



evolution wireless G4 skm 300

Instruction Manual



SKM 300 G4 handheld transmitter



You can find more detailed information about the SKM 300 G4 in the following sections:

- Installation and Startup: “Installing the SKM 300 G4”
- Operation: “Using the SKM 300 G4”
- Technical Data: “SKM 300 G4”



Accessories

A variety of accessories are available for the ew 300-500 G4 series.

Microphones and cables

Microphone modules

We recommend using the following microphone modules with the SKM 300 G4 and SKM 500 G4 handheld transmitters.

Module	Features	Article no.
MMD 835-1 BK	Dynamic, cardioid, black	502575
MMD 845-1 BK	Dynamic, super-cardioid, black	502576
MME 865-1 BK	Capacitor, super-cardioid, black	502581
MMD 935-1 BK	Dynamic, cardioid, black	502577
MMD 945-1 BK	Dynamic, super-cardioid, black	502579
MMK 965-1 BK	Capacitor, switchable Cardioid/super-cardioid, black	502582
MMK 965-1 NI	Capacitor, switchable Cardioid/super-cardioid, nickel	502584
MD 9235 BK	Dynamic, cardioid, black	502585
MD 9235 NI	Dynamic, cardioid, black	502586
MD 9235 NI/BK	Dynamic, cardioid, nickel/black	502591
Neumann KK 204	Capacitor, cardioid, nickel	008651
Neumann KK 204 BK	Capacitor, cardioid, black	008652
Neumann KK 205	Capacitor, super-cardioid, nickel	008653
Neumann KK 205 BK	Capacitor, super-cardioid, black	008654

i You can find more information about the individual microphone modules on their respective product pages at www.sennheiser.com.



Additional accessories

Color labeling set

- **KEN 2**, color labeling set for SKM handheld transmitters, article no. 530195



Microphone clamp

- **MZQ 1**, microphone clamp for SKM handheld transmitters, article no. 076670





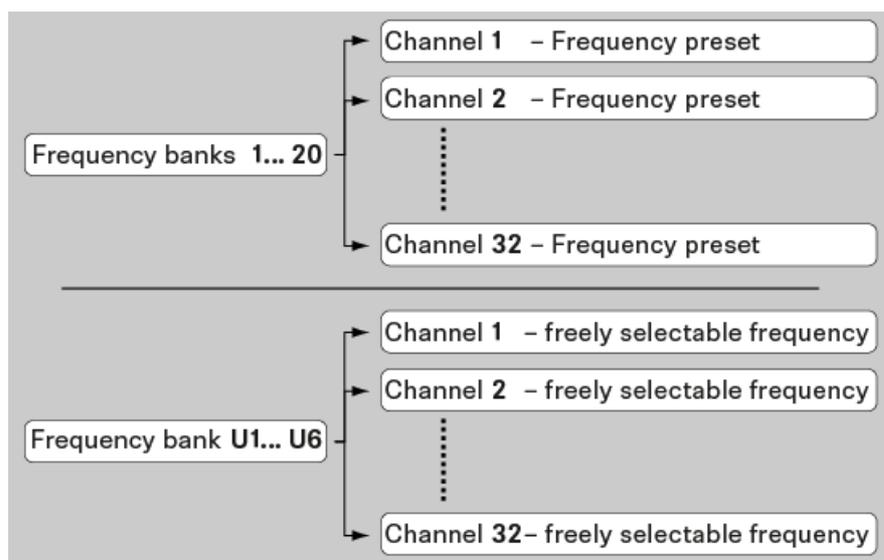
The frequency bank system

There are different frequency ranges in the UHF band available for transmission.

The following frequency ranges are available for the **ew 300-500 G4** series:

- **Aw+ range:** 470 – 558 MHz
- **AS range:** 520 – 558 MHz
- **Gw1 range:** 558 – 608 MHz
- **Gw range:** 558 – 626 MHz
- **GBw range:** 606 – 678 MHz
- **Bw range:** 526 – 698 MHz
- **Cw range:** 718 – 790 MHz
- **Dw range:** 790 – 865 MHz
- **JB range:** 806 – 810 MHz
- **K+ range:** 925 – 937.5 MHz

Every frequency range has **26 frequency banks** with up to 32 channels:



i You can find information about the frequency presets in the frequency tables of the respective frequency ranges under “Frequency tables”.



Installing the SKM 300 G4

These sections contain detailed information about installing and starting up the SKM 300 G4.

You can find information about operating the SKM 300 G4 under “Using the SKM 300 G4”.

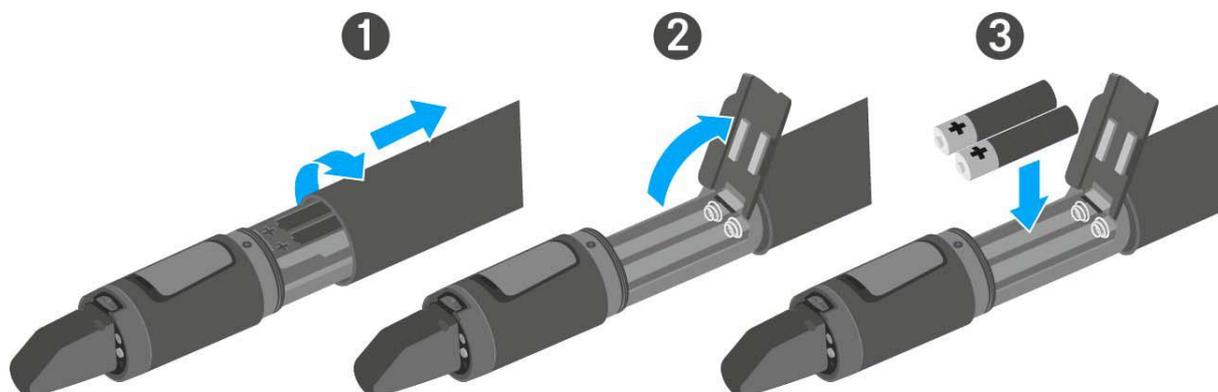
Inserting and removing the batteries/rechargeable batteries

You can operate the wireless microphone either with batteries (AA, 1.5 V) or with the rechargeable Sennheiser BA 2015 battery.

- ▷ Screw the rear part of the wireless microphone in the direction of the arrow (counter-clockwise) off of the handle of the wireless microphone.

i When you remove the wireless microphone during operation, mute is automatically activated. **MUTE** appears in the display panel. When you screw the microphone back together, mute is deactivated.

- ▷ Pull the rear part of the wireless microphone all the way out.
- ▷ Open the cover of the battery compartment.
- ▷ Place the batteries or the BA 2015 rechargeable battery in the battery compartment as shown on the cover. Please observe correct polarity when inserting the batteries/accupack.



- ▷ Close the cover.
- ▷ Push the battery compartment into the handle of the wireless microphone.
- ▷ Screw the rear part of the wireless microphone back onto the handle.

