

User's Manual

Boundary Layer Microphone

BLM4060



DPA 
MICROPHONES



BLM4060 Boundary Layer Microphone

With its elegant look and excellent performance, the BLM4060 Boundary Layer Microphone is the perfect microphone in boardrooms, conference facilities, courtrooms, teleconferencing and other places for audio reinforcement or recording. This microphone is particularly excellent for pick-up of the voice.

The BLM4060 is designed to work under optimum conditions when placed on a table top, but it also performs well on any other hard, flat surface.

The advantages of this microphone are the ease of placement in combination with the high sensitivity and a wide dynamic range.

Design

The microphone element is a pre-polarized omnidirectional miniature condenser microphone with a 54 mm (0.2 in) vertical diaphragm specially designed for maximum performance. The microphone body consists of a center rubber disc that holds the microphone element mounted in an elegant stainless steel base.

The 3 m (10 ft) cable provided with this microphone is slim and strong and terminated on both ends with a MicroDot connector.

The microphone's size taken into consideration, DPA has obtained an outstanding noise floor of 23 dB(A) re. 20 μ Pa and an impressive sensitivity of 20 mV/Pa. If powered correctly, the microphone will be able to handle sound pressure levels up to 134 dB SPL before clipping occurs.

A wide range of connection adapters and power supplies makes it possible to use the BLM4060 with any microphone input.



How to connect the cable

Take the microphone in one hand and the microphone cable in the other. Hold the microphone in a horizontal position keeping the topside up. The connectors are assembled by leading the male part into its female counterpart.



Female connector on the microphone body.



The MicroDot connector is assembled from the topside of the microphone.

The MicroDot lock cap is turned clockwise and tightened firmly to the female connector.



The cable is connected to the microphone by turning the lock cap clockwise.



Make sure the thread is firmly tightened.

How it works

The BLM4060 Boundary Layer Microphone is a transducer that should always be placed on a surface that reflects sound. By doing this you will benefit from the special characteristics of the sound field found here: a 6 dB gain of direct sound and only 3 dB gain of the diffuse sound. Hence, the sound captured has both a greater clarity and intelligibility compared to sound captured above the surface.

How to use it

The microphone can be placed on any surface that reflects sound, i.e. tables, speaker podiums, etc. Even if a table is covered with a cloth, the BLM4060 will work due to the shape and size of the disc.



The microphone has been designed to secure high frequency clarity and speech intelligibility under most conditions.

The low frequency response is to some extent dependant on the area of the boundary. However, for speech pick-up even small areas like podiums are adequate.

The microphone can be placed in essentially any position on the surface, even close to the edge. However, try to avoid a placement that may receive reflections from vertical faces as this may cause coloration of the sound (comb-filtering).

For tables longer than 6 m (20 ft), it is recommended to use more than one BLM4060.



Specifications

Directional characteristics

Omnidirectional, hemisphere

Principle of operation

Pressure

Cartridge type

Pre-polarized condenser element

Frequency range, ± 2 dB

20 Hz – 14 kHz

(with a 7 dB soft boost at 8 kHz)

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 μ Pa (max. 26 dB(A))

Equivalent noise level ITU-R BS.468-4

Typ. 35 dB (max. 38 dB)

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

71 dB(A)

Total Harmonic Distortion (THD)

<1% up to 123 dB SPL peak

<1% up to 120 dB SPL RMS sine

Dynamic range

Typ. 100 dB

Max. SPL, peak before clipping

134 dB

Output impedance

From MicroDot: 30 – 40 ohm

From DAD6001: 100 ohm

Cable drive capability

Up to 300 m (984 ft)

Power supply

For wireless systems: Min. 5 V – max. 50 V through
DPA adapter

With DAD6001-BC/DAD6024/DAD4099:

48 V phantom power ± 4 V for full performance

Connector

MicroDot/XLR 3-pin

Finish

Black rubber disc mounted in stainless steel base

Dimensions

Diameter: 100 mm (4 in)

Height: 12 mm (0.5 in)

Weight: 240 g (8.5 oz) excl. cable

Cable

Cable length: 3 m (10 ft)

Cable diameter: 1.6 mm (0.06 in)

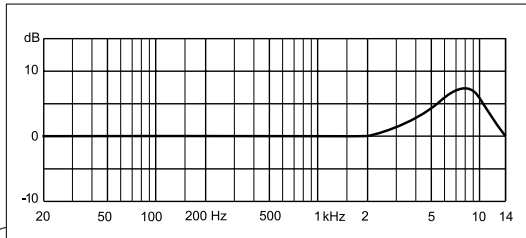
Cable color: Black

Polarity

Positively increasing sound pressure produces positive going voltage on MicroDot pin/pin2 on XLR connector

Operating temperature range

-10 to 45° C (+14 to 113° F)



On-Axis Frequency Response of BLM4060

Accessories:

Adapters:

DAD6001 MicroDot to 3-pin XLR plug (included)

Cables for BLM4060:

DAO6015 Cable for BLM4060, 3 m (10 ft) (included)

DAO6016 Cable for BLM4060, 10 m (32.8 ft)

DAO6017 Cable for BLM4060, 20 m (65.6 ft)

Miniature Power Supplies:

MPS6001 1-channel, 3-pin XLR

MPS6010 2-channel, 3-pin XLR

MPS6020 2-channel, phono

MPS6030 2-channel, mini-jack

MPS6040 2-channel, ¼ in. jack

Amplifier:

MMA6000 Miniature Microphone Amplifier

Maintenance:

A dry cloth may be used to clean the surface of the microphone.
IMPORTANT: No cleaning agent should ever be used as fluids may damage the microphone.

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.



Service and 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.

Please contact DPA Microphones for your nearest representative on:

Head Office:

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Fax: +45 48 14 27 00

Us Sales Office:

Tel. +1 303 823 8878

Fax: +1 303 823 5830

You can also get in touch with DPA Microphones at:

www.dpamicrophones.com or info@dpamicrophones.com

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.

CE-Marking

The CE-mark guarantees that the product conforms to relevant Directives approved by the European Commission, specifically the EMC Directive: 2004/108/EU.



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Product features and specifications are subject to change without notice.



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