Contents

For more detailed information on the individual sections of this instruction manual, visit the corresponding product page on our website at www.sennheiser.com.

Important safety instructions

- Read this instruction manual.
- Keep this instruction manual. Always include this instruction manual when passing the device and the mains unit on to third parties.
- Heed all warnings and follow all instructions in this instruction manual.
- Only clean the device and the mains unit when they are not connected to the mains. Use a cloth for cleaning.
- Never open the device, otherwise you can receive an electric shock. If devices are opened by customers in breach of this instruction, the warranty becomes null and void.
- Refer all servicing to qualified service personnel.
  Servicing is required if the device or the mains unit have been damaged in any way, liquid has been spilled, objects have fallen inside, the device or the mains unit have been exposed to rain or moisture, do not operate properly or have been dropped.
- WARNING: To reduce the risk of fire or electric shock, do not use the device and the mains unit near water and do not expose them to rain or moisture. Do not place objects filled with liquids, such as vases or coffee cups, on the device.
- Unplug the mains unit from the wall socket.
- Unplug the mains unit from the wall socket
  – to completely disconnect the device from the mains,
  – during lightning storms or
  – when unused for long periods of time.
- Only operate the mains unit from the type of power source specified in the chapter ‘‘Specifications’’ (see page 22).
- Ensure that the mains 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 22).
- Do not block any ventilation openings. Install the device and the mains unit in accordance with the instructions given in this instruction manual.
- Do not install the device and the mains unit near any heat sources such as radiators, stoves, or other devices (including amplifiers) that produce heat.
- Only use attachments/accessories specified by Sennheiser.
- When replacement parts are required, only use 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.
- Do not overload wall outlets and extension cables as this may result in fire and electric shock.

Danger due to high volumes

This is a professional transmitter. Commercial use is subject to the rules and regulations of the trade association responsible. Sennheiser, as the manufacturer, is therefore obliged to expressly point out possible health risks arising from use.

This transmitter is capable of producing sound pressure exceeding 85 dB(A). 85 dB(A) is the sound pressure corresponding to the maximum permissible volume which is by law (in some countries) allowed to affect your hearing for the duration of a working day. It is used as a basis according to the specifications of industrial medicine. Higher volumes or longer durations can damage your hearing. At higher volumes, the duration must be shortened in order to prevent hearing damage. The following are sure signs that you have been subjected to excessive noise for too long a time:

- You can hear ringing or whistling sounds in your ears.
- You have the impression (even for a short time only) that you can no longer hear high notes.

Intended use

Intended use of the SR 300 IEM transmitter includes:

- having read this instruction manual especially the chapter ''Important safety instructions'',
- using the device within the operating conditions and limitations described in this instruction manual.

''Improper use'' means using the device other than as described in these instructions, or under operating conditions which differ from those described herein.

The evolution wireless series ew 300 IEM G3

This transmitter is part of the evolution wireless series generation 3 (ew G3). With this series, Sennheiser offers high-quality state-of-the-art RF transmission systems with a high level of operational reliability and ease of use. Transmitters and receivers are designed for monitoring applications and permit wireless transmission with studio-quality sound.

The SR 300 IEM rack-mount transmitter

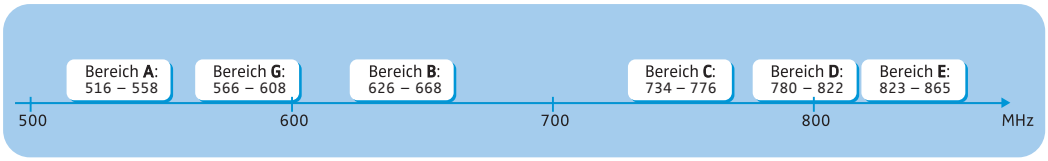
With the 2-channel/stereo monitoring system of the SR 300 IEM transmitter, musicians, video and sound amateurs, reporters/broadcasters, etc. can directly monitor the received sound signals without troublesome cables or monitor speakers being required. In addition, the system can also be used for any application where talkback signals are to be transmitted.

Features of the SR 300 IEM G3 transmitter:

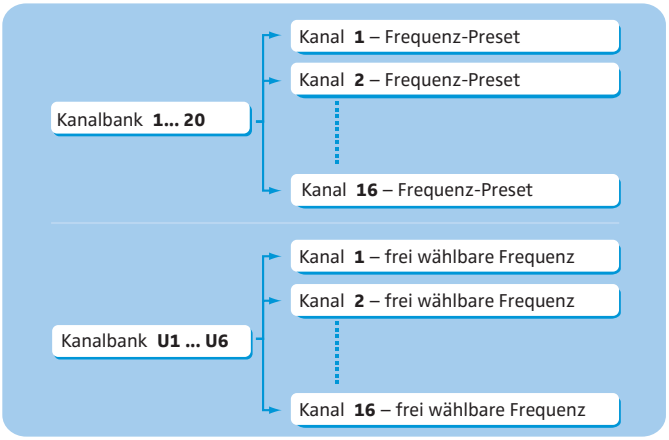
- Optimized PLL synthesizer and microprocessor technology
- HDX noise reduction system
- Pilot tone squelch control
- True diversity technology
- Switching bandwidth of 42 MHz
- Safe configuration of a multi-channel system using the WSM