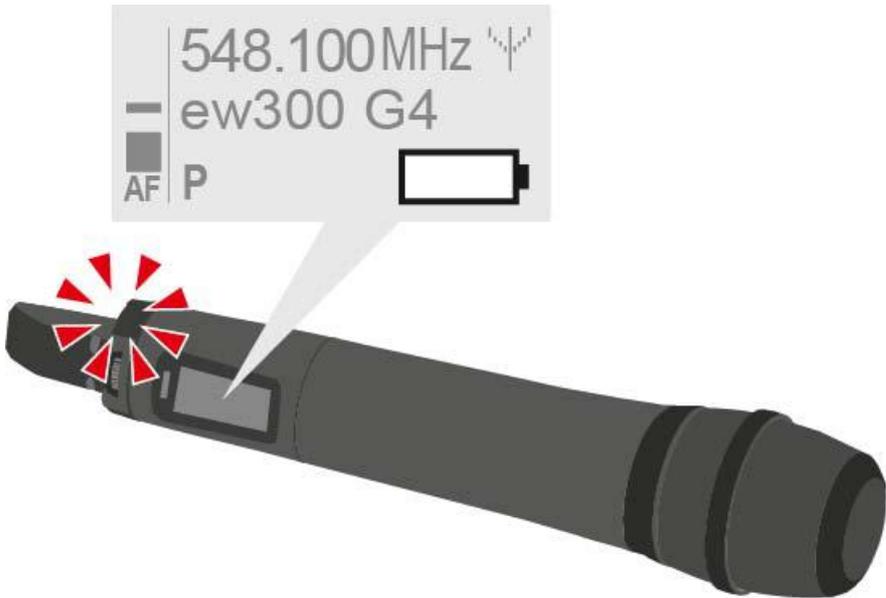


Battery status

Charge status of the batteries:

	100 %	> 8 h
	70 %	4 - 6 h
	30 %	2 - 3 h
LOW BATT		

Charge status is critical (LOW BATT):



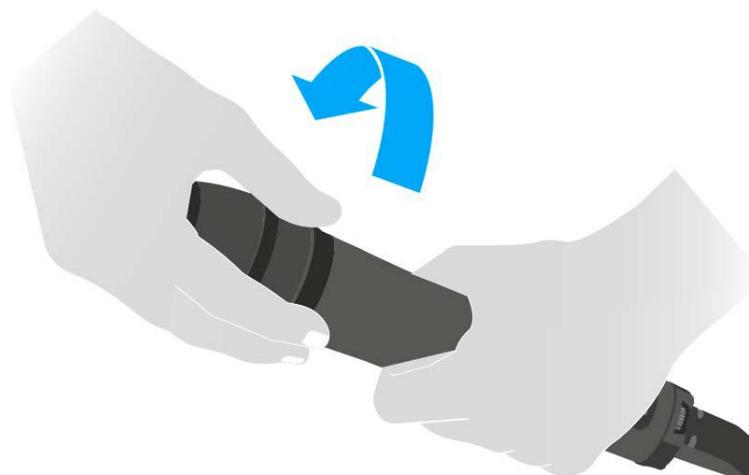


Replacing the microphone module

You can find a list of the recommended microphone modules for the hand-held transmitter under “Microphones and cables”.

To change the microphone module:

- ▷ Unscrew the microphone module.
- ▷ Screw the desired microphone module on.



i Do not touch the wireless microphone contacts or the microphone module contacts. If you touch the contacts, they may become dirty or bent.

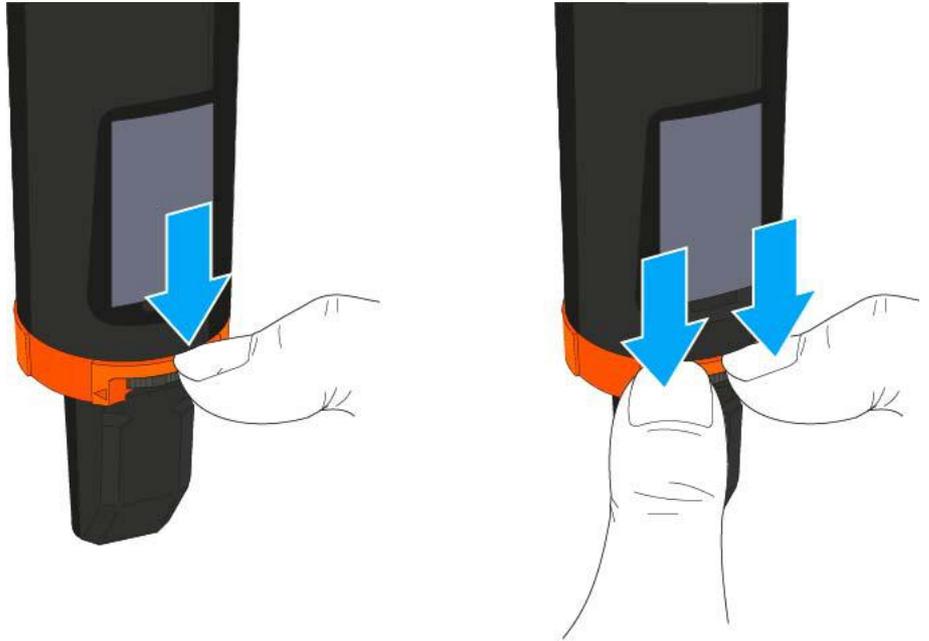
When you unscrew the microphone module during operation, mute is automatically activated. **MUTE** appears in the display panel. When you screw the microphone module back on, mute is deactivated.



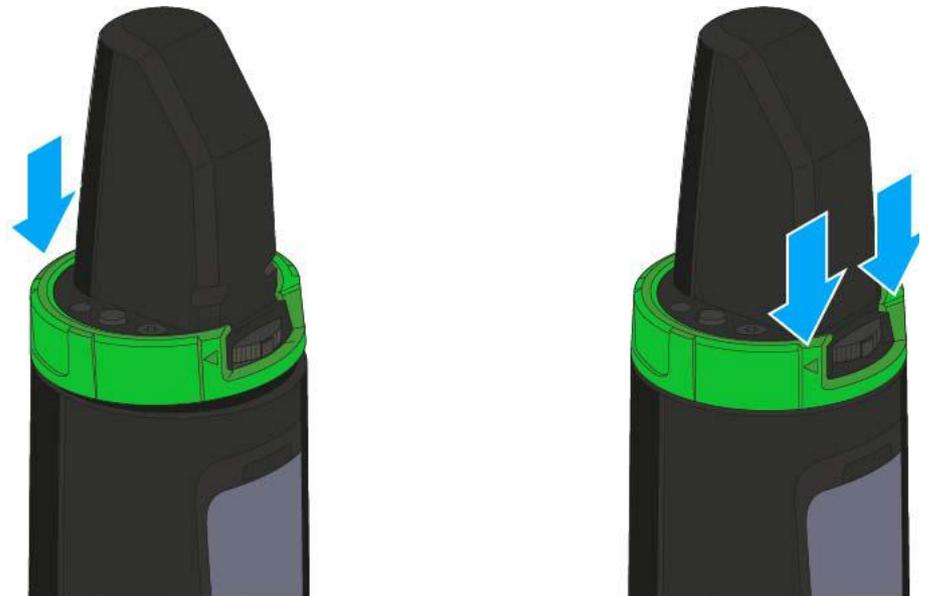
Changing the colored ring

To change the colored ring:

- ▷ Pull the colored ring off as shown in the diagram.



