PROFILE

Model: PROFILE

PDF export of the original HTML instructions

Contents

1. Preface

PDF export of the original HTML instructions

This PDF document is an automated export of an interactive set of HTML instructions. It may be the case that not all contents and interactive elements are contained in the PDF as they cannot be presented in this format. Furthermore, automatically generated page breaks may cause coherent contents to be moved slightly. We can therefore only guarantee the completeness of the information in the HTML instructions, and recommend that you use these. You can find these in the download section of the website under www.sennheiser.com/download.

2. Product information

General information about the product and its intended use.

PROFILE – USB-C microphone

FEATURES

- Plug & play (USB-C connector)
- 3.5 mm headphone output
- LED status indicators
- Microphone amplifier controller
- Mixer control
- Headphones volume control
- Cardioid pick-up pattern (see Specifications)

DELIVERY INCLUDES

PROFILE SET

- PROFILE microphone
- Table stand
- USB-C cable (1.5 m)
- Instruction manual with manufacturer's declarations
- Quick guide

PROFILE STREAMING SET

- PROFILE microphone
- Boom arm
- USB-C cable (3 m)
- Storage bag
- Instruction manual with manufacturer's declarations
- Quick guide

ACCESSORIES

- Item no.: 700101 | **Boom Arm**
- Item no.: 700102 | **Profile Table Stand**
- Item no.: 700103 | **USB-C cable (3 m)**

SYSTEM REQUIREMENTS

- Windows: 10.0 or later
- macOS: 10.15 or later
- Android: 9.0 or later
- iPadOS*: 14 or later* Can only be used with USB-C compatible Apple devices

Application scenarios

PROFILE is a class-compatible plug & play USB microphone that has been developed for different application scenarios such as podcasting, streaming and home recording.

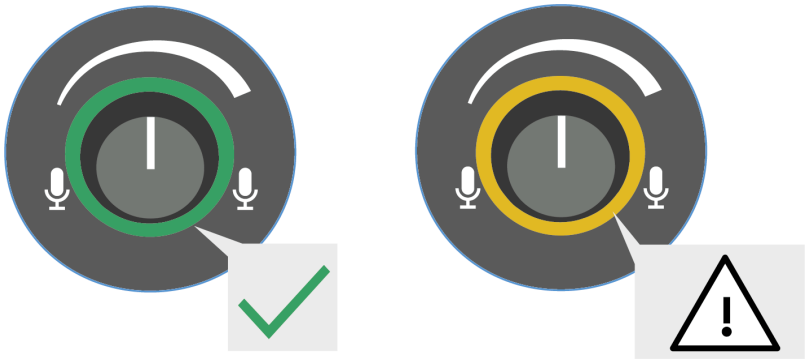
Podcasting refers to the recording and publishing of audio or video files on the Internet. For example, a podcast could be a news report, a radio broadcast or a book lecture. The recording can be downloaded and listened to at any time.

Streaming involves distributing and hosting data in real time over the Internet. Unlike a podcast, a stream is broadcast directly and in real time. PROFILE is an outstanding gaming and streaming microphone that is ideal for transmitting live video on platforms such as Twitch & YouTube and that offers excellent sound quality.

Home recording refers to recording your own music productions in a private recording studio.

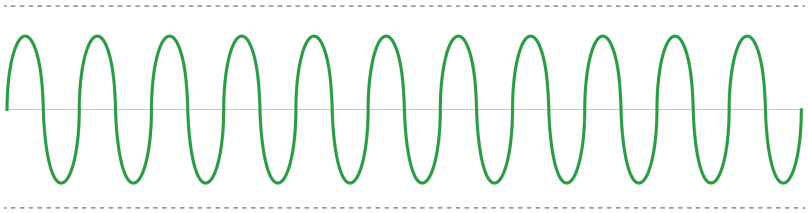
Audio signal processing

This chapter will explain more about processing the audio signal.



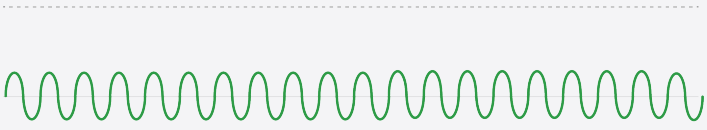
You can use the GAIN controller (see Microphone amplification (gain)) to increase or decrease the input level in order to achieve a "clean input signal." Depending on the strength of the incoming audio signal, the LED will be green or yellow.

Green: the signal is correctly amplified



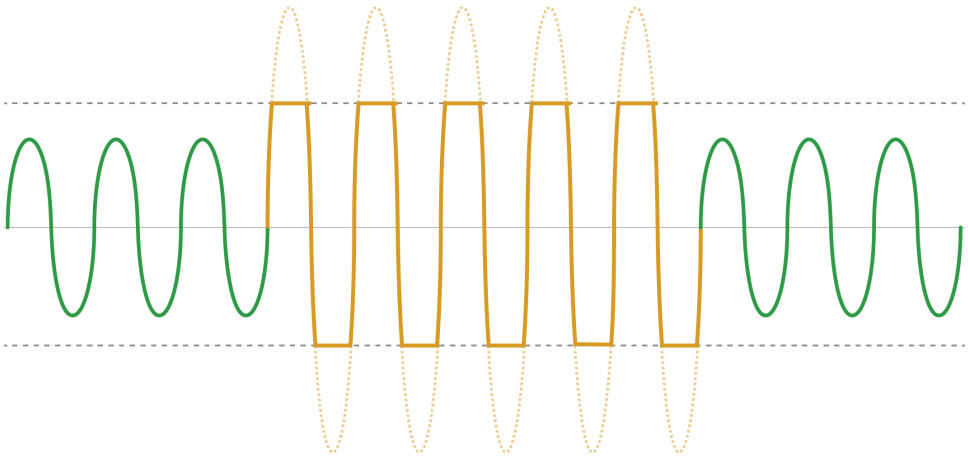
The incoming signals are within the system tolerance limits and can be amplified without problems. Even the highest peak levels remain within the tolerance range, which results in a clean input signal and high sound quality.

i Note that the LED will still be green even if the input level is too low (for example, if the voices are quiet or the microphone is too far away).



