

USER'S MANUAL

Shotgun Microphone

DPA 4017



DPA 
MICROPHONES



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INTRODUCTION

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

The 4017 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 4017 is equally at home in the recording studio and when used for sound reinforcement/live music miking.

At just 210 mm (8.3 inches) in length and 71 grams (2.5 ounces) in weight, the 4017 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 4017 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.

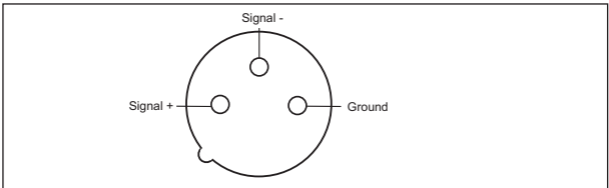


Fig. 1. External view of the output connector of the DPA 4017.

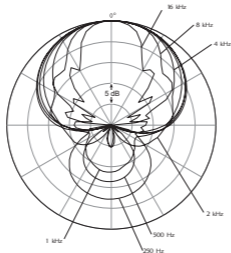


Fig. 2. Directional characteristics of DPA 4017 (normalized).

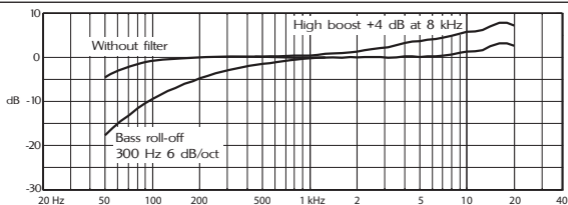


Fig. 3. Frequency response of switching filters.

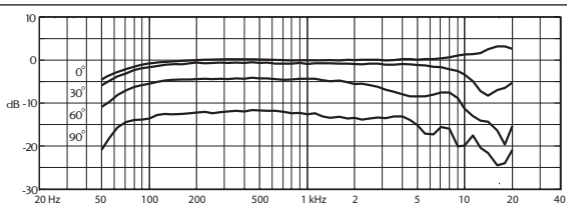


Fig. 4. On- and off-axis responses of DPA 4017 (measured at 60 cm (236 in)).

Filters

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



Switching filters

High boost: When the switching ring is turned on, the filter is on, giving +4 dB at 8 kHz (shelving). It is recommended for any high frequency loss caused by use of third party manufacturer's windshield. Use DPA WINDPAC® to avoid any high frequency attenuation.

Bass roll-off: By turning the switching ring on, the filter is on, giving a first order (6 dB/oct) bass roll off below 300 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.

FULL SPECIFICATIONS

Cartridge type

19 mm (0.75 in) pre-polarized condenser

Principle of operation

Pressure gradient, supercardioid with interference tube

Power supply

48 V Phantom power

Frequency range; ± 2 dB

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

Switching filters

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

Bass roll-off, first order filter, below 300 Hz

Directional characteristics

Supercardioid, lobe-shaped shotgun

Sensitivity, nominal, ± 2 dB

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

Equivalent noise level A-weighted

Typ. 14 dB(A), (max. 15 dB(A))

Equivalent noise level ITU-R BS.468-4

Typ. 25 dB, (max. 26 dB)

Max. SPL, peak before clipping

132 dB

Total harmonic distortion

<0.5 % up to 130 dB SPL peak

<1 % up to 131 dB SPL peak

Output voltage

Max. 2.2 V peak

Output impedance

<200 ohm

Dynamic range

Typ. 117 dB

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

80 dB (A)

Connector

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

Polarity

Positively increasing sound pressure creates positive going voltage on pin 2

Current consumption

45 mA

Cable drive capability

Up to 100 m (328 ft)

Color

Matt black

Material

Aluminum

Dimensions**Microphone length**

210 mm (8.3 in)

Microphone diameter

19 mm (0.75 in)

Weight

71 g (2.5 oz)

ACCESSORIES INCLUDED

Holders

UA0639 Microphone Clip

Acoustic Equalizers and Windscreens

DUA0073 Windscreen for 4017

ACCESSORIES AVAILABLE

Holders

UA0897 Shock Mount

TB4000 Table Base

Windshield Systems

WINDPAC-L Microphone Windshield System, Large

Please refer to www.dpamicrophones.com 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

All products from DPA Microphones are covered by a two-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.

DPA Headquarters, Denmark:

Tel: + 45 4814 2828

Fax: + 45 4814 2700

DPA Inc., United States:

Tel: +1 303 485 1025

Fax: +1 303 485 6470



CE MARKING

The CE mark guarantees that all products conform with relevant standards approved by the European Community. The products described in this User's Manual comply with current relevant standards when used with cables from DPA Microphones.

EMC Directive: 89/336/EEC, amended by 92/31/EEC and 93/68/EEC Low Voltage Directive: 73/23/EEC, amended by 93/68/EEC



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 we are all a part of. 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 present directive 9002/95/EC) at the time a new product is introduced to the market. These requirements are not only valid for DPA but also its suppliers.

With respect to waste disposal, DPA fully complies with the WEEE directive (9002/96/EC) and will adhere to any amendments and subsequent requirements. From 1 January 2006, all DPA products that require a return for upgrading and/or reuse 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 who will return it to DPA for disposal under the national legislation program. Furthermore, DPA guarantees that any DPA product purchased after 1 January 2000 will be covered by the same program to ensure that end users have adequate means to dispose of obsolete DPA products.

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