



# TECHNICAL SPECIFICATIONS MQ1366

## DESCRIPTION

- Mid/High VA4 loudspeaker system
- Optimized for permanent installation only
- Horn-loaded 10-in cone with VA4 phase plug
- 2-in exit/75mm voice coil compression driver on constant directivity horn

The new MQ Series represents the next generation of permanent installation loudspeaker systems. Using VA4 Technology developed for the new KF700 Series, the MQ range replaces the MH and BV ranges of Virtual Array systems. The Series comprises matched sets of mid/high and low frequency enclosures that enjoy complementary dimensions and trapezoid angles to facilitate the creation of optimized-coverage arrays.

The MQ1366 uses a single, horn-loaded 10-in midrange cone with a specially designed geometry that produces a time-coherent wavefront through the upper portion of the midrange that is critical to vocal articulation. A phase plug with radial slots then serves to reduce the mechanical reactance of the subsystem without affecting the directivity of the source, allowing for flawless arraying of multiple MQ mid/high modules.

A high power 2-in exit/75mm voice coil high frequency compression driver is mounted on a constant directivity horn for consistent, accurate dispersal of HF information. The MQ1366 provides a nominal coverage pattern of 60° (h) x 60° (v).

## APPLICATION

The MQ1366 mid/high module works with the MQ1312 triple 12-in low frequency module to create arrays for use in a wide variety of permanently installed applications.

The most common array configuration is 2x MQ1366's separated by a single MQ1312. In such an array, a certain amount of splay must be provided to achieve optimal coverage. Rigging systems currently available allow users up to 10° of overlap between the mid/high enclosures.

All MQ Series enclosures feature a comprehensive system of 3/8"-16 threaded mounting points for maximum flexibility when suspending arrays overhead.

Applications include:

- Large House of Worship
- Arena
- Stadium
- Theater
- Performing Arts Center



## DESCRIPTIVE DATA

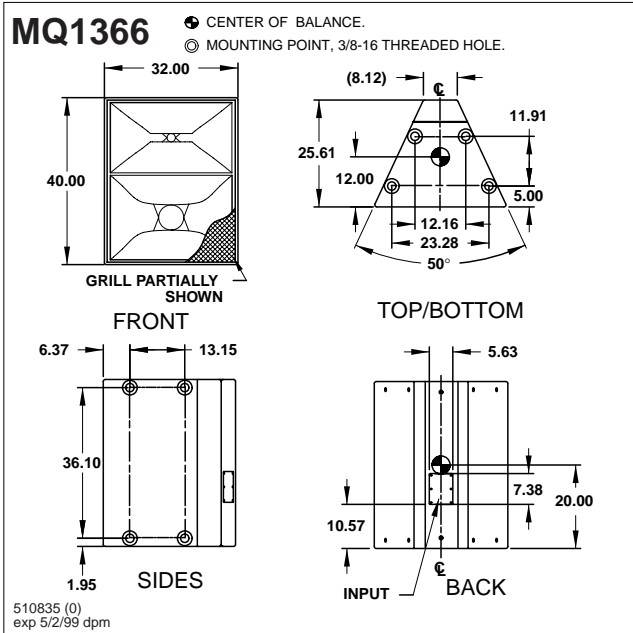
Configuration	Mid/High	
Powering	Bi-amplified	
MF Subsystem	1x 10-in Horn-Loaded Cone, Radial Phase Plug	
HF Subsystem	1x 2-in Exit/75mm Voice Coil Compression Driver on Constant Directivity Horn	
Cabinet Type (shape)	Trapezoid	
Enclosure Materials	Baltic Birch Plywood	
Finish	Black Polyurethane	
Connectors	4-Terminal Barrier Strip & 1x Neutrik NL4 Speakon	
Suspension Hardware	(16) 3/8"-16 Threaded Mounting Suspension Points (4 each top, bottom and sides)	
Grill	Powder Coated Perforated Steel	
<b>Dimensions</b>	<b>inches</b>	<b>millimeters</b>
	Height	40.00 1016
	Width (front)	32.00 813
	Width (rear)	8.12 206
	Depth	25.61 650
Trapezoid Angle	50°	
<b>Weights</b>	<b>pounds</b>	<b>kilograms</b>
	Net Weight	164.5 75.1
	Shipping Weight	182 82.8
<b>Companion Systems</b>		
Sub Bass	SB528, BH822e	
LF	MQ1312	





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## DIMENSIONAL DRAWINGS



## NOMINAL DATA

<b>Frequency Response (1 W @ 1m)</b>	
±3 dB	190 Hz to 19 kHz
-10 dB	140 Hz
<b>Axial Sensitivity (dB SPL, 1 Watt @ 1m)</b>	
MF	109.5
HF	112.0
<b>Impedance (Ohms)</b>	
MF	8
HF	8
<b>Power Handling, AES Standard (Watts)</b>	
MF	400
HF	200
<b>Calculated Maximum Output (dB SPL)</b>	
MF Peak	141.5
HF Peak	141.0
MF Long Term	135.5
HF Long Term	135.0
<b>Nominal Coverage Angle/-6 dB points (degrees)</b>	
Horizontal	60
Vertical	60
<b>Recommended High-Pass Frequency</b>	
24 dB/Octave	190 Hz

## ARCHITECTURAL SPECIFICATIONS

The two-way mid/high loudspeaker system shall incorporate a 10-in cone MF transducer and a 2-in exit compression driver HF transducer.

The MF driver shall be loaded into a midrange horn constructed of 3mm birch plywood reinforced with high density polyurethane foam. The MF horn shall incorporate a phase/displacement plug. The HF driver shall be loaded on constant directivity horn with a nominal coverage pattern of 60° (h) x 60° (v). An internal passive filter network shall provide system equalization.

System frequency response shall vary no more than ±3 dB from 190 Hz to 19 kHz measured on axis. The midrange frequency section shall produce a Sound Pressure Level (SPL) of 109.5 dB SPL on axis at 1 meter with a power input of 1 Watt, and shall be capable of producing a peak output of 141.5 dB SPL on axis at 1 meter. The high frequency section shall produce a Sound Pressure Level (SPL) of 112 dB SPL on axis at 1 meter with a power input of 1 Watt, and shall be capable of producing a peak output of 141 dB SPL on axis at 1 meter. The midrange frequency section shall handle 400 Watts of amplifier power (AES Standard) and shall have a nominal impedance of 8 Ohms. The high frequency section shall handle 200 Watts of amplifier power (AES Standard) and shall have a nominal impedance of 8 Ohms.

The loudspeaker enclosure shall be trapezoidal in shape. It shall be constructed of 15mm thickness void-free cross-grain-laminated Baltic birch plywood and shall employ extensive internal bracing. It shall be finished in black catalyzed polyurethane. Input connectors shall be 4-terminal barrier strip and one Neutrik NL4 Speakon. A total of sixteen 3/8"-16 threaded mounting/suspension points (4 each top, bottom and sides) shall be provided. The front of the loudspeaker shall be covered with a powder coated perforated steel grill.

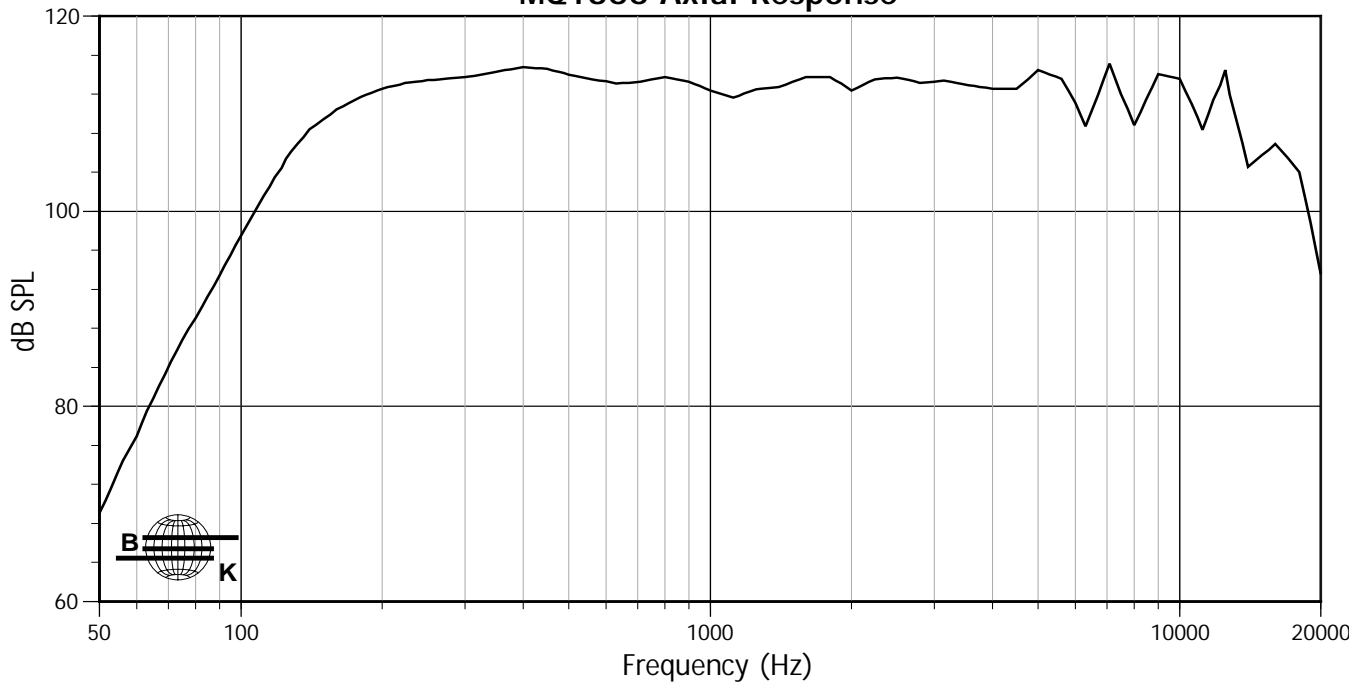
The two-way mid/high loudspeaker shall be the EAW model MQ1366.



