

### Introduction

Both the DPA 4065/66/67 (omnidirectional) and the DPA 4088 (cardioid) microphones provide a uniquely natural and open sound. Ultra-lightweight and adjustable, DPA headbands ensure a secure and comfortable fit in live performance environments. To ensure optimal performance of your DPA Headband, please follow the simple instructions below.

### Adjusting the DPA 4066, 4067 and 4088

The size of the headband mount may easily be adjusted. Change the standard bend by carefully expanding the distance between the earhooks.

To change sides simply click the boom out of the clips and switch it over to the other side.



The remaining two clips are not used. The soft cable must not be attached into the clips.



### DPA 4065

4065 is pre-formed and requires minor adjustment in order to get a tight, fixed position to the back of the neck. Adjust the steel tube carefully at the curves.

### Placement of microphone

For discrete placement, you can choose to bend the microphone boom slightly so that the capsule is as close to the cheek as possible. Do not bend by holding on to the capsule itself, but bend the wire boom, making a smooth curve with your thumb to best fit the profile of the face.

### DPA 4066/4067

Adjust the approximate position of the microphone boom which should be placed between the ear and the mouth.



### DPA 4088

In general to ensure the optimal sound of the 4088, it must be mounted at about 2-3 cm (1 inch) from the corner of the mouth.



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 Headband on a performer, care should be taken to avoid sweat from running directly into the microphone. 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 headband gently. When it is left to dry out it will recover its original specifications. Drying out the Headband between exposures to humidity will also help to extend its lifetime.

### Cleaning the microphone grid of DPA 4065, 4066, and 4067

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. **This is not possible on the 4088.** The diaphragm of the 4088 is protected inside the microphone housing and the protection grids are not removable. Therefore, no attempt should be made to clean the grid surface and extreme care should be taken not to clog the grids with make-up or other such substances.

### Cleaning Guide

DPA Headbands are designed to be very resistant to humidity, moisture and sweat. Highly resistant materials 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 Headband away from any kind of unnecessary exposure to water and cleaning fluids and to keep the microphone element dry at all times. The cable is the only part that may be cleaned if necessary, and except for the Cardioid Headband 4088, the protection grid can also be cleaned.

### The microphone cable

Residue from tape, glue or make-up on the cable must be removed after use, using organic oil (e.g. olive oil) or lukewarm, distilled water. Use of organic oil after cleaning the cable may help protect the cable sleeve thereby prolonging its useful life.

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.

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



### Correct use of microphone grids

The two different protection grids that are supplied with 4066 and 4067, are for acoustical equalization, according to the placement on the performer.

The premounted soft boost grid must be removed before being replaced by the high boost grid.



### Correct use of adapters and MicroDot connectors

To provide users with safe and compact mounting of connectors, all Headbands 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 must be used whenever the MicroDot connector needs to be tightened safely onto the adapter for long periods of time.

### 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) and avoid 'kinks' in the cable.



# Specifications

4065/4066/4067/4088

## Directional characteristics:

4065/66/67: Omnidirectional  
4088: Cardioid

## Principle of operation:

4065/66/67: Pressure  
4088: Pressure gradient

## Cartridge type:

Pre-polarized condenser element with vertical diaphragm

## Power supply:

4065/66/88: Min 5 V - max 50 V through DPA adapter

4067:

Min 3 V - max 50 V through DPA adapter

## Frequency range $\pm 2$ dB:

Soft boost grid:  
4065/66: 20 Hz - 20 kHz, 3 dB soft boost at 8 - 20 kHz  
4067: 50 Hz - 20 kHz, 3 dB soft boost at 8 - 20 kHz,  
lo-cut -10 dB at 20 Hz

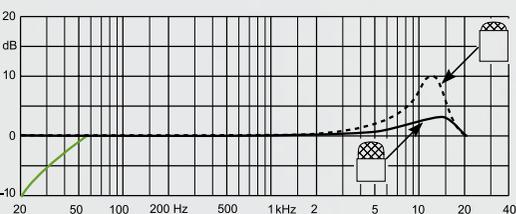
## High boost grid:

4066: 20 Hz - 20 kHz, 10 dB boost at 12 kHz  
4067: 50 Hz - 20 kHz, 10 dB boost at 12 kHz,  
lo-cut -10 dB at 20 Hz

4088: 100 Hz - 20 kHz ( $\pm 2$  dB between 500 Hz and  
20 kHz; 4-6 dB soft boost at 15 kHz)

## On-Axis Frequency Response of 4065/66/67

Solid line is with soft boost grid.  
Dotted line is with high boost grid.  
Green line is 4067 below 50 Hz.  
(4065 only utilizes the soft boost frequency response)



## 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.

## 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.

## Sensitivity, nominal ( $\pm 3$ dB at 1 kHz):

4065: 6 mV/Pa; -44.5 dB re. 1 V/Pa  
4066: 6 mV/Pa; -44.5 dB re. 1 V/Pa  
4067: 1 mV/Pa; -60 dB re. 1 V/Pa  
4088: 6 mV/Pa; -44.5 dB re. 1 V/Pa

## Equivalent noise level A-weighted:

4065/66/88: Typ. 26 dB(A) re. 20  $\mu$ Pa (max. 28 dB(A))  
4067: Typ. 31 dB(A) re. 20  $\mu$ Pa (max. 35 dB(A))

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

4065/66/88: 68 dB  
4067: 63 dB

## Total Harmonic Distortion (THD):

<1% THD up to 123 dB SPL peak;  
<1% THD up to 120 dB SPL RMS sine

## Dynamic Range:

4065/66/88: Typ. 97 dB  
4067: Typ. 92 dB

## Max SPL peak before clipping:

4065/66/88: 144 dB  
4067: 154 dB

## Output impedance:

30-40 Ohm

## Connector:

MicroDot

## Polarity:

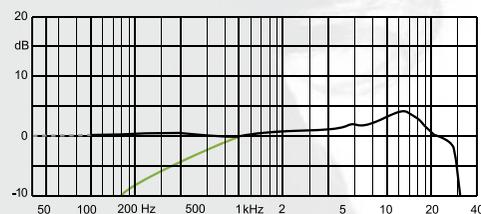
Inward movement of diaphragm produces positive going voltage on MicroDot pin

## Cable drive capability:

Up to 300 m (984 ft)

## On-Axis Frequency Response of 4088

Solid line is near field (2-3 cm)  
Green line is far field (more than 30 cm)  
Dotted line is typical low frequency in near field (estimated)



## 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



## ENVIRONMENTAL POLICY

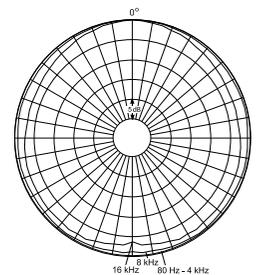
This product is comprised by the Waste (WEEE) directive and should not be thrown in the garbage bin when obsolete. Instead, return it to your local DPA representative (or DPA Microphones A/S directly) who will dispose of the product in accordance with the current environmental standards.



© 2005, DPA Microphones A/S  
- Product features and specifications are subject to change without notice.

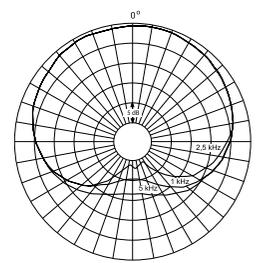


## Polar Pattern of 4065/66/67



Directional Characteristics (normalised)

## Polar Pattern of 4088



Directional Characteristics (normalised)

**DPA**  
MICROPHONES

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