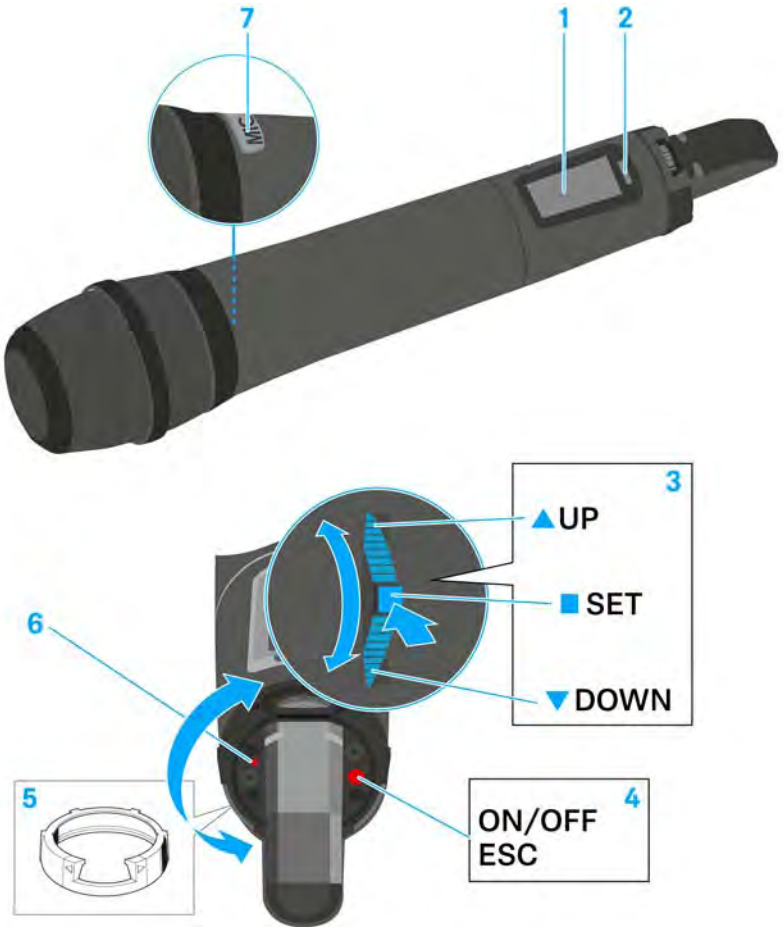
Using the SKM 300 G4

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

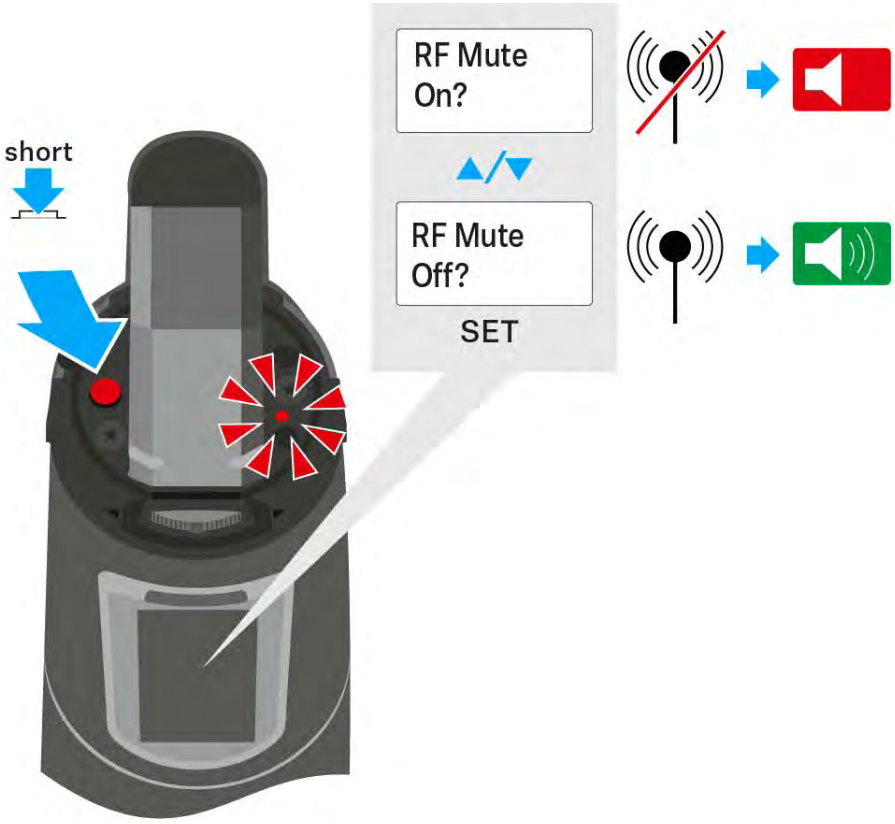
You can deactivate the RF signal with the **ON/OFF** button.

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”).



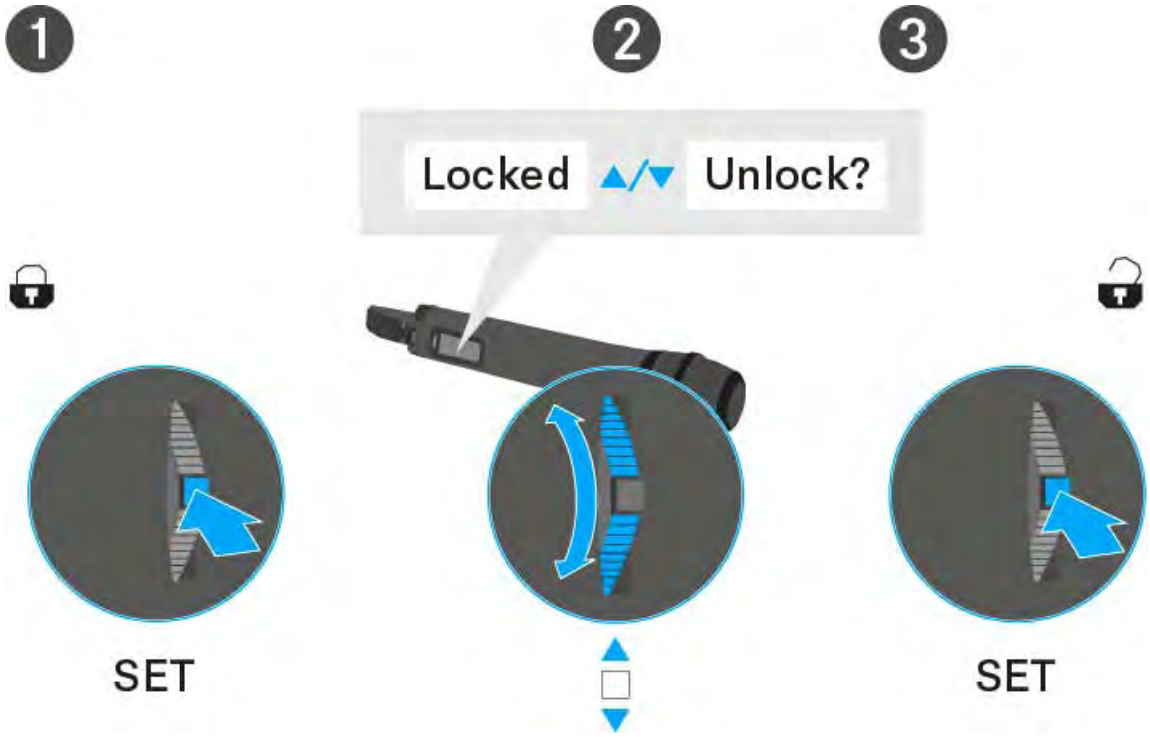
Lock-off function

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.

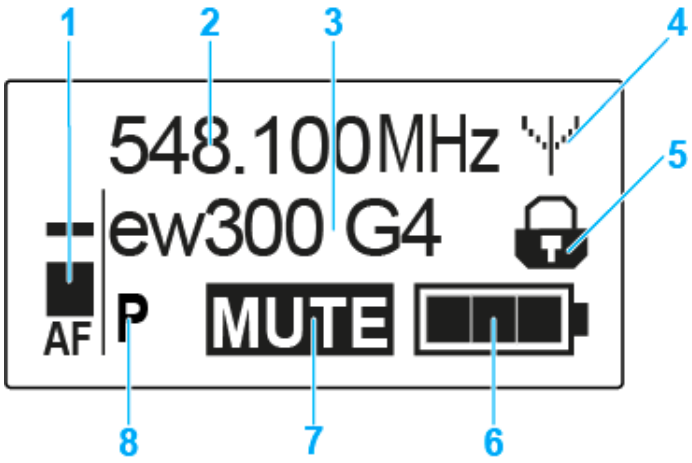
To temporarily deactivate the lock-off function:

- ▹ 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”

Setting options in the menu

In the SKM 300 G4 menu, you can configure the following settings.

