

# HI-SOUND DR PARABOLIC MICROPHONE

High-quality, very low-noise audio parabolic microphone



**USER GUIDE**

**0.4**

# Overview



Hi-Sound DR is a stereo parabolic microphone which comes from many years of studies and prototyping in order to provide the best solution without compromise in terms of portability, high quality and low noise.

For stereo parabolic microphones the primary reflective area of the disc is located **at the sides with the top and the bottom giving a smaller reflection** to the sensor. This is the reason behind the  $\infty$  shape of this new parabolic microphone.

The **stereo effect is greatly increased** by the septum that splits the two halves with two different focuses placed at the center of the sensors.

This parabolic microphone is designed to be **almost invisible**; the primary material is polycarbonate which gives the perfect combination of strength, flexibility and transparency. The handle is composed of aluminum which improves overall mechanical strength and decreases the weight.

# Innovation

One of the unique standout features of this new device is the possibility to **remove the two wings so they can be stacked together** for easy transportation, placed within a custom bag. This solution keeps the original parabolic shape while folded disks hardly come back to the original shape.

This makes it possible for users to travel abroad with the device, or simply condense it to a smaller size to bring it to difficult-to-access locations.

The two halves are kept together by a simple mechanism.

To connect them together place the two halves on a flat surface.

**No tool is needed to separate and to reconnect the two halves.**



Align the buttonholes with the screws.



Press up to align the screw



Place the microphone in the correct position, aligning the magnets with with the two circular fixing plates,



Aluminum tripod mount with whitworth thread.

## *The microphone*

The microphone integrates four **AOM-5024** (with superior signal to noise ratio) capsules, two on each side. The combination of dual sensors on each side improves sensitivity by 3dB.

Its shape is designed according to rigorous simulation modeling as well as testing in an anechoic chamber.

The microphone can easily be removed by simply sliding it out of place, as it is kept in its correct position with four neodymium magnets.

Hi-Sound DR can be equipped with two microphone versions

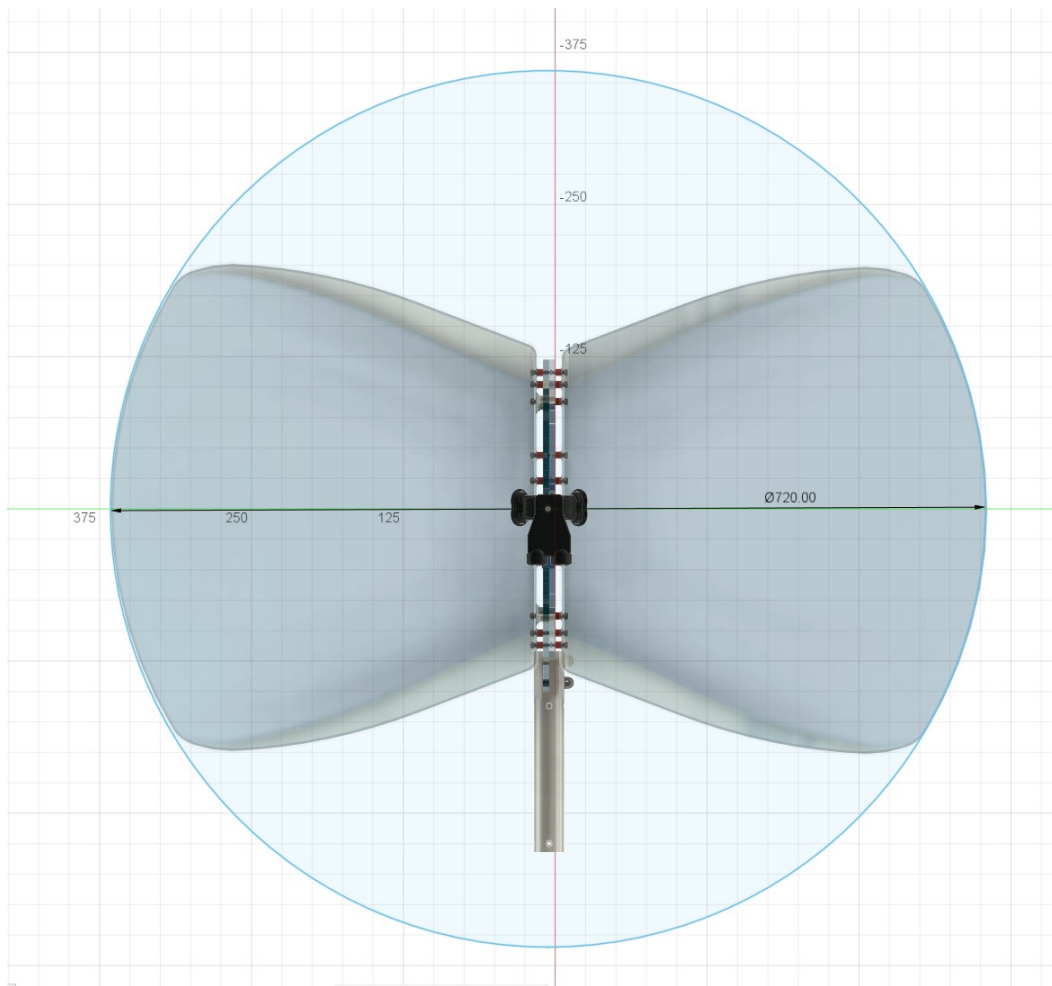
<p>Hi-Sound DR jack, with a stereo 3.5mm gold-plated jack output.</p> <p>In order to power the sensors, a recorder with a jack input function via PIP (plug in power) is required, so please check the user guide of the given recorder to check for this feature.</p>	
<p>Hi-Sound DR XLR, with a double XLR output.</p> <p>For recorders equipped with an XLR input, 24V or 48V phantom power is required.</p>	

