

Introduction

To ensure optimal performance of your DPA Miniature Microphone, please follow the simple care and maintenance instructions below.

Miniature Microphones from DPA are designed to be very resistant to humidity, moisture and sweat. Highly resistant materials like gold plated stainless steel, and features like the double-vent-protection-system are used in construction of the microphones, to avoid damage by hostile fluids. In any case, it is still a good idea to keep the Miniature Microphones away from any kind of unnecessary exposure to water and cleaning fluids and to keep the microphone element dry at all times.

1. Cleaning guide

The cable and protection grid are the only parts that may be cleaned if necessary. The protection grid is permanently fixed and protects the microphone element inside. Do not attempt to remove the protection grid under any circumstances.

Do not use any kind of cleaning fluid other than distilled water. Use of ultra-sonic baths must be avoided. Avoid all kinds of spray or fluids, which contain chemical components to remove static electricity on or close to the microphone as this could cause damage to the electret layer.

When mounting the Miniature Microphone

directly on the skin of a performer, care should be taken to avoid sweat from running directly into the microphone. If the microphone gets filled up with water or sweat it will not be damaged, but possibly turn deaf while the water is captured inside the microphone, behind the protection grid. Remove the water by shaking the microphone or drying it with a piece of lint free cloth.

Note: If the microphone has been exposed to water or sweat it must be left to dry out to recover its original specifications. Drying out the Miniature Microphone between exposures to humidity will also help to extend its lifetime. Leaving the microphone with the power on will speed up the drying process, as the built-in pre-amplifier will gently heat up the microphone (idle power ~2 mW).

Tip: In order to save battery power on the belt pack transmitters while drying out the microphone, it is a good idea to use a P48 Phantom Power Adapter (DAD6001).

1.1 Cleaning the microphone grid

During use in environments where the microphone is exposed to make-up or dusty materials, the grid may get clogged up. If needed, clean the grid using a soft cloth and distilled water only.

1.2 Cleaning the microphone cable

Residue from tape, glue or make-up on the cable must be removed after use. Leaving these substances on the cable over longer periods of time may etch into the cable jacket and will make the cable more susceptible to breaks. The cable can easily be cleaned using organic oil (e.g. olive oil) or lukewarm, distilled water.

Do not bend the cable or rub it harshly since this may stress the inner cores of the cable and cause them to break over time.

2. Correct use of the Miniature Microphone

It is important to observe the following guidelines concerning the daily use of the microphone.

2.1 Description of presence boost and frequency response

The type 4071 has a fixed microphone grid with a typical 5dB soft boost at 4-6kHz. This so-called "presence area" is the range where the human ear is most sensitive and is also the range of speech intelligibility, clarity and definition. When a microphone is placed on the chest for example, clarity seems to be lost. Most engineers will compensate for this by having a presence boost on an equalizer in the following audio path, to make the voice "cut through". The Type 4071 with presence boost will make use easier and quicker and will intro-

duce less noise and distortion than any EQ will because the boost is done acoustically, at the microphone diaphragm. An acoustic lo-cut has been incorporated in the capsule so the built-in preamp and the perhaps following wireless system will have much larger headroom. When recording voices, from microphone placement on the performer's body, no frequency below 100 Hz is relevant. For this reason, the airing vent in the capsule has been specially designed to make the frequency response 2dB attenuated at 100Hz, with a 3dB per octave roll off. Outdoor recordings can introduce unwanted wind rumble. The lo-cut feature will reduce the low frequency part of the wind rumble.

2.2 Correct treatment of the microphone element

The diaphragm in the microphone element is the most sensitive part of the unit and as emphasized earlier, it must be left untouched to preserve its original characteristics. Do not spray any substances such as hair spray directly into the microphone and avoid getting make-up or paint on the microphone element and housing.

Tip: In lapel or tie placement it is recommended that the microphone grid point away from the mouth to decrease breathing noises caused by the mouth or nose of the performer. The microphone element is completely omnidirectional at all frequencies, so this method will not colour the sound.



