

HI-SOUND PARABOLIC MICROPHONES

Hi quality parabolic microphones



USER GUIDE

1.5

Hi-Sound parabolic microphones are equipped with high quality electret capsules. The main body is in Delrin and produced with a high quality CNC machine working. The handle and the microphone tube are in aluminum so to improve the overall mechanical strength and decrease the weight.

There are two main kind of Hi-Sound: the mono version with two different type of sensor and the stereo version with stereo capability

The shielded cable ends with a gold plated stereo 3.5mm mini jack.

In order to power the sensors the recorder needs to give the power with the PIP (plug in power), so please check the user guide of the recorder to check this feature. If your recorder does not provide this feature you can connect the Hi Sound to XLR connector with the XLR to PIP adapter.



XLR to PIP stereo adapter

Applications

The stereo version gives spatial recordings where i.e. in a swamp and listening with a headphone it is possible to understand clear where a frog or a bird is located.

The version with EM172 is equipped with 4 sensors, two for the left and two for the right. The AOM-5024 is equipped with 2 sensors, one for each side. Due to the high sensitivity of the AOM-5024 and very low noise you can have good recordings due to the more precise focusing of the sensor.

The mono version has two different kind of sensors: 2 x omnidirectional EM172 and 2 x unidirectional EM184. With this configuration you can record mono sounds and for the different sensitivity of the two sensors if a signal clips in the channel with the EM172 you can recover the record on the less sensitive channel with the EM182.

The EM172 is now discontinued and it is replaced with the EM272 with the same characteristics.

Hi Sound mono

The signal is routed in a single stereo mini Jack 3.5 mm connector.

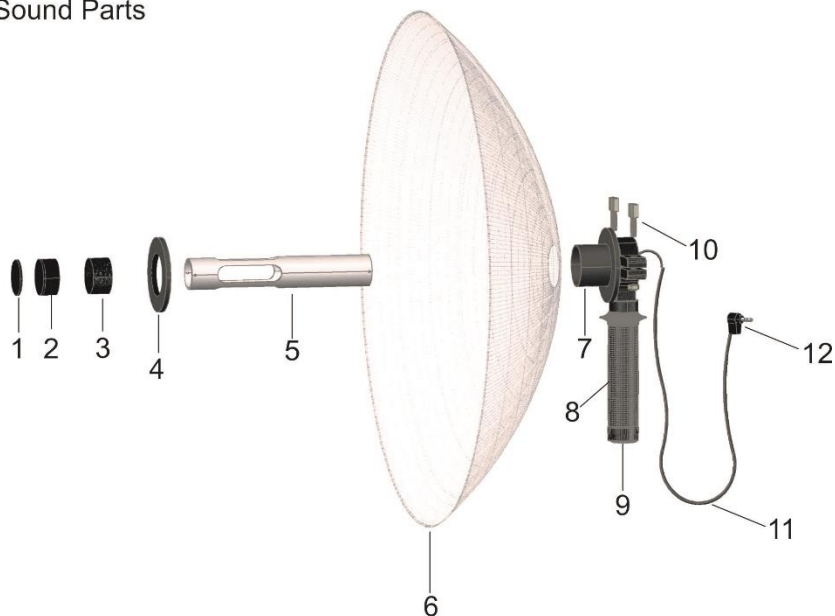
The four capsules are perfectly aligned with the outer edge of the dish.

The sensor comprises two high quality EM172 electret omni directional microphone sensors and two EM184 low noise Uni Directional microphone sensor PRIMO technology.



- 1 – Cap spring
- 2 – Microphone capsules
- 3 – Foam windscreen
- 4 – Ring to fix the disc
- 5 – Aluminum case tube
- 6 – Parabolic disc
- 7 – Disc holder
- 8 – Aluminum handle with foam grip
- 9 – Aluminum tripod mount
- 10 – Screws to fix the main body
- 11 – Shielded cable
- 12 – Stereo gold plated mini jack 3.5mm

HiSound Parts



HiSound Stereo

This parabolic microphone can capture sounds with a stereo separation, the signal is routed in a single stereo mini Jack 3.5 mm connector.

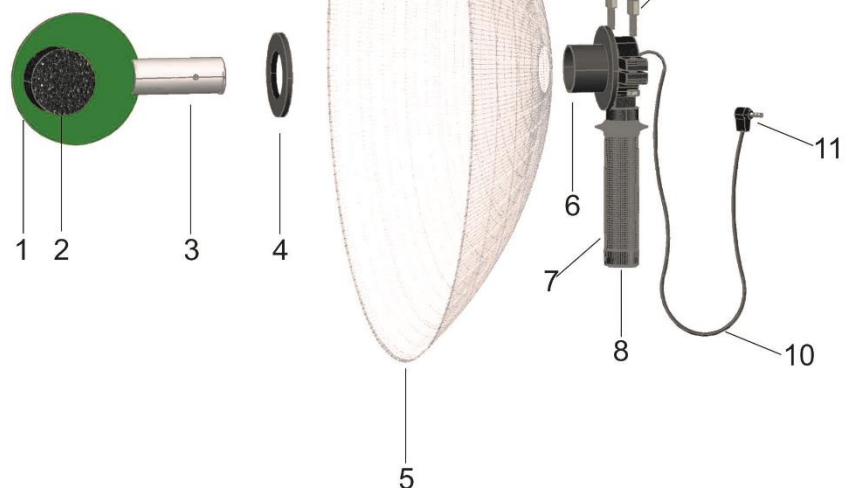
The stereo effect is given by the channels separation obtained by placing a separator disc (baffle) between two pairs of microphones, positioned to the left and right channels with two capsules for each channel. The dish is composed by two circuits with top and bottom shield; the same shield is tightly connected to ground of the capsules so to minimize the immunity to external interferences.

