



TECHNICAL SPECIFICATIONS KF750F

DESCRIPTION

The KF750F 3-way triamplified full range system contains many new EAW technologies that make it a powerful concert touring sound reinforcement tool. Its Acoustic Singularity™ design aligns the three subsystems along a single axis so the KF750 acts as a true point source, greatly reducing temporal smearing of staccato events and improving overall clarity and impact.

Since the large mid frequency horn contains both the high and low frequency subsystems, the overall package is just 31 in. high. Still, the KF750F provides consistent wideband pattern control in both the vertical and horizontal planes.

The LF subsystem includes two vented 12-in woofers mounted in the MF horns upper and lower walls as a Dipolar Array™. This Dipolar Array extends vertical directivity well into the LF passband to minimize midbass build up below the array.

The large MF horn loads a specially designed 10-in midrange cone whose geometry exactly matches the rear of its phase plug assembly. By developing the driver and phase plug as a single unit, pathlength discontinuities within the MF passband have been eliminated without compromising the directional qualities of the source as all previous phase plug designs have.

The 2-in exit/100mm voice coil HF compression driver is mounted on a 35 x 35 constant directivity horn mounted coaxially within the MF horn flare.

The KF750F's 15°-per-side trapezoidal enclosure features eight 4-position flytracks (four each front and rear) that accept industry-standard flyclips.

APPLICATIONS

The KF750F is designed to create arrays with optimized coverage in both the horizontal and vertical planes to cover audience areas ranging from 200 to 80,000 people.

At just 31-in tall and 190 lb. per module, KF750F arrays will be smaller, lighter, more efficient and, therefore, more powerful than those built with other systems. These smaller, lighter arrays are easier to fly, require less truck space and permit more open sight lines to cover any given venue.

The KF750F works with a companion downfill module, the KF755F to provide full range nearfield coverage below the array. When KF755's are either not available or not desired, the KF750F's smooth power response produces remarkably even SPL levels throughout the coverage area, allowing it to be used for nearfield coverage when necessary.

Applications include:

- Concert Tours
- Performing Arts Centers
- Theaters



DESCRIPTIVE DATA

Configuration	3-Way, Full Range	
Powering	Triamplified (MX8600 Processor)	
LF Subsystem	2x 12-in Cones, Dipolar Array, Vented	
MF Subsystem	10-in Cone, Radial Phase Plug, Horn-Loaded	
HF Subsystem	2-in Exit/100mm Voice Coil Compression Driver on CD Horn	
Cabinet Type (shape)	Trapezoidal	
Enclosure Materials	Baltic Birch Plywood	
Finish	Black Polyurethane	
Connectors	2x Neutrik NL8 Speakon	
Suspension Hardware	8x 4-Position Flytrack (4 each front and rear)	
Grill	Powder Coated Perforated Steel, Foam Backed	
Dimensions	inches	millimeters
Height	31.00	787
Width (Front)	27.00	686
Width (Rear)	8.78	233
Depth	34.00	864
Trapezoid Angle	15 degrees per side	
Weights	pounds	kilograms
Net Weight	190	86.5
Shipping Weight	200	91.0
Companion Systems		
Sub Bass	SB850R/SB1000e/KF940	
Full Range Downfill	KF755F	
Options	KF700 Series Caster Pallet	



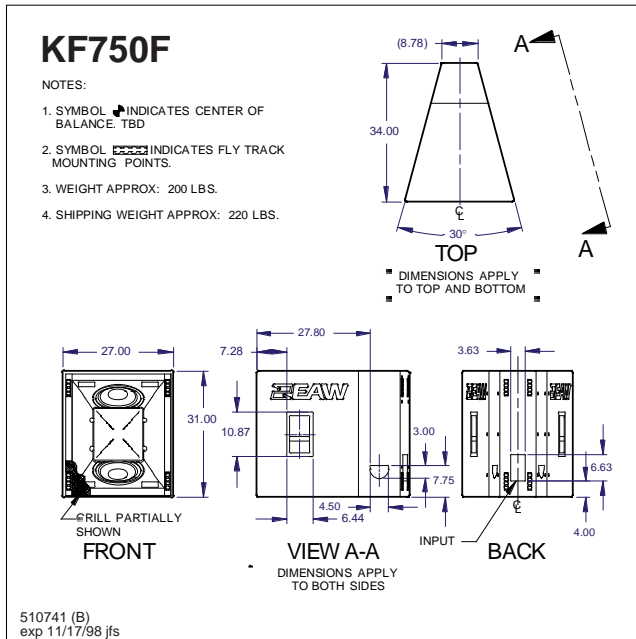
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EAW products are continually improved. All specifications are therefore subject to change without notice. • PUB# KF750F-888048 (A)/2 pp/1/29/99 • Printed In USA