- ▷ Attached a colored ring in the color you want as shown in the diagram.

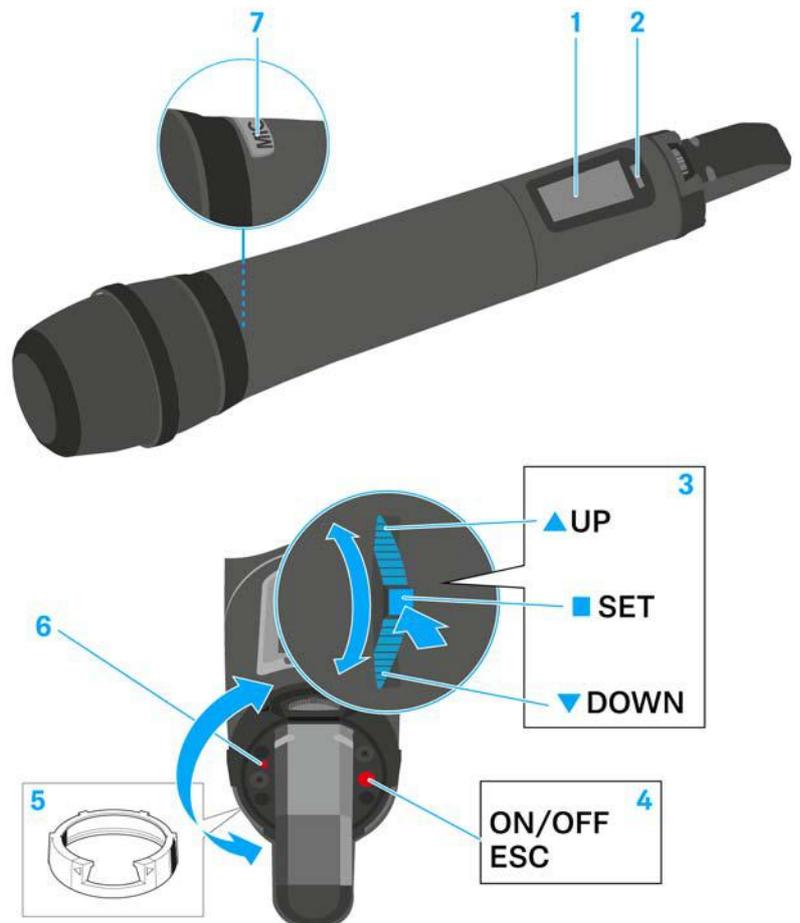




Using the SKM 300 G4

These sections contain detailed information about using the SKM 300 G4. You can find information on installation and startup of the SKM 300 G4 under “Installing the SKM 300 G4”.

Operating elements of the SKM 300 G4 handheld transmitter



- 1** Display panel
 - See “Displays on the SKM 300 G4 handheld transmitter display panel”
- 2** Infra-red interface
 - See “Synchronizing devices”
- 3** **DOWN**, **UP** and **SET** multi-function switch
 - See “Buttons for navigating the SKM 300 G4 menu”
- 4** **ON/OFF** button with **ESC** function in the operating menu
 - Switch the transmitter on or off
See “Switching the SKM 300 G4 handheld transmitter on and off”
 - Escape function in the menu
See “Buttons for navigating the SKM 300 G4 menu”
 - Deactivating the RF signal
See “Deactivating the RF signal (RF mute)”

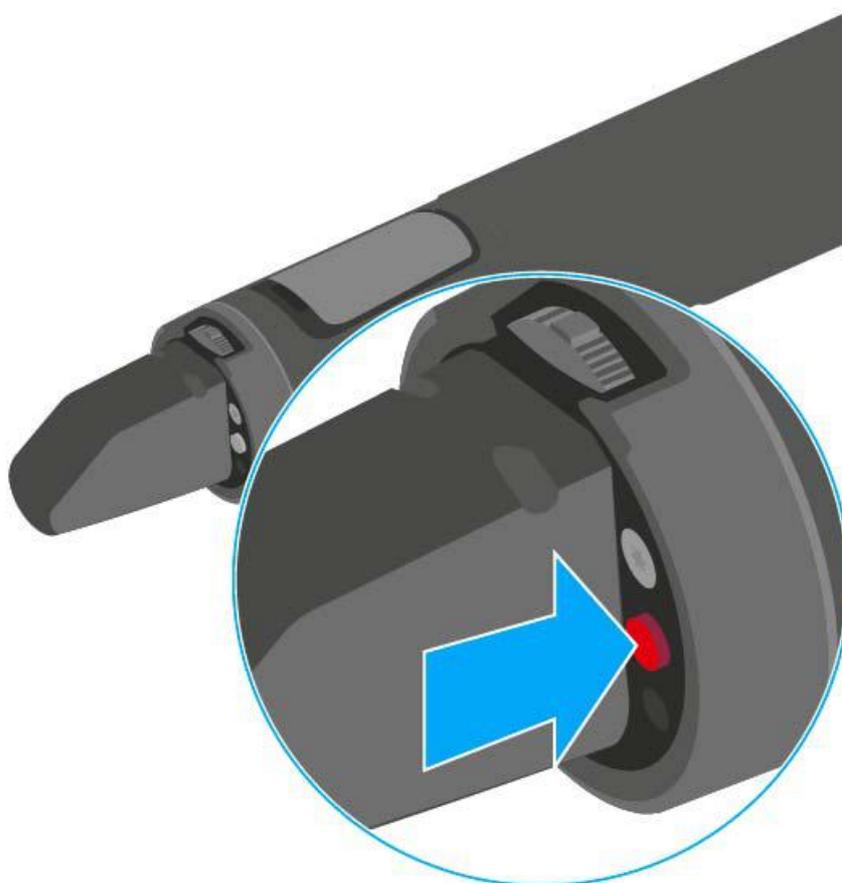


- 5** Colored ring
 - Available in different colors (see “Additional accessories” and “Changing the colored ring”)
 - Can be turned to protect the multi-function switch
- 6** Operation and battery indicator, red LED
 - illuminated = ON
See “Switching the SKM 300 G4 handheld transmitter on and off”
 - flashing = LOW BATTERY
See “Inserting and removing the batteries/rechargeable batteries”
- 7** **MIC** button
 - See “Muting the handheld transmitter (AF mute)”
 - See “Deactivating the RF signal (RF mute)”
 - See “Advanced > Mute Mode menu item”

Switching the SKM 300 G4 handheld transmitter on and off

To switch on the SKM 300 G4:

- ▷ Hold down the **ON/OFF** button until the Sennheiser logo appears on the display.



