

USER'S MANUAL

Shotgun Microphone

DPA 4017mk2



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INTRODUCTION

The DPA 4017mk2 is a short and exceptionally lightweight shotgun microphone, offering a very directional pickup pattern with the typical natural DPA clarity maintained.

The 4017mk2 has been designed for a broad range of uses, from camera systems to fixed positions at sports facilities and for booming in ENG, broadcast, and film applications. Due to its remarkable clarity, wide dynamic range, and excellent rejection characteristics, the 4017mk2 is equally at home in the recording studio and when used for sound reinforcement/live music miking.

At just 210 mm (8.3 in) in length and 71 g (2.5 oz) in weight, the 4017mk2 is compact in size and among the lightest boom microphones available.

TECHNICAL DESCRIPTION

The cartridge

The condenser capsule uses a high voltage pre-polarized back plate, giving the DPA 4017mk2 high output (sensitivity: 30 mV/Pa) as well as low noise and low distortion.

The preamplifier

The output is transformerless and signal balanced between pin 2 and pin 3.

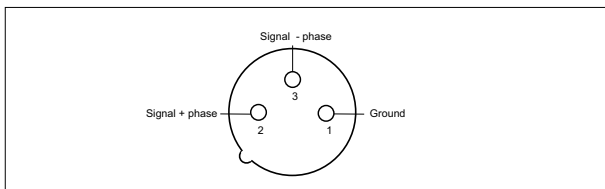


Fig. 1. External view of the output connector of the DPA 4017mk2.

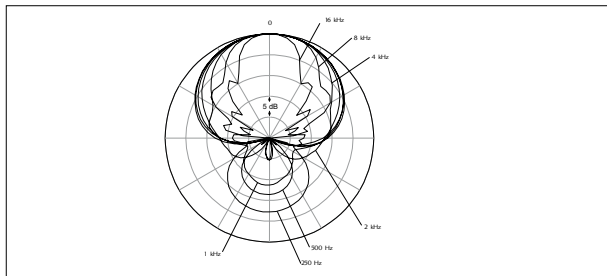


Fig. 2. Directional characteristics of DPA 4017mk2 (normalized).

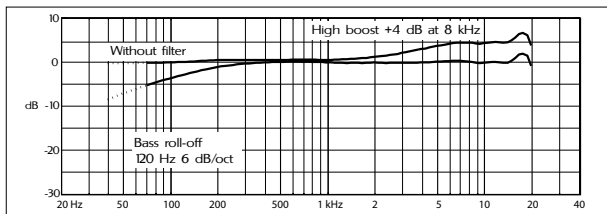


Fig. 3. Frequency response of switchable filters.

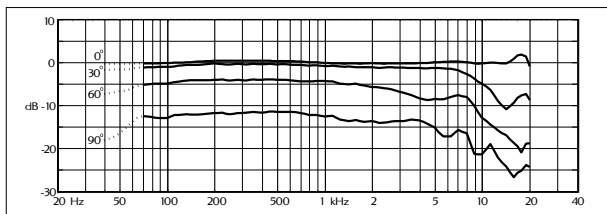


Fig. 4. On- and off-axis responses of DPA 4017mk2, measured at 60 cm (236 in).

Filters

DPA 4017mk2 features two switchable filters (see fig. 3) which are controlled at the switchable ring, and a permanent third order high pass filter at 50 Hz.



Switchable filters

High boost: When the switchable ring is turned on, the filter is active, giving +4 dB at 8 kHz (shelving). It is recommended for any high frequency loss caused by use of third party manufacturer's windshield.

Bass roll-off: By turning the switchable ring on, the filter is active, giving a first order (6 dB/oct) bass roll off below 120 Hz. This decreases unwanted low frequency disturbance from handling and wind noise. Furthermore, it can be used to tune the desired amount of bass in a voice, as the bass response of the microphone is influenced by the proximity effect. Short distances to a performer will usually require the bass roll-off filter to be switched on to compensate for the low frequency rise.