# PERFORMANCE SPECIFICATIONS MQ1366

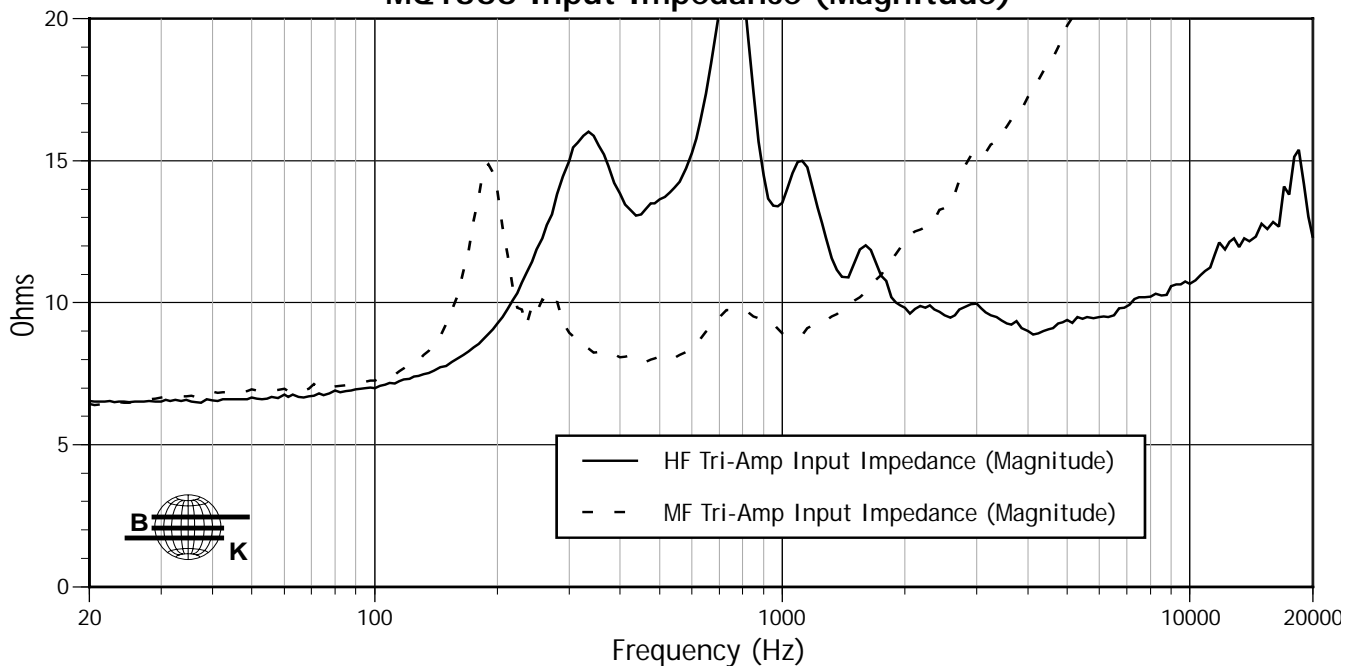
## FREQUENCY RESPONSE

### MQ1366 Axial Response



## INPUT IMPEDANCE

### MQ1366 Input Impedance (Magnitude)

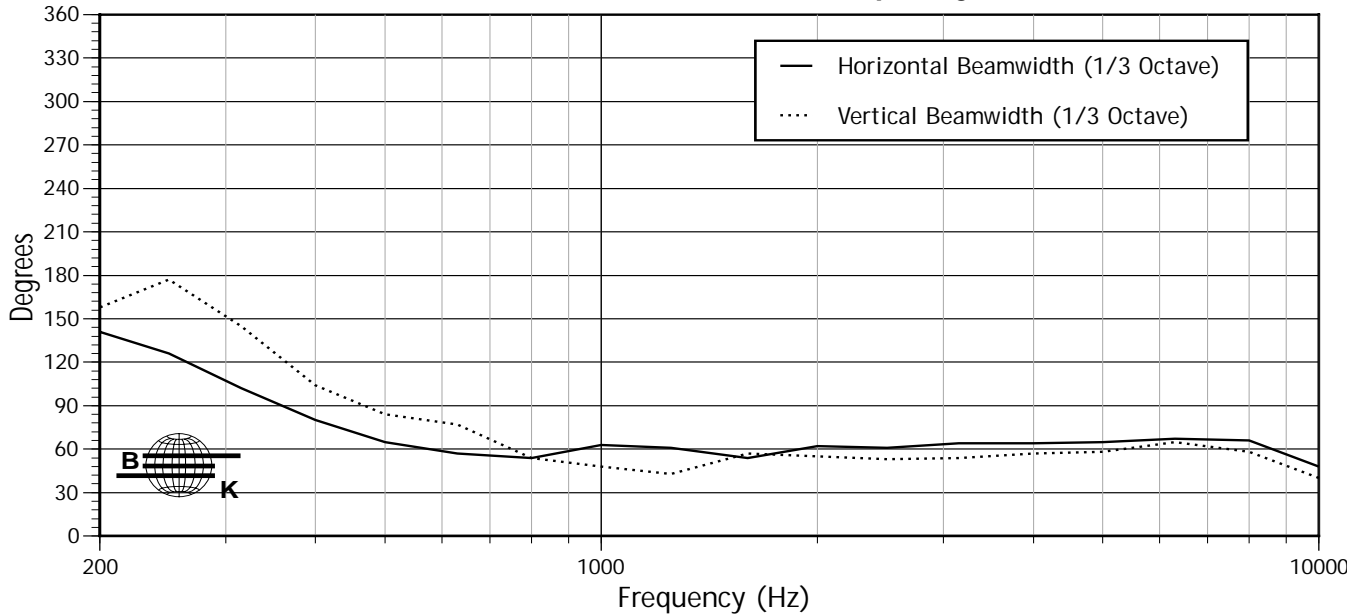




# PERFORMANCE SPECIFICATIONS MQ1366

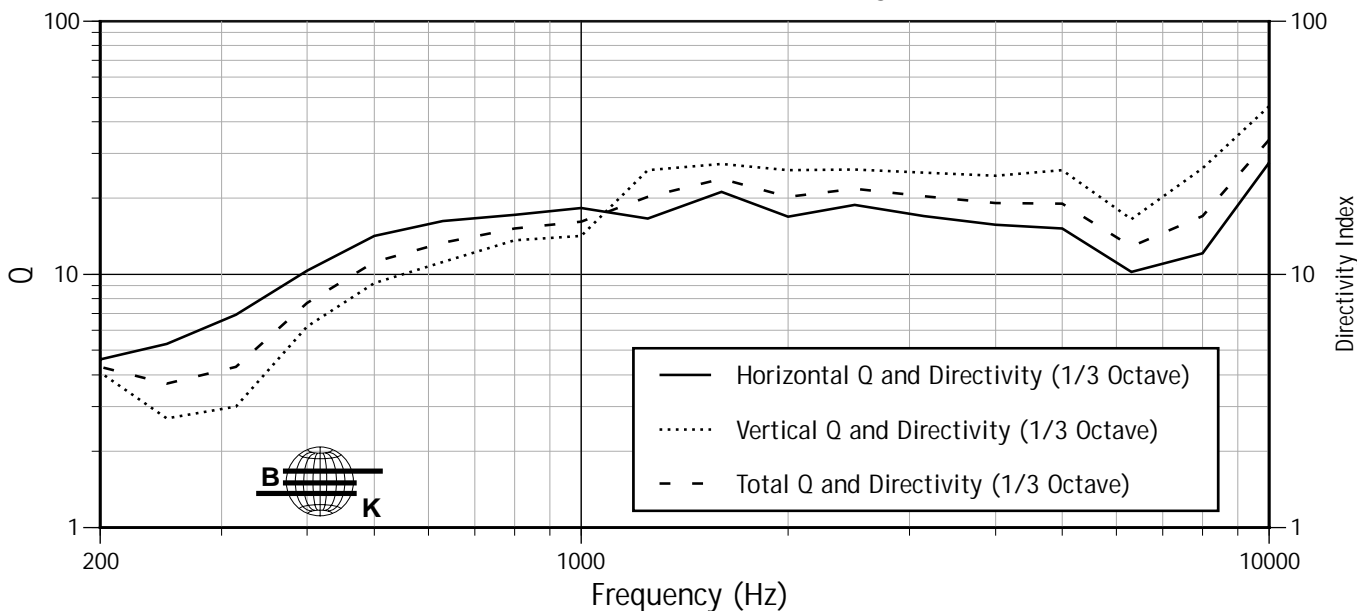
## BEAMWIDTH

### MQ1366 Beamwidth vs Frequency



## Q & DIRECTIVITY INDEX (DI)

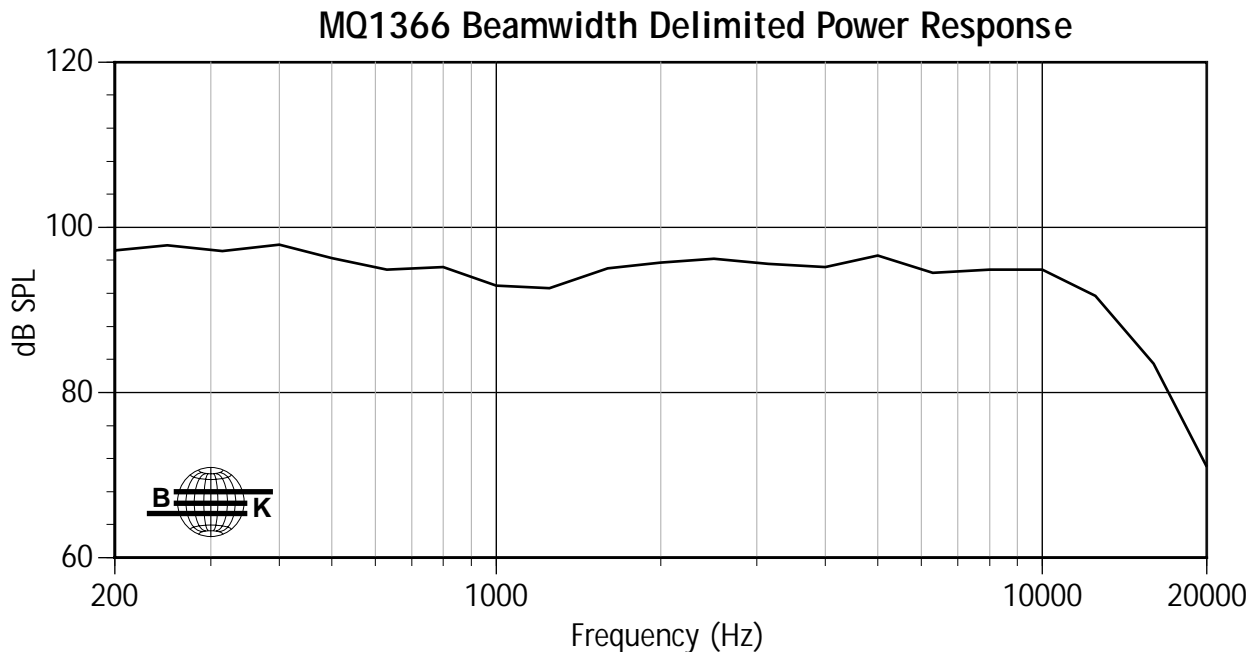
### MQ1366 Q and Directivity





# PERFORMANCE SPECIFICATIONS MQ1366

## POWER RESPONSE





# PERFORMANCE SPECIFICATIONS MQ1366

## Q & DIRECTIVITY & BEAMWIDTH BY FREQUENCY

Frequency	Hor Beamwidth	Ver Beamwidth	Hor Q & Dir	Ver Q & Dir	Tot Q & Dir
100	161	144	3.3	4	3.6
125	159	151	3.6	4.1	3.8
160	153	151	4	4.6	4.3
200	141	158	4.6	4.1	4.3
250	126	177	5.3	2.7	3.7
315	102	145	6.9	3	4.3
400	80	104	10.3	6.2	7.7
500	65	84	14.2	9.2	11.2
630	57	77	16.2	11.2	13.3
800	54	54	17.2	13.6	15.2
1000	63	48	18.3	14.2	16.1
1250	61	43	16.6	25.8	20.2
1600	54	57	21.2	27.2	23.8
2000	62	55	16.9	25.8	20.2
2500	61	53	18.8	25.9	21.7
3150	64	54	17	25.2	20.3
4000	64	57	15.7	24.5	19.1
5000	65	58	15.2	25.7	19
6300	67	65	10.2	16.5	12.9
8000	66	58	12.1	26.2	17
10000	48	40	27.5	46.2	34
12500	49	47	32.9	39.9	35.9
16000	70	67	11.5	15.8	13.3
20000	56	29	25.3	72.2	37.5