To switch off the SKM 300 G4:

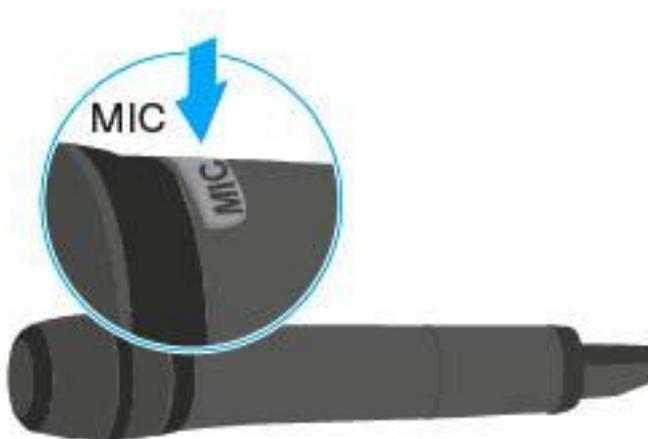
- ▷ Hold down the **ON/OFF** button until the display goes off.



Muting the handheld transmitter (AF mute)

You can mute the audio signal by pressing the **MIC** button.

To do this, the **MIC** button function must be configured to **AF On/Off**. You can find more information about this subject under “Advanced > Mute Mode menu item”.



Furthermore, you can configure whether the **MIC** button should light up red and when. You can find more information about this subject under “Advanced > MIC LED menu item”.



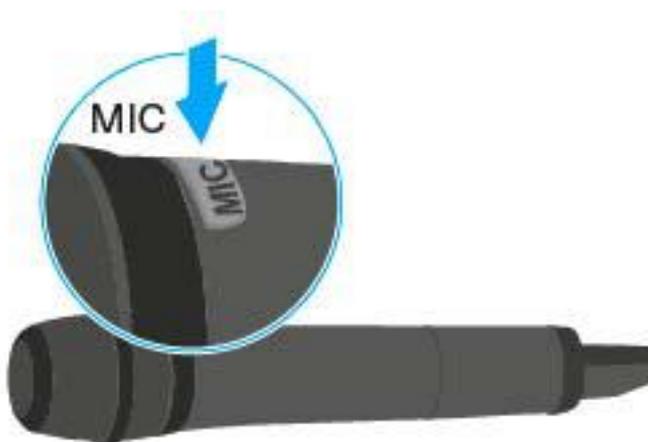
Deactivating the RF signal (RF mute)

You can deactivate the RF signal in two ways:

Deactivating the RF signal with the **MIC** button

You can mute the RF signal by pressing the **MIC** button.

To do this, the **MIC** button function must be configured to **RF On/Off**. You can find more information about this subject under “Advanced > Mute Mode menu item”.



Furthermore, you can configure whether the **MIC** button should light up red and when. You can find more information about this subject under “Advanced > MIC LED menu item”.



Deactivating the RF signal with the **ON/OFF** button

You can deactivate the RF signal with the **ON/OFF** button.

To deactivate the RF signal:

- ▷ Press the **ON/OFF** button.

RF Mute On? appears.

- ▷ Press the **SET** button.

The transmission frequency is displayed, however the wireless microphone is not transmitting an RF signal. The transmission icon is not lit (see “Displays on the SKM 300 G4 handheld transmitter display panel”).

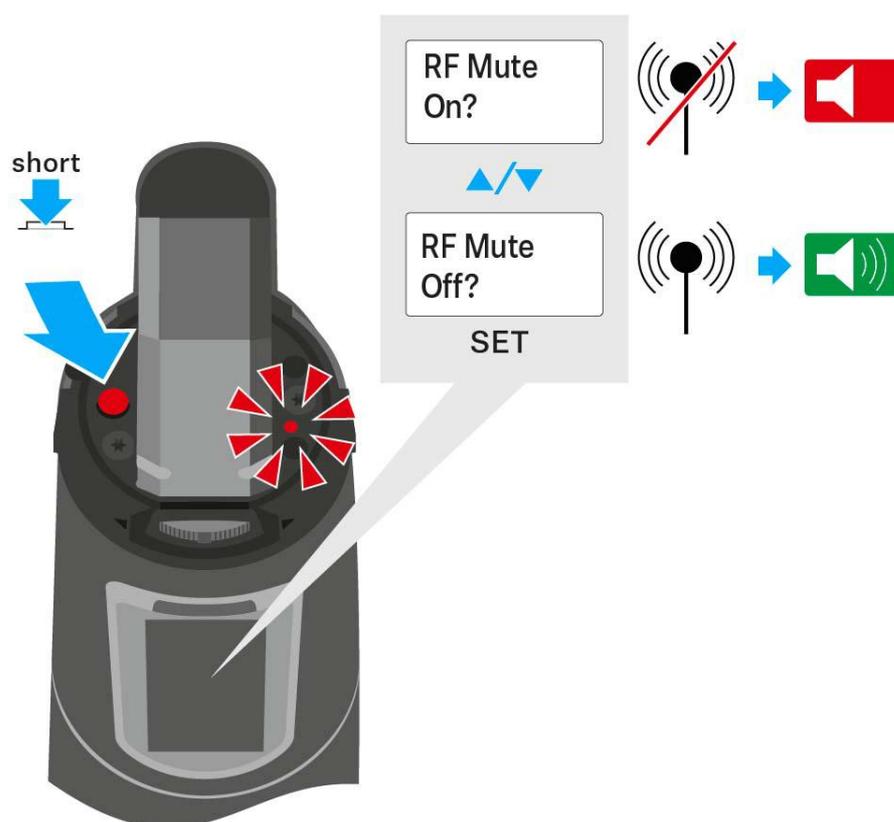
To **activate** the RF signal:

- ▷ Press the **ON/OFF** button.

RF Mute Off? appears.

- ▷ Press the **SET** button.

The transmission icon appears again (see “Displays on the SKM 300 G4 handheld transmitter display panel”).