Adjusting the input sensitivity

▹ See “Sensitivity menu item”

Setting the frequency bank and the channel

▹ See “Frequency Preset menu item”

Entering a freely selectable name

▹ See “Name menu item”

Activating/deactivating the automatic lock-off function

▹ See “Auto Lock menu item”

Configuring enhanced settings in the Advanced Menu:

- Adjusting the transmission frequencies for the U frequency bank
- Defining the MIC button setting
- Configuring the background lighting of the MIC button
- Configuring the transmission power
- Activating/deactivating the pilot tone evaluation
- Adjusting the contrast of the display panel
- Resetting the transmitter
- Displaying the current software revision

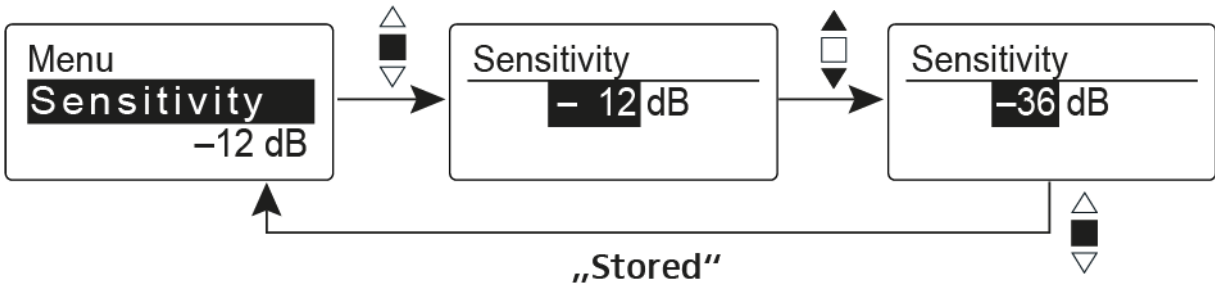
▹ See “Advanced menu item”

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.

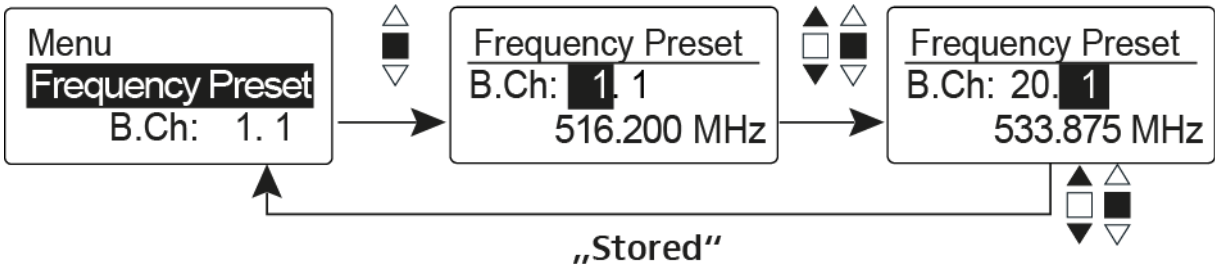


Recommended presets:

- 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



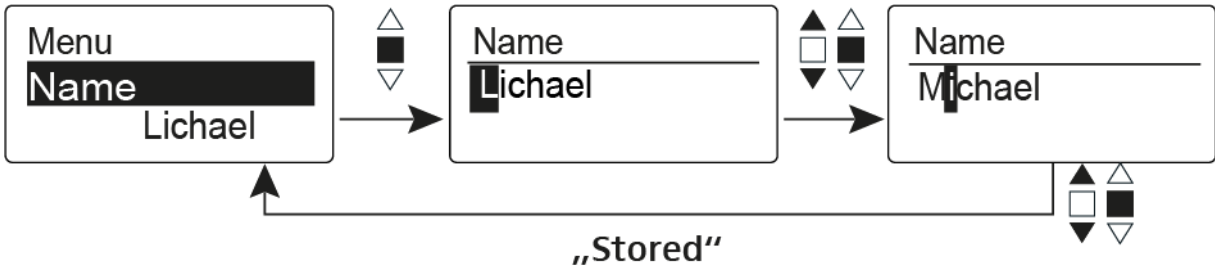
While you work in the **Frequency Preset** menu, the RF signal is deactivated.

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

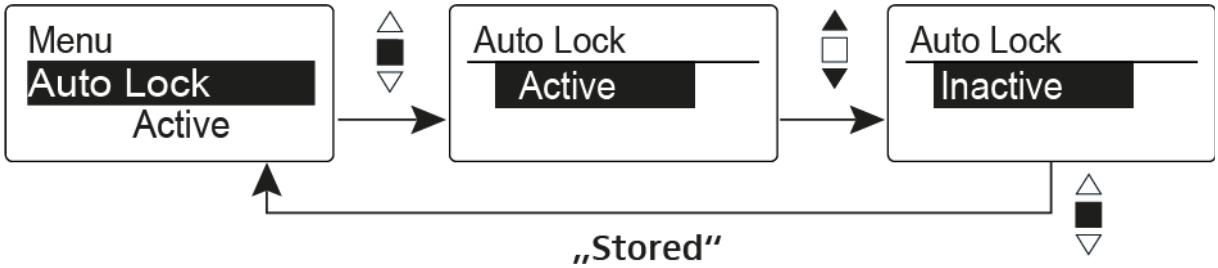
Enter the names as follows:

▹ 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 menu item

In the **Advanced** submenu you can configure enhanced settings.

The following sub-items are available:

Adjusting the transmission frequencies for the U frequency bank

▹ See “Advanced > Tune menu item”

Defining the MIC button setting

▹ See “Advanced > Mute Mode menu item”

Configuring the background lighting of the MIC button

▹ See “Advanced > MIC LED menu item”

Configuring the transmission power

▹ See “Advanced > RF Power menu item”

Activating/deactivating the pilot tone evaluation

▹ See “Advanced > Pilot Tone menu item”

Adjusting the contrast of the display panel

▹ See “Advanced > LCD Contrast menu item”

Resetting the transmitter

▹ See “Advanced > Reset menu item”

Displaying the current software revision

▹ See “Advanced > Software Revision menu item”

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.

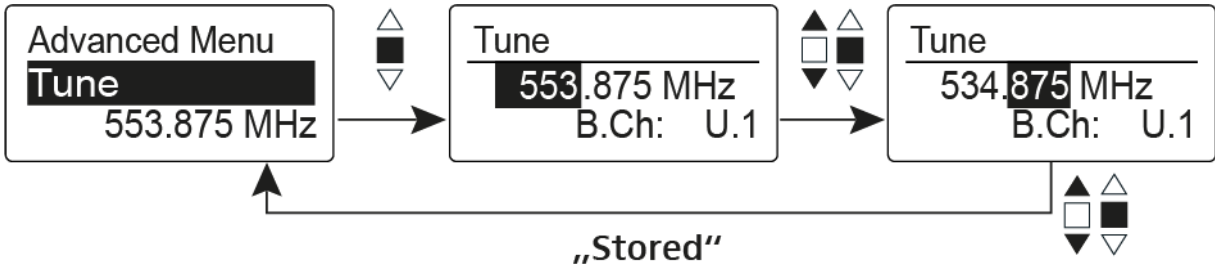
You can configure a transmission frequency for the current channel or select a channel in the frequency bank U and configure a transmission frequency for this channel in the **Tune** menu. Be sure to note the information on frequency selection, see “Setting notes”.

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.

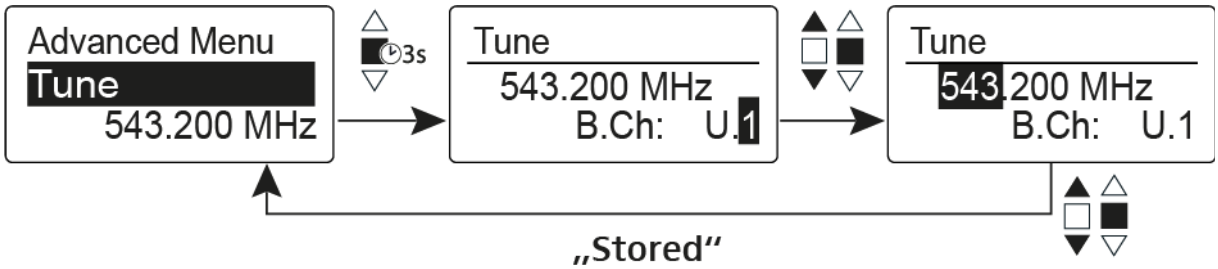
▹ Press the multi-function switch.
Your settings will be saved. You are now back in the operating menu.