SPECIFICATIONS

Directional characteristics

Supercardioid, lobe-shaped

Principle of operation

Pressure gradient, supercardioid with interference tube

Cartridge type

Pre-polarized condenser

Frequency range, ± 2 dB

70 Hz - 20 kHz, permanent third order high pass filter at 50 Hz

Sensitivity, nominal ± 2 dB at 1 kHz

30 mV/Pa; -30 dB re. 1 V/Pa

Equivalent noise level, A-weighted

Typ. 14 dB(A) re. 20 μ Pa (max. 15 dB(A))

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

Typ. 25 dB (max. 26 dB)

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

Typ. 80 dB(A)

Total Harmonic Distortion (THD)

< 0.5 % up to 130 dB SPL peak

< 1 % up to 131 dB SPL peak

Dynamic range

Typ. 117 dB

Max. SPL, peak before clipping

132 dB

Switchable filters

High boost, +4 dB at 8 kHz (shelving)

Bass roll-off, first order filter, below 120 Hz

Output impedance

< 150 ohm

Cable drive capability

Up to 100 m (328 ft)

Output balance principle

Signal balanced

Common mode rejection ratio (CMRR)

> 40 dB

Power supply

48 V Phantom power

Current consumption

45 mA

Connector

XLR-3M, Pin 1: shield, Pin 2: Signal + phase, Pin 3: Signal - phase

Color

Matte black

Dimensions

Weight: 71 g (2.5 oz)

Microphone diameter: 19 mm (0.75 in)

Capsule diameter: 19 mm (0.75 in)

Microphone length: 210 mm (8.3 in)

Maximum output voltage

2.2 V peak

Polarity

Positively increasing sound pressure creates positive going voltage on pin 2

Operating conditions

Temperature range: -40 °C to 45 °C (-40 °F to 113 °F)

Relative humidity (RH): Up to 90%

ACCESSORIES INCLUDED

Holder

UA0639 Microphone Clip

Windscreen

DUA0073 Windscreen for 4017mk2

ACCESSORIES AVAILABLE

Holders

UA0897 Shock Mount

TB4000 Table Base

Windshield System

RWK4017mk2 Rycote Windshield Kit

Please refer to www.dpamicrophones.com/accessories for more information.

CARE OF MICROPHONE

No preventive maintenance is required on this product. The microphone cartridge is tightly secured to the main body housing and no attempt should be made to remove it.

Use of windscreen is recommended when microphones are used in dirty, dusty, and windy environments.

When not in use, the microphone should be disconnected and kept in the case supplied or similar protection.

SERVICE & REPAIR

Products from DPA Microphones are extremely stable, and there should not be any significant change in the specifications with time and use. If, however, you are not totally satisfied with the characteristics exhibited by your product, contact your nearest DPA Microphones representative for further details of service and the repair facilities that are available.

WARRANTY

DPA 4017mk2 is covered by a five year limited warranty on both mechanical functionality and documented specifications as long as the items are not mistreated, abused, or modified in any way. Invoices are required as warranty registration documents in case of a claim.

Find your nearest DPA representative on our website, www.dpamicrophones.com, or send e-mail to info@dpamicrophones.com.

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CE MARKING

The CE-mark guarantees that the product described in this manual conforms to relevant Directives and standards approved by the European Commission:

EMC Directive: 2004/108/EU

Low voltage directive: 2006/95/EC



ENVIRONMENTAL POLICY

DPA Microphones A/S is proud to be known as a "green" company. It is company policy to produce all products in accordance with the best ecological practices to preserve the environment. Consequently, it is DPA's aim to cooperate with both national and international legislative bodies to fulfil the requirements and recommendations set out in environmental standards and directives.

Throughout DPA's conduct and in its design of new products, the company pursues solutions that have minimal impact on the ecology and are in line with the latest legislative requirements at the time of introduction (at present RoHS directive 2002/95/EC). These requirements are not only valid for DPA but also its suppliers.

With respect to waste disposal, DPA fully complies with the WEEE directive (2002/96/EC) and will adhere to any amendments and subsequent requirements. Since 2006, all products have been provided with a "waste" label. This means that at the end of its usable life, the product may be returned to the local DPA representative for disposal under the national legislation program.

DPA



M I C R O P H O N E S

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