The frequency bank system

The transmitter is available in 6 UHF frequency ranges with 1,680 transmission frequencies per frequency range:



Each frequency range (A–E, G) offers 26 frequency banks with up to 16 channels each:



Each of the channels in the frequency banks "1" to "20" has been factory-preset to a fixed transmission frequency (frequency preset). The factory-preset frequencies within one frequency bank are intermodulation-free. These frequencies cannot be changed.

For an overview of the frequency presets, please refer to the supplied frequency information sheet. Updated versions of the frequency information sheet can be downloaded from the corresponding product page on our website at www.sennheiser.com.

The frequency banks "U1" to "U6" allow you to freely select and store transmission frequencies. It might be that these transmission frequencies are not intermodulation-free (see page 20).

Delivery includes

The packaging contains the following items:

1 SR 300 IEM G3 rack-mount transmitter

1 NT 2-3 mains unit with one country adapter

1 rod antenna

1 GA 3 rack adapter

1 instruction manual

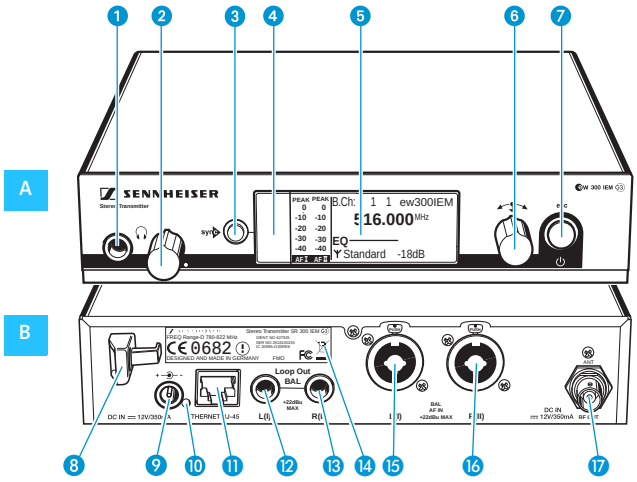
1 frequency information sheet

1 RF licensing information sheet

4 device feet

Product overview

Overview of the SR 300 IEM transmitter



A Operating elements – front panel

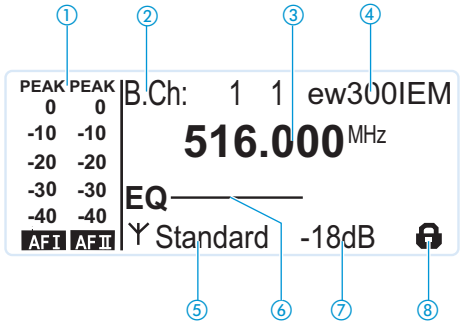
1. Headphone output, ¼″ (6.3 mm) jack socket (🎧)
2. Headphone volume control
3. sync button, backlit
4. Infra-red interface
5. Display panel, backlit in orange
6. Jog dial
7. STANDBY button with operation indication (red backlighting), serves as the ESC (cancel) key in the operating menu

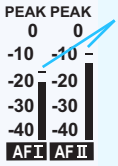
B Operating elements – rear panel

8. Cable grip for power supply DC cable
9. DC socket (DC IN) for connection of NT 2-3 mains unit
10. LED (yellow) for network activity indication
11. LAN socket (ETHERNET RJ 45)
12. Audio output left (LOOP OUT BAL L (I)), ¼″ (6.3 mm) jack socket
13. Audio output right (LOOP OUT BAL R (II)), ¼″ (6.3 mm) jack socket
14. Type plate
15. Audio input left (BAL AF IN L (I)), ¼″ (6.3 mm) jack/XLR-3 combo socket
16. Audio input right (BAL AF IN R (II)), ¼″ (6.3 mm) jack/XLR-3 combo socket)
17. Antenna output (RF OUT) with remote power supply input, BNC socket

Overview of the displays

After switch-on, the transmitter displays the standard display.



Display	Meaning
① Audio level "AF IN L(I)" and "AF IN R(II)" (Audio Frequency)	 Modulation of the left (I) and right (II) audio channel with peak hold function When the level displays for audio level show full deflection, the audio input level is excessively high. When the transmitter is overmodulated frequently or for extended periods of time, the "PEAK" display is shown inverted.
② Frequency bank and channel	Current frequency bank and channel number
③ Frequency	Current transmission frequency
④ Name	Freely selectable name of the transmitter
⑤ Transmission power	Current transmission power
⑥ Equalizer setting	Current equalizer setting
⑦ Input sensitivity	Current input sensitivity for the audio signal available at the audio input sockets BAL AF IN L (I) ⑮ and BAL AF IN R (II) ⑯.
⑧ Lock mode icon (see page 16)	Lock mode is activated

Putting the transmitter into operation

Preparing the transmitter for use

When using more than one transmitter, we recommend connecting remote antennas and, if necessary, using Sennheiser antenna accessories. Fore more information, visit the ew G3 product page at www.sennheiser.com.

