

Evolution Wired

Evolution wired Series

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1. Preface

PDF Export of the Original HTML Manual

This PDF document is an automatic export of an interactive set of HTML manuals. Some content and interactive elements may not be included in the PDF because they cannot be displayed in this format. In addition, automatically generated page breaks may cause related content to be slightly shifted. We can therefore only guarantee the completeness of the information in the HTML manual and recommend using it. You can find it in the Documentation Portal at www.sennheiser.com/documentation.

2. Product Information

All information about the product and available accessories at a glance.

For more information, see:

- You can find information about installing and operating under User Manual.
- You can find technical specifications about the individual products under Specifications.
- You can find information about pick-up pattern under Directional characteristics.
- You can find information about applications under Applications.

evolution 600

The evolution 600 series includes instrument microphones with cardioid and supercardioid patterns.

e 602 II

Instrument microphone with cardioid polar pattern



Article no. 500797

Applications



You can find more detailed information about the e 602 II in the following sections:

- **Startup and operation:** e 602 II
- **Specifications:** e 602 II

e 604

Instrument microphone with cardioid polar pattern



Article no. 004519

Applications



You can find more detailed information about the e 604 in the following sections:

- **Startup and operation:** e 604
- **Specifications:** e 604

e 608

Instrument microphone with supercardioid pattern



Article no. 004520

Applications



You can find more detailed information about the e 608 in the following sections:

- **Startup and operation:** e 608
- **Specifications:** e 608

e 609 silver

Instrument microphone with supercardioid pattern



Article no. 500074

Applications



You can find more detailed information about the e 609 in the following sections:

- **Startup and operation:** e 609
- **Specifications:** e 609 silver

e 614

Instrument microphone with supercardioid pattern



Article no. 009895

Applications



You can find more detailed information about the e 614 in the following sections:

- **Startup and operation:** e 614
- **Specifications:** e 614

evolution 800

The evolution 800 series includes microphones for speech and singing with cardioid and supercardioid polar patterns.

e 825-S

Instrument and vocal microphone with cardioid pattern



Article no. 004511

Applications



> You can find more detailed information about the e 825-S in the following sections:
>
> - **Startup and operation:** e 825-S
> - **Specifications:** e 825-S

e 835 | e 835-S | e 835-S-PTT

Cardioid vocal microphone



Article no. e 835: 004513

Article no. e 835-S: 004514

Article no. e 835-S-PTT: 390020

Applications



You can find more detailed information about the e 835 | e 835-S | e 835-S-PTT in the following sections:

- **Startup and operation:** e 835 | e 835-S | e 835-S-PTT
- **Specifications:** e 835-S

e 845 | e 845-S

Supercardioid vocal microphone





Article no. e 845: 004515

Article no. e 845-S: 004516

Applications



You can find more detailed information about the e 845 | e 845-S in the following sections:

- **Startup and operation:** e 845 | e 845-S
- **Specifications:** e 845-S

e 865 | e 865-S

Supercardioid vocal microphone





Article no. e 865: 004846

Article no. e 865-S: 004847

Applications



You can find more detailed information about the e 865 | e 865-S in the following sections:

- **Startup and operation:** e 865 | e 865-S
- **Specifications:** e 865-S

evolution 900

The evolution 600 series includes instrument microphones with cardioid and supercardioid patterns.

e 901

Instrument microphone with cardioid polar pattern



Article no. 500198

Applications



You can find more detailed information about the e 901 in the following sections:

- **Startup and operation:** e 901
- **Specifications:** e 901

e 902

Instrument microphone with cardioid polar pattern



Article no. 500199

Applications



You can find more detailed information about the e 902 in the following sections:

- **Startup and operation:** e 902
- **Specifications:** e 902

e 904

Instrument microphone with cardioid polar pattern



Article no. 500200

Applications



You can find more detailed information about the e 904 in the following sections:

- **Startup and operation:** e 904
- **Specifications:** e 904

e 906

Instrument microphone with cardioid polar pattern



Article no. 500202

Applications



You can find more detailed information about the e 906 in the following sections:

- **Startup and operation:** e 906
- **Specifications:** e 906

e 908

Instrument microphone with cardioid polar pattern



Article no. e 908 B: 500203

Article no. e 908 B ew: 500204

Applications



You can find more detailed information about the e 908 in the following sections:

- **Startup and operation:** e 908
- **Specifications:** e 908

e 914

Instrument microphone with supercardioid pattern



Article no. 500206

Applications



You can find more detailed information about the e 914 in the following sections:

- **Startup and operation:** e 914
- **Specifications:** e 914

e 935

Cardioid vocal microphone



Article no. 009421

Applications



You can find more detailed information about the e 935 in the following sections:

- **Startup and operation:** e 935
- **Specifications:** e 935

e 945

Supercardioid vocal microphone



Article no. 009422

Applications



You can find more detailed information about the e 945 in the following sections:

- **Startup and operation:** e 945
- **Specifications:** e 945

e 965

Vocal microphone with switchable polar pattern (cardioid and supercardioid)



Article no. 500881

Applications



You can find more detailed information about the e 965 in the following sections:

- **Startup and operation:** e 965
- **Specifications:** e 965

Accessories

Various accessory parts are available for the microphones.

MZA 900 P

Phantom power adaptor



MZA 900 P with a lockable 3.5 mm jack socket

Article no. 500226

Compatible with:

- e 908

> **i** You can find more detailed information about the MZA 900 P in the following sections:
>
> - **Startup and operation:** MZA 900 P
> - **Specifications:** MZA 900 P

MZH 604

Microphone shock mount clamp for a drum rim



Article no. 005299

Compatible with:

- e 604
- e 904

MZH 908 B

Microphone clamp for brass



Article no. 500540

Compatible with:

- e 908 B and e 908 B ew (see e 908)
- e 608

MZH 908 D

Microphone clamp for drums



Article no. 500541

Compatible with:

- e 908 D (see e 908)
- e 608

MZQ 100

Microphone clamp



Article no. 002155

Compatible with:

- e 609 silver
- e 614

MZQ 800

Microphone clamp



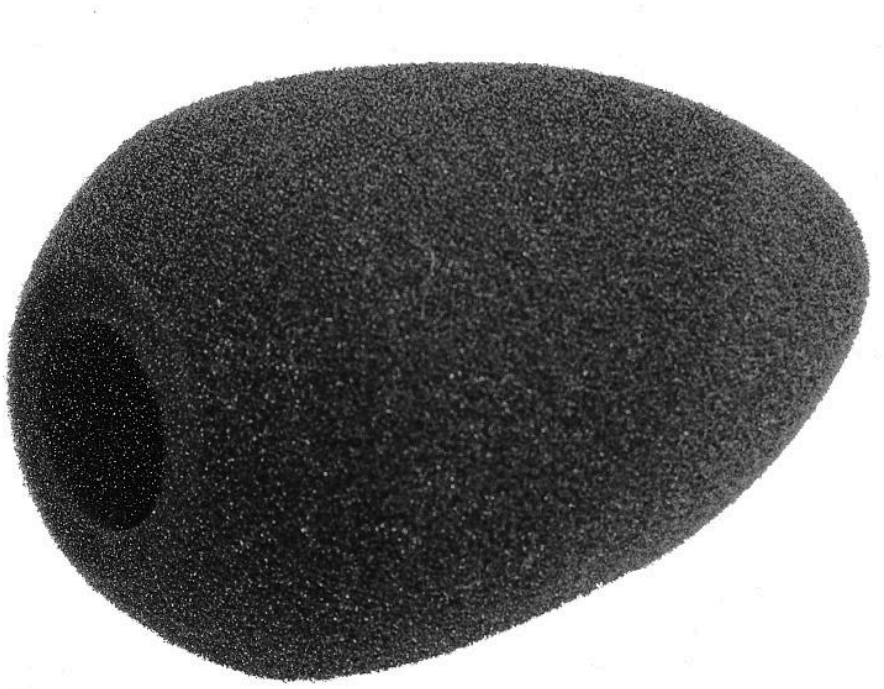
Article no. 004711

Compatible with:

- e 825-S
- e 835 | e 835-S | e 835-S-PTT
- e 845 | e 845-S
- e 865 | e 865-S
- e 935
- e 935
- e 935

MZW 64

Foam windshield



Article no. 003703

Compatible with:

- e 614
- e 914

MZW 4032

Foam windshield



Article no. MZW 4032-A, anthracite: 002978

Article no. MZW 4032-C, blue: 002980

Compatible with:

- e 825-S
- e 835 | e 835-S | e 835-S-PTT
- e 845 | e 845-S
- e 865 | e 865-S
- e 935
- e 935
- e 935

Applications

The following sections provide information about different application possibilities of the evolution wired microphones.

Directional characteristics

Cardioid



Cardioid microphones

- e 602 II
- e 604

- e 825-S
- e 835 | e 835-S | e 835-S-PTT

- e 901
- e 902
- e 904
- e 906
- e 908
- e 914
- e 935
- e 965 (see Switchable pick-up pattern)

Super-cardioid

Supercardioid is a pickup pattern between cardioid and figure-of-eight. This means it focuses even more on frontal sound than the “normal” cardioid characteristic, but sound from the rear is not suppressed quite as much. Sound arriving from the side is picked up less.

The maximum sound suppression is at the rear left and rear right, i.e. at approximately 110–125 degrees relative to the recording axis. This can be very useful on stage, for example, when positioning the stage monitors accordingly.

The supercardioid-shaped pickup pattern is suitable for targeted pickup of a sound source in a loud environment. Bleed from other instruments on stage is significantly reduced.



Super-cardioid microphones

- e 608
- e 609 silver
- e 614

- e 845 | e 845-S
- e 865 | e 865-S

- e 945
- e 965 (see Switchable pick-up pattern)

Switchable pick-up pattern



Microphone with switchable pick-up pattern

- e 965

The e 965 offers the possibility to switch between a cardioid and a supercardioid pick-up pattern.

Microphone application matrix

● Main application

● Suitable application



e 602 II					●		●		●	●		●				●			●	
e 604					●								●	●	●	●			●	
e 608					●								●	●		●				●
e 609 silver								●					●	●	●	●				●
e 614				●	●		●	●				●				●	●			●
e 835	●	●																	●	
e 845	●	●																		●
e 865	●	●																		●
e 901												●	●						●	
e 902									●	●		●				●			●	
e 904					●								●	●	●	●			●	
e 906								●					●	●	●	●			●	
e 908					●								●	●	●	●			●	
e 914				●			●	●				●				●	●		●	
e 935	●																		●	
e 945	●																			●
e 965	●	●				●													●	●

Fields of applications

In the following sections you will find lists of evolution wired microphones with regard to different fields of application.

Singing



- e 835 | e 835-S | e 835-S-PTT
- e 845 | e 845-S
- e 865 | e 865-S
- e 935
- e 945
- e 965

Speech



- e 835 | e 835-S | e 835-S-PTT
- e 845 | e 845-S
- e 865 | e 865-S

Choir



- e 614
- e 845 | e 845-S
- e 914

Orchestra



- e 614
- e 914

Brass/Woodwind



- e 602 II
- e 604
- e 608
- e 902
- e 904
- e 908

Acoustic guitar



- e 614
- e 914

Acoustic bass



- e 602 II
- e 614
- e 914

Guitar amplifier



- e 609 silver
- e 906

Bass amplifier



- e 602 II
- e 902

Brass (bass)



- e 602 II
- e 902

Piano/Grand piano



- e 614
- e 901
- e 914

Kick drum



- e 901
- e 902

Snare drum



- e 604
- e 608
- e 609 silver
- e 904
- e 906
- e 908

Tom-tom



- e 604
- e 608
- e 609 silver
- e 904
- e 906
- e 908

Floor tom



- e 602 II
- e 604
- e 609 silver
- e 902
- e 904
- e 906
- e 908

Percussion



- e 604
- e 608
- e 609 silver
- e 614
- e 904
- e 906
- e 908
- e 914

Overhead



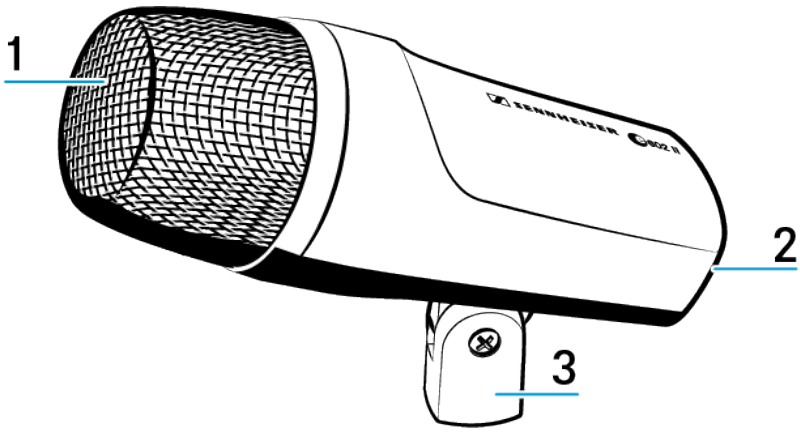
- e 614
- e 914

3. User Manual

Starting up and operating devices of the evolution wired series.

e 602 II

Product overview



1 Sound inlet basket

2 XLR-3 connector

- see Connecting the microphone

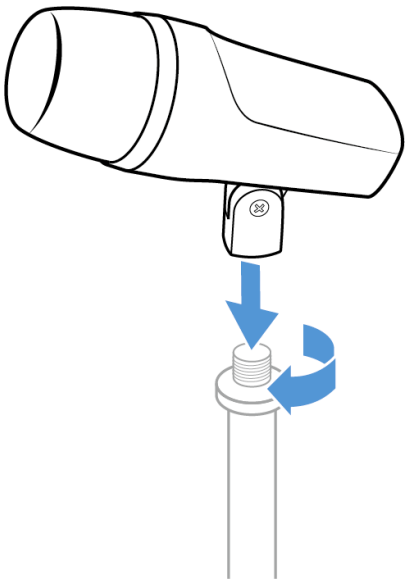
3 Integral stand mount

- see Attaching the microphone

Installation

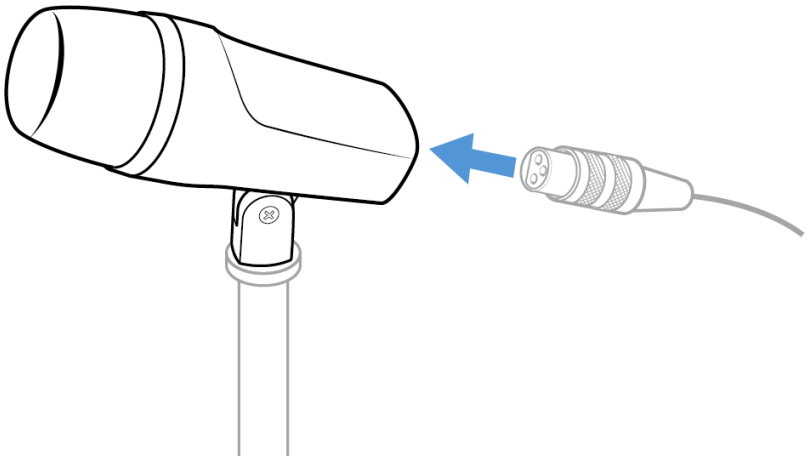
Attaching the microphone

- Screw the microphone's built-in mount onto a sufficiently stable microphone stand.



Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.

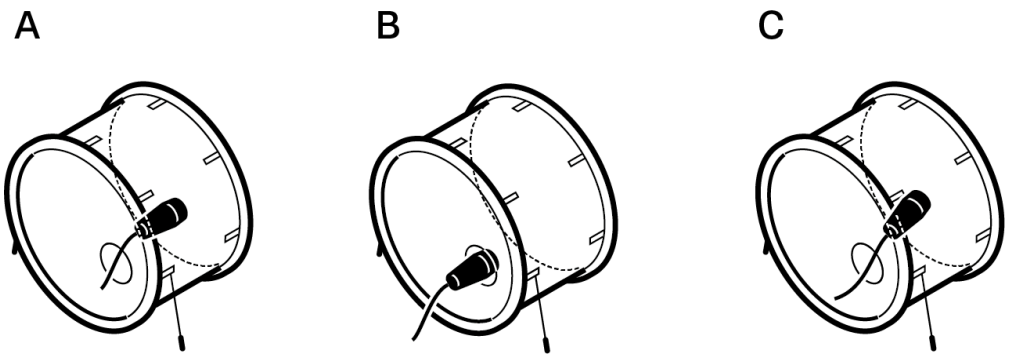


Operation

Positioning the microphone on a kick drum

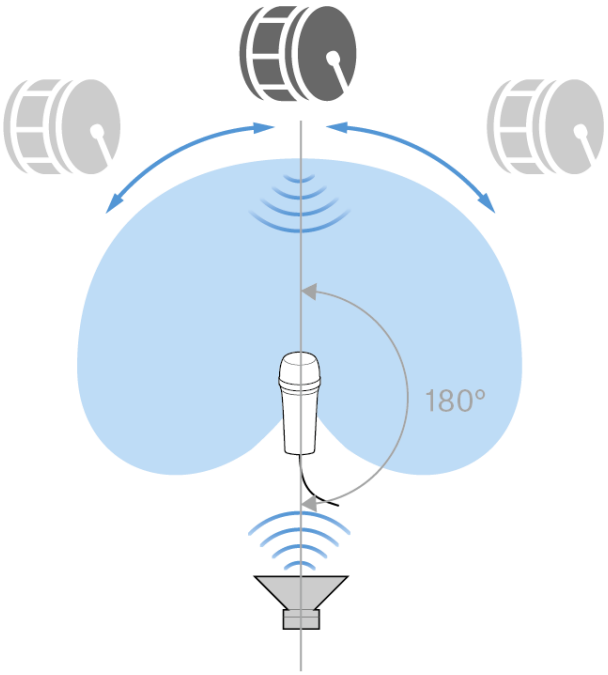
- It is vital to observe the following notes:
  - Position A: Position the microphone at a distance of a few centimeters from the batter head.
    - Resulting sound: much attack, little resonance, dry
  - Position B: Position the microphone at the level of the resonant head.
    - Resulting sound: less attack, much resonance, smooth and voluminous
  - Position C: Position the microphone in the middle between the batter head and the resonant head.
    - Resulting sound: less Attack

> **i** For less attack in all three positions, turn the microphone away from where the beater strikes.



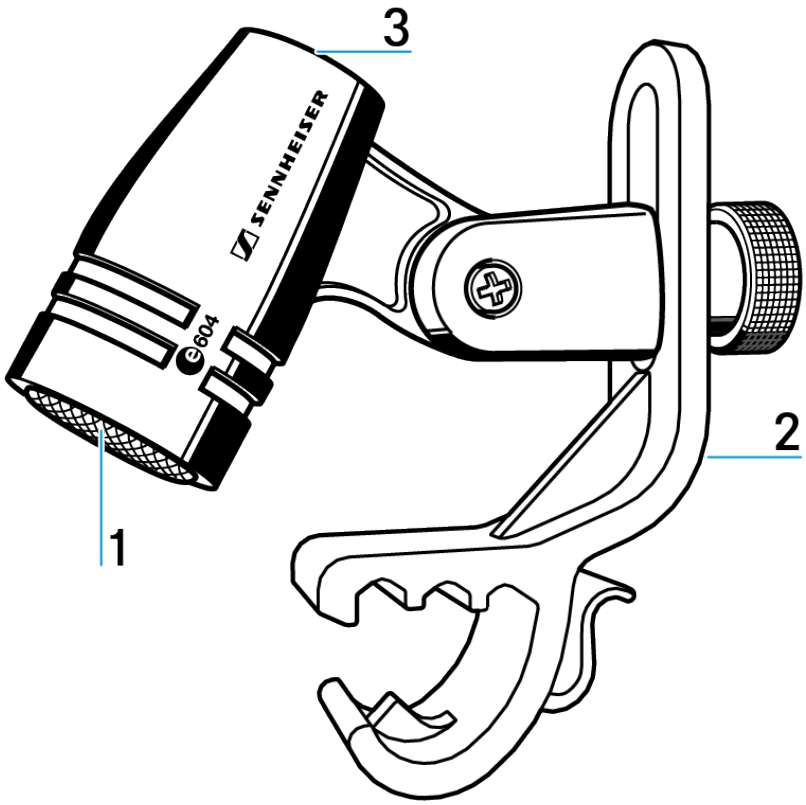
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 180°).



e 604

Product overview



1 Sound inlet basket

2 Integral stand mount

- see Attaching the microphone

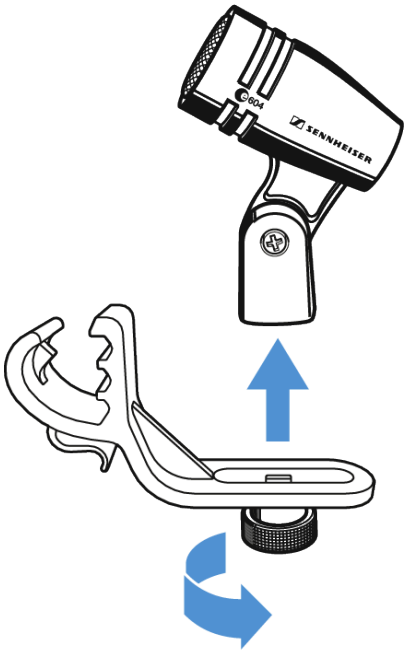
3 XLR-3 connector

- see Connecting the microphone

Installation

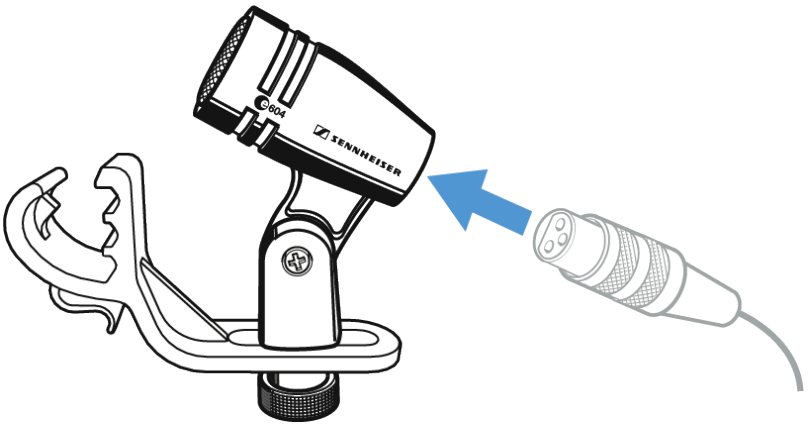
Attaching the microphone

- Fasten the holder to the microphone using the screw.



Connecting the microphone

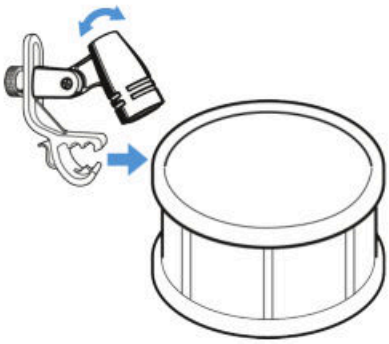
- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.

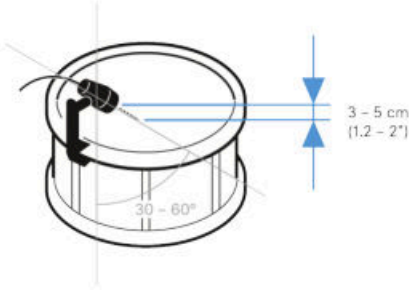


Operation

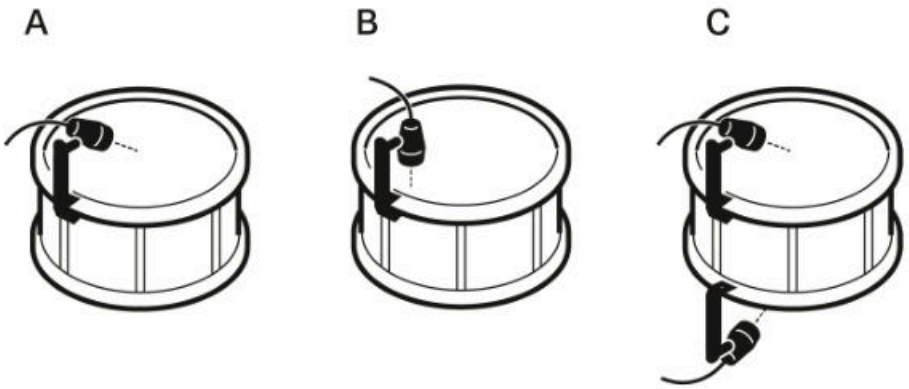
Positioning the microphone on a kick drum

- Use the microphone clamp to attach the MZH 604 to the rim of the drum.
- Position the microphone on the drum so that it is 3 to 5 cm above the drumhead.



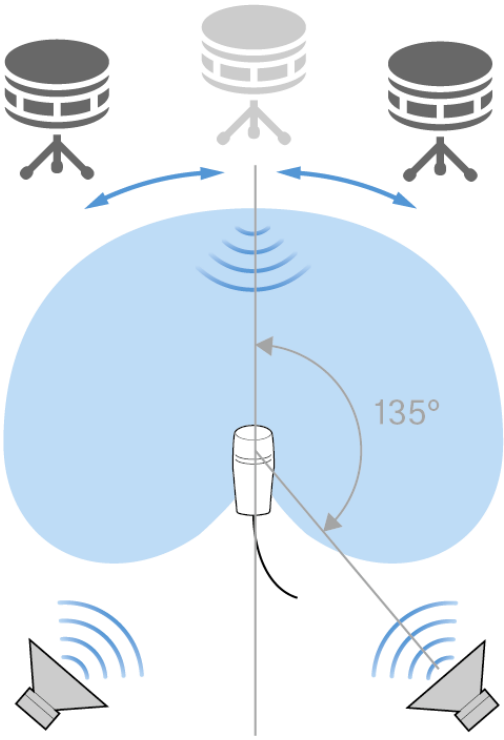


- It is vital to observe the following notes:
  The fundamental to overtones ratio can be adjusted by changing the angle of the microphone. The most balanced results are obtained at an angle of 30 to 60°.
  - Resulting sound Position A: More fundamental, little overtones
  - Resulting sound Position B: Less fundamental, many overtones
- Use of a second e 604 for picking up the bottom of the drumskin and the snares. (Position C).
  The lower microphone must be phase-reversed to avoid phase-cancellation effects due to the second microphone being on the other side of the drumskin.



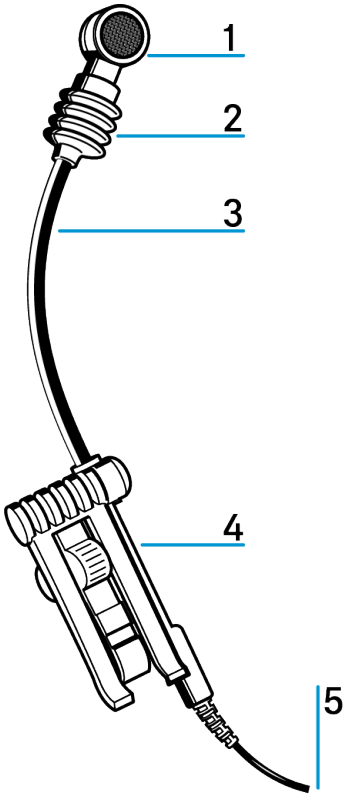
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 135°).



e 608

Product overview



1 Microphone head

2 Elastic suspension

3 Gooseneck

- see Attaching the microphone

4 Microphone clamp

- see Using accessories

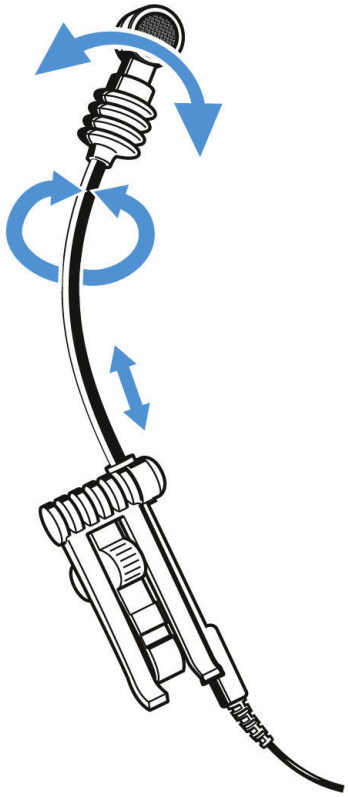
5 XLR-3 socket

- see Connecting the microphone

Installation

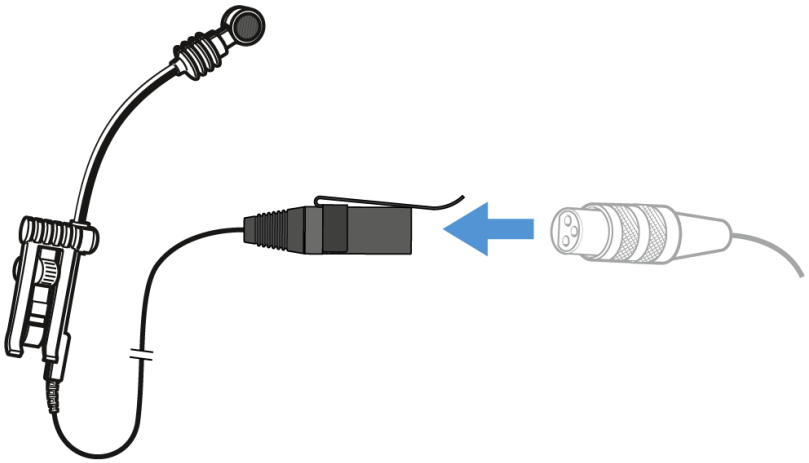
Attaching the microphone

- Carefully bend the flexible goose neck.



Connecting the microphone

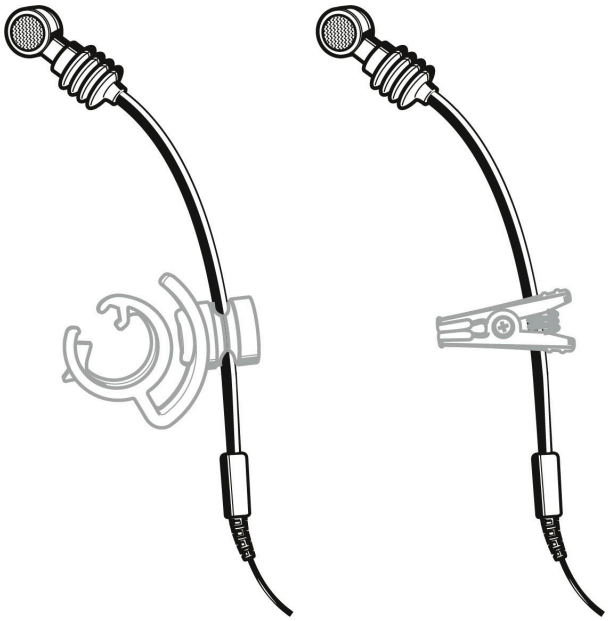
- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using accessories

> The MZH 908 D (left image) and MZH 908 B (right image) clips are available as optional accessories for the e 608.

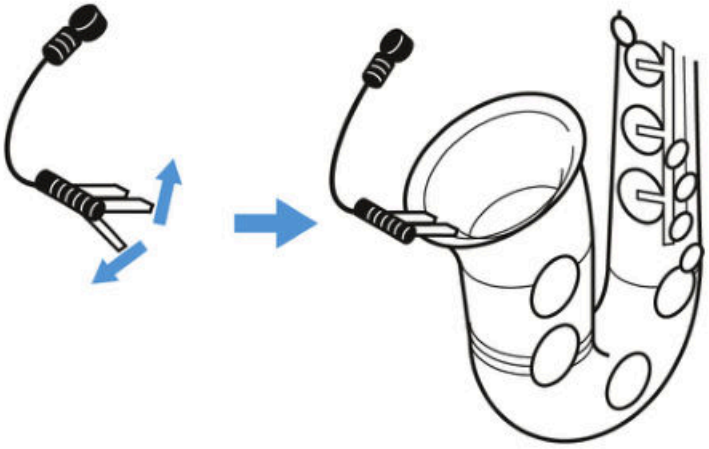
- Remove the attached clip from the goose neck.
- Unscrew the screw on the clip.
- Press the clip firmly onto the goose neck.
- Tighten the screw on the clip.



Operation

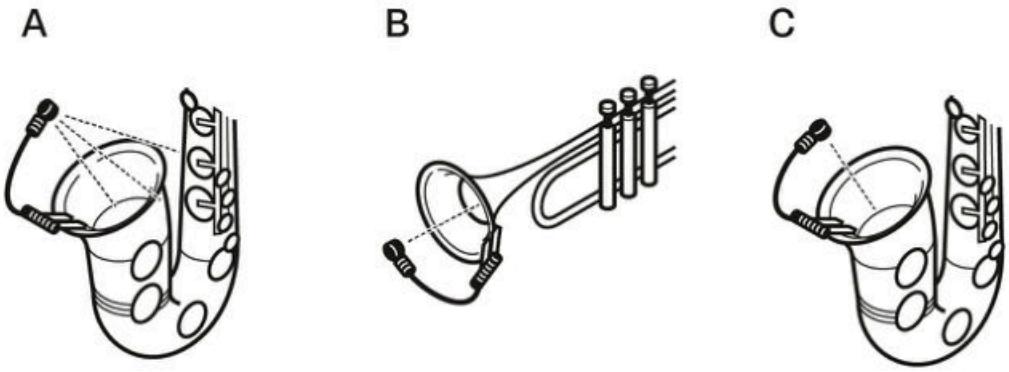
Positioning the microphone on a wind instrument

- Use the microphone clamp to attach the e 608 to the bell of the instrument.



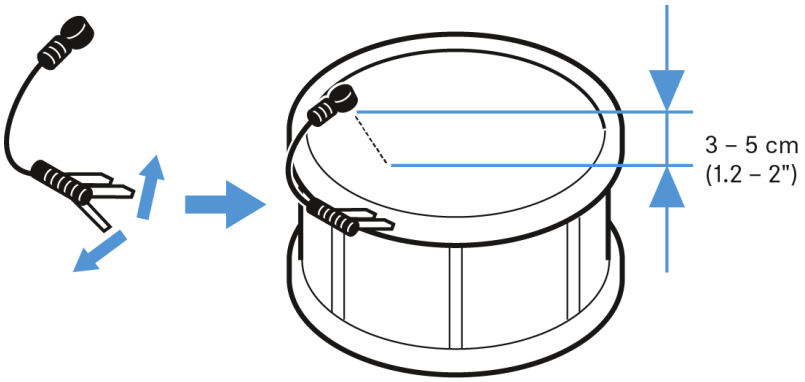
- It is vital to observe the following notes:
  Position A and B: Use the supplied clamp to attach the microphone to the bell of the instrument.
  - Resulting sound Position A: reduced ambient noise
  - Resulting sound Position B: clear, powerful sound

- Position C: For a Saxophone, the microphone should normally be directed partly towards the bell and partly towards the body of the instument.
  - Resulting sound: Balanced, natural sound



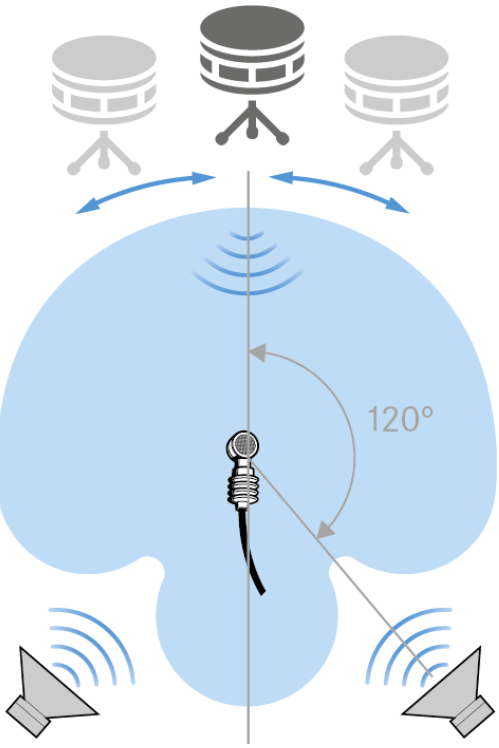
Positioning the microphone on a drum

- Attach the drum clamp to the rim of the drum.
- Position the microphone on the drum so that it is 3 to 5 cm above the drumhead.



