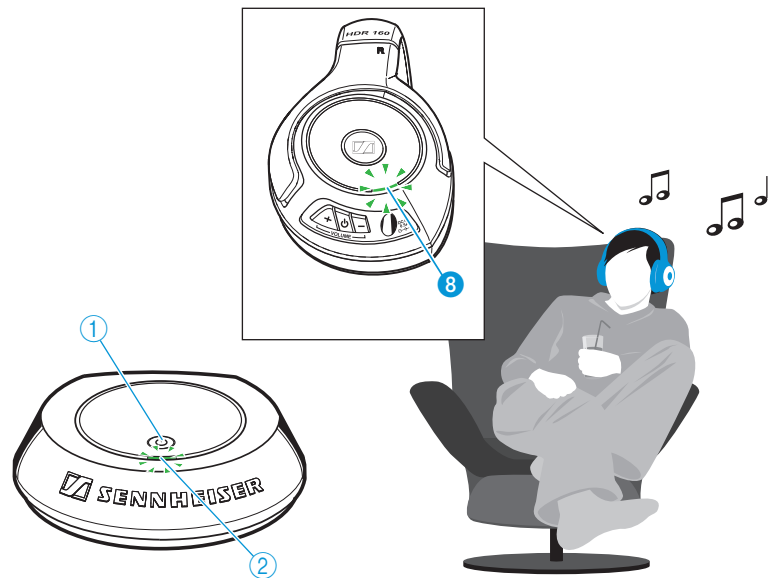
Switching the transmitter on





- ▶ Press the multi-function button ① for approx. 1 second. The transmitter switches on. The multi-function LED ② flashes green, indicating that the transmitter is in enrollment mode.



Once the transmitter has found suitable headphones, it pairs with the headphones and transmits an audio signal. The multi-function LED ⑧ of the headphones and the multi-function LED ② of the transmitter flash slowly.




Switching the transmitter off

- ▶ Press the multi-function button  ① for approx. 1 second.
The multi-function LED  goes off. The transmitter is in standby mode.

To disconnect the transmitter from the mains:

- ▶ Pull out the mains plug from the wall socket.



If the headphones are outside the transmission range or switched off for more than 5 minutes, the transmitter automatically switches to standby mode. The multi-function LED  goes off. In standby mode, the transmitter's power consumption is very low so that it can remain connected to the mains.

Switching the headphones on and off

WARNING Danger due to high volumes!




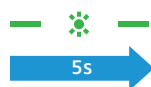
Listening at high volume levels for long periods can lead to permanent hearing defects.

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

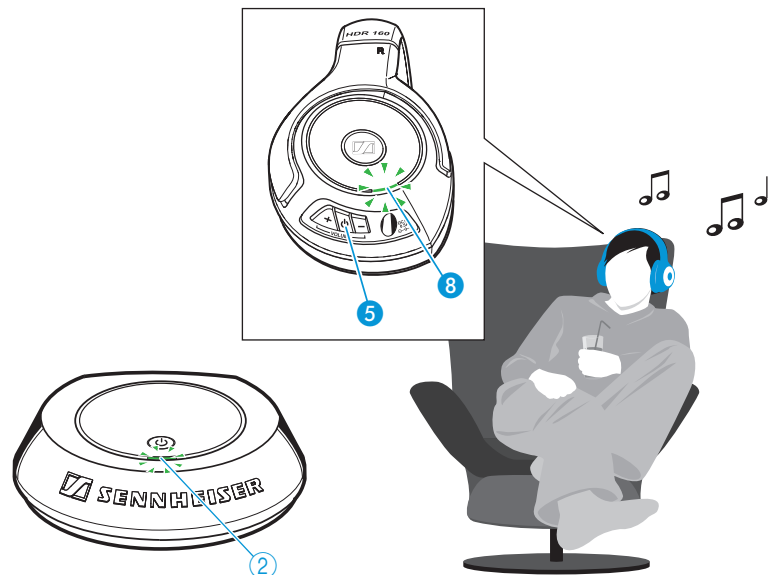
Switching the headphones on




- ▶ Press the multi-function button  **5** for approx. 1 second. The headphones switch on. The multi-function LED **8** flashes green, indicating that the headphones are in enrollment mode.



Once the headphones have found a suitable transmitter, the transmitter pairs with the headphones and transmits an audio signal. The multi-function LED **8** of the headphones and the multi-function LED **2** of the transmitter flash slowly.



