

MKH 8090

Studio microphone



Instruction manual

Important safety information

- Please read this instruction manual carefully and completely before using the product.
- Make this instruction manual easily accessible to all users at all times.
- Always include this instruction manual when passing the product on to third parties.
- This instruction manual is also available at www.sennheiser.com.

Before operation

- Never open the housing of the product. If products are opened by customers in breach of this instruction, the warranty becomes null and void.

During operation

- Keep all liquids away from the product. Liquids entering the product can short-circuit the electronics or damage the mechanics.
- Only use a soft, slightly damp cloth to clean the product. Solvents or cleansing agents can damage the surface of the product.
- Only use the product within the specified temperature range (see “Specifications” on page 6).

After operation

- Use the product with care and store it in a clean, dust-free environment.

Intended use

Intended use includes:

- having read this instruction manual, especially the chapter “Important safety information”,
- using the product within the operating conditions and limitations described in this instruction manual.

“Improper use” means using the product other than as described in this instruction manual, or under operating conditions which differ from those described herein.

The MKH 8090

The MKH 8090 is a high-end wide cardioid studio condenser microphone from the modular MKH 8000 microphone series. This RF condenser microphone is especially suitable for orchestral recordings because it can be used both as a main microphone and as a support microphone.

The microphone operates on the RF principle that has been used by Sennheiser for more than 50 years, now brought to highest level of perfection. Among the many advantages of this principle are an extremely low inherent self-noise, the capability to handle high sound pressure levels without distortion and a high resistance to adverse climatic conditions.

- Wide cardioid pick-up pattern
- Very natural sound
- Can be used as an analog or – with the digital module – digital microphone
- Exceptionally low inherent self-noise prevents masking of delicate sound structures
- Symmetrical transducer technology ensures extremely low distortion
- Transformerless and fully floating balanced output: no coupling of spurious signals, minimal distortion
- High output signal voltage ensures interference-free signal paths
- Rugged metal housing with non-reflective Nextel coating
- Extremely weather-proof due to high-frequency circuit
- Versatile use due to the extensive range of accessories available for the MKH 8000 series, e.g.:
 - MZD 8000 digital module
 - MZF 8000 filter module
 - Windshield systems
 - Shock mounts



A list of accessories can be found on the MKH 8090 product page at www.sennheiser.com. For information on suppliers, contact your local Sennheiser partner: www.sennheiser.com > “Service & Support”.

Delivery includes



Microphone, consisting of the MKH 8090 microphone head and the MZX 8000 XLR module



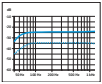
MZQ 8000 microphone clamp
(thread adaptor included for 3/8" and 5/8" threads)



MZW 8000 double-layered windshield



Instruction manual

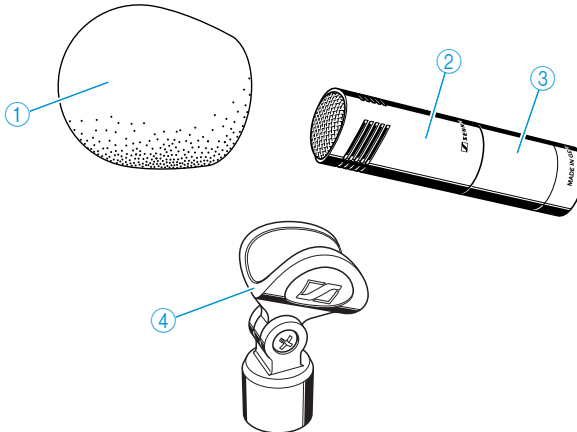


Frequency response sheet



Carrying case

Product overview



① Windshield, double-layered

③ XLR module

② Microphone head

④ Microphone clamp (thread adaptor included for 3/8" and 5/8" threads)

Putting the MKH 8090 into operation

Connecting the microphone

Connection data of the MKH 8090:

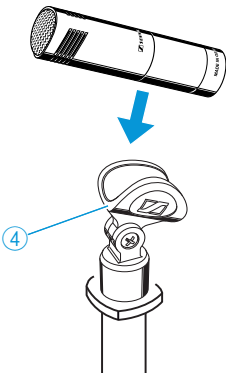
- 48 V \pm 4 V phantom powering (P48, as per IEC 61938)
- XLR-3 connector, balanced

To connect the MKH 8090 to a mixing console or recording device:

- ▶ Connect the socket of the microphone cable to the microphone.
- ▶ Connect the connector of the microphone cable to the mixing console or recording device.

Attaching the microphone

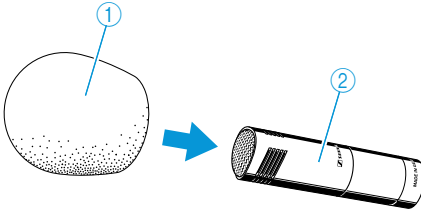
- ▶ Select the suitable mounting thread:
 - Without thread insert: 5/8" thread
 - Thread insert: 3/8" thread
- ▶ Screw the microphone clamp ④ to a stand.
- ▶ Place the microphone with its back end into the microphone clamp: Make sure that the lateral slots are **not** covered.
- ▶ Orient the microphone together with the microphone clamp.



Using the windshield

The windshield changes the sound only slightly, but attenuates wind noise by approx. 30 dB.

