



PHANTOM POWER

Earthworks microphones have active electronics and require phantom power to operate.

The most common phantom power voltage is 48V (known as P48). Using P48 allows M23 G2 to cleanly capture audio at up to 140 dBSPL.

Some devices such as wireless transmitters can also supply lower voltages, like 12V (known as P12). This can be a good way to increase wireless transmitter battery life, especially when using alkaline batteries.

At 12V, M23 G2's max SPL is reduced to 133 dBSPL, but audio performance is not otherwise affected.

FREQUENCY RESPONSE

M-Series microphones are individually tuned for the flattest possible frequency response.

The rated flat portion (+/- 1dB) of the frequency range of M23 G2 is extremely wide, extending from 5 Hz to 23 kHz.

Below and above the flat portion, the microphone's response starts to roll off.

You can expect the following:

- The -3dB low-frequency cutoff will be 3 Hz or lower
- The -3dB high-frequency cutoff will be at least 30 kHz

EXTREME TEMPERATURES

When using the microphone in direct sunlight in a hot climate (ie: a daytime festival in the desert), the sun can heat the microphone to the point that it temporarily stops working. Bring the microphone into the shade and let it cool down and it should be fine.

A good rule of thumb is that if the rest of the gear at FOH needs shade, make sure your measurement microphone is in the shade too.

Likewise, if the microphone has been stored in a hot vehicle and its stainless steel body is hot to the touch, let it cool down before using.

If your microphone has been stored in a cold place and its stainless steel body is freezing to the touch, allow it to warm up before use.

WIND

When wind is present, use the included OMW2 foam windscreen.

The OMW2 is made from high quality foam and is designed for acoustic transparency. Its effects on sensitivity, frequency response and polar response are extremely minimal.

IP RATING

Earthworks M-Series microphones have an IP54 rating.

This means 5 out of 6 for dust ("Dust Protected"), and 4 out of 9 for water ("Protected from water splashing from any direction").

The stainless steel mesh that covers the microphone's capsule does a good job of keeping out most dust and moisture.

In general, if the environment is comfortable for people and safe for other audio gear, then the microphone will also be fine.

DUST

When a lot of fine dust is present in the air, such as at a construction site, or if dust is being blown around at high velocity, use the included foam windscreen to protect the microphone capsule.

MOISTURE

It is important to prevent the microphone capsule from getting wet.

A few drops of rain from an unexpected shower before you have a chance to get the microphone under shelter will likely be caught by the tip mesh, especially if the microphone is oriented horizontally so that water cannot pool.

However, continuous rain exposure or water immersion will likely result in permanent damage. The windscreen can be used to provide extra protection against splashes and rain, but be aware that once waterlogged it will become a source of damaging moisture located close to the capsule.



Specifications

MICROPHONE TYPE

Pre-Polarized Condenser

DIAPHRAGM SIZE

6 mm

POLAR PATTERN

Omnidirectional

FLAT FREQUENCY RANGE (+/- 1dB)

5 Hz to 23 kHz

LOW FREQUENCY CUTOFF (-3dB)

<= 3 Hz

HIGH FREQUENCY CUTOFF (-3dB)

>= 30 kHz

A-WEIGHTED SELF-NOISE

23 dBA

POWER REQUIREMENTS

P48 (48V Phantom Power): 7.2 mA

P12 (12V Phantom Power): 4.8 mA

MAXIMUM SPL (3% THD)

P48: 140 dBSPL

P12: 133 dBSPL

MINIMUM LOAD IMPEDANCE

1 kΩ

IP RATING

IP54

CONSTRUCTION

Machined Stainless Steel

DIMENSIONS (L X W)

5.5 x 0.86 Inches

(138.6 x 21.8 mm)

WEIGHT

0.28 lbs (0.13 kg)

COLOR

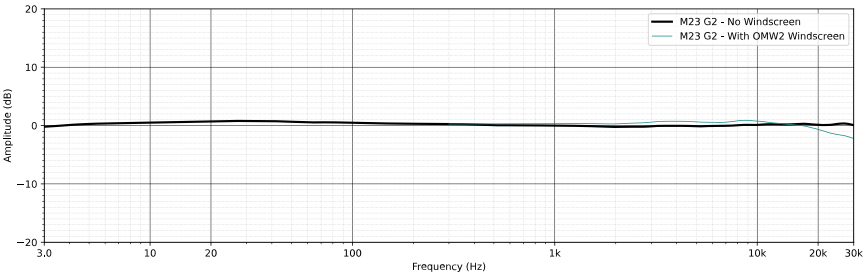
Silver

INCLUDED ACCESSORIES

- Carrying Case
- Calibration Chart
- MC1 Microphone Clip
- OMW2 Windscreen
- ADP1 Calibrator Adapter
- Mic Stand Thread Adapter

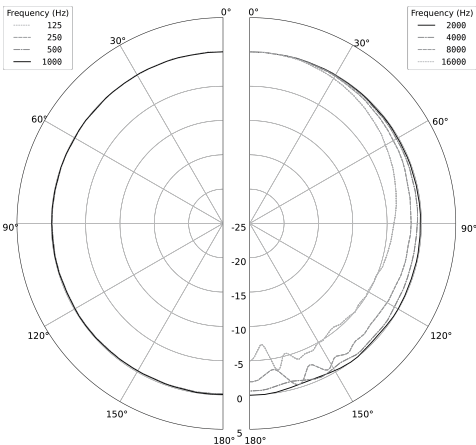
Diagrams

FREQUENCY RESPONSE DIAGRAM



POLAR RESPONSE DIAGRAM

Without Windscreen



With OMW2 Windscreen