Cables are **fully shielded** and insulated to keep electromagnetic interference to an absolute minimum.

The four **AOM5024** sensors are the best in class in terms of signal to noise ratio and sensitivity. They are faced towards the center of each parabolic wing so the sensitivity is maximized. The wide surface area close to the sensors **increases sensitivity** since the soundwaves hitting the sensors are not spread at the sides. The orientation also allows for **better immunity against any external, unwanted noise**.


## ***The active surface***

With a wider diameter, a lower minimum frequency can be reflected, in comparison to standard parabola designs. With a diameter of **70 cm** when mounted, the tight connection of the two wings makes the disc vibrate as if it was a single component.



The **small dimension of the microphone** creates a very small obstacle to the incoming sound meaning the full surface area acts as an active reflector.

## *Optional*

<p style="text-align: center;"><b>Windshield</b></p> <p>An optional Lycra windshield greatly reduces wind-generated interference on the parabola surface. Please remember that the best recordings are made when wind flow is minimal.</p>	
	<p style="text-align: center;"><b>Transport bag</b></p> <p>The custom transport bag is specifically designed to bring the Hi Sound DR with you on field recording sessions.</p> <p>The fabric is waterproof and durable allowing it to resist harsh environments.</p> <p>A specific internal pocket is designed to bring the recorder and headset in the protected section of the bag.</p> <p>Likewise, this bag is ideal to bring your parabola abroad, keeping it safe and protected.</p> <p><b>When collapsed dimensions are 16 x 46 x 37 cm.</b></p>

# How to make recordings

A complete recording system is composed by:

Handheld audio recorder



Headphones

Hi-Sound DR





# Specifications

Outer diameter 70 cm

Focus depth 14 cm

Weight: 1080g

Disc Material **polycarbonate**

**Audio range (70Hz – 20KHz)**

**Dimensions when collapsed:**

16 x 46 x 37 cm

## AOM-5024

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

Sensitivity: -24 ±3dB @ 1kHz

Rated Voltage: 3V

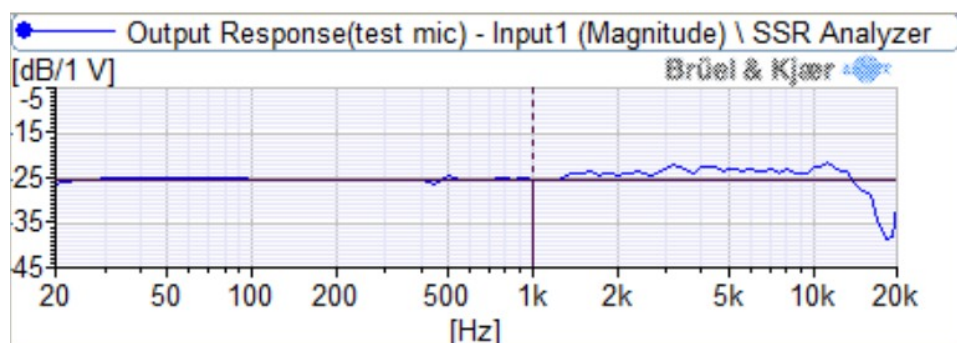
Output impedance @ 1kHz: 2,2 kΩ

Current consumption:(3VS with 2.2 kΩ RL) 500 μA

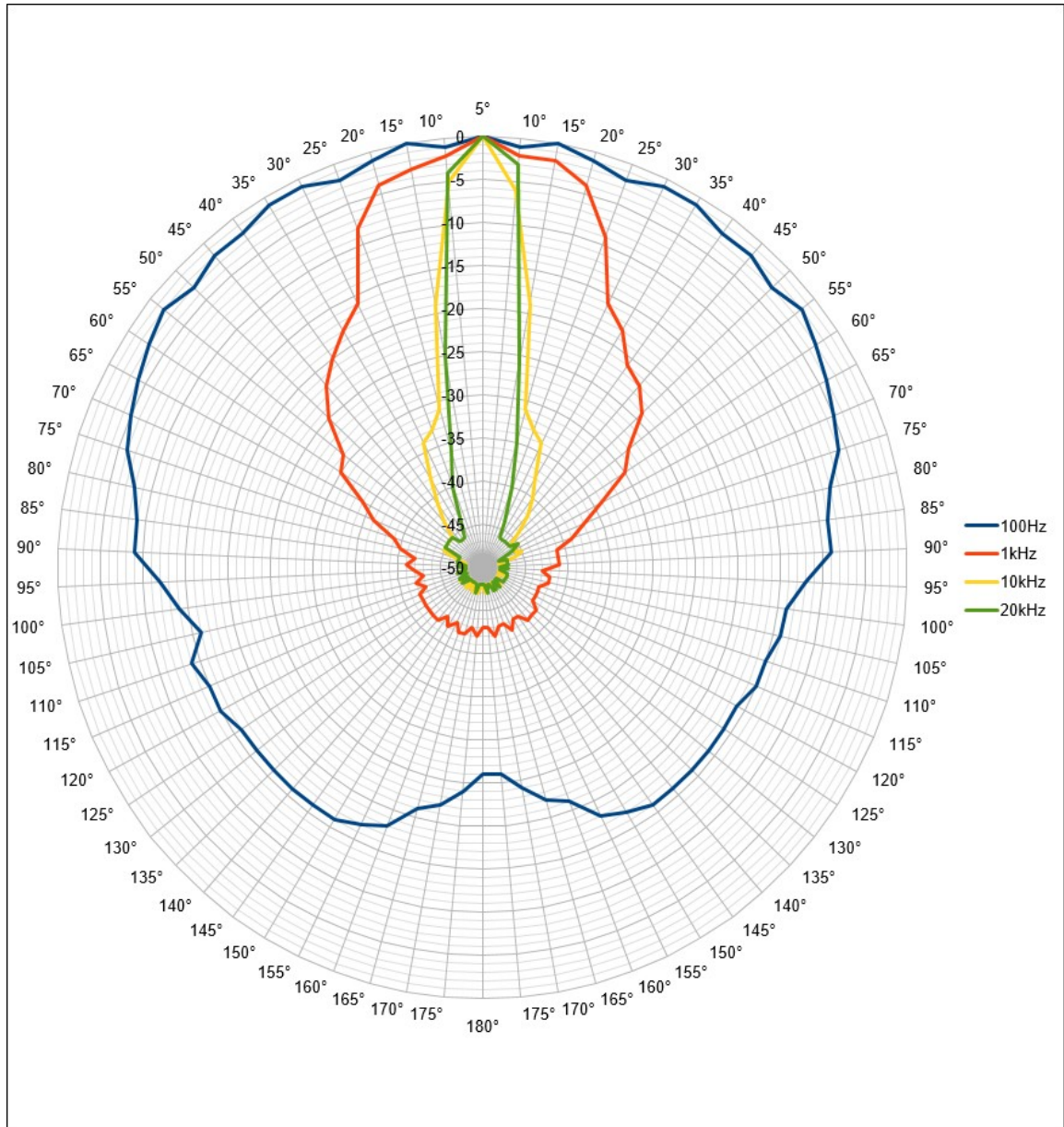
Signal-to-Noise Ratio:(1kHz, 94 dB input, A-weighted) 80 dB

Operating Voltage Range 1 ~ 10 VDC

Maximum SPL Input (THD<3%) 110 dB



# Polar plot



## Conformity declaration

model: Hi-Sound DR

Ultramic is in conformity with the protection and compliance requirements of the following EC Directives:

- EM 55011
- EN 61326-1
- EN 61000-4-2
- EN 61000-4-3
- EN 61000-4-8

## Technical assistance and support

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