

 **SENNHEISER**



Digital Wireless System
RS 160

Instruction manual



Contents

Important safety information	2
The RS 160 digital RF headphone system	4
Delivery includes	5
Product overview	6
Overview of the HDR 160 headphones	6
Overview of the TR 160 transmitter	7
Overview of the indicators and acoustic signals	8
Overview of the connection stages	10
Putting the RS 160 into operation	11
Setting up the transmitter	11
Connecting the transmitter to a sound source	12
Powering the transmitter	13
Powering the headphones	15
Adjusting the headband of the headphones	17
Using the RS 160	18
Switching the transmitter on and off	18
Switching the headphones on and off	20
Adjusting the volume on the headphones	21
Adjusting the signal of the sound source	22
Associating the headphones to the transmitter	23
Listening with several headphones simultaneously	26
Cleaning the RS 160	27
If a problem occurs	28
Accessories and spare part	30
Specifications	31
Manufacturer declarations	32

Important safety information

- Please read this instruction manual carefully and completely before using the product.
- Make this instruction manual easily accessible to all users at all times. Always include this instruction manual when passing the product on to third parties.
- Do not use the product in situations which require special attention (e.g. in traffic or when performing skilled jobs).
- Always keep the product dry and do not expose it to extreme temperatures (normal operating temperatures: 0 °C/32 °F to 40 °C/104 °F).
- Use the product with care and store it in a clean, dust-free environment.
- Switch the headphones off after use to conserve battery power. Remove the batteries if the product will not be used for extended periods of time.
- The headphones contain magnets that generate a magnetic field which could cause interference with cardiac pacemakers and implanted defibrillators. Keep the headphones at least 1.2" (3 cm) from cardiac pacemakers or implanted defibrillators.
- Please protect your hearing from high volume levels. Sennheiser headphones also sound exceptionally good at low volumes.
- Only use the Sennheiser supplied power supply units.
- To reduce the risk of fire or electric shock, do not use the product near water and do not expose it to rain or moisture.
- Unplug the power supply unit from the wall socket
 - to completely disconnect the product from the mains
 - during lightning storms or
 - when unused for long periods of time.
- Only operate the power supply unit from the type of power source specified in the chapter "Specifications" (see page 31).
- Ensure that the power supply unit is
 - in a safe operating condition and easily accessible,
 - properly plugged into the wall socket,
 - only operated within the permissible temperature range,
 - not covered or exposed to direct sunlight for longer periods of time in order to prevent heat accumulation (see "Specifications" on page 31).
- Do not operate the product near any heat sources.
- Only use attachments/accessories specified by Sennheiser (see "Accessories and spare part" on page 30).

Replacement parts

When replacement parts are required, be sure the service technician uses replacement parts specified by Sennheiser or those having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Intended use

Intended use of the product includes

- having read this instruction manual, especially the chapter “Important safety instructions” on page 2,
- using the product within the operating conditions and limitations described in this instruction manual.

“Improper use” means using the product other than as described in this instruction manual, or under operating conditions which differ from those described herein.















Safety instructions for the NiMH rechargeable batteries

If abused or misused, the rechargeable batteries may leak. In extreme cases, they may even present



- a heat hazard,
- a fire hazard,
- an explosion hazard,
- a smoke or gas hazard.

Please understand that Sennheiser does not accept liability for damage arising from abuse or misuse.

	Keep away from children.		Only use rechargeable batteries recommended by Sennheiser.
	Observe correct polarity.		Do not short-circuit.
	Do not expose to moisture.		Switch rechargeable battery-powered products off after use.
	Do not pack charged batteries loose – danger of shorting out/fire hazard.		When not using rechargeable batteries for extended periods of time, charge them regularly (about every 3 months).
	Only charge rechargeable batteries at ambient temperatures between 10 °C/50 °F and 40 °C/104 °F.		Do not heat above 70 °C/158 °F, e.g. do not expose to sunlight or throw into a fire.
	Do not mutilate or dismantle.		Do not continue to use defective rechargeable batteries.
	Immediately remove rechargeable batteries from obviously defective devices.		Dispose of rechargeable batteries at special collection points or return it to your specialist dealer.