- Set the input level correctly before operation (see Adjusting the input level (gain)).

Yellow: the signal is overdriven



The incoming signals (yellow) go beyond the system tolerance limits, either in phases or constantly, resulting in an overdriven signal. Any peak levels that extend beyond the tolerance range are immediately attenuated to the highest possible peak level within the tolerance limits.

Possible effects:

The signal is artificially distorted, which can result in unpleasant noises, whistling or crackle.

Possible causes:

- The microphone amplification (GAIN) is set too high for the particular volume and/or chromatic range of the voice.
- The distance between the sound source and the microphone is too small, causing an excessively high audio input level.
- The microphone sensitivity is set too high in your device's operating system and must be reduced.

Corrective action:

- If necessary, turn down the GAIN control to reduce the microphone gain. You can find more information under Microphone amplification (gain).
- Ensure that the distance between the microphone and the point of speaking is between 5 and 15 cm.
- Check the GAIN LED to see if the incoming sound pressure level is overdriving the microphone.

3. Instruction manual

Information on installation and startup as well as operation of the microphone.

Installation and startup

The following sections provide information on installing and connecting the PROFILE USB-C microphone.

Mounting the microphone

Depending on your set (PROFILE or PROFILE STREAMING SET), you can mount the USB microphone either on the supplied table stand or on the supplied boom arm.

The microphone contains an internal thread and can be screwed onto the thread on the table stand or boom arm.

ℹ The boom arm and the extra-long USB-C cable (3 m) contained in the STREAMING SET are also available as optional accessories, which you can add to the PROFILE as required.

Mounting the microphone on the table stand

ℹ A stable and level worktop (e.g. a desk) is required for setting up the table stand.

Mounting the microphone on the table stand:

- Place the table stand on a stable and level worktop.
- Manually screw the USB microphone onto the screw thread on the table stand until the microphone is fixed in place.

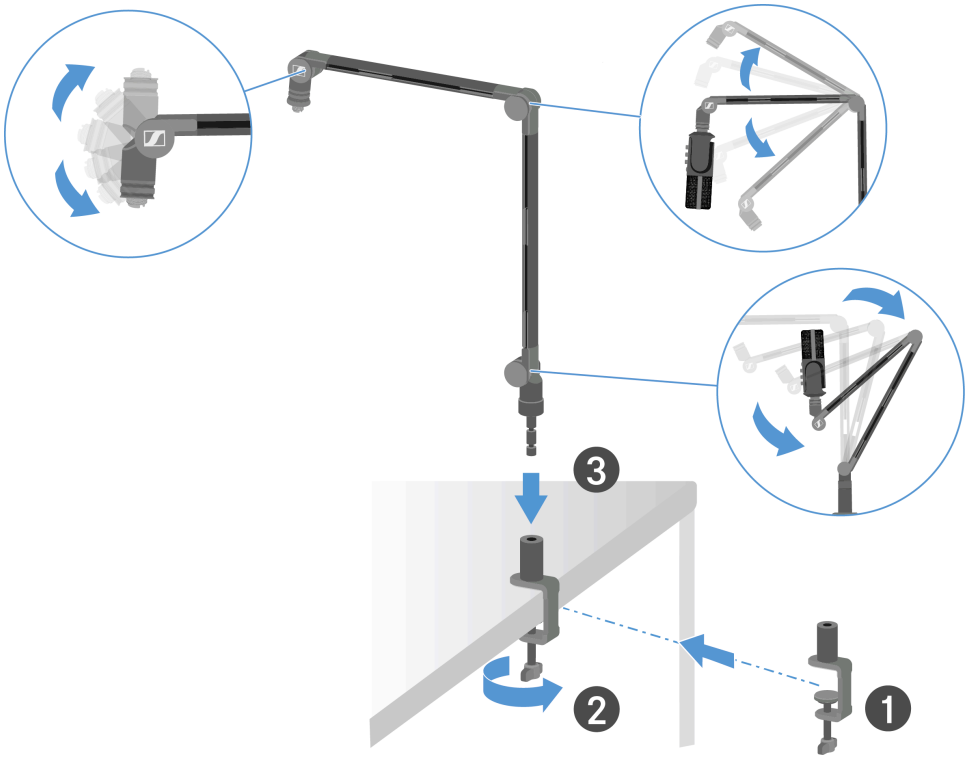
✓ The microphone is now mounted on the table stand.

Mounting the microphone on the boom arm

> **i** A stable and level worktop (e.g. a desk) is required for mounting the boom arm.