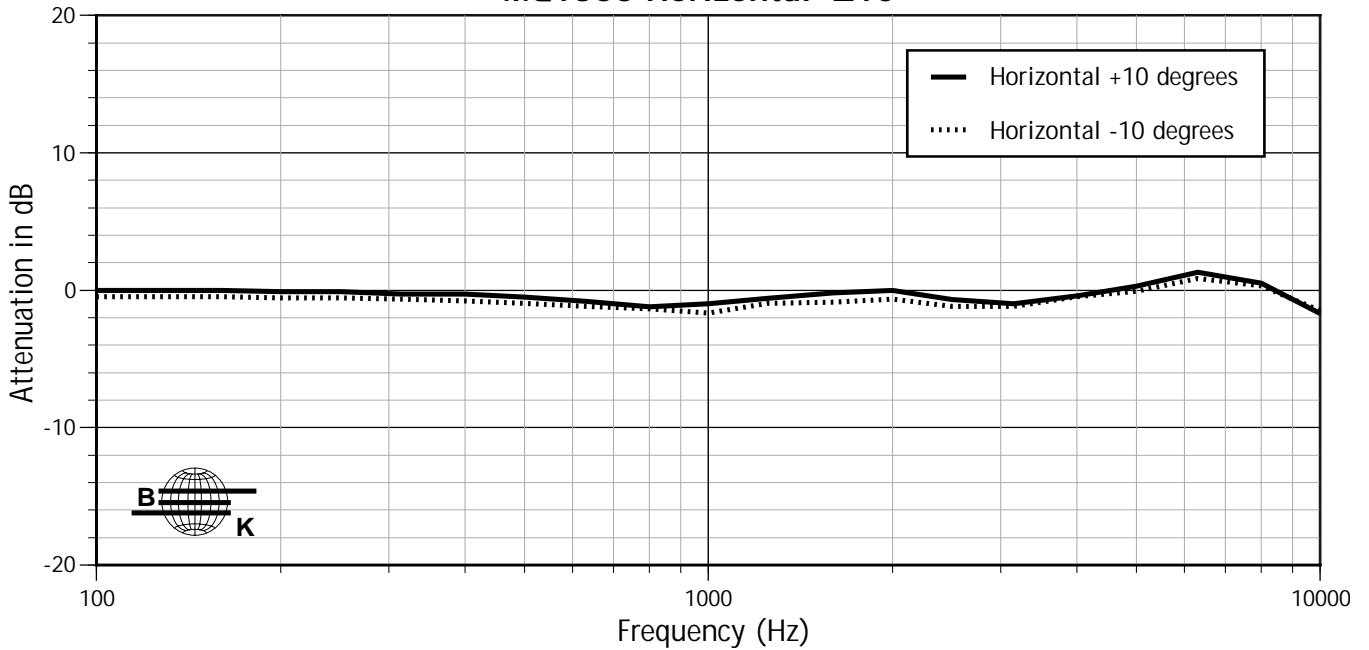


# PERFORMANCE SPECIFICATIONS MQ1366

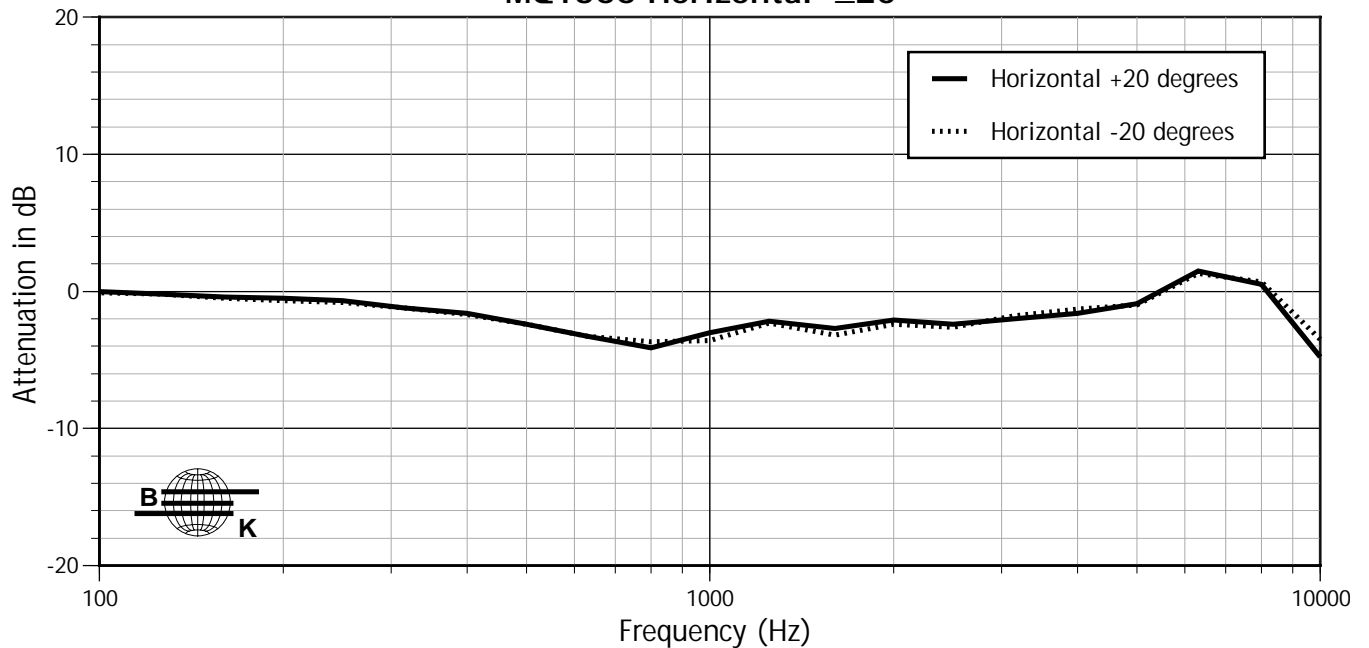
## HORIZONTAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.

### MQ1366 Horizontal $\pm 10^\circ$



### MQ1366 Horizontal $\pm 20^\circ$



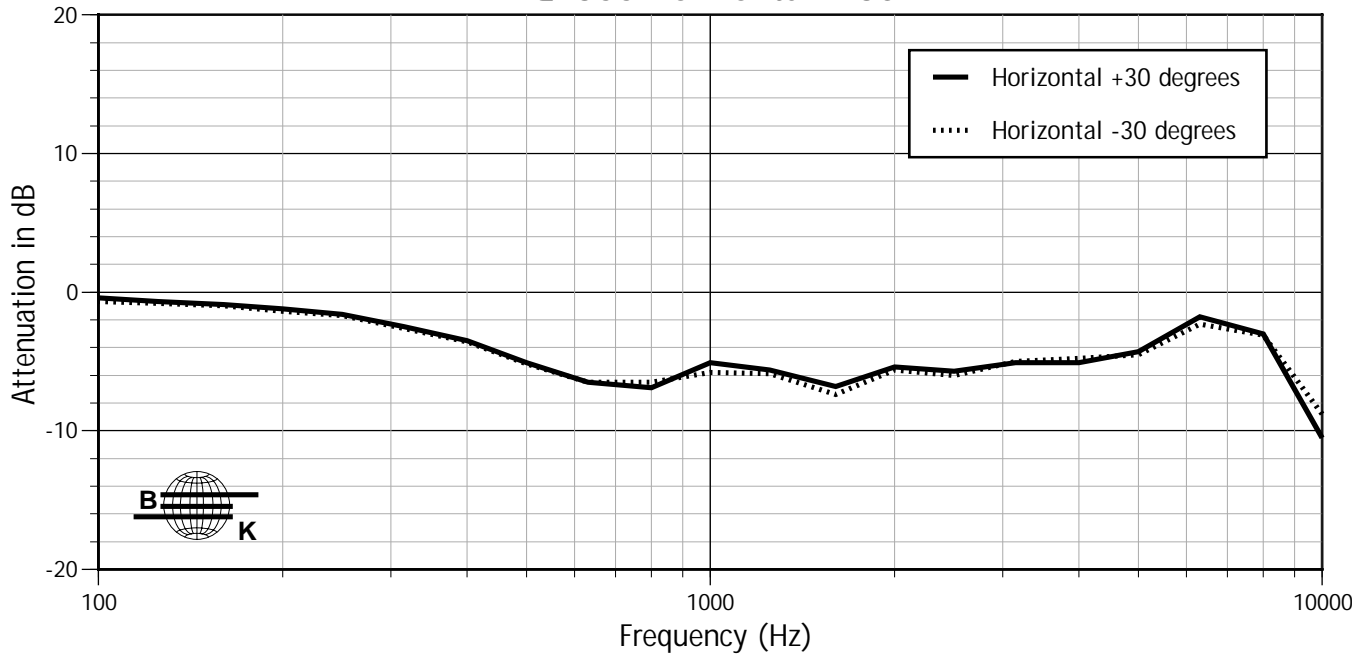


# PERFORMANCE SPECIFICATIONS MQ1366

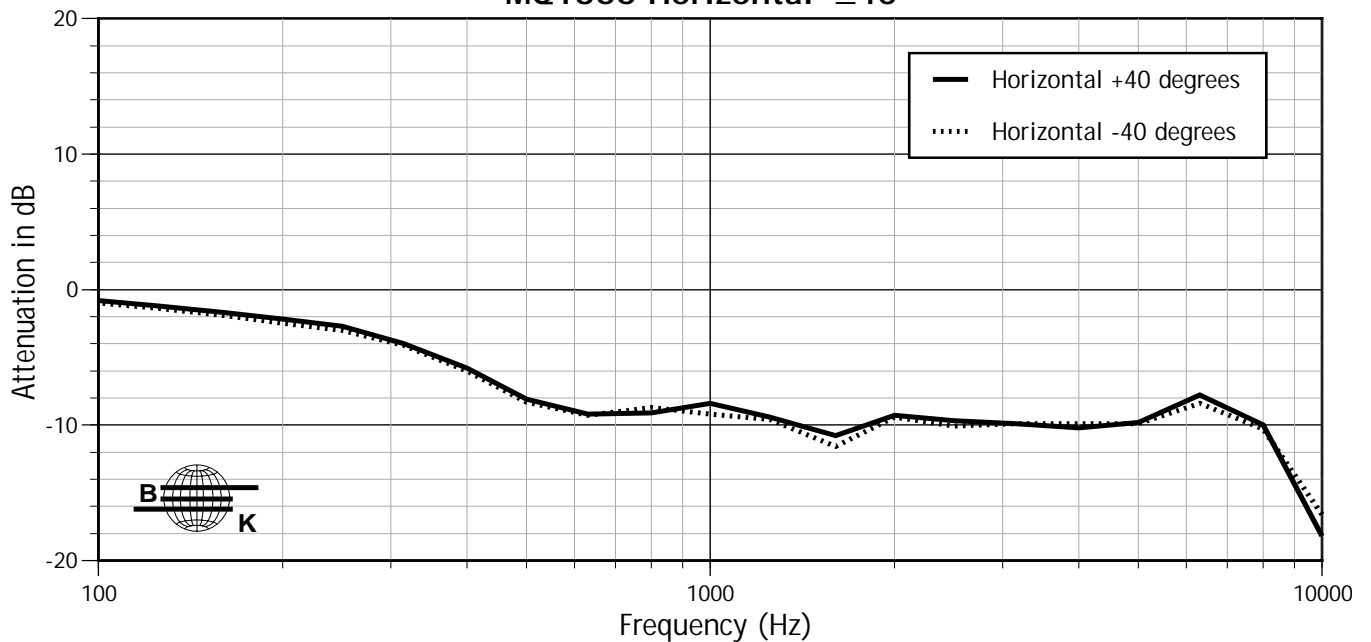
## VERTICAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.