The RS 160 digital RF headphone system

The RS 160 is an RF stereo hi-fi headphone system with comprehensive technical features. Its transparent and balanced sound image with excellent bass response makes this system an ideal choice for hi-fi, home cinema and TV use.

Enjoy total freedom of sound, stylish design and maximum comfort.

Additional features of the RS 160 headphone system

- Transmits uncompressed audio over a robust 2.4 GHz digital link, enabling you to enjoy your music without the hassles of cables.
- Dynamic transducer systems with powerful neodymium magnets deliver clear and detailed audio reproduction.
- Kleer's uncompressed digital wireless transmission delivers CD-quality sound.
- No set-up required – just plug and play. Simply connect the transmitter to your personal audio/video player, put on the headphones and turn it on!
- TR 160 transmitter with multi-receiver capability, enabling up to 4 people to listen to the same sound source.

Kleer™ wireless transmission technology



The RS 160 headphone system features the digital wireless audio transmission technology from Kleer. The Kleer company has developed an RF-based wireless transmission standard (of the same name) that offers lossless audio transmission in CD-quality while consuming minimal power.

Delivery includes


- 1 HDR 160 headphones
- 1 TR 160 transmitter
- 1 power supply unit with country adapters
- 1 stereo audio cable with 3.5 mm jack plugs
- 1 DC cable (4.0 mm DC jack socket to 2 x 4.0 mm DC plug)
- 2 AAA size NiMH rechargeable batteries, 1.2 V
- 1 quick guide incl. CD ROM with detailed instruction manual (PDF file)
- 1 safety guide

Product overview


Overview of the HDR 160 headphones



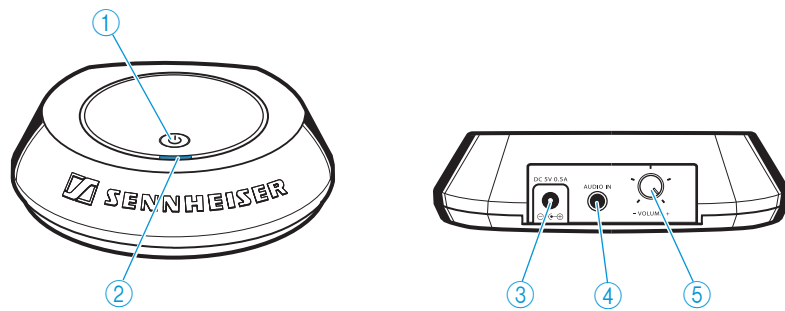
- ① Headband
- ② Ear pads
- ③ Battery compartments


- ④ VOLUME + button
- ⑤ Multi-function button 
- ⑥ VOLUME - button
- ⑦ Charging socket (DC 5V 0.5A)
- ⑧ Multi-function LED




With the multi-function button  ⑤, you can switch the headphones on/to standby mode, set the headphones to multi-user operation, mute the headphones and associate the headphones.

Overview of the TR 160 transmitter






- ① Multi-function button 
- ② Multi-function LED
- ③ Socket for power supply unit (DC 5V 0.5A)
- ④ Audio input (AUDIO IN)
- ⑤ VOLUME control (- +)






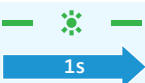


With the multi-function button  ①, you can switch the transmitter on/to standby mode, set the transmitter to multi-user operation and associate the transmitter.

Overview of the indicators and acoustic signals



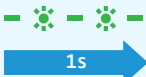

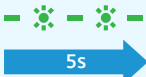
Meaning of the pictograms for the different LEDs

Status	Meaning
	The LED is lit.
	The LED flashes once per second.
	The LED flashes twice every 5 seconds.