Setting up the transmitter on a flat surface

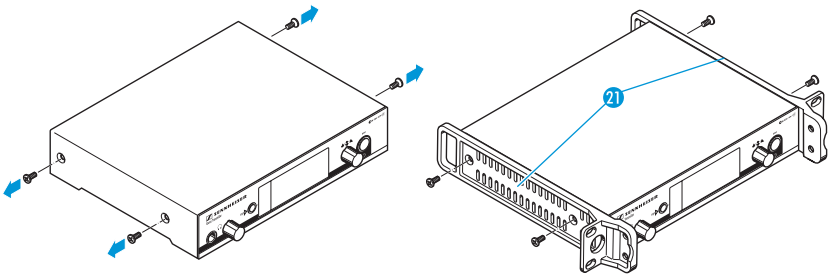
Place the transmitter on a flat, horizontal surface. Please note that the device feet can leave stains on delicate surfaces.

The rack mount "ears" are designed to help protect the operating elements from damage or deformation, e.g. if the transmitter is dropped. Therefore, fasten the rack mount "ears", even if you do not want to rack mount your transmitter.

Mounting the rack mount "ears"

To fasten the rack mount "ears" (21):

- Unscrew and remove the two recessed head screws (M4x8) on each side of the transmitter (see left-hand diagram).
- Secure the rack mount "ears" (21) to the sides of the transmitter using the previously removed recessed head screws (see right-hand diagram).



Fitting the device feet

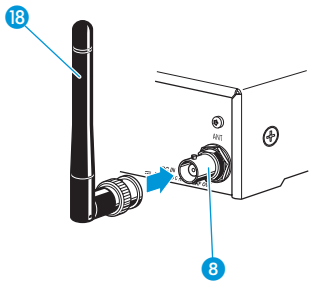
Do not fit the device feet when mounting the transmitter into a 19" rack.

- Clean the base of the transmitter where you want to fix the device feet.
- Fit the device feet to the four corners of the transmitter.

Connecting the rod antenna

The supplied rod antenna (18) is suitable for use in good reception conditions.

- Connect the rod antenna (18) (see diagram on page 9).



Mounting the transmitter into a 19" rack

Do not fit the device feet when mounting the transmitter into a 19" rack.

CAUTION!

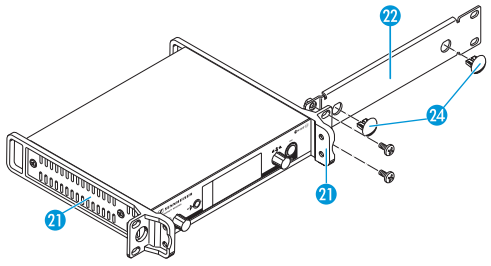
Risks when rack mounting the transmitter!

When installing the device in a closed or multi-rack assembly, please consider that, during operation, the ambient temperature, the mechanical loading and the electrical potentials will be different from those of devices which are not mounted into a rack.

- Make sure that the ambient temperature within the rack does not exceed the permissible temperature limit specified in the SR 300 IEM specifications.
- Ensure sufficient ventilation; if necessary, provide additional ventilation.
- Make sure that the mechanical loading of the rack is even.
- When connecting to the power supply, observe the information indicated on the type plate. Avoid circuit overloading. If necessary, provide overcurrent protection.
- When rack mounting, please note that intrinsically harmless leakage currents of the individual mains units may accumulate, thereby exceeding the allowable limit value. As a remedy, ground the rack via an additional ground connection.

Rack mounting one transmitter

- Secure the rack mount "ears" 21 (supplied with the GA 3 rack adapter) to the transmitter as described on page 8.
- Secure the blanking plate 22 to one of the rack mount "ears" using two recessed head screws (M 6x10) (see diagram).