Correct way to wind up the cable of the Miniature Microphone. Please note the slack after the connector.



A connector tightening tool is supplied with each adapter

2.3 Correct treatment of the microphone cable

The cable is usually longer than required for its actual purpose. Ensure that superfluous cable is wound up in soft loops (preferably 6-8 cm in diameter). Avoid 'kinks' in the cable. Exposing the cable to stretching beyond its specifications or stressing it by winding it tightly over sharp edges will reduce the microphone's operational life

Tip: Handling noise from the cable can be decreased by up to 30dB by making a loose loop in the cable, as close to the microphone element as possible. The DMM0008 Miniature Clip, double lock, is designed for this mounting technique.

Tip: The place where the cable enters the MicroDot connector will sometimes be exposed to excessive stress and after long term heavy-duty use, the cable might show signs of wear at this point. As a preventive maintenance procedure, it may be advisable to replace the connector in this instance. Contact the nearest DPA Microphones representative for maintenance advice or assistance.

2.4 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 as standard. A broad

range of connection adapters is offered as optional accessories for most VHF and UHF systems for professional use. The adapters are ultra-compact and will in most cases take up no more space than the original connectors. With each adapter comes a connector-tightening tool, which should be employed whenever the MicroDot connector needs to be tightened safely onto the adapter for long periods of time.

Never attempt to loosen or tighten the connector by the cable or its strain relief. Despite the use of Kevlar, the cable might be damaged if twisted with excessive force. Tighten the MicroDot using finger torque or the recommended tightening tool only. Do not use glue.

Do not mount any other connector onto the cable than the standard MicroDot connector from DPA Microphones. The DPA MicroDot connector is specially designed for use with the Kevlar reinforced cable, ensuring the maximum possible tensile strength in the design. In case of failure, MicroDot spare parts, assembly tool and assembly guide can be acquired.

Various wireless systems require the use of electronic components inside the adapter to optimize the signal level, the DC-offset filtering and powering of the built-in microphone preamplifier. Using the adapters from DPA ensures the correct electronic circuit with

the listed types of wireless systems at all times. Do not attempt to employ non-standard adapters or connectors as you might damage the microphone preamplifier.

EMK4071 ENG/EFP MICROPHONE KIT

Also available as DAK4071-E excluding microphone and adaptor.



3. EMK4071 ENG/EFP Microphone Kit

This kit is made for ENG/EFP use, when the microphone is allowed to be visible. The kit is delivered in a sturdy, hard case with a transparent lid. It contains a 4071-BM Miniature Microphone and the following accessories:

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

Designed for microphone placement 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. This adapter provides a 3dB attenuation at 800Hz for added clarity when using a Miniature Microphone.



DAD6024 XLR adaptor with mid range attenuation



Miniature Holder, Single Pin

Miniature Holder, Single Pin (DMM0006)

Ultra-small single pin holder for mounting on the chest of a speaker quickly and easily. The pin has a lock that ensures maximum mounting stability, and it is specially designed for use on rather thick clothes like sweaters, sweatshirts and jackets.



Miniature Clip, Double Lock

Miniature Clip, Double Lock (DMM0008)

Clip for quick and easy mounting on the chest of a speaker. The double lock feature allows for attachment with a loop on the cable (ref. section 2.3).



Miniature Windscreens

Miniature Windscreens (7 colours) (DUA0570)

The windscreens are made of foam. The size and construction of the foam ensure that the windscreen does not attenuate the higher frequencies more than the tolerance field of the microphone frequency response and simultaneously provides protection from wind and pop-noises. The size of the windscreen makes it discreet in all applications.



Miniature Windjammer

Miniature Windjammer (DUA0571)

Miniature Windjammer for use in heavy wind. The windjammer fur coat is sewn to the mesh. This will make it totally insensitive to handling noise from any possible friction between the two materials. Please note that the presence boost will be virtually unaffected by the windjammer, but that the high frequency roll off will set in a little earlier.