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.



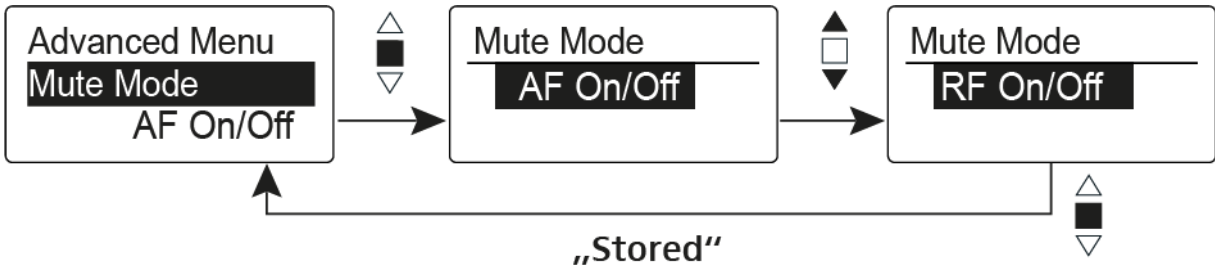
▹ Set the desired channel.

▹ 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.

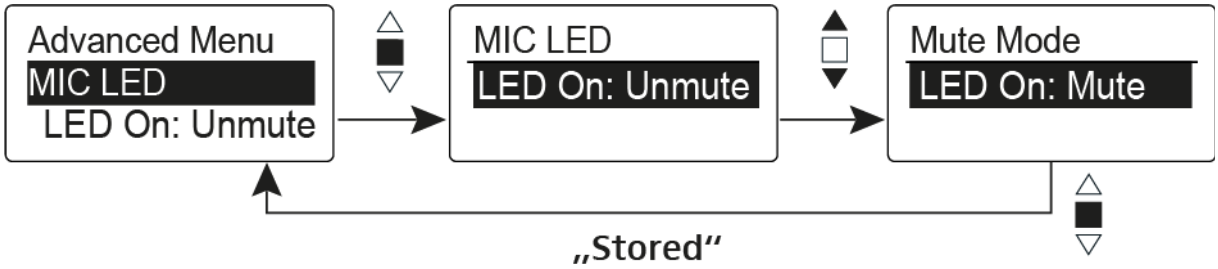
Disabled mode

- 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**

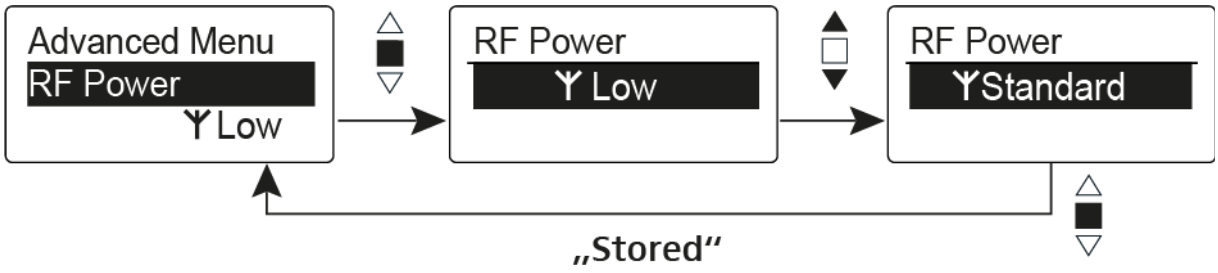
- The **MIC** button is backlit when the wireless microphone is not sending an RF signal or is muted.

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:

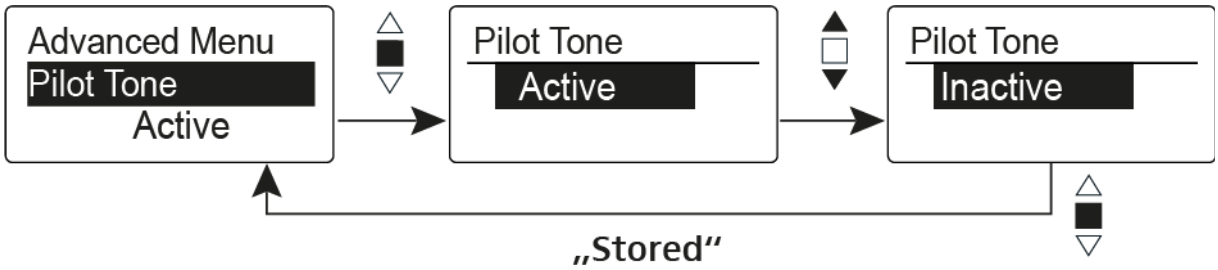
Low: 10 mW

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.

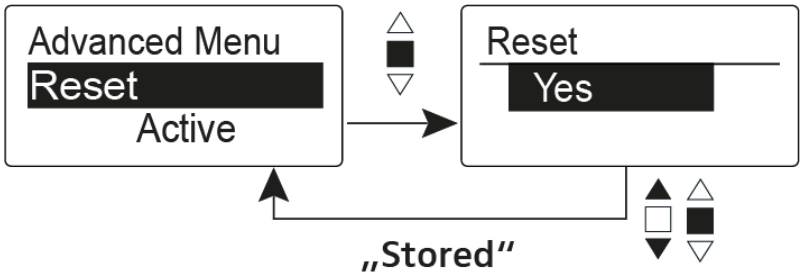
Advanced > LCD Contrast menu item

- 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.

Using the SK 300 G4

These sections contain detailed information about using the SK 300 G4.

You can find information about installing the SK 300 under “Installing the SK 300 G4”.

Operating elements of the SK 300 G4 bodypack transmitter

1 Display panel
- See “Displays on the SK 300 G4 bodypack transmitter display panel”

2 Operation and battery indicator, red LED
- illuminated = ON
  See “Switching the SK 300 G4 bodypack transmitter on and off”
- flashing = LOW BATTERY
  See “Inserting and removing the batteries/rechargeable batteries”

3 Audio overload indicator, yellow LED
- illuminated = AF PEAK (overload)
  See “Sensitivity menu item”

4 **UP** button
- See “Buttons for navigating the SK 300 G4 menu”

5 **SET** button
- See “Buttons for navigating the SK 300 G4 menu”

6 **DOWN** button
- See “Buttons for navigating the SK 300 G4 menu”

7 **ON/OFF** button with ESC function in the operating menu
- Switch the transmitter on or off
  See “Switching the SK 300 G4 bodypack transmitter on and off”
- Escape function in the menu
  See “Buttons for navigating the SK 300 G4 menu”

8 Infra-red interface
- See “Synchronizing devices”

9 **MUTE** switch
- Deactivate and activate RF signal
  See “Deactivating the RF signal (RF mute)”
- Deactivate and activate audio signal
  See “Muting the bodypack transmitter (AF mute)”

10 2.5 mm jack socket
- for remote mute switch RMS 1
- See “Connecting the RMS 1 mute switch to the SK 300”

Switching the SK 300 G4 bodypack transmitter on and off

▹ Press the two catches and open the battery compartment cover.

To switch on the SK 300 G4:

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

To switch off the SK 300 G4:

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

Muting the bodypack transmitter (AF mute)

You can mute the audio signal in two ways:

Muting the audio signal with the **MUTE** switch

You can mute the audio signal with the **MUTE** switch.

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

▹ Slide the **MUTE** switch to the MUTE position.
The audio signal is muted. The message MUTE is shown on the display.

Muting the audio signal with the **RMS 1** remote mute switch

See “Using the SK 300 G4 with the RMS 1 remote mute switch”

Deactivating the RF signal (RF mute)

You can deactivate the RF signal in three ways:

Deactivating the RF signal with the **MUTE** switch

You can deactivate the RF signal with the MUTE switch.

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

Slide the **MUTE** switch to the MUTE position.

The RF signal is deactivated. The message MUTE is shown in the display and the transmission icon no longer appears.