### MQ1366 Horizontal $\pm 30^\circ$



### MQ1366 Horizontal $\pm 40^\circ$





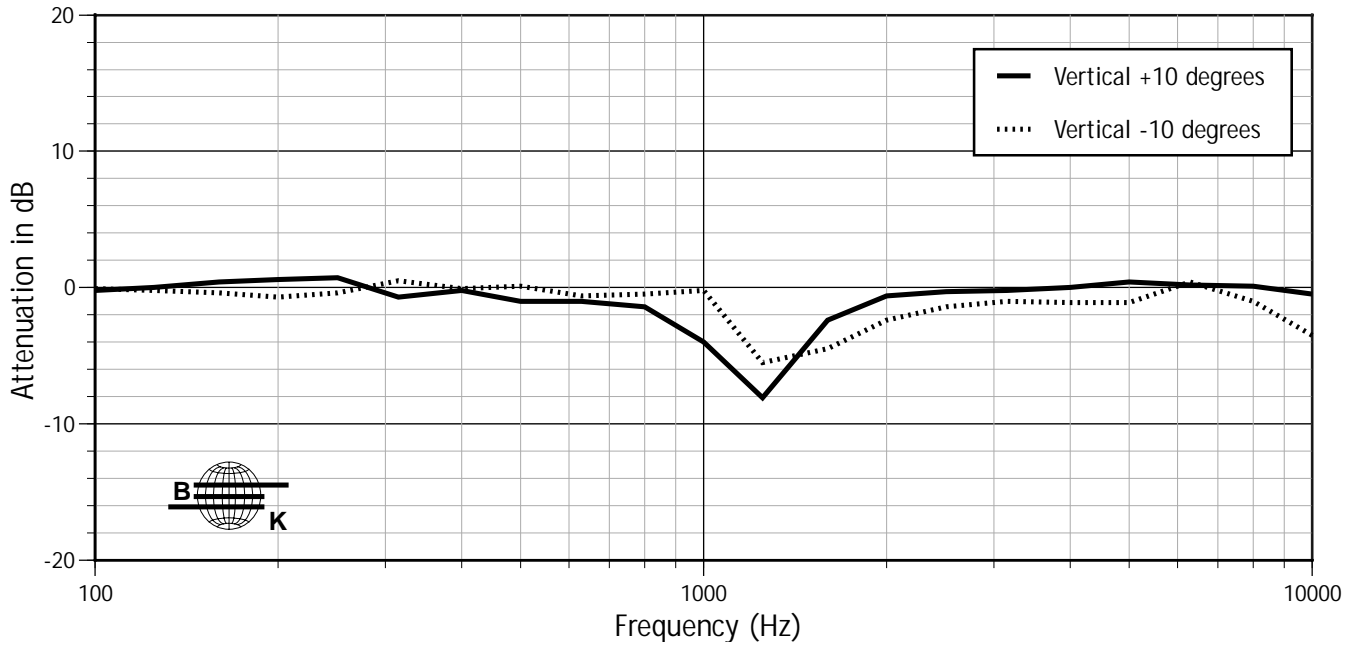


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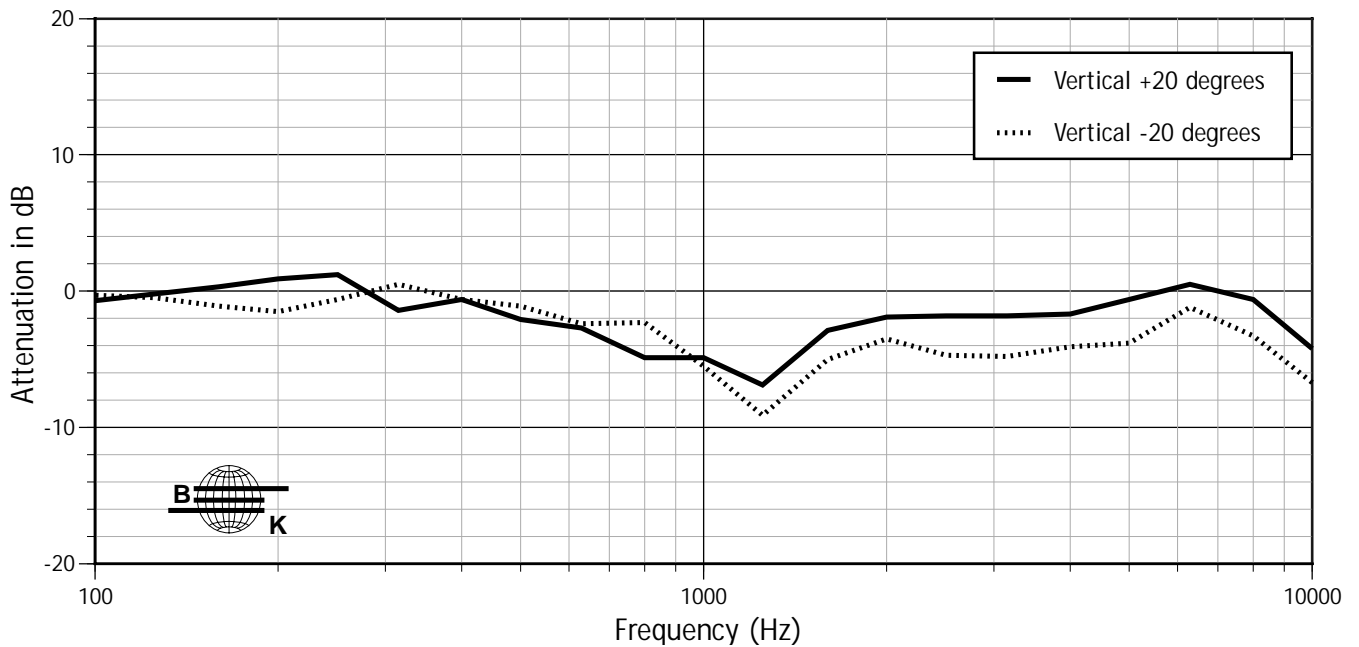
## VERTICAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.

### MQ1366 Vertical $\pm 10^\circ$



### MQ1366 Vertical $\pm 20^\circ$



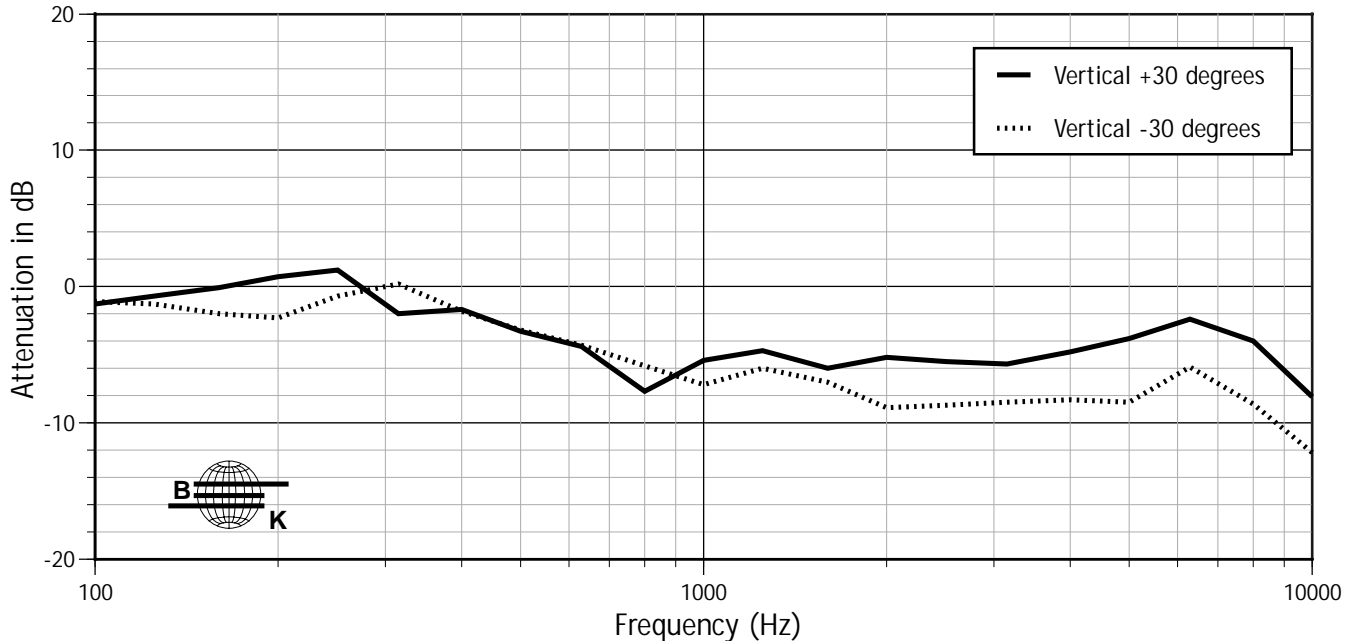


# PERFORMANCE SPECIFICATIONS MQ1366

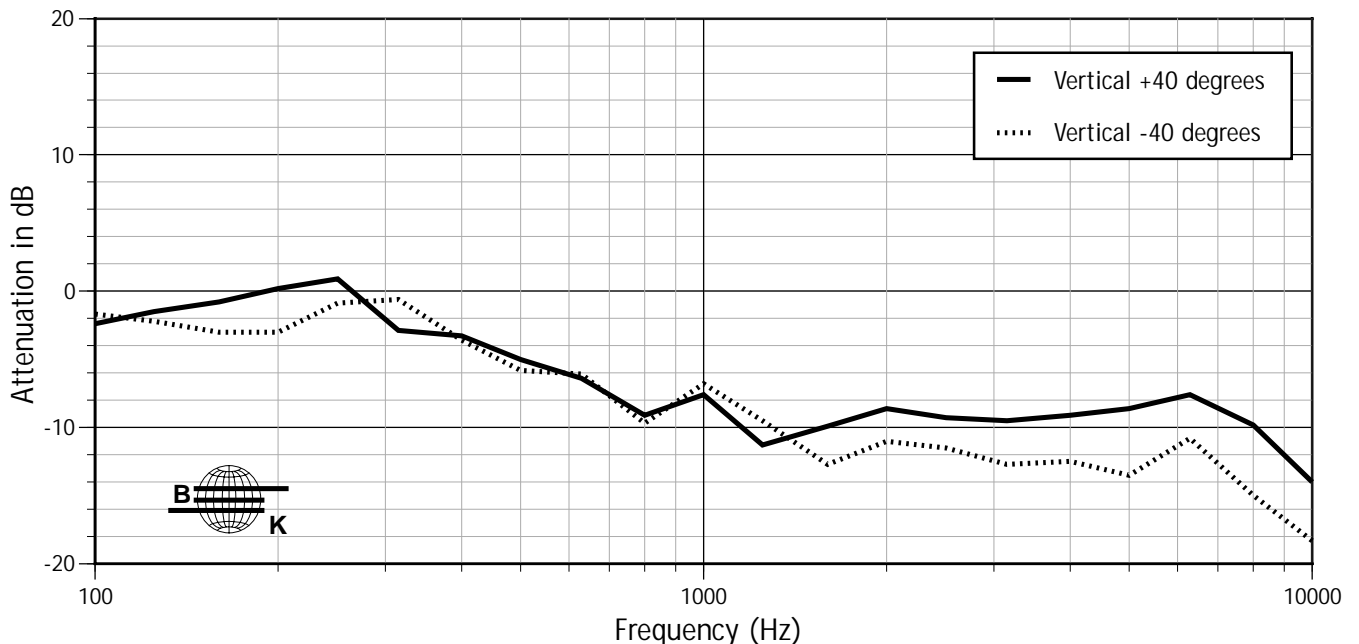
## VERTICAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.