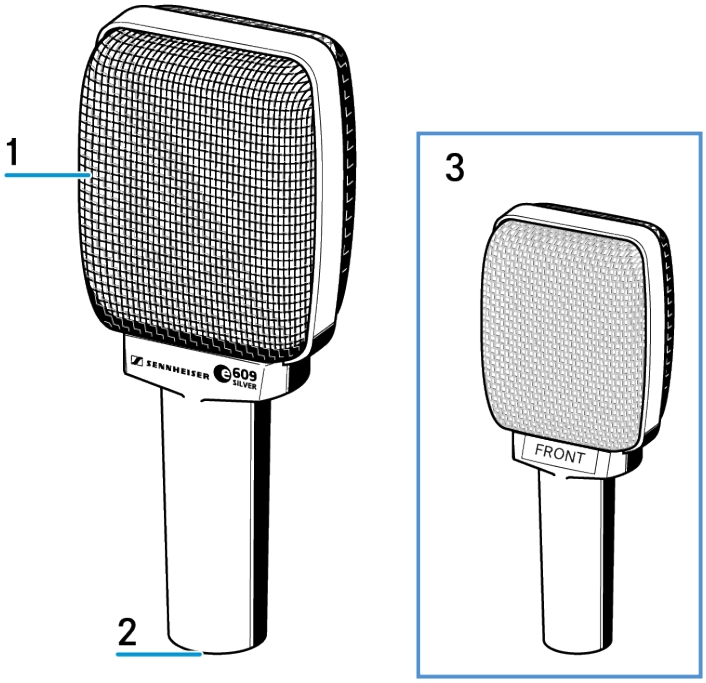
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 120°, see Polar pattern).



e 609

Product overview



1 Sound inlet basket

2 XLR-3 connector

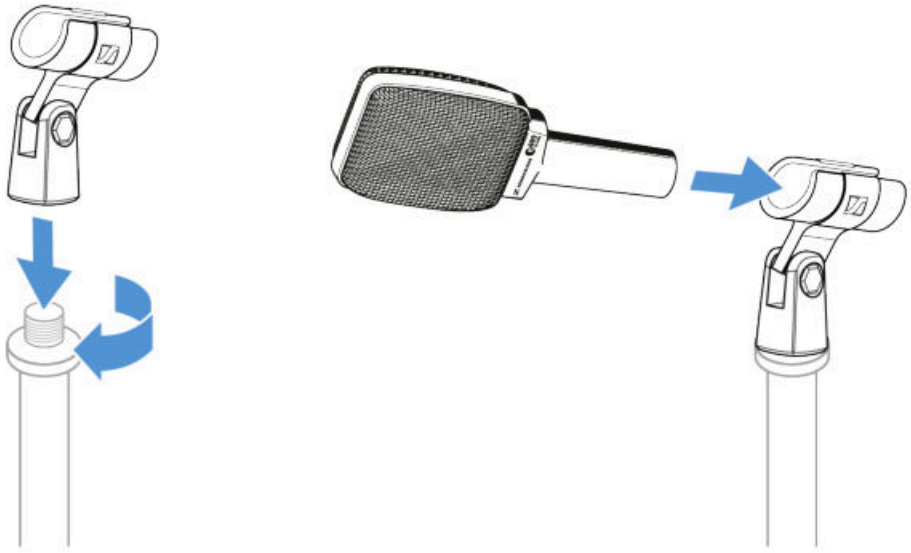
- see Connecting the microphone

3 Front

Installation

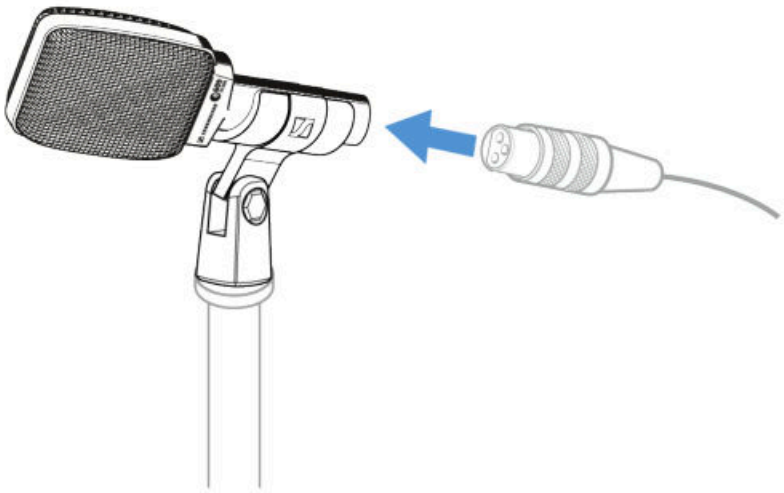
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



Connecting the microphone

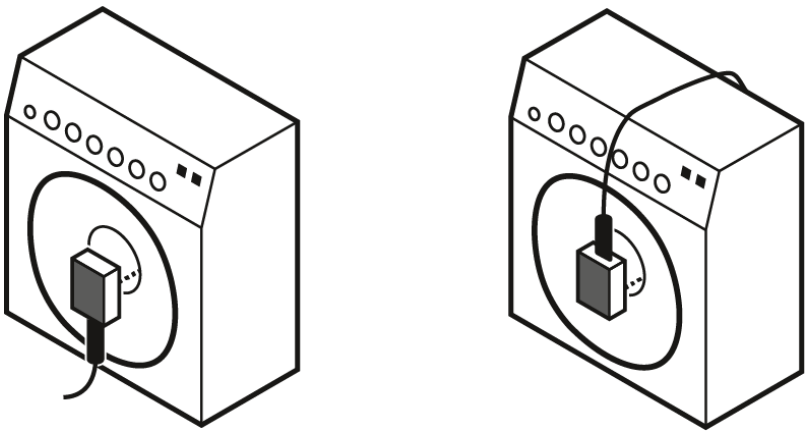
- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



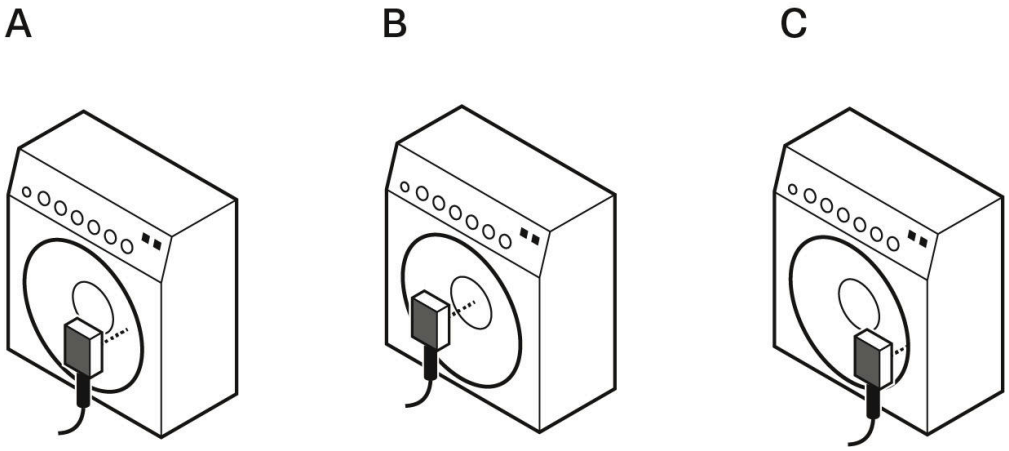
Operation

Positioning the microphone

- Position the microphone between the dust cap and surround.
- The front must face the loudspeaker.

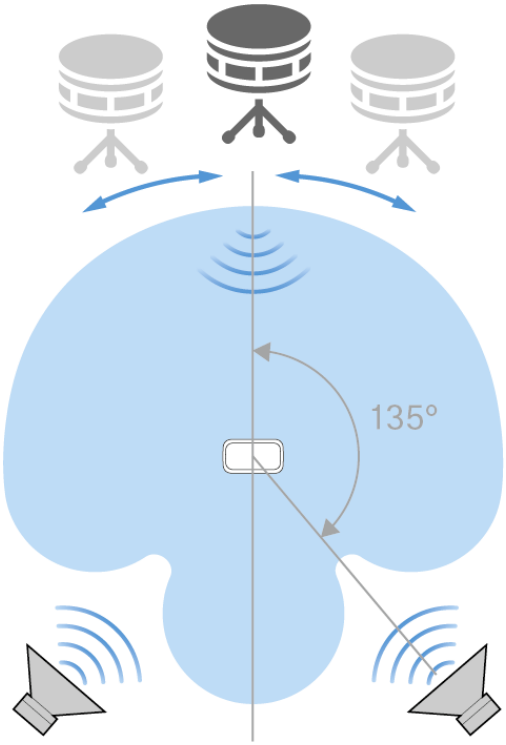


- It is vital to observe the following notes:
  - Position A: Microphone directed towards the dome of the loudspeaker.
    - Resulting sound: many trebles, aggressive sound
  - Position B: Microphone directed towards the middle between dome and edge of the loudspeaker. If necessary, turn the microphone by approx. 30° towards the edge.
    - less trebles, more lower mids, smoother sound
    - balanced, natural sound
  - Position C: Microphone directed towards the edge of the loudspeaker.
    - Resulting sound: less trebles, more lower mids, smoother sound



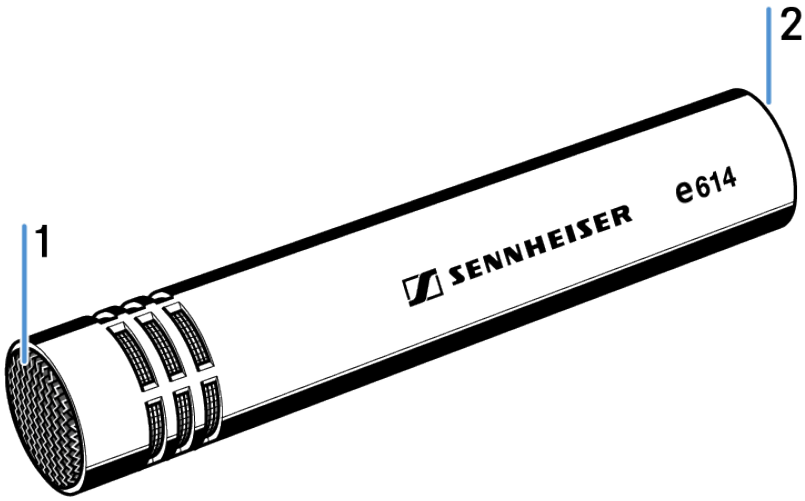
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 135°, see Polar pattern).



e 614

Product overview



1 Sound inlet basket

- see Using the windshield

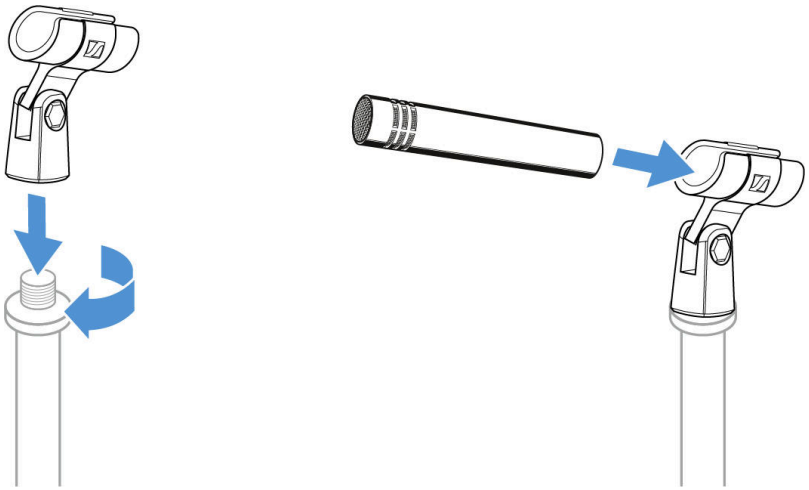
2 XLR-3 connector

- see Connecting the microphone

Installation

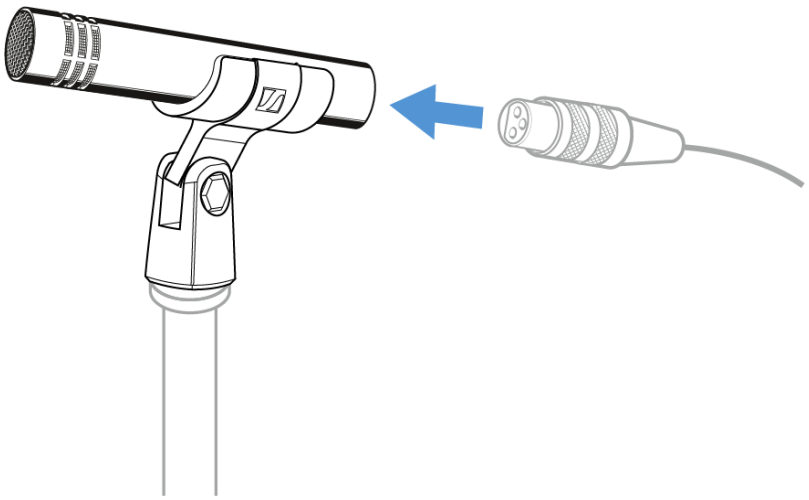
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



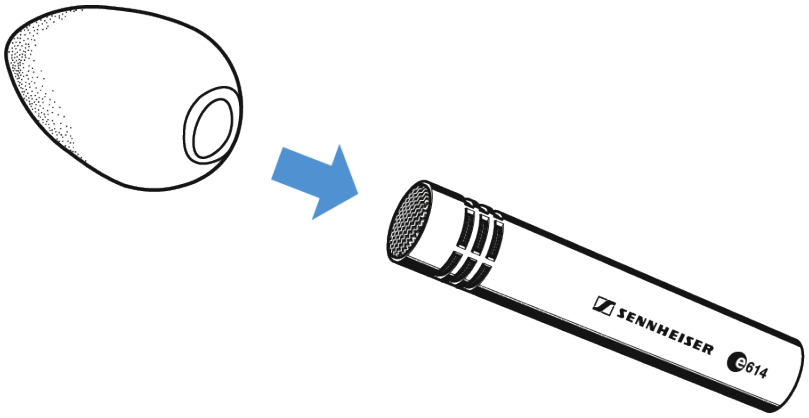
Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using the windshield

- Place the MZW 64 (optional accessories) windshield over the microphone head.



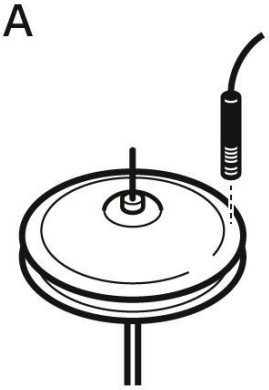
Operation

Positioning the microphone: Drums / Percussions

> **i** Attention: When closing the hi-hat, a strong air current is created on the edge. If the microphone is positioned too close to the edge, interfering noise due to the air current can occur.

- It is vital to observe the following notes:
- Position the microphone a few centimetres above the outer edge of the hi-hat aiming down.
- If necessary, remove unwanted low-frequency signal portions by high pass filtering.
  - Position A: natural, clear sound
  - Position B: more fundamental, little overtones

A

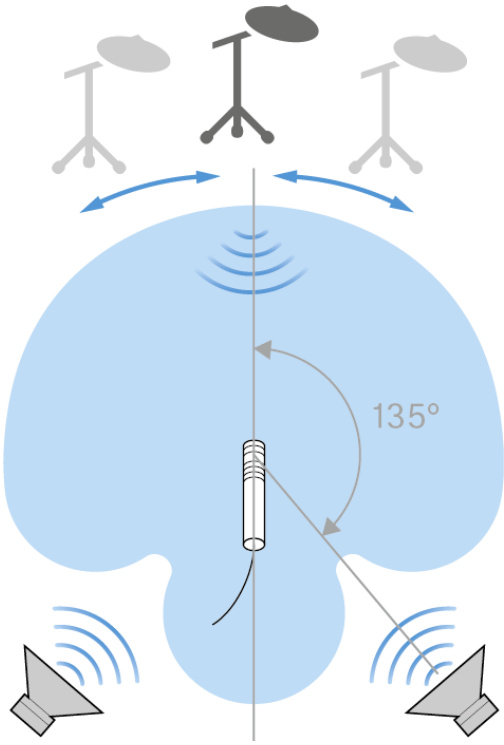


B



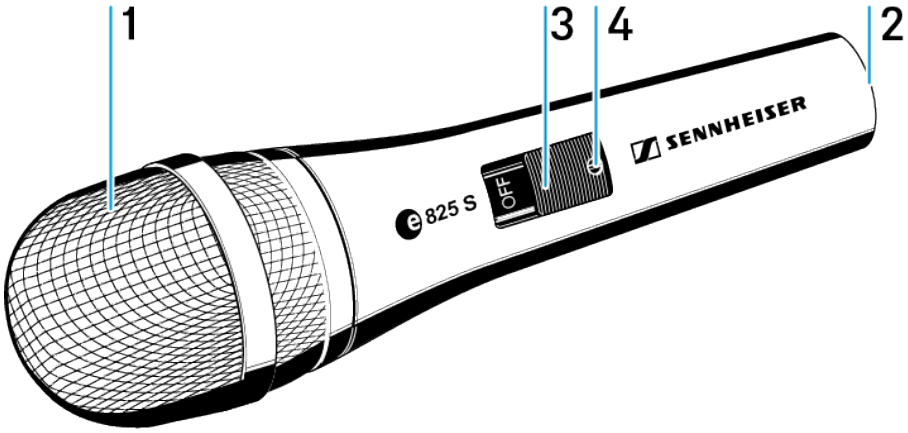
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 135°, see Polar pattern).



e 825-S

Product overview



1 Sound inlet basket

- see Using the windshield

2 XLR-3 connector

- see Connecting the microphone

3 **ON/OFF** switch

- see Switching the microphone on/off

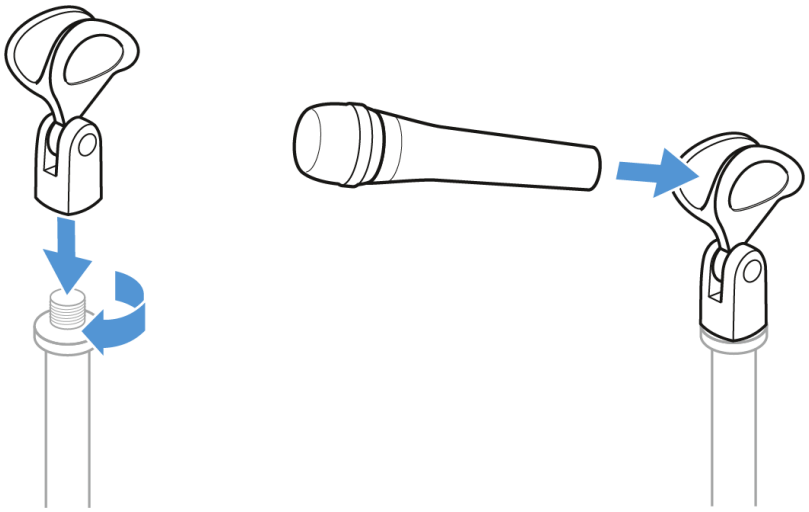
4 Screw

- see Switching the microphone on/off

Installation

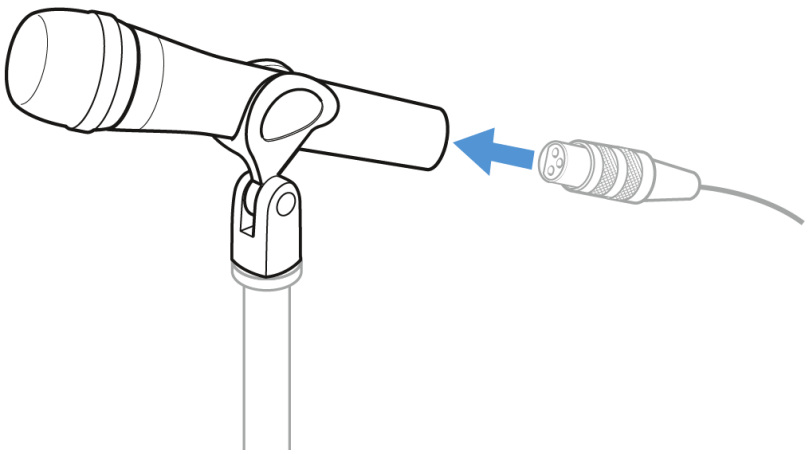
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



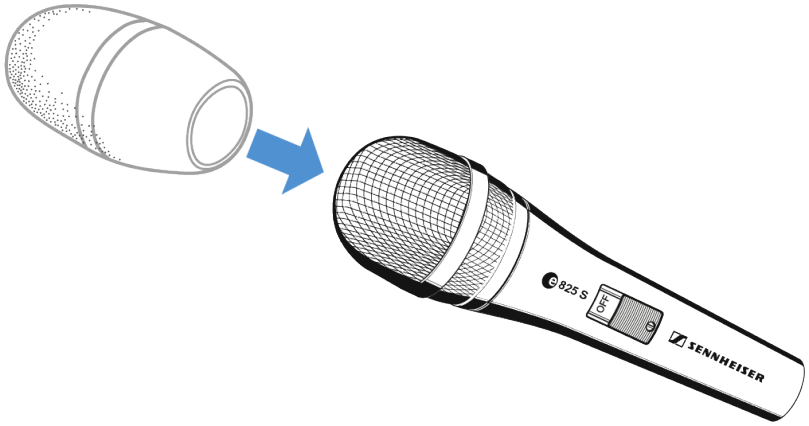
Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using the windshield

- Place the MZW 4032 (optional accessories) windshield over the microphone head.

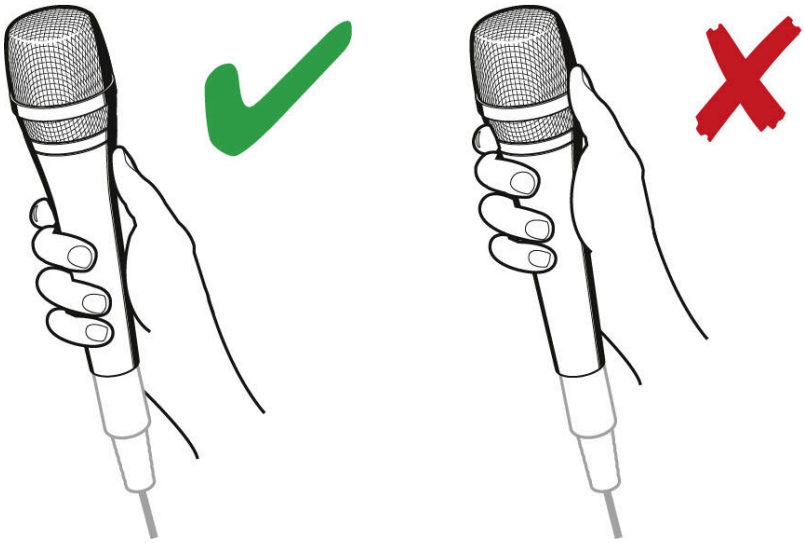


Operation

Holding the microphone

> i If you cover the microphone head during transmission, this will change the pick-up pattern of the microphone and consequently the sound.

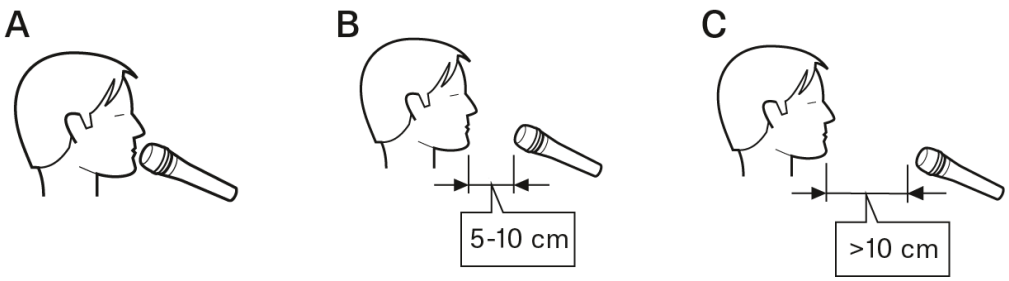
- Only hold the microphone by its body.



Positioning the microphone

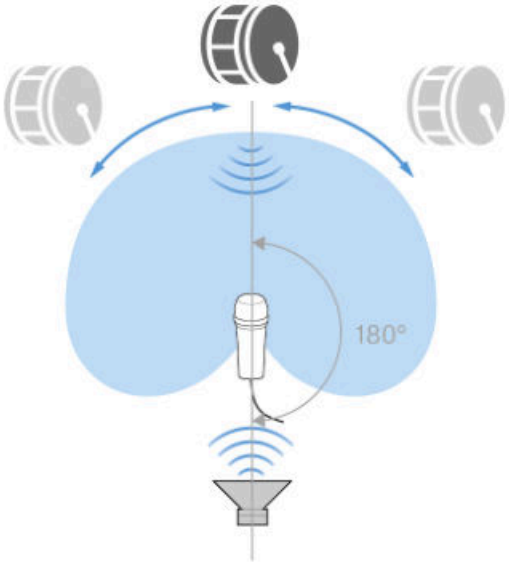
- It is vital to observe the following notes:
  - Position A: Very little crosstalk from other sound sources.
    - Resulting sound: High proximity effect (large bass boost), powerful, direct sound
  - Position B: More crosstalk from other sound sources.
    - Resulting sound: Less proximity effect (less bass boost), some room ambience, natural, balanced sound
  - Position C: Higher crosstalk from other sound sources.
    - Resulting sound: Very little proximity effect (minimal bass boost), more room ambience, indirect sound

- If sibilance occurs: Position the microphone slightly to the side and not directly in front of the mouth.



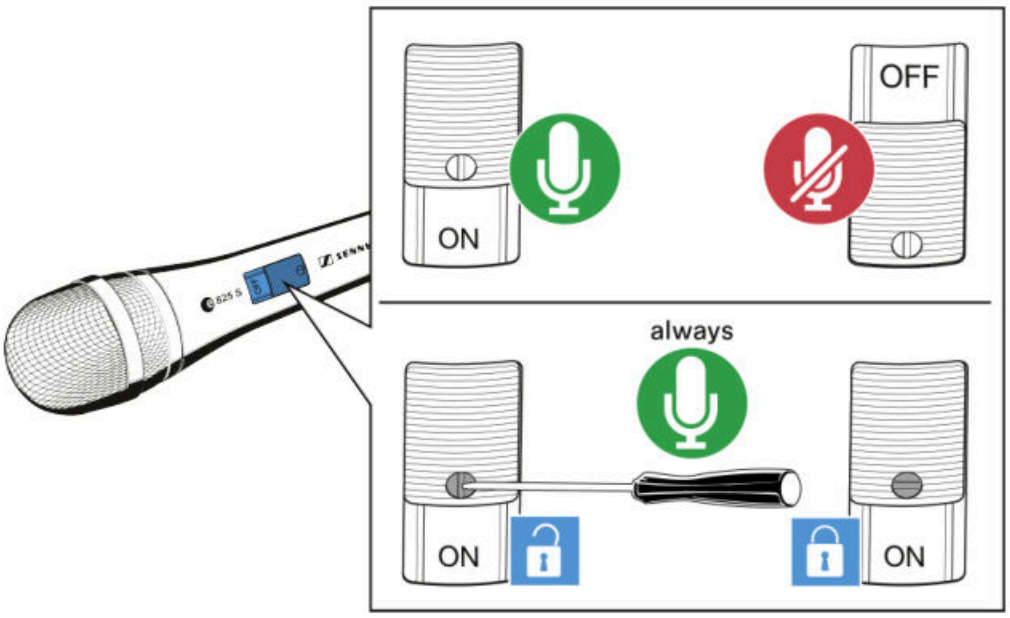
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 180°).



Switching the microphone on/off

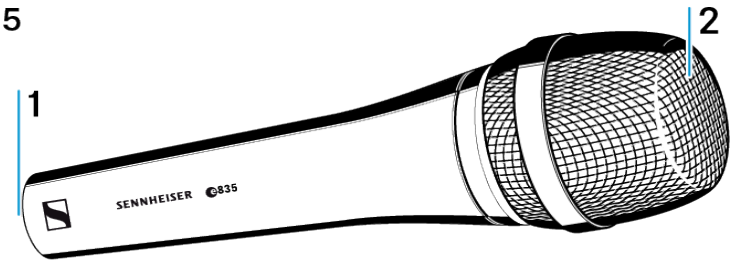
- Use the **ON/OFF** switch.
- If necessary, use the screw to lock the **ON/OFF** switch in the „on“ position.



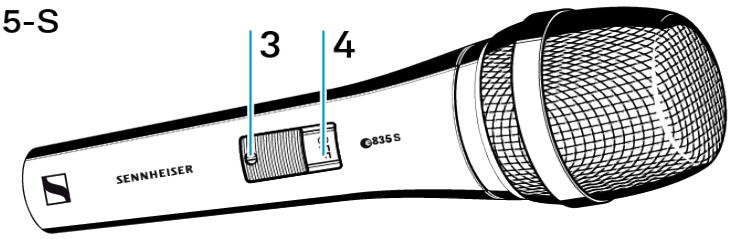
e 835 | e 835-S | e 835-S-PTT

Product overview

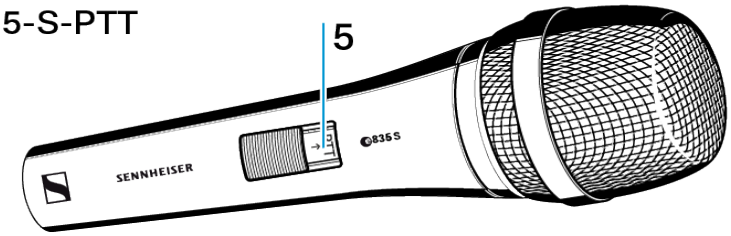
e 835



e 835-S



e 835-S-PTT



1 XLR-3 connector

- see Connecting the microphone

2 Sound inlet basket

- see Using the windshield

3 Screw (only e 835-S)

- see Switching the microphone on/off

4 **ON/OFF** switch (only e 835-S)

- see Switching the microphone on/off

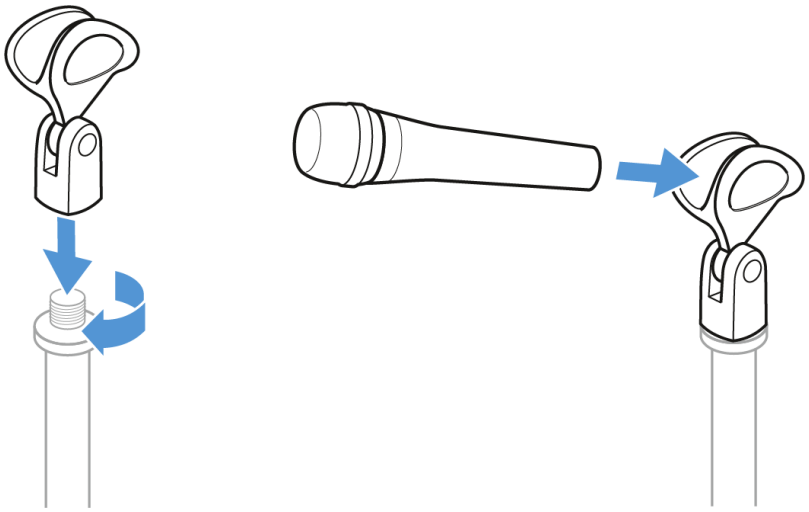
5 **PTT** (push-to-talk) switch (only e 835-S-PTT)

- see Using the push-to-talk function (only E 835-S-PTT)

Installation

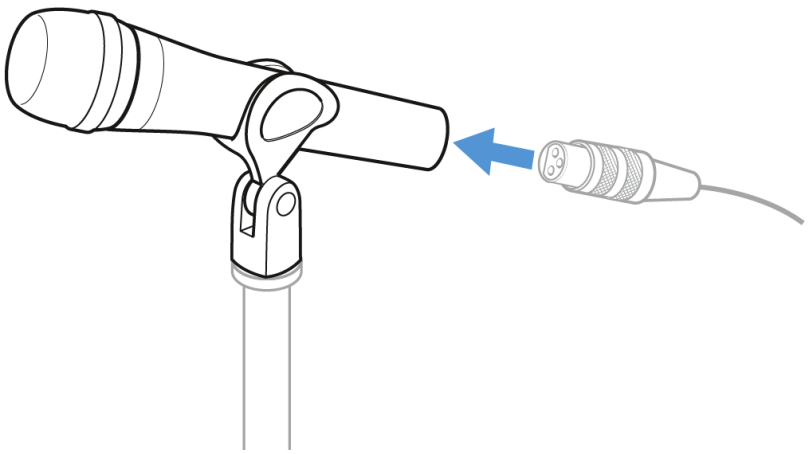
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



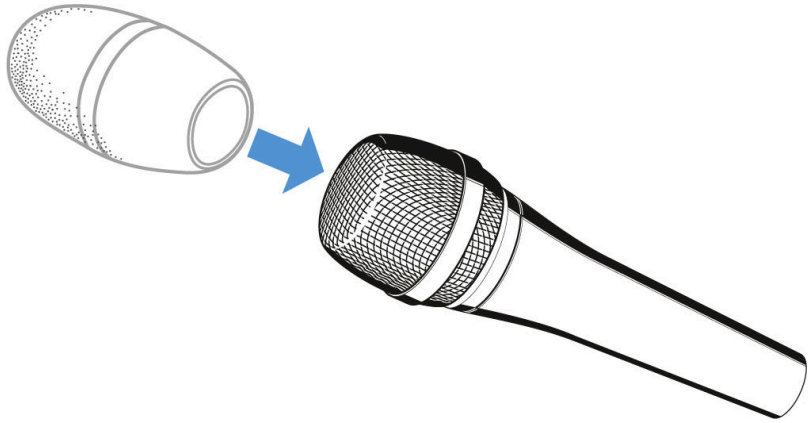
Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using the windshield

- Place the MZW 4032 (optional accessories) windshield over the microphone head.

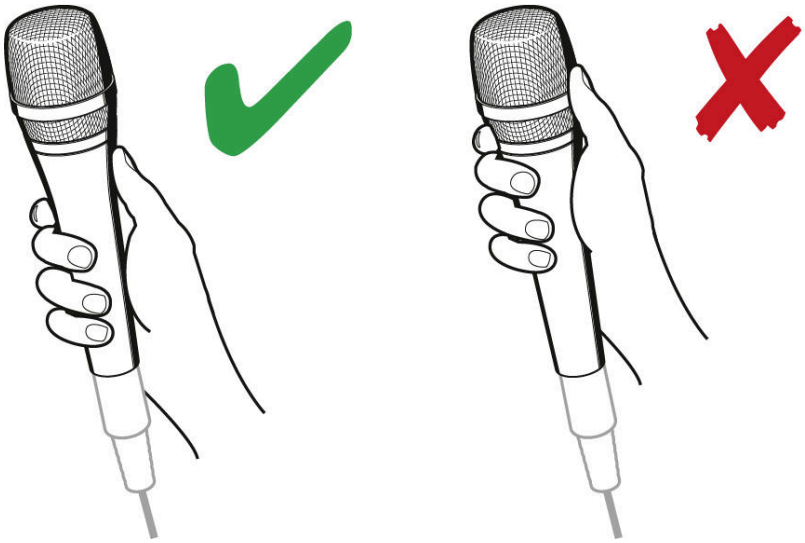


Operation

Holding the microphone

> i If you cover the microphone head during transmission, this will change the pick-up pattern of the microphone and consequently the sound.

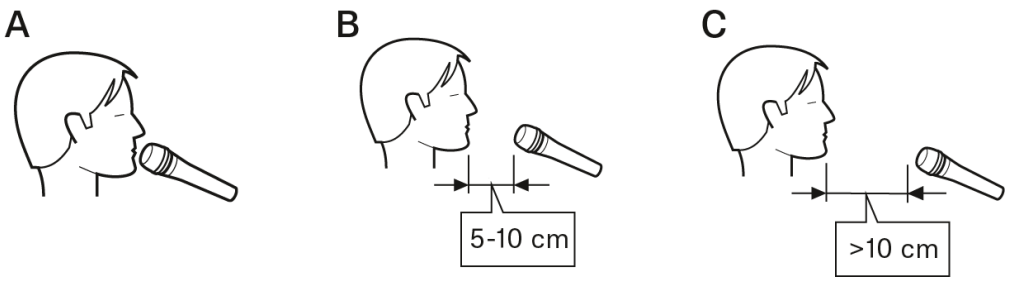
- Only hold the microphone by its body.



Positioning the microphone

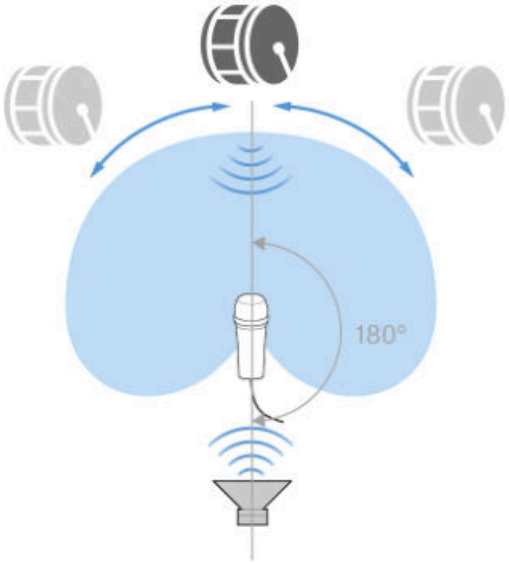
- It is vital to observe the following notes:
  - Position A: Very little crosstalk from other sound sources.
    - Resulting sound: High proximity effect (large bass boost), powerful, direct sound
  - Position B: More crosstalk from other sound sources.
    - Resulting sound: Less proximity effect (less bass boost), some room ambience, natural, balanced sound
  - Position C: Higher crosstalk from other sound sources.
    - Resulting sound: Very little proximity effect (minimal bass boost), more room ambience, indirect sound

- If sibilance occurs: Position the microphone slightly to the side and not directly in front of the mouth.



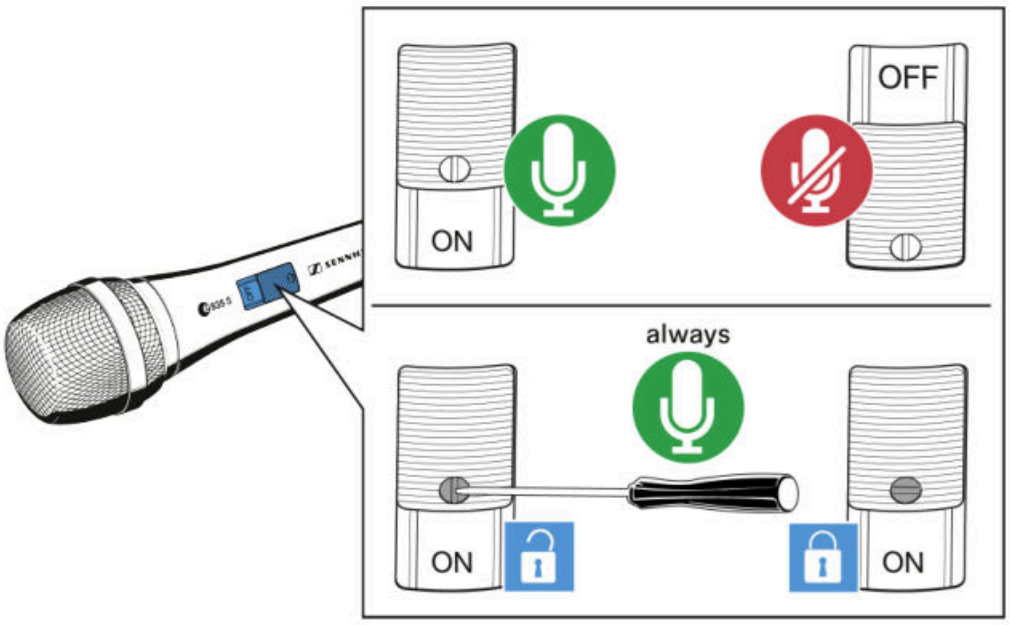
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 180°).



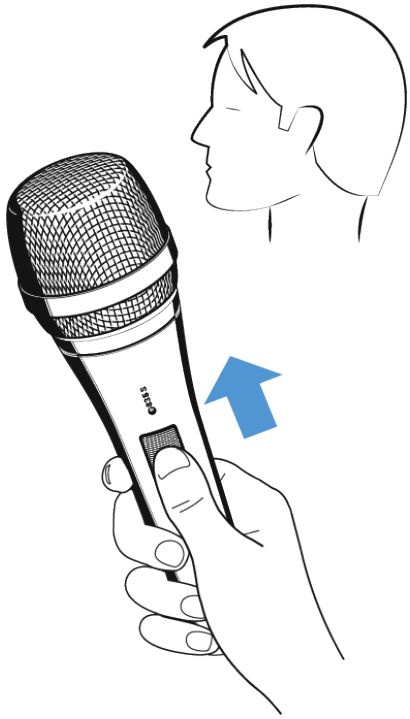
Switching the microphone on/off

- Use the **ON/OFF** switch.
- If necessary, use the screw to lock the **ON/OFF** switch in the „on“ position.



Using the push-to-talk function (only E 835-S-PTT)

- Push and hold the switch up.