- ▶ Place the MZW 8000 windshield ① over the microphone head ② so that all lateral slots are covered.

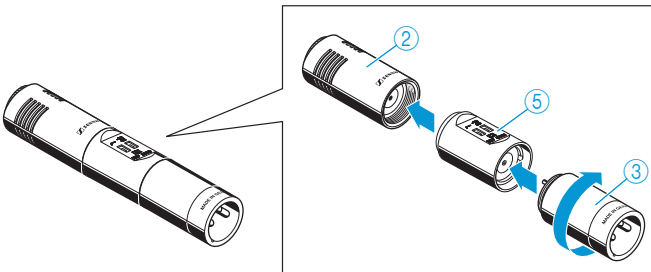


i Alternative windshields are available as accessories and can be found on the MKH 8090 product page at www.sennheiser.com.

Retrofitting and extending the microphone

You can retrofit and extend the microphones of the modular MKH 8000 microphone series by exchanging the microphone head or by using optional modules.

- ▶ Disconnect all cables from the microphone.
- ▶ Unscrew the microphone head ② from the XLR module ③.
- ▶ Add, for example, the MZF 8000 filter module ⑤.
- ▶ Screw the modules together again.



Cleaning and maintaining the microphone

CAUTION

Damage to the product due to liquids!

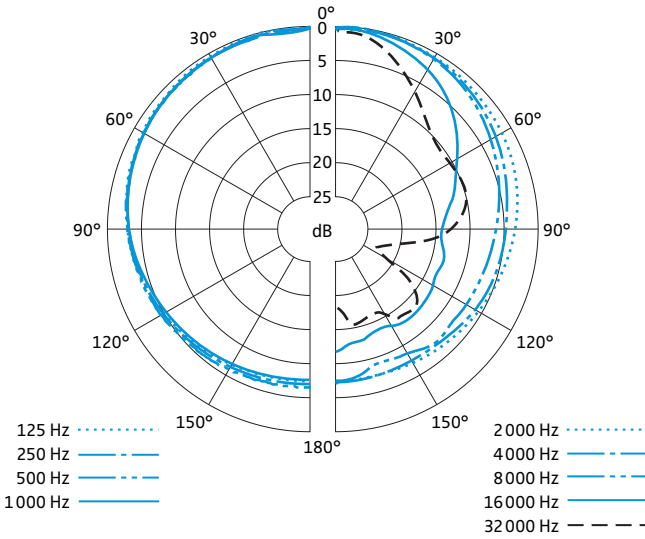
Liquids entering the product can short-circuit the electronics or damage the mechanics. Solvents or cleansing agents can damage the surface of the product.

- ▶ Keep all liquids away from the product.
- ▶ Only use a soft, slightly damp cloth to clean the product.

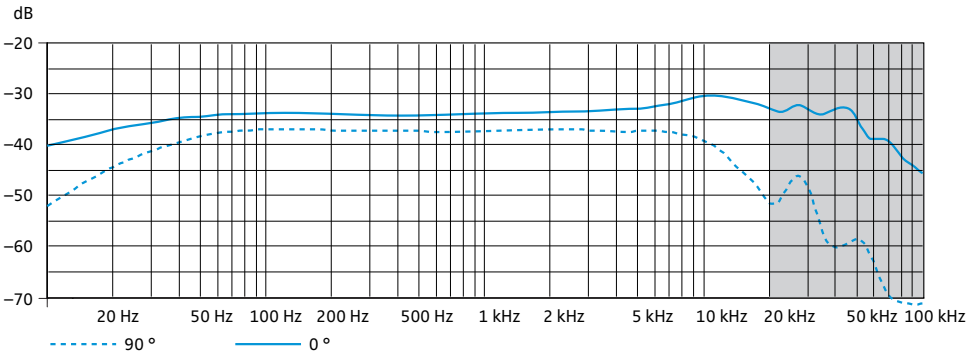
Specifications

Pick-up pattern	wide cardioid
Frequency response	30 Hz to 50 kHz
Sensitivity	–34 dBV/Pa (20 mV/Pa) –44 dBV/Pa (6.3 mV/Pa) with MZF 8000 filter module
Max. SPL	142 dB SPL with and without MZF 8000 filter module
Equivalent noise level	13 dB(A) (DIN-IEC 651) 23 dB (CCIR 268-3)
Nominal impedance	25 Ω
Min. terminating impedance	2 k Ω
Phantom powering	48 V \pm 4 V (P48, IEC 61938)
Current consumption	3.3 mA
Diameter	approx. 19 mm
Length	approx. 41 mm approx. 75 mm with MZX 8000 XLR module
Weight	approx. 25 g approx. 55 g with MZX 8000 XLR module
Operating temperature	–10°C to 60°C

Polar diagram



Frequency response curve



Manufacturer Declarations

Warranty

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

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

In compliance with the following requirements

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






Please dispose of this product by taking it to your local collection point or recycling center for such equipment.

CE Declaration of Conformity

- EMC Directive (2004/108/EC)

The declaration is available at www.sennheiser.com.

In compliance with:

Europe	 EMC EN 55103-1/-2
USA	FCC 47 CFR 15 subpart B
Canada	Industry Canada ICES_003
China	
Australia/ New Zealand	



Sennheiser electronic GmbH & Co. KG

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

Printed in Germany, Publ. 09/12, 544742/A01