Indicators on the headphones

Indicator	Status	Meaning
Multi-function LED 		The rechargeable batteries are almost flat.
		The rechargeable batteries are being charged.
	off	The rechargeable batteries are fully charged.
		The headphones are in enrollment mode (searching for a transmitter to pair with).
		The headphones are in association mode (exchanging device information with the transmitter).
		The headphones receive an audio signal.

Indicators on the transmitter

Indicator	Status	Meaning
Multi-function LED ②		The signal of the sound source is too strong.
		The transmitter is in enrollment mode (searching for headphones to pair with).
		The transmitter is in association mode (exchanging device information with the headphones).
		The transmitter is in single-user operation.
		The transmitter is in multi-user operation.

Acoustic signal of the headphones

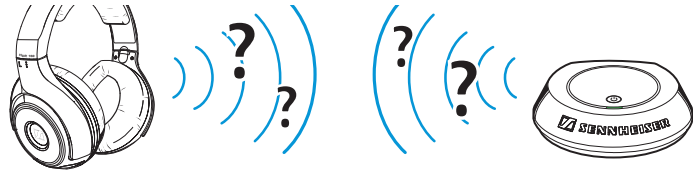
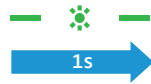
1 short beep	Meaning
	The minimum volume is reached.
	The maximum volume is reached.

Overview of the connection stages

Connection establishment

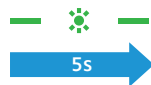
Enrollment mode

When you switch the headphones and the transmitter on, the headphones search for a suitable transmitter.



Pairing

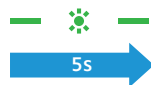
The headphones and the transmitter have recognized each other and the headphones are paired with the transmitter.



Single-user and multi-user operation

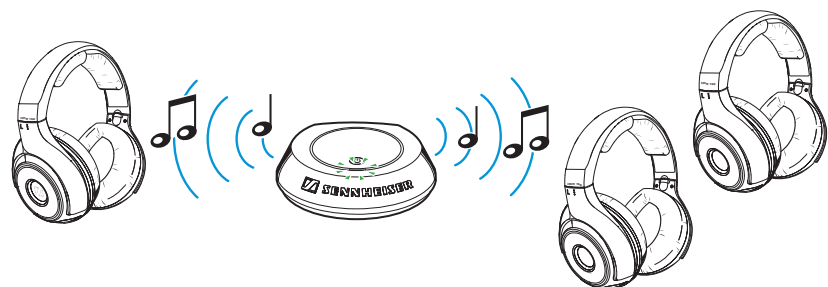
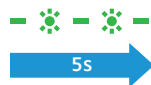
Single-user operation

You can listen to your sound source via one pair of headphones. By default, the transmitter is set to single-user operation (see page 23).



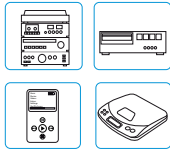
Multi-user operation

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 (see page 26).

