



5100, 5100 Mobile Surround Microphone

The DPA 5100 is an exciting new mobile surround microphone whose compact size and ease of use come at no sacrifice to its stunning sound quality

Video: Audio specialist Eddy B. Brixen presents an overview of the 5100's features and functionality

- Plug-and-play solution
- Lightweight and portable
- Rich, smooth and fully enveloping sound
- Discrete 5.1 analog output – no processing needed

The DPA 5100 is an exciting new mobile surround microphone whose compact size and ease of use come at no sacrifice to its stunning sound quality. It can be regarded as a surround ambience adder, ideal for bringing truly engaging surround ambience to sport events, documentaries and other ambience applications for especially HDTV production. No external signal processing is required. The versatile 5100 can be mounted on a camera or microphone stand, suspended, or simply handheld via a hand grip. Extremely lightweight and portable, the unit sports a surprisingly robust build quality that is also highly resilient to inclement weather conditions. A completely self-contained "plug and play" solution for 5.1 audio capture, the 5100 employs five miniature pressure transducers that exhibit extremely low sensitivity to wind and mechanical noise, low distortion, highly consistent low frequency response and large dynamic range. Appropriate channel separation and directionality are achieved through a combination of DPA's proprietary DiPMic™ (Directional

Pressure Microphone) technology, which mounts interference tubes on the L/C/R omni capsules, and the use of acoustic baffles that further preserve the accuracy of levels between the discrete analog output channels.

The 5100's three front microphones are time coincident to eliminate comb filtering and ensure paramount frequency consistency when downmixing to stereo or mono. In contrast, the rear microphones, which feature standard omnidirectional patterns, are optimally spaced from both each other and the front array to simulate the most natural time arrival differences. The LFE (.1) channel is comprised from a L/R sum, which is then attenuated 10 dB in comparison with the signal from the main channels, in accordance with the 5.1 format. The end result of DPA's innovative design approach is a surround atmosphere that is rich, smooth and fully enveloping, great in its coherence, channel separation and localization accuracy.

The 5.1 output of the 5100 runs through a multi-pin Lemo connector carrying all six channels electronically balanced, while an enclosed five-meter (16 ft), six-pair Mogami cable breaks out to six Neutrik XLR-M connectors.

Accessories included: Cable, thread adapter and outdoor cover.

Accessories available: stands, cables and windjammer.

For more information please visit:
www.dpamicrophones.com

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Directional characteristics:

Directional

Principle of operation:

Pressure, with interference tube

Cartridge type:

Pre-polarized condenser element

Frequency range:

L, C, R, LS, RS: 20 Hz to 20 kHz; LFE: 20 Hz to 120 Hz

Frequency range, ± 3 dB:

L, C, R: 200 Hz to 16 kHz; LS, RS: 100 Hz to 12 kHz; LFE: 20 Hz to 120 Hz

Sensitivity, nominal ± 3 dB at 1 kHz:

L, C, R: 26 mV/Pa; LS, RS: 28 mV/Pa

Equivalent noise level, A-weighted:

L, C, R: Typ. 18 dB(A) (max. 21 dB(A)); LS, RS: Typ. 20 dB(A) (max. 23 dB(A))

Equivalent noise level, ITU-R BS.468-4:

L, C, R: Typ. 29 dB (max. 32 dB); LS, RS: Typ. 31 dB (max. 34 dB)

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

L, C, R: Typ. 76 dB(A); LS, RS: Typ. 74 dB(A)

Total Harmonic Distortion (THD):

<1% up to 123 dB

Dynamic range:

L, C, R, LS, RS: 103 dB; LFE: 100 dB

Max. SPL, peak before clipping:

132 dB

Output impedance:

50 Ohm

Cable drive capability:

100 m (328 ft)

Output balance principle:

Active Signal balanced

Common Mode Rejection Ratio (CMRR):

60 dB, 50 Hz - 20 kHz

Power supply:

