

Introduction

The DPA 4080 Miniature Cardioid Microphone, Lavalier, is specifically developed to provide optimum speech intelligibility within broadcast, conference, and other live performances in the studio. To ensure optimal performance with your 4080, please follow these simple instructions for use, placement, and cleaning.

Correct use of 4080

The 4080 is designed to be mounted on the body of a speaker. It is acoustically pre-equalized, offering a 4 dB presence boost, which makes the voice more distinguishable and improves speech intelligibility and definition.

The 4080 is delivered with a pre-mounted pop-filter in a durable holder with an integrated shock mount, fixed on the DPA clip (fig. 1). The 4080 is designed to be always used in this setup and it is recommended not to dismount it when not in use. If necessary, the holder can easily be mounted or dismounted from the clip (fig. 2). When mounting the holder on to the clip, a small loop of 15 cm (06 in) (fig. 3) should be left between the microphone and the holder. Press the cable gently into the cable trail (fig. 3) and secure the cable with the cable clamp (fig. 5) Apart from securing the holder even more, it will prevent handling noise from the cable.

The loop should not touch the clothes of the performer and the cables should not touch each other.

Placement of 4080

To ensure the optimal sound of the 4080, the best position on the performer's body is 20 - 25 cm (8 - 10 in) from the speaker's mouth (fig. 6). With its innovative mounting solution it can easily be turned in all directions, upwards and sideways, to get the best sound. Furthermore, it ensures that the 4080 fits both left and right buttoned shirts (fig. 7 & 8).

Cleaning guide

Miniature Microphones from DPA are designed to be very resistant to external stress. Highly resistant materials are used in construction of the microphones. Do not try to clean the microphone as it will be damaged. Avoid all kinds of spray or fluids containing chemical components to remove static electricity on or close to the microphone as this could cause permanent damage to the electret layer. The pop-filter is optimized to perform under difficult conditions, but should it need cleaning, distilled water will wash away any dirt.

Use organic oil (e.g. olive oil) or lukewarm, distilled water to remove residue from tape, glue, or make-up from the cable after use. Use organic oil after cleaning to protect the cable sleeve and prolonging its life.

Ensure that super-fluou cable is wound up in soft loops (preferably 6 - 8 cm (2.5 - 3 in) in diameter) which also helps to reduce handling noise. Do not bend the cable or rub it harshly, it may stress the inner cores of the cable and cause them to break over time.

Correct use of adapters and MicroDot connectors

To provide users with safe and compact mounting of connectors, all Miniature Microphones from DPA are fitted with the MicroDot connector. A broad range of connection adapters is offered as optional accessories for most VHF and UHF systems for professional use. A connector tightening tool is supplied with each adapter, and is the only recommendable way to tighten the MicroDot (fig. 9).

3 pin XLR/phantom power use

If running directly into a recording system using 3 pin XLR and phantom power, we recommend the DAD6024 XLR adapter, designed for applications when microphone placement is on the human body.

When placing a microphone on a performer's chest, an acoustic lower midrange boost will occur resulting in a muddy and indistinct sound, compared to a free frontal placement. The adapter provides a 3 dB attenuation at 800 Hz for added clarity when using the 4080 Lavalier.

When using lavalier microphones it is always advisable to insert a high-pass filter at e.g. 80 or 100 Hz in order to avoid rumble from the performer. You can find these settings on most wireless transmitter equipment as well as on portable recorder units and mixing consoles.