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DIMENSIONAL DRAWING



NOMINAL DATA

Frequency Response (1 Watt @ 1m)

±3 db	48 Hz to 18 kHz
-10 dB	30 Hz

Axial Sensitivity (dB SPL, 1 Watt @ 1m)

LF	103
MF	109
HF	116

Impedance (Ohms)

LF	2x 8
MF	8
HF	8

Power Handling, AES Standard (Watts)

LF	1200
MF	400
HF	200

Calculated Maximum Output (dB SPL @ 1m)

LF Peak/Long Term	139.8/133.8
MF Peak/Long Term	141.0/135.0
HF Peak/Long Term	145.0/139.0

Nominal Coverage Angles, -6 dB points (degrees)

Horizontal	35
Vertical	35

Recommended High-Pass Frequency (24 dB/Octave)

35 Hz

ARCHITECTURAL SPECIFICATIONS

The three-way full range loudspeaker systems shall incorporate 2x 12-in LF transducers, a 10-in MF cone transducer and a 2-in exit/100mm voice coil compression driver HF transducer.

The LF drivers shall be mounted in a vented enclosure tuned for optimum low frequency response and separated vertically to produce off-axis cancellation at a tuned frequency. The MF driver shall be mounted on a large-format horn and shall be coupled to a phase plug whose geometry exactly matches that of the driver. The HF driver shall be loaded on a constant directivity horn with a nominal coverage pattern of 35° (h) x 35° (v).

System frequency response shall vary no more than ±3 dB from 48 Hz to 18 kHz measured on axis. The loudspeaker's subsystems (LF/MF/HF) shall produce Sound Pressure Level (SPL) of 103/109/116 dB SPL on axis at 1 meter with a power input of 1 Watt, and shall be capable of producing a peak output of 139.8/141.0/145.0 dB SPL on axis at 1 meter. The subsystems (LF/MF/HF) shall handle 1200/400/200 Watts of amplifier power (AES Standard) and shall have nominal impedances of 2x 8/8/8 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 connector shall be a Neutrik NL8 with an additional NL8 provided for connect through. A total of eight 4-position flytracks (4 each front and rear) shall be provided. The front of the loudspeaker shall be covered with a powdercoated perforated steel grill.

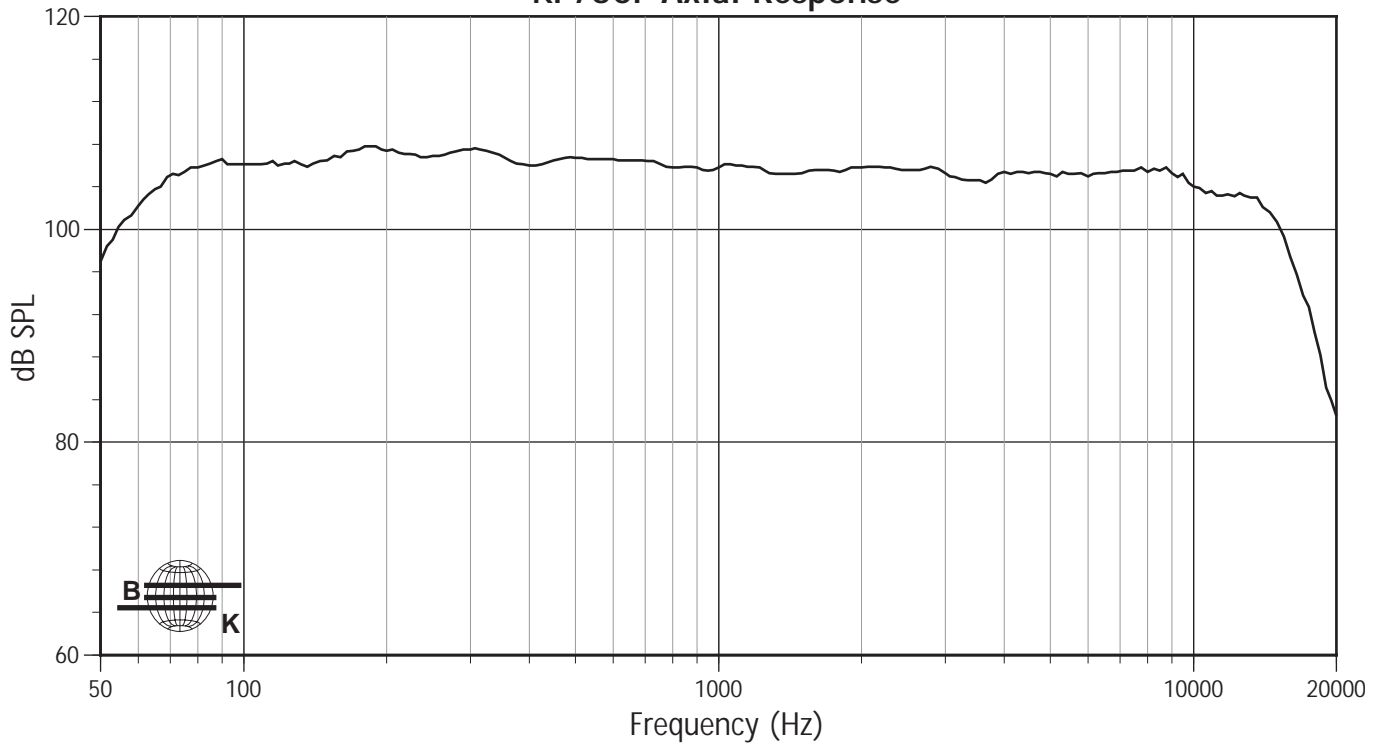
The three-way full range loudspeaker systems shall be the EAW model KF750F.