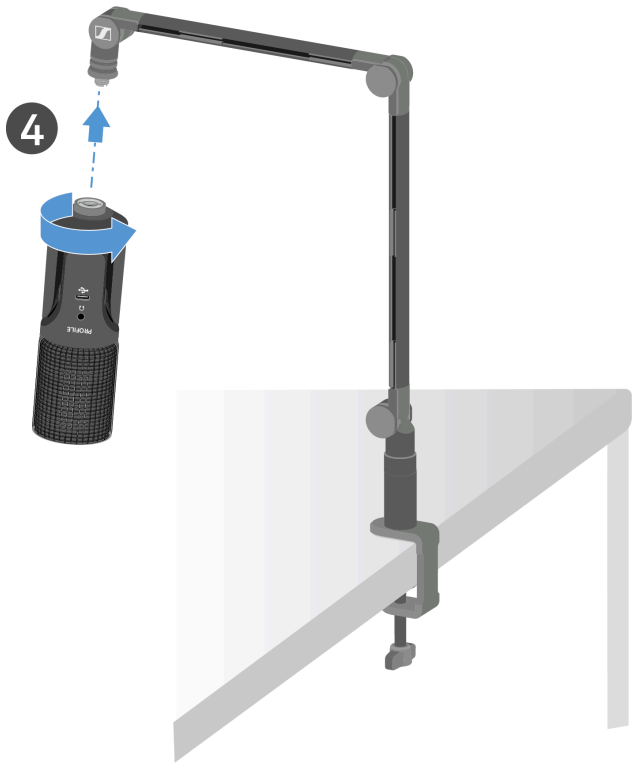
Mounting the microphone on the boom arm:

- Attach the supplied table clamp to a stable worktop.
- To do this, tighten the screw cap in the direction indicated by the arrow.
- Insert the boom arm's locking pin into the table clamp until you hear the holder click into place.



> **i** You can use the rotating external thread on the boom arm to fix the microphone in the desired position.

- Manually screw the USB microphone onto the screw thread on the boom arm until the microphone is fixed in place.



You can use the rotating external thread on the boom arm to fix the microphone in the desired position.

✓ The microphone is now mounted on the boom arm.

Connecting the microphone

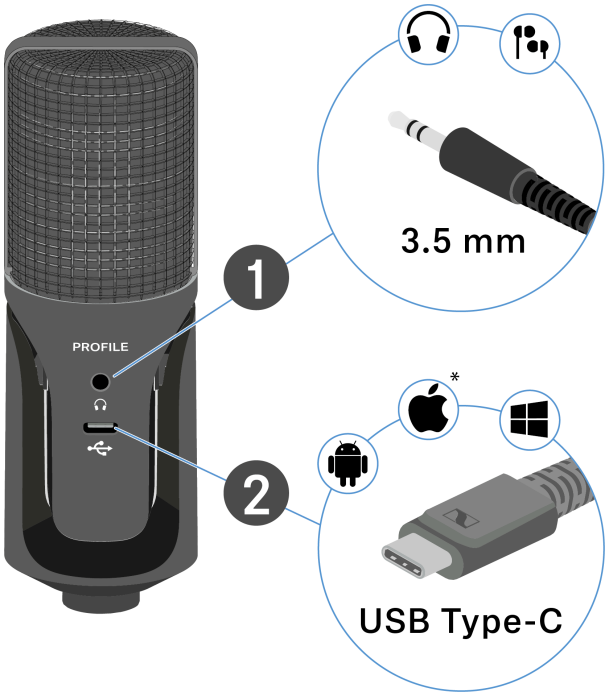
There are two connectors on the back of the PROFILE:

1 3.5 mm headphone socket

- Headphone output for monitoring
- See Adjusting the mixer control
- See Setting the headphone volume

2 USB-C port

- For power supply and data transmission



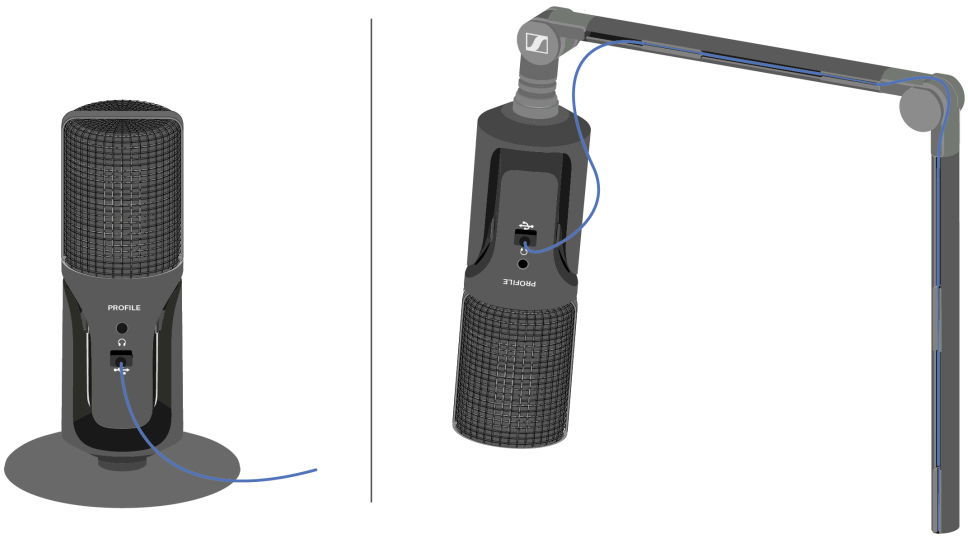
i Before starting up the microphone, make sure that the device you wish to use meets the system requirements (see Product information).

