

Reference Microphones



4007 Reference Microphone, P48

4004 Reference Microphone, 130 V

When choosing a microphone for reference use, the demand for reliability and accuracy is crucial. The awareness of being able to trust the results from a reference microphone - even over many years - surpasses most other wishes for that working tool. This is the challenge that DPA Microphones takes seriously and we are honoured to fulfil these requirements by delivering microphones that are produced within extremely narrow tolerances.

The 12 mm diaphragm is ideal for linear and undistorted frequency response (10 Hz to 40 kHz for DPA 4004) and the extreme sound level handling of up to 168 dB is unbeatable. The omnidirectionality is close to optimal up to 20 kHz which, together with the linear frequency response, allows a true fingerprint of the sound field to proceed unhindered to any desired analysis programme.

Adjusting a Front of House PA setup, inspecting loudspeakers or fine tuning a frequency response test system are just a few examples of where you will find our Reference Microphones a trustworthy tool.

For extended frequency range and accurate transient response

A lot of focus has been placed on the extended frequency range of new digital formats, like DVD-A, SACD, DXD, DSD and more. Higher sampling frequencies shift the upper limiting frequency and will indeed also improve the resolution in the time domain, which is why a microphone with true transient characteristics is suddenly heard and needed. The 4007 and 4004 have a linear frequency response up to 40 kHz, which is achieved by a superior acoustical and mechanical design and an impulse precision in the audible frequency range which is top of the league.

For high SPL sound sources in music recording

Choosing a condenser microphone for its sonic qualities is obvious. Using it for extremely loud sound sources like drums, trumpets or the like is a mission, that DPA is master of - for live gigs as well as studio recordings. A 4007 on a bass drum, for instance, delivers a punchy sound with a hitting attack and a tight, focused bass with infinite dynamics.

With these high SPL specialists, you can close-mike drums, percussion and brass or other powerful sound sources with total accuracy for a clean, undistorted dynamic sound. These mics have been used to record space shuttle launches with excellent results.

The HMA5000 is a high quality power supply and mic amp, offering a solution with additional 10 dB headroom over the conventional phantom power supply. A transformerless, high-level, single-ended or electronically balanced signal path preserves the integrity of the audio signal and delivers excellent phase and low-distortion characteristics. These powerful features make the 4004 with HMA5000 High-Voltage Microphone Amplifier combination perfect for direct-to-track recordings. Read more about HMA5000 on page 14.



DPA Reference Microphones for high SPL recordings, inspecting loudspeakers, adjusting PA setups and other precision tasks.
4004 with HMA5000.

Specifications



4007
4004

Directional characteristics:

Omnidirectional

Principle of operation:

Pressure

Cartridge type:

12 mm (0.47 in) pre-polarised condenser

Power supply:

4007: 48 V Phantom power

4004: 130 V via HMA5000

Frequency range, ± 2 dB:

4007: 20 Hz - 40 kHz

4004: 10 Hz - 40 kHz

Sensitivity, nominal, ± 2 dB:

4007: 2.5 mV/Pa; -52 dB re. 1 V/Pa

4004: 10 mV/Pa; -40 dB re. 1 V/Pa

Equivalent noise level, A-weighted:

Typ. 24 dB(A) re. 20 μ Pa

S/N ratio, re. 1 kHz at 1 Pa (94 dB SPL)

70 dB

Total Harmonic Distortion:

<0.5% up to 142 dB SPL peak

<1% up to 148 dB SPL peak

Dynamic range:

Typ.: 124 dB

Max. SPL peak before clipping:

4007: 155 dB

4004: 168 dB

Output impedance:

4007: <75 Ohm

4004: Matches HMA5000 input

Cable drive capability:

4007: Up to 300 m (984 ft)

4004: From microphone to HMA5000: Up to 20 m

(66 ft) From HMA5000: Up to 300 m (984 ft)

Connector:

4004: 4 pin modified XLR-M (High Voltage)

4007: 3 pin XLR-M (Standard P48)

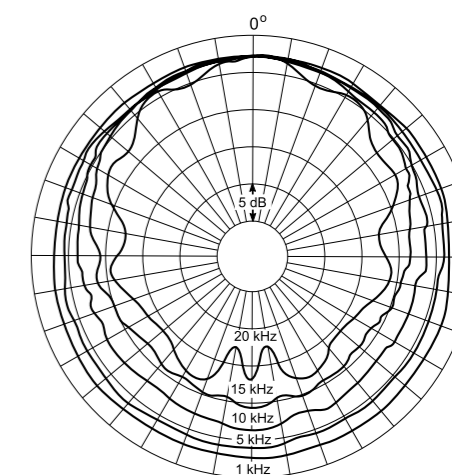
Dimensions:

Length: 165 mm (6.5 in)

Diameter: Capsule: 12 mm (0.47 in), housing: 19 mm (0.75 in)

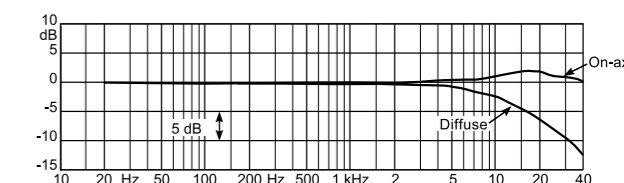
Weight: 150 g (5.29 oz)

Polar Pattern



Directional characteristics of 4004 & 4007 (normalised).

Frequency Responses



On-axis and diffuse-field responses of 4004 & 4007.