48 V Phantom power

Current consumption:

Typ. 5 mA (max. 5.5 mA)

Connector:

Lemo multipin

Color:

Black

Weight:

500 g (17.6 oz)

Diameter:

W: 240 mm (9.4 in), H: 140 mm (5.5 in), D: 195 mm (7.7 in)

Capsule diameter:

5.4 mm (0.2 in)

Cable length:

5 m (16.4 ft)

Cable color:

Black

Cable diameter:

9.3 mm (0.37 in)

Maximum output voltage:

L, C, R, LS, RS: 1,8 Vrms / 2,5 Vpeak; LFE: 1 Vrms / 1,4 Vpeak

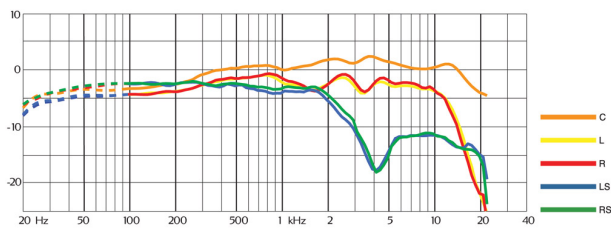
Polarity:

Positive

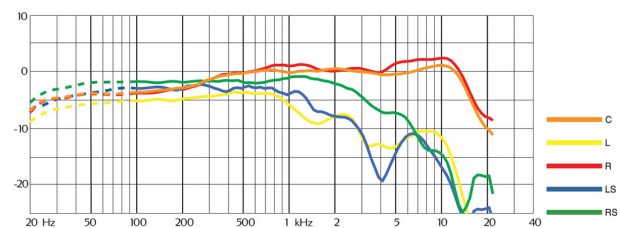
Diagrams

5100, 5100 Mobile Surround Microphone

Typical frequency response of DPA 5100 at 0 degrees

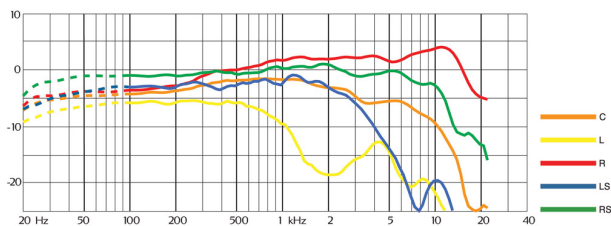


Typical frequency response of DPA 5100 at 30 degrees



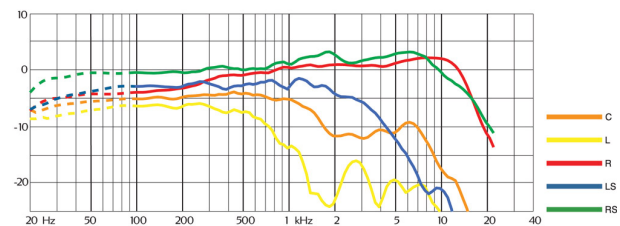
Typical frequency response of DPA 5100 at 60 degrees

Typical frequency response of DPA 5100 at 60 degrees



Typical frequency response of DPA 5100 at 30 degrees

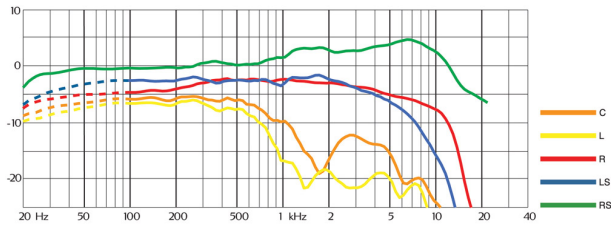
Typical frequency response of DPA 5100 at 90 degrees