Connecting the USB-C cable to the microphone

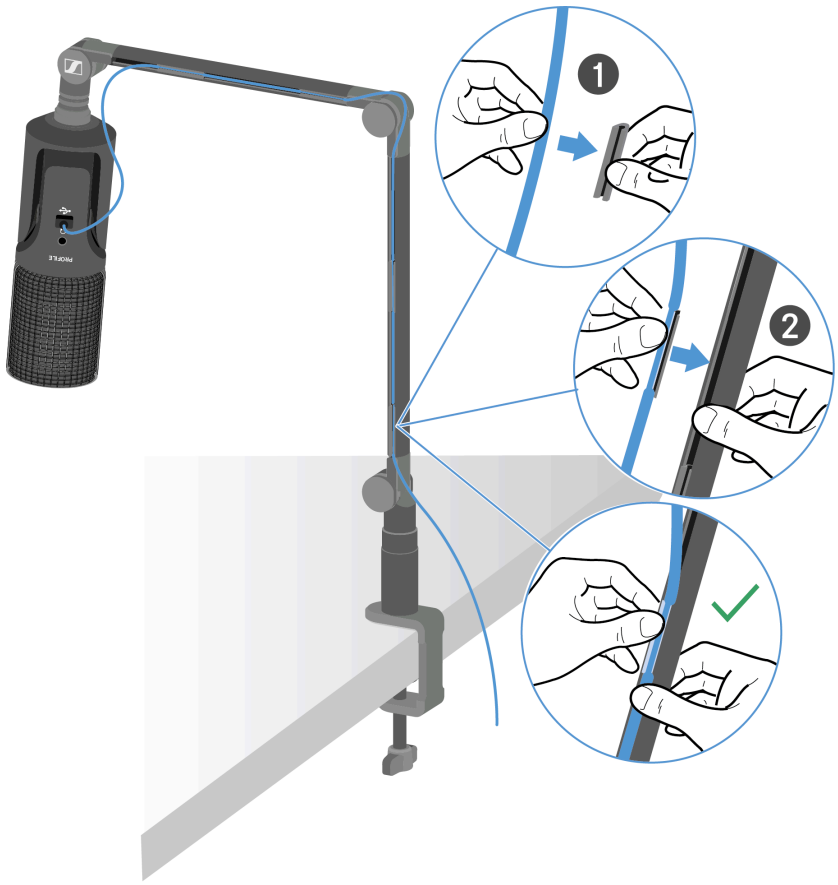
i Use only the accessories recommended by Sennheiser. Sennheiser is not liable for damage to USB devices that do not meet the USB specifications.

Connecting the USB-C cable to the microphone:

- Plug one end of the supplied USB-C cable into the USB-C connector on the microphone.



- Plug the other end of the USB-C cable into the USB-C connector on your device. If necessary, use a USB C/A adapter.



With the STREAMING SET, run the USB-C cable over the boom arm joint and properly insert the cable into the cable guide rail as follows:

- Remove the cable clips from the cable guide rail of the boom arm.
- Insert the cable into the clip.
- Reinsert the clips into the cable guide rail.
- Route the cable over the boom arm joint.
- Make sure that the cable is loose and not too tight over the joint so that you do not put excessive strain on the USB-C cable when the boom arm is extended.

The USB-C cable is now connected to the microphone.

Connecting headphones to the microphone

CAUTION

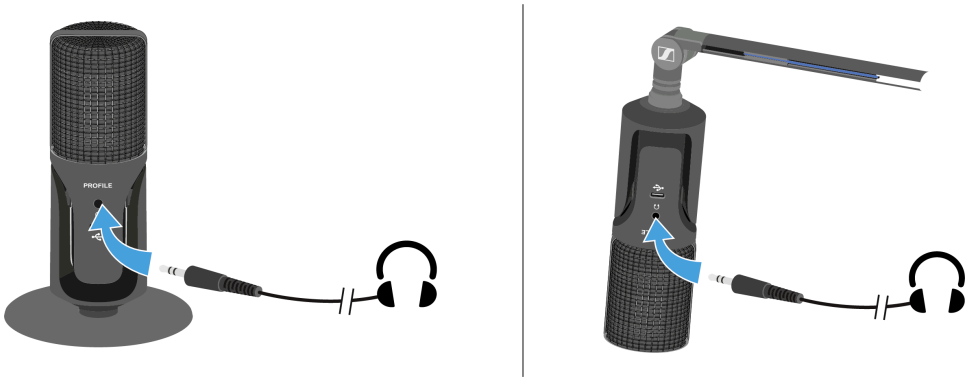
Danger due to high volume levels!

Volume levels that are too high may damage your hearing.

- Turn down the volume of the headphone output before you put on the headphone.

Connecting headphones to the microphone:

- Insert the 3.5 mm headphone jack into the headphone socket on the microphone.



✓ The headphones are now attached to the microphone.

Positioning the microphone

Properly aligning the microphone and maintaining the correct distance from the microphone are essential to ensuring the correct input signal is received and processed at the correct level.

The procedure for aligning the microphone differs depending on your set:

- PROFILE SET: by adjusting the inclination of the table stand
- PROFILE STREAMING SET: using the adjustable joints of the boom arm

> The microphone has a cardioid pick-up pattern. To achieve the best voice quality, always observe the indicated direction of speaking and the recommended distances.

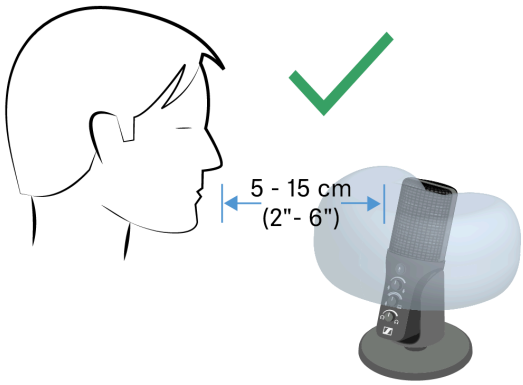
Microphone speaking direction:

Aligning the microphone on the table stand

> **i** Please note that the audio input level may differ depending on your distance from the microphone. The shorter the distance from the microphone, the higher the incoming sound pressure level and thus the higher audio input level (see Audio signal processing and Tips & tricks).

Aligning the microphone on the table stand:

- Slightly tilt the microphone forward or backward to an appropriate speaking angle.
- Make sure that your distance from the microphone is 5 to 15 cm (2″ to 6″).