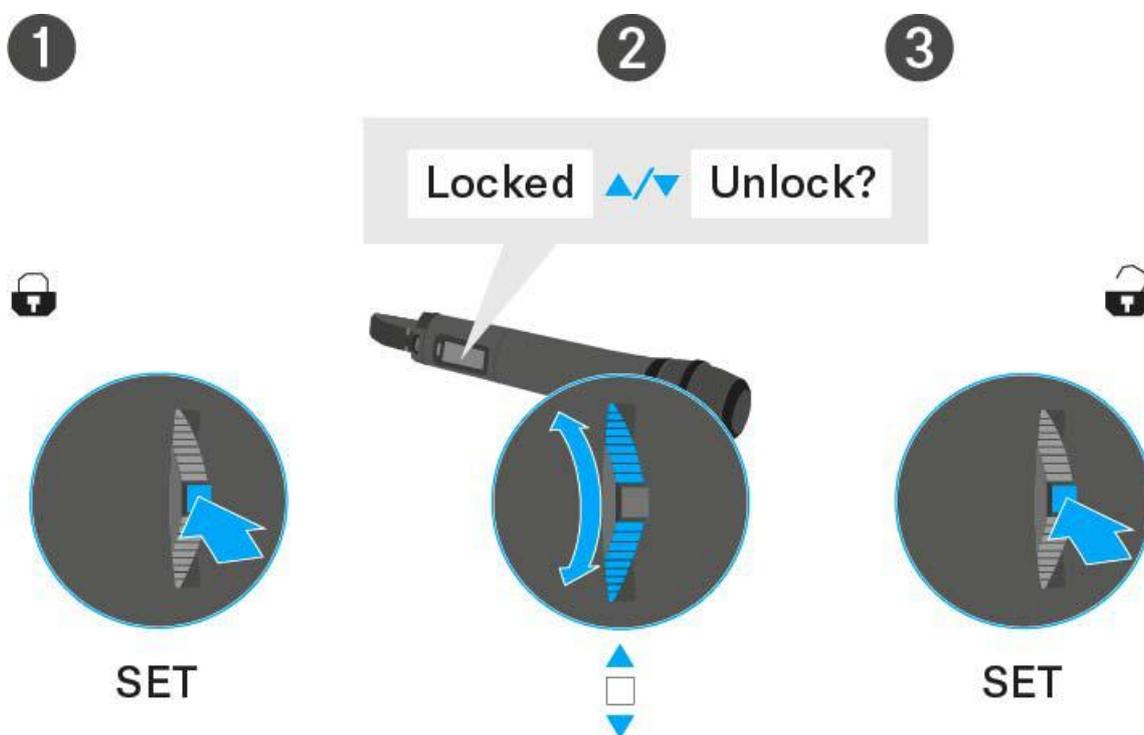
Lock-off function

You can set the automatic lock-off function in the **Auto lock** menu (see “Auto Lock menu item”).

When you have switched on the lock-off function, you will have to turn the transmitter off and on again in order to operate it.

To temporarily deactivate the lock-off function:

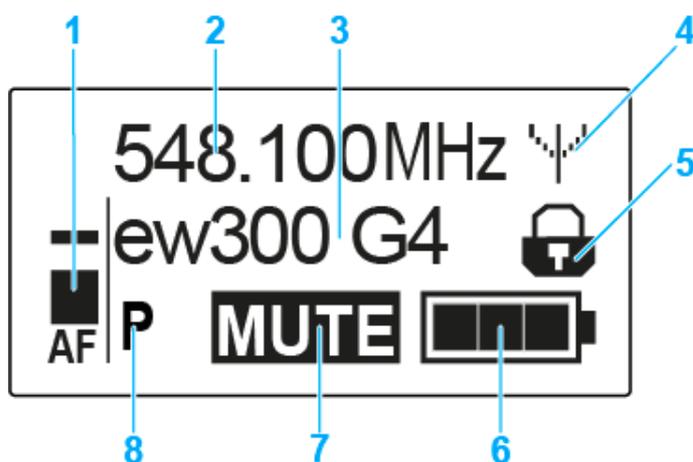
- ▷ Press the **SET** button.
Locked appears in the display panel.
- ▷ Press the **UP** or **DOWN** button.
Unlock? appears in the display panel.
- ▷ Press the **SET** button.
Lock-off function is now temporarily deactivated.





Displays on the SKM 300 G4 handheld transmitter display panel

You can view the following information on the transmitter display.



- 1 AF audio level**
 - Displays the audio level with peak hold function
 - See “Sensitivity menu item”
- 2 Frequency**
 - Configured transmission frequency
 - See “Frequency Preset menu item”
- 3 Name**
 - Freely selectable name of the receiver
 - See “Name menu item”
- 4 Transmission icon**
 - RF signal is being transmitted
 - See “Deactivating the RF signal (RF mute)”
- 5 Lock-off function**
 - Lock-off function is activated
 - See “Auto Lock menu item”
- 6 Battery status**
 - See “Battery status”
- 7 MUTE muting function**
 - The audio signal is muted
 - See “Muting the handheld transmitter (AF mute)”
- 8 P pilot tone**
 - Pilot tone transmission is activated
 - See “Advanced > Pilot Tone menu item”

>> “Buttons for navigating the SKM 300 G4 menu”

>> “Setting options in the menu”



Select a standard display

- ▷ Move the **multi-function switch** to select a standard display:

Frequency/Name standard display



Channel/Frequency standard display



Name/Channel standard display





Buttons for navigating the SKM 300 G4 menu

Navigating through the menu

To open the menu:

- ▷ Press the **SET** button.
The operating menu is shown on the transmitter display panel.

To open a menu item:

- ▷ Press the **UP** or **DOWN** buttons to navigate through the individual menu items.
- ▷ Press the **SET** button to open the selected menu item.



“Operating elements of the SKM 300 G4 handheld transmitter”

Making changes in a menu item

After you open a menu item, you can make changes as follows:

- ▷ Press the **UP** or **DOWN** buttons to set the displayed value.
- ▷ Press the **SET** button to save the setting.
- ▷ Press the **ESC (ON/OFF)** button to leave the menu item without saving the setting.



“Operating elements of the SKM 300 G4 handheld transmitter”

>> “Displays on the SKM 300 G4 handheld transmitter display panel”

>> “Setting options in the menu”

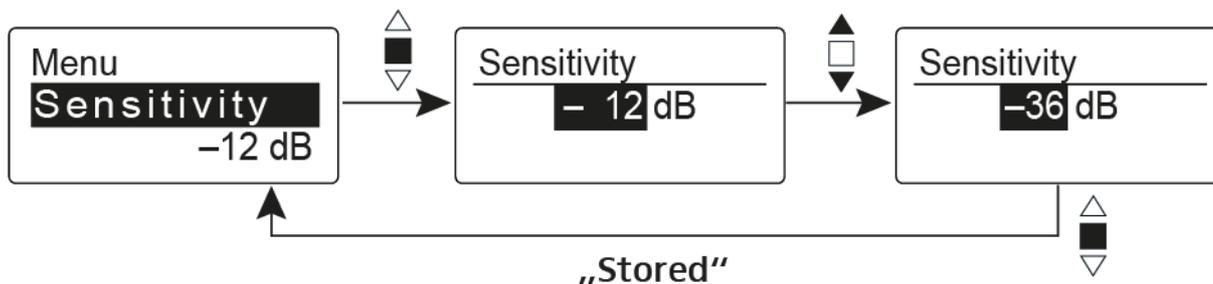


Sensitivity menu item

- Adjusting the input sensitivity – **AF** audio level

Setting range: 0 dB to -48 dB in 6 dB steps

The **AF** audio level is also displayed when the wireless microphone is muted, e.g. to check the sensitivity before a live broadcast.