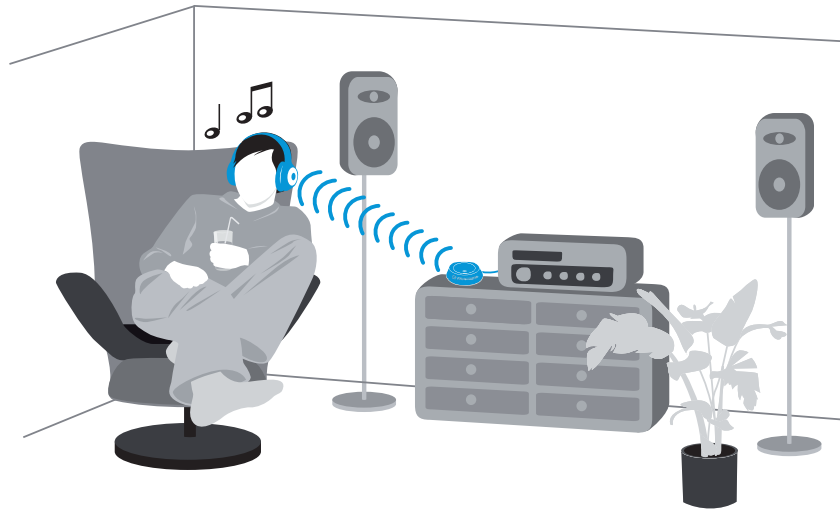


Putting the RS 160 into operation

Setting up the transmitter



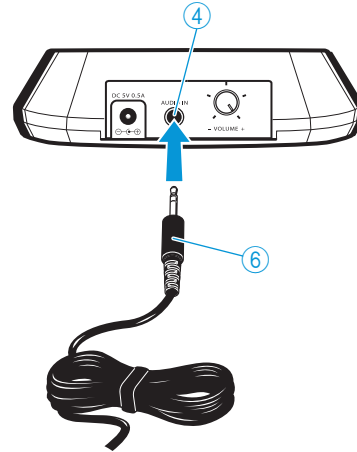
- ▶ Choose a suitable place near your sound source (e.g. TV, stereo or home cinema system).
- ▶ Do not place the transmitter close to metal objects such as shelf bars, reinforced concrete walls, etc. as this can decrease the transmitter's range.
- ▶ Make sure that there is direct line of sight between the transmitter and the headphones.



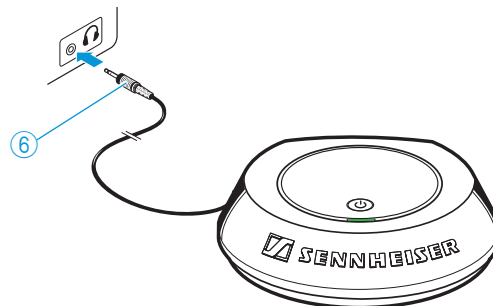
Connecting the transmitter to a sound source

You can connect the TR 160 transmitter to different sound sources, such as a TV, a DVD player or a stereo system.

- ▶ Switch your sound source off before connecting the transmitter.



- ▶ Connect the audio cable ⑥ to the audio input ④ of the transmitter.
- ▶ Connect the audio cable ⑥ to the headphone socket of your sound source.



- ▶ Adjust the volume on your sound source to a medium level. This improves the quality of wireless sound transmission. If necessary, check the settings of your sound source.

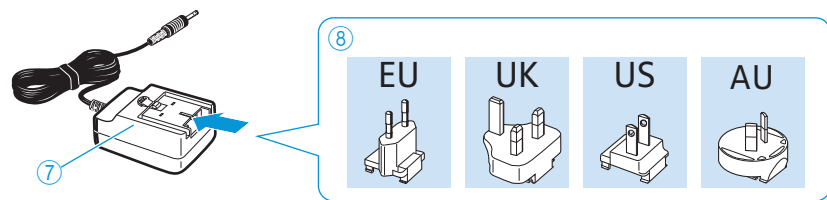
Powering the transmitter

For powering the TR 160 transmitter, you can use:

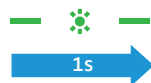
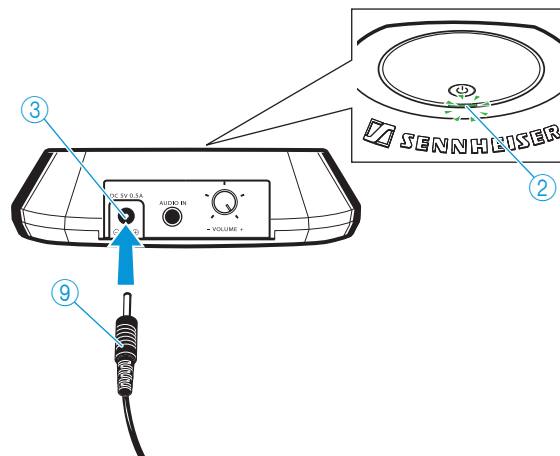
- the supplied SSA-4P 5050F power supply unit for stationary use
- rechargeable batteries (AA size, NiMH, 1.2 V, at least 1,300 mAh) for mobile use
- standard batteries (AA size, 1.5 V) for mobile use

Powering the transmitter via the power supply unit

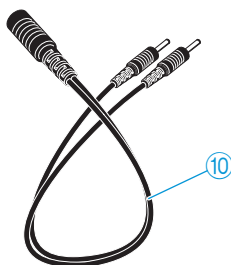
- ▶ Select the suitable country adapter ⑧ for your wall socket.
- ▶ Slide the country adapter ⑧ onto the power supply unit ⑦ until it locks into place.