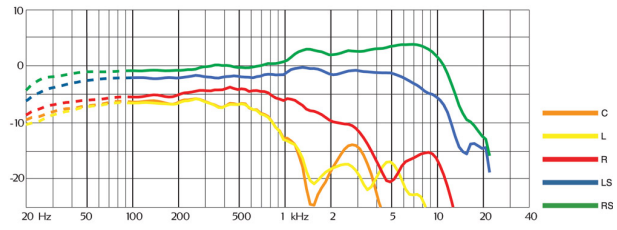
Typical frequency response of DPA 5100 at 60 degrees

Typical frequency response of DPA 5100 at 90 degrees

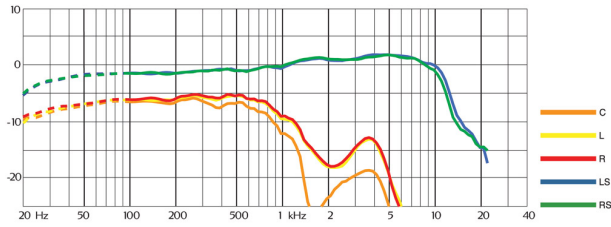
Typical frequency response of DPA 5100 at 120 degrees



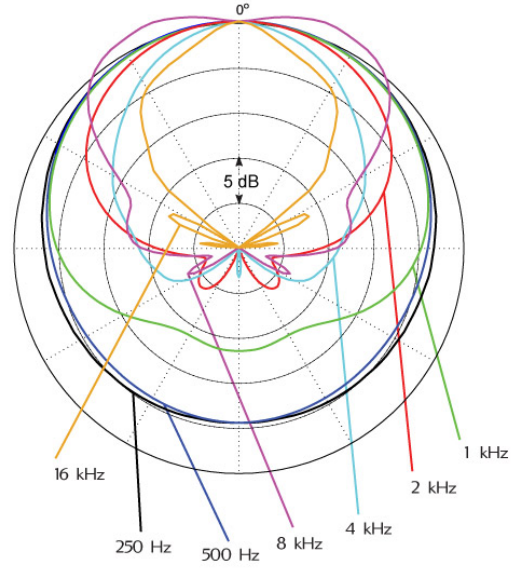
Typical frequency response of DPA 5100 at 150 degrees



Typical frequency response of DPA 5100 at 120 degrees
Typical frequency response of DPA 5100 at 180 degrees

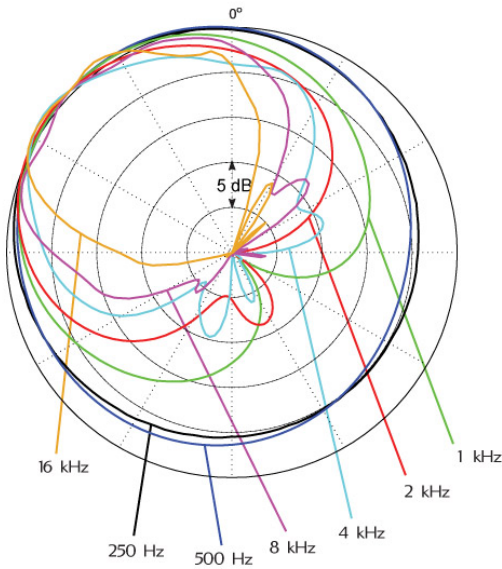


Typical frequency response of DPA 5100 at 150 degrees
Typical directional characteristics of DPA 5100 (normalized): Center