Switching the headphones off

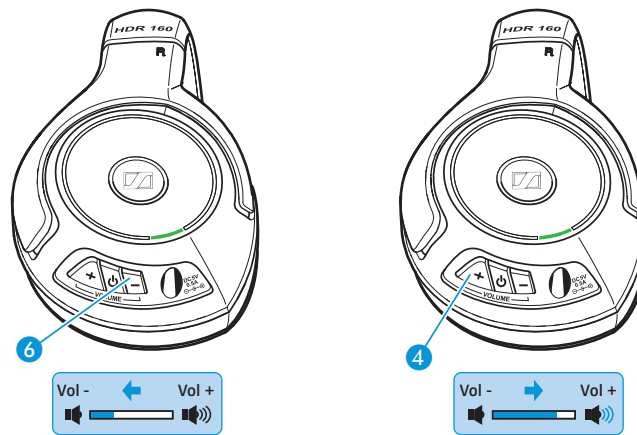
- ▶ Press the multi-function button  **5** for approx. 1 second. The multi-function LED **8** goes off. The headphones are in standby mode.



If there is no signal from the transmitter for more than 5 minutes, the headphones automatically switch to standby mode.

Adjusting the volume on the headphones

- ▶ Press the **VOLUME –** button **6** or the **VOLUME +** button **4** repeatedly until the volume is adjusted to a comfortable and undistorted level.



Muting the headphones

- ▶ Briefly press the multi-function button **5** to mute the headphones or to cancel the muting.



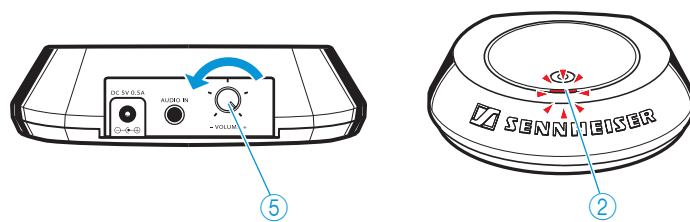
Adjusting the signal of the sound source

The transmitter automatically ensures that the headphones always receive an optimum signal. If necessary, use the **VOLUME** control ⑤ to adjust the volume of the audio signal.

However, the signal of the sound source can be so strong that it can no longer be automatically adjusted.

If the signal of the sound source is too strong, the multi-function LED ② of the transmitter flashes or lights up red.

- ▶ Either adjust the **VOLUME** control ⑤ on the transmitter so that the multi-function LED ② stops flashing or lighting up red.
- ▶ Or adjust the volume of your sound source so that the multi-function LED ② stops flashing or lighting up red.



Associating the headphones to the transmitter



The RS 160 system features the digital wireless audio transmission technology from Klear. You can also associate other Klear compatible headphones (e.g. the Sennheiser MX W1) to the transmitter. For more information, refer to the chapter “Associating other Klear compatible headphones to the transmitter” on page 25 or to the instruction manual of the corresponding product.

The headphones and the transmitter are already associated upon delivery. You only have to associate the headphones to the transmitter

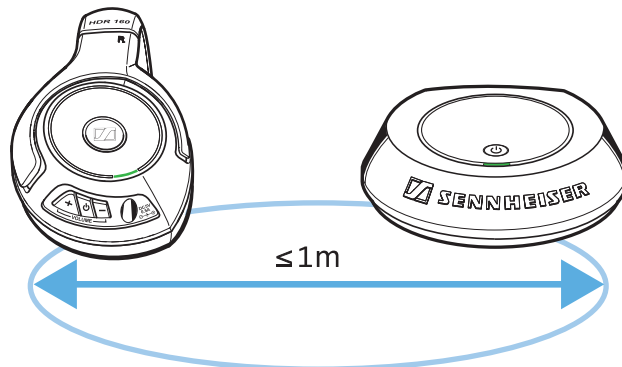
- if you want to use another pair of Klear compatible headphones or
- if the transmission between the headphones and the transmitter is disturbed by interferences in the vicinity.

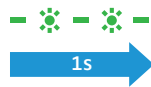
If you want to use several headphones, refer to the chapter “Associating several headphones to the transmitter” on page 25.