With two capsules instead of one allows to obtain a signal gain of approximately +3dB and a lower self inherent noise. Compared to traditional PZM the greatest improvement in Hi-Sound stereo is done placing the capsule on the same plane with the baffle and not in opposite direction. This configuration can add additional signal gain of +6 dB. This trick allows a high frequency response more than the one obtained in traditional PZM system, the capsule directed against the baffle constitutes an obstacle to the passage of low intensity sound wave.



- 1 - Baffle for stereo separation
- 2 - Foam Windscreen
- 3 - Main microphone body
- 4 - Ring to fix the disc
- 5 - Parabolic disc
- 5 - Aluminum case tube
- 6 - Disc holder
- 7 - Aluminum handle with foam grip
- 8 - Aluminum tripod mount
- 9 - Screws to fix the main body
- 10 - Shielded cable
- 11 - Stereo gold plated mini jack 3.5mm

STEREO HiSound Parts



The sensors

There are different configurations

Sensor type	Noise	Sensitivity	Type	Mounted on:
EM172	Best in class	High	Omnidirectional	Hi-Sound stereo and mono
EM184	Best in class	High	Directional	Hi-Sound mono
AOM-5024	Best in class	Very high	Omnidirectional	Hi-Sound stereo

Custom configurations are possible on request.



Aluminum tripod mount with Whitworth thread.



Back alignment

The back of the microphone must be aligned with the rim of the handle, so the sensor is at the focus of the parabola.

SPECIFICATIONS

Outer diameter 53 cm

Focus depth 12.5 mm

Weight:

Hi-Sound Mono 770g

Hi-Sound stereo 820g

Material **PETG**

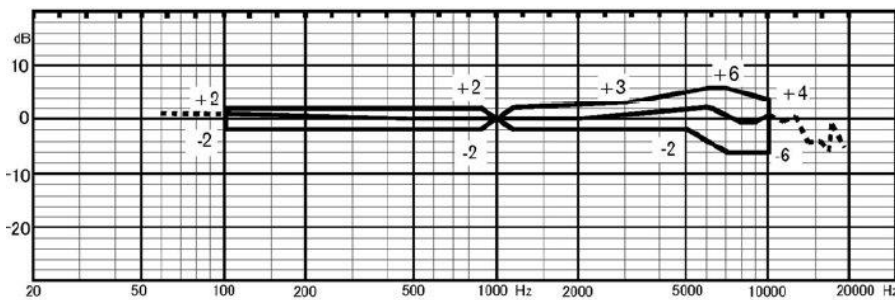
Audio range (100Hz - 20KHz)

EM172 specifications

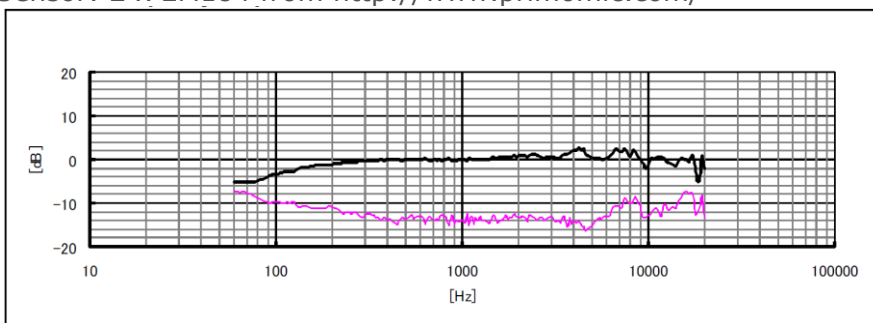
Sensor: EM172 from <http://www.primomic.com/>