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:

▹ Short-press the **ON/OFF** button.
RF Mute On? appears.

▹ Press the **SET** button.
The RF signal is deactivated. The message MUTE is shown in the display and the transmission icon no longer appears.

To activate the RF signal:

▹ Short-press the **ON/OFF** button.
RF Mute Off? appears.

▹ Press the **SET** button.
The transmission icon appears again.

Deactivating the RF signal with the **RMS 1** remote mute switch

See “Using the SK 300 G4 with the RMS 1 remote mute switch”

Using the SK 300 G4 with the RMS 1 remote mute switch

You can control the SK 300 G4 remotely via cable with the RMS 1 remote mute switch.

- ▹ Configure the desired function for the RMS 1 in the “Advanced > Mute Mode menu item” of the SK 300.
- ▹ Press the **MIC** button.

  The bodypack transmitter will behave as described in the table in “Advanced > Mute Mode menu item”.

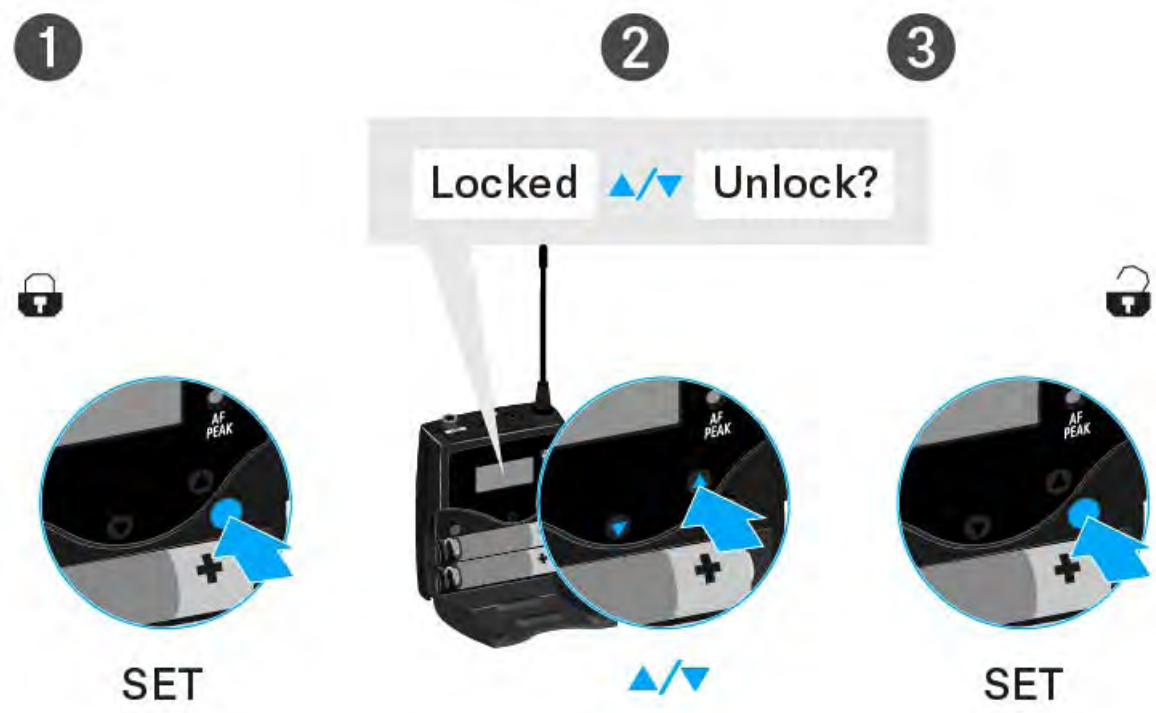
Lock-off function

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.

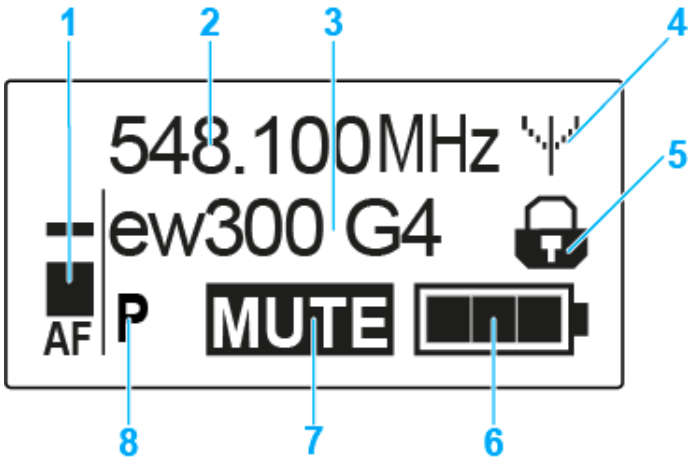
To temporarily deactivate the lock-off function:

- ▹ 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 SK 300 G4 bodypack 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 “Muting the bodypack transmitter (AF 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 bodypack transmitter (AF mute)”

8 **P** pilot tone
- Pilot tone transmission is activated
- See “Advanced > Pilot Tone menu item”

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

>> “Setting options in the menu”

Select a standard display

▹ Press the **UP** or **DOWN** buttons to select a standard display.

Frequency/Name standard display

Channel/Frequency standard display

Name/Channel standard display

Buttons for navigating the SK 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 SK 300 G4 bodypack 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 SK 300 G4 bodypack transmitter”

>> “Displays on the SK 300 G4 bodypack transmitter display panel”

>> “Setting options in the menu”

Setting options in the menu

In the SK 300 G4 menu, you can configure the following settings.

Adjusting the input sensitivity

▹ See “Sensitivity menu item”

Setting the frequency bank and the channel

▹ See “Frequency Preset menu item”

Entering a freely selectable name

▹ See “Name menu item”

Activating/deactivating the automatic lock-off function

▹ See “Auto Lock menu item”

Configuring enhanced settings in the Advanced Menu:

- Adjusting the transmission frequencies for the U frequency bank
- Configuring the function of the MUTE switch and the RMS 1 remote mute switch
- Configuring the LED behavior of the RMS 1 external mute switch
- Configuring the transmission power
- Activating/deactivating the pilot tone evaluation
- Adjusting the contrast of the display panel
- Resetting the transmitter
- Displaying the current software revision

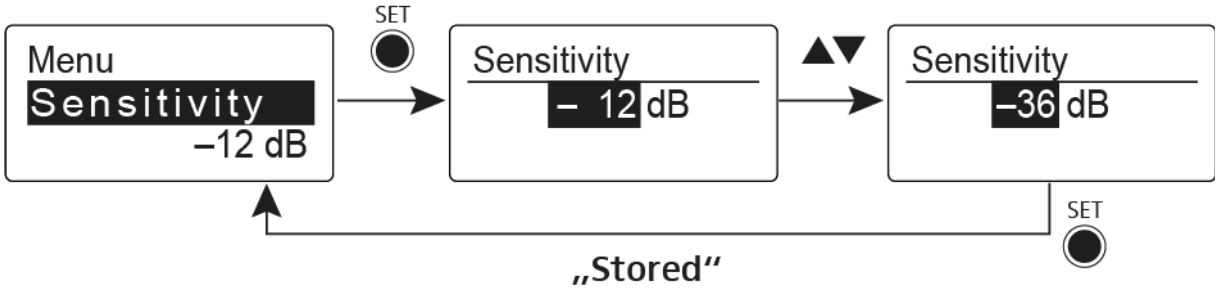
▹ See “Advanced menu item”

Sensitivity menu item

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

Setting range: 0 dB to –60 dB in 3 dB steps

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

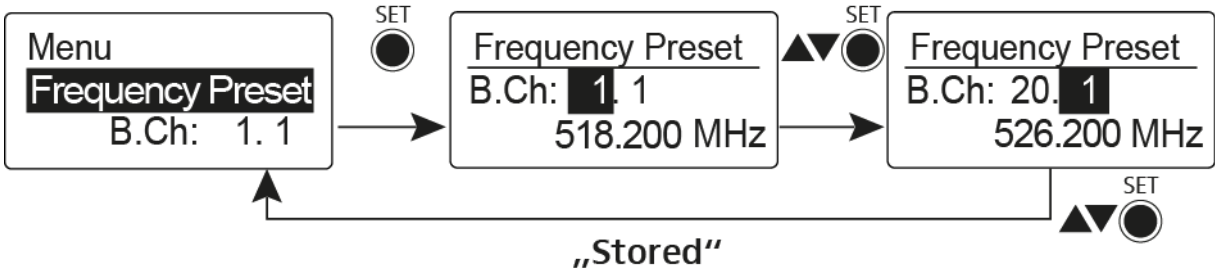


Recommended presets:

- Loud music/vocals: –30 to –21 dB
- Moderation: –21 to 0 dB
- Instrument input
  - Electric guitar with single-coil pickup: –30 to –24 dB
  - Electric guitar with Humbucker pickups: –45 to –30 dB
  - Guitars with active electronics (active pickups, active EQs, Piezo pickups) –45 to –30 dB

Frequency Preset menu item

- Manually selecting a frequency bank and channel



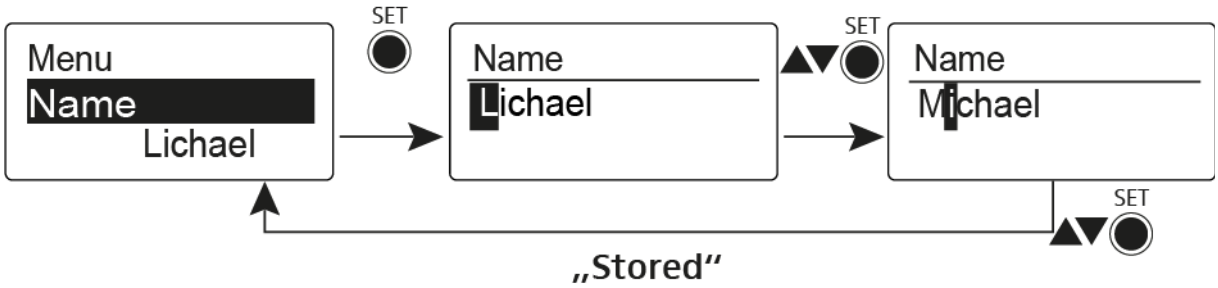
While you work in the **Frequency Preset** menu, the RF signal is deactivated.

Please note when creating multi-channel systems:

Only the factory-preset frequencies within one frequency bank are intermodulation-free. The bodypack transmitter 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 bodypack transmitters (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

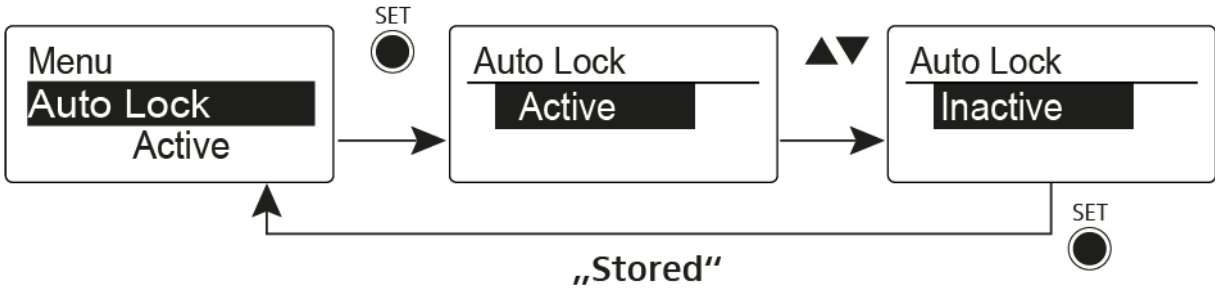
Enter the names as follows:

▹ Press the UP or DOWN buttons to select a character.

▹ Press the UP or DOWN buttons to switch 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 bodypack transmitter 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 menu item

In the **Advanced** submenu you can configure enhanced settings.

The following sub-items are available:

Adjusting the transmission frequencies for the U frequency bank

▹ See “Advanced > Tune menu item”

Configuring the function of the MUTE switch and the RMS 1 remote mute switch

▹ See “Advanced > Mute Mode menu item”

Configuring the LED behavior of the RMS 1 external mute switch

▹ See “Advanced > MIC LED menu item”

Configuring the transmission power

▹ See “Advanced > RF Power menu item”

Activating/deactivating the pilot tone evaluation

▹ See “Advanced > Pilot Tone menu item”

Adjusting the contrast of the display panel

▹ See “Advanced > LCD Contrast menu item”

Resetting the transmitter

▹ See “Advanced > Reset menu item”

Displaying the current software revision

▹ See “Advanced > Software Revision menu item”

Advanced > Tune menu item

- Configuring the transmission frequency and frequency bank U

When you have configured the bodypack transmitter 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.

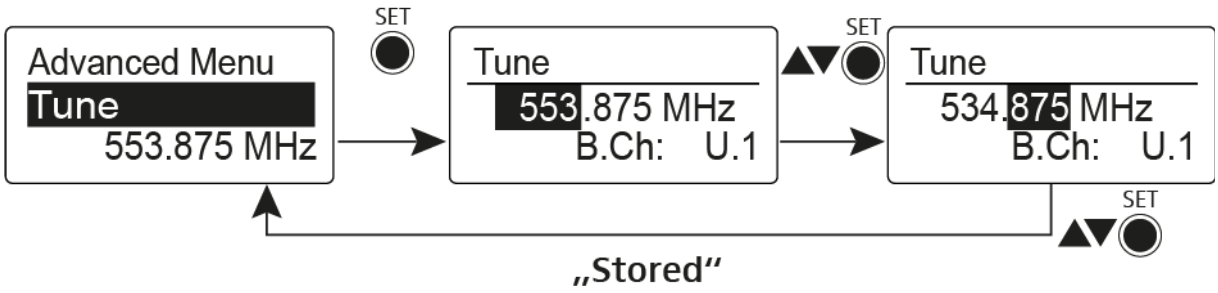
You can configure a transmission frequency for the current channel or select a channel in the frequency bank U and configure a transmission frequency for this channel in the **Tune** menu. Be sure to note the information on frequency selection under “Setting notes”.

Only adjusting the frequency

To configure the transmission frequency for the current channel:

▹ Press the UP or DOWN button until the **Tune** menu item appears.

▹ Press the SET button.
The frequency selection appears.



▹ Configure the desired frequency.

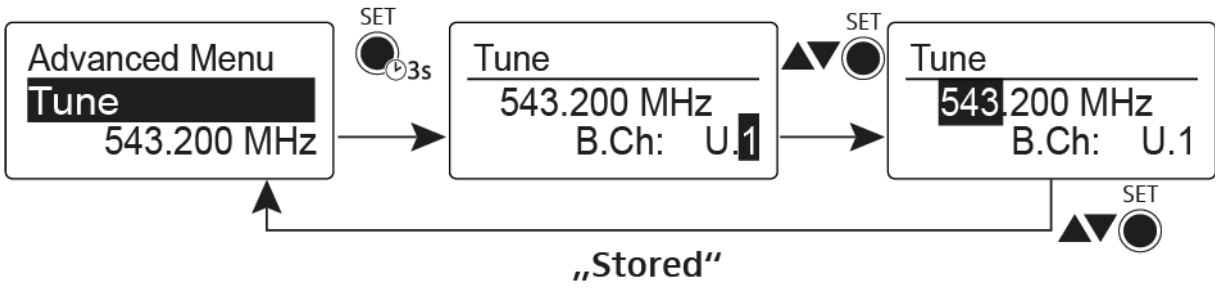
▹ Press the SET button.
Your settings will be saved. You are now back in the operating menu.

Setting the channel and frequency

To select a channel and assign it a frequency:

▹ Press the UP or DOWN button until the Tune menu item appears.

▹ Hold down the SET button until the power LED turns off.



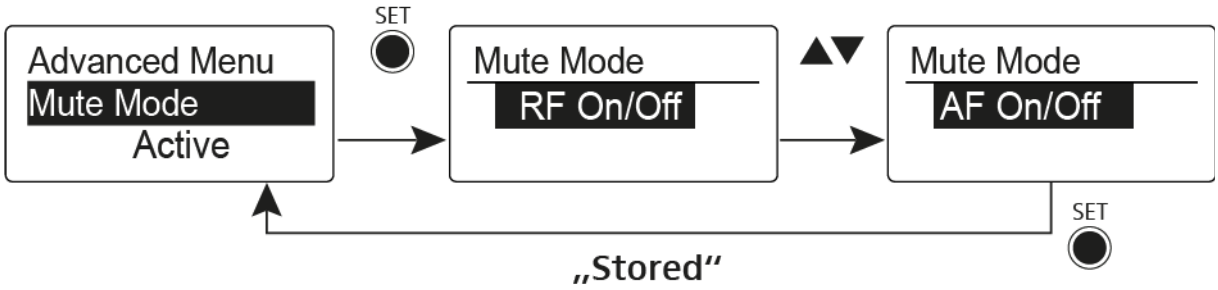
▹ Set the desired channel.