### MQ1366 Vertical $\pm 30^\circ$

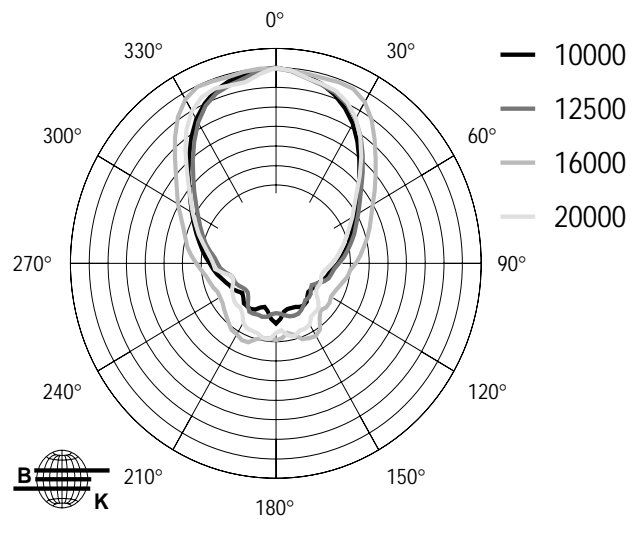
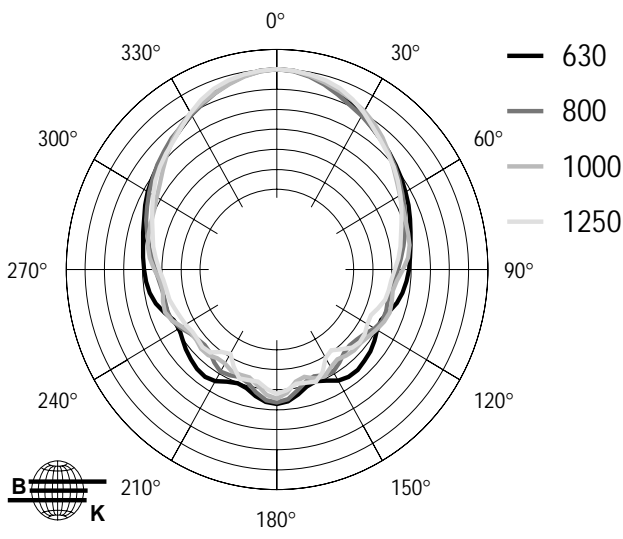
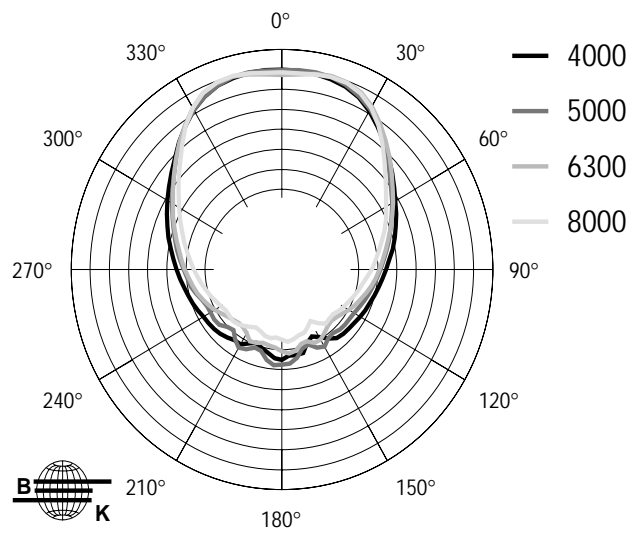
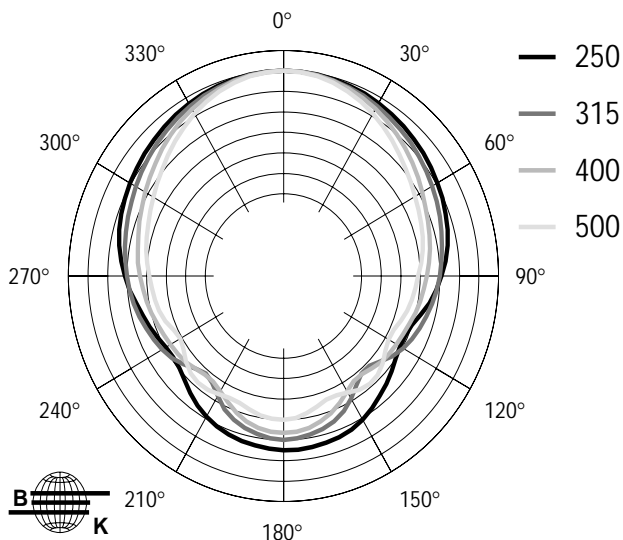
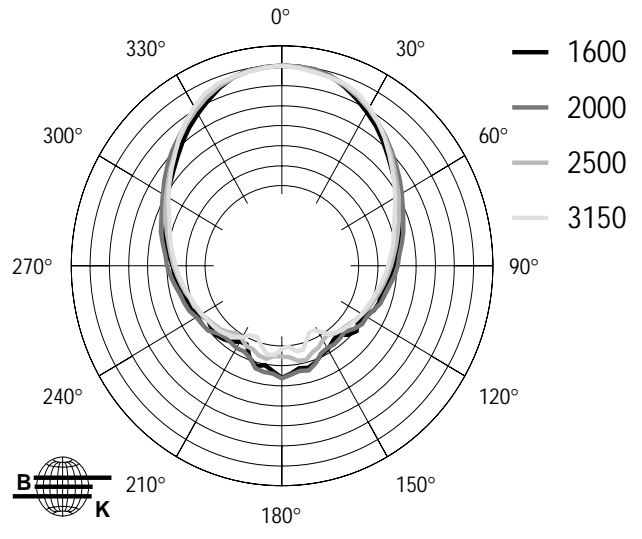
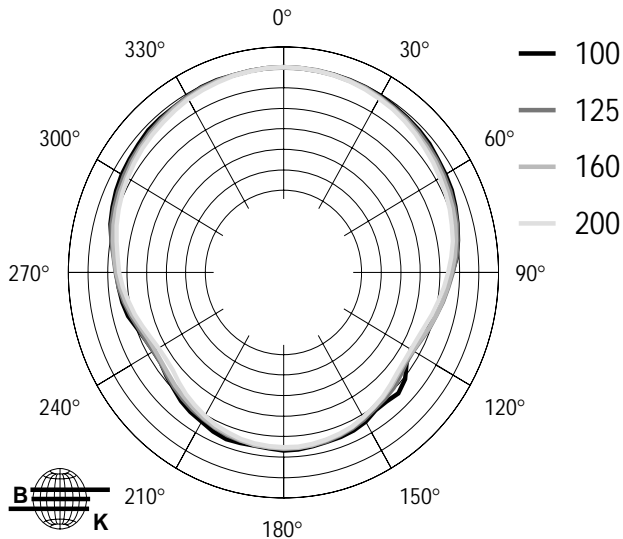


### MQ1366 Vertical $\pm 40^\circ$





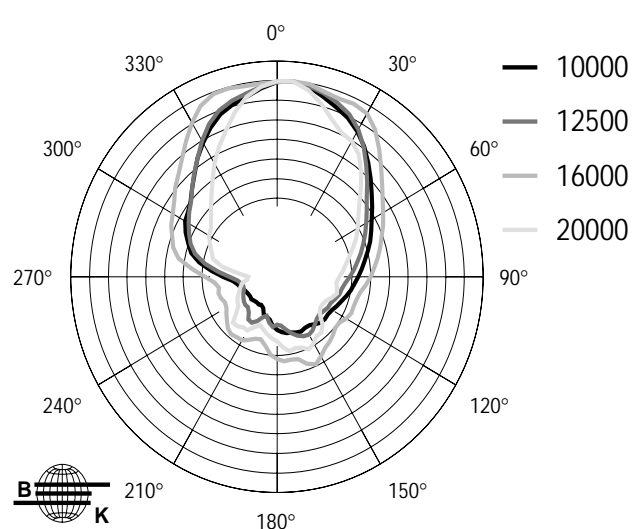
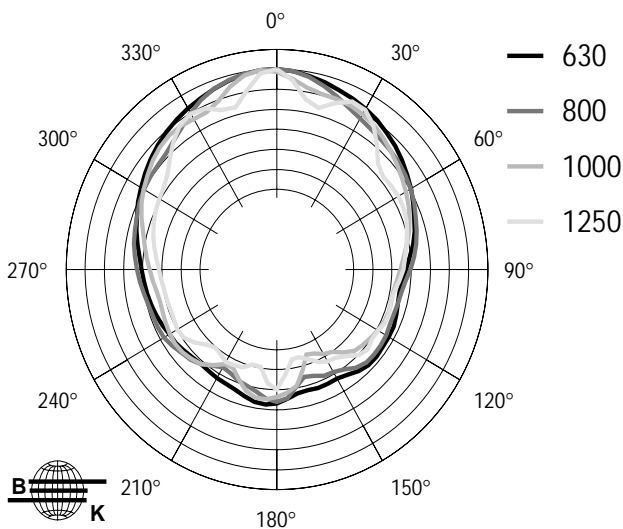
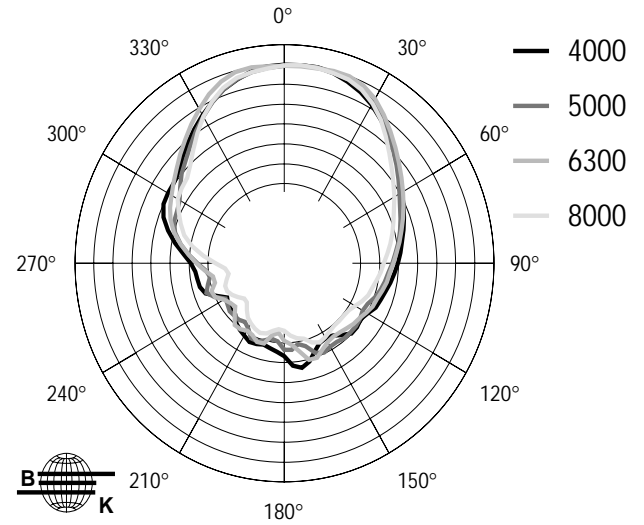
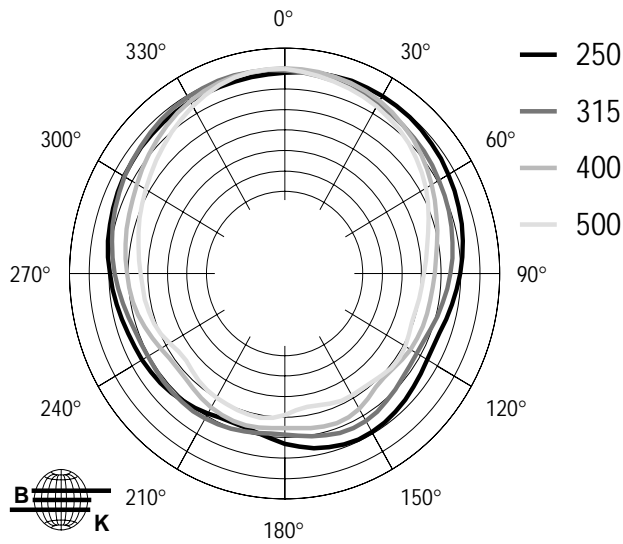
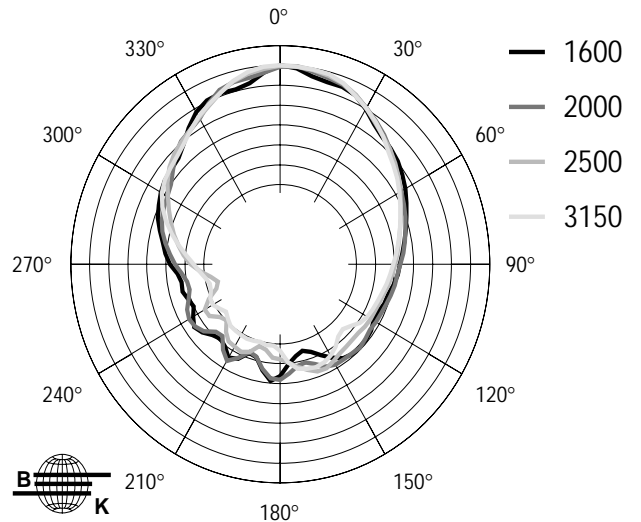
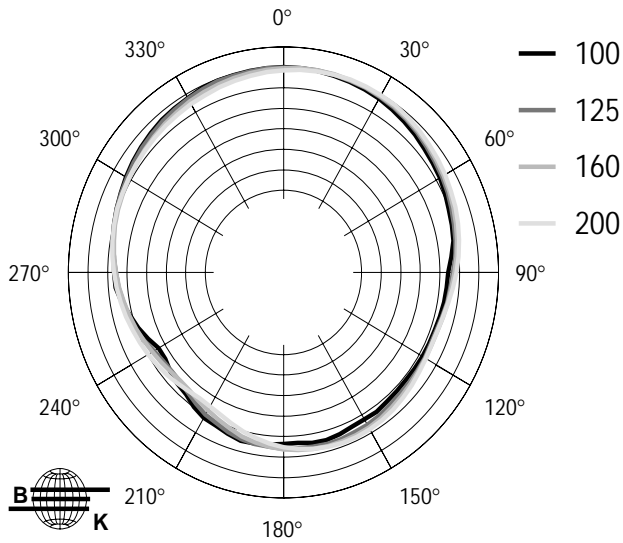
# HORIZONTAL 1/3 OCTAVE POLAR DATA MQ1366