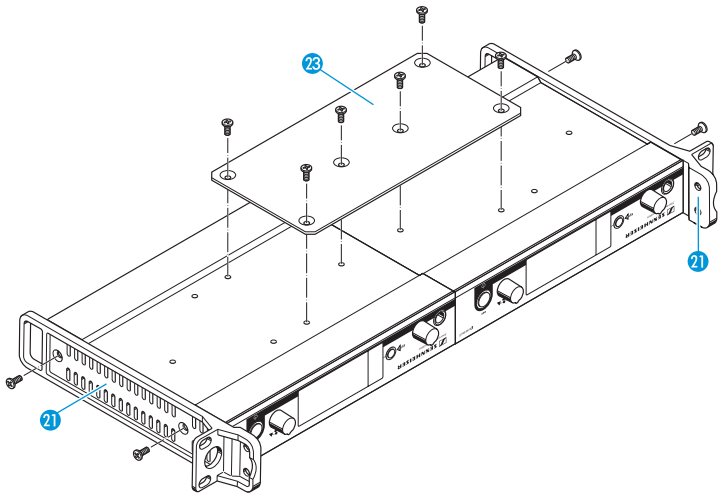


- Connect the antenna. You have the following options:
  - You can connect the supplied rod antenna 18 to the rear of the transmitter (see page 8). In this case, insert the two blanking plugs 24 into the holes of the blanking plate (see diagram on page 9).
  - You can use the AM 2 antenna front mount kit (optional accessory) and mount the rod antenna to the blanking plate 22.
  - You can use a remote antenna, if necessary in conjunction with the AC 3 antenna combiner.
- Slide the transmitter with the mounted blanking plate 22 into the 19'' rack.
- Secure the rack mount ''ear'' 21 and the blanking plate 22 to the 19'' rack.

Rack mounting two transmitters

To mount two transmitters into a rack using the GA 3 rack adapter:

- Place the two transmitters side by side upside-down onto a flat surface:



- Secure the jointing plate 23 to the transmitters using six recessed head screws (M 3x6).
- Secure the rack mount ''ears'' 21 to the transmitters as described on page 8.

To mount the antennas:

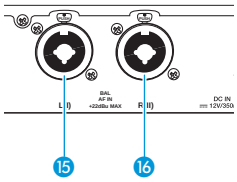
- Use remote antennas, if necessary in conjunction with the AC 3 antenna combiner. For more information, visit the ew G3 product pages at www.sennheiser.com.

To mount the transmitters into the 19'' rack:

- Slide the transmitters into the 19'' rack.
- Secure the rack mount ''ears'' to the 19'' rack.

Connecting external devices

Connecting external devices to the input sockets



- Use a suitable cable to connect the output of an external device (e.g. a mixing console or an additional SR 300 IEM) to the input socket BAL AF IN L (I) 15 and/or BAL AF IN R (II) 16 (see also page 15).
- Via the operating menu, adjust the transmitter's input sensitivity. The input sensitivity is adjusted via the "Sensitivity" menu item and is common for both inputs.

Connecting external devices to the output sockets

- Use a suitable cable to connect the input of an external device (e.g. a mixing console or an additional SR 300 IEM) to the output socket LOOP OUT BAL L(I) 12 and/or LOOP OUT BAL R(II) 13 (see also page 15).

The signal of the input sockets BAL AF IN L (I) 15 and BAL AF IN R (II) 16 is actively decoupled and then distributed to the output sockets LOOP OUT BAL L (I) 12 and LOOP OUT BAL R (II) 13. You can therefore use the output sockets only when the transmitter is switched on.

Connecting a remote antenna to the BNC socket

Use a remote antenna when the transmitter position is not the best antenna position for optimum transmission. You can choose between two antennas:

- A 2003 UHF passive directional antenna
- A 1031 passive omni-directional antenna

- Use a low-attenuation 50-Ω cable to connect the antenna to the transmitter. Ready-made antenna cables from Sennheiser are available as accessories with length of 1 m, 5 m and 10 m.
- If possible, use a short antenna cable and as little connections as possible, since long cables and many connectors lead to an attenuation of the antenna signal.
- Position the antenna in the same room in which the transmission takes place.
- Observe a minimum distance of 1 m between the antenna and metal objects (including reinforced concrete walls).

Connecting the AC 3 antenna combiner to the BNC socket

To make multi-channel systems, you should use the AC 3 antenna combiner (optional accessory). The AC 3 allows you to operate up to four transmitters with a single antenna without virtually no intermodulation.

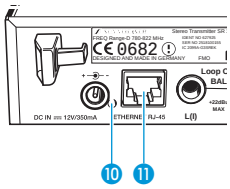
In addition, the AC 3 incorporates DC distribution to enable simultaneous powering of up to four transmitters via its BNC sockets.

- Connect an AC 3 antenna combiner to the BNC socket 17.

Connecting transmitters in a network

You can connect several transmitters in a network. The transmitters are remote controlled via a PC running the "Wireless Systems Manager" (WSM) software. This software will assist in the quick and safe configuration of multi-channel systems.

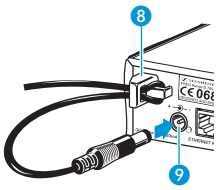
The "Wireless Systems Manager" (WSM) software can be downloaded from the corresponding product page on our website at www.sennheiser.com.



- Connect a standard network cable (at least Cat 5) to the LAN socket 11 of the transmitter.
- Connect your transmitters to an Ethernet switch.
- Connect a PC to the Ethernet switch.
  When a transmitter is properly connected to the Ethernet switch or the PC, the yellow LED 10 at the rear of the transmitter lights up.