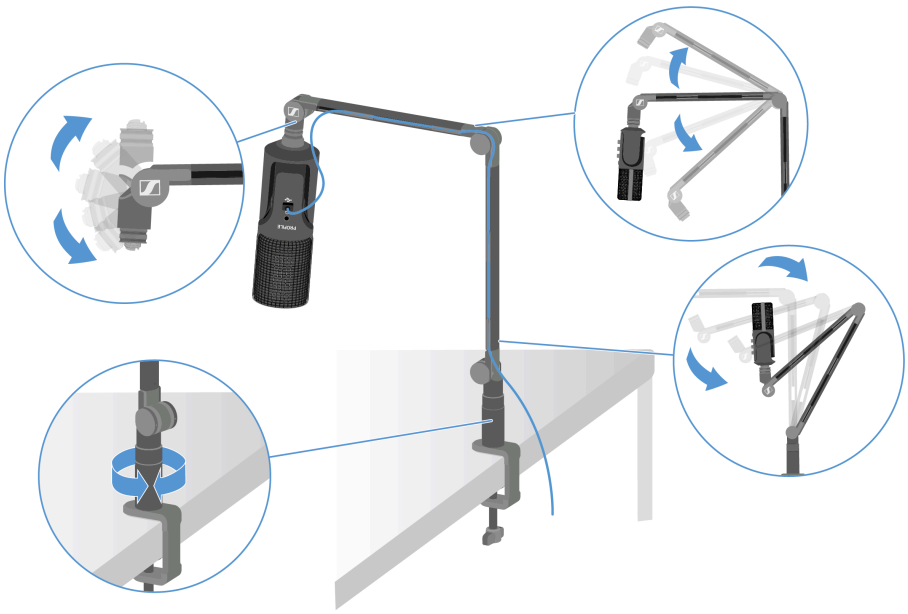
✓ The microphone is now aligned and ready for use.

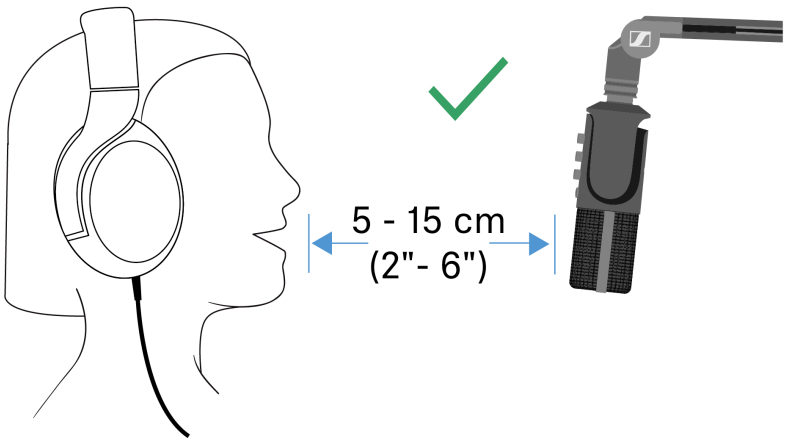
Aligning the microphone on the boom arm

i Make sure that the cable is loose and not too tight over the joint so that you do not put excessive strain on the USB-C cable when the boom arm is extended.

Aligning the microphone on the boom arm:

- Adjust the joints of the boom arm so that a distance of 5 to 15 cm (2″ to 6″) is maintained between the speaker and the microphone.





✓ The microphone is now aligned and ready for use.

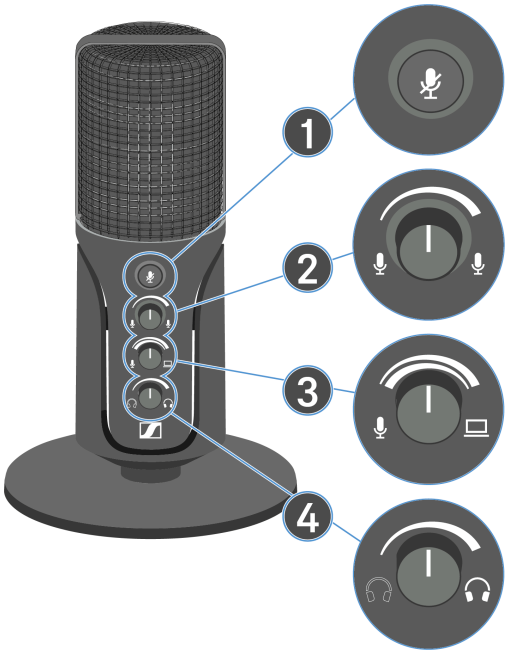
Operating instructions

The following sections provide information on using the USB microphone.

Related information

Control elements
Muting the microphone
Microphone amplification (gain)
Adjusting the input level (gain)
Adjusting the mixer control
Setting the headphone volume

Control elements



1 MUTE

- See Muting the microphone

2 GAIN

- See Adjusting the input level (gain)