▹ Press the SET button.
The frequency selection appears.

▹ Configure the frequency.

Advanced > Mute Mode menu item

- Configure the function of the mute switch and the **RMS 1** remote mute switch



The **Push to mute** and **Push to talk** menu items can only be used with an RMS 1 remote mute switch.

MUTE switch functions

AF On/Off mode

- If set to position **MUTE**, the audio signal is muted

RF On/Off mode

- If set to the **MUTE** selector position, the RF signal is deactivated.

Disabled mode

- No function

Functions of the RMS 1 remote mute switch

AF On/Off mode

- Press the RMS 1 mute switch: The audio signal is muted.
- Press the RMS 1 mute switch again: The audio signal is no longer muted.

RF On/Off mode

- Press the RMS 1 mute switch: The RF signal is deactivated.
- Press the RMS 1 mute switch again: The RF signal is activated.

Push To Mute mode

- The audio signal is deactivated as long as the RMS 1 mute switch is pressed.

Push To Talk mode

- The audio signal is activated as long as the RMS 1 mute switch is pressed.
- The bodypack transmitter is muted when you configure the **Push to Talk** function.

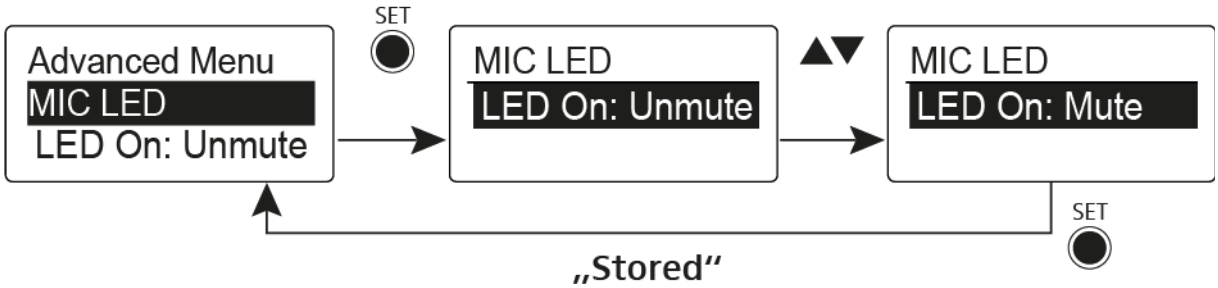
Disabled mode

- No function

When you connect the RMS 1 remote mute switch you can only mute the signal using this switch. The **MUTE** switch's function is deactivated during this time.

Advanced > MIC LED menu item

- Configure the **STATUS** LED of the RMS 1 remote mute switch



In the **MIC LED** menu item you can configure and deactivate the **STATUS** LED (see “Connecting the RMS 1 mute switch to the SK 300”) of the RMS 1 remote mute switch regardless of the settings of the “Advanced > Mute Mode menu item” and the status of the RF signal.

LED On: setting **Unmute**

- The **STATUS** LED is illuminated when the bodypack transmitter is sending an RF signal or is not muted.

LED On: setting **Mute**

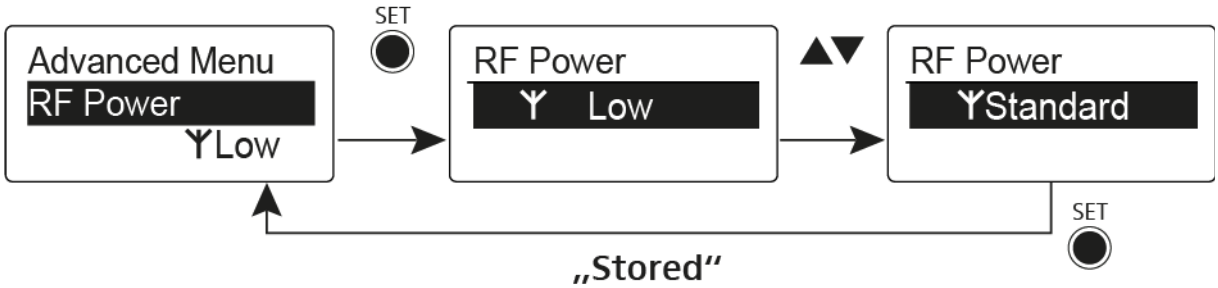
- The **STATUS** LED is illuminated when the bodypack transmitter is not sending an RF signal or is muted.

Disable LED setting

- The **STATUS** LED 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:

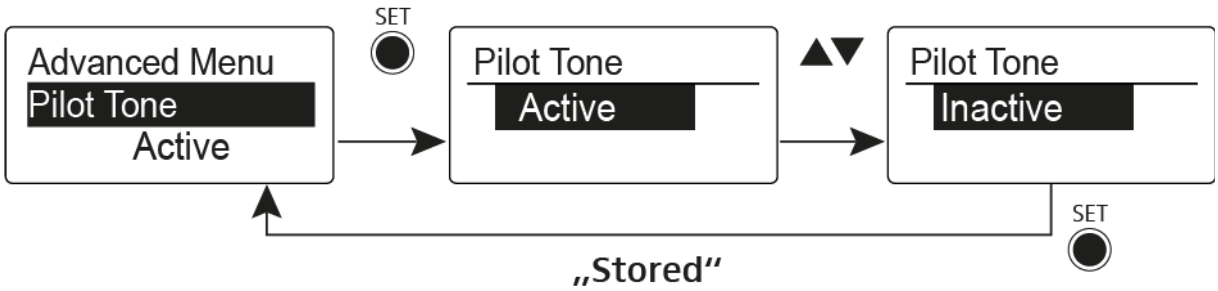
Low: 10 mW

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.

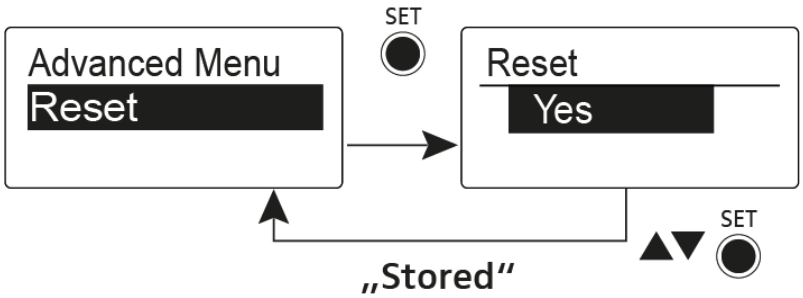
Advanced > LCD Contrast menu item

- Adjusting the contrast of the display panel

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

Advanced > Reset menu item

- Resetting the bodypack transmitter



When you reset the bodypack transmitter, 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.

Establishing a radio link

To establish a radio link between the transmitter and receiver, the same frequency must be set in both devices.

You can do this in a number of different ways:

1. Use the **Easy Setup** function to perform an **automatic frequency set-up** (see “Easy Setup menu item”).
2. Set a frequency in the receiver **manually** (see “Frequency Preset menu item”) and **synchronize** it with the transmitter (see “Synchronizing devices”).
3. Set the frequency on the receiver and the transmitter **manually** (EM 300–500 G4: “Frequency Preset menu item”, SKM 300 G4: “Frequency Preset menu item”, SK 300 G4: “Frequency Preset menu item”, SKM 500 G4: “Frequency Preset menu item”, SK 500 G4: “Frequency Preset menu item”).

Setting notes

Please note the following when synchronizing a transmitter with a receivers:

- ▹ Only use transmitters and receivers from the same frequency range (see the type plate on the transmitter and receiver).
- ▹ Make sure that your chosen frequencies are listed in the frequency table for the particular frequency range (see “Frequency tables”).
- ▹ Ensure that the desired frequencies are permitted in your country and apply for an operating license if necessary.

Please note the information at the following address:

General conditions and restrictions for the use of frequencies

---

Synchronizing devices

You can synchronize ew 300-500 G4 series transmitters and receivers via the receiver's infrared interface.

You can adjust the **Parameters** to be transferred to the transmitter here: "Advanced -> Sync Settings menu item".

To synchronize the devices:

- ▹ Switch the transmitter and the receiver on.
- ▹ Press the **SYNC** button on the receiver.
  Sync appears in the receiver's display and the blue LED turns blue.