Associating the HDR 160 headphones to the transmitter

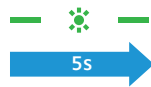
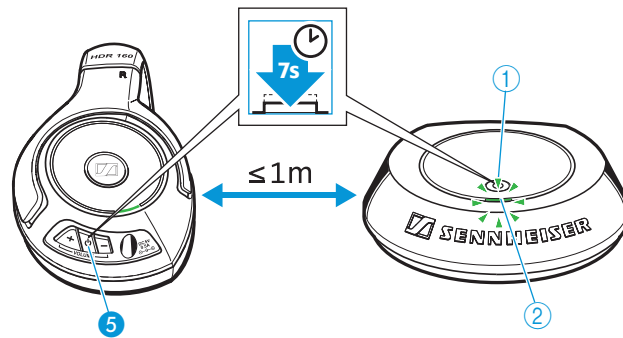
When associating the headphones to the transmitter, the distance between the transmitter and the headphones should not exceed 1 m.

- ▶ Make sure that the transmitter and the headphones are in standby mode (see page 19 and 20).

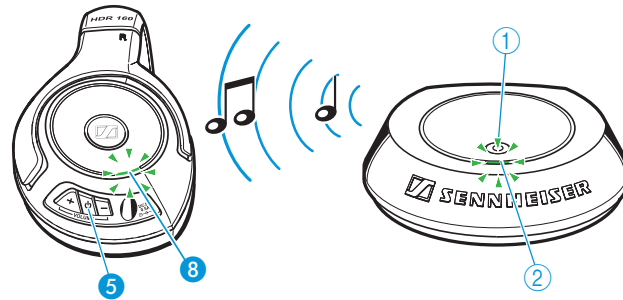




- ▶ Simultaneously press the multi-function button ① of the transmitter and the multi-function button ⑤ of the headphones for 7 seconds.
The multi-function LED ② of the transmitter flashes green.



- After approx. 30 seconds, the headphones are paired with the transmitter and you can hear your sound source via the headphones. The multi-function LED ⑧ of the headphones and the multi-function LED ② of the transmitter flash green.

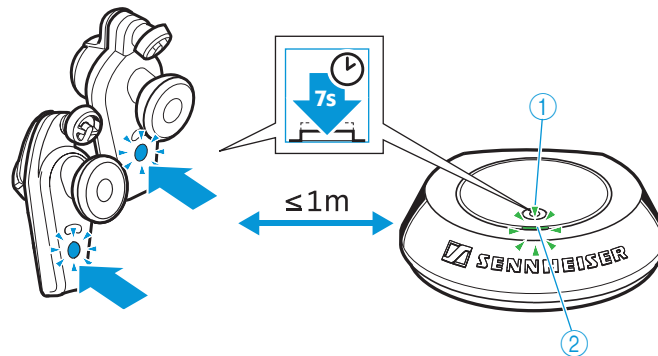


Associating other Kleer compatible headphones to the transmitter

The following describes how to associate the Sennheiser MX W1 earphones to the TR 160 transmitter.

For information on how to associate other Kleer compatible headphones to the transmitter, refer to the instruction manual of the corresponding product.

- ▶ Press the **operation/pairing** button on both MX W1 earphones for 7 seconds.
- ▶ Press the multi-function button **⏻ ①** of the transmitter for 7 seconds.



After approx. 30 seconds, the MX W1 earphones are paired with the transmitter and you can hear your sound source via the earphones. The multi-function LED **②** of the transmitter flashes green.

Associating several headphones to the transmitter

In order to be able to use several headphones simultaneously, you first have to associate your additional headphones to the transmitter.

Follow the steps in the previous chapter "Associating the headphones to the transmitter" on page 23.


You can then only use the last headphones paired to listen to your sound source (single-user operation).

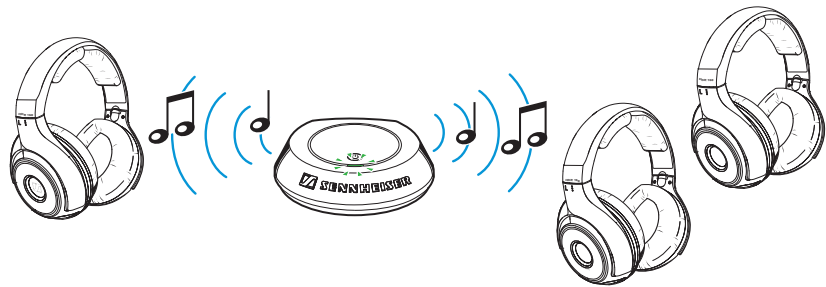
To listen to your sound source with up to 4 headphones simultaneously:


- ▶ Set your transmitter to multi-user operation as described in the next chapter.