3 Mixer control

- See Adjusting the mixer control

4 Volume control for the headphone socket

- See Setting the headphone volume

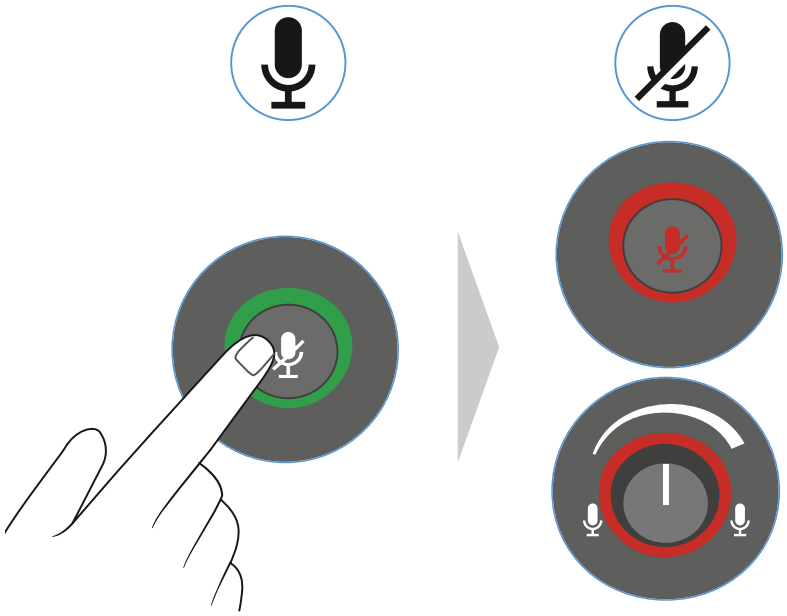
Muting the microphone

The microphone can be muted during operation. When the microphone is muted, no audio input signals are processed.

Active muting is indicated by two red LEDs above the MUTE and GAIN buttons.

Muting the microphone

- Short-press the MUTE button.
  - The MUTE and GAIN button LEDs light up red. The microphone is now muted.

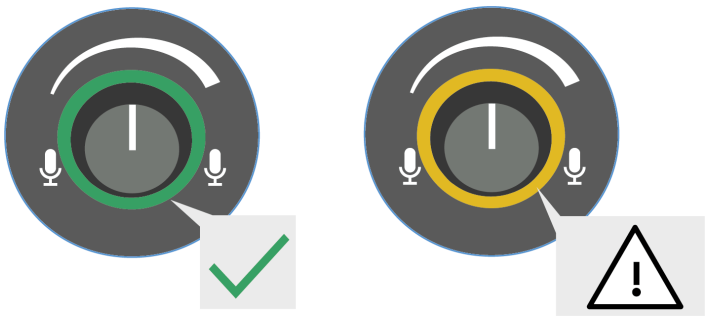


Canceling muting

- Short-press the MUTE button.
  - The MUTE button LED goes out. The GAIN LED is green or yellow again (see Adjusting the input level (gain)).

Microphone amplification (gain)

You can use the GAIN controller to increase or decrease the input level in order to achieve a “clean input signal.” Depending on the strength of the incoming audio signal, the LED will be green or yellow.



Meaning of indicators

The indicators tell you when:

- The signal is within the tolerance range and amplified without artifacts (green LED).
- The signal exceeds the tolerance range and is thus overdriven (yellow LED). This can lead to unpleasant noise, whistling or crackle, and/or feedback during audio output.

> **i** Note that the LED will still be green even if the input level is too low (for example, if the voices are quiet or the microphone is too far away). Detailed information on signal processing can be found in chapter Audio signal processing.

Tips for achieving optimal sound

To achieve the best sound with the PROFILE, we recommend the following:

- Make your recordings in a quiet environment (e.g. a studio or a closed room where you are not subject to external noise).
- Align the microphone so that the recommended distance between the sound source and the microphone is maintained (see Positioning the microphone).
- Adjust the microphone gain so that the input level always remains within the tolerance range in all intended recording situations, as indicated by the green LED (see Adjusting the input level (gain)).

> **i** For more tips on voice and voice recordings, see chapter Tips & tricks.

Adjusting the input level (gain)

> **i** Set the microphone's input level in a quiet environment in order to achieve maximum suppression of off-axis noise.

For natural voice/volume

- Speak into the microphone with a natural volume and watch the level indicator.
  - The LED is solid green. The peak level is within the tolerance range. Proceed to step 6.
  - The LED is solid yellow. The microphone is overdriven.
- Turn the knob counterclockwise to lower the gain.
- Speak into the microphone again and observe the level indicator.
- Repeat the steps until the LED turns green.

For adjusted voice/volume

> **i** If the LED is yellow even with quiet tones, the microphone sensitivity may be set too high on the device you are using. Adjust the microphone sensitivity on your device and repeat the previous steps.

- Speak into the microphone with a loud voice to simulate overdrive and determine the peak level limit in your intended situations.
  - The LED is solid green. The peak level is within the tolerance range.
  - The LED is solid yellow. The microphone is overdriven.
- Turn the knob counterclockwise to lower the gain.
- Repeat the steps until the LED turns green.
- If necessary, simulate several situations in which you change your chromatic range and the distances to the microphone.
- Adjust the input level so that the incoming signal remains within the tolerance range in all intended speech or singing situations as indicated by the green LED.

Adjusting the mixer control

The mixer control allows you to set a custom mix of two audio sources.

The mixer control allows you to set a custom mix of two audio sources: the direct microphone input signal (e.g., your voice) and the audio output signal from your device (e.g. playback from a PC or mobile device) that arrives via the microphone's USB-C port.

- Turn the knob to the left if the microphone signal is too quiet – the output signal of your device will become correspondingly quieter.
- Turn the knob to the right if the output signal of your device is too quiet – the microphone will be adjusted accordingly.

i We recommend that you initially place the knob in the middle position to achieve a balance between the microphone signal and the playback.

CAUTION

Danger due to high volume levels!