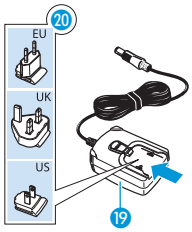
For further information on network operation, refer to page 19.

Connecting the mains unit



Only use the supplied mains unit. It is designed for the transmitter and ensures safe operation.

- Insert the yellow connector of the NT 2-3 mains unit into the yellow socket 9 of the transmitter.
- Pass the cable of the mains unit through the cable grip 8.
- Slide the supplied country adapter 20 onto the mains unit 19.
- Plug the mains unit 19 into a wall socket.
  The STANDBY button is backlit in red.



The AC 3 antenna combiner incorporates DC distribution to enable simultaneous powering of up to four transmitters via its BNC sockets. These transmitters do not require their individual power supply (see also page 11).

Using the transmitter

To establish a transmission link, proceed as follows:

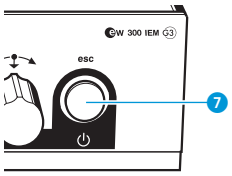
1. Switch the transmitter on (see below).
2. Switch the receiver on (see the instruction manual of the receiver).
   The transmission link is established.

It is vital to observe the notes on frequency selection on page 19.

If you cannot establish a transmission link between transmitter and receiver:

- Make sure that transmitter and receiver are set to the same frequency bank and to the same channel.
- If necessary, read the chapter "If a problem occurs ..." on page 21.

Switching the transmitter on/off



To switch the transmitter on:

- Briefly press the STANDBY button 7.
  The transmitter switches on and the standard display appears.

To switch the transmitter to standby mode:

- If necessary, deactivate the lock mode (see page 16)
- Keep the STANDBY button 7 pressed until "OFF" appears on the display panel.
  The display panel then turns off.

When in the operating menu, pressing the STANDBY button 7 will cancel your entry (ESC function) and return you to the standard display.

The STANDBY button 7 is backlit in red both during operation and in standby mode.

To completely switch the transmitter off:

- Disconnect the transmitter from the mains by unplugging the mains unit from the wall socket.
  The backlighting of the STANDBY button 7 goes off.

Monitoring the audio signal via headphones

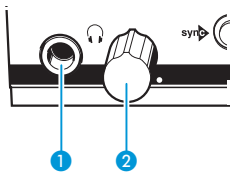
You can monitor the audio signal via the headphone output.

CAUTION!

Danger of hearing damage!

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

- Set the headphone volume control 2 to the minimum position before putting the headphones on.



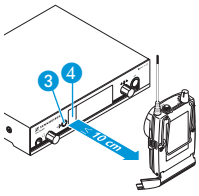
- Set the headphone volume control 2 to the minimum position.
- Connect headphones with a ¼" (6.3 mm) stereo jack plug to the headphone output 🎧 1.
- Gradually increase the volume and monitor the audio signal with the lowest possible volume.

Synchronizing a receiver with the transmitter

You can synchronize an EK 300 IEM G3 receiver with the transmitter. During synchronization, the following parameters are transferred to the receiver:

Setting	Transferred parameters
"Balance"	Current balance setting ("–15"/"+15")
"Squelch"	Current squelch setting ("Off", "5 dB" ... "25 dB")
"Mode"	Current audio channel setting ("Stereo"/"Focus")
"High boost"	Current high boost setting ("flat"/"High boost")
"Auto Lock"	Current lock mode setting ("active"/"inactive")
"Limiter"	Current limiter setting ("–18 dB", "–12 dB", "–6 dB", "Off")

Via the "Sync Settings" submenu, you can adjust the parameters listed above and active or deactivate their transfer to the receiver (see page 17).



To transfer the parameters:

- Switch the transmitter and the receiver on.
- Press the sync button 3 on the transmitter.
  "Sync" appears on the display panel of the transmitter.
- Place the infra-red interface of the transmitter (see the instruction manual of the receiver) in front of the infra-red interface 4 of the transmitter.
  The parameters are transferred to the receiver. When the transfer is completed, "√" appears on the display panel of the transmitter. The transmitter then switches back to the standard display.

To cancel the transfer:

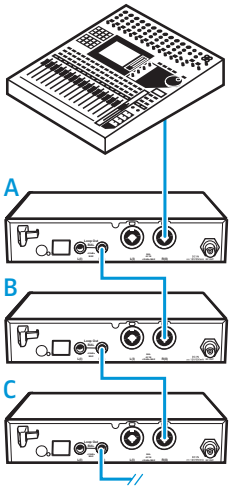
- Press the STANDBY button on the transmitter.
  "X" appears on the display panel of the transmitter. "X" also appears if:
  - no receiver was found or the receiver is not compatible,
  - no receiver was found and the synchronization process was canceled after 30 seconds,
  - you canceled the transfer.

Adjusting the audio channels

Via the "Mode" menu item, you can adjust the audio channels.