- ▶ Connect the connector ⑨ of the power supply unit to the socket ③.



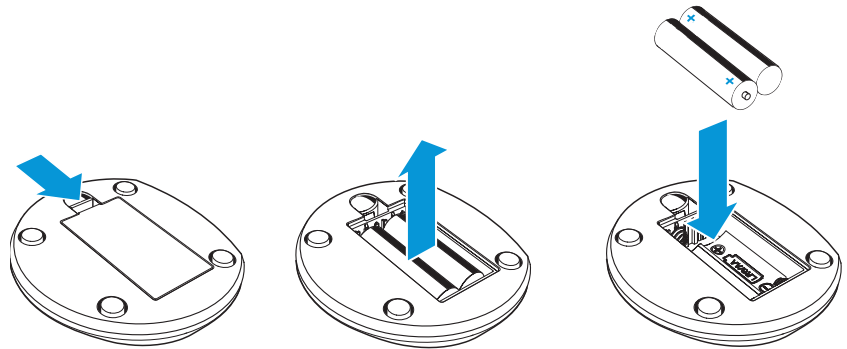
- ▶ Plug the power supply unit ⑦ into a wall socket. The transmitter switches on. The multi-function LED ② flashes green after 9 seconds. The transmitter is in enrollment mode.



- ▶ You can also connect the charging cable ⑩ to the connector ⑨ of the power supply unit to conveniently charge your headphones (see "Charging rechargeable batteries in the headphones" on page 16).

Inserting rechargeable batteries/standard batteries into the transmitter and changing them

- ▶ Power the TR 160 transmitter either with rechargeable batteries (AA size, NiMH, 1.2 V at least 1,300 mAh) or standard batteries (AA size, 1.5 V).
- ▶ Open the battery compartment at the base of the transmitter as shown.
- ▶ Remove the depleted rechargeable batteries or batteries (where applies).
- ▶ Insert the rechargeable batteries or batteries. Observe correct polarity.



- ▶ Close the battery compartment.
The cover locks into place with an audible click and the transmitter switches on. The multi-function LED ② flashes green after 9 seconds. The transmitter is in enrollment mode.

Powering the headphones

For powering the headphones, you can use:

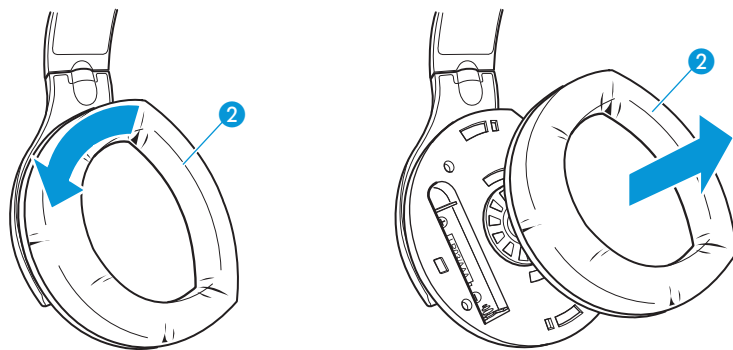
- standard batteries (AAA size, 1.5 V)
- rechargeable batteries (AAA size, NiMH, 1.2 V, 600 mAh)

If you use rechargeable batteries, you can charge them in the headphones using the charging cable ⑩ (see next chapter).

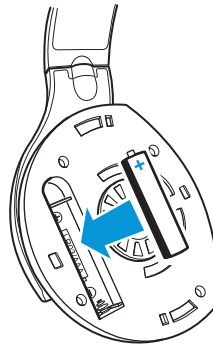
Inserting rechargeable batteries/standard batteries into the headphones and changing the rechargeable batteries/standard batteries



- ▶ Remove the ear pads ② from both 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.