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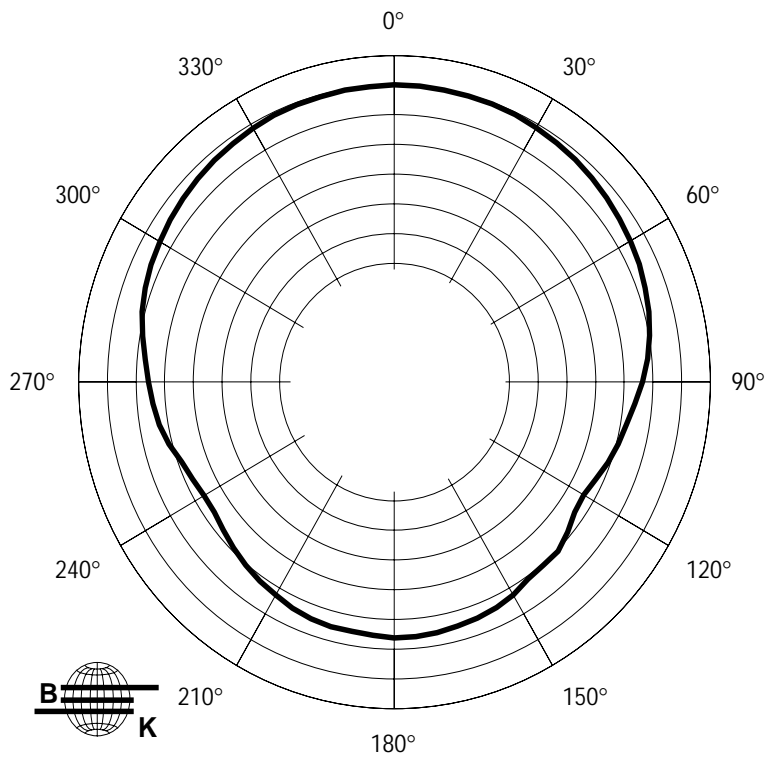
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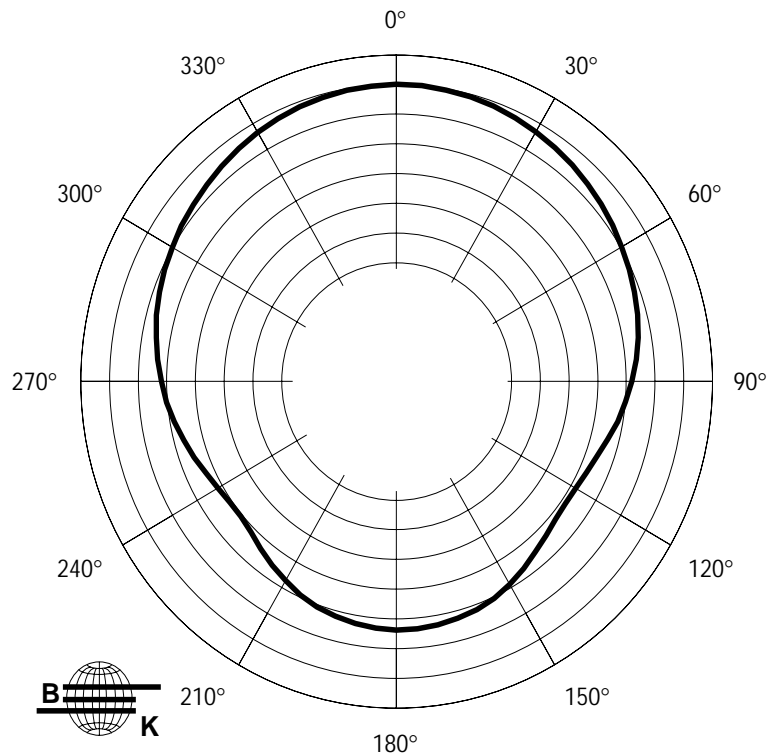


# HORIZONTAL OCTAVE POLAR DATA MQ1366

## MQ1366 125 Hz Horizontal Octave Polar Data



## MQ1366 250 Hz Horizontal Octave Polar Data

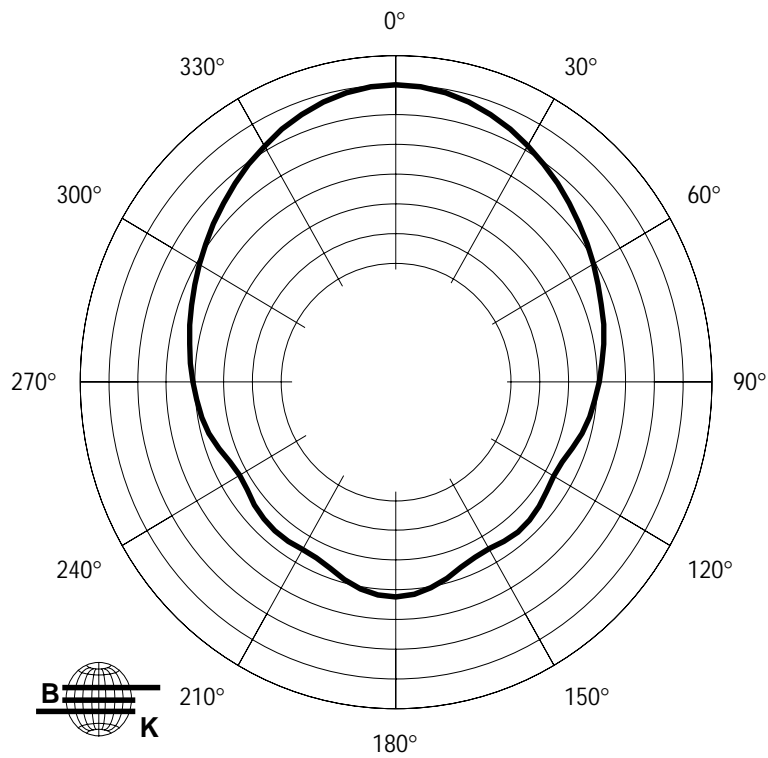


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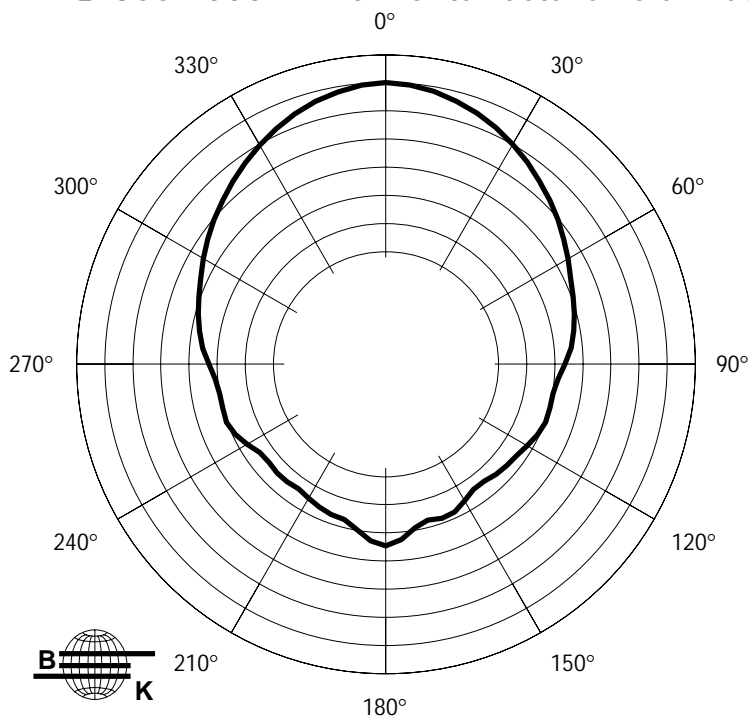