- ▹ Hold the infra-red interface of the transmitter in front of the infra-red interface of the receiver.

The parameters are transferred to the transmitter. The blue LED blinks during transmission.

When the transfer is complete, a tick appears in the receiver's display as a confirmation. Then the receiver will return to the current standard display.

To cancel synchronization:

▹ Press the **ESC** button on the receiver.

An **X** appears in the display.

This icon also appears when:

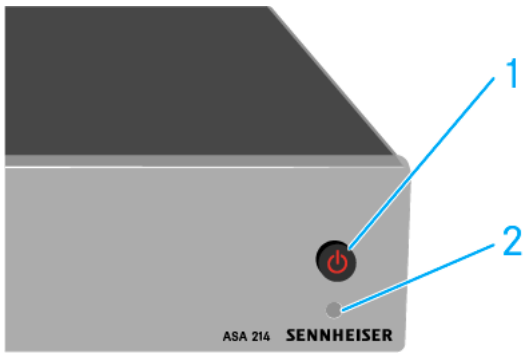
- no transmitter is found or the transmitter is not compatible.
- no transmitter is found and the synchronization process automatically ends after 30 seconds.

Using the ASA 214

These sections contain detailed information about operating the ASA 214.

You can find information on installation and startup of the ASA 214 under “Installing the ASA 214”.

Operating elements on the front of the device



1 STANDBY button

- See “Switching the ASA 214 on and off”

2 LED: Operation indicator

Switching the ASA 214 on and off

To switch on the antenna splitter:

▹ Short-press the **STANDBY** button.

The antenna splitter switches on and the power LED turns green.

The RF signals of the connected antennas are distributed to all connected receivers.

To switch the antenna splitter to standby mode:

▹ Press the **STANDBY** button for approx. 2 seconds.

The LED turns off. The connected antenna amplifiers are switched off. Connected receivers are switched off if they draw their supply voltage from the BNC sockets A1 to A4 (see “Connecting receivers to the ASA 214”).

To fully switch off the antenna splitter:

▹ Disconnect the antenna splitter from the power supply system by unplugging the power supply unit from the wall socket.

The LED turns off.

SPECIFICATIONS

Overview

In the sections below, you can find information about the different variants of the products in the **ew 300–500 G4** series as well as technical data for the individual products.

- Product variants and frequency variants >> “Product variants”
- Frequency tables with overviews of all banks and channels >> “Frequency tables”
- Product-specific technical data >> “Specifications”
- Information on pin assignment (jack and XLR) >> “Pin assignment”

You can also find information about safely cleaning and maintaining **evolution wireless G4** series products.

- “Cleaning and maintenance”

Product variants

EM 300-500 G4 product variants

Made in Germany

EM 300-500 G4-K+	925 – 937.5 MHz	Art. no. 507790
EM 300-500 G4-GBw	606 – 678 MHz	Art. no. 507791
EM 300-500 G4-Gw	558 – 626 MHz	Art. no. 507792
EM 300-500 G4-Bw	626 – 698 MHz	Art. no. 507793
EM 300-500 G4-Cw	718 – 790 MHz	Art. no. 507794
EM 300-500 G4-Dw	790 – 865 MHz	Art. no. 507795
EM 300-500 G4-Aw+	470 – 558 MHz	Art. no. 508415

Assembled in the USA

EM 300-500 G4-AS	520 – 558 MHz	Art. no. 508129
EM 300-500 G4-JB	806 – 810 MHz	Art. no. 508130
EM 300-500 G4-Gw	558 – 626 MHz	Art. no. 508131
EM 300-500 G4-Bw	626 – 698 MHz	Art. no. 508132
EM 300-500 G4-Cw	718 – 790 MHz	Art. no. 508133
EM 300-500 G4-Dw	790 – 865 MHz	Art. no. 508134
EM 300-500 G4-Aw+	470 – 558 MHz	Art. no. 508135
EM 300-500 G4-Gw1	558 – 608 MHz	Art. no. 508457

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 500 G4 product variants

Made in Germany

SKM 500 G4-K+	925 – 937.5 MHz	Art. no. 507782
SKM 500 G4-GBw	606 – 678 MHz	Art. no. 507783
SKM 500 G4-Gw	558 – 626 MHz	Art. no. 507784
SKM 500 G4-Bw	626 – 698 MHz	Art. no. 507785
SKM 500 G4-Cw	718 – 790 MHz	Art. no. 507786
SKM 500 G4-Dw	790 – 865 MHz	Art. no. 507787
SKM 500 G4-Aw+	470 – 558 MHz	Art. no. 508414

Assembled in the USA

SKM 500 G4-AS	520 – 558 MHz	Art. no. 508121
SKM 500 G4-JB	806 – 810 MHz	Art. no. 508122
SKM 500 G4-Gw	558 – 626 MHz	Art. no. 508123
SKM 500 G4-Bw	626 – 698 MHz	Art. no. 508124
SKM 500 G4-Cw	718 – 790 MHz	Art. no. 508125
SKM 500 G4-Dw	790 – 865 MHz	Art. no. 508126
SKM 500 G4-Aw+	470 – 558 MHz	Art. no. 508435
SKM 500 G4-Gw1	558 – 608 MHz	Art. no. 508459

SK 300 G4 product variants

Made in Germany

SK 300 G4-RC-K+	925 – 937.5 MHz	Art. no. 507719
SK 300 G4-RC-GBw	606 – 678 MHz	Art. no. 507720
SK 300 G4-RC-Gw	558 – 626 MHz	Art. no. 507721
SK 300 G4-RC-Bw	626 – 698 MHz	Art. no. 507722
SK 300 G4-RC-Cw	718 – 790 MHz	Art. no. 507723
SK 300 G4-RC-Dw	790 – 865 MHz	Art. no. 507724
SK 300 G4-RC-Aw+	470 – 558 MHz	Art. no. 508406

Assembled in the USA

SK 300 G4-RC-AS	520 – 558 MHz	Art. no. 508059
SK 300 G4-RC-JB	806 – 810 MHz	Art. no. 508060
SK 300 G4-RC-Gw	558 – 626 MHz	Art. no. 508061
SK 300 G4-RC-Bw	626 – 698 MHz	Art. no. 508062
SK 300 G4-RC-Cw	718 – 790 MHz	Art. no. 508063
SK 300 G4-RC-Dw	790 – 865 MHz	Art. no. 508064
SK 300 G4-RC-Aw+	470 – 558 MHz	Art. no. 508427
SK 300 G4-RC-Gw1	558 – 608 MHz	Art. no. 508448

SK 500 G4 product variants

Made in Germany

SK 500 G4-K+	925 – 937.5 MHz	Art. no. 507774
SK 500 G4-GBw	606 – 678 MHz	Art. no. 507775
SK 500 G4-Gw	558 – 626 MHz	Art. no. 507776
SK 500 G4-Bw	626 – 698 MHz	Art. no. 507777
SK 500 G4-Cw	718 – 790 MHz	Art. no. 507778
SK 500 G4-Dw	790 – 865 MHz	Art. no. 507779
SK 500 G4-Aw+	470 – 558 MHz	Art. no. 508413

Assembled in the USA

SK 500 G4-AS	520 – 558 MHz	Art. no. 508113
SK 500 G4-JB	806 – 810 MHz	Art. no. 508114
SK 500 G4-Gw	558 – 626 MHz	Art. no. 508115
SK 500 G4-Bw	626 – 698 MHz	Art. no. 508116
SK 500 G4-Cw	718 – 790 MHz	Art. no. 508117
SK 500 G4-Dw	790 – 865 MHz	Art. no. 508118
SK 500 G4-Aw+	470 – 558 MHz	Art. no. 508434
SK 500 G4-Gw1	558 – 608 MHz	Art. no. 508455

Frequency tables

You can find frequency tables for all available frequency ranges in the download section of the Sennheiser website uneer www.sennheiser.com/download.

Download area of the Sennheiser website

Enter **ew G4** into the search bar to show the frequency tables.

Specifications

You can find the cross-system and product-specific technical data in the sections below.