Attachment: Gently place the windjammer over the microphone grid until it cannot move any further.



Miniature Mesh

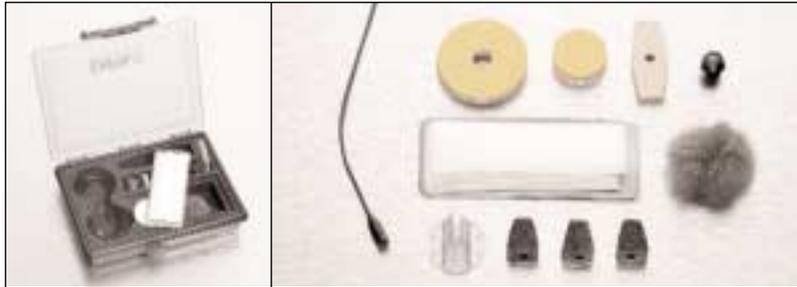
Miniature Mesh (DUA0572)

Miniature Mesh for slight wind- or pop reduction from a speaker's voice or any other turbulence that can cause the diaphragm to disperse.

Attachment: Gently place the mesh over the microphone grid until it cannot move any further.

FMK4071 FILM MICROPHONE KIT

Also available as DAK4071-F excluding microphone.



4. FMK4071 FILM MICROPHONE KIT

This kit is made for Film or TV production use, when the microphone is not allowed to be visible. The kit is delivered in a sturdy, hard case with a transparent lid. It contains a 4071-BM Miniature Microphone and leaves room for one or more connection adaptors.

Also included is:



Miniature Double Pin, Black



Miniature Concealer



Double-sided Tape for DMM0009

Miniature Double Pin, Black (DMM0002-B)

Holder for quick and easy mounting on the chest of a speaker. The double pin ensures maximum mounting stability and makes it possible to fit the microphone even on T-shirts and sweaters.

Miniature Concealer (DMM0009)

Whenever the 4071 Miniature Microphone needs to be hidden on a performer, the DMM0009 comes in useful. Simply place the 4071 in the opening on the backside of the holder. The microphone is now secured from friction noise from clothing because the microphone (including the grid) is hidden and the holder itself is smooth. The mic concealer can be sewn into clothing by using the 4 buttonholes or it can be fixed to any cloth material using the double-sided tape pads.

Double-sided Tape for DMM0009 10pcs. (ADH0002)

Specially designed and easy to use double-sided tape pads for the DPA Miniature Concealer. Store tape away from excessive heat and light.

Attention: Do not use these double-sided tape pads on leather, suede or directly on skin.



Tie Pod

**Tie Pod, 3 pcs.
(DMM0010)**

When an actor wears a tie, noise is unavoidable from friction between tie and shirt. A successful placement of the microphone could be in the knot of the tie with the microphone inside this soft tie pod with double-sided tape outside the pod. The holder will be fixed, the tie can be tightened around it and the microphone grid is hidden in the pod and will not pick up friction noise.

Tip: To reduce friction noise further, the Double-sided Mic Tape (ADH0004) included in this kit can be used to secure the tie to the shirt.



Double-sided Tape for Tie Pod

**Double-sided Tape for Tie Pod, 10 pcs.
(ADH0001)**

Specially designed and easy to use double-sided tape pads for the DPA Tie Pods. Store tape away from excessive heat and light.



Miniature Mic Tape.

**Miniature Mic Tape, 10 pcs.
(ADH0003)**

Specially designed self-adhesive pads for use directly on the 4071. Store tape away from excessive heat and light.

Attention: Do not use these double-sided tape pads on leather, suede or directly on skin.

**Double-sided Mic Tape, 10 pcs.
(ADH0004)**

Versatile self-adhesive mounting tape, originally made as toupee tape. Store tape away from excessive heat and light.