# HORIZONTAL OCTAVE POLAR DATA MQ1366

## MQ1366 500 Hz Horizontal Octave Polar Data



## MQ1366 1000 Hz Horizontal Octave Polar Data

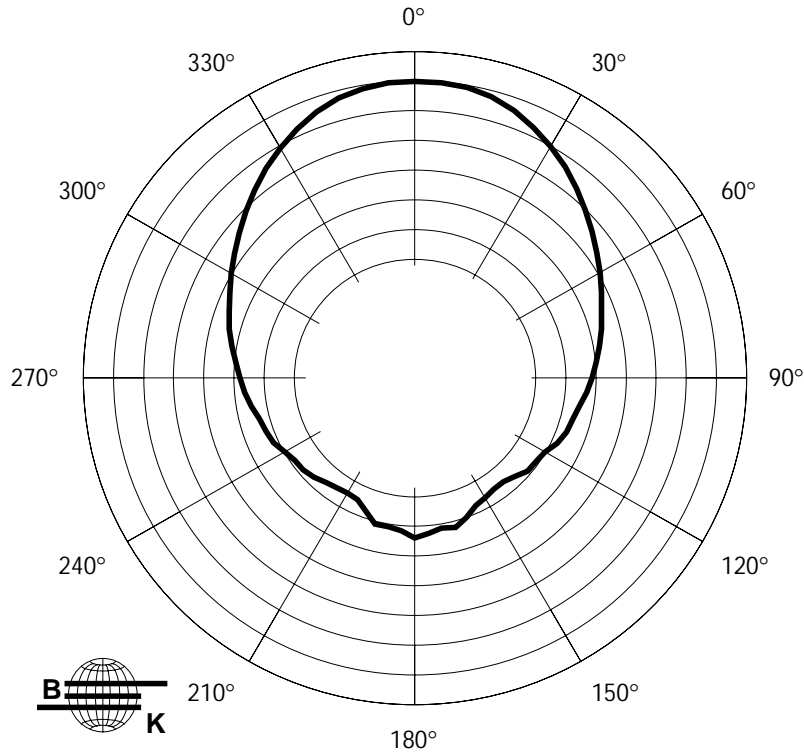


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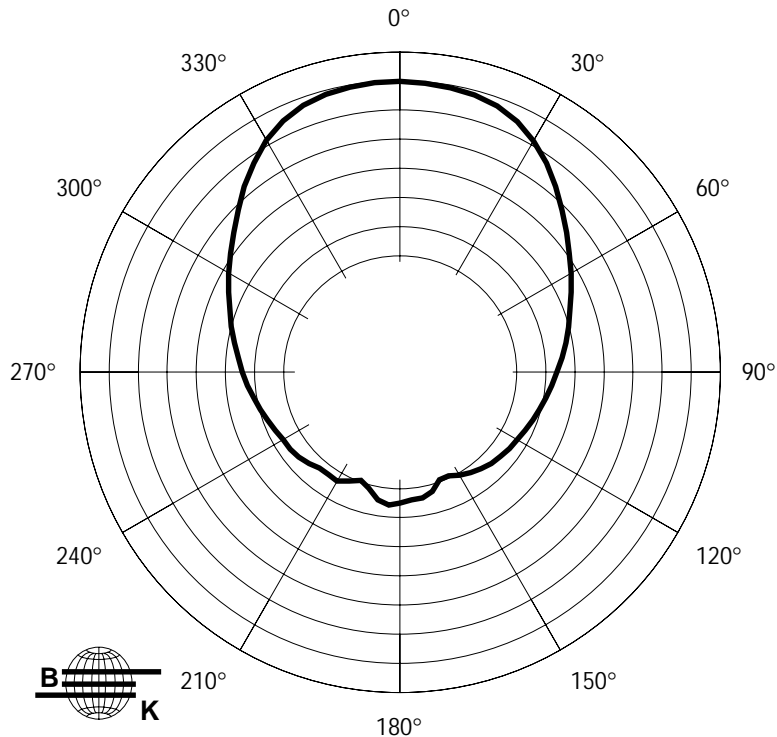


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## MQ1366 2000 Hz Horizontal Octave Polar Data



## MQ1366 4000 Hz Horizontal Octave Polar Data

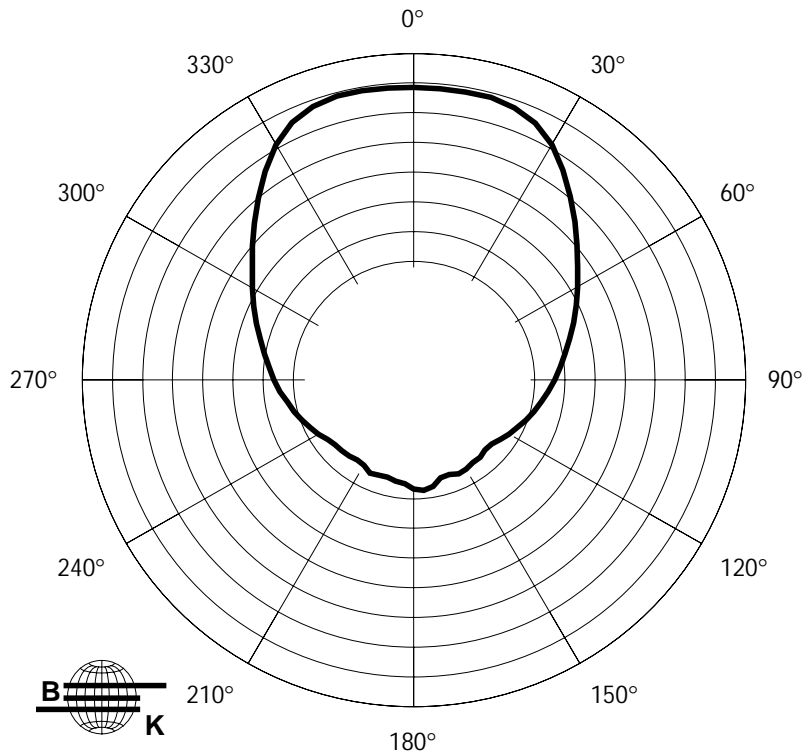


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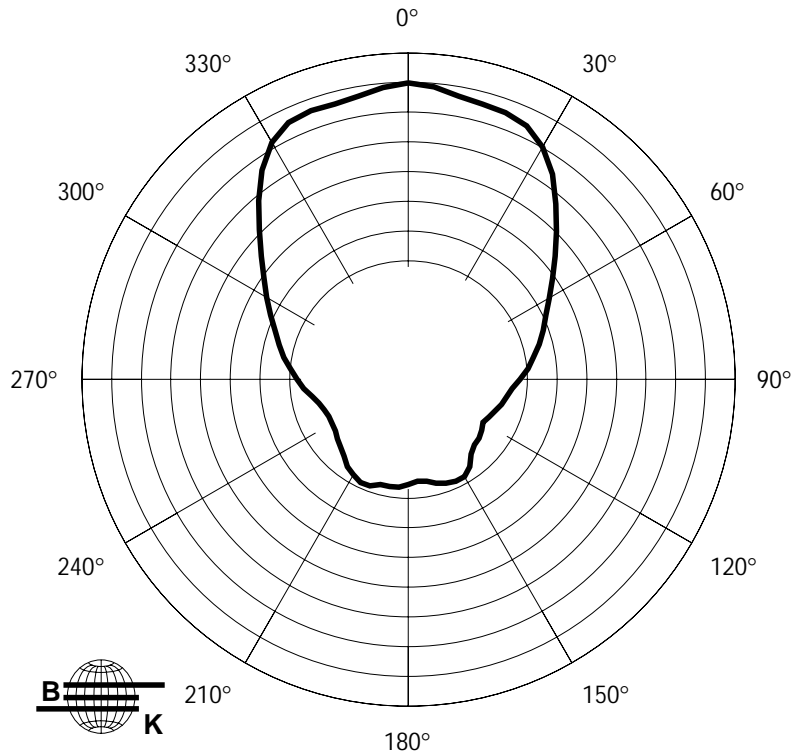


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## MQ1366 8000 Hz Horizontal Octave Polar Data



## MQ1366 16000 Hz Horizontal Octave Polar Data



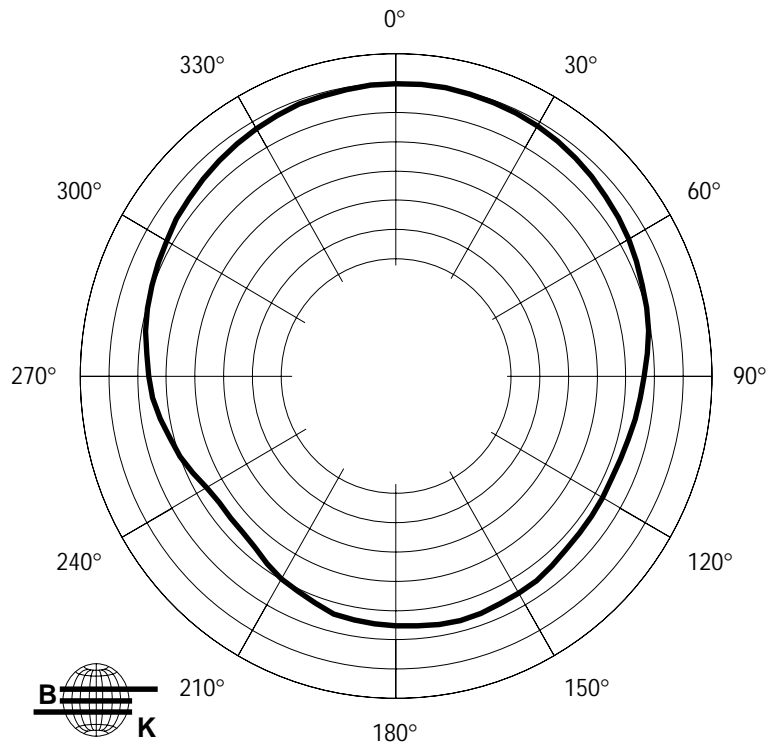
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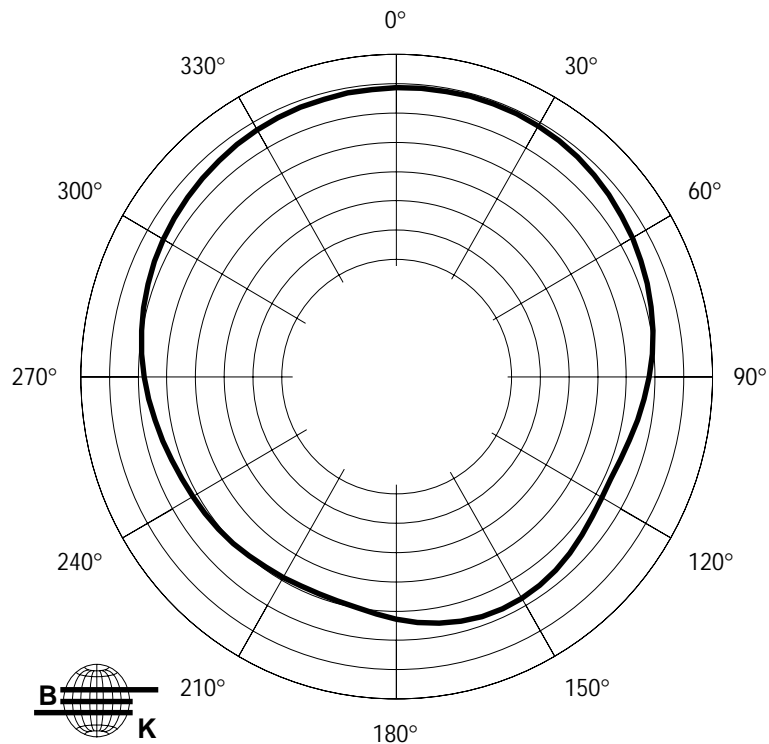