EM 300-500 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
Receiving 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
Receiver principle	True diversity
Sensitivity (with HDX, peak deviation)	< 2.5 µV for 52 dBA $_{\text{eff S/N}}$
Adjacent channel selection	Typically ≥ 75 dB
Intermodulation attenuation	Typically ≥ 70 dB
Blocking	≥ 75 dB
Squelch	5 to 25 dBµV, can be set in 2 dB steps
Pilot tone squelch	Can be switched off
Antenna inputs	2 BNC sockets

AF characteristics

Compander system	Sennheiser HDX
EQ presets (switchable, act on line and monitor outputs): **Preset 1:** Flat	
Preset 2: Low Cut	–3 dB at 180 Hz
Preset 3: Low Cut / High Boost	–3 dB at 180 Hz +6 dB at 10 kHz
Preset 4: High Boost	+6 dB at 10 kHz
Signal-to-noise ratio (1 mV, peak deviation)	≥ 115 dBA
Total harmonic distortion (THD)	≤ 0.9 %
AF output voltage (at peak deviation, 1 kHz AF)	6.3 mm jack socket (unbalanced): +12 dBu BNC socket (balanced): +18 dBu
AF OUT **setting range**	48 dB in 3 dB steps

Overall device

Temperature range	-10 °C to +55 °C (14 °F to 131 °F)
Power supply	12 V DC
Power consumption	300 mA
Dimensions	Approx. 202 x 212 x 43 mm
Weight	approx. 980 g

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	≤ ±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

SKM 500 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	≤ ±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

SK 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	≤ ±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	Microphone: 80 – 18,000 Hz Line: 25 – 18,000 Hz
Signal-to-noise ratio (1 mV, peak deviation)	≥ 115 dBA
Total harmonic distortion (THD)	≤ 0.9 %
Max. input voltage Microphone/line	3 V_{eff}
Input impedance Microphone/line	40 kΩ, unbalanced/1 MΩ
Input capacitance	Switchable
Setting range for input sensitivity	60 dB in 3 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. 82 x 64 x 24 mm
Weight (with batteries)	Approx. 160 g

SK 500 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	≤ ±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	Microphone: 80 – 18,000 Hz Line: 25 – 18,000 Hz
Signal-to-noise ratio (1 mV, peak deviation)	≥ 115 dBA
Total harmonic distortion (THD)	≤ 0.9 %
Max. input voltage Microphone/line	3 V_{eff}
Input impedance Microphone/line	40 kΩ, unbalanced/1 MΩ
Input capacitance	Switchable
Setting range for input sensitivity	60 dB in 3 dB steps

Overall device

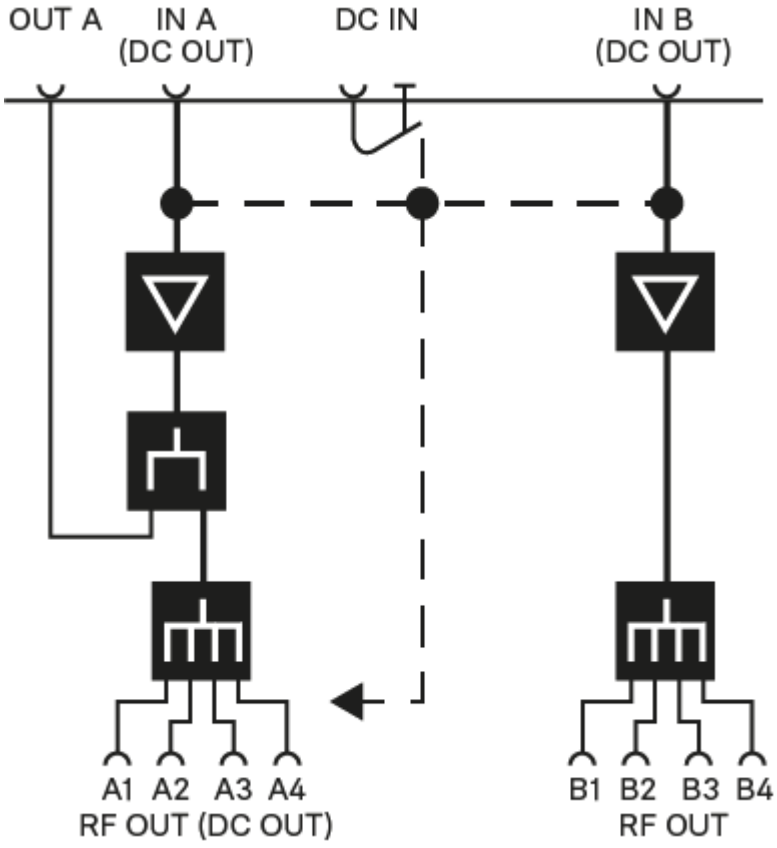
Temperature range	-10 °C to +55 °C (14 °F to 131 °F)
Power supply	2 AA batteries, 1,5 V or BA 2015 accupack
Nominal voltage	3 V battery 2.4 V rechargeable battery
Power consumption	
at nominal voltage **with transmitter switched off**	typically 180 mA ≤ 25 µA
Operating time	Typically 8 h
Dimensions	approx. 82 x 64 x 24 mm
Weight (with batteries)	Approx. 160 g

ASA 214

Specifications

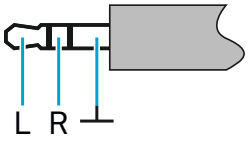
ASA 214 antenna splitter	2 × 1:4 or 1 × 1:8, active
Connection cable	8 pieces, 50 cm, BNC
Frequency range	
ASA 214-UHF: ASA 214-1G8:	470 – 870 MHz at –3 dB 1785 – 1805 MHz at –3 dB
Amplification	
In A – Out A In A – Out A1 ... A4 In B – Out B1 ... B4	0 ± 1 dB 0 ± 1 dB 0 ± 1 dB
IIP3	20 dBm min. 23 dBm, typical
Impedance	50 Ω
Reflection loss	10 dB (all RF outputs)
Operating voltage	13.8 V DC (with power supply unit NT 1-1)
Power consumption	ASA 1: 245 mA ASA 1-1G8: 350 mA
Total power consumption	max. 2.0 A with 4 receivers and 2 × 2 antenna amplifiers per antenna input
Antenna amplifier power supply at ANT RF IN A and ANT RF IN B	12 V, 130 mA
Receiver power supply at A1 to A4	12 V (protected against reverse supply), 350 mA
Relative air humidity	5 to 95%
Temperature range	
Operation: Storage:	-10 °C to +55 °C (14 °F to 131 °F) -20 °C to +70 °C (-4 °F to 158 °F)
Dimensions	approx. 212 x 168 x 43 mm
Weight	approx. 1090 g

Block diagram



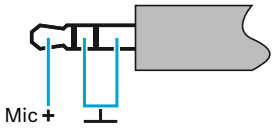
Pin assignment

3.5 mm stereo jack plug



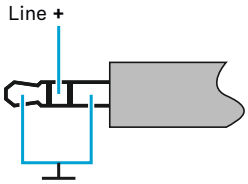
- Plug for headphone and earphone cables, e.g. IE 4.
- Connect to:
  - EK IEM G4
  - EK 500 G4

3.5 mm mic jack plug



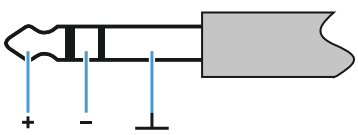
- Plug for lavalier and headset microphone, e.g. ME 2.
- Connect to:
  - SK 100 G4
  - SK 300 G4
  - SK 500 G4

3.5 mm line jack plug



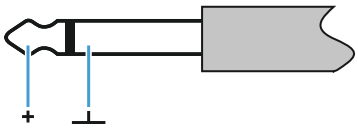
- Plug for line and instrument cables, e.g. Ci 1-N
- Connect to:
  - SK 100 G4
  - SK 300 G4
  - SK 500 G4

6.3 mm stereo jack plug, balanced (audio in/loop out)



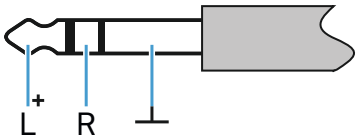
- Connect to:
  - SR IEM G4 Audio In
  - SR IEM G4 Loop Out

6.3 mm mono jack plug, unbalanced



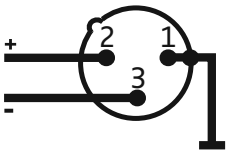
- Connect to:
  - EM 100 G4 Audio Out
  - EM 300-500 G4 Audio Out

6.3 mm stereo jack plug for headphone jack

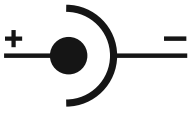


- Connect to:
  - EM 100 G4 headphone input
  - EM 300-500 G4 headphone input
  - SR IEM G4 headphone input

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**.

Sennheiser electronic GmbH & Co. KG

Am Labor 1, 30900 Wedemark, Germany
www.sennheiser.com