PERFORMANCE SPECIFICATIONS KF750F

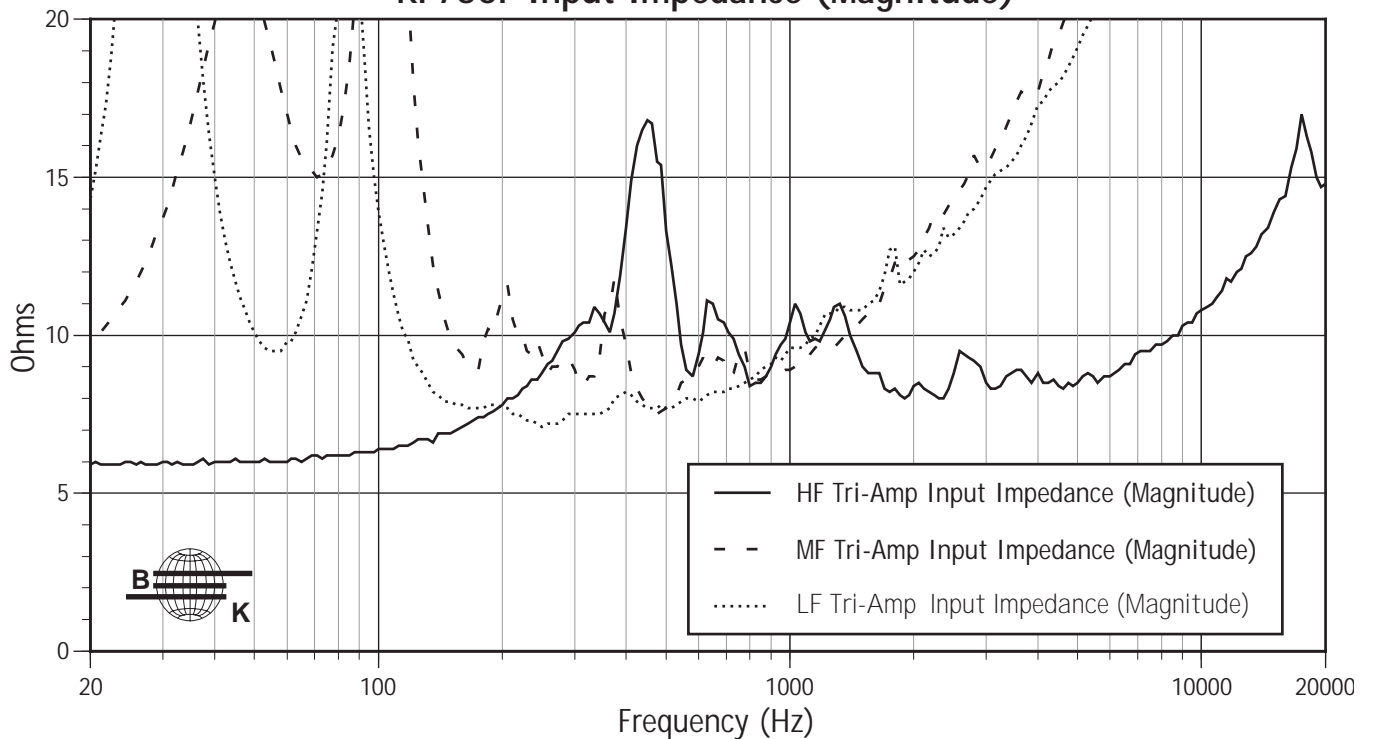
FREQUENCY RESPONSE

KF750F Axial Response



INPUT IMPEDANCE

KF750F Input Impedance (Magnitude)