- Select "Stereo" if you want to output a separate signal via the output sockets LOOP OUT BAL L(I) ⑫ and LOOP OUT BAL R(II) ⑬ (e.g. LOOP OUT BAL L(I) ⑫ = audio signal of the presenter/musician, LOOP OUT BAL R(II) ⑬ = sum of all audio signals).
  This allows the presenter/musician to adjust the balance between the left and right stereo signal on his receiver.
- Select "Mono" if you want to output the same signal on both audio channels. The signal from the left audio input BAL AF IN L ⑮ is used.

Daisy-chaining audio signals



To daisy-chain an audio signal from one transmitter to the next:

- Route a signal from the mixing console to the input socket (in this example: BAL AF IN R ⑯) of transmitter A.
- Connect the output socket LOOP OUT BAL R ⑬ of transmitter A to the input socket BAL AF IN R ⑯ of transmitter B.
- Connect the output socket LOOP OUT BAL R ⑬ of transmitter B to the input socket BAL AF IN R ⑯ of transmitter C.
- Repeat for the other transmitters.

You can use the LOOP OUT BAL L(I) ⑫ and LOOP OUT BAL R(II) ⑬ output sockets only when the transmitter is switched on.

Deactivating the lock mode temporarily

You can activate or deactivate the automatic lock mode via the "Auto Lock" menu item. If the lock mode is activated, you have to temporarily deactivate it In order to be able to operate the transmitter:

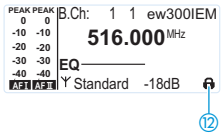
▶ Press the jog dial.
"Locked" appears on the display panel.

▶ Turn the jog dial.
"Unlock?" appears on the display panel.

▶ Press the jog dial.
The lock mode is temporarily deactivated:

When you are in the operating menu
The lock mode remains deactivated until you exit the operating menu.
When the standard display is shown
The lock mode is automatically activated after 10 seconds.

The lock mode icon ⑧ flashes prior to the lock mode being activated again.



Activating/deactivating the RF signal

To deactivate the RF signal:

▶ When the standard display is shown on the display panel, briefly press the STANDBY button.
"RX Mute On?" appears on the display panel.

▶ Press the jog dial.
The RF signal is deactivated. "RX Mute" flashes in alternation with the standard display and the display is backlight in red.

To activate the RF signal:

▶ Press the STANDBY button.
"RX Mute Off?" appears on the display panel.

▶ Press the jog dial.
The RF signal is activated and the display backlighting changes from red to orange again.

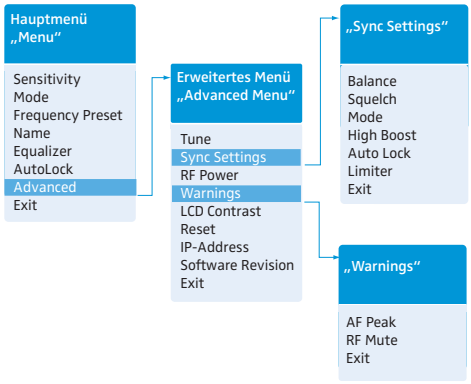
Using the operating menu

The buttons

Button	Function of the button
Press the STANDBY button 	• Switches the transmitter on and off • Cancels the entry and returns to the current standard display (ESC function) • Activates/deactivates the RF signal (special function, see page 16)
Press the jog dial 	• Changes from the current standard display to the operating menu • Calls up a menu item • Enters a submenu • Stores the settings and returns to the operating menu
Turn the jog dial 	• Changes to the next/previous menu item • Changes the setting of a menu item

Overview of the operating menu

For more detailed information on the operating menu, refer to the instruction manual of the SR 300 IEM. This instruction manual can be downloaded from the SR 300 IEM product page at www.sennheiser.com.



When the standard display is shown on the display panel, you can get into the main menu by pressing the jog dial. The extended menu ‘‘Advanced Menu’’ and the other menus can be accessed via the corresponding menu items.

Display	Function of the menu item
Main menu "Menu"	
Sensitivity	Adjusts the input sensitivity
Mode	Switches between mono and stereo operation
Frequency Preset	Changes the frequency bank and the channel
Name	Enters the transmitter name
Equalizer	Changes the frequency response of the output signal using a graphic equalizer
AutoLock	Activates/deactivates the automatic lock mode
Advanced	Calls up the extended menu "Advanced Menu"
Exit	Exits the operating menu and returns to the standard display
Extended menu "Advanced Menu"	
Tune	Sets the transmission frequencies for the frequency banks "U1" to "U6" Special function: Sets a channel and a transmission frequency for the frequency banks "U1" to "U6": ▶ Select this menu item and call it up by pressing the jog dial 6 until the channel selection appears.
Sync Settings	Adjusts the parameters to be transferred to the receiver and activates/deactivates the transfer For an overview of the parameters, refer to page 14.
RF Power	Adjusts the transmission power
Warnings	Activates/deactivates the warning messages
LCD Contrast	Adjusts the contrast of the display panel
Reset	Resets the transmitter
IP-Address	Adjusts the IP address of the transmitter
Software Revision	Displays the current software revision
Exit	Exits the extended menu "Advanced Menu" and returns to the main menu
"Warnings"	
Activates/deactivates warnings (color change and warning messages):	
AF Peak	Audio overmodulation
RF Mute	RF signal is deactivated
Exit	Exits the submenu "Warnings" and returns to the extended menu "Advanced Menu"