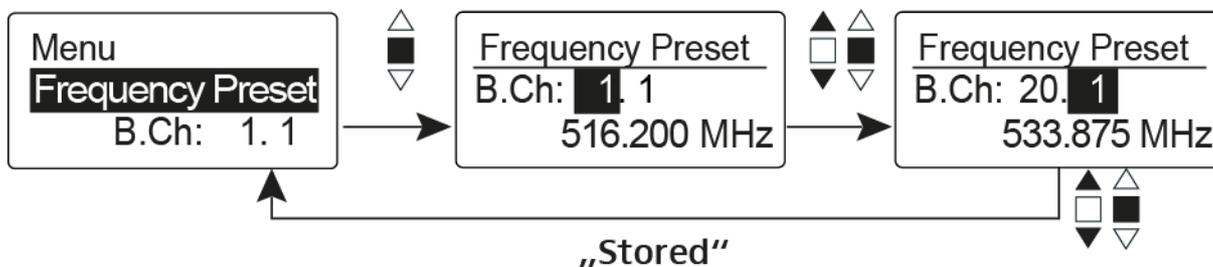


Recommended presets:

- Loud music/vocals: -48 to -18 dB
- Moderation: -18 to -12 dB
- Interviews: -12 to 0 dB

Frequency Preset menu item

- Manually selecting a frequency bank and channel



i While you work in the **Frequency Preset** menu, the RF signal is deactivated.

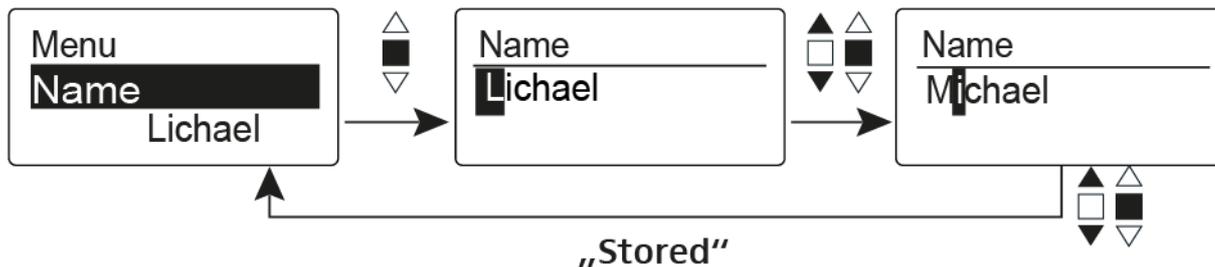
Please note when creating multi-channel systems:

Only the factory-preset frequencies within one frequency bank are intermodulation-free. The wireless microphone and receiver must be set to the same frequency. Be sure to note the information on frequency selection under “Establishing a radio link”.



Name menu item

- Entering names



In the **Name** menu item you can enter any name you want for the wireless microphone (e.g. the names of the musicians).

The name can be shown in the [Frequency/Name](#) and [Name/Channel](#) standard displays.

The names are a maximum of 8 characters:

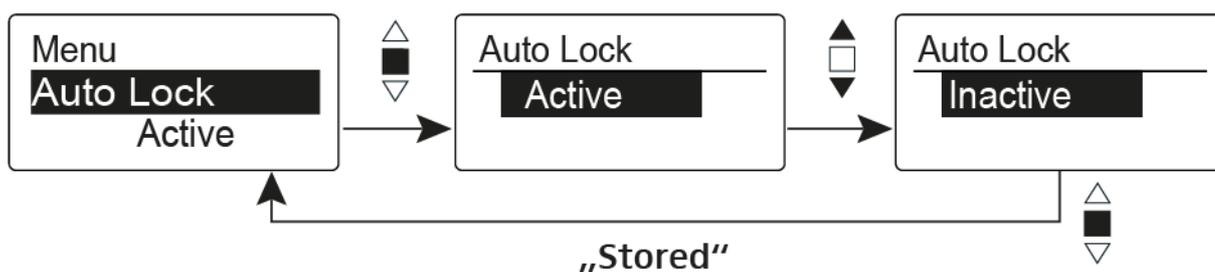
- All letters except umlauts.
- Numbers from 0 to 9
- Special characters and spaces

Enter the names as follows:

- ▷ Move the multi-function switch to select a character.
- ▷ Press the multi-function switch to jump to the next space or to save the name you have entered once it is complete.

Auto Lock menu item

- Switching the automatic lock-off function on and off



This lock prevents the wireless microphone from being unintentionally switched off and also prevents any unintentional changes to the transmitter's configuration. In the current standard display, the lock icon shows whether the lock-off function is currently switched on.

You can find information about using the lock-off function under "Lock-off function".



Advanced > Tune menu item

- Configuring the transmission frequency and frequency bank U

When you have configured the wireless microphone to a system bank and you call up the **Tune** menu item, channel 1 of the frequency bank **U** is automatically set. The message **U.1** briefly appears in the display. In the factory settings, the channels of the frequency bank **U** are not assigned to any transmission frequency.

While you work in the **Tune** menu, the RF signal is deactivated.

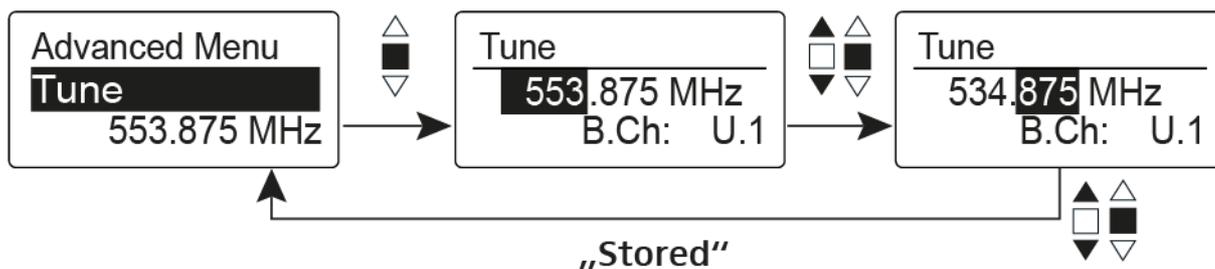
You can configure a transmission frequency for the current channel or select a channel in the frequency bank **U** and configure a transmission frequency for this channel in the **Tune** menu. Be sure to note the information on frequency selection, see “Setting notes”.

Only adjusting the frequency

To configure the transmission frequency for the current channel:

- ▷ Move the multi-function switch until the **Tune** menu item appears.
- ▷ Press the multi-function switch.

The frequency selection appears.