Double-sided Mic Tape



Miniature Windjammer

Miniature Windjammer (DUA0571)

Miniature Windjammer for use in heavy wind. The windjammer fur coat is sewn to the mesh. This will make it totally insensitive to handling noise from any possible friction between the two materials. Please note that the presence boost will be virtually unaffected by the windjammer, but that the high frequency roll off will set in a little earlier.

Attachment: Gently place the windjammer over the microphone grid until it cannot move any further.



Miniature Mesh

Miniature Mesh (DUA0572)

Miniature Mesh for slight wind- or pop reduction from a speaker's voice or any other turbulence that can cause the diaphragm to disperse.

Attachment: Gently place the mesh over the microphone grid until it cannot move any further.

5. Specifications

Cartridge type:

Pre-polarized condenser element with vertical diaphragm

Principle of operation:

Pressure

Power supply:

Via the Adapter System from DPA Microphones

Frequency range:

100Hz - 15kHz ± 2 dB with typ. 5dB soft boost at 4-6kHz.

Directional characteristics:

Omnidirectional

Sensitivity:

Nominally 6mV/Pa ± 3 dB at 1kHz; -44.4 ± 3 dB re. 1V/Pa

Equivalent noise level CCIR 468-1:

Typ. 38dB (max. 40dB)

Equivalent noise level A-weighted:

Typ. 26dB(A) re. 20 μ Pa (max. 28dB(A))

Max SPL:

144dB SPL before clipping

Total Harmonic Distortion:

123dB SPL peak (<1% THD);

120dB SPL sine (<1% THD)

Preamplifier:

Output impedance: 30-40 Ohm

Cable drive capability: Up to 300m

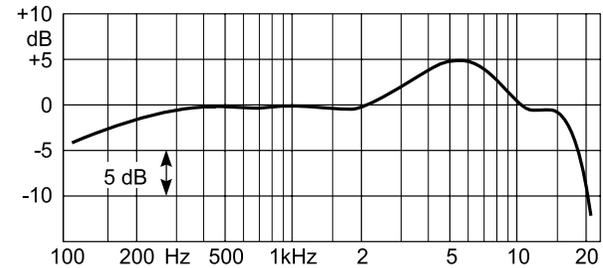
Dimensions:

Microphone length: 17mm

Microphone diameter: 5.4mm

Capsule diameter: 5.4mm

Weight: 9g incl. cable and MicroDot connector



Typical on-axis frequency response of DPA 4071.

6. Accessories available

Miniature Holders

DMM0001	Miniature Clip
DMM0002-B	Miniature Double Pin, Black
DMM0002-W	Miniature Double Pin, White
DMM0003-B	Miniature Magnet, Black
DMM0003-W	Miniature Magnet, White
DMM0004	Miniature Clip, Small
DMM0005	Miniature Holder, Single Pin, 3 pcs.
DMM0006	Miniature Holder, Single Pin
DMM0007	Universal Surface Mount
DMM0008	Miniature Clip, Double Lock
DMM0009	Miniature Concealer
DMM0509	Miniature Concealer 5 pcs.
DMM0010	Tie Pod, 3 pcs. incl.tape
MHS6001	Microphone Holder for Strings, 1 pcs.
MHS6005	Microphone Holder for Strings, 5 pcs.

Windscreens

DUA0560	Miniature Windscreens, 5 pcs, Black
DUA0561	Miniature Windscreens, 5 pcs, Red
DUA0562	Miniature Windscreens, 5 pcs, Blue
DUA0563	Miniature Windscreens, 5 pcs, Yellow
DUA0564	Miniature Windscreens, 5 pcs, Green
DUA0566	Miniature Windscreens, 5 pcs, White
DUA0567	Miniature Windscreens, 5 pcs, Beige
DUA0570	Miniature Windscreens, 7 pcs, Mix
DUA0571	Miniature Windjammer for 4071
DUA0572	Miniature Mesh for 4071

Adhesive pads

ADH0001	Double-sided Tape for Tie Pod, 25 pcs
ADH0002	Double-sided Tape for Miniature Concealer, 25 pcs
ADH0003	Miniature Mic Tape, 25 pcs
ADH0004	Double-sided Mic Tape, 10 pcs.
ADH0005	Double-sided Mic Tape, 50 pcs.