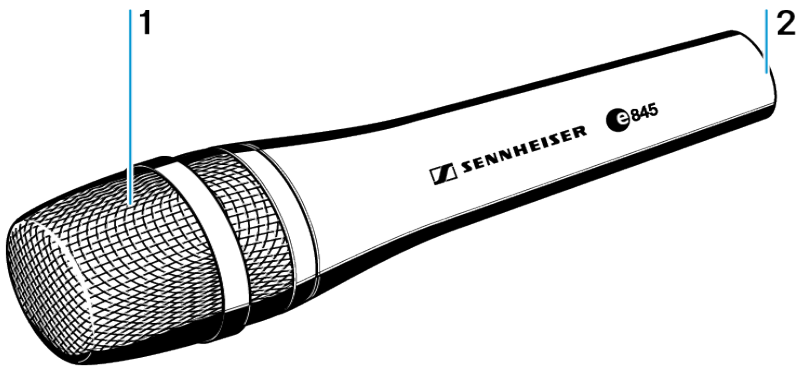


You can talk now.

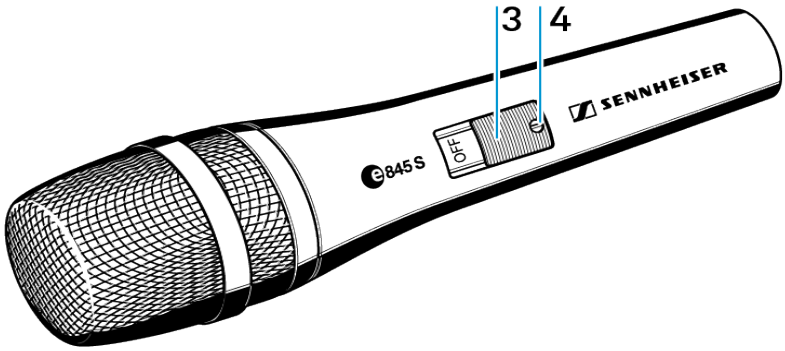
e 845 | e 845-S

Product overview

e 845



e 845-S



1 Sound inlet basket

- see Using the windshield

2 XLR-3 connector

- see Connecting the microphone

3 **ON/OFF** switch (only e 845-S)

- see Switching the microphone on/off

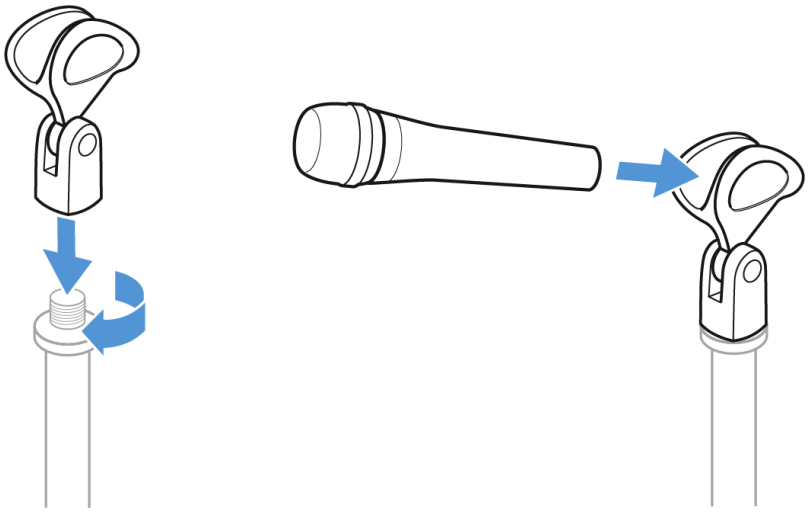
4 Screw (only e 845-S)

- see Switching the microphone on/off

Installation

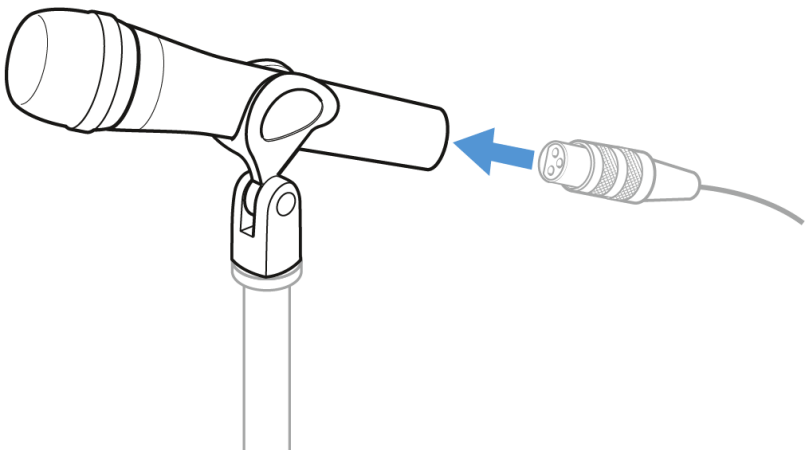
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



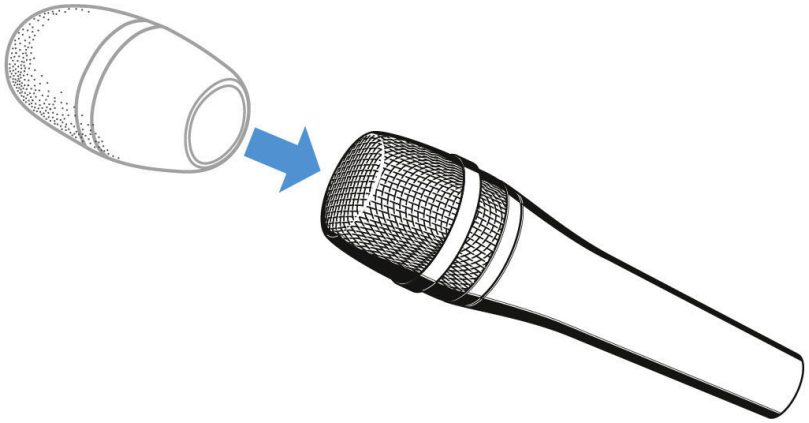
Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using the windshield

- Place the MZW 4032 (optional accessories) windshield over the microphone head.

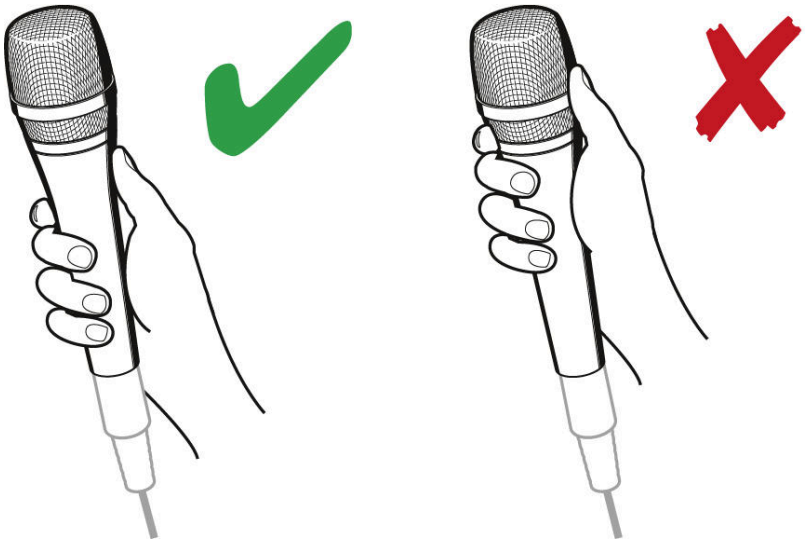


Operation

Holding the microphone

> i If you cover the microphone head during transmission, this will change the pick-up pattern of the microphone and consequently the sound.

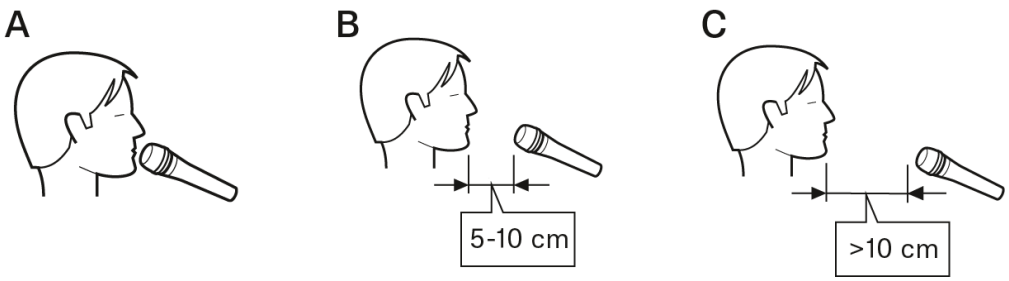
- Only hold the microphone by its body.



Positioning the microphone

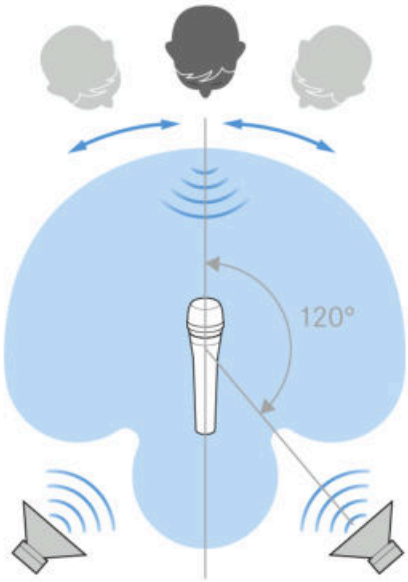
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    - Resulting sound: Less proximity effect (less bass boost), some room ambience, natural, balanced sound
  - Position C: Higher crosstalk from other sound sources.
    - Resulting sound: Very little proximity effect (minimal bass boost), more room ambience, indirect sound

- If sibilance occurs: Position the microphone slightly to the side and not directly in front of the mouth.



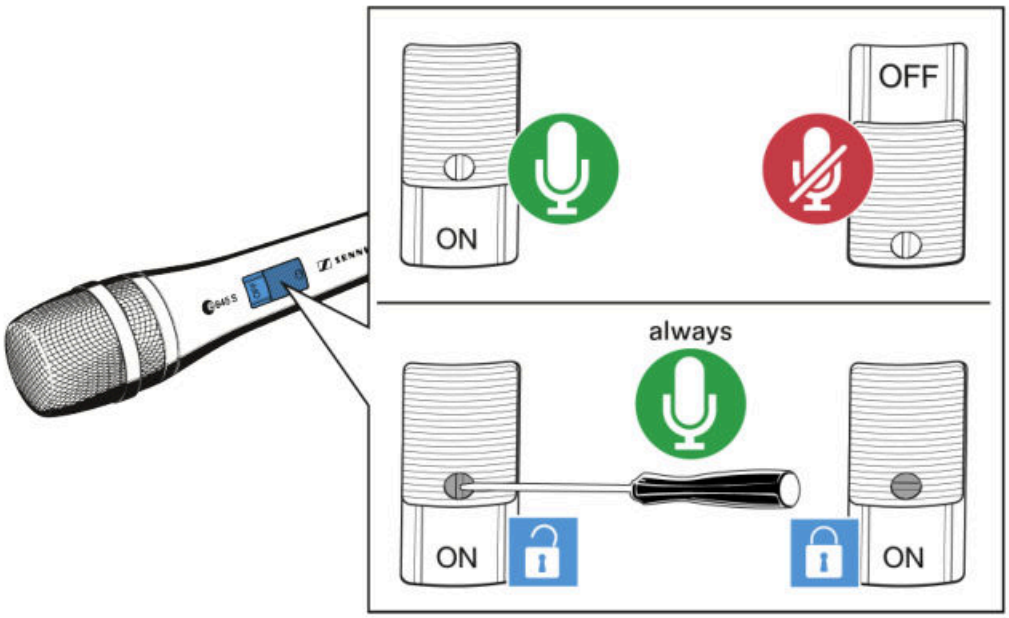
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 120°).



Switching the microphone on/off

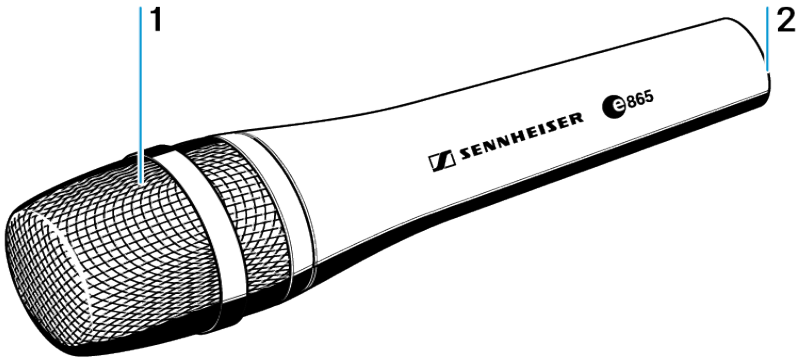
- Use the **ON/OFF** switch.
- If necessary, use the screw to lock the **ON/OFF** switch in the „on“ position.



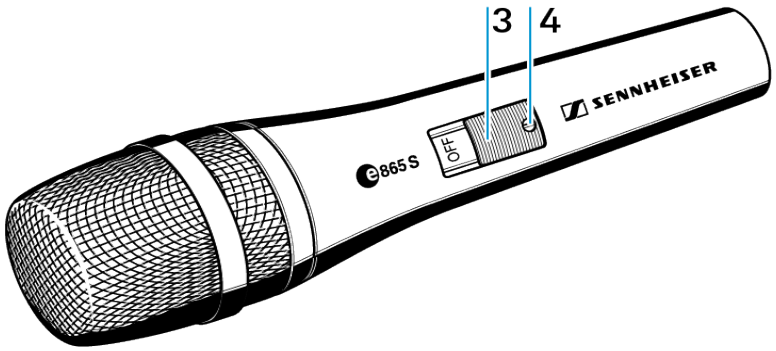
e 865 | e 865-S

Product overview

e 865



e 865-S



1 Sound inlet basket

- see Using the windshield

2 XLR-3 connector

- see Connecting the microphone

3 **ON/OFF** switch (only e 865-S)

- see Switching the microphone on/off

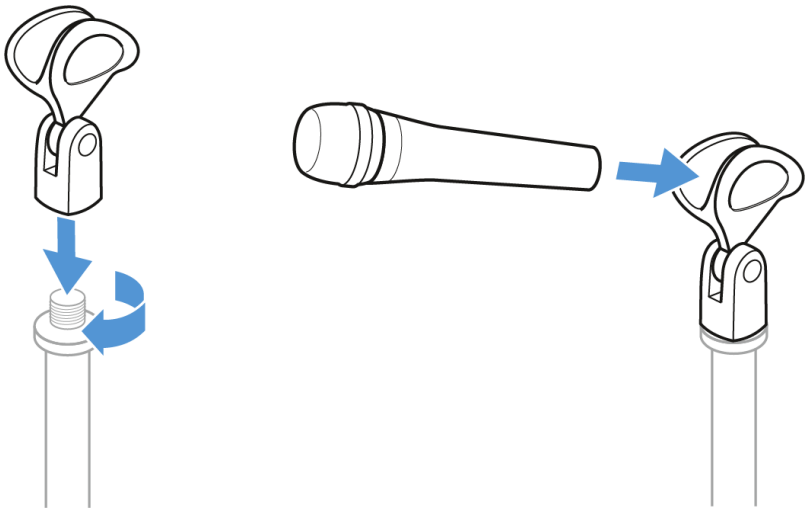
4 Screw (only e 865-S)

- see Switching the microphone on/off

Installation

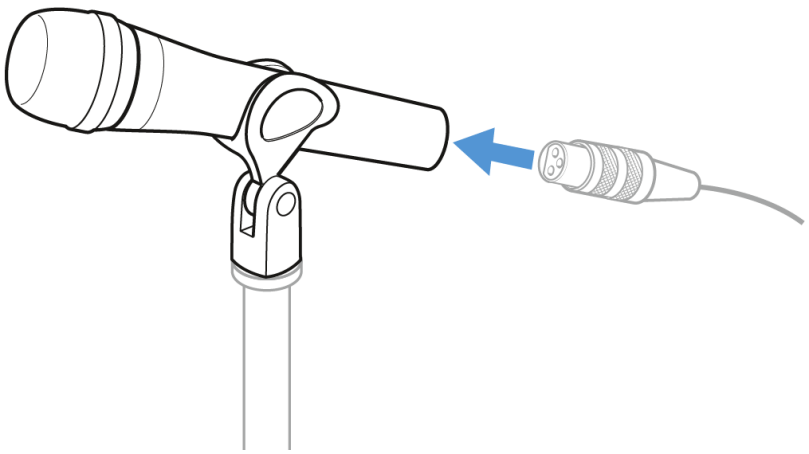
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



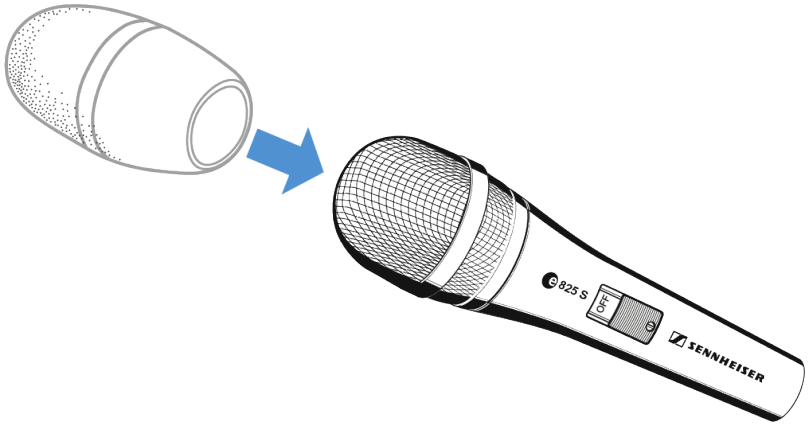
Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using the windshield

- Place the MZW 4032 (optional accessories) windshield over the microphone head.

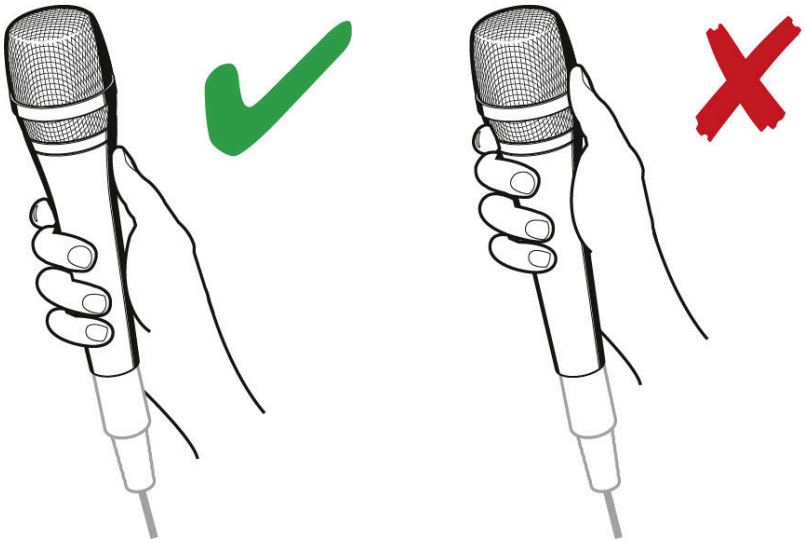


Operation

Holding the microphone

> i If you cover the microphone head during transmission, this will change the pick-up pattern of the microphone and consequently the sound.

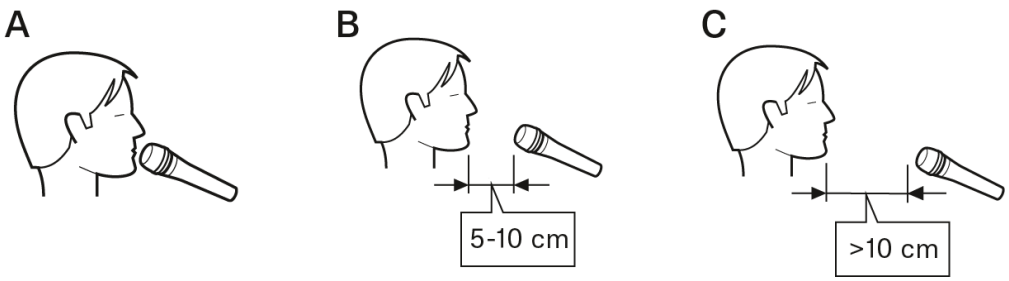
- Only hold the microphone by its body.



Positioning the microphone

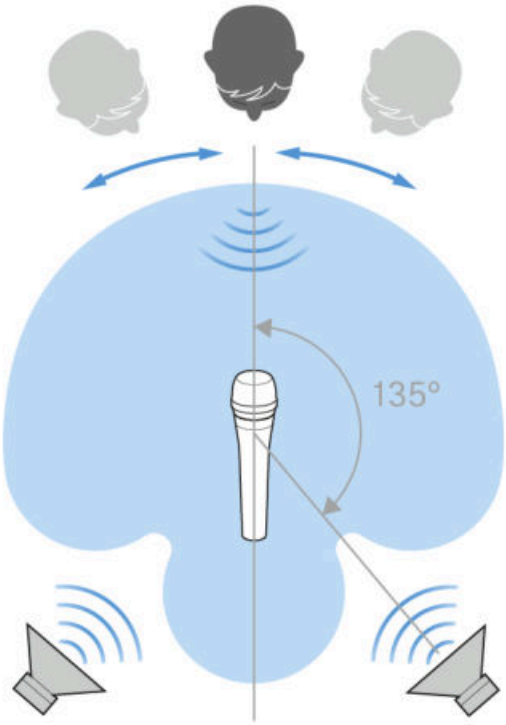
- It is vital to observe the following notes:
  - Position A: Very little crosstalk from other sound sources.
    - Resulting sound: High proximity effect (large bass boost), powerful, direct sound
  - Position B: More crosstalk from other sound sources.
    - Resulting sound: Less proximity effect (less bass boost), some room ambience, natural, balanced sound
  - Position C: Higher crosstalk from other sound sources.
    - Resulting sound: Very little proximity effect (minimal bass boost), more room ambience, indirect sound

- If sibilance occurs: Position the microphone slightly to the side and not directly in front of the mouth.



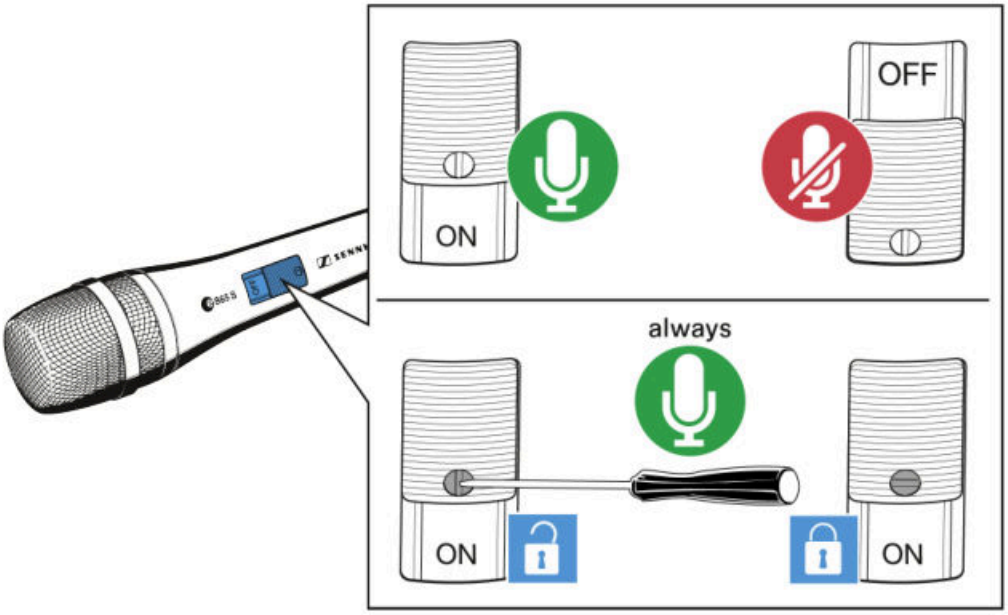
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 135°).



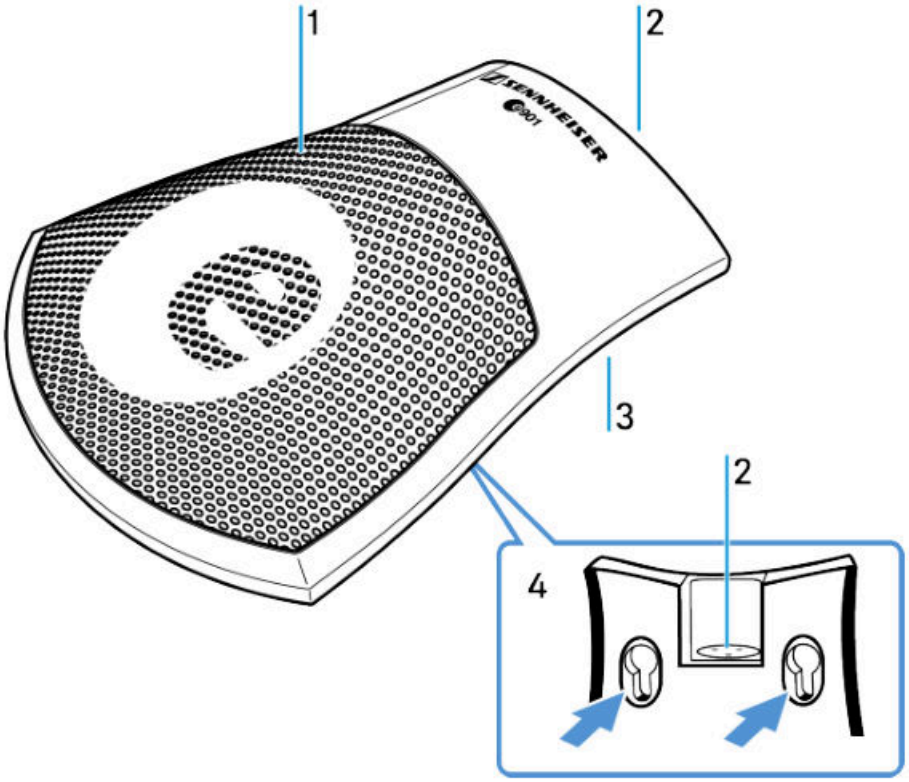
Switching the microphone on/off

- Use the **ON/OFF** switch.
- If necessary, use the screw to lock the **ON/OFF** switch in the „on“ position.



e 901

Product overview



1 Sound inlet basket

2 XLR-3 connector

- see Connecting the microphone

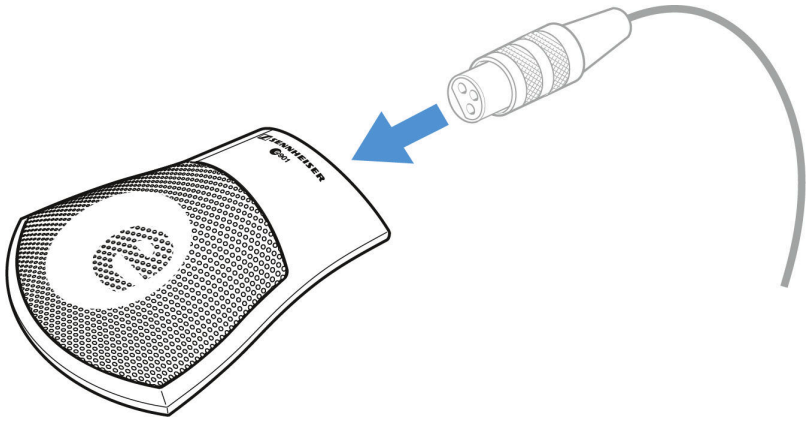
3 Rubber damping plate

4 Mounting slots

Installation

Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.

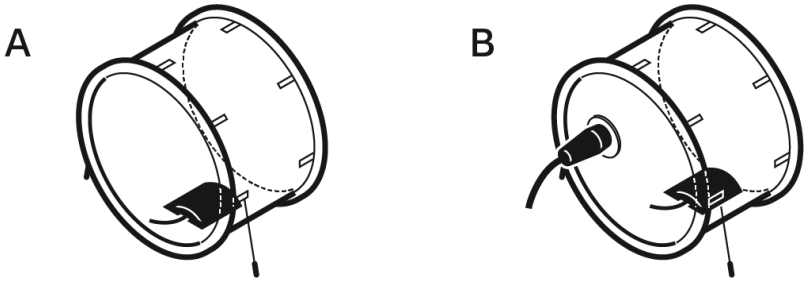


Operation

Positioning the microphone in a drum

- Place the e 901 in the drum. Position the microphone so that its sound inlet basket is directed upwards.

- It is vital to observe the following notes:
    - Position A: Position the microphone at the bottom of the kick drum, approx. 10 - 20 cm from the batter head.
        - Resulting sound: Much resonance; much attack; less attack: Turn the microphone away from where the beater strikes.
    - Position B: Combined with an e 902 positioned at the resonant head. The lower micro-phone must be phase-reversed to avoid phase-cancellation effects due to the second microphone being on the other side of the drumskin.
        - Resulting sound: The e 901 is used for picking up the attack, the e 902 for picking up the fundamental.



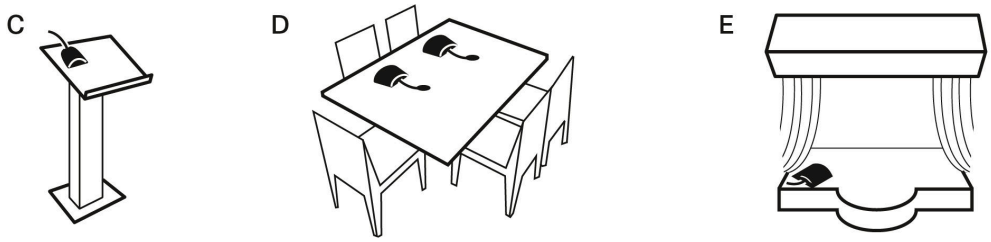
Positioning the microphone on sound-reflecting surfaces

- Place the e 901 on the desired sound-reflecting surface. Position the microphone so that its sound inlet basket is directed towards the sound source.

- It is vital to observe the following notes:
    - Position C: Lying on the altar or lectern. Unobtrusive due to flat design. No microphones in the field of vision.
        - Resulting sound: Less room resonance portions or comb filter elements; improved speech intelligibility; greater gain reserves in contrast to free-standing microphones
    - Position D: Lying on the conference table, directed towards the conference participants. Microphone must not be covered by papers, folders or similar objects.
        - Resulting sound: Less room resonance in contrast to free-standing microphones
    - Position E: Lying at the edge of the stage and directed towards the stage. As spot microphone of the PA system or for monitoring purposes in the

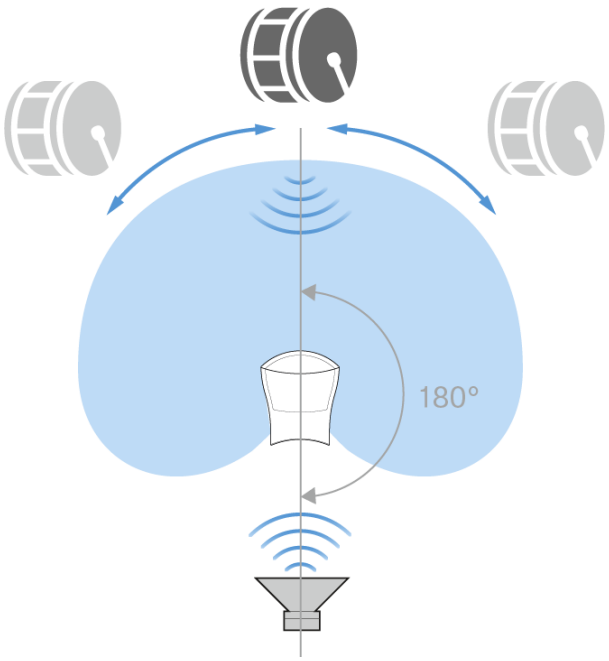
theater cloakrooms. Excellent rejection of rumble noise; if necessary, place the microphone on a soft pad (e.g. mousepad). If necessary, combine with overhead microphones (e.g. Sennheiser ME 36 with MZH 30 B & MZC 30).

- Resulting sound: Less room resonance in contrast to free-standing microphones; improved speech intelligibility



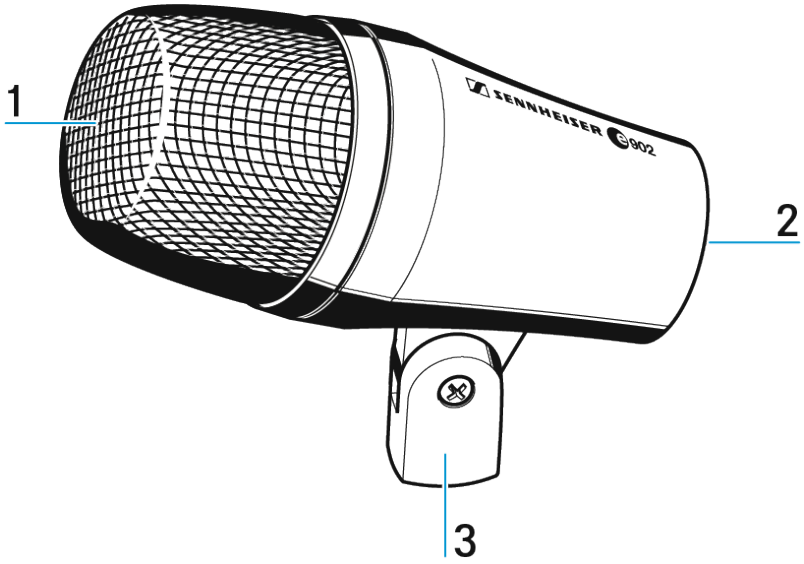
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 180°).



e 902

Product overview



1 Sound inlet basket

2 XLR-3 connector

- see Connecting the microphone

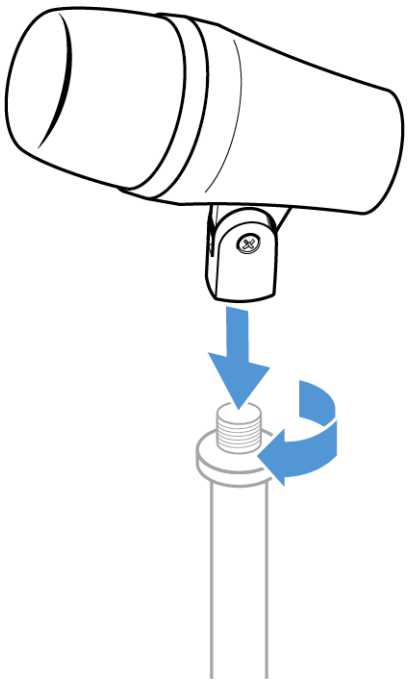
3 Integral stand mount

- see Attaching the microphone

Installation

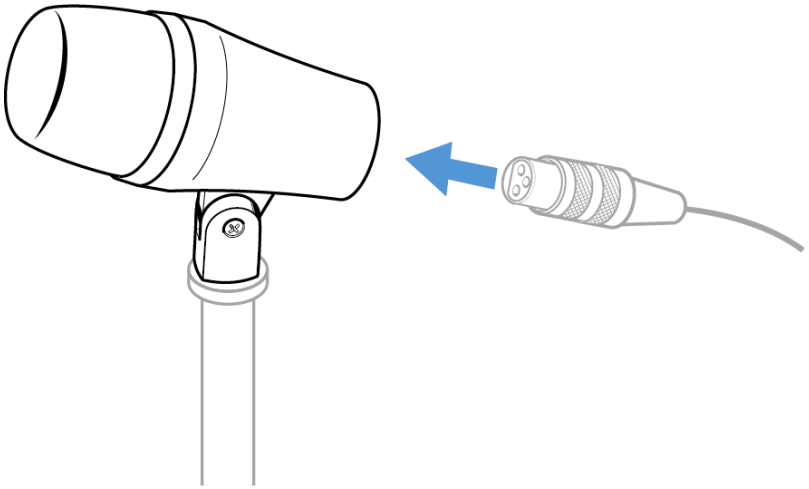
Attaching the microphone

- Screw the microphone's built-in mount onto a sufficiently stable microphone stand.



