

 SENNHEISER



Discover the
Soul of
Sound



MKH 8000 Series Microphones



Sound With a Soul: Sennheiser's New MKH Microphones

Sennheiser has taken its sophisticated MKH series of radio-frequency condenser microphones one step further: with the MKH 8020, MKH 8040 and MKH 8050, the audio specialist is introducing three new high-end microphones that fulfil the most exacting demands on sound quality and versatility. Extremely low inherent self-noise, an exceptionally wide frequency response for the new high sampling rate digital audio formats and a very compact design make them an ideal choice for the most demanding classical music recordings, for broadcast use and for stage & film applications.

The new MKH 8000 Series has been designed to capture the soul of sound, reproducing the music with an unprecedented warmth and transparency. Without taking away from the unique clarity that MKH symmetrical microphones are famous for, the new 8000 series has a natural subtle warmth that has to be heard to be appreciated. Voices will sound rich and detailed, piano, strings and wind instruments will have that special "character", while percussive instruments benefit from a fast attack and a dynamic, powerful reproduction. The end of the year will see the launch of a digital module for the new MKH microphones, taking their superb sound into the digital area.

With these unique microphones, Sennheiser has succeeded in creating a superb synthesis of sound aesthetics and engineering perfection.

Features That Make a Difference

Modular design: Extremely compact and elegant, the new MKH microphones have a diameter of just 19 mm and a length of only 74 mm. Yet, they can become even more unobtrusive. The microphones can be split into the actual microphone head, which contains all acoustic and electronic components, and the XLR module. The small microphone head (only 41 mm long) is attached to one of Sennheiser's special capsule remote accessories, while the XLR connector module is attached outside the camera angle, making the MKHs virtually invisible on stage.

Special symmetrical capsule: The MKH capsules incorporate a symmetrical design with the diaphragm located between the normal back plate and an additional, identical front plate. This design provides both acoustical and electrical symmetry and is the most powerful way to eliminate transducer non-linearity and accompanied harmonic and intermodulation distortion. Their unique symmetrical construction enables the MKH microphones to pick up subtleties in the music lost to other microphones – for instance, the subtle harmonics in unaccompanied choir, the complex sound patterns of a 12-string guitar and much more...

Extremely low inherent self-noise: While the inherent noise in conventional microphones tends to mask quieter sounds and thus limits the dynamic range, the MKH microphones employ the unique principle of the radio-frequency condenser microphone, resulting in an outstandingly low self-noise. The special capsule design reflects the frequency-dependent response of the human hearing, and provides an excellent signal-to-noise ratio in the frequency range where the human ear is most sensitive to noise. This results in small-diaphragm MKH microphones being quieter even than most large-diaphragm condenser microphones.

Extended high-frequency response: The acoustic properties of the MKH capsule design enable the high-frequency response to be extended beyond the limits of the standard audio CD format, enabling these microphones to fully utilise the potential of new digital recording formats with higher sampling rates.

Accurate directional patterns: All directional patterns have been carefully designed for minimal deviation from the ideal patterns over the entire frequency range. The unique technical design characteristics of the MKH symmetrical microphone series means that the designer no longer has to make compromises between frequency response, polar pattern and low noise – now he can have it all: wide frequency response, ultra low noise and a polar response close to the theoretical ideal.

Nextel® coating: All MKH 8000 Series microphones and accessories are coated with black Nextel®, ensuring that there will be no disturbing reflections even in the brightest of film and television lights.

Intelligent accessories: A wide range of accessories enables the microphones to be used under many and varied conditions of the most demanding classical music recordings, of broadcast use, filming and any stage application. The accessories are suitable for stereo or dual mono applications and some of them have been designed to carry the audio signal to enable even more compact microphone set-ups. A digital module that transmits audio signals according to the AES 42 standard (24 bit, 192 kHz sampling rate) will be available from the end of 2007.



Microphone Types



MKH 8020

The omni-directional MKH 8020 is ideal for recording large and small sound sources, for a "Decca Tree" or for use in an OSS "Jecklin Disk" array. As it does not suffer from a proximity effect, it is also a good choice for close-miking. If the acoustic ambience is right, this microphone will provide very impressive recordings. The extra octave at the bottom end makes the MKH 8020 perfect for recording pipe organs, grand piano and acoustic double-bass.

- Omni-directional pick-up pattern
- Frequency response 10 to 60,000 Hz
- Ideal for stereo and surround recordings, as an M microphone and for ambience



MKH 8040

The cardioid MKH 8040 is suitable for almost any application. It considerably reduces pick-up of a reverberant room. This is very helpful in rooms with poor acoustics or when disturbing sounds impinge mainly from the rear.

- Cardioid pick-up pattern
- Frequency response 30 to 50,000 Hz
- Ideal as a spot microphone and for surround recordings



MKH 8050

The super-cardioid MKH 8050 will give higher attenuation of off-axis sound from the side than its cardioid sister model. It is a good choice for recording soloists, where the requirements for lateral acoustic separation are higher.

- Super-cardioid pick-up pattern
- Frequency response 30 to 50,000 Hz
- Provides optimum separation of instruments

Accessories

An extensive range of accessories will ensure that your MKH 8000 microphones are always optimally positioned – whatever the miking requirement, whatever their use. The accessories feature a slim and elegant design, and have the same non-reflective black Nextel® coating as the microphones. All accessories are designed for handling stereo signals – either mechanically, e.g. the clips, or electrically, e.g. the MZE extension tubes that carry the signal.

Floor Stands: A versatile system that can be tailored to your miking needs. All vertical elements are protected against coming loose. A reliable solution for instruments and vocals.