# VERTICAL OCTAVE POLAR DATA MQ1366

## MQ1366 125 Hz Vertical Octave Polar Data



## MQ1366 250 Hz Vertical Octave Polar Data

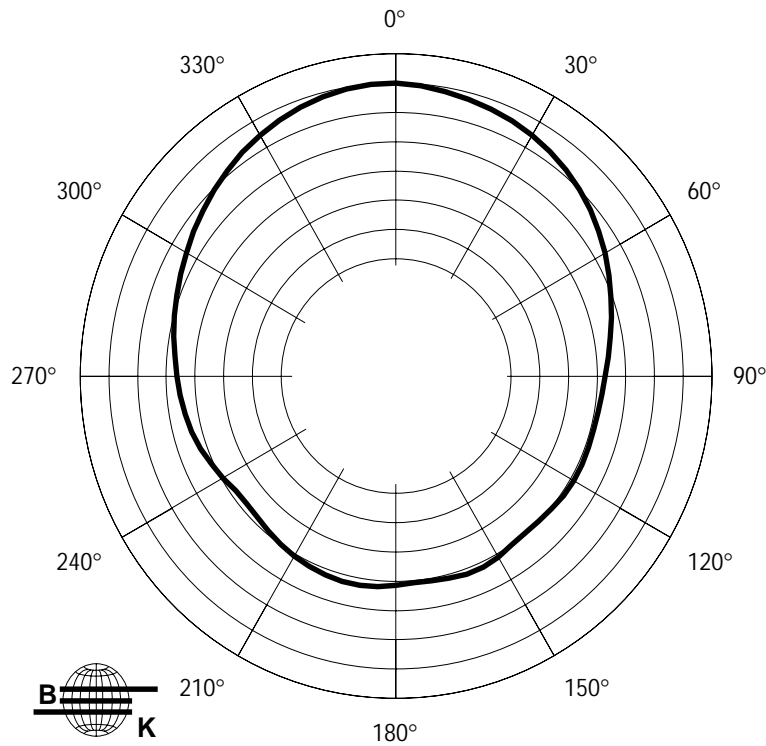


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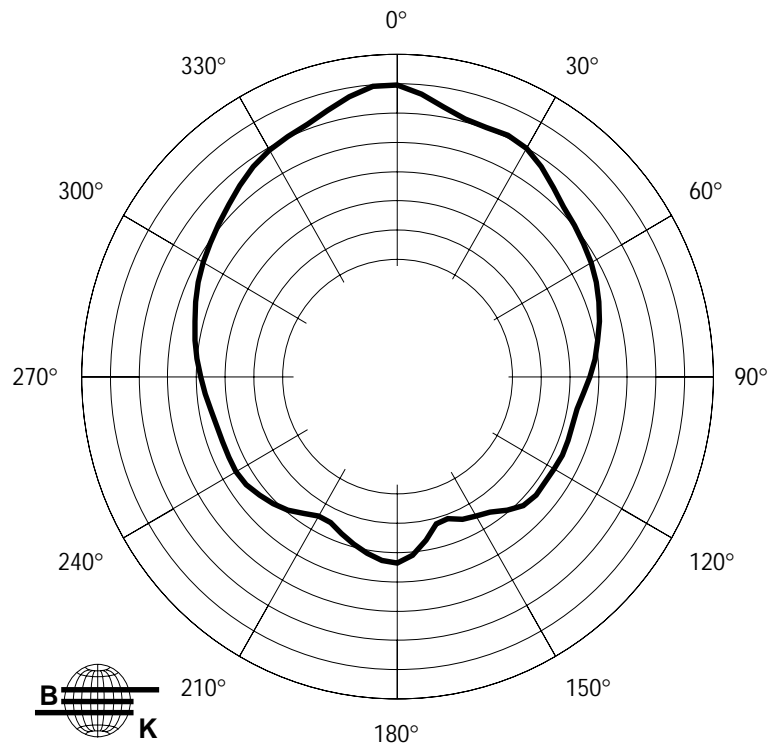


# VERTICAL OCTAVE POLAR DATA MQ1366

## MQ1366 500 Hz Vertical Octave Polar Data



## MQ1366 1000 Hz Vertical Octave Polar Data

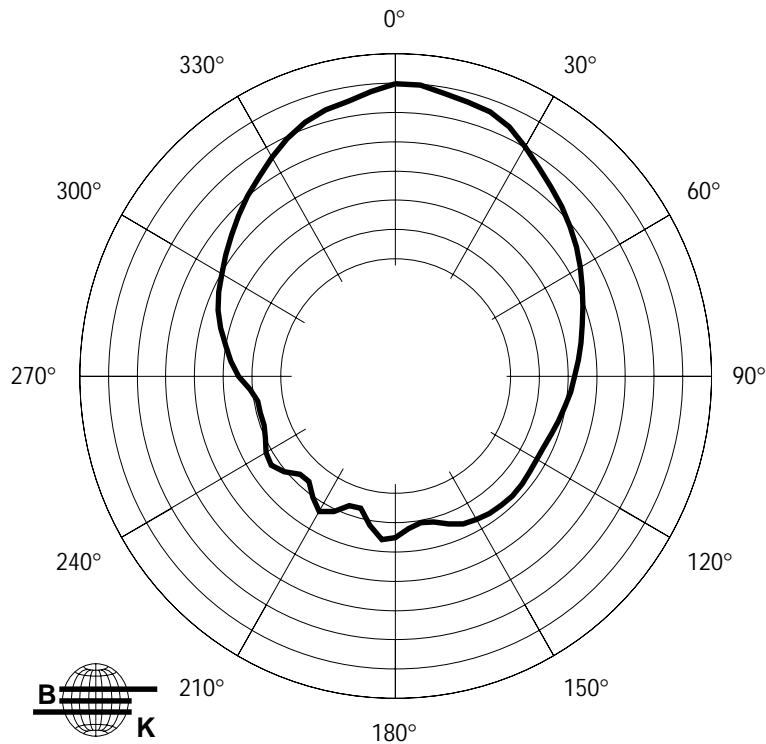


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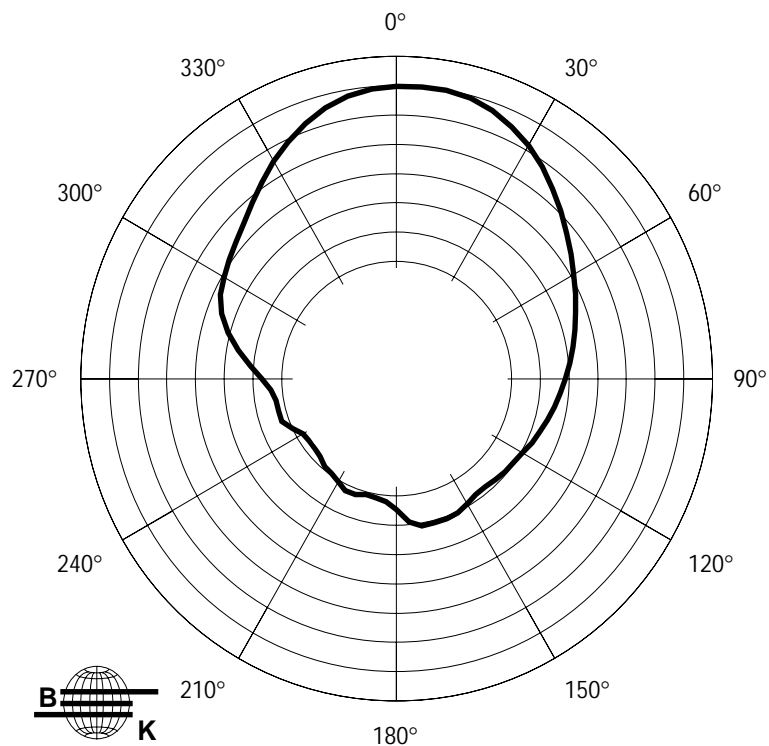


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## MQ1366 2000 Hz Vertical Octave Polar Data



## MQ1366 4000 Hz Vertical Octave Polar Data

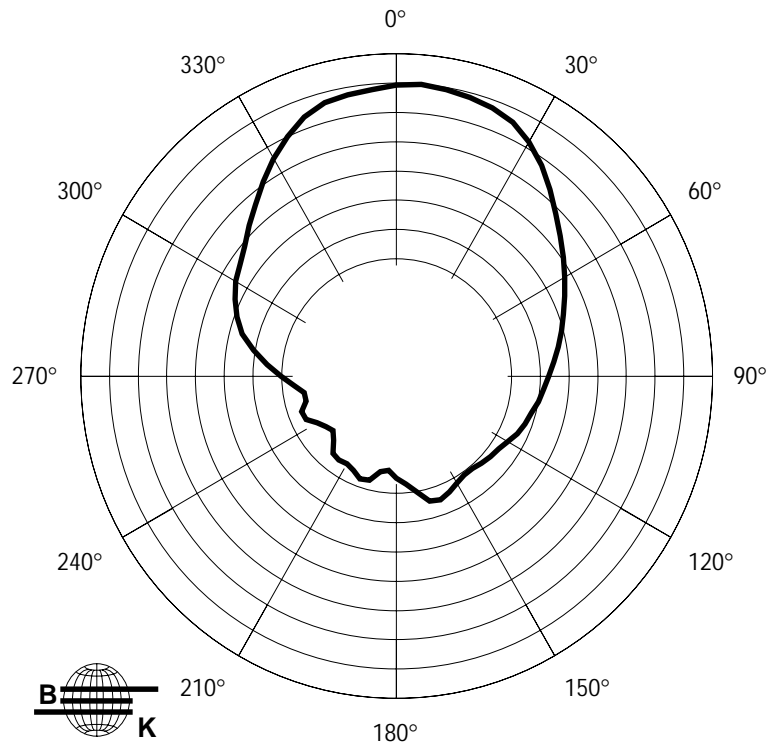


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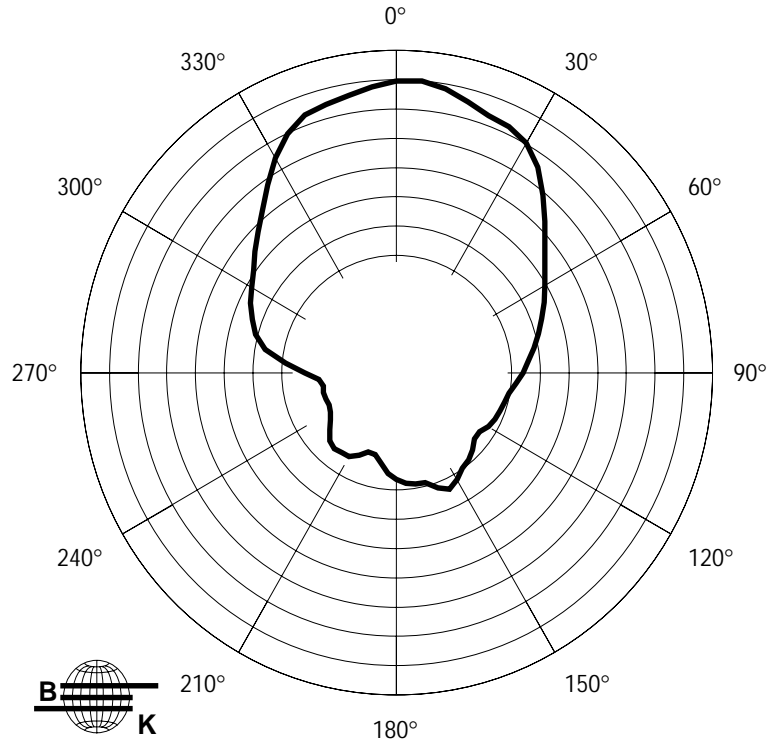


# VERTICAL OCTAVE POLAR DATA MQ1366

## MQ1366 8000 Hz Vertical Octave Polar Data



## MQ1366 16000 Hz Vertical Octave Polar Data



6 db/div.

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