Adjustment tips

Synchronizing the transmitter with a receiver

When synchronizing the transmitter with a receiver, please observe the following:

- Only use a transmitter and a receiver from the same frequency range (see the type plate on the transmitter and the receiver).
- Make sure that the desired frequencies are listed in the enclosed frequency information sheet.
- Make sure that the desired frequencies are approved and legal in your country and, if necessary, apply for an operating license.

Synchronizing the transmitter with a receiver – individual operation

Upon delivery, transmitter and receiver are synchronized with each other. However, if you cannot establish a transmission link between transmitter and receiver, you have to synchronize the channels of the devices:

- With your EK 300 IEM receiver, perform a frequency preset scan to scan the frequency banks for unused channels (see the instruction manual of the receiver).
- Select a frequency preset on your receiver (see the instruction manual of the receiver). The frequency of the frequency preset must be approved and legal in your country (see above).
- Synchronize a transmitter with the receiver via the infra-red interface (see page 14). This establishes a transmission link between the transmitter and the receiver.

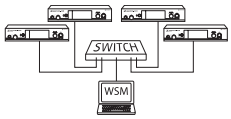
Alternatively, you can set the channel on the transmitter manually:

- Make sure that you set the transmitter to the same frequency bank and the same channel as the receiver.

Synchronizing transmitters with receivers – multi-channel operation

Network operation

In multi-channel operation, the transmitters are remote controlled via a PC running the "Wireless Systems Manager" (WSM) software.



Advantages of controlling the transmitters via the "Wireless Systems Manager" (WSM) software:

- Detailed overview of all transmission and receiving channels
- Remote control of all transmitters in the network
- Combination of transmitters of different frequency ranges (see page 4).

- Connect your transmitters and your PC in a network (see page 12).
- Switch your transmitters and your PC on.
- Launch the "Wireless Systems Manager" (WSM) software.
- Using the WSM software, prepare your transmitter for the frequency preset scan. The RF signal of all transmitters is automatically deactivated. For further information, refer to the instruction manual of your WSM software.
- With your EK 300 IEM receiver, perform a frequency preset scan and select an unused frequency preset (see the instruction manual of the receiver).

- Synchronize a transmitter with your receiver via the infra-red interface (see page 14). This establishes a transmission link between the transmitter and the receiver.
- To automatically assign frequency presets to the other transmitters, proceed as described in the instruction manual of the "Wireless Systems Manager" (WSM) software.
- Set the corresponding receivers to the selected frequency bank and to the selected channel either by synchronizing your receivers with the transmitters (see page 14) or by setting the frequency bank and the channel manually (see the instruction manual of the receiver).

Your multi-channel system is now set up.

Operation without network

- Switch off all transmitters of your system that are to be automatically configured. Channels used by switched-on transmitters are displayed as "used".
- Repeat the steps described under "Synchronizing transmitters with receivers – multi-channel operation" on page 19 for the remaining transmitter and receiver pairs. Leave the transmitters that are already synchronized with a receiver switched on.

You can also freely select the frequencies and store these frequencies in the frequency banks "U1" to "U6".

If you want to use the frequency banks "U1" to "U6":

- Make sure to use transmitters and receivers from the same frequency range (see page 4 and the type plates of the devices).
- Only use frequencies that are approved and legal in your country (see page 19).

To ensure that the desired frequencies are intermodulation-free, proceed as follows:

- Calculate intermodulation-free frequencies using the "Sennheiser Intermodulation and Frequency Management (SIFM)" software (see www.sennheiser.com).

- Set each transmitter to the same frequency bank.
- On one of the transmitters, select a channel within this frequency bank (see page 18).
- Assign this channel one of the calculated transmission frequencies (see page 18).
- Synchronize a receiver with your transmitter (see page 14)

  OR
- Manually set the receiver to the same frequency bank, channel and frequency that you set on the transmitter.
- Repeat for the remaining transmitters and receivers as described above.

Cleaning the transmitter

CAUTION!

Liquids can damage the electronics of the transmitter!

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

- Keep all liquids away from the transmitter.

- Before cleaning, disconnect the device from the mains.
- Use a slightly damp cloth to clean the device from time to time. Do not use any solvents or cleansing agents.

If a problem occurs ...