Learn more at www.dpamicrophones.com



Fig. 1. 4080 Miniature Cardioid Microphone, Lavalier



Fig. 5. Securing the cable with the cable clamp



Fig. 8. 4080 mounted right



Fig. 2. 4080 mounting solution



Fig. 6. Placement 20-25 cm (8 - 10 in) from mouth



Fig. 9. Tightening the MicroDot connector



Fig. 3. Loop between microphone and holder



Fig. 7. 4080 mounted left



Fig. 4. Loop between holder and clip

Accessories

DAD6001-BC Adapter
MicroDot to 3-pin XLR (P48) w. Belt Clip

DAD6024 Adapter
MicroDot to 3-pin XLR (P48) w. Mid Range Attenuation

DMM0015
4080 Double Mount

DMM0016
4080 Magnet Mount

Miniature Cardioid Microphone, Lavalier



Specifications

4080

Directional characteristics
Cardioid

Principle of operation
Pressure gradient

Cartridge type
Pre-polarized condenser element with vertical diaphragm

Power supply
Min 5 V – max. 50 V through DPA adapter

Frequency range ± 2 dB
250 Hz – 17 kHz with typ. 4 dB soft boost at 4 – 6 kHz (-5 dB at 100 Hz)

Sensitivity, nominal, ±3 dB at 1 kHz
20 mV/Pa; -34 dB re. 1 V/Pa

Equivalent noise level, A-weighted
Typ. 23 dB(A) re. 20 µPa (max. 26 dB(A))

S/N ratio, re. 1 kHz at 1 Pa (94 dB SPL)
Typ. 71 dB (A)

Dimensions

Microphone length
30 mm (1.2 in)

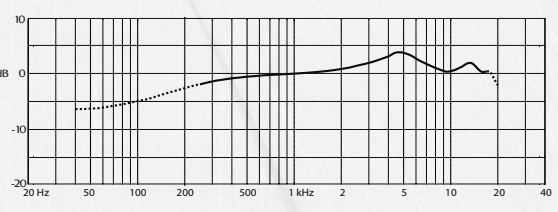
Microphone diameter
10 mm (0.4 in)

Capsule diameter
54 mm (0.2 in)

Weight
15 g (0.5 oz) incl. cable and MicroDot connector

Frequency response

Typ. on-axis frequency response of DPA 4080, measured at 25 cm (10 in) distance



Total Harmonic Distortion (THD)
<1 % up to 123 dB SPL peak
<1 % up to 120 dB SPL RMS sine

Cable drive capability
Up to 300 m (984 ft)

Connector
MicroDot

Dynamic range
Typ. 100 dB

Max. SPL, peak before clipping
144 dB

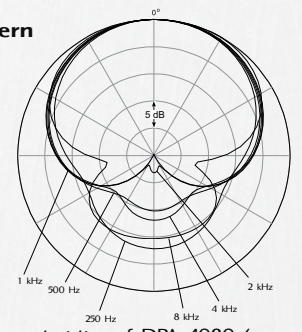
Output impedance
30 – 40 Ohm

Polarity
Inward movement of diaphragm produces positive-going voltage on MicroDot pin

Cable length
1.2 m (4 ft)



Polar Pattern



Directional characteristics of DPA 4080 (normalized).

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 this product, contact your nearest DPA Microphones representative for further details of service and the repair facilities that are available.

CE MARKING

The CE mark guarantees that the product conforms with relevant directives approved by the European Commission.

EMC Directive: 89/336/EC, amended by 92/31/EC and 93/68/EC

Low Voltage Directive: 73/23/EC, amended by 93/68/EC



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. In case of a warranty claim your invoice is your warranty registration.

ENVIRONMENTAL POLICY

This product is comprised by the Waste (WEEE) directive and should not be thrown in the garbage bin when obsolete. Instead, return it to your local DPA representative (or DPA Microphones A/S directly) who will dispose of the product in accordance with the current environmental standards.



© October 2007, DPA Microphones A/S
- Product features and specifications are subject to change without notice.

Headquarters:
DPA Microphones A/S
Gydevang 42-44
DK-3450 Allerød,
Denmark

Tel: +45 4814 2828
Fax: +45 4814 2700

info@dpamicrophones.com
www.dpamicrophones.com

United States:
DPA Microphones, Inc.
2432 N. Main St, Suite 200
Longmont, CO 80501
USA

Tel: +1 303 485 1025
Fax: +1 303 485 6470

info-usa@dpamicrophones.com
www.dpamicrophones.com