Connecting the microphone

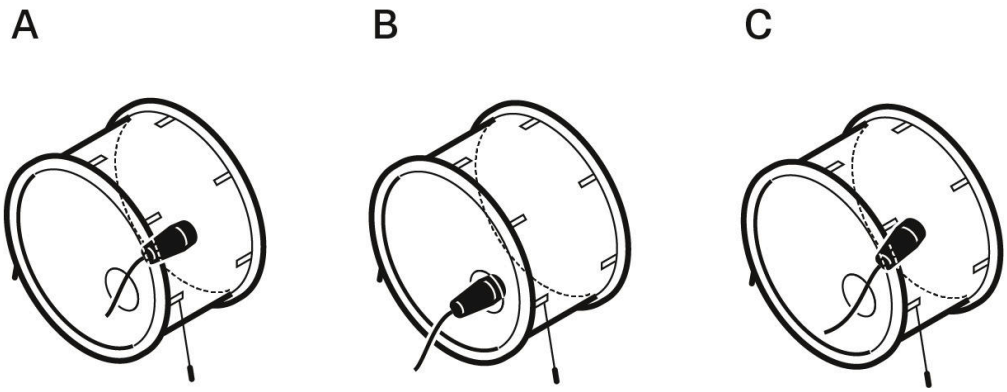
- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Operation

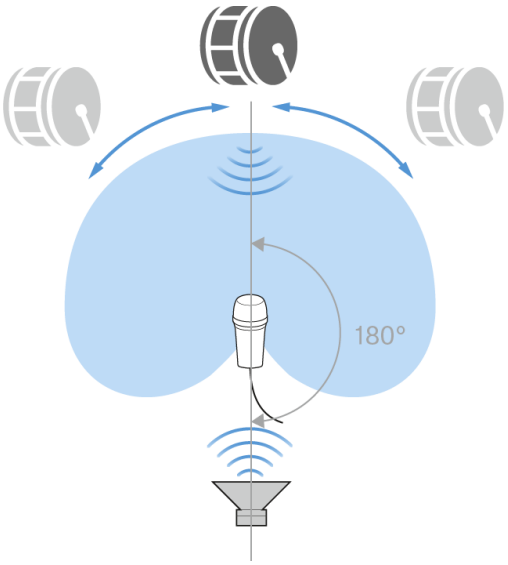
Positioning the microphone on a kick drum

- Use the integral stand mount to attach the microphone.
- It is vital to observe the following notes:
    - Position A: Position the microphone at a distance of a few centimeters from the batter head.
        - Resulting sound: much attack; little resonance; dry
    - Position B: Position the microphone at the level of the resonant head.
        - Resulting sound: less attack; much resonance; smooth and voluminous
    - Position C: Position the microphone in the middle between the batter head and the resonant head.
        - Resulting sound: less Attack



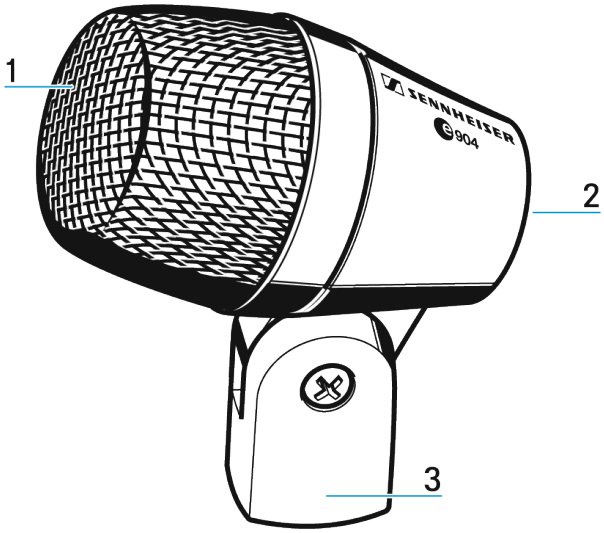
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 180°).



e 904

Product overview



1 Sound inlet basket

2 XLR-3 connector

- see Connecting the microphone

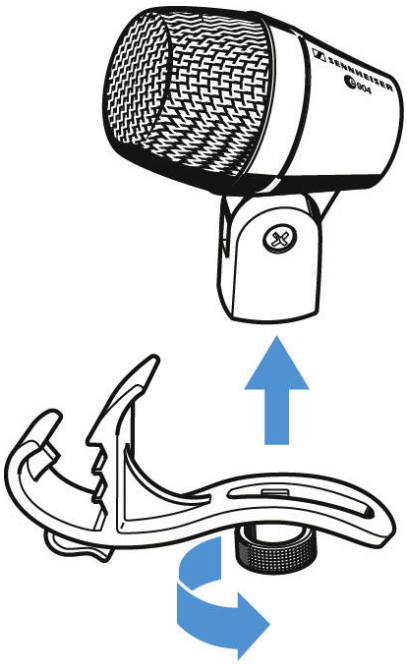
3 Integral stand mount

- see Attaching the microphone

Installation

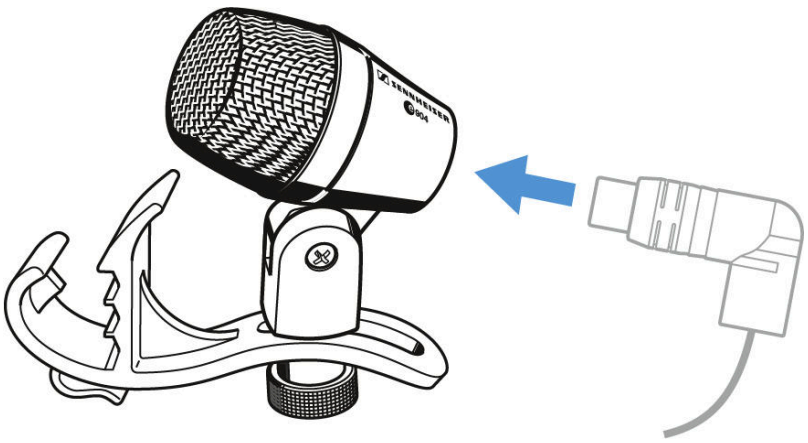
Attaching the microphone

- Fasten the holder to the microphone using the screw.



Connecting the microphone

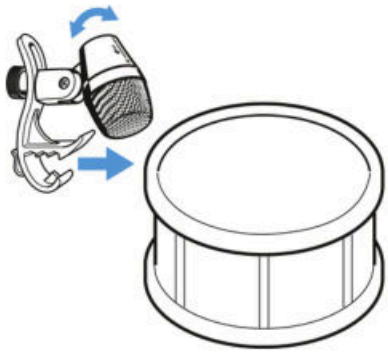
- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.

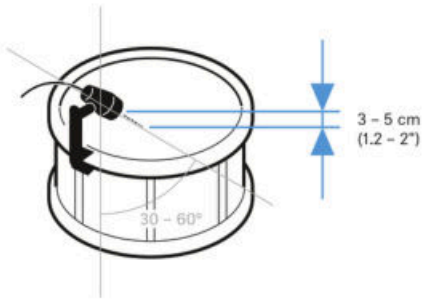


Operation

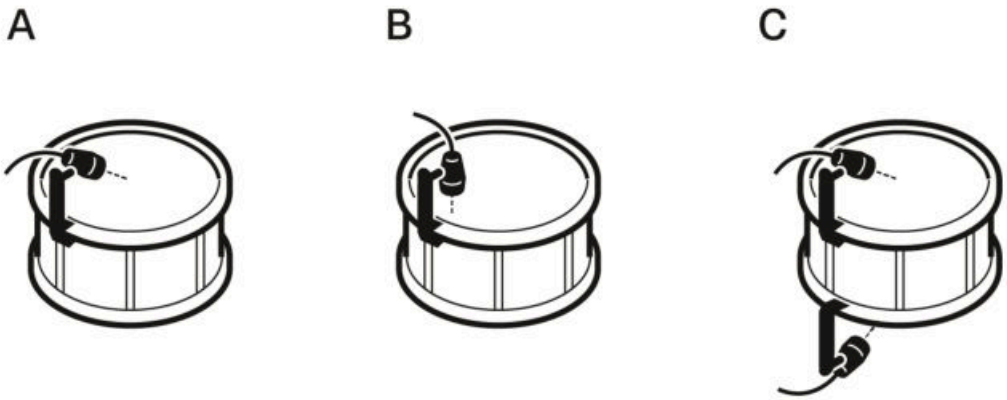
Positioning the microphone on a drum

- Use the microphone clamp MZH 604 to attach the e 904 to the rim of the drum.
- Position the microphone on the drum so that it is 3 to 5 cm above the drumhead.



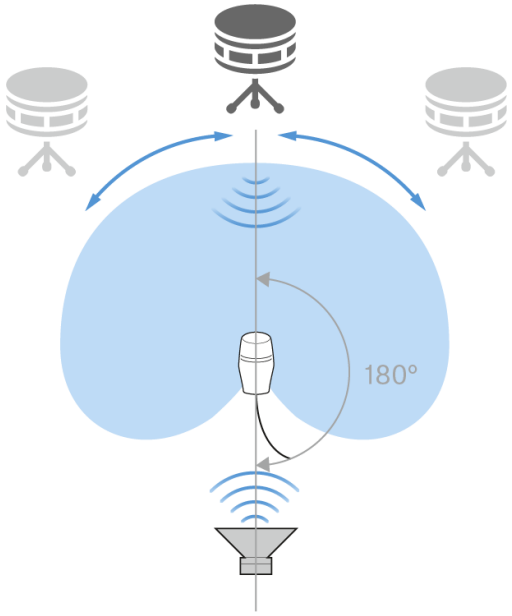


- It is vital to observe the following notes:
  - Position A and B: The fundamental to overtones ratio can be adjusted by changing the angle of the microphone. The most balanced results are obtained at an angle of 30 to 60°.
    - Resulting sound A: More fundamental; little overtones
    - Resulting sound B: Less fundamental; many overtones
  - Position C: Use of a second e 904 for picking up the bottom of the drumskin and the snares.
    - The lower microphone must be phase-reversed to avoid phase-cancellation effects due to the second microphone being on the other side of the drumskin



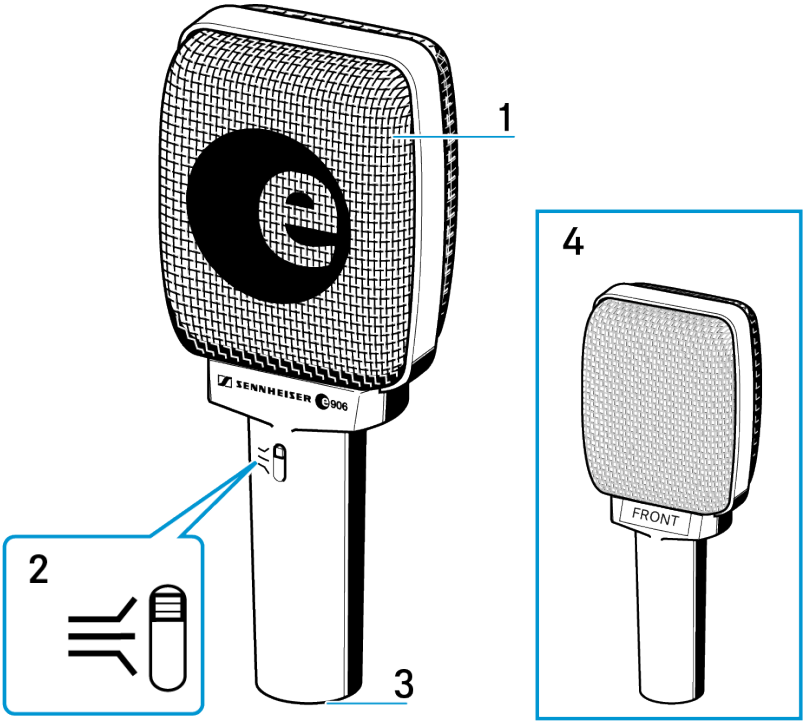
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 180°).



e 906

Product overview



1 Sound inlet basket

2 3-position slide switch for adjusting the presence filter

- see Adapting the sound characteristics

3 XLR-3 connector

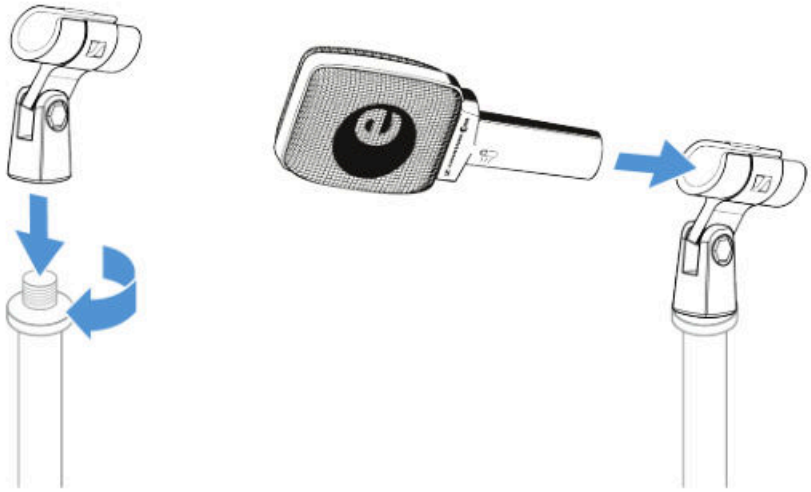
- see Connecting the microphone

4 Front

Installation

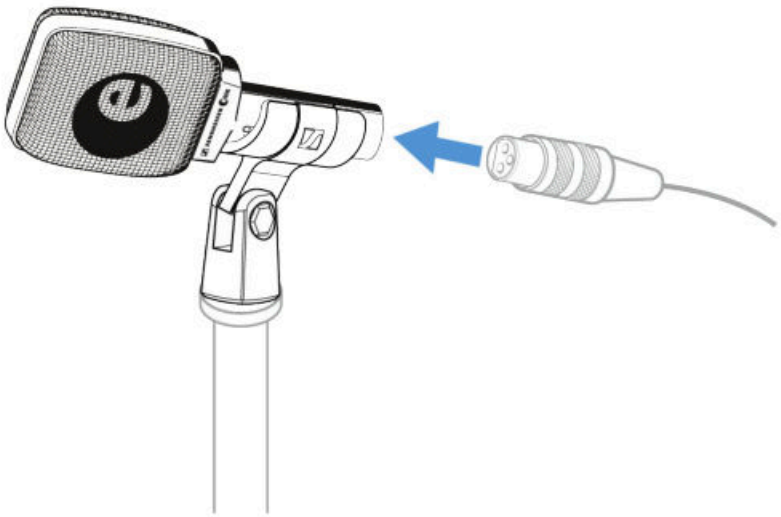
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



Connecting the microphone

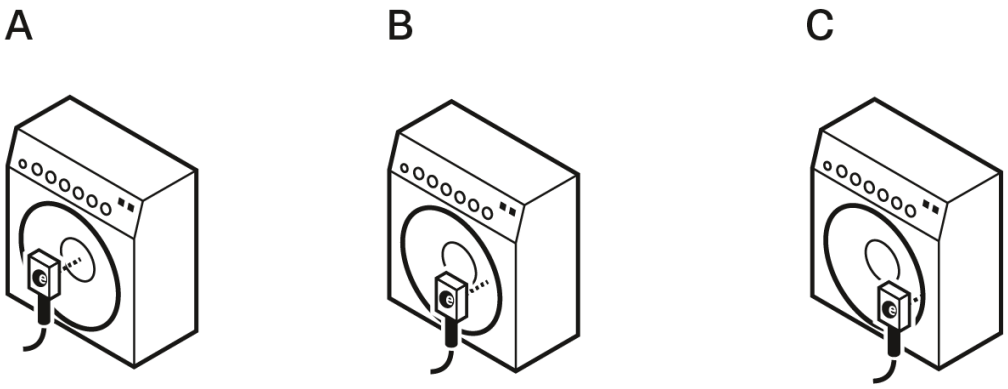
- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Operation

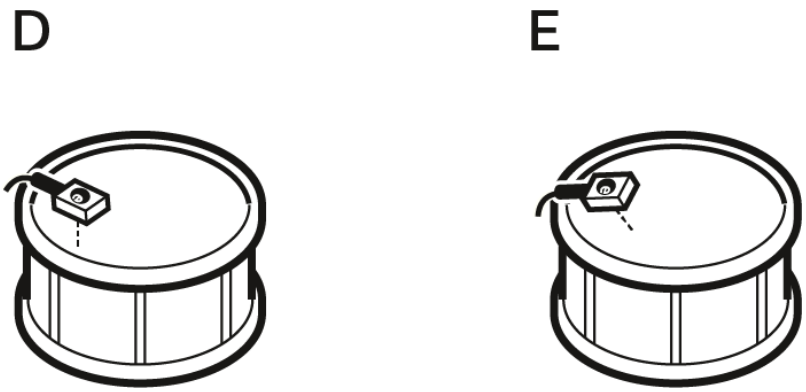
Positioning the microphone an a guitar amp

- The front of the microphone must face the guitar amplifier.
- It is vital to observe the following notes:
    - Position A: Microphone directed towards the dome of the loudspeaker.
        - Resulting sound: many trebles; aggressive sound
    - Position B: Microphone directed towards the middle between dome and edge of the loudspeaker. If necessary, turn the microphone by approx. 30° towards the edge.
        - Resulting sound: less trebles, more lower mids, smoother sound; balanced, natural sound
    - Position C: Microphone directed towards the edge of the loudspeaker.
        - Resulting sound: less trebles, more lower mids, smoother sound



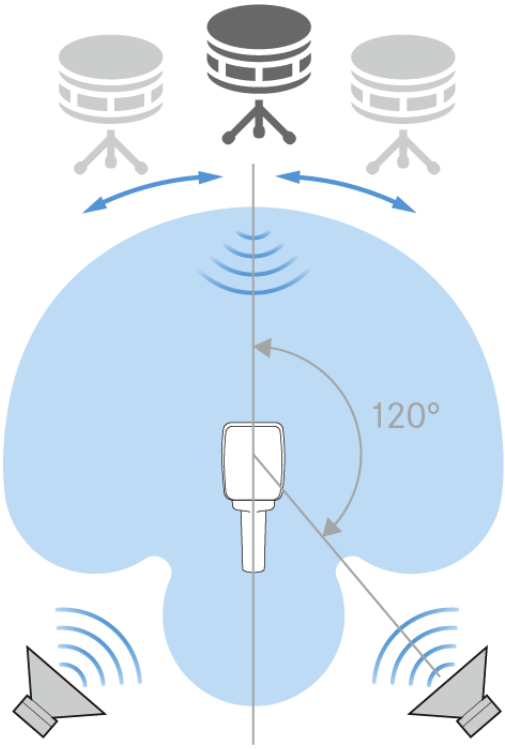
Positioning the microphone on a drum

- The front of the microphone must face the drum.
- It is vital to observe the following notes:
    - Position D: Position the microphone on the drum so that it is 3 to 5 cm above the batter head. Direct the microphone towards the center of the batter head. The fundamental tone to overtones ratio can be adjusted via the angle. The most balanced results are obtained at an angle of 30–60°.
        - Resulting sound D: more fundamental tone, little overtones
        - Resulting sound E: less fundamental tone, many overtones



Positioning the monitor loudspeakers

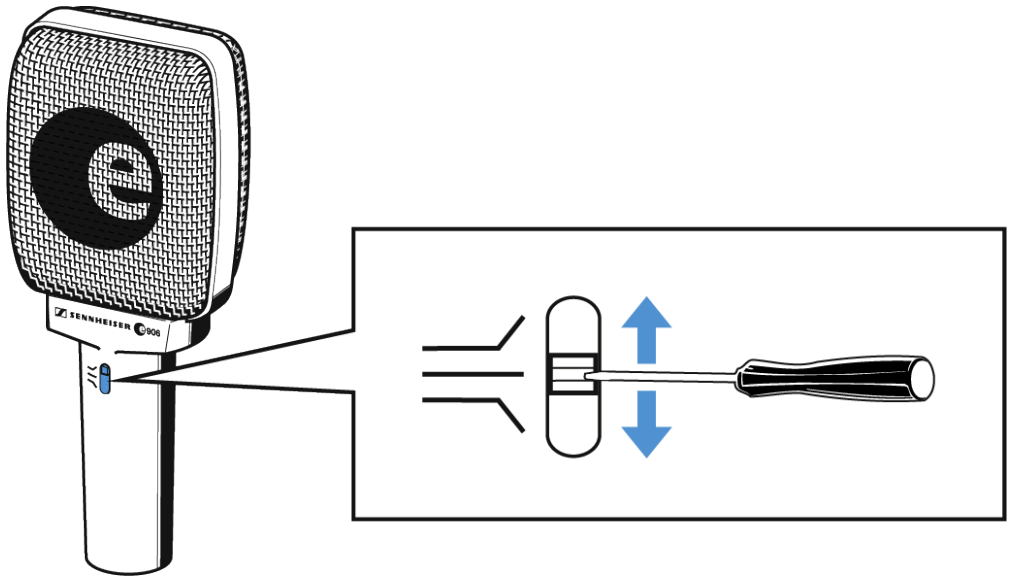
- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 120°).



Adapting the sound characteristics

> **i** The e 906 features a switchable presence filter which allows to adapt the microphone to the different sound requirements and styles (see Frequency response).
> The mid frequency of the presence filter is 4.2 kHz.

▶ Use a pointed tool such as a small screwdriver to move the 3-position slide switch to the desired position.





- Setting: boosted presence range
- Suitability: e.g. for aggressive metal rhythm guitars



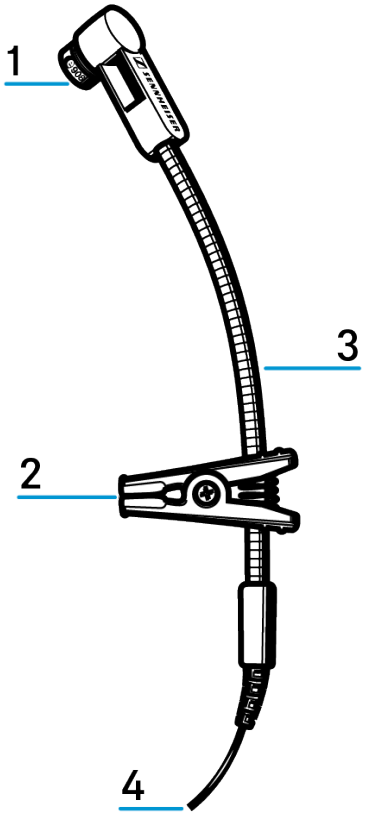
- Setting: normal presence range
- Suitability: e.g. for classic rock



- Setting: attenuated presence range
- Suitability: e.g. for warm and smooth jazz and blues sounds

e 908

Product overview



1 Microphone head

- see Using the windshield

2 Microphone clamp MZH 908 B

3 Gooseneck

- see Attaching the microphone

4 e 908 B: XLR-3 connector

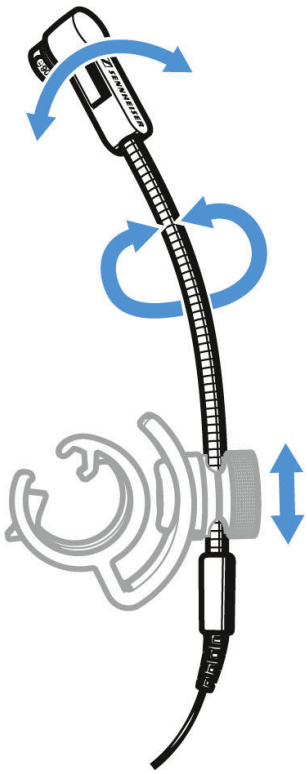
e 908 B ew: 3.5 mm jack

- see Connecting the microphone

Installation

Attaching the microphone

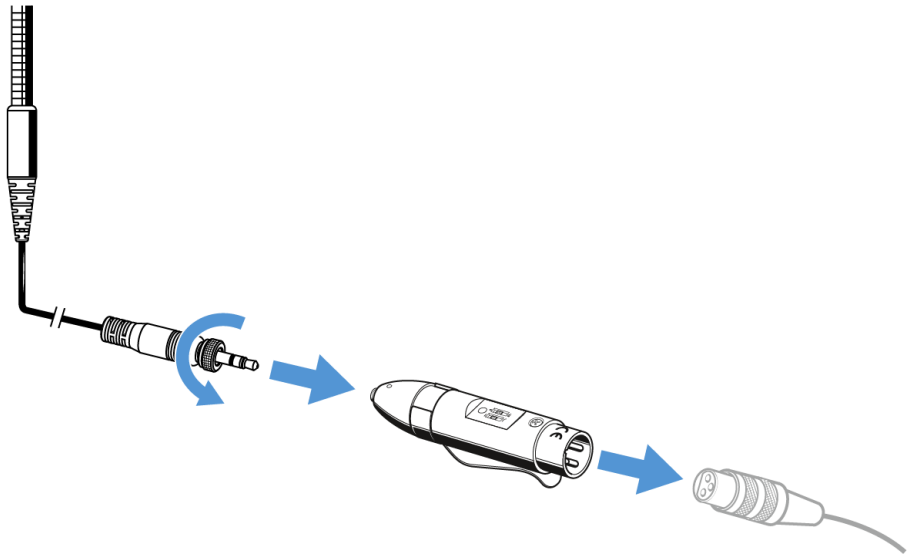
- Carefully bend the flexible goose neck.



Connecting the microphone

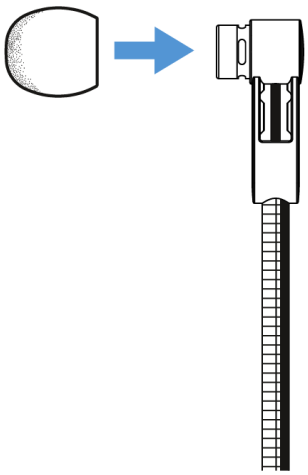
- Plug the 3.5 mm mini jack plug into the 3.5 mm jack socket of the MZA 900 P phantom power adapter (included with e 908 B).
- Tighten the coupling ring.

- Plug the XLR cable into the XLR output of the MZA 900 P phantom power adapter.



Using the windshield

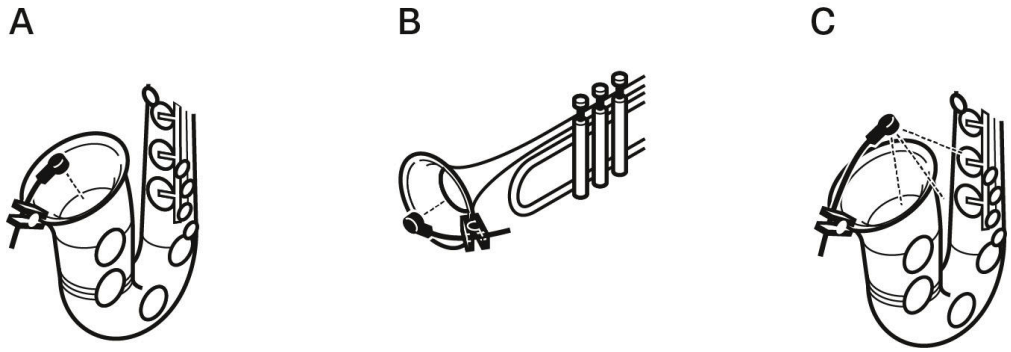
- Place the MZW 908 (optional accessories) windshield over the microphone head.



Operation

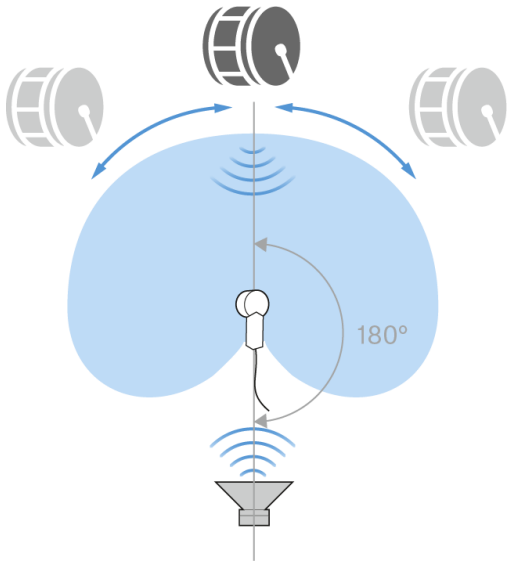
Positioning the microphone on a wind instrument

- Use the microphone clamp MZH 908 B to attach the microphone to the bell of the instrument.
- It is vital to observe the following notes:
  - Position A and B: Directed into the bell of the instrument.
    - Resulting sound A: Reduced ambient noise
    - Resulting sound B: Clear, powerful sound
  - Position C: Directed partly towards the bell and partly towards the body of the instrument.
    - Resulting sound: Balanced, natural sound



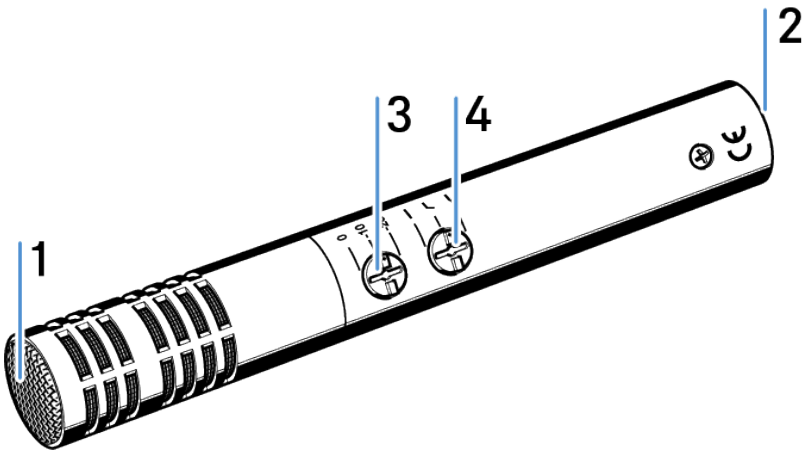
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 180°, see Polar pattern).



e 914

Product overview



1 Sound inlet basket

- see Using the windshield

2 XLR-3 connector

- see Connecting the microphone

3 Adjusting the sensitivity

- see Adjusting the sensitivity

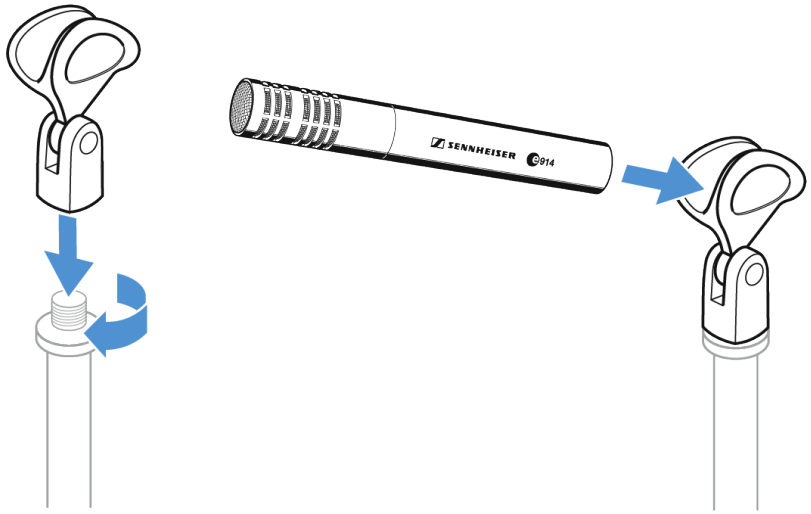
4 Adjusting the bass filter

- see Adjusting the bass filtern

Installation

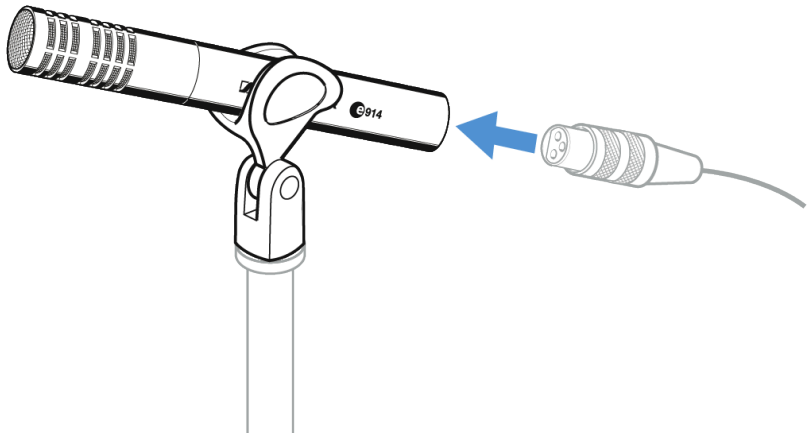
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



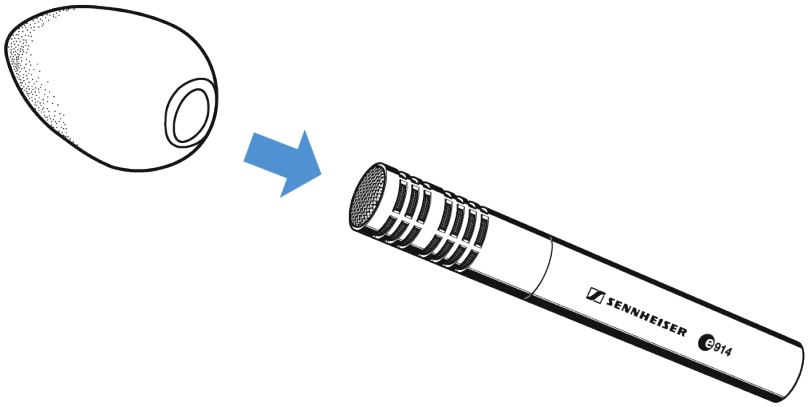
Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using the windshield

- Place the MZW 64 (optional accessories) windshield over the microphone head.

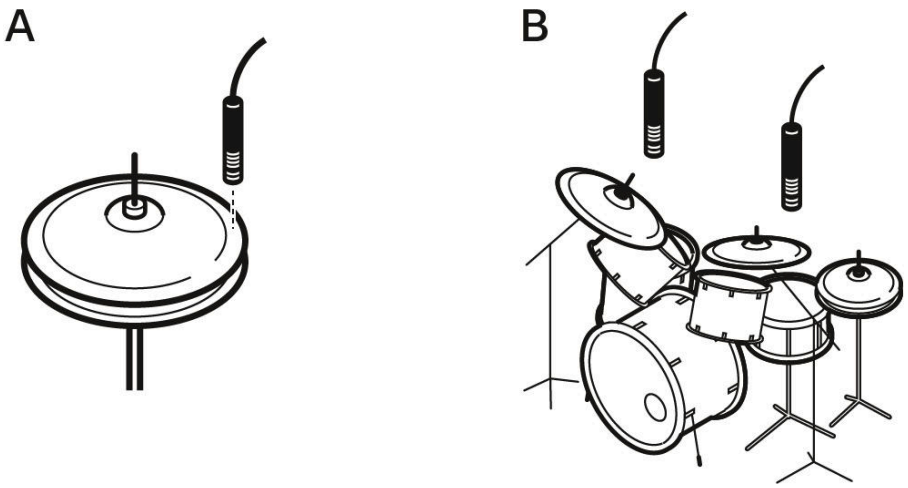


Operation

Positioning the microphone: Drums / Percussions

> i Attention: When closing the hi-hat, a strong air current is created on the edge. If the microphone is positioned too close to the edge, interfering noise due to the air current can occur.

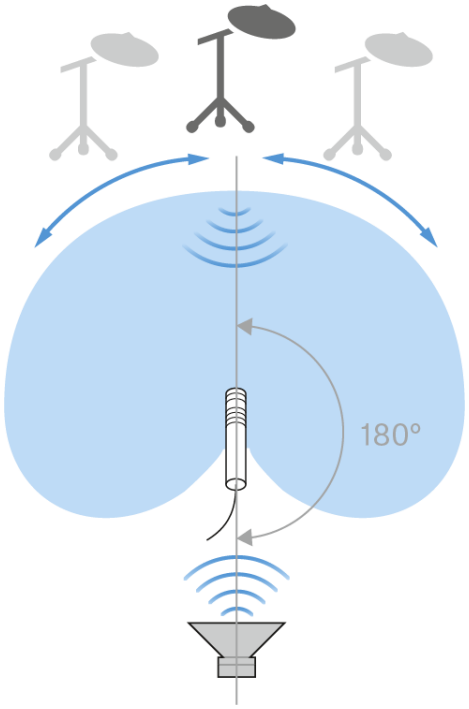
- It is vital to observe the following notes:
  - Position A: Position the microphone a few centimetres above the outer edge of the hi-hat aiming down. If necessary, remove unwanted low-frequency signal portions by high pass filtering.
  - Position B: Good starting position for live miking applications. If the overhead microphones are only used for picking up the cymbals, unwanted signal portions can be attenuated by high pass filtering.



In order to prevent interference due to crosstalk between adjacent sound sources, try to position the microphone so that the interfering sound source is located in the angle area of the highest cancellation of the microphone (approx. 180°, see Polar pattern).

Positioning the monitor loudspeakers

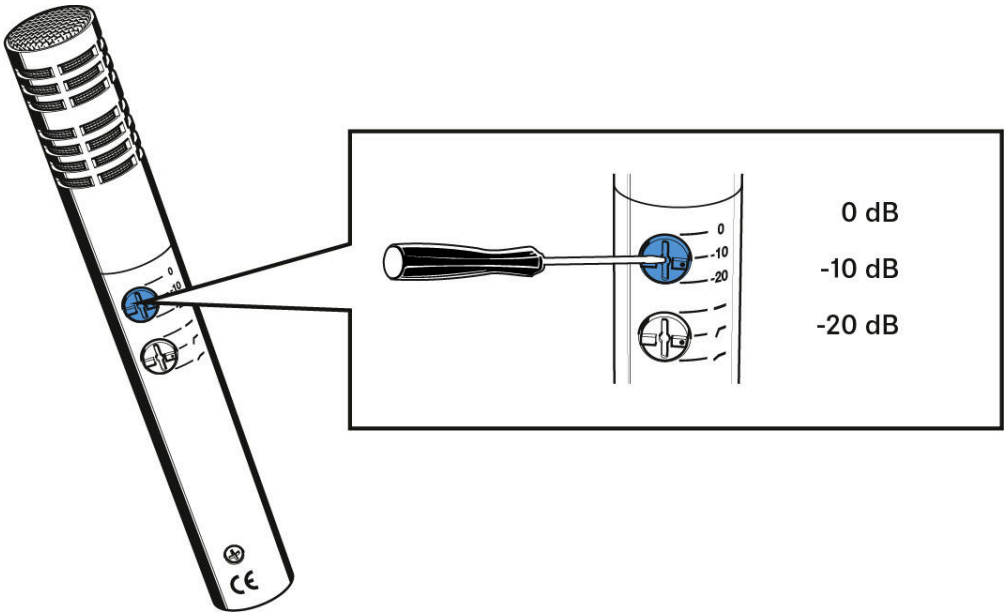
- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 180°, see Polar pattern).



Adjusting the sensitivity

- The microphone sensitvity can remain unchanged (0) or be reduced by 10 dB or 20 dB.
  The latter is recommended when there is a risk that the microphone or subsequent microphone input is overmodulated, e.g. due to high sound pressure levels from drums, brass instruments, etc.

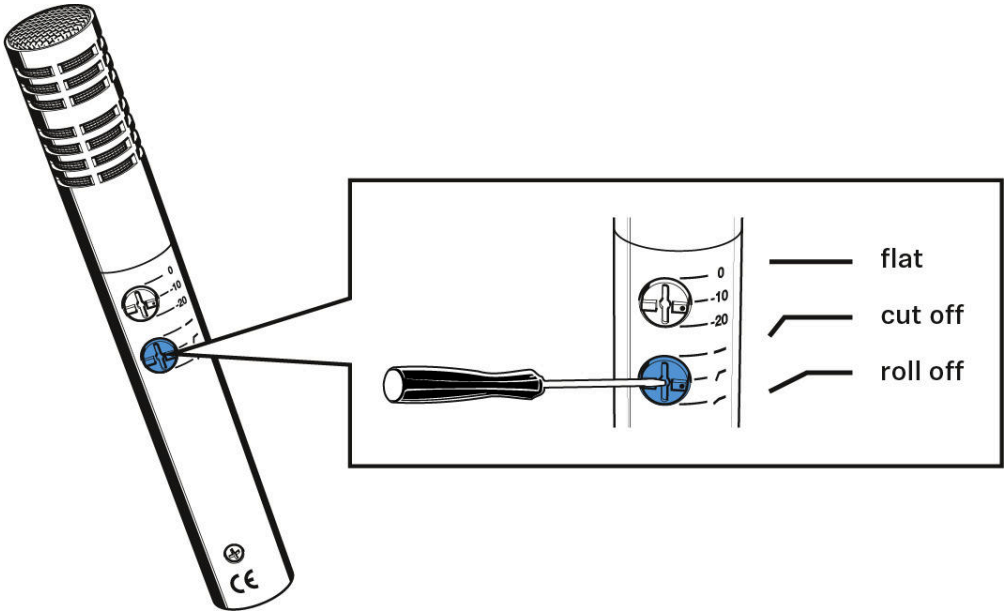
i We recommend that you mute the corresponding microphone channel on the mixing console before connecting and disconnecting the microphone cable, switching on and off the phantom powering or setting the switches.