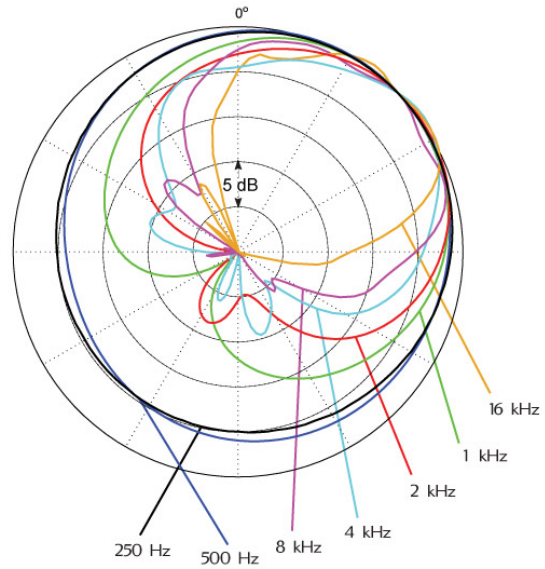


Typical frequency response of DPA 5100 at 180 degrees

Typical directional characteristics of DPA 5100 (normalized): Left



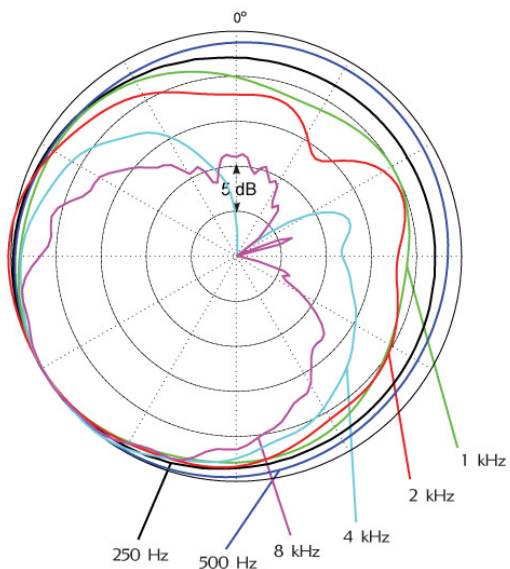
Typical directional characteristics of DPA 5100 (normalized): Center
Typical directional characteristics of DPA 5100 (normalized): Right



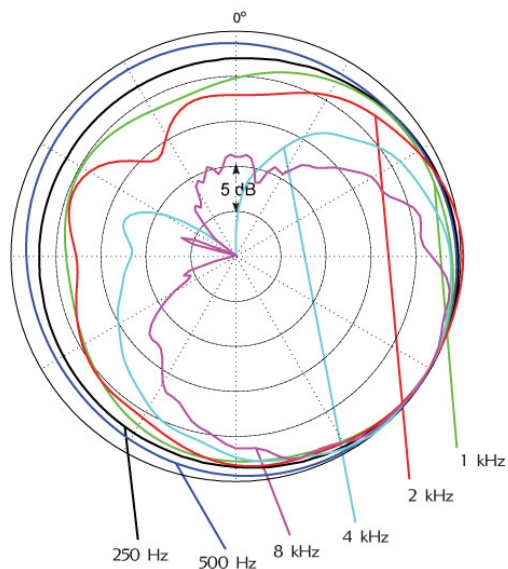
Typical directional characteristics of DPA 5100 (normalized): Left

Typical directional characteristics of DPA 5100 (normalized): Right

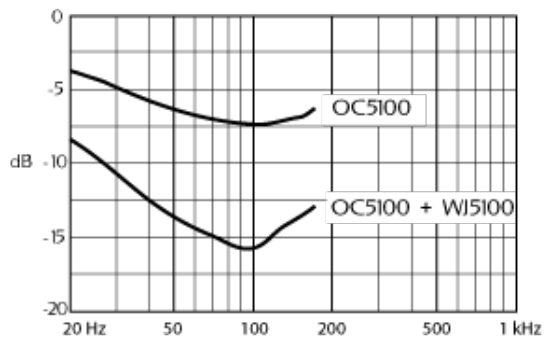
Typical directional characteristics of DPA 5100 (normalized): Left Surround



Typical directional characteristics of DPA 5100 (normalized): Right Surround



Typical directional characteristics of DPA 5100 (normalized): Left Surround
Wind noise attenuation with WJ5100 Windjammer



Typical directional characteristics of DPA 5100 (normalized): Right Surround

Wind noise attenuation compared to uncovered DPA5100 at 10m/s (33 ft/s) (average of all channels and angles)



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