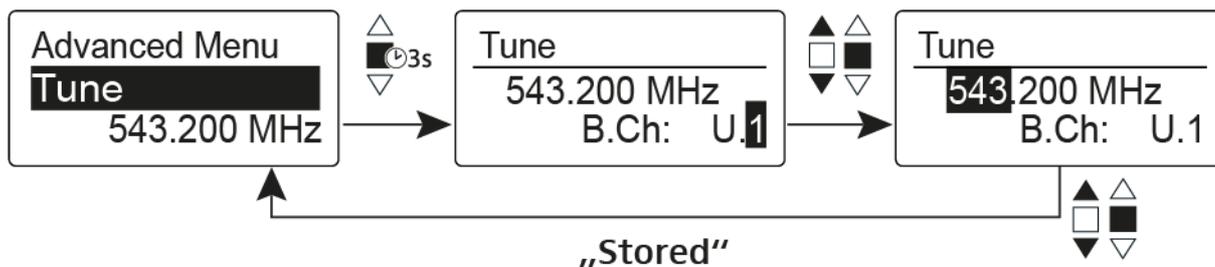


- ▷ Configure the desired frequency.
 - ▷ Press the multi-function switch.
- Your settings will be saved. You are now back in the operating menu.

Setting the channel and frequency

To select a **channel** and assign it a frequency:

- ▷ Move the multi-function switch until the **Tune** menu item appears.
- ▷ Hold down the multi-function switch until the frequency bank selection appears.

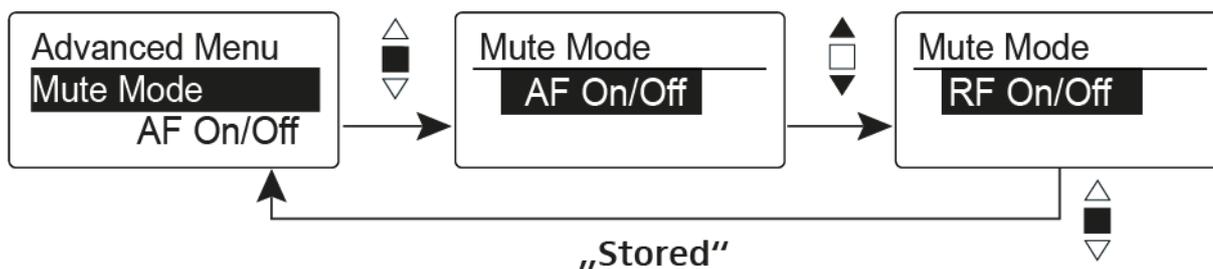


- ▷ Set the desired channel.
 - ▷ Press the multi-function switch.
- The frequency selection appears.
- ▷ Configure the frequency.



Advanced > Mute Mode menu item

- Configuring the function of the **MIC** button



AF On/Off mode

- When you press the **MIC** button, no audio signal is transmitted.

RF On/Off mode

- When you press the **MIC** button, the RF signal is deactivated.

Push To Mute mode

- The audio signal is deactivated as long as you press down the **MIC** button.

Push To Talk mode

- The audio signal is activated as long as you press down the **MIC** button.
- The wireless microphone is muted when you configure the **Push to Talk** function.

Disabled mode

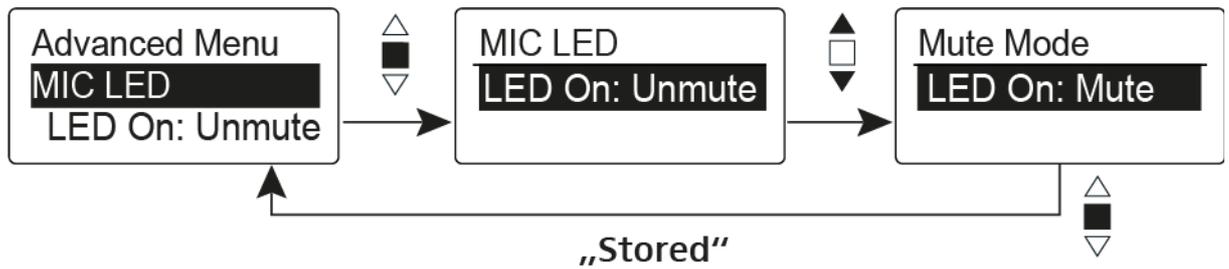
- No function

You can find information about the **MIC** button under “Muting the handheld transmitter (AF mute)” and “Deactivating the RF signal (RF mute)”.



Advanced > MIC LED menu item

- Configuring the background lighting of the MIC button



In the **MIC LED** menu item you can configure and deactivate the background lighting of the **MIC** button regardless of the settings of the “Advanced > Mute Mode menu item” and the status of the RF signal.

LED On: [setting Unmute](#)

- The **MIC** button is backlit when the wireless microphone sends an RF signal or is not muted.

LED On: [setting Mute](#)

- The **MIC** button is backlit when the wireless microphone is not sending an RF signal or is muted.

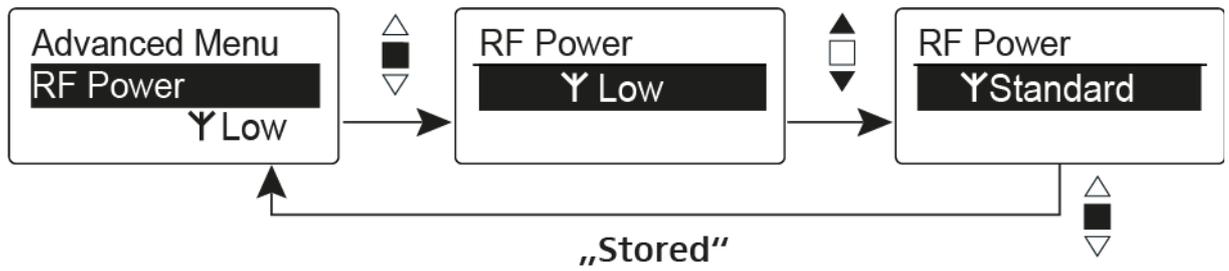
Disable LED [setting](#)

- The background lighting of the **MIC** button is deactivated.



Advanced > RF Power menu item

- Configuring the transmission power



You can configure the transmission power in three steps in the **RF Power** menu item. Please note the information at the following address:

General conditions and restrictions for the use of frequencies

Setting range:

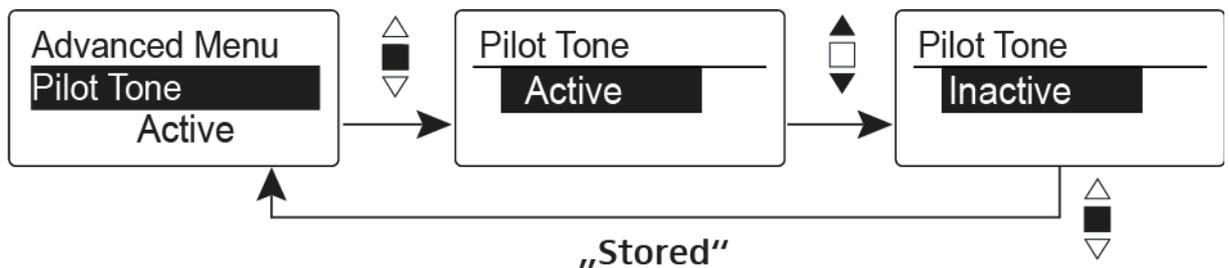
Low: 10 mW

Standard: 30 mW

High: 50 mW

Advanced > Pilot Tone menu item

- Activating/deactivating pilot tone transmission



The pilot tone has an inaudible frequency that is sent from the transmitter and evaluated by the receiver. It supports the receiver's squelch function.