Adjusting the bass filtern

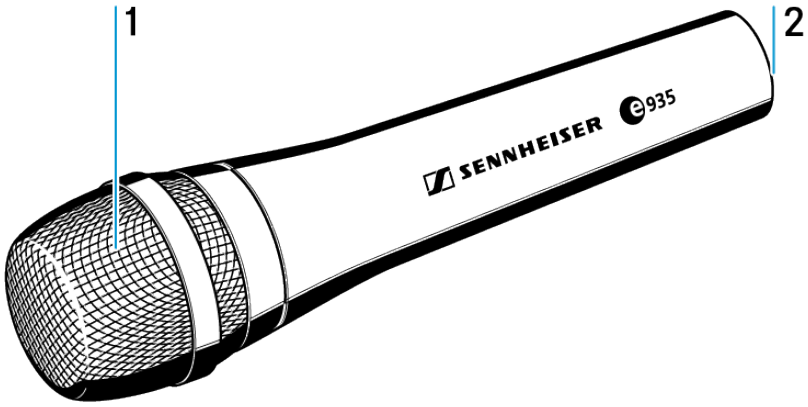
> **i** The e 914 has been designed for an extended low-frequency bass response. With certain live or close instrument miking applications, an over-emphasis of the low frequencies can occur.

- This can be compensated for by the 6 dB/octave roll-off filter. The cut-off filter reduces low-frequency wind noise by 18 dB/octave.



e 935

Product overview



1 Sound inlet basket

- see Using the windshield

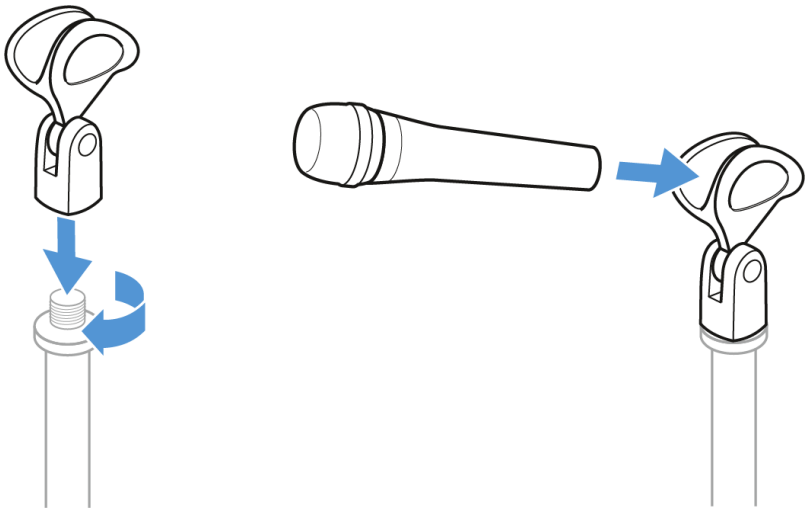
2 XLR-3 connector

- see Connecting the microphone

Installation

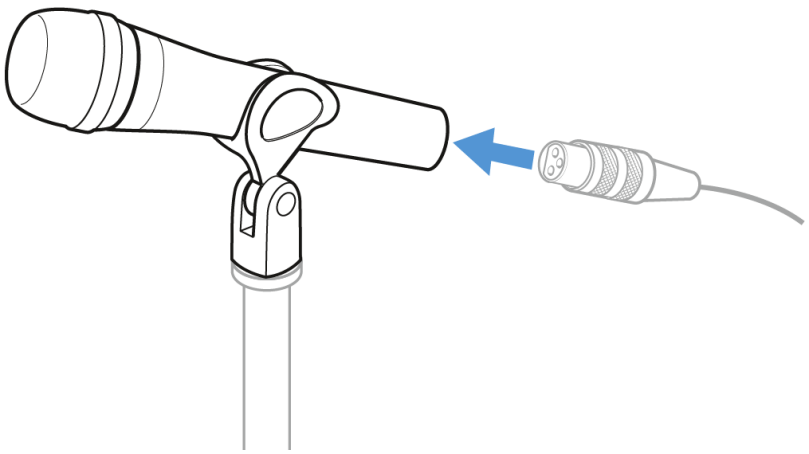
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



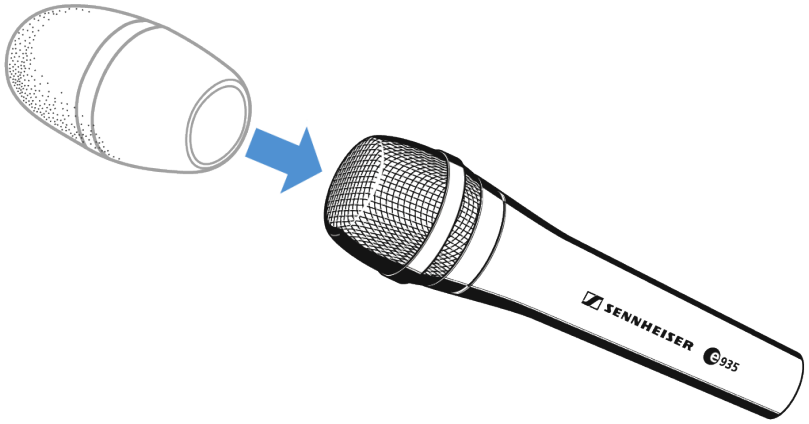
Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using the windshield

- Place the MZW 4032 (optional accessories) windshield over the microphone head.

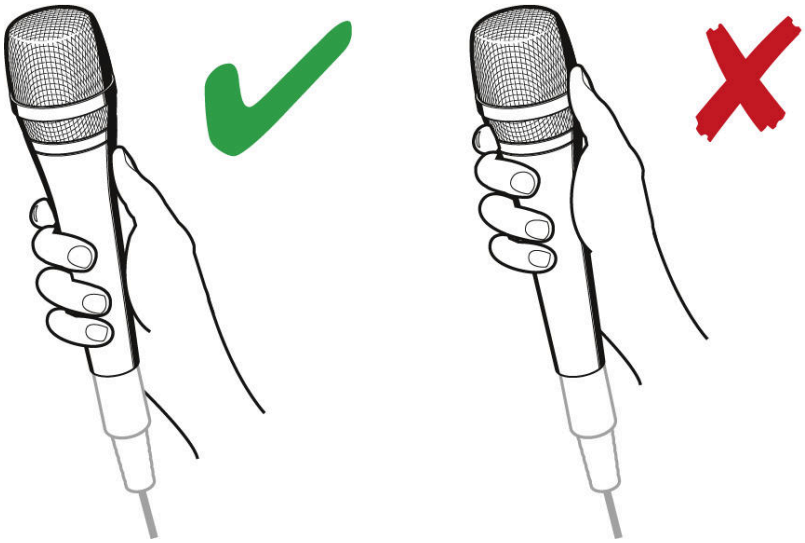


Operation

Holding the microphone

> i If you cover the microphone head during transmission, this will change the pick-up pattern of the microphone and consequently the sound.

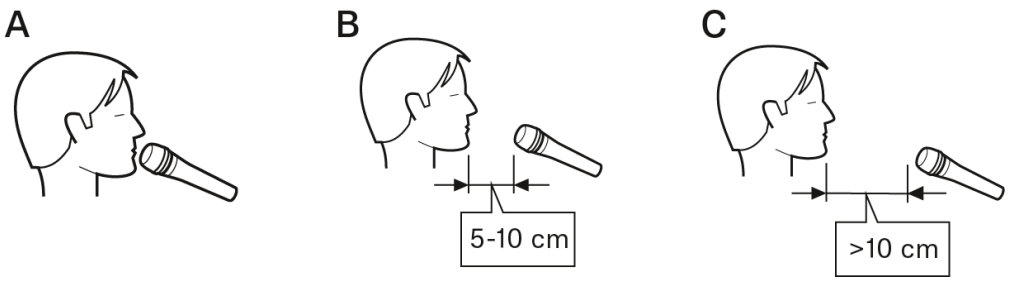
- Only hold the microphone by its body.



Positioning the microphone

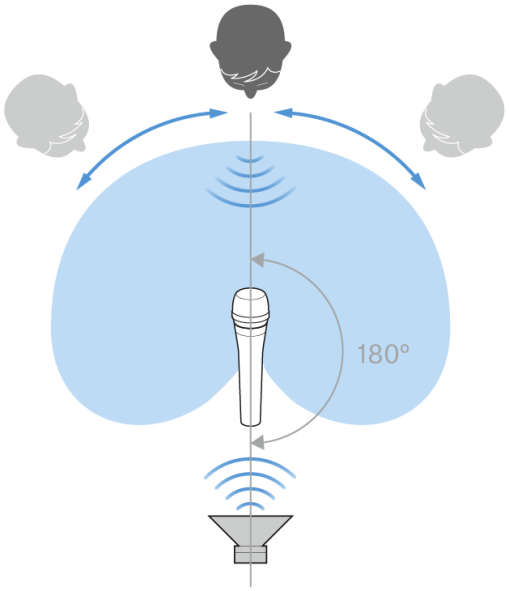
- It is vital to observe the following notes:
  - Position A: Very little crosstalk from other sound sources.
    - Resulting sound: High proximity effect (large bass boost), powerful, direct sound
  - Position B: More crosstalk from other sound sources.
    - Resulting sound: Less proximity effect (less bass boost), some room ambience, natural, balanced sound
  - Position C: Higher crosstalk from other sound sources.
    - Resulting sound: Very little proximity effect (minimal bass boost), more room ambience, indirect sound

- If sibilance occurs: Position the microphone slightly to the side and not directly in front of the mouth.



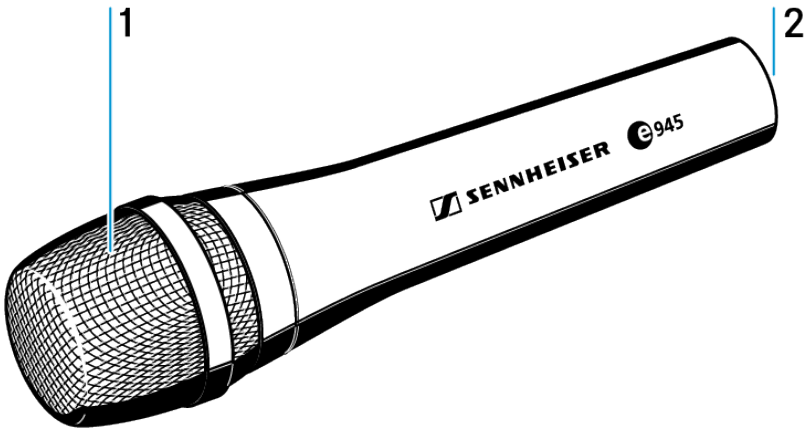
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 180°).



e 945

Product overview



1 Sound inlet basket

- see Using the windshield

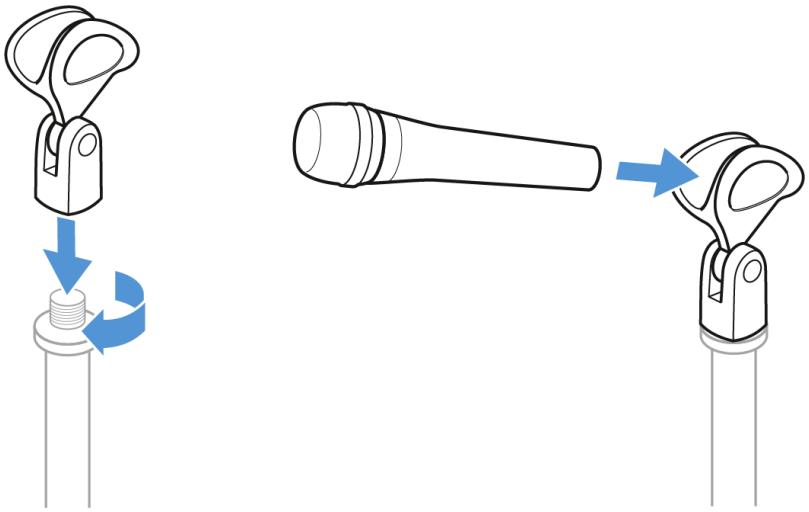
2 XLR-3 connector

- see Connecting the microphone

Installation

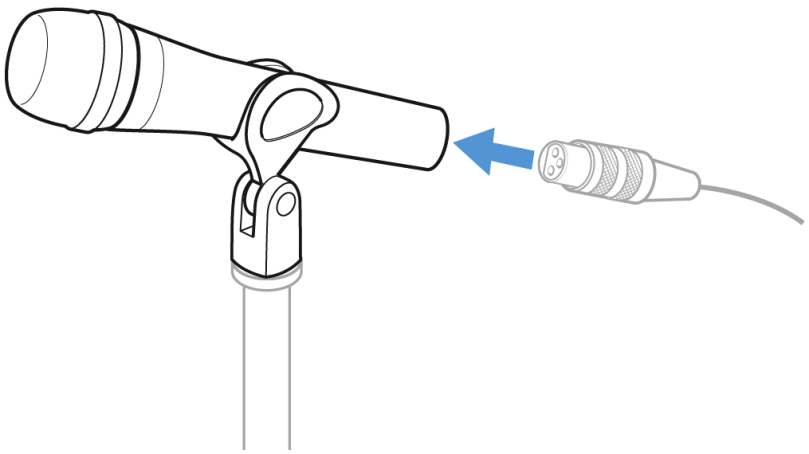
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



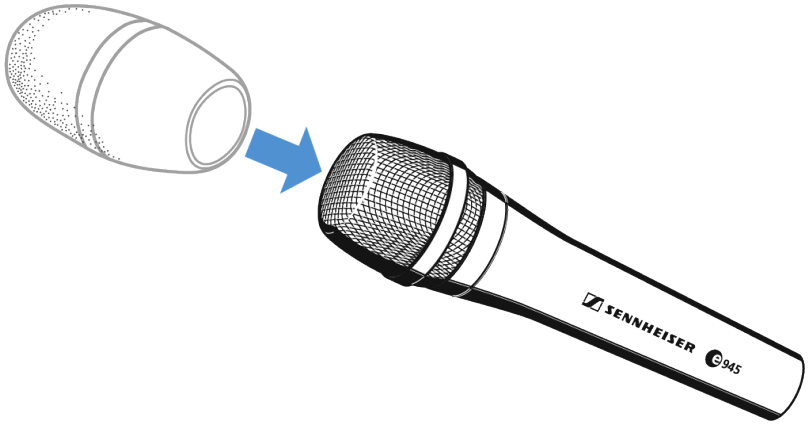
Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using the windshield

- Place the MZW 4032 (optional accessories) windshield over the microphone head.

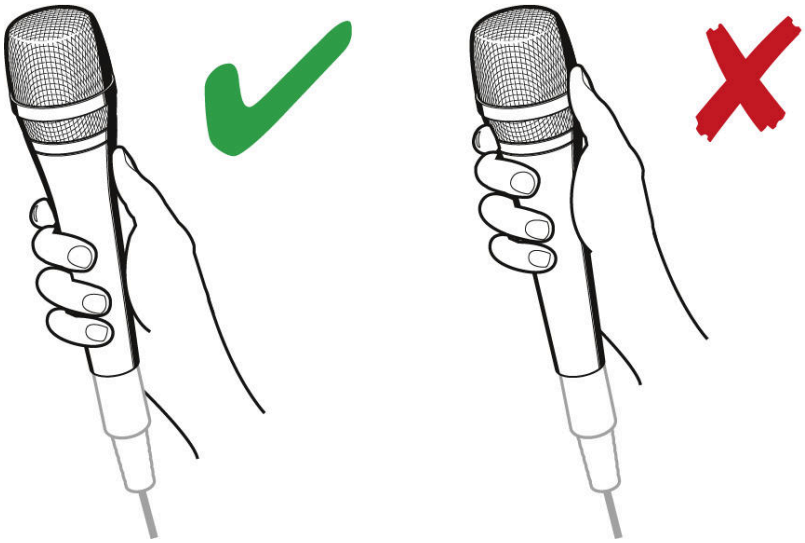


Operation

Holding the microphone

> i If you cover the microphone head during transmission, this will change the pick-up pattern of the microphone and consequently the sound.

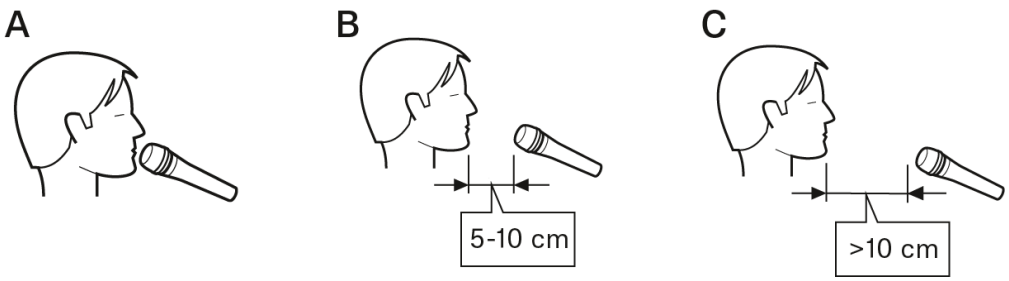
- Only hold the microphone by its body.



Positioning the microphone

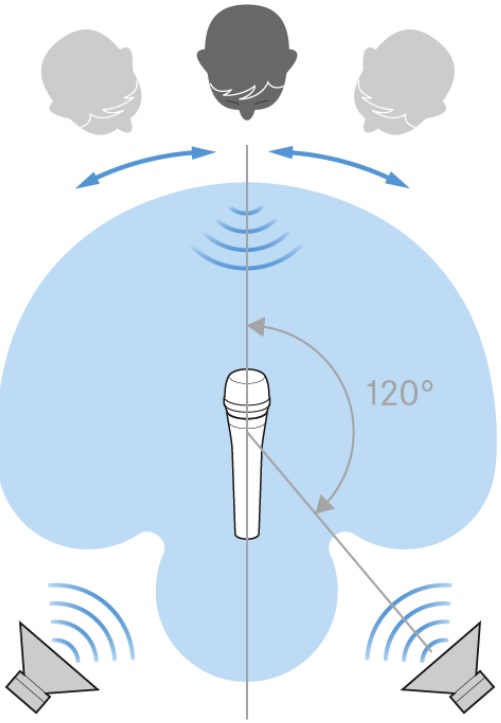
- It is vital to observe the following notes:
  - Position A: Very little crosstalk from other sound sources.
    - Resulting sound: High proximity effect (large bass boost), powerful, direct sound
  - Position B: More crosstalk from other sound sources.
    - Resulting sound: Less proximity effect (less bass boost), some room ambience, natural, balanced sound
  - Position C: Higher crosstalk from other sound sources.
    - Resulting sound: Very little proximity effect (minimal bass boost), more room ambience, indirect sound

- If sibilance occurs: Position the microphone slightly to the side and not directly in front of the mouth.



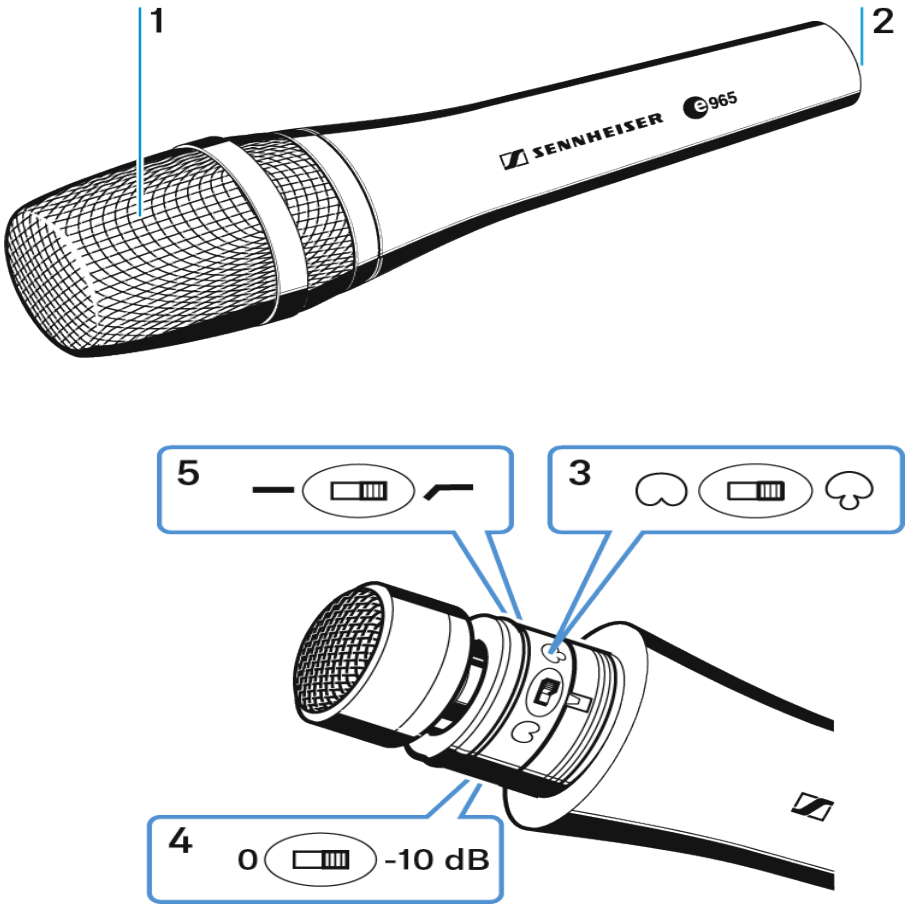
Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (approx. 120°).



e 965

Product overview



1 Sound inlet basket

- see Using the windshield

2 XLR-3 connector

- see Connecting the microphone

3 Directivity switch

- see Adjusting the pick-up pattern

4 Sensitivity switch -10 dB 0 dB

- see Adjusting the attenuation

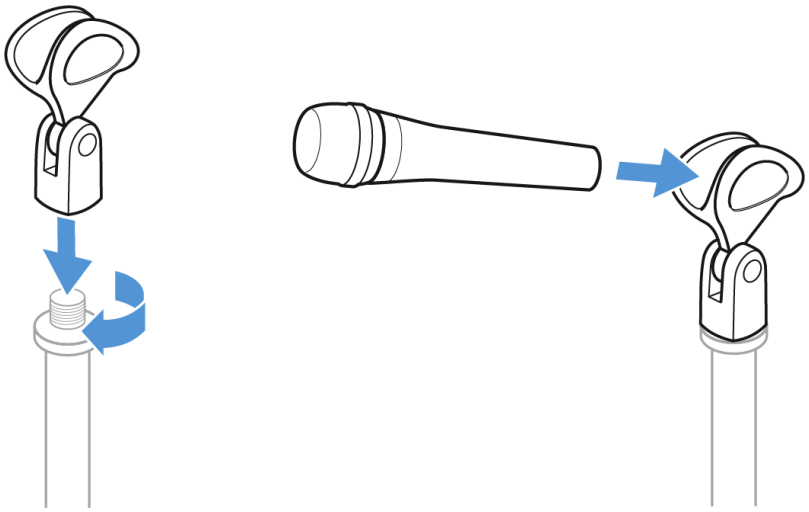
5 Bass roll-off switch 

- see Adjusting the low-cut/roll-off filter

Installation

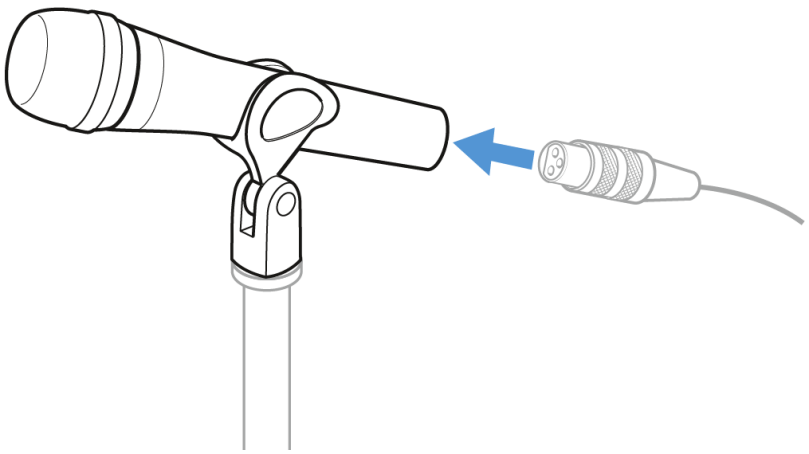
Attaching the microphone

- Screw the microphone clamp to a stand.
- Place the microphone with its back end into the microphone clamp.
- Orient the microphone together with the microphone clamp.



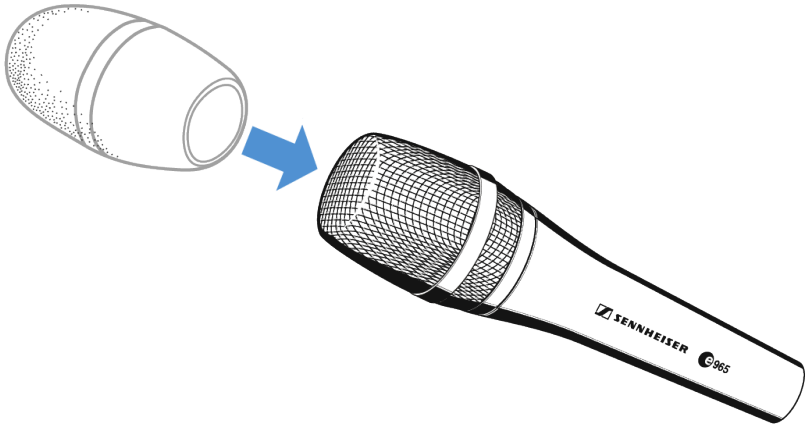
Connecting the microphone

- Connect the XLR-3 socket of the microphone cable (optional accessories) to the XLR-3 socket of the microphone.



Using the windshield

- Place the MZW 4032 (optional accessories) windshield over the microphone head.

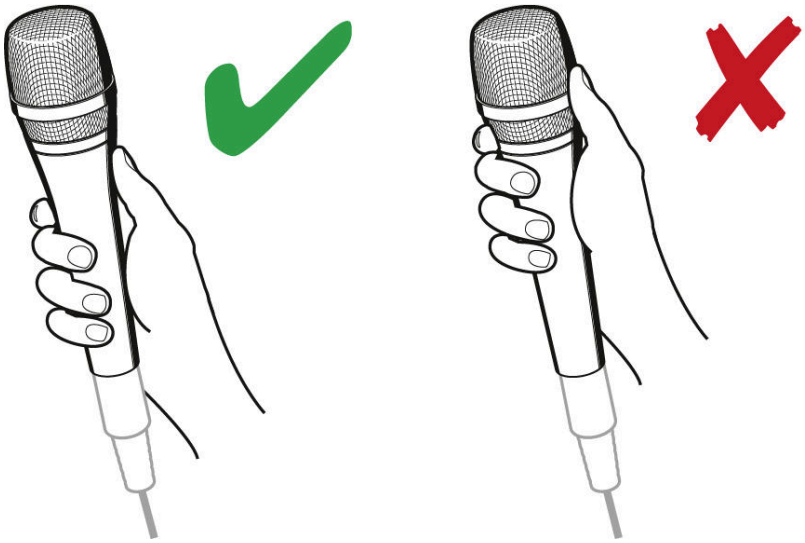


Operation

Holding the microphone

> i If you cover the microphone head during transmission, this will change the pick-up pattern of the microphone and consequently the sound.

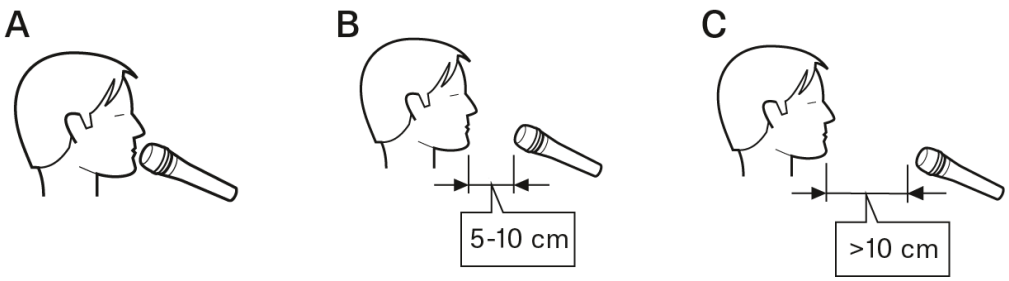
- Only hold the microphone by its body.



Positioning the microphone

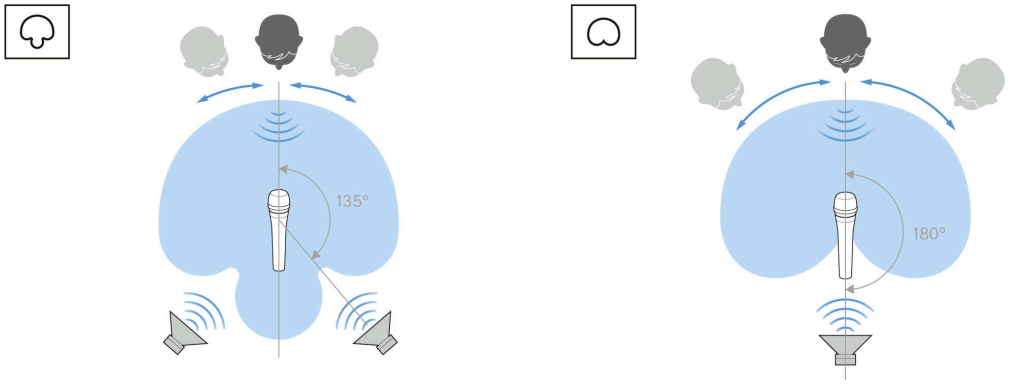
- It is vital to observe the following notes:
  - Position A: Very little crosstalk from other sound sources.
    - Resulting sound: High proximity effect (large bass boost), powerful, direct sound
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    - Resulting sound: Less proximity effect (less bass boost), some room ambience, natural, balanced sound
  - Position C: Higher crosstalk from other sound sources.
    - Resulting sound: Very little proximity effect (minimal bass boost), more room ambience, indirect sound

- If sibilance occurs: Position the microphone slightly to the side and not directly in front of the mouth.



Positioning the monitor loudspeakers

- To prevent feedback and crosstalk, postion your monitor loudspeakers in the angle area of the highest cancellation of the microphone (cardioid: 180°; super-cardioid: 135°).



Adjusting the pick-up pattern

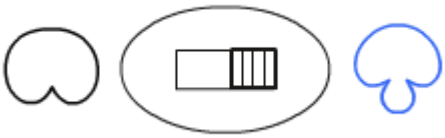
NOTICE

Danger of damage to the microphone!

The switches on the microphone can be damaged if you try to operate them using tools.

- Only operate the switches on the microphone using your fingers.

- Unscrew the sound inlet basket.
- Set the directivity switch to the desired position:
  - Cardioid
    - A cardioid pick-up pattern also picks up sound from the sides. This pattern is good for picking up several vocalists at once, e.g. a choir or ensemble.
  - Super-cardioid
    - A super-cardioid pickup pattern reduces pick-up from the sides. This pattern is therefore good for picking up individual an individual sound source in a noisy environment. Crosstalk from other instruments on stage is drastically reduced.



Adjusting the attenuation

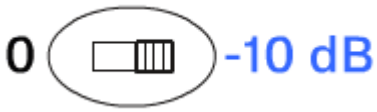
NOTICE

Danger of damage to the microphone!

The switches on the microphone can be damaged if you try to operate them using tools.

- ▶ Only operate the switches on the microphone using your fingers.

- ▶ Unscrew the sound inlet basket.
- ▶ Set the pad switch to the desired position:
  - 0 dB
    - No attenuation
  - -10 dB
    - Reduces the sensitivity of the microphone capsule by 10 dB
    - Increases the maximum sound pressure level



Adjusting the low-cut/roll-off filter

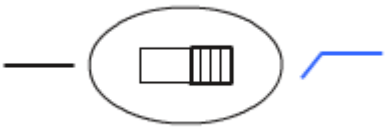
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The switches on the microphone can be damaged if you try to operate them using tools.

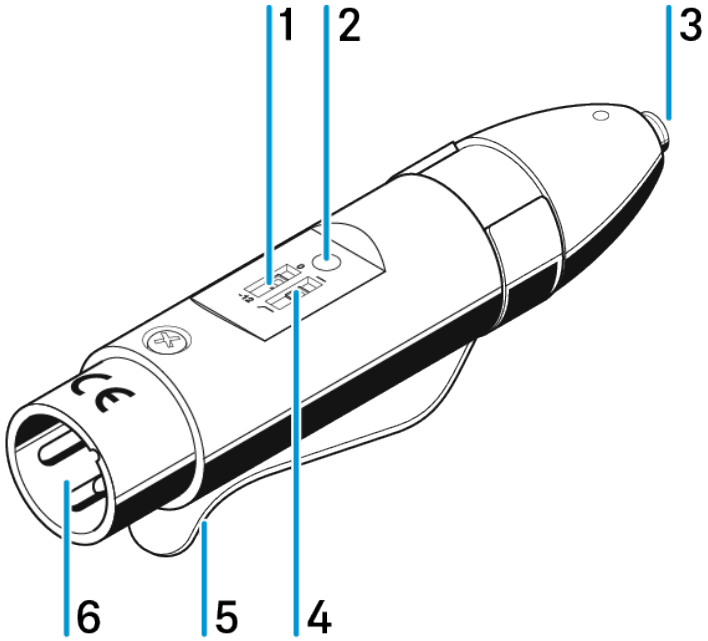
- ▶ Only operate the switches on the microphone using your fingers.

- ▶ Unscrew the sound inlet basket.
- ▶ Set the low-cut/roll-off switch to the desired position:
  - —
    - Off, linear frequency response
  - ⌐
    - Eliminates low-frequency noise such as impact sound, fan noise, etc.



MZA 900 P

Product overview



1 Pre-attenuation switch

- see Switchable pre-attenuation

2 LED

- see LED indication

3 3.5 mm jack plug

- see Connecting the microphone

4 Roll-off filter switch

- see Switchable roll-off filter

5 Belt clip

- see Attaching to clothing

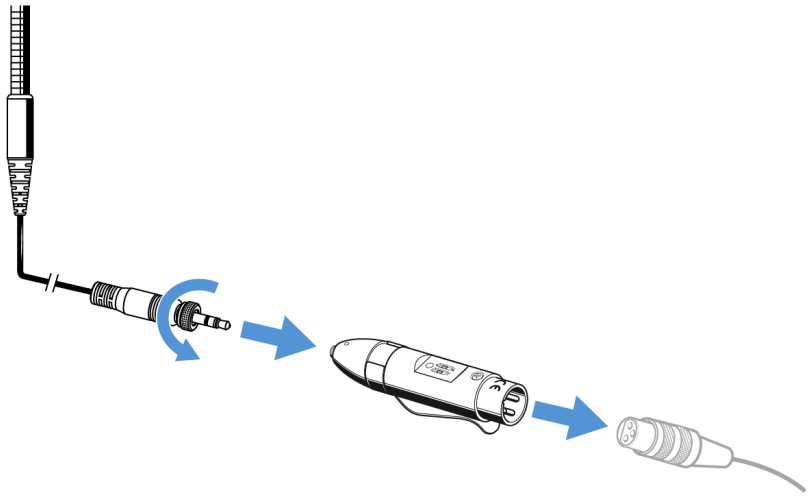
6 XLR output

- see Connecting the microphone

Installation

Connecting the microphone

- Connect the jack plug of the microphone e 908 to the socket of the MZA 900 P.
- Tighten the coupling ring.
- Plug the XLR cable into the XLR output.



Attaching to clothing

- Using the belt clip, you can unobtrusively attach the MZA 900 P to clothing (e.g. belt, waistband).

Operation

LED indication

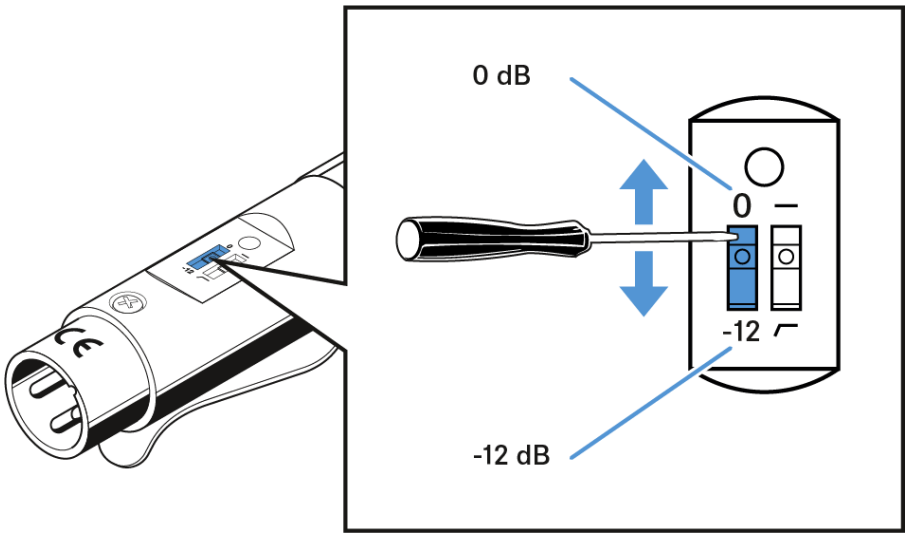
The MZA 900 P features a two-colour LED.

- LED lights up in green:
  - The MZA 900 P is properly powered and there is no over-modulation (normal operation).
- LED llights up in red
  - A flashing red LED at high sound pressure levels indicates over-modulation of the microphone or overloading of the MZA 900 P's output.
- LED in constant red
  - A constant red LED indicates a defective cable.

Switchable pre-attenuation

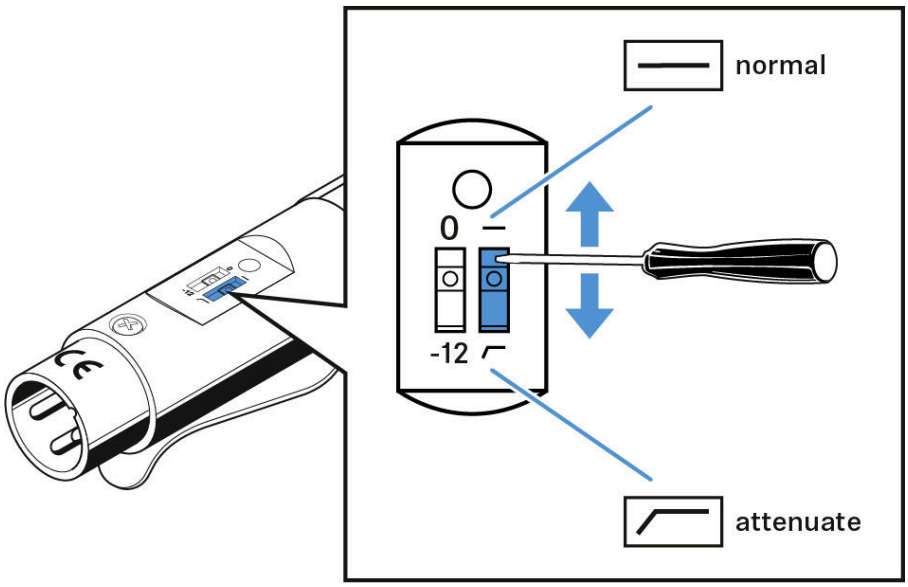
The gain can be reduced by 12 dB. This is recommended when the subsequent microphone input is overmodulated or when the MZA 900 P's output is strongly biassed by the subsequent device, e.g. due to high sound pressure levels from drums, brass instruments, etc.