Problem	Possible cause	Possible solution
Transmitter cannot be operated, "Locked" appears on the display panel	Lock mode is activated	Deactivate the lock mode (see page 16).
No operation indication	No mains connection	Check the connections of the mains unit.
No RF signal at the receiver	Transmitter and receiver are not on the same channel	Set the transmitter and receiver to the same channel. To do so, use the synchronization function (see page 14).
	Transmission range is exceeded	Check the squelch threshold setting on the receiver.
		Reduce the distance between receiver and transmitter.
RF signal available, no audio signal at the receiver	Receiver's squelch threshold is adjusted too high	Reduce the squelch threshold (see the instruction manual of the receiver).
		Reposition the antennas.
Audio signal has a high level of background noise	Transmitter sensitivity is adjusted too low	Adjust the transmitter sensitivity correctly.
Audio signal is distorted	Transmitter sensitivity is adjusted too high	Adjust the transmitter sensitivity correctly.
	Receiver's audio output level is adjusted too high	Reduce the audio output level (see the instruction manual of the receiver).

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 under "Service & Support".

For accessories, visit the ew G3 product page at www.sennheiser.com.

Specifications

RF characteristics

Frequency ranges	516–558, 566–608, 626–668, 734–776, 780–822, 823–865 MHz (A to E, G, see page 4)
Transmission frequencies	1,680 frequencies, tuneable in steps of 25 kHz 20 frequency banks, each with up to 16 factory-preset channels 6 frequency banks with up to 16 user programmable channels
Switching bandwidth	42 MHz
Frequency stability	±10 ppm (–10°C to +55°C)
Antenna output	BNC socket, 50 Ω
RF output power at 50 Ω	typ. 10/30 mW (Low/Standard), switchable

AF characteristics

Modulation	wideband FM stereo (MPX pilot tone)
Compander system	Sennheiser HDX
Nominal/peak deviation	±24 kHz/±48 kHz
MPX pilot tone (frequency/deviation)	19 kHz / ±5 kHz
AF frequency response	25 Hz–15 kHz
AF input BAL AF IN L (I)/BAL AF IN R (II)	2 x XLR-3, electronically balanced
Max. input level	+22 dBu
THD (at 1 kHz and nominal deviation)	< 0.9 %
Signal-to-noise ratio at nominal load and peak deviation	> 90 dB
AF output LOOP OUT BAL L (I)/LOOP OUT BAL R (II)	¼'' (6.3 mm) stereo jack socket, balanced

Overall device

Temperature range	–10 °C to +55 °C
Power supply	12 V ⎓
Current consumption	max. 300 mA
Dimensions	approx. 202 mm x 212 mm x 43 mm
Weight	approx. 980 g

In compliance with

Europe CE	EMC	EN 301489-1/-9
	Radio	EN 300422-1/-2
	Safety	EN 60065 EN 62311 (SAR)

Approved by

Canada	Industry Canada RSS 210, IC: 2099A-G3SREK limited to 806 MHz
USA	FCC-Part 74 FCC-ID: DMOG3SREK limited to 698 MHz

NT 2-3 mains unit

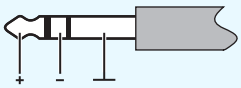
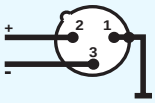
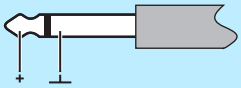
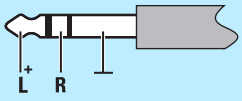
Input voltage	100 to 240 V~, 50/60 Hz
Current consumption	max. 120 mA
Output voltage	12 V ⎓
Secondary output current	400 mA
Temperature range	–10 °C to +40 °C

In compliance with

Europe	CE	EMC	EN 55022, EN 55024, EN 55014-1/-2
		Safety	EN 60065
USA	FC	47 CFR 15 subpart B	
Canada		ICES 003	

The mains unit is certified in accordance with the legal safety requirements of Europe, the United States, Canada, Russia and Japan.

Connector assignment

Audio		Other connectors
¼'' (6.3 mm) stereo jack plug, balanced (Audio In/Loop out) 	XLR-3F connector, balanced (Audio In) 	DC connector for power supply 
¼'' (6.3 mm) mono jack plug, unbalanced 	¼'' (6.3 mm) stereo jack plug for headphone output 	

Manufacturer Declarations

Warranty

Sennheiser electronic GmbH & Co. KG gives a warranty of 24 months on this product.

For the current warranty conditions, please visit our web site at www.sennheiser.com or contact your Sennheiser partner.

In compliance with the following requirements

- RoHS Directive (2002/95/EU)
- WEEE Directive (2002/96/EU)

Please dispose of the transmitter at the end of its operational lifetime by taking it to your local collection point or recycling center for such equipment.

CE Declaration of Conformity

- CE 0682
- R&TTE Directive (1999/5/EU), EMC Directive (2004/108/EU),
  Low Voltage Directive (2006/95/EU)
  The declarations are available at www.sennheiser.com.
  Before putting the device into operation, please observe the respective country-specific regulations.

Statements regarding FCC and Industry Canada

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 device 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.

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