Connection Adapters

DAD6001	Adapter: MicroDot to 3-pin XLR (P48)
DAD6001-BC	Adapter: MicroDot to 3-pin XLR (P48) w. Belt Clip
DAD6002	Adapter: Sennheiser BF1083-U/ BF1053-U
DAD6003	Adapter: Sennheiser SK 50/ SK 250/ SK3063
DAD6004	Adapter: Audio Ltd. Tx 2000/ Tx 2020
DAD6006	Adapter: Beyerdynamic TS42/ TS85/ TS190/ TS900
DAD6007	Adapter: AKG PT 300
DAD6008	Adapter: Sony WRT820/ WRT860/ WRT8
DAD6009	Adapter: Samson CT-2/ TX-3/ UT4/ UT5/ UT6
DAD6010	Adapter: Shure U1/ UT1/ SC1, TOA WM4300
DAD6011	Adapter: Vega T-66/ T-677 & Shure U1L
DAD6012	Adapter: Lectrosonic M185
DAD6013	Adapter: Micron TX501.x/ TX502.x

DAD6014	Adapter: Pastega TMA16/ TMU20 (2 wire preset)
DAD6015	Adapter: Vega T-37
DAD6016	Adapter: Beyerdynamic (TS600)/ Trantec
DAD6017	Adapter: AKG PT 40/60/80/81, Samson UT1L/ VT2LL
DAD6018	Adapter: Pastega TMA16/ TMU20 (3 wire preset)
DAD6019	Adapter: Sony Freedom WRT 805, Sennheiser Evolution
DAD6020	Adapter: Prostar / Telex UHF-UB12
DAD6021	Adapter: AT ATW-T101 (System U100), Lectrosonic UHF systems for low level recordings
DAD6022	Audio-Technica, ATW-751 (1400 Series)
DAD6024	Adapter: MicroDot to 3-pin XLR (P48) w. Mid Range Attenuation
DAD6025	Adapter: Micron TX700
DAD6026	Adapter: Beyerdynamic TS 500/600, Trantec
DAD6027	Adapter for Beyerdynamic OPUS 100 -200
DAD6028	Adapter: Audio-Technica ATW-T75 (7000 Series)
DAD6030	Adapter: Electro-Voice CSB-1000 (RE1), TELEX
DAD6031	Adapter: Mipro ACT-707T/TE/TM/TS
DAD3050	Adapter: TOA WM360 (for low DC Microphones)
DAD3051	Adapter: Ramsa WX-RP410 (for low DC Microphones)

Miniature Power Supplies

MPS6010	Miniature Battery Supply, 2-channel, 3-pin XLR
MPS6020	Miniature Battery Supply, 2-channel, Phono
MPS6030	Miniature Battery Supply, 2-channel, Mini-Jack
MPS6040	Miniature Battery Supply, 2-channel, 1/4 in. Jack

Cables

DAO6005	Miniature Microphone Cable, 3.5m
DAO6010	Miniature Microphone Cable, 10m
DAO6020	Miniature Microphone Cable, 20m

Cases & Boxes

DAK4060	Accessory Kit for Miniature Microphones
DAK4071-E	Accessory Kit for ENG/EFP
DAK4071-F	Accessory Kit for Film

Miscellaneous

DUA6011	Drop Stopper, Black, 10 pcs.
DQA0035	Tool for MicroDot

7. 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 these products, contact your nearest DPA Microphones representative for further details of service and the repair facilities that are available. DPA Microphones has a maximum seven working days in-house service policy, usually ensuring that no more than seven working days will elapse from the day we receive the item for service to the day we are ready to return it to you.

8. 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.

9. CE Standard

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/EE

Product features and specifications are subject to change without notice.