

### Introduction

The DPA Miniature Omnidirectional Microphones are designed for use with wireless systems in theatre, television and close-miking instrument applications.

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.

### Cleaning Guide

The cable and protection grid are the only parts that may be cleaned if necessary. Do not use any kind of cleaning fluid other than distilled water. 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 mi-

crophone. If the microphone gets filled up with water 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 sweat it must be rinsed out in distilled water and 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.

### 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. Remove the microphone grid from the microphone element and clean the grid using a soft cloth and distilled water only. Make sure the grid is dry before remounting it on the microphone element.

### 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.

### Correct use of microphone grids

The two different protection grids that are supplied with the Miniature Microphones DPA 4060, 4061, 4062, 4063 are for acoustical equalization, according to the placement on the body of the performer. When mounted on the head of the performer, the microphone normally needs a 3 dB soft boost at 8-20 kHz, provided by the soft boost grid.



The microphone is supplied with the soft boost grid fitted. This grid must be removed before being replaced by the high boost grid.

### Correct use 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. The protection grids are available in four standard colours: Black, brown, beige and white. Check if a different coloured protection grid will be less visible before painting or colouring a microphone grid.

### 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.

### 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.

A connector-tightening tool is supplied with each adapter and should be employed whenever the MicroDot connec-

tor 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! Various wireless systems require the use of electronic components inside the adapter to optimise the signal level, the DC offset filtering and powering of the built-in microphone preamplifier. Using the adapters from DPA Microphones 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.

Download the complete user's manual at [www.dpamicrophones.com](http://www.dpamicrophones.com)



### IMK4061 Instrument Microphone Kit

This kit is designed to be used as a close-miking solution for a wide variety of musical instruments. The condenser microphone offers a very clean, detailed and natural sound quality, leaving placement up to the user, in order to receive the desired timbre for studio use or amplification for live use. Included are holders for strings, universal surface mounts with double sided tape, magnet mount and foam windscreens.

The 4061 can handle 144 dB SPL before clipping, allowing the microphone to be used even for snare drums, trumpets, guitar/bass speaker cabinets or other high level sound sources.

### IMK4061 includes:

- 4061-BM Miniature Microphone
- DAD6001 XLR Adapter
- MHS6001 Microphone Holder for Strings
- DUA0560 Miniature Windscreens
- DMM0007 Universal Surface Mounts
- DMM0011-B Magnet Mount

See [www.dpamicrophones.com](http://www.dpamicrophones.com) for further information about miking musical instruments.



# Specifications

**DPA 4060/4061/4062/4063**

**Directional characteristics:**  
Omnidirectional

**Principle of operation:**  
Pressure

**Cartridge type:**  
Pre-polarized condenser

**Power supply:**  
4060, 4061, 4062: Min 5 V  
- max 50 V through DPA adapter  
4063: Min 3 V - max 50 V through DPA adapter

**Frequency response, ±2 dB :**  
Soft boost grid:  
20 Hz - 20 kHz, 3 dB soft boost at 8-20 kHz

High boost grid:  
20 Hz - 20 kHz, 10 dB boost at 12 kHz

**Sensitivity, nominal (± 3 dB at 1 kHz):**  
4060: 20 mV/Pa; -34 dB re. 1 V/Pa  
4061: 6 mV/Pa; -44.5 dB re. 1 V/Pa  
4062: 1 mV/Pa; -60 dB re. 1 V/Pa  
4063: 6 mV/Pa; -44.5 dB re. 1 V/Pa

**Equivalent noise level A-weighted:**  
4060: Typ. 23 dB(A) re. 20 µPa (max. 26 dB(A))  
4061: Typ. 26 dB(A) re. 20 µPa (max. 28 dB(A))  
4062: Typ. 33 dB(A) re. 20 µPa (max. 37 dB(A))  
4063: Typ. 26 dB(A) re. 20 µPa (max. 28 dB(A))

**S/N ratio, re. 1 kHz at 1 Pa (94 dB SPL):**  
4060: 71 dB (A)  
4061: 68 dB (A)  
4062: 61 dB (A)  
4063: 68 dB (A)

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

**Dynamic Range:**  
Typ. 100 dB

**Max SPL peak before clipping:**  
4060: 134 dB  
4061: 144 dB  
4062: 154 dB  
4063: 138 dB

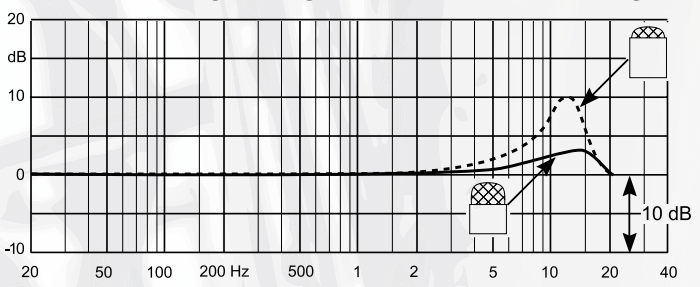
**Output impedance:**  
30-40 Ohm

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

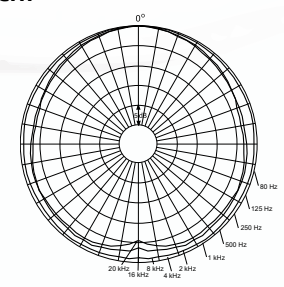
**Cable drive capability:**  
Up to 300 m (984 ft)



**On-Axis Frequency Response of Miniature Microphones.**  
Dotted line is with high boost grid and solid line with soft boost grid.



**Polar Pattern**



Directional Characteristics (normalised)

**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.

**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.



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