Listening with several headphones simultaneously

By default, the transmitter is set to single-user operation. In order to be able to listen to your sound source with several headphones simultaneously, you have to set your transmitter to multi-user operation.

- ▶ Make sure that all headphones are paired to the transmitter (see previous chapter).
- ▶ Switch all headphones on (see page 20).
- ▶ Then switch the transmitter on (see page 18).
- ▶ Briefly press the multi-function button  ① of the transmitter. The multi-function LED ② of the transmitter and the multi-function LEDs ③ of the headphones flash green. You can now listen to your sound source with several headphones simultaneously.



When pressing the transmitter's multi-function button  ① in multi-user operation, the transmitter switches to single-user operation. You can still listen to your sound source with the last headphones paired, the other headphones are disconnected from the transmitter.

Cleaning the RS 160

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.

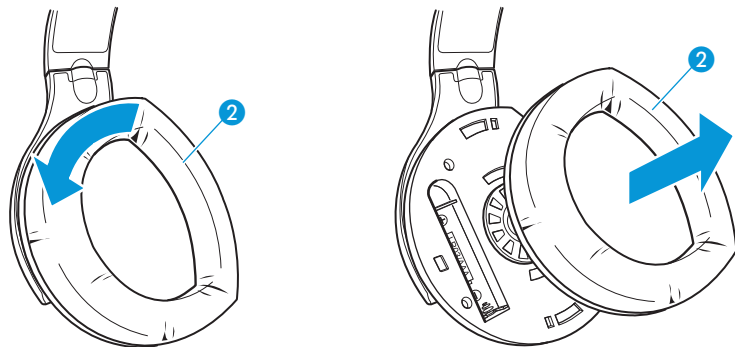
- ▶ Keep all liquids far away from the product.
 - ▶ Do not use any cleansing agents or solvents.
-

- ▶ Before cleaning, switch the product off and disconnect the transmitter from the mains.
- ▶ Only use a dry and soft cloth to clean the product.

Replacing the ear pads

For reasons of hygiene, you should replace the earpads from time to time. Spare earpads are available from your Sennheiser dealer (see "Accessoires and spare parts" on page 30).

- ▶ Remove the ear pads ② from the ear cups by turning the ear pads in the direction of the arrow until you overcome a slight resistance.
- ▶ Lift the ear pads ② off the ear cups.



- ▶ Secure the new ear pads to the ear cups.

If a problem occurs ...

Sound problems

Problem	Possible cause	Possible solutions	Page	
No sound	Transmitter is/headphones are switched off	Switch the transmitter/headphones on	18/20	
	Headphones are muted	Cancel the muting	12	
	Jack plug is not properly connected	Check the plug connection	12	
	Sound source is switched off	Switch the sound source on	–	
	Audio cable is defective	Replace the cable	–	
	Transmission between transmitter and headphones is disturbed by interferences (including ESD) in the vicinity	Associate the headphones with the transmitter again		23
		Disconnect the transmitter from the mains and reconnect it again		13
		Remove the rechargeable batteries and reinsert them again		15
Headphones are not correctly associated with the transmitter (e.g. additional headphones)	Associate the headphones with the transmitter		23	
Occasional sound dropouts	Headphones are out of range	Reduce the distance between headphones and transmitter	12	
	Signal is shielded	Remove obstacles between transmitter and headphones	12	
	Interfering devices in the vicinity	Change your position	12	
Sound is too low	Volume of the sound source is adjusted too low	Increase the volume of the sound source	–	
	Signal of the sound source is too weak	Turn the VOLUME control ⑤ on the transmitter clockwise	21	
	Headphone volume is adjusted too low	Increase the volume by pressing the VOLUME + button ④	21	

Problem	Possible cause	Possible solutions	Page
Sound only on one ear	Audio cable is defective	Replace the audio cable	–
	Audio cable is not properly connected	Check the plug connection	12
Sound is distorted	Signal of the sound source is distorted	Reduce the volume of the sound source	–
		Reduce the volume by pressing the VOLUME – button 6 on the headphones	21
Multi-function LED 2 on the transmitter flashes or lights up red	Signal of the sound source is too strong	Turn the VOLUME control 5 on the transmitter counter-clockwise	22
		Reduce the volume of the sound source	22

Other problems

Problem	Possible cause	Possible solution	Page
The transmitter cannot be switched on	No mains connection	Check the connection of the power supply unit to the transmitter and to the mains	13
Headphones cannot be switched on	Rechargeable batteries are flat	Recharge the rechargeable batteries	16
	Rechargeable batteries are inserted the wrong way round	Remove the rechargeable batteries and reinsert them again. Observe correct polarity	15
Operating time decreases	Rechargeable batteries are exhausted	Replace the rechargeable batteries	14/15

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.