Sensitivity $-28 \pm 3\text{dB}$ @ 1kHz

SNR 80dB @ 1kHz



Sensor: 2 x EM184 from <http://www.primomic.com/>

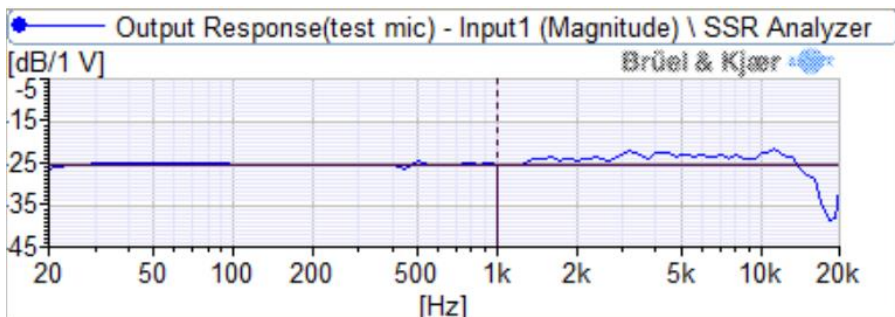


AOM-5024 specifications

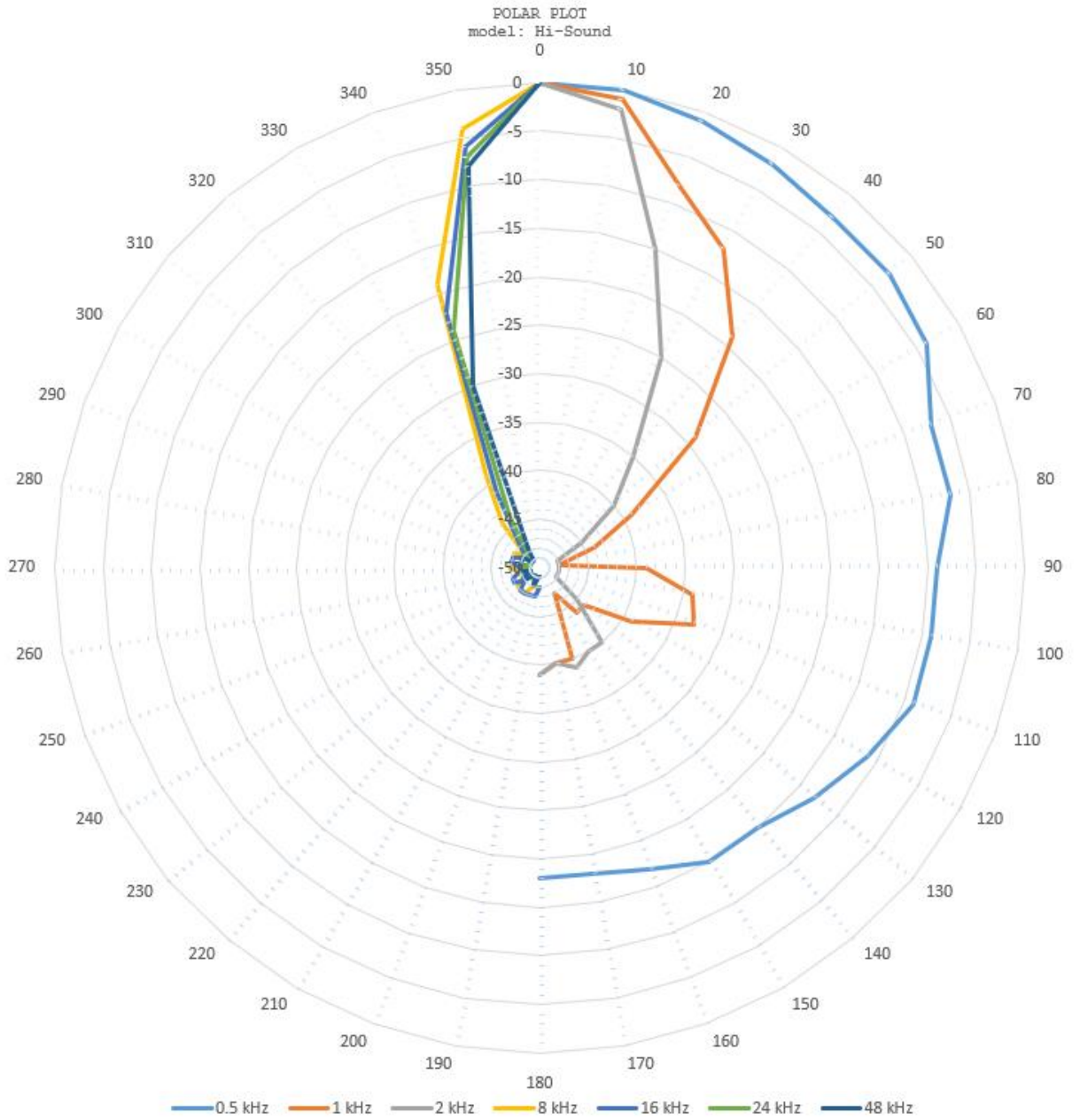
Sensor: AOM-5024 from <http://www.primomic.com/>

Sensitivity $-24 \pm 3\text{dB}$ @ 1kHz

SNR 80dB @ 1kHz



POLAR PLOT



Options

Windscreen improves the quality of recordings and reduces the effect of the wind. Please consider that in windy environment is almost impossible to do good recordings.

	
Mono version	Stereo version

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