Please note that when operating the MZA 900 P on 12V phantom powering, its output is considerably biassed by the power supply. If this is the case, and when high sound pressure levels occur, the pre-attenuation should also be switched on.



Switchable roll-off filter

The roll-off filter allows the MZA 900 P to be adapted to Sennheiser HSP and clip-on microphones. With the roll-off filter switched on , the low-frequency signal portions (below 125 Hz) are attenuated, thus increasing speech intelligibility. In addition, pop and wind noise is effectively suppressed.



Using as a cable tester

The MZA 900 P can also be used as a cable tester for XLR microphone cables. For this, there is no need to connect a microphone.

Connect one end of the cable to be tested to a mixing console with activated phantom powering. Connect the other end of the cable to the MZA 900 P.

LED lights up in green

- The cable is OK

LED lights up in red

- Possible errors:
    - One signal wire is broken
    - One signal wire is short-circuited to the shielding

LED does not light up

- Possible errors:
    - Both signal wires are broken
    - The shielding is interrupted
    - Both signal wires are short-circuited to the shielding

Cleaning and maintenance

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

NOTICE



Liquids can damage the electronics of the product

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 mains-operated products from the power supply system and remove rechargeable batteries and batteries (if present) before you begin cleaning.
- Clean all products only with a soft, dry cloth.

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

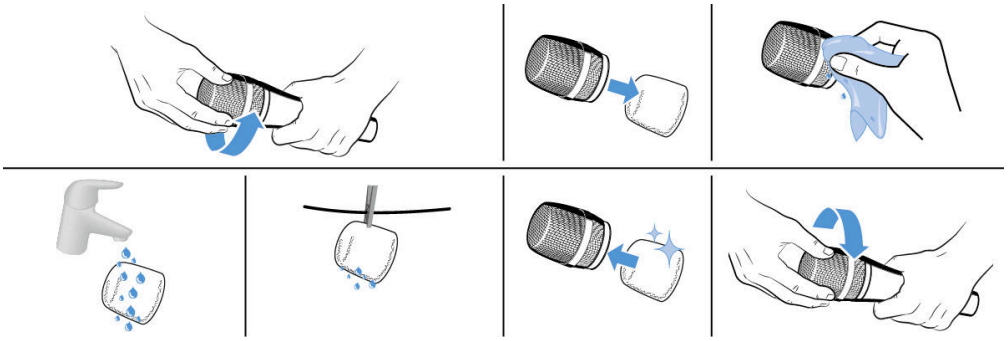
Cleaning the sound inlet basket of the microphone module

Applies to:

- e 602 II
- e 825-S, e 835/e 835-S, e 845/e 845-S, e 865/e 865-S
- e 902, e 935, e 945, e 965

- Unscrew the sound inlet basket.
- Remove the foam insert from the sound inlet basket.
- Use a slightly damp cloth to clean the sound inlet basket from the inside and ouside.
- If necessary, clean the foam insert with a mild detergent or replace the foam insert.
- Dry the foam insert.
- Reinsert the foam insert.

- Replace the sound inlet basket on the microphone head and screw it tight.



4. Specifications

All specifications at a glance.

e 602 II

Specifications

Transducer principle

- dynamic

Frequency response

- 20 - 16,000 Hz

Pick-up pattern

- cardioid

Sensitivity (free field, no load)

- 0.9 mV/Pa (at 50 Hz)
- 0.25 mV/Pa (at 1 kHz)

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

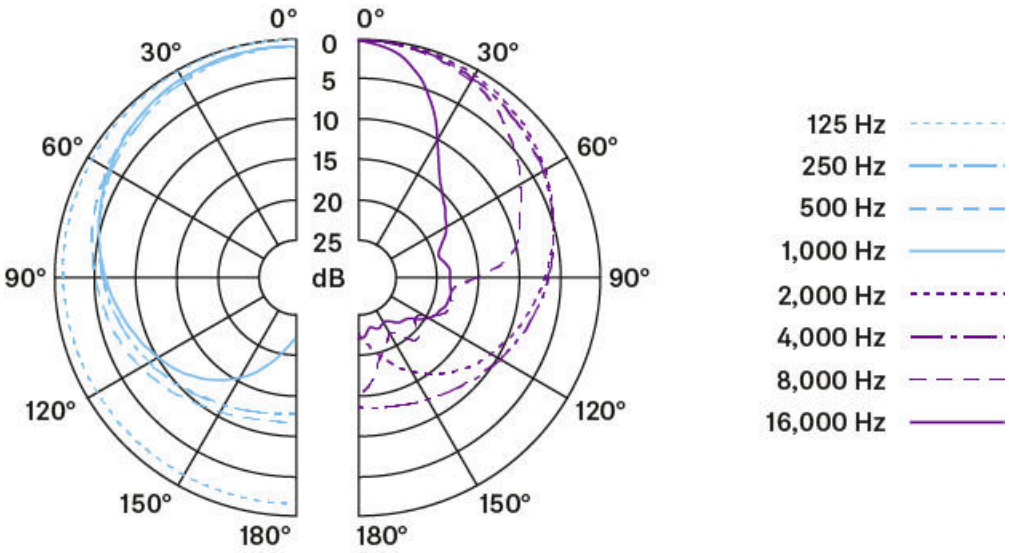
Dimensions

- Ø 60 x 153 mm

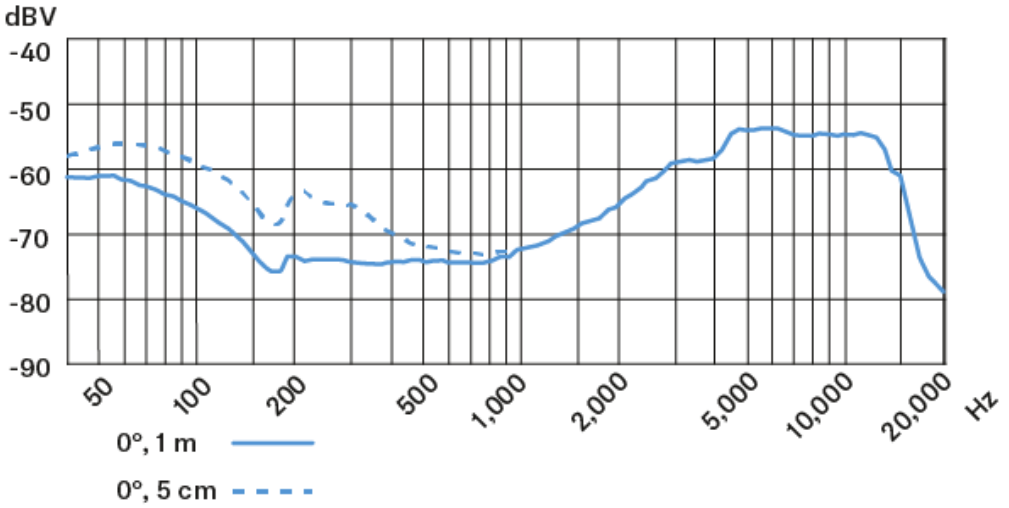
Weight

- 318 g

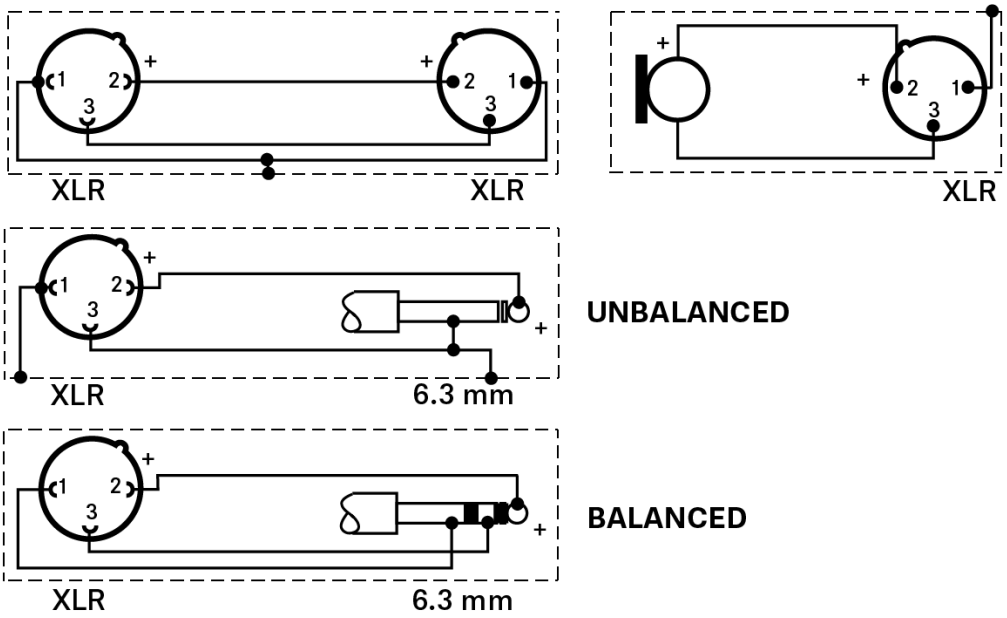
Polar pattern



Frequency response



Connector assignment



e 604

Specifications

Transducer principle

- dynamic

Frequency response

- 40 - 18,000 Hz

Pick-up pattern

- cardioid

Sensitivity (free field, no load)

- 1.8 mV/Pa

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

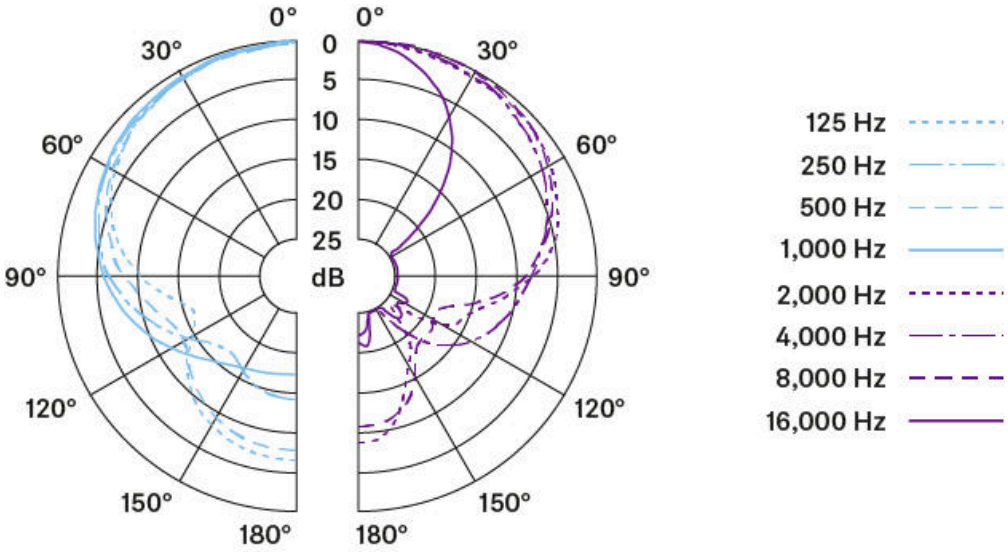
Dimensions

- Ø 33 x 59 mm

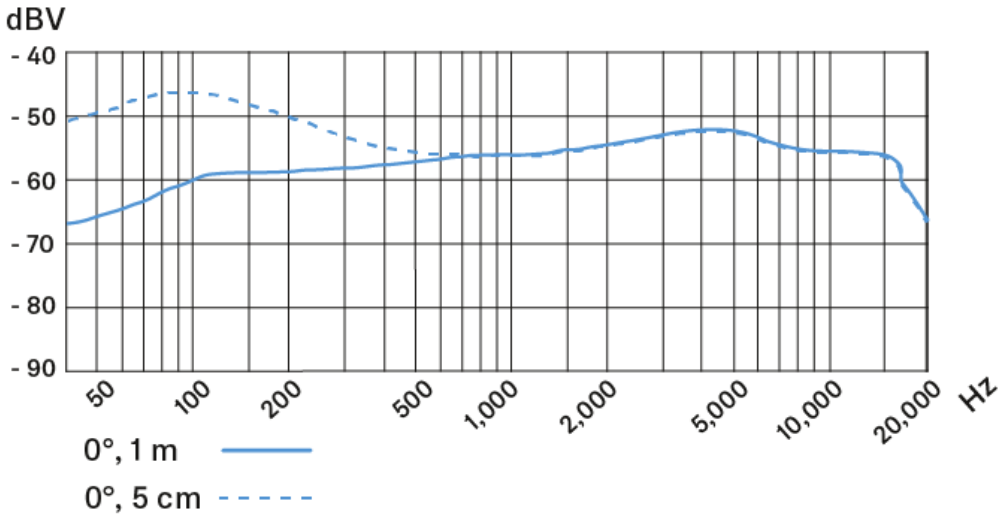
Weight

- 60 g

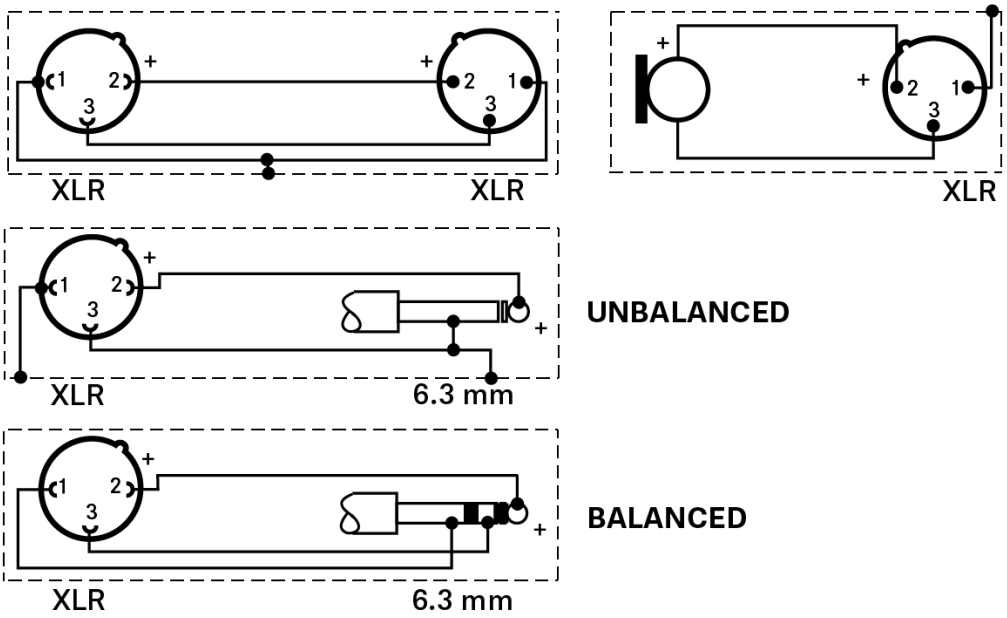
Polar pattern



Frequency response



Connector assignment



e 608

Specifications

Transducer principle

- dynamic

Frequency response

- 40 - 16,000 Hz

Pick-up pattern

- Supercardioid

Sensitivity (free field, no load)

- 0.8 mV/Pa

Nominal impedance (at 1 kHz)

- 250 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

Temperature range

- 0 °C to +40 °C

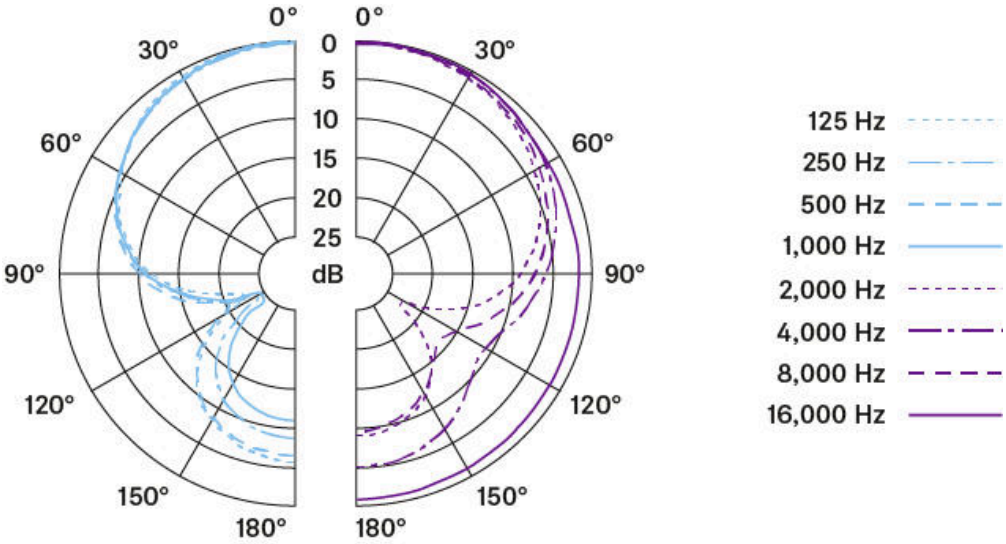
Dimensions

- Ø 17 x 185 mm

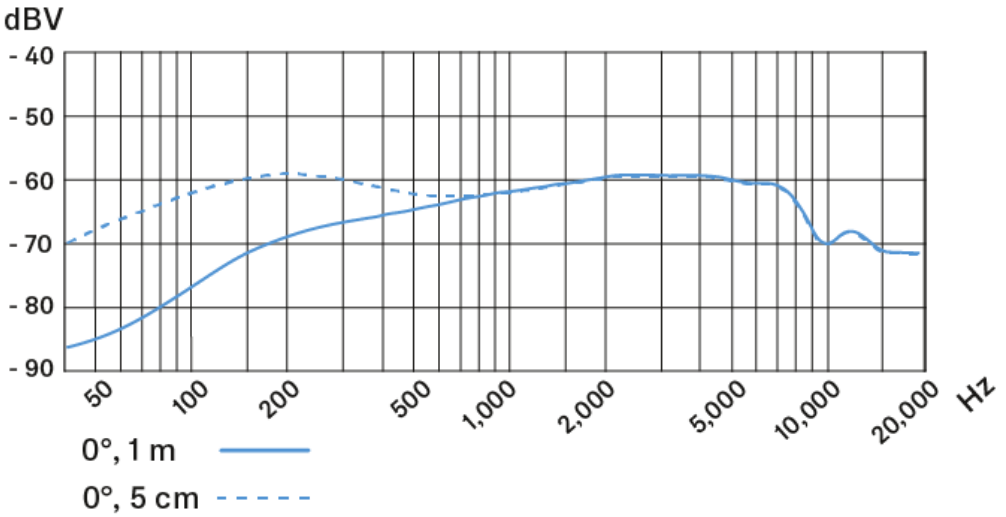
Weight

- 20 g

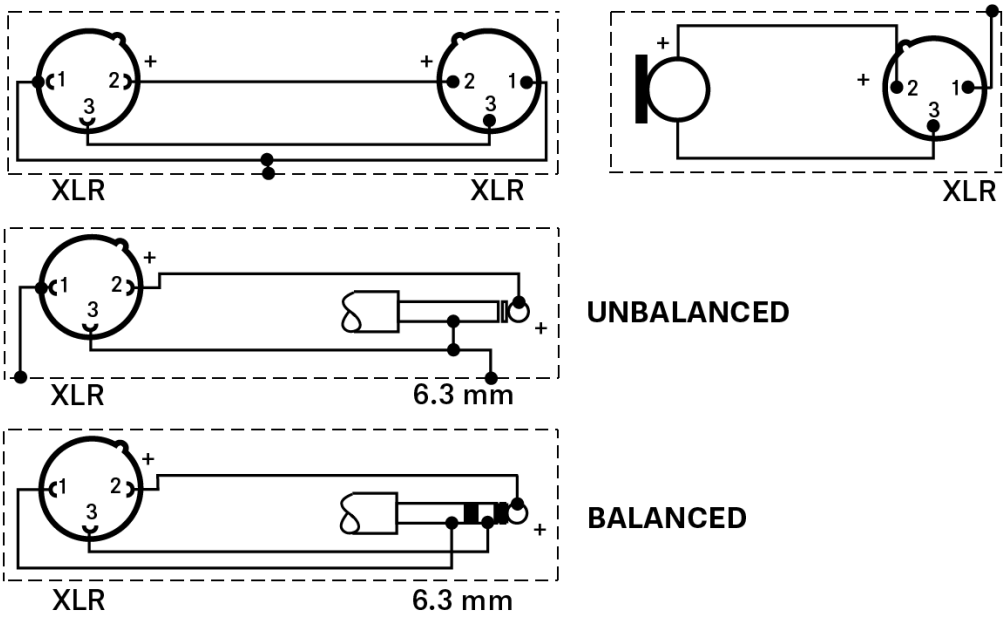
Polar pattern



Frequency response



Connector assignment



e 609 silver

Specifications

Transducer principle

- dynamic

Frequency response

- 40 - 15,000 Hz

Pick-up pattern

- Supercardioid

Sensitivity (free field, no load)

- 1.5 mV/Pa

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

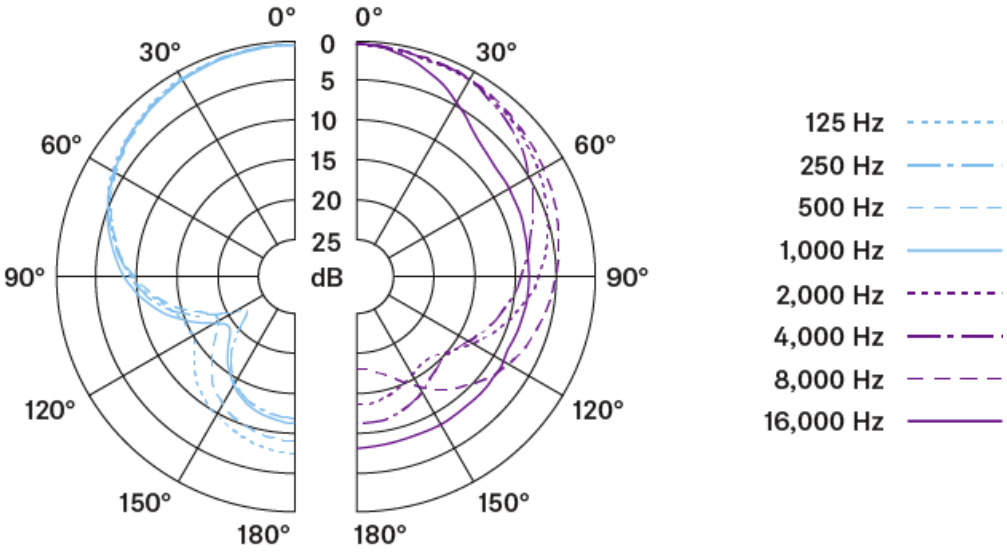
Dimensions

- 55 x 34 x 134 mm

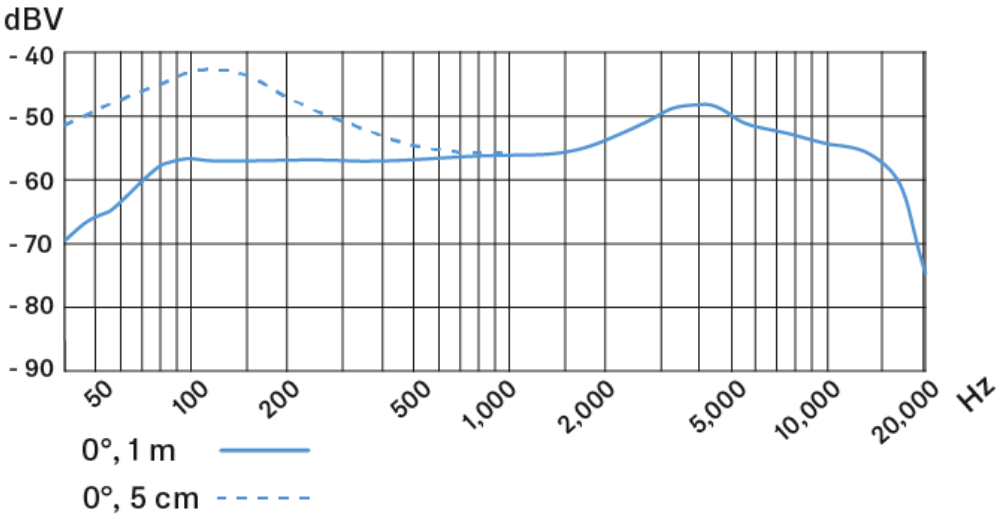
Weight

- 140 g

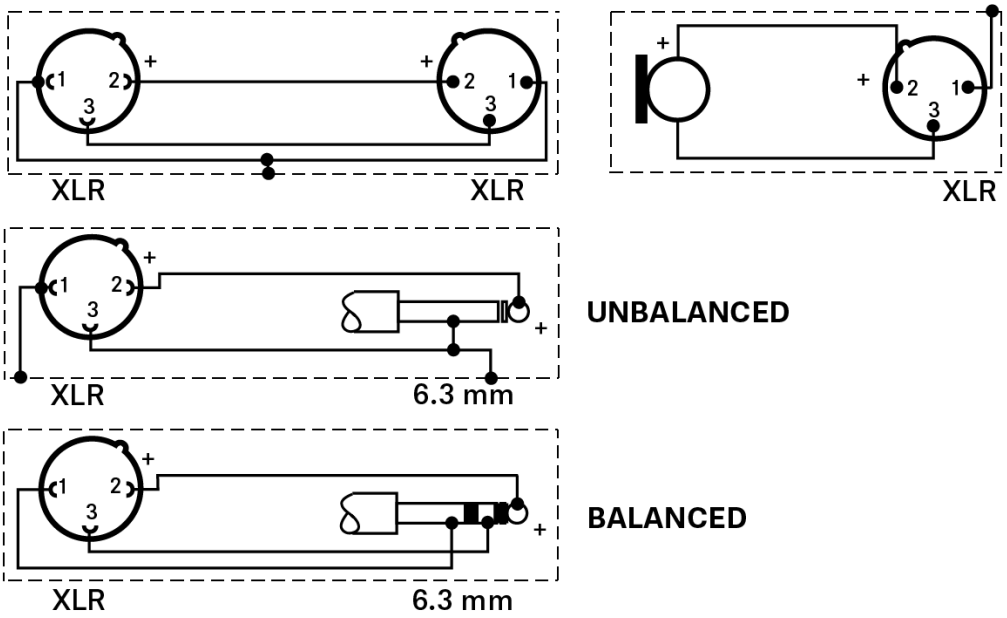
Polar pattern



Frequency response



Connector assignment



e 614

Specifications

Transducer principle

- pre-polarised condenser microphone

Frequency response

- 40 - 20,000 Hz

Pick-up pattern

- Supercardioid

Sensitivity (free field, no load)

- 3 mV/Pa

Nominal impedance (at 1 kHz)

- 50 Ω

Min. terminating impedance

- 1 kΩ

Max. sound pressure level (at 1 kHz)

- 139 dB

Equivalent noise level

- A-weighted: 24 db(A)
- CIIR-weighted: 35 dB

Phantom powering

- 12 - 48 V

Connector

- XLR-3

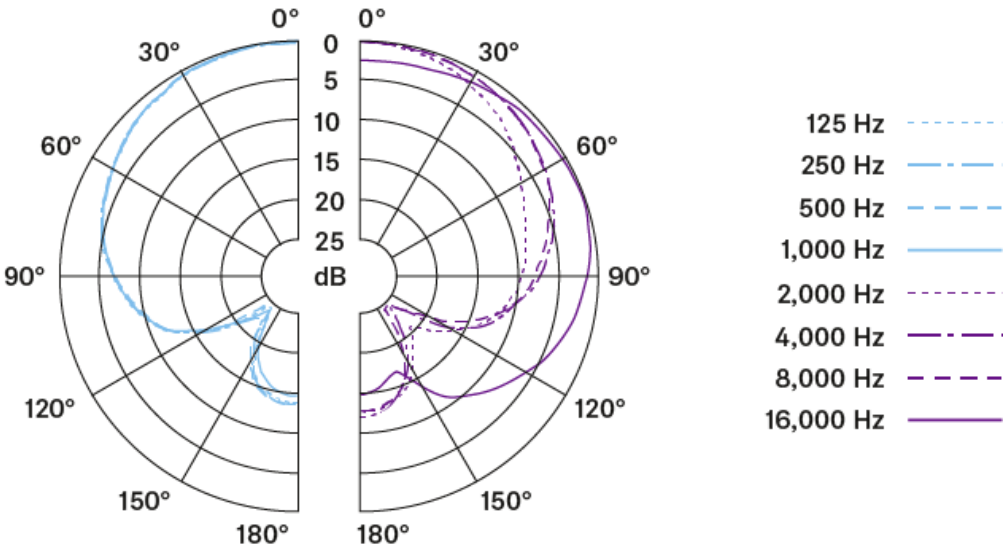
Dimensions

- Ø 20 x 100 mm

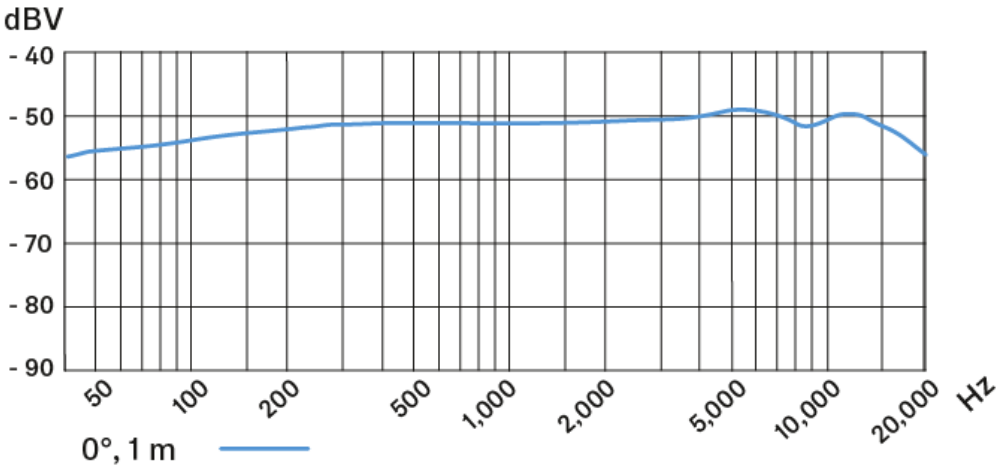
Weight

- 93 g

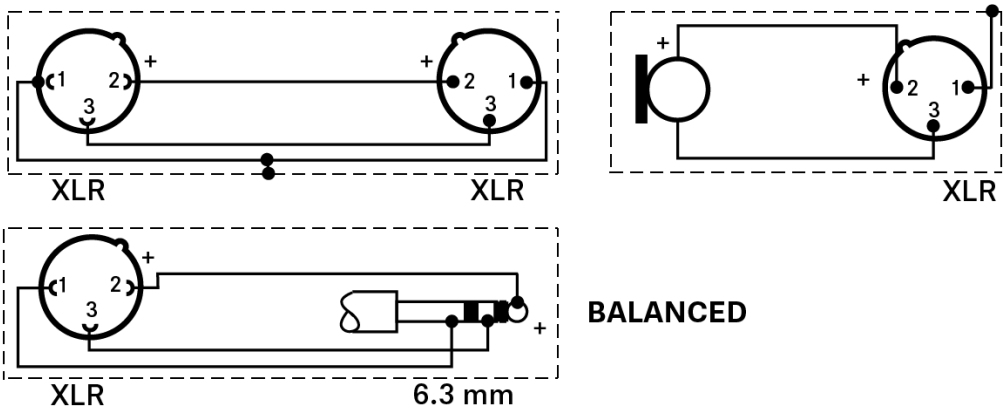
Polar pattern



Frequency response



Connector assignment



BALANCED

e 825-S

Specifications

Transducer principle

- dynamic

Frequency response

- 80 - 15,000 Hz

Pick-up pattern

- cardioid

Sensitivity (free field, no load)

- 1.5 mV/Pa

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

Temperature range

- 0 °C to +40 °C

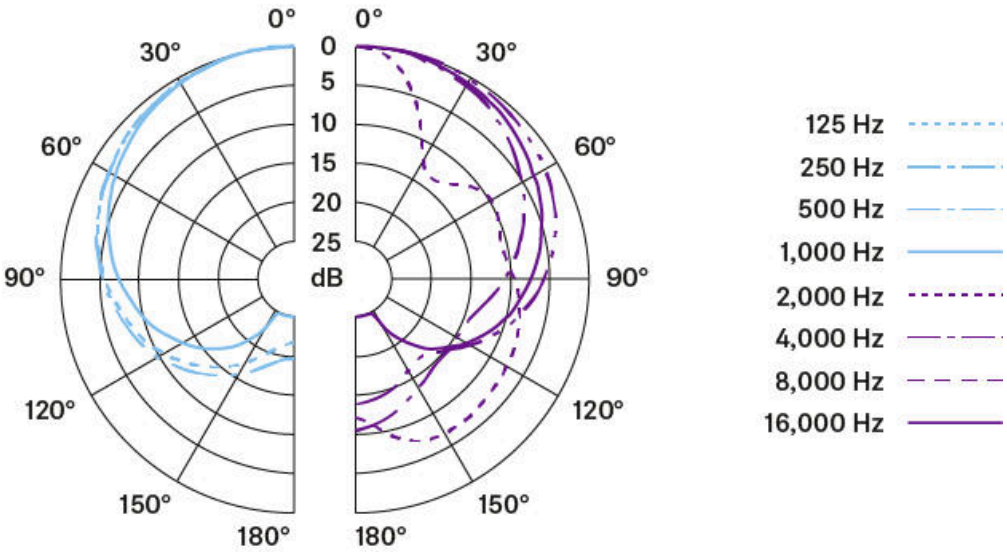
Dimensions

- Ø 48 x 180 mm

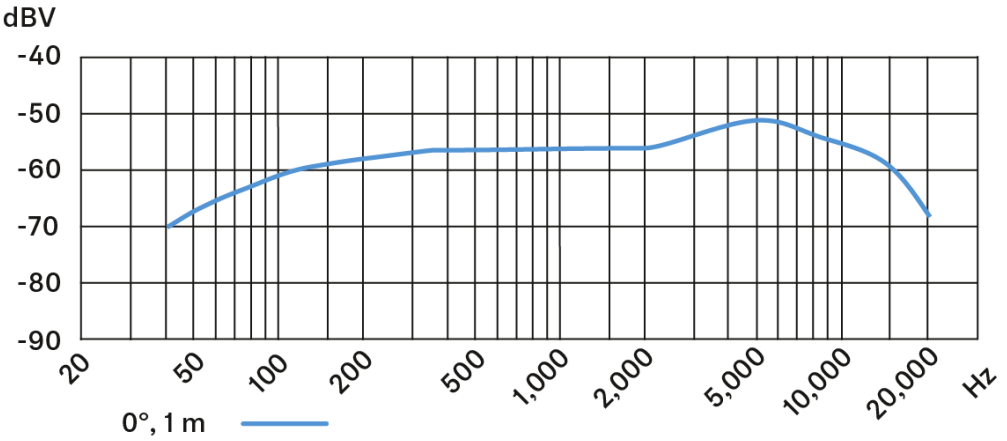
Weight

- 330 g

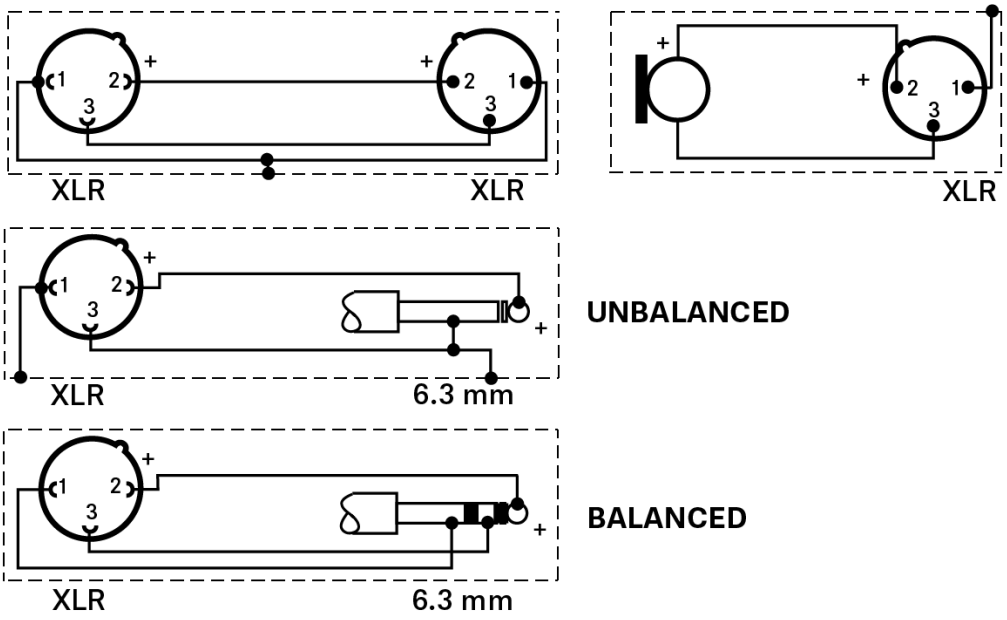
Polar pattern



Frequency response



Connector assignment



e 835-S

Specifications

Transducer principle

- dynamic

Frequency response

- 40 - 16,000 Hz

Pick-up pattern

- cardioid

Sensitivity (free field, no load)