- ▶ Remove the depleted rechargeable batteries or batteries (where applies).
- ▶ Insert the rechargeable batteries or batteries. Observe correct polarity.



- ▶ Secure the ear pads ② to the ear cups.

Charging rechargeable batteries in the headphones

CAUTION Danger of damage to the headphones!

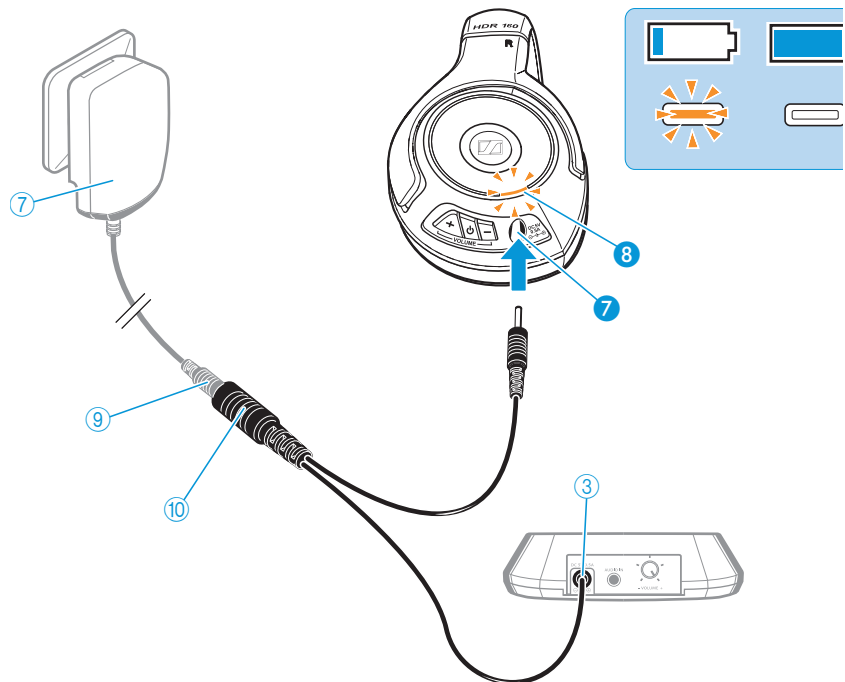
If standard batteries are inserted into the headphones, the batteries can leak during charging and damage the headphones.

- ▶ Only charge rechargeable batteries in your headphones.



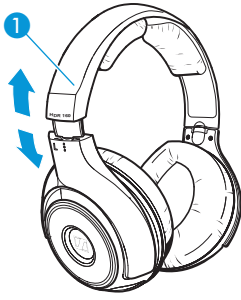
Charge the rechargeable batteries for at least 16 hours prior to first time use. Subsequent charging time is about half of the previous operating time. The operating time is up to 24 hours.

- ▶ Connect the charging cable ⑩ to the charging socket ⑦ on the headphones.
- ▶ Connect the charging cable ⑩ to the socket ③ on the transmitter.
- ▶ Connect the charging cable ⑩ to the connector ⑨ of the power supply unit.
- ▶ Plug the power supply unit ⑦ into a wall socket. The rechargeable batteries are being charged. The multi-function LED ⑧ on the headphones lights up orange.



The transmitter automatically switches from battery operation to mains operation if you connect the power supply unit or the charging cable ⑩ to the transmitter.

Adjusting the headband of the headphones



For good sound quality and best possible comfort, the headband has to be adjusted to properly fit your head. To do so, adjust the headband ① via its snap-in locking mechanism:

- ▶ Wear the headphones so that the headband ① runs over the top of your head.
- ▶ Adjust the length of the headband so that
 - your ears are completely inside the earpads,
 - you feel even, gentle pressure around your ears,
 - a snug fit of the headband ① on the head is ensured.