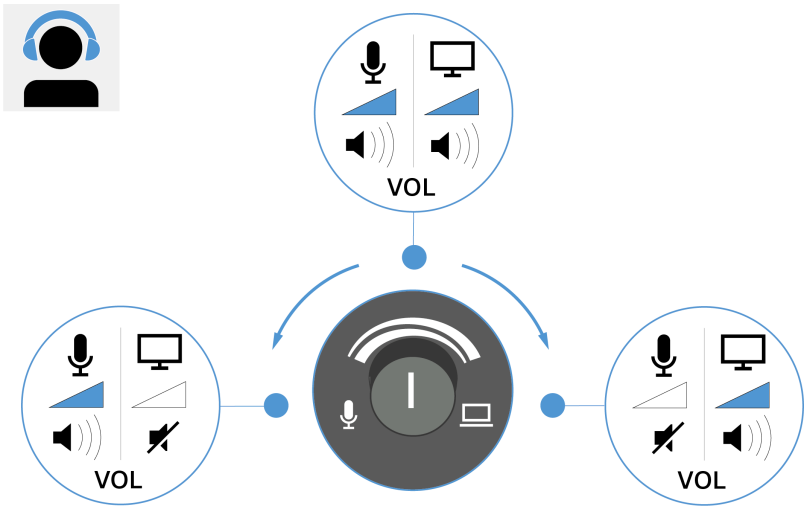
Volume levels that are too high may damage your hearing.

▶ Turn down the volume of the headphone output before you put on the headphone.

To adjust the balance:

▶ Rotate the knob toward the microphone icon (to the left) to focus the mixed signal on the microphone signal.

▶ Rotate the knob toward the PC icon to focus the mixed signal on the output signal from the device (for example, playback from the PC).



Setting the headphone volume

The headphone output on the back of the microphone (3.5 mm jack) allows you to monitor the mixed audio signal from the microphone and the playback via the USB-C port (audio signal from PC/mobile device).

The mixer control allows you to set a custom mix of two audio sources: the direct microphone input signal (e.g., your voice) and the audio output signal from your device (e.g. playback from a PC or mobile device) that arrives via the microphone's USB-C port. You can find more information in chapter Adjusting the mixer control.

WARNING

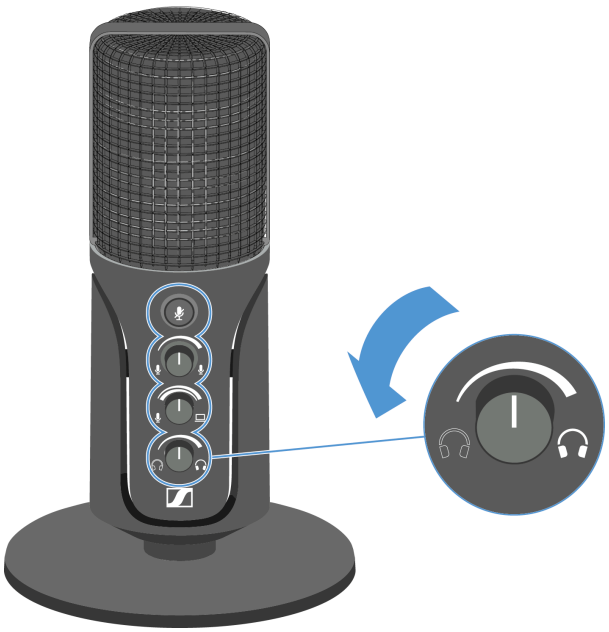
Danger due to high volume levels

Volume levels that are too high may damage your hearing.

- Reduce the volume and the microphone amplification, if applicable, before using the product.

To adjust the headphone volume:

- Rotate the volume control to the left to turn down the volume.
- Connect the headphones to the headphone socket.
- Put the headphones on and gradually adjust the volume of the headphone output.



4. Tips & tricks

Useful tips and tricks for using the microphone.

PROFILE is designed to record voices and singing for podcasting, streaming and home recording.

Depending on the situation, several factors will determine the strength of the audio signal at the microphone and the sound pressure level that is processed. It is important to note the volume, the voice's chromatic range and the distance from the sound source to the microphone.

These tips will show you how to achieve the appropriate voice quality and best possible sound.

> **i** Always correctly set the input level for the intended situation before use (see Adjusting the input level (gain)).

Recording setup tips

- Make your recordings in a quiet environment with as few reflective surfaces as possible. Highly reflective surfaces include windows, glossy tables or counters, bare walls, tiles, etc. (For example, a room furnished with carpeting and few glass windows will produce a much better sound quality than an empty space with tiles and many windows.)
- Align the microphone so that the recommended distance between the sound source and the microphone is maintained (see Positioning the microphone).
- Speak directly or slightly sideways into the microphone while maintaining the recommended distance.
- Adjust the microphone gain so that the input level always remains within the tolerance range in all intended recording situations, as indicated by the green LED (see Adjusting the input level (gain)).

> **i** Detailed information on signal processing can be found in chapter Audio signal processing.

Voice tips

Natural voice

- A natural-sounding voice can be achieved with a recommended distance of between 5 and 15 cm from the microphone. This distance is ideal for podcasts and streaming with a moderate speed of speaking.

Warm voice

- If you want to achieve a more intimate voice quality, speak very closely into the microphone. This will amplify the low frequencies to generate a warm voice quality.
- Pay attention to the input level (LED indicator), as the audio transmission distance is very short and thus the incoming pressure level will be very high.

Tips for recording singing

- Singing produces higher sound pressure levels than normal voice recordings. The plosive sounds in particular ("P", "B", "T" and "K") can overdrive the microphone in this situation.
- To achieve a clean sound without artifacts, we recommend keeping a distance of at least 15 cm. Depending on the singer's volume and chromatic range, the distance can be extended up to 45 cm.
- If necessary, use an additional pop shield to dampen the plosive sounds.

5. FAQ

Questions and answers on the subject of sound, connection and functions.