- 2.7 mV/Pa

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

Temperature range

- 0 °C to +40 °C

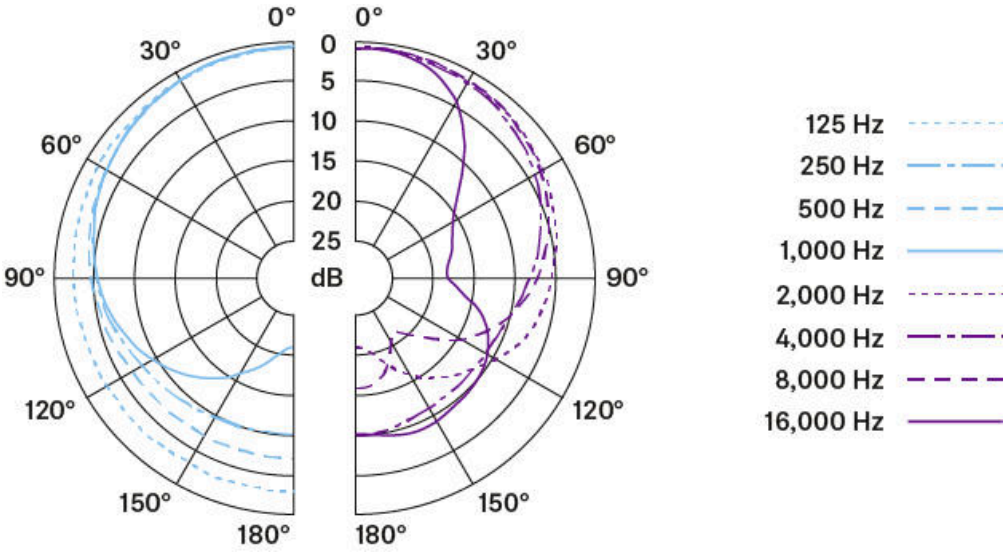
Dimensions

- Ø 48 x 180 mm

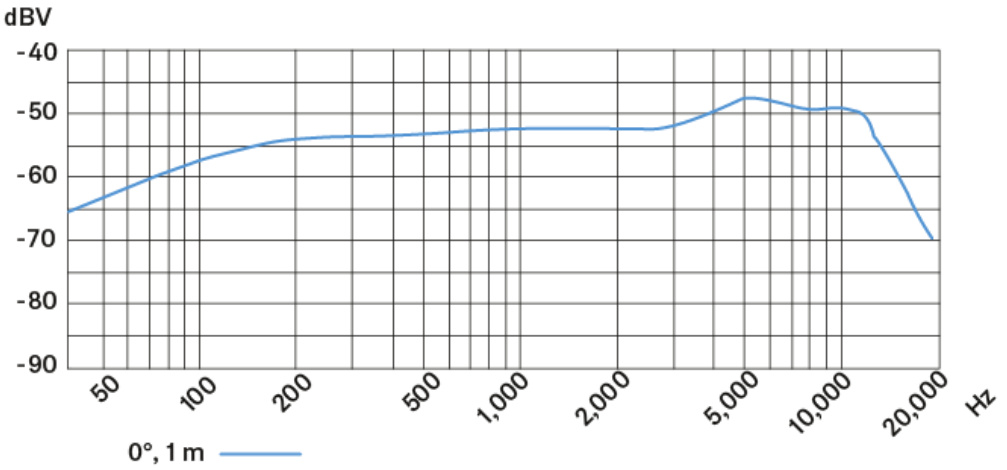
Weight

- 330 g

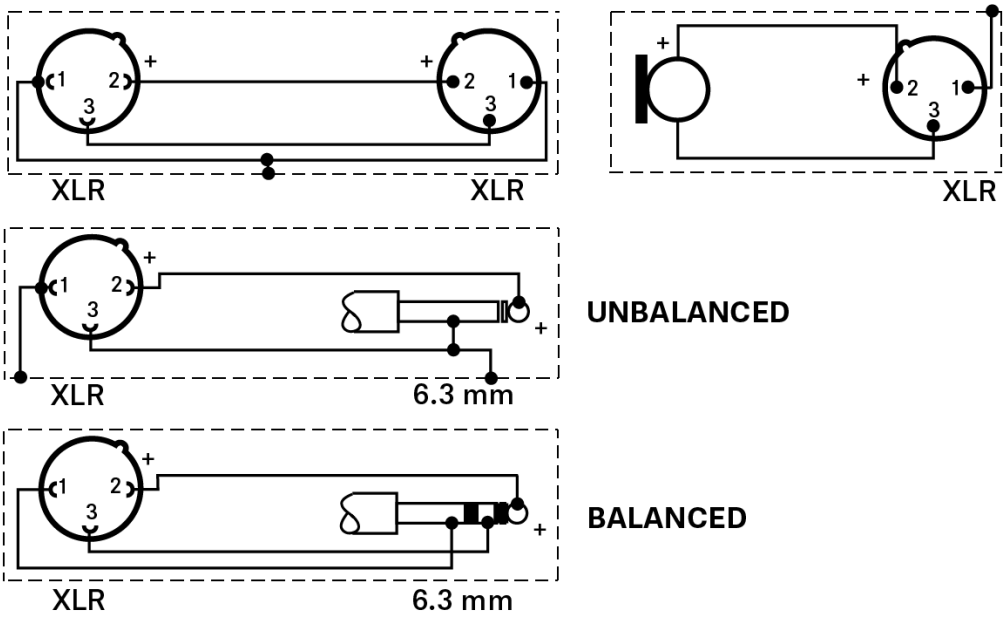
Polar pattern



Frequency response



Connector assignment



e 845-S

Specifications

Transducer principle

- dynamic

Frequency response

- 40 - 16,000 Hz

Pick-up pattern

- Supercardioid

Sensitivity (free field, no load)

- 1.8 mV/Pa

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

Temperature range

- 0 °C to +40 °C

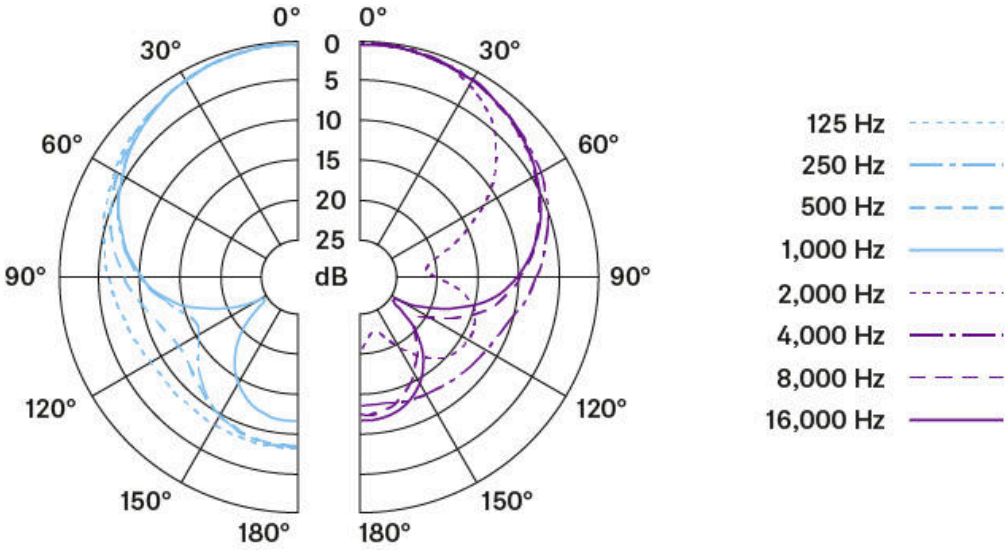
Dimensions

- Ø 46 x 185 mm

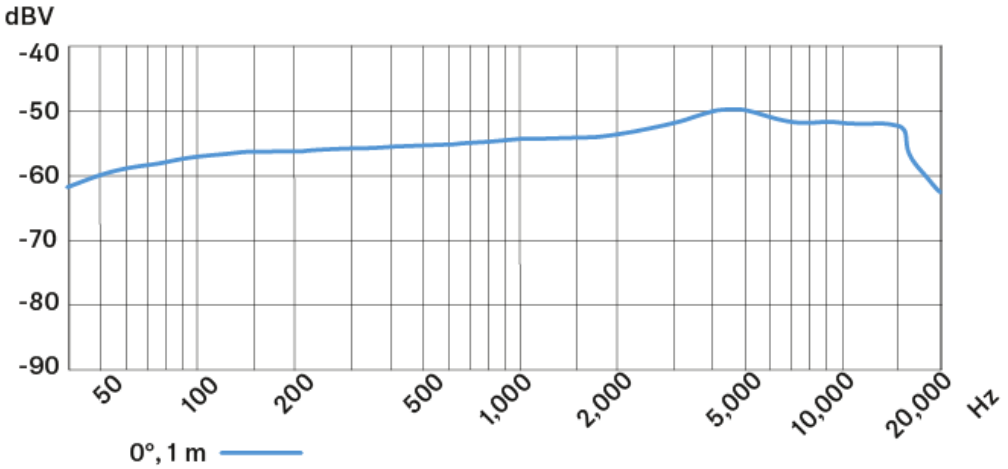
Weight

- 330 g

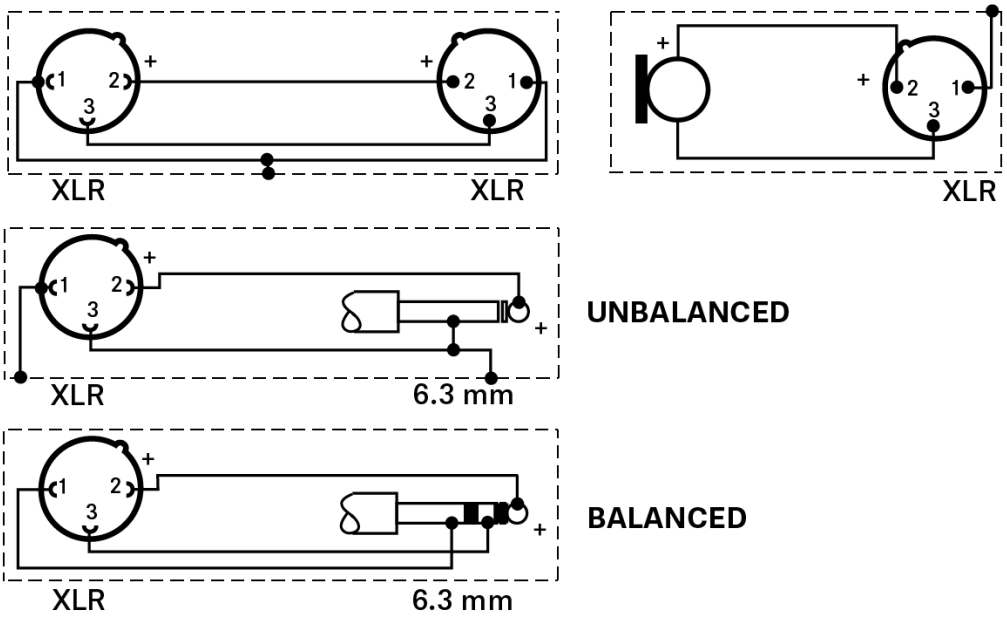
Polar pattern



Frequency response



Connector assignment



e 865-S

Specifications

Transducer principle

- pre-polarised condenser microphone

Frequency response

- 40 - 20,000 Hz

Pick-up pattern

- Supercardioid

Sensitivity (free field, no load)

- 3 mV/Pa

Nominal impedance (at 1 kHz)

- 200 Ω (symmetrisch)

Min. terminating impedance

- 1 kΩ

Max. sound pressure level (at 1 kHz)

- 150 dB

Phantom powering

- 12 - 48 V

Connector

- XLR-3

Temperature range

- 0 °C to +40 °C

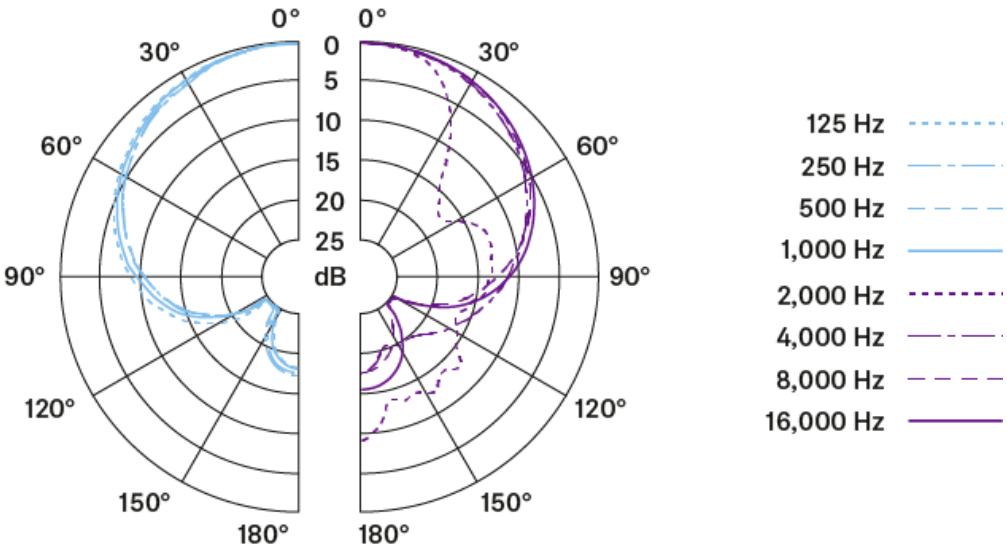
Dimensions

- Ø 47 x 193 mm

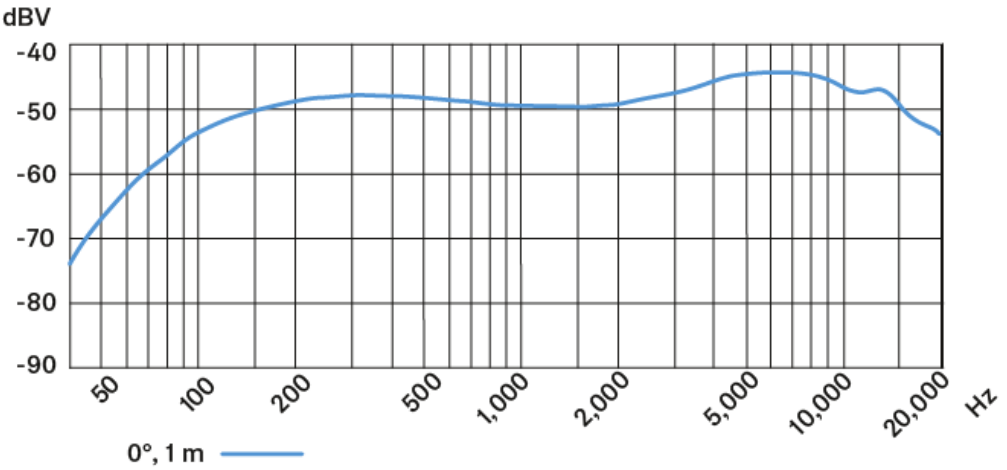
Weight

- 311 g

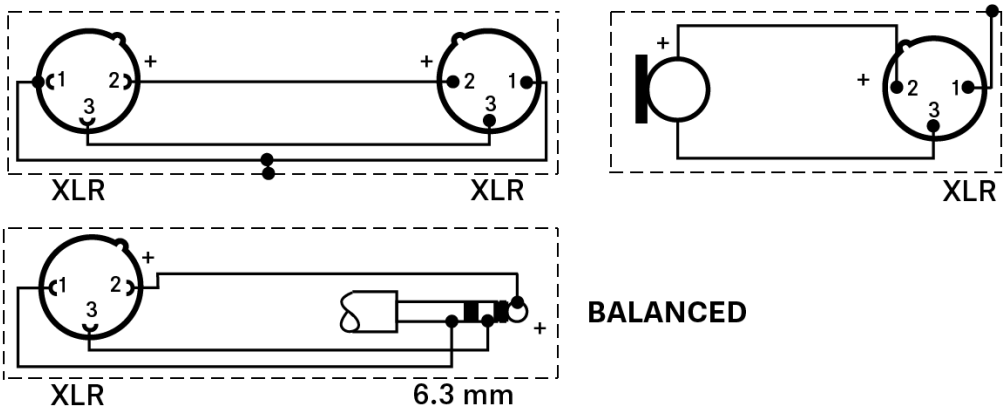
Polar pattern



Frequency response



Connector assignment



BALANCED

e 901

Specifications

Transducer principle

- pre-polarised condenser microphone

Frequency response

- 20 - 20,000 Hz

Pick-up pattern

- Halbcardioid

Sensitivity (free field, no load)

- 0.5 mV/Pa

Nominal impedance (at 1 kHz)

- 100 Ω

Min. terminating impedance

- 1 kΩ

Max. sound pressure level (at 1 kHz)

- 154 dB

Phantom powering

- 48 V

Connector

- XLR-3

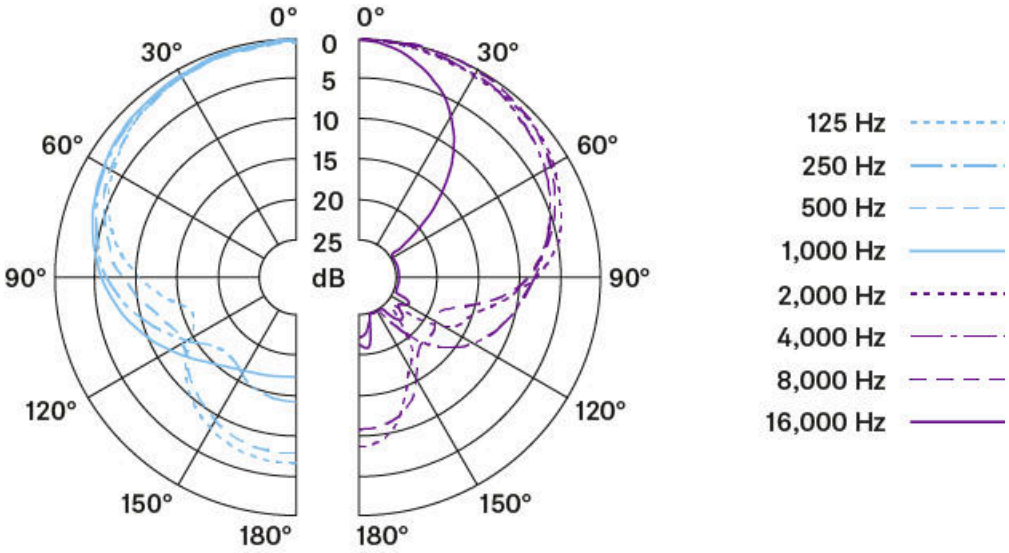
Dimensions

- 126.5 x 105 x 26.5 mm

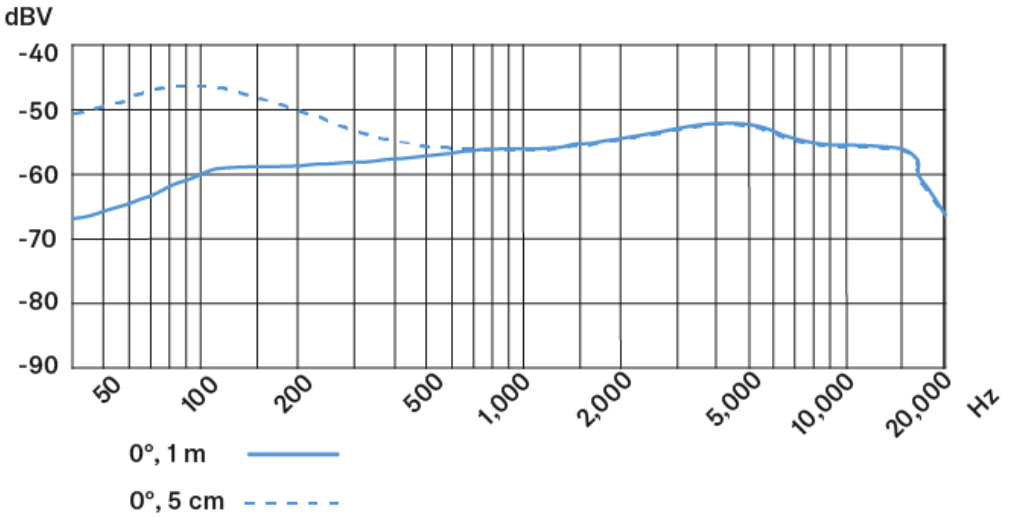
Weight

- 550 g

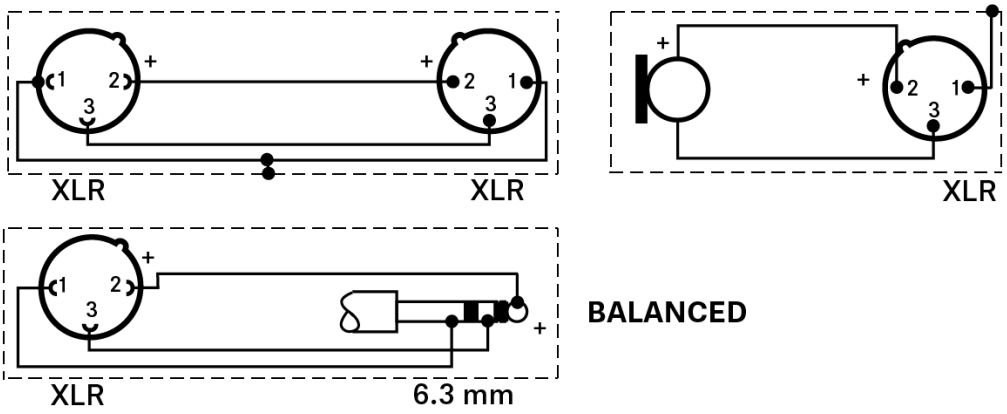
Polar pattern



Frequency response



Connector assignment



BALANCED

e 902

Specifications

Transducer principle

- dynamic

Frequency response

- 20 - 18,000 Hz

Pick-up pattern

- cardioid

Sensitivity (free field, no load)

- 0.6 mV/Pa (at 60 Hz)
- 0.2 mV/Pa (at 1 kHz)

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

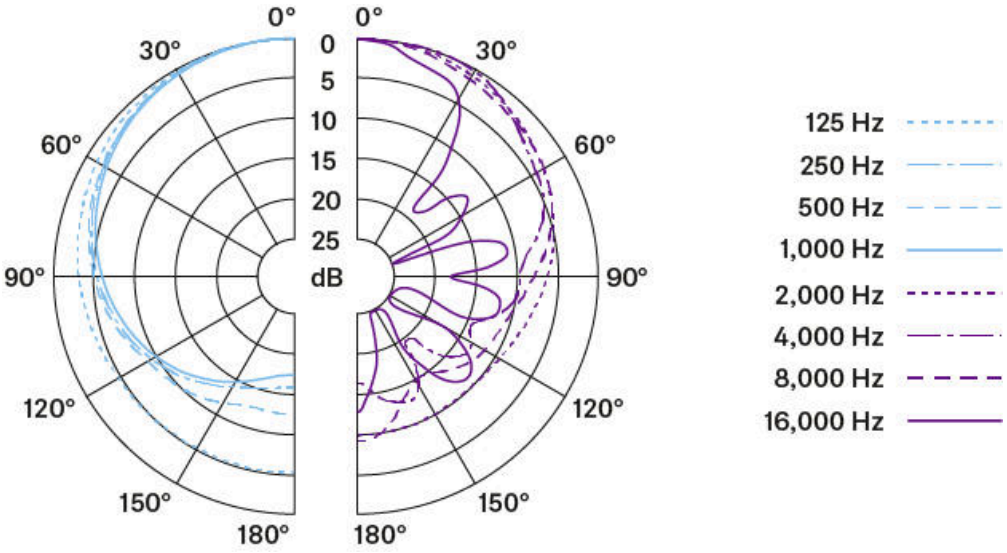
Dimensions

- Ø 60 x 128.5 mm

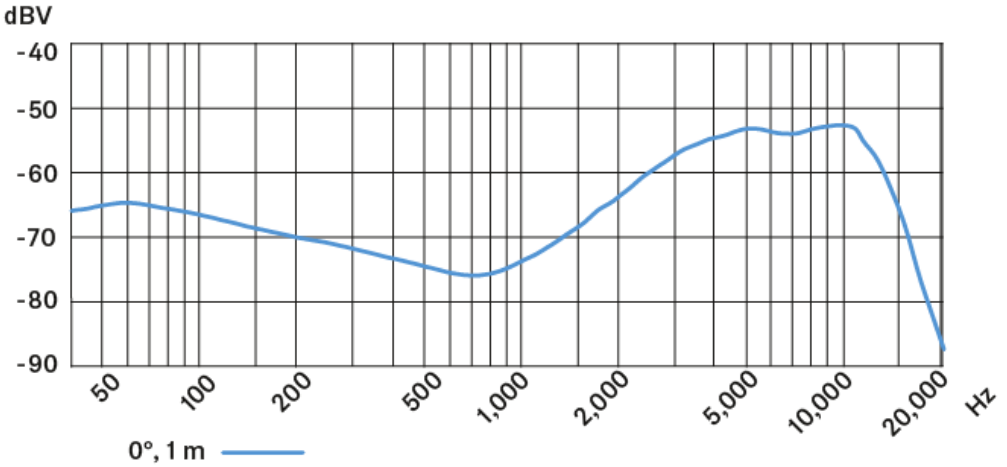
Weight

- 440 g

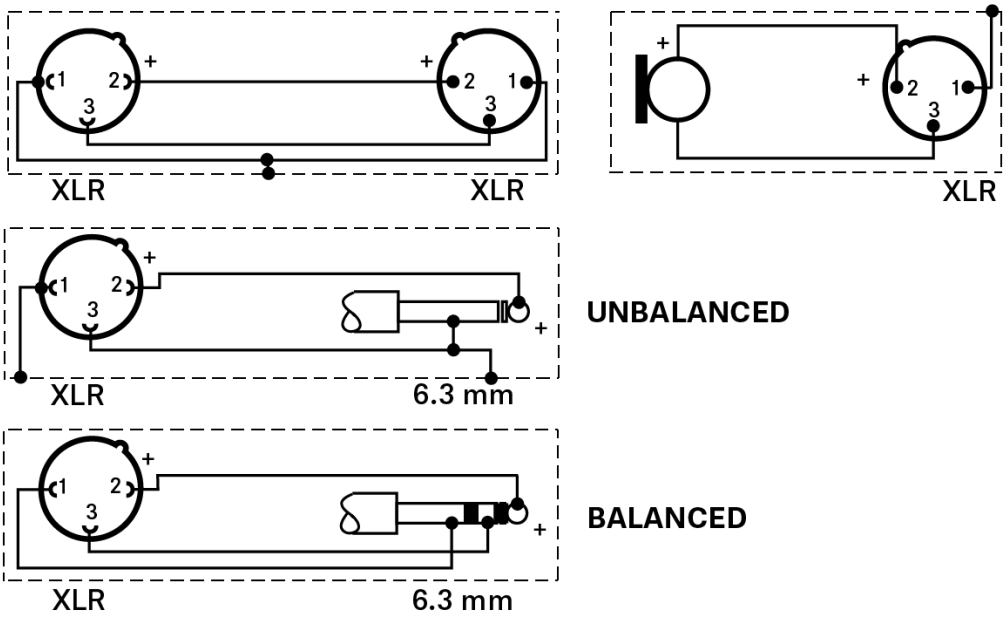
Polar pattern



Frequency response



Connector assignment



e 904

Specifications

Transducer principle

- dynamic

Frequency response

- 40 - 18,000 Hz

Pick-up pattern

- cardioid

Sensitivity (free field, no load)

- 2.0 mV/Pa

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

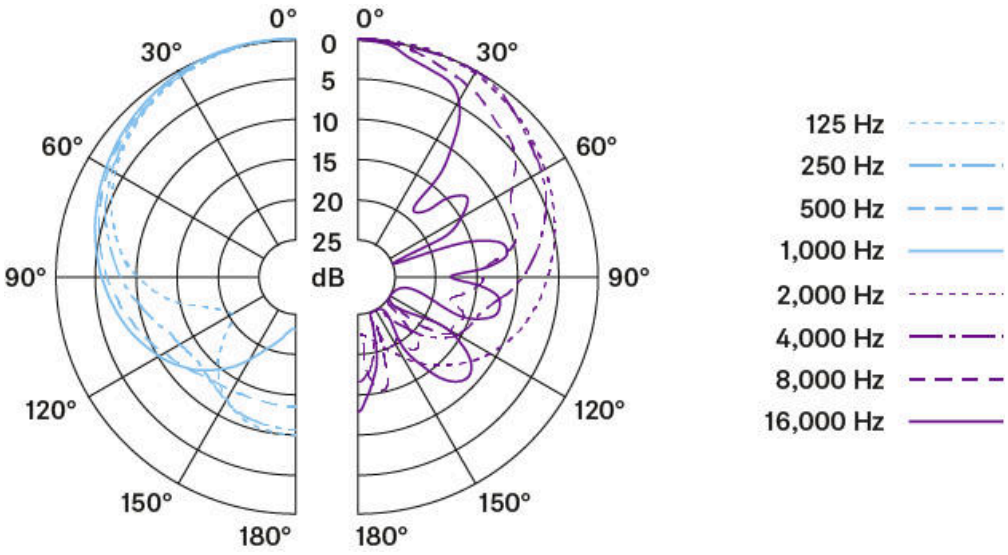
Dimensions

- Ø 41 x 63 mm

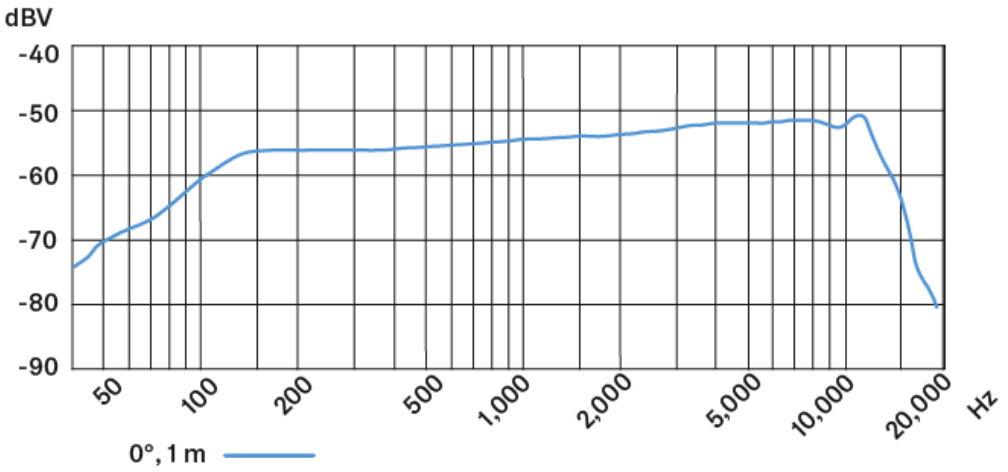
Weight

- 125 g

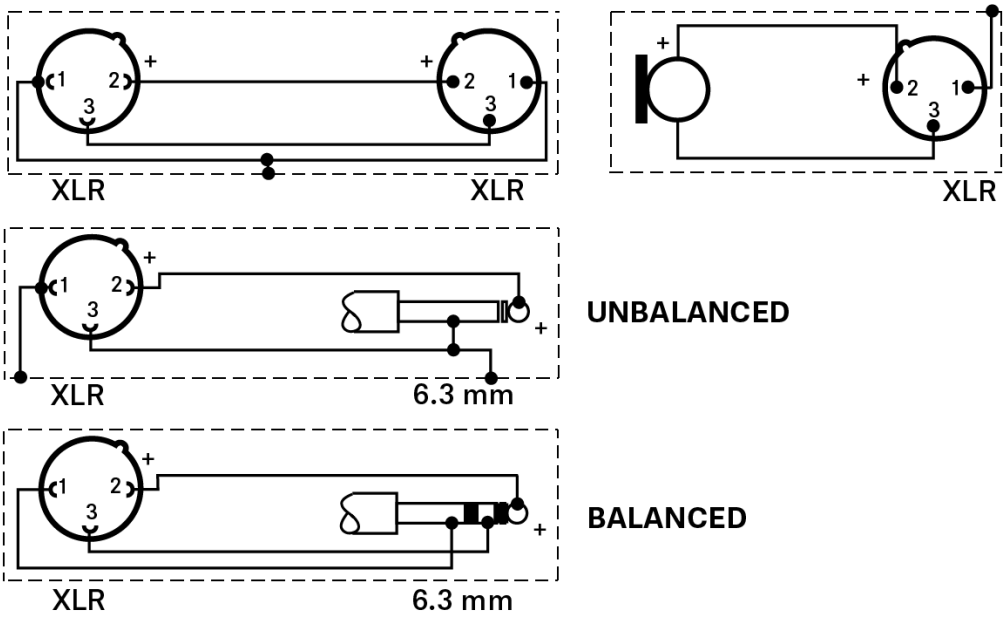
Polar pattern



Frequency response



Connector assignment



e 906

Specifications

Transducer principle

- dynamic

Frequency response

- 40 - 18,000 Hz

Pick-up pattern

- Supercardioid

Sensitivity (free field, no load)

- 2.2 mV/Pa

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

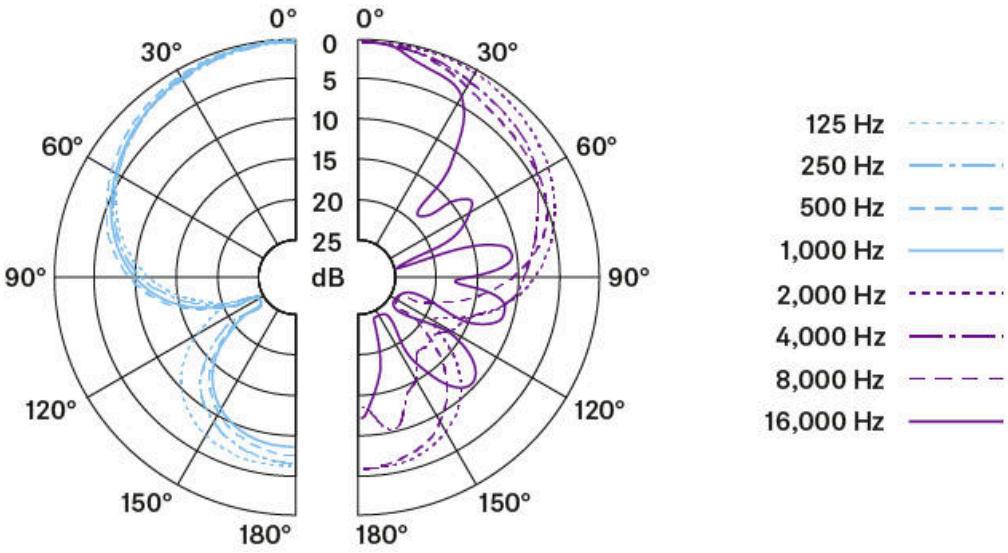
Dimensions

- 55 x 34 x 134 mm

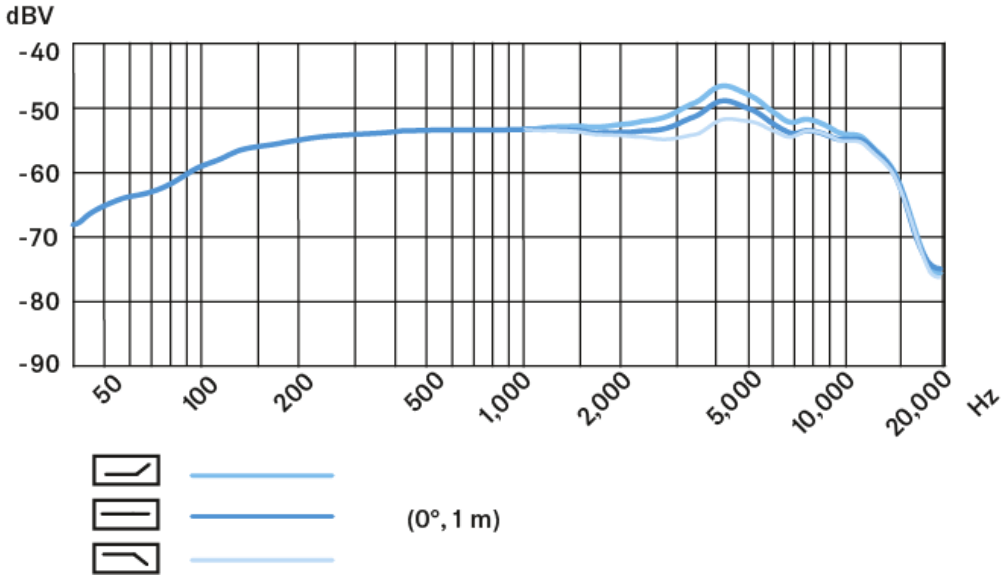
Weight

- 140 g

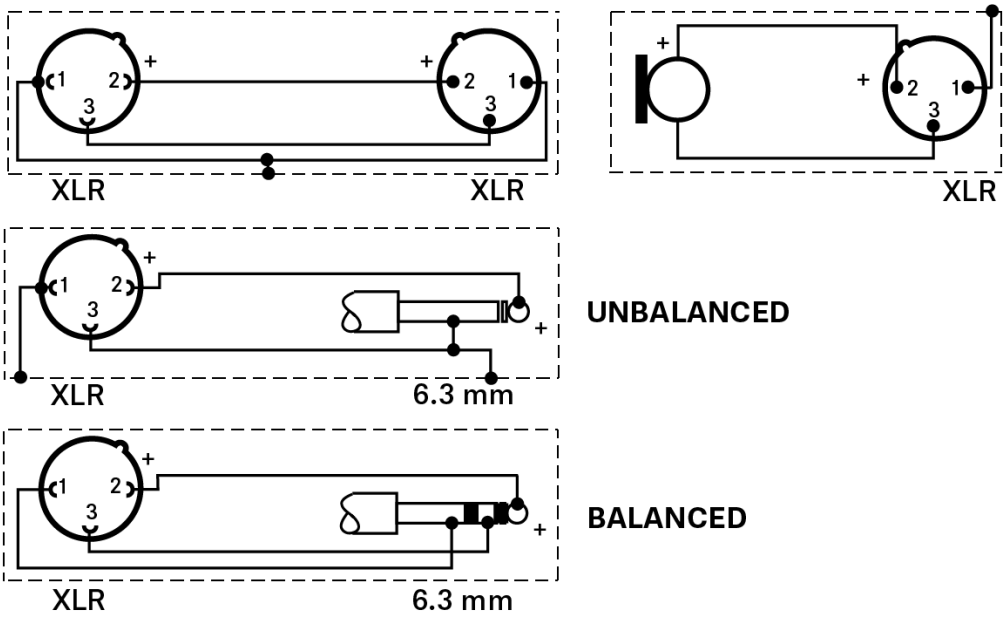
Polar pattern



Frequency response



Connector assignment



e 908

Specifications

Transducer principle

- pre-polarised condenser microphone

Frequency response

- 40 - 20,000 Hz

Pick-up pattern

- cardioid

Sensitivity (free field, at 1 kHz)

- 4.0 mV/Pa

Nominal impedance (at 1 kHz)

- 100 Ω (balanced)*

Min. terminating impedance

- 50 Ω

Max. sound pressure level

- 147 dB_{SPL} (k = 3%)