Advanced > LCD Contrast menu item

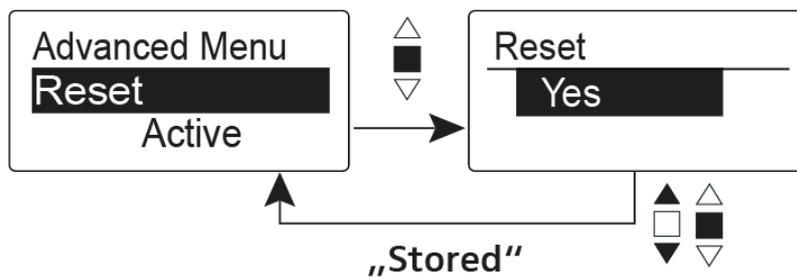
- Adjusting the contrast of the display panel

You can configure the contrast of the display in 16 steps.



Advanced > Reset menu item

- Resetting the wireless microphone



When you reset the wireless microphone, only the selected settings of the pilot tone and the **U1** to **U6** frequency banks are retained.

Advanced > Software Revision menu item

- Show software revision

You can display the current software revision.



SKM 300 G4 product variants

Made in Germany

SKM 300 G4-S-K+	925 – 937.5 MHz	Art. no. 507727
SKM 300 G4-S-GBw	606 – 678 MHz	Art. no. 507728
SKM 300 G4-S-Gw	558 – 626 MHz	Art. no. 507729
SKM 300 G4-S-Bw	626 – 698 MHz	Art. no. 507730
SKM 300 G4-S-Cw	718 – 790 MHz	Art. no. 507731
SKM 300 G4-S-Dw	790 – 865 MHz	Art. no. 507732
SKM 300 G4-S-Aw+	470 – 558 MHz	Art. no. 508407

Assembled in the USA

SKM 300 G4-S-AS	520 – 558 MHz	Art. no. 508067
SKM 300 G4-S-JB	806 – 810 MHz	Art. no. 508068
SKM 300 G4-S-Gw	558 – 626 MHz	Art. no. 508069
SKM 300 G4-S-Bw	626 – 698 MHz	Art. no. 508070
SKM 300 G4-S-Cw	718 – 790 MHz	Art. no. 508071
SKM 300 G4-S-Dw	790 – 865 MHz	Art. no. 508072
SKM 300 G4-S-Aw+	470 – 558 MHz	Art. no. 508428
SKM 300 G4-S-Gw1	558 – 608 MHz	Art. no. 508449



SKM 300 G4

RF characteristics

Modulation	Wideband FM
Receiving frequency ranges	Aw+: 470 – 558 MHz AS: 520 – 558 MHz Gw1: 558 – 608 MHz Gw: 558 – 626 MHz GBw: 606 – 678 MHz Bw: 526 – 698 MHz Cw: 718 – 790 MHz Dw: 790 – 865 MHz JB: 806 – 810 MHz K+: 925 – 937.5 MHz
Transmission frequencies	Max 2880 receiving frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 32 factory-preset channels, no intermodulation 6 frequency banks with up to 32 programmable channels
Switching bandwidth	up to 88 MHz
Nominal/peak deviation	± 24 kHz / ± 48 kHz
Frequency stability	$\leq \pm 15$ ppm
RF output power at 50 ?	Switchable: Low: typically 10 mW Standard: typically 30 mW High: typically 50 mW
Pilot tone squelch	Can be switched off



AF characteristics

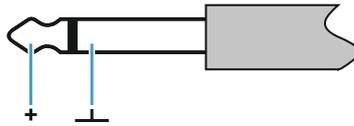
Compander system	Sennheiser HDX
AF frequency response	80 – 18,000 Hz
Signal-to-noise ratio (1 mV, peak deviation)	≥ 115 dBA
Total harmonic distortion (THD)	≤ 0.9 %
Setting range for input sensitivity	48 dB in 6 dB steps

Overall device

Temperature range	-10 °C to +55 °C (14 °F to 131 °F)
Power supply	2 AA batteries, 1,5 V or BA 2015 accupack
Nominal voltage	3 V battery / 2.4 V rechargeable battery
Power consumption	
at nominal voltage with transmitter switched off	typically 180 mA ≤ 25 µA
Operating time	Typically 8 h
Dimensions	Approx. Ø 50 x 265 mm
Weight (with batteries)	Approx. 450 g

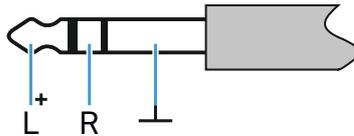


6.3 mm mono jack plug, unbalanced



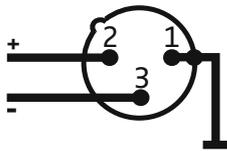
- Connect to:
 - EM 100 G4 Audio Out
 - EM 300-500 G4 Audio Out

6.3 mm stereo jack plug for headphone jack



- Connect to:
 - EM 100 G4 headphone input
 - EM 300-500 G4 headphone input
 - SR IEM G4 headphone input

XLR-3 plug, balanced



Hollow jack plug for power supply





Cleaning and maintenance

Note the following information when cleaning and maintaining evolution wireless G4 series products.

CAUTION

Liquids can damage the products' electronics.

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

- ▷ Keep all liquids away from the products.
- ▷ Do not use any solvents or cleansing agents.

-
- ▷ Disconnect the products from the power supply system and remove rechargeable batteries and batteries before you begin cleaning.
 - ▷ Clean all products only with a soft, dry cloth.

- ▷ Note the special cleaning instructions below for the following products.

Cleaning the sound inlet basket of the microphone module

- ▷ Unscrew the top sound inlet basket from the microphone module by turning it counterclockwise.
- ▷ Remove the foam insert.



You can clean the sound inlet basket in two ways:

- ▷ Use a slightly damp cloth to clean the top sound inlet basket from the inside and outside.
- ▷ Use a brush and rinse with clean water.
- ▷ If necessary, clean the foam insert with a mild detergent or replace the foam insert.
- ▷ Dry the top sound inlet basket and foam insert.
- ▷ Reinsert the foam insert.



- ▷ Screw the sound inlet basket back onto the microphone module.

From time to time, you should also clean the microphone module contacts:

- ▷ Wipe the contacts of the microphone module with a soft, dry cloth.



CONTACT

Contact

Instruction manual as a PDF

You can find this instruction manual as a PDF (German and English) in the download section of the Sennheiser website at **www.sennheiser.com/download**.

Download area for the Sennheiser website

- ▷ Enter **ew G4** into the search bar to show the instruction manuals for products in the ew G4 series.

Customer service

If you have technical questions or experience problems with the product, you can access Sennheiser customer service at **www.sennheiser.com/service-support**.

Sennheiser customer service online area

Feedback

Do you have any questions or suggestions about this instruction manual? Write to us at **techcomm@sennheiser.com**.



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