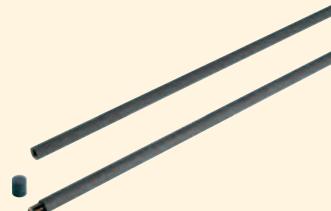
MZE 8015 / MZE 8060 / MZE 8120 Extension tube

Special bar that carries the audio signal. The microphone head is attached to the front, the XLR module to the end. Available in lengths of 15, 60 and 120 cm.



MZGE 8000 / MZGE 8002 Bar connector

Joins vertical bars with one or two extension tubes.



MZEF 8060 / MZEF 8120 Vertical bars

Available in lengths of 60 or 120 cm, standard 3/8" thread.



MZFS 8000 Floor stand

Heavy design, insensitive to structure-borne noise.

Table Stands: Your ideal choice for the broadcast studio or lecterns at shows and special events.



MZT 8000

Classic metal table stand, sturdy and robust.



MZT 8001

Elegant table stand with acrylic base.

MKH 8020



Pick-up pattern	omni-directional
Frequency response	10 Hz to 60 kHz
Sensitivity (free field, no load, at 1 kHz)	-30 dBV/Pa (31 mV/Pa)
Sound pressure level	138 dB SPL
Equivalent noise level	10 dB (A) (A-weighted, DIN 651), 21 dB (CCIR-weighted, CCIR 268-3)
Output signal	balanced, transformerless, floating
Output impedance	25 Ω
Min. terminating impedance	1,000 Ω
Phantom power supply	48 V ± 4 V
Supply current	3.3 mA
Diameter	19 mm
Length of microphone module	41 mm (74 mm including XLR module)
Weight	25 g (55 g including XLR module)

MKH 8040



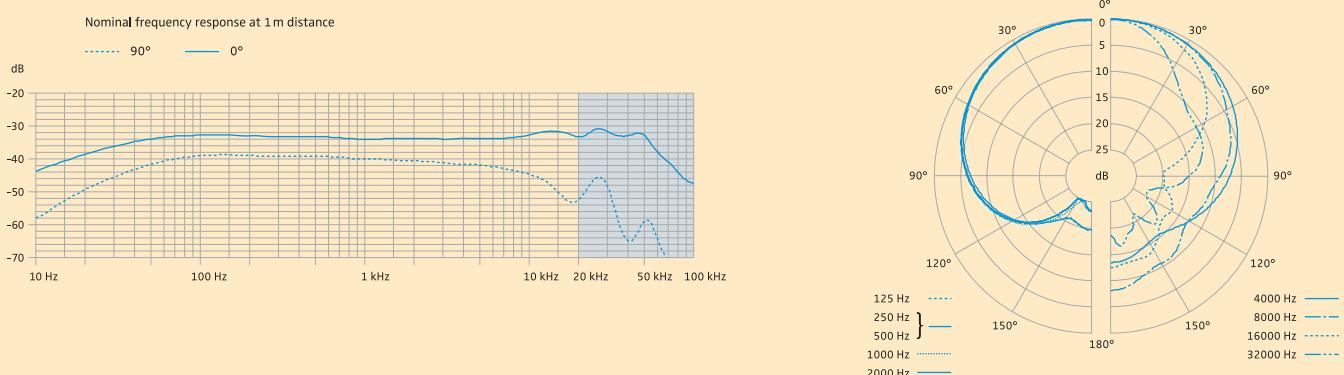
Pick-up pattern	cardioid
Frequency response	30 Hz to 50 kHz
Sensitivity (free field, no load, at 1 kHz)	-34 dBV/Pa (20 mV/PA)
Sound pressure level	142 dB
Equivalent noise level	13 dB(A) (A-weighted, DIN 651), 22 dB (CCIR-weighted, CCIR 268-3)
Output signal	balanced, transformerless, floating
Output impedance	25 Ω
Min. terminating impedance	1,000 Ω
Phantom power supply	48 V ± 4 V
Supply current	3.3 mA
Diameter	19 mm
Length of microphone module	41 mm (74 mm including XLR module)
Weight	25 g (55 g including XLR module)

MKH 8050



Pick-up pattern	super-cardioid
Frequency response	30 Hz to 50 kHz
Sensitivity (free field, no load, at 1 kHz)	-34 dBV/Pa (20 mV/PA)
Sound pressure level	142 dB
Equivalent noise level	13 dB(A) (A-weighted, DIN 651), 22 dB (CCIR-weighted, CCIR 268-3)
Output signal	balanced, transformerless, floating
Output impedance	25 Ω
Min. terminating impedance	1,000 Ω
Phantom power supply	48 V ± 4 V
Supply current	3.3 mA
Diameter	19 mm
Length of microphone module	41 mm (74 mm including XLR module)
Weight	25 g (55 g including XLR module)

Technical Data





MZS 8000 Shock mount

Flexible suspension in a very compact design; effectively suppresses the transmission of structure-borne noise.



MZQ 8001 Mini clip

Miniature clamp, ideal if the microphone is used with a remote cable; 3/8" standard thread.



MZQ 8000 Microphone clip

Standard clip, included in the delivery of the MKH 8000 microphones.



MZG 8000 Swivel joint

Designed for desktop mounting in conjunction with the MZS 31 elastic suspension; carries the audio signal and provides the connector for the XLR module.



MZW 8000 Windshield

Double-layer design for efficient reduction of wind and pop noise.



MZH 8000 Ceiling mount

With cable guide. Adjustable for optimum alignment of the microphone with the sound source.



MZL 8003/8010 Remote cable

Connects between the microphone head and the XLR module to make the microphone extremely unobtrusive (ideal for almost invisible use hanging from the ceiling); available in lengths of 3 m and 10 m.