Accessories and spare part

Only use original Sennheiser accessories and spare parts, otherwise the product quality can be impaired or the product can be damaged.

Cat. No.	Accessory/spare part
504250	HDR 160 headphones
534480	Power supply unit with country adapters
534486	Stereo audio cable with two 3.5 mm jack plugs (1 m)
534479	DC cable (4.0 mm DC jack socket to 2 x 4.0 mm DC plug)
093778	Adapter (3.5 mm jack socket to ¼" (6.3 mm) jack plug)
514267	Adapter (3.5 mm jack socket to 2 RCA plugs)
534470	1 pair of ear pads (closed type)

Specifications

RS 160 system

Modulation	MSK digital
Carrier frequencies	2.4 – 2.48 GHz
Range	approx. 20 m in the open area
Ambient temperature	32 °F to 104 °F (0 °C to 40 °C)

TR 160 transmitter

Audio connection	3.5 mm stereo jack socket
Power consumption (standby mode)	< 0.3 W
Power supply	5 V $\overline{\text{DC}}$, 500 mA 2 AA size batteries, 1.5 V or 2 AA size NiMH rechargeable batteries, 1.2 V, at least 1,300 mAh
Transmission power	< 2.5 mW
Operating time with batteries	approx. 120 hours
Weight (w/o batteries)	approx. 56 g
Dimensions	8.7 cm x 9.7 cm x 2.7 cm

HDR 160 headphones

Transducer principle	circumaural, closed
Max. SPL	106 dB (SPL)
THD	< 0.5 % at 1 kHz, 100 dB SPL
Frequency response	18 Hz – 21,000 Hz
Charging time of rechargeable batteries	approx. 16 hours
Power supply	2 AAA size NiMH rechargeable batteries, 1.2 V, 600 mAh
Operating time	approx. 24 hours
Weight (w/o rechargeable batteries)	approx. 226 g

SSA-4P 5050F power supply unit

Rated input	100 – 240 V \sim , 0.2 A, 50 – 60 Hz
Rated output	5 V $\overline{\text{DC}}$, 500 mA
Operating temperature range	32 °F to 104 °F (0 °C to 40 °C)

Manufacturer declarations

Warranty

Sennheiser 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 or contact your Sennheiser partner.

In compliance with the following requirements

- RoHS Directive (2002/95/EC)
- WEEE Directive (2002/96/EC)
- Battery Directive (2006/66/EC)

CE Declaration of Conformity

- R&TTE Directive (1999/5/EC)
- EMC Directive (2004/108/EC)
- Low Voltage Directive (2006/95/EC)

The declaration is available at www.sennheiser.com.

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

Rechargeable batteries



The supplied rechargeable batteries can be recycled.

Please dispose of them as special waste or return them to your specialist dealer. In order to protect the environment, only dispose of exhausted batteries.


WEEE Declaration



Your Sennheiser product was developed and manufactured with high-quality materials and components which can be recycled and/or reused. This symbol indicates that electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime.

Please dispose of this product by taking it to your local collection point or recycling centre for such equipment. This will help to protect the environment in which we all live.

Statements regarding FCC and Industry Canada

FCC Declaration of Conformity (DoC)	
	
We,	Sennheiser Electronic Corporation Strat. Marketing • Stefanie Reichert 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 and with RSS-210 of Industry Canada. 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 equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.


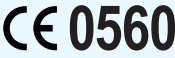


This class B digital apparatus complies with the Canadian ICES-003.

Changes or modifications made to this equipment not expressly approved by Sennheiser electronic Corp. may void the FCC authorization to operate this equipment.

RF Radiation Exposure Information

Since the radiated output power of this device is far below the FCC radio frequency exposure limits, it is not subjected to routine RF exposure evaluation as per Section 2.1093 of the FCC rules.

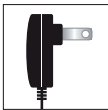
In compliance with:

USA	FCC ID: DMOTR160 FCC ID: DMOHDR160	
Canada	IC: 2099A-TR160 IC: 2099A-HDR160	
Europe		
Australia/ New Zealand		
Singapore	Complies with IDA Standards DB100582	

Trademarks



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qualified adapter
for a better
environment

Energy Star is a registered trademark of the United States Environmental Protection Agency.



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