My device does not detect the microphone

- Ensure that the device meets the system requirements (see Product information).
- Remove the USB-C cable. Reconnect the cable to the USB-C port on your device.
- If necessary, restart the device you are using (such as a PC) to detect newly attached devices.

I don't hear any sound even though the microphone is detected

- Make sure the microphone is not muted (see Muting the microphone).
- Check the position of the controls on the microphone. To start the adjustment, move all knobs to the center position so that you can hear all incoming and outgoing audio signals. For more information about controls, see Control elements.

The sound is distorted

- If necessary, turn down the GAIN control to reduce the microphone gain. You can find more information under Adjusting the input level (gain).
- Ensure that the distance between the microphone and the point of speaking is between 15 and 45 cm.
- Check the GAIN LED to see if the incoming sound pressure level is overdriving the microphone.

There is no sound in the headphones

- Make sure the microphone is not muted (see Muting the microphone).
- Check that the 3.5 mm headphone cable is connected correctly (see Connecting the microphone).
- Move the headphone volume knob and the mixer control to the center position. Speak into the microphone and adjust the volume to your desired level using the headphone volume knob (see Setting the headphone volume).

6. Specifications

Overview of all specifications at a glance.

General

Temperature range

- During use: 0 °C to +40 °C (32 °F to 104 °F)
- Storage: -20 °C to +70 °C (-4 °F to 158 °F)
    - 0% to 95%, non-condensing

Dimensions

- PROFILE: Ø 50 x 152 mm
- Table stand: Ø 98 x 18 mm
- Boom arm: 780 mm (horizontal extension)

Connections

- USB-C (USB 2.0 Full-Speed, class compatible)
- 3.5 mm TRS headphone output

USB-C cable length

- PROFILE: 1.2 m
- STREAMING SET: 3 mg

Power supply

- 5 V DC, max. 200 mA
- Via PC/Mac, Android or iPadOS device

Weight

- PROFILE: 350 g
- Table stand: 60 g
- Boom arm: 820 g

MICROPHONE

Transducer principle

- Pre-polarized condenser microphone

Pick-up pattern

- Cardioid

Sensitivity at max. gain

- -10 dBFS at 80 dB SPL

Sensitivity at min. gain

- -50 dBFS at 80 dB SPL

Max. SPL

- Min. gain: 125 dB SPL
- Max. gain: 85 dB SPL

Frequency response

- 20 to 20.000 Hz

Equivalent noise level

- Min. gain: 34 dB(A) SPL
- Max. gain: 28 dB(A) SPL

Sampling rate

- 44.1, 48 kHz

Sampling resolution

- 16, 24 bits

Headphone output

Connection

- 3.5 mm TRS

Min. output impedance

- 16 Ω

Frequency response

- 20 to 18.500 Hz

Compatible operating systems

Windows

- 10.0 or later

macOS

- 10.15 or later

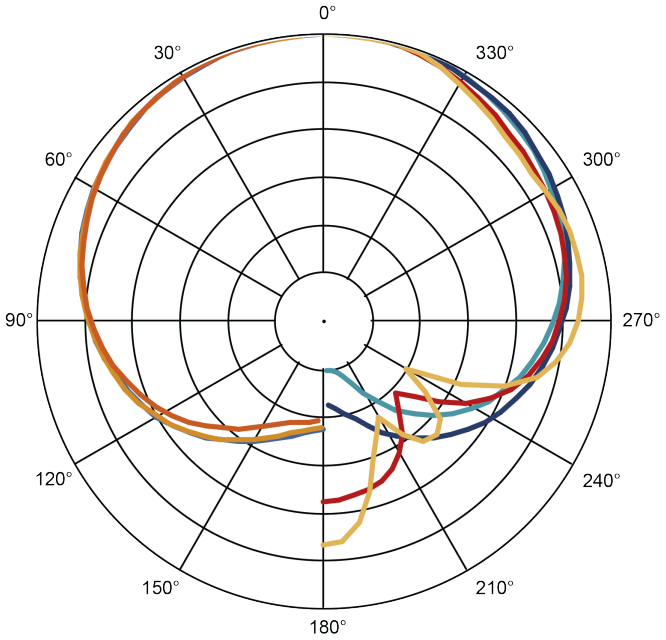
Android

- 9.0 or later

iPadOS *

- 14 or later
- * Compatible with USB-C enabled Apple devices

Polar diagram

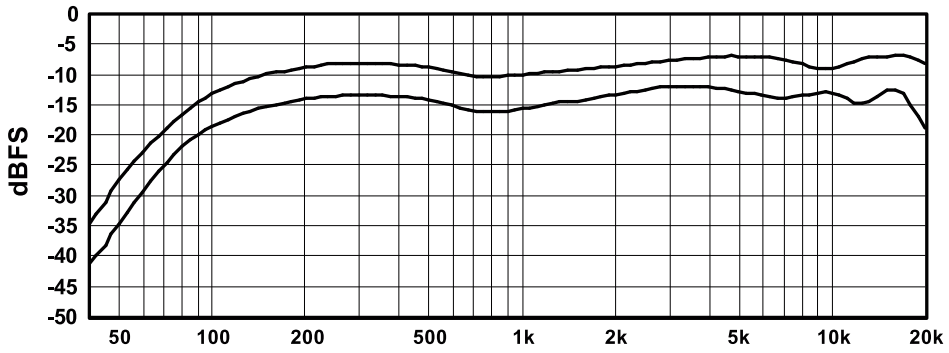


Polar Pattern

Left: 125 Hz ~ 1 kHz

Right: 2 kHz ~ 16 kHz

Frequency response



0° and 90° frequency response @ 80 dB SPL

Sennheiser electronic SE & Co. KG | Am Labor 1 | 30900 Wedemark | Germany