Equivalent noise level

- 30 dB (A)
- 35 dB (A)*

Phantom powering

- 12 - 48 V*

Connector

- e 908 B: XLR-3*
- 3.5 mm jack

Dimensions

- 47 x 193 mm

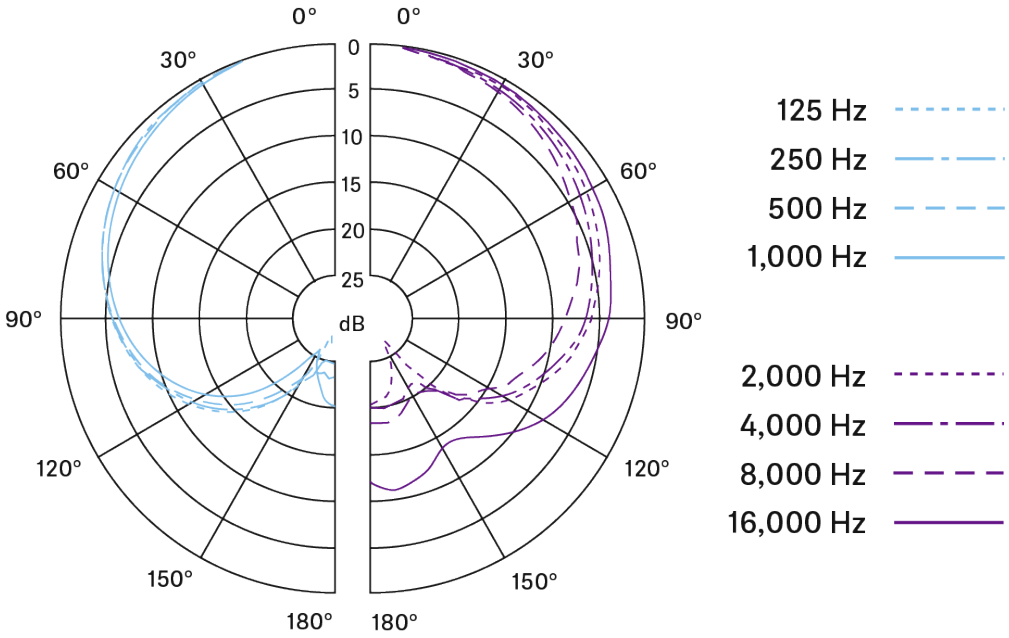
Weight

- 140 g*

* with MZA 900 P (e 908 B)

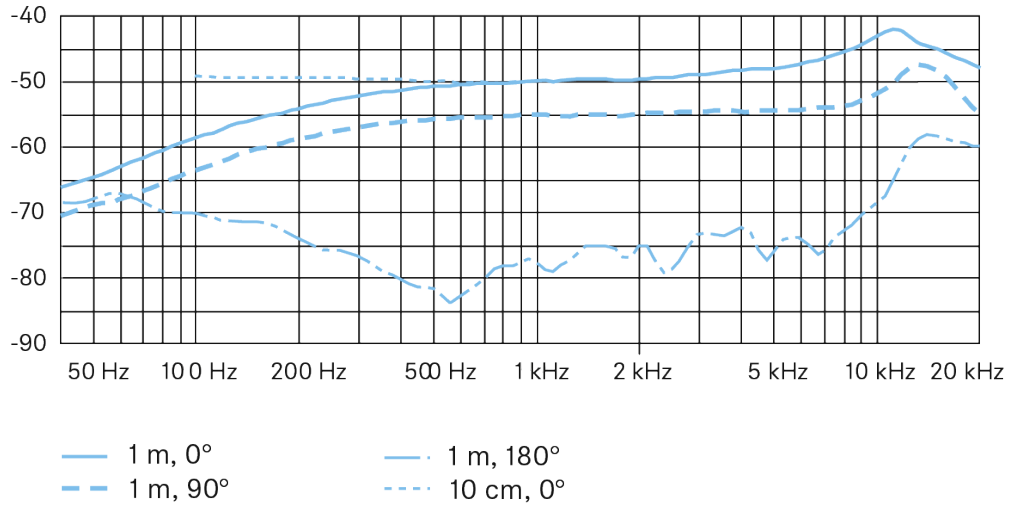
e 908 B ew for direct connection to ew transmitters

Polar pattern

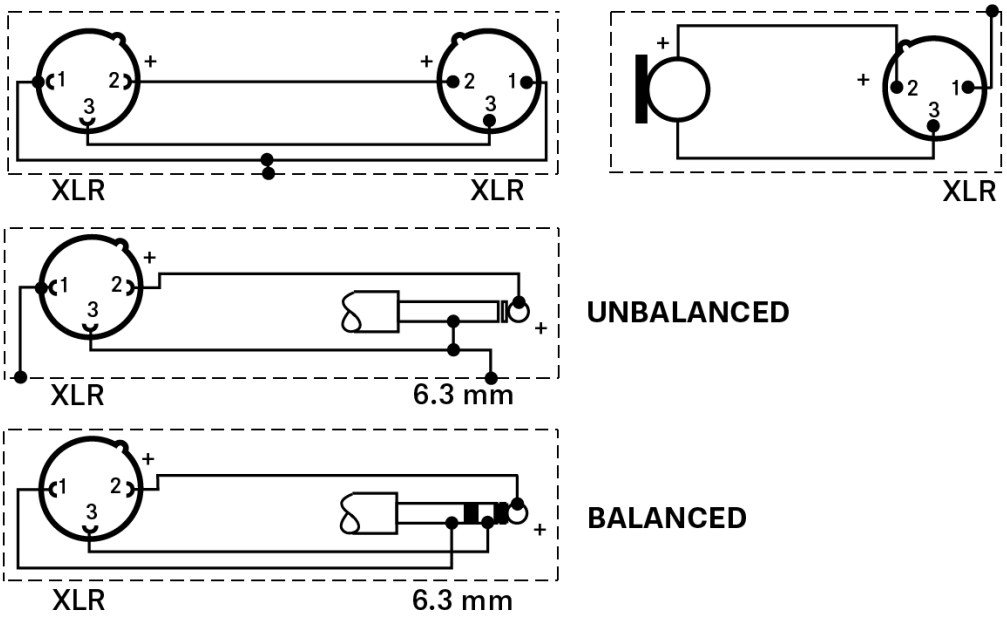


Frequency response

dBV/Pa



Connector assignment



e 914

Specifications

Transducer principle

- pre-polarised condenser microphone

Frequency response

- 20 - 20,000 Hz

Pick-up pattern

- cardoid

Sensitivity (free field, no load)

- 7 mV/Pa
- with pre-attenuation: 2.3 mV/Pa / 0.7 mV/Pa

Nominal impedance (at 1 kHz)

- 100 Ω

Min. terminating impedance

- 1 kΩ

Max. sound pressure level (at 1 kHz)

- 137/147/157 dB SPL (depending on pre-attenuation)

Equivalent noise level

- A-weighted: 24 db(A)
- CIIR-weighted: 34 dB

Pre-attenuation

- 0, -10, -20 dB

Bass filter

- linear
- roll-off 130 Hz, 6 dB/Okt
- cut-off 85 Hz, 18 dB/Okt

Phantom powering

- 48 V / 2.2 mA

Connector

- XLR-3

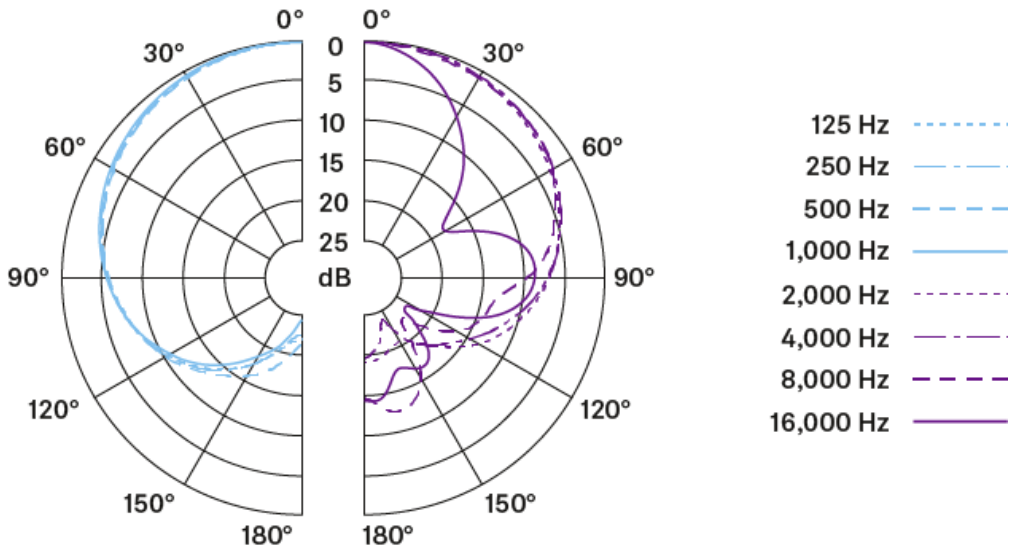
Dimensions

- Ø 24 x 157 mm

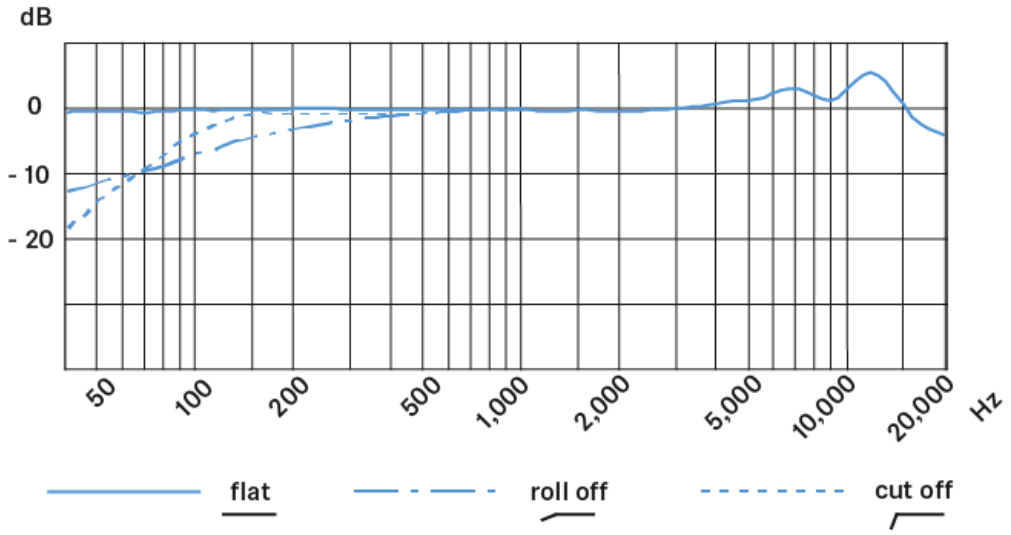
Weight

- 198 g

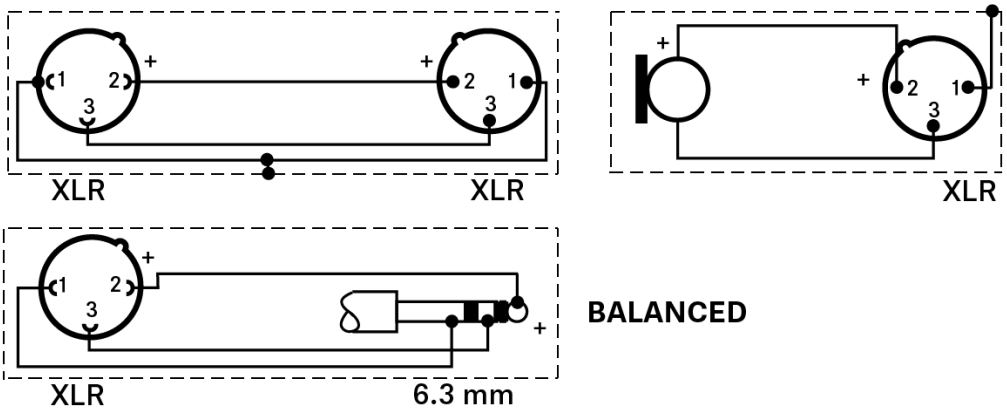
Polar pattern



Frequency response



Connector assignment



e 935

Specifications

Transducer principle

- dynamic

Frequency response

- 40 - 18,000 Hz

Pick-up pattern

- cardioid

Sensitivity (free field, no load)

- 2.8 mV/Pa

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

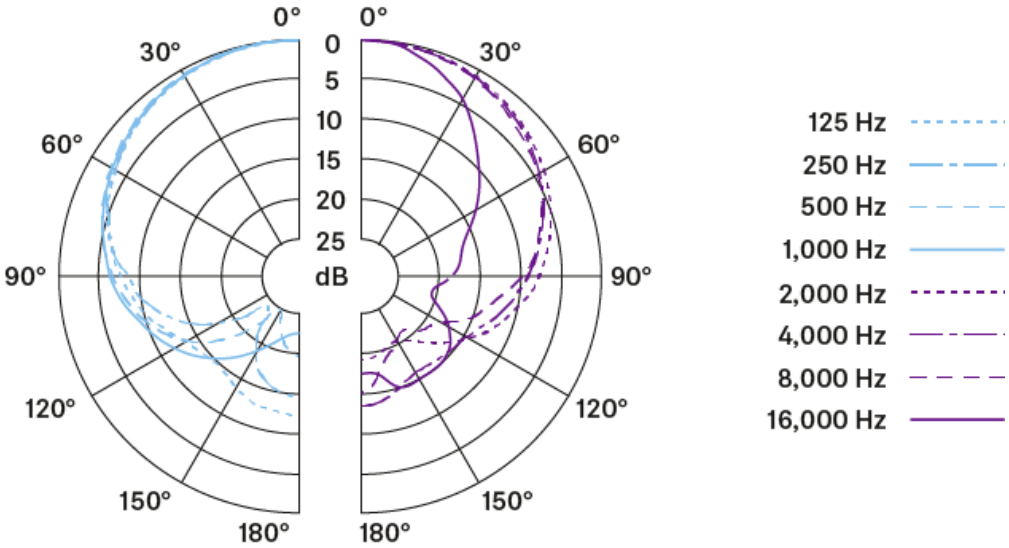
Dimensions

- Ø 47 x 151 mm

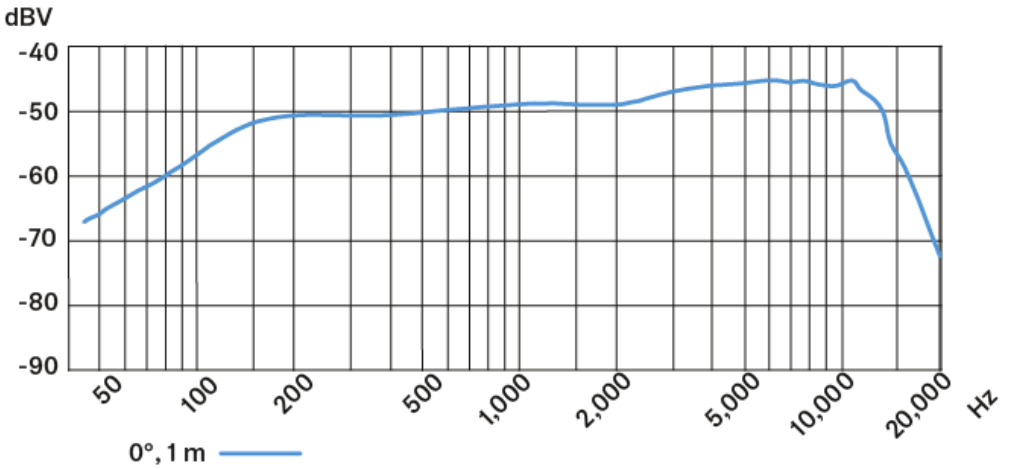
Weight

- 335 g

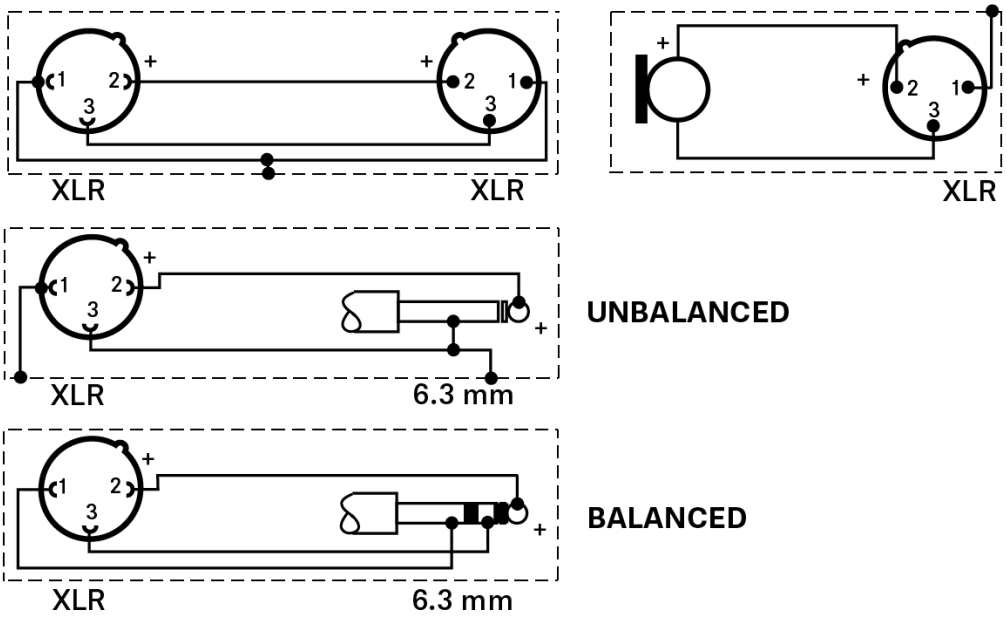
Polar pattern



Frequency response



Connector assignment



e 945

Specifications

Transducer principle

- dynamic

Frequency response

- 40 - 18,000 Hz

Pick-up pattern

- Supercardioid

Sensitivity (free field, no load)

- 2.0 mV/Pa ±3 dB

Nominal impedance (at 1 kHz)

- 350 Ω

Min. terminating impedance

- 1 kΩ

Connector

- XLR-3

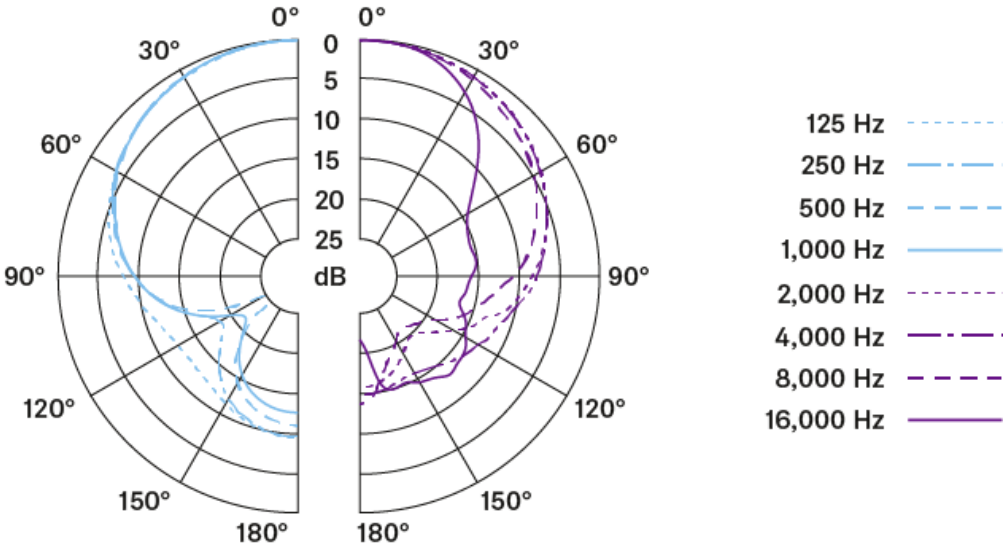
Dimensions

- Ø 47 x 186 mm

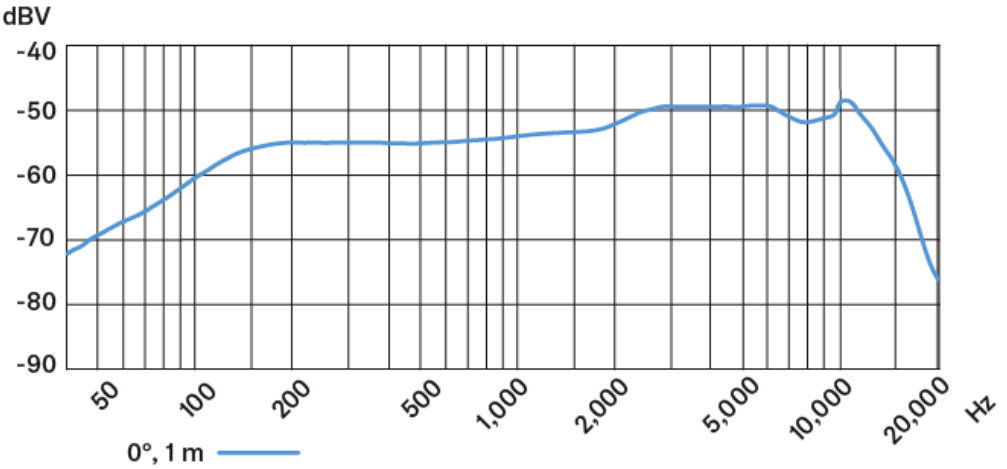
Weight

- 365 g

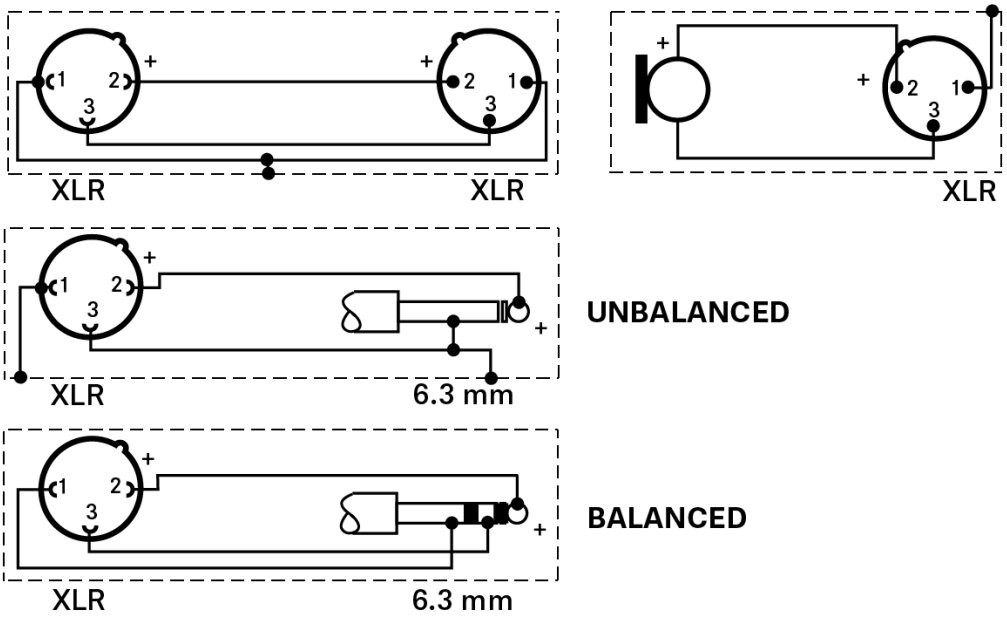
Polar pattern



Frequency response



Connector assignment



e 965

Specifications

Transducer principle

- externally polarized dual-diaphragm condenser microphone

Membran diameter

- 25.4 mm/1"

Frequency response

- 40 - 20,000 Hz

Pick-up pattern

- cardioid/supercardioid, switchable

Sensitivity (free field, no load)

- 7 mV/Pa
- with pre-attenuation: 2.3 mV/Pa

Nominal impedance (at 1 kHz)

- ca. 50 Ω

Min. terminating impedance

- 1 kΩ

Max. sound pressure level (at 1 kHz)

- 142 dB
- with pre-attenuation: 152 dB

Equivalent noise level

- 21 dB (A)

Phantom powering

- 48 V/3.5 mA

Connector

- XLR-3

Temperature range

- 0 °C to +40 °C

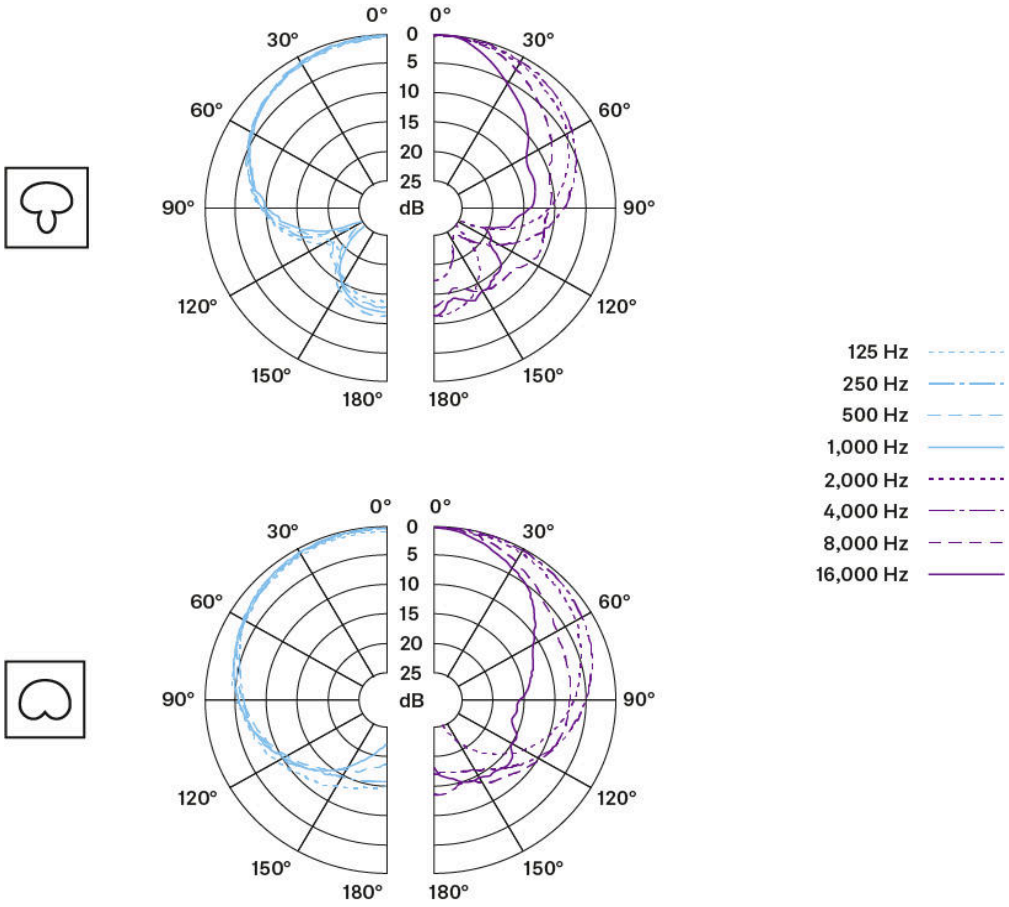
Dimensions

- Ø 48 x 199 mm

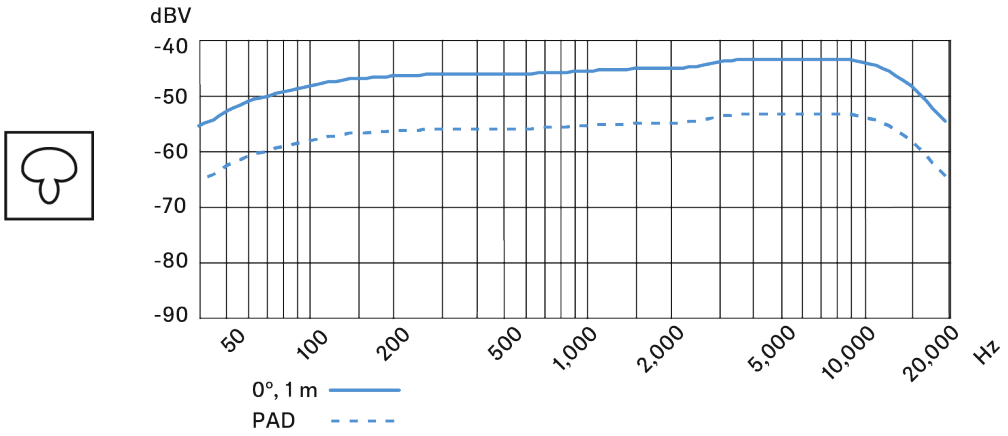
Weight

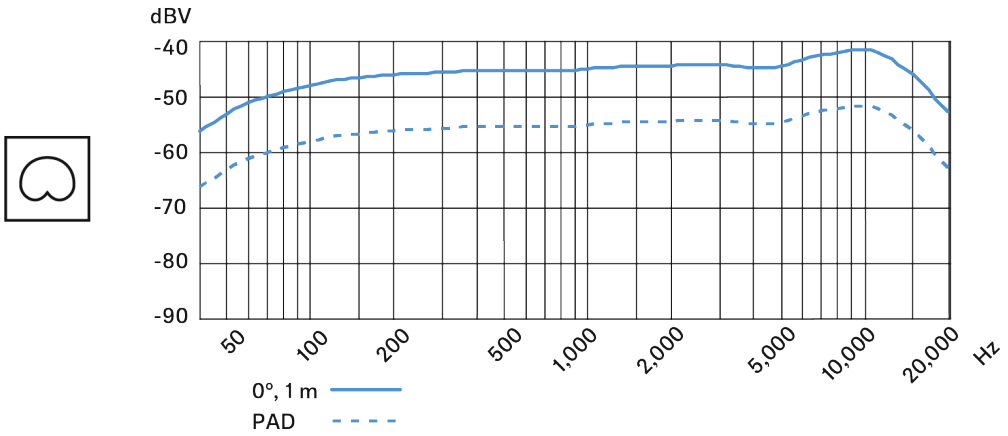
- 396 g

Polar pattern

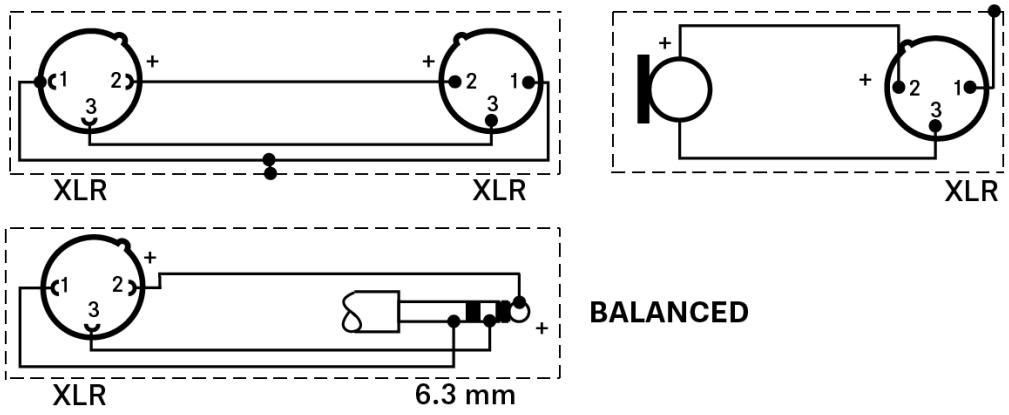


Frequency response





Connector assignment



MZA 900 P

Specifications

Frequency response

- 20 - 20,000 Hz (-1 dB)

Gain, switchable (Pre-attenuation)

- 0/-12 dB

Roll-off filter, switchable

- 125 Hz, (-3 dB), 12 dB/Okt

Max. output voltage at

- 0 dB gain: 1.8 V (P48); 0.6 V (P12)
- -12 dB gain: 0.45 V (P12 - P48)

Noise voltage at the output

- A-weighted: 3 µV (0/–12 dB)
- CIIR-weighted: 12 µV (0/–12 dB)

Output impedance

- 100 Ω

Min. load impedance at

- 0 dB pre-attenuation: 5 kΩ (P12 - P48)
- -12 dB pre-attenuation: 2 kΩ (P12 - P48)

Power supply

- P12 - P48
- 10 - 52 V
- 2.6 - 2.8 mA

Connector

- XLR-3 M

Input socket

- 3.5 mm jack socket, lockable

Temperature range

- -20 °C to +60 °C

Dimensions

- Ø 19/22 x 100 mm

Weight

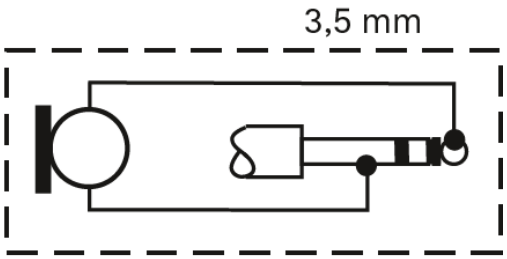
- 60 g

Humidity range

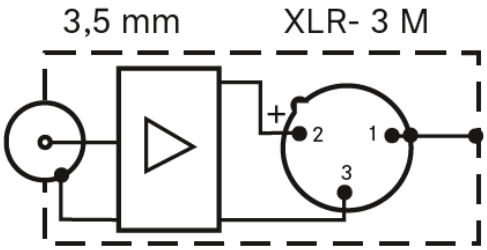
- < 95 % r. F.

Connector assignment

e 908



MZA 900 P



5. Regulatory Information

Information on manufacturer declarations, environmental and disposal notices, and terms of use.

Model: e 602 II, e 604, e 608, e 609 silver, e 614, e 825 S, e 835/e 835 S/e 835-S-PTT, e 845/e 845 S, e 865/e 865 S, e 901, e 902, e 904, e 906, e 908, e 914, e 935, e 945, e 965

Warranty

Sennheiser electronic SE & Co. KG gives a warranty of 24 months on these products.

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

In the US please contact:

Sennheiser Electronic Corporation

1 Enterprise Drive, Old Lyme, CT 06371

www.sennheiser.com

Warranty for Australia and New Zealand only

Sennheiser Australia Pty Ltd provides a warranty of 24 months on these products. For the current warranty conditions, visit Sennheiser website: Australia: sennheiser.com, New Zealand: sennheiser.com

Sennheiser goods come with guarantees that cannot be excluded under Australian and New Zealand Consumer law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

This warranty is in addition to other rights or remedies under law. Nothing in this warranty excludes, limits or modifies any remedy available to be consumer which is granted by law.

To make a claim under this contract, raise a case via Sennheiser website. Australia: sennheiser.com/support, New Zealand: sennheiser.com/support

All expenses of claiming the warranty will be borne by the person making the claim.

Sennheiser international warranty is provided by: Sennheiser Australia Pty Ltd (ABN 68 165 388 312) Level 14, Tower A Zenith Building, 821 Pacific Highway, Chatswood NSW 2067, Australia

Europe

CE

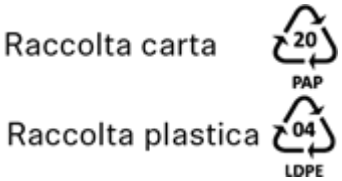
In compliance with the following requirements

- Regulation (EU) 2023/988 on general product safety
- WEEE Directive (2012/19/EU)

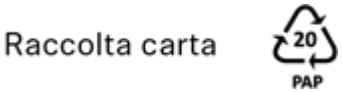


Italy:

- e 602 II, e 604, e 608, e 609 silver, e 614, e 825 S, e 835/ e 835 S/ e 835-S-PTT/ e 835-S-PTT, e 845/e 845 S, e 865/e 865 S, e 901, e 902, e 904, e 906, e 908, e 914, e 935, e 945:

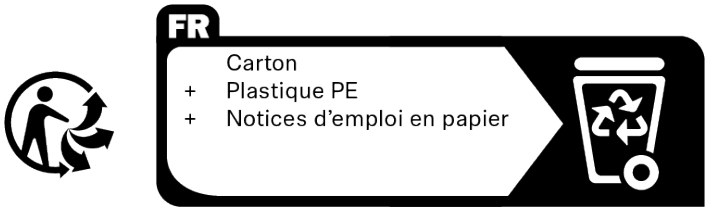


- e 965:

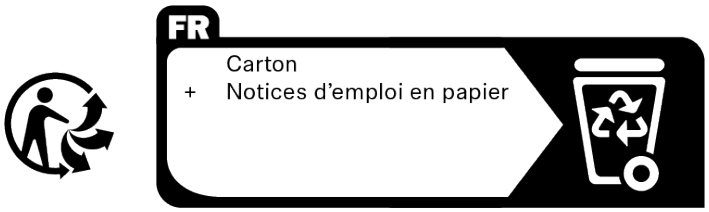


France:

- e 602 II, e 604, e 608, e 609 silver, e 614, e 825 S, e 835/ e 835 S/ e 835-S-PTT/ e 835-S-PTT, e 845/e 845 S, e 865/e 865 S, e 901, e 902, e 904, e 906, e 908, e 914, e 935, e 945:



- e 965:



Notes on disposal

The symbol of the crossed-out dumpster on the product, the (rechargeable) battery (if applicable) and/or the packaging indicates that these products must not be disposed of with normal household waste, but must be disposed of separately at the end of their service

life. For the packaging, follow the regulations in your country for separating waste. Improper disposal of packaging materials can be harmful to your health and the environment.

The separate collection of waste electrical and electronic equipment, (rechargeable) batteries (if applicable) and packaging is intended to promote reuse and recycling and to prevent negative impacts on public health and the environment, for example due to hazardous substances contained in these products. At the end of their service life, recycle electrical and electronic equipment and (rechargeable) batteries so that their materials can be reused and to prevent environmental pollution.

If (rechargeable) batteries can be removed without destroying them, you are obliged to dispose of them separately (see the product's operating instructions for information on how to remove the batteries safely). Be especially careful when handling (rechargeable) batteries containing lithium, as these pose special hazards, such as the risk of fire and/or health risks if button cells are swallowed. Reduce battery waste as much as possible by using longer-life batteries or rechargeable batteries.

Further information on the recycling of these products can be obtained from your municipal administration, from the municipal collection points, or from your Sennheiser partner. You may also be able to return electrical or electronic equipment to your distributor, if they are legally required to do so. By disposing of your batteries properly, you are helping to protect public health and the environment.

EU Declaration of conformity

- RoHS Directive (2011/65/EU)
- e 865/e 865 S, e 901, e 914, e 965: EMC Directive (2014/30/EU)

The full text of the EU declaration of conformity is available at the following internet address: sennheiser.com/download.

United Kingdom

UK CA

In compliance with the following requirements

- WEEE Regulations (2013)



UK Declaration of conformity

- RoHS Regulations (2012)
- e 865/e 865 S, e 901, e 914, e 965: EMC Regulations (2016)

Importer: Sennheiser UK Ltd.

Pacific House, Third Avenue, Globe Park, Marlow

Buckinghamshire SL7 1EY, United Kingdom

Vietnam

Kể từ ngày 1 tháng 12 năm 2012, các sản phẩm được sản xuất bởi Sennheiser tuân thủ Thông tư 30/2011/TT-BCT quy định về giới hạn cho phép đối với một số chất độc hại trong các sản phẩm điện và điện tử.

China

China RoHS

部件名称 (Parts)	有害物质										
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)	邻苯二甲酸二(2-乙基己)酯 (DEHP)	邻苯二甲酸丁苄酯 (BBP)	邻苯二甲酸二丁酯 (DBP)	邻苯二甲酸二异丁酯 (DIBP)	产品环保年限 EFUP
金属部件 (Metal parts)	x	o	o	o	o	o	o	o	o	o	15
电路模块 (Circuit Modules)	x	o	o	o	o	o	o	o	o	o	15
电缆及电缆组件 (Cables & Cable Assemblies)	x	o	o	o	o	o	o	o	o	o	15

本表格依据 SJ/T 11364 的规定编制。
o: 表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572 规定的限量要求以下。
x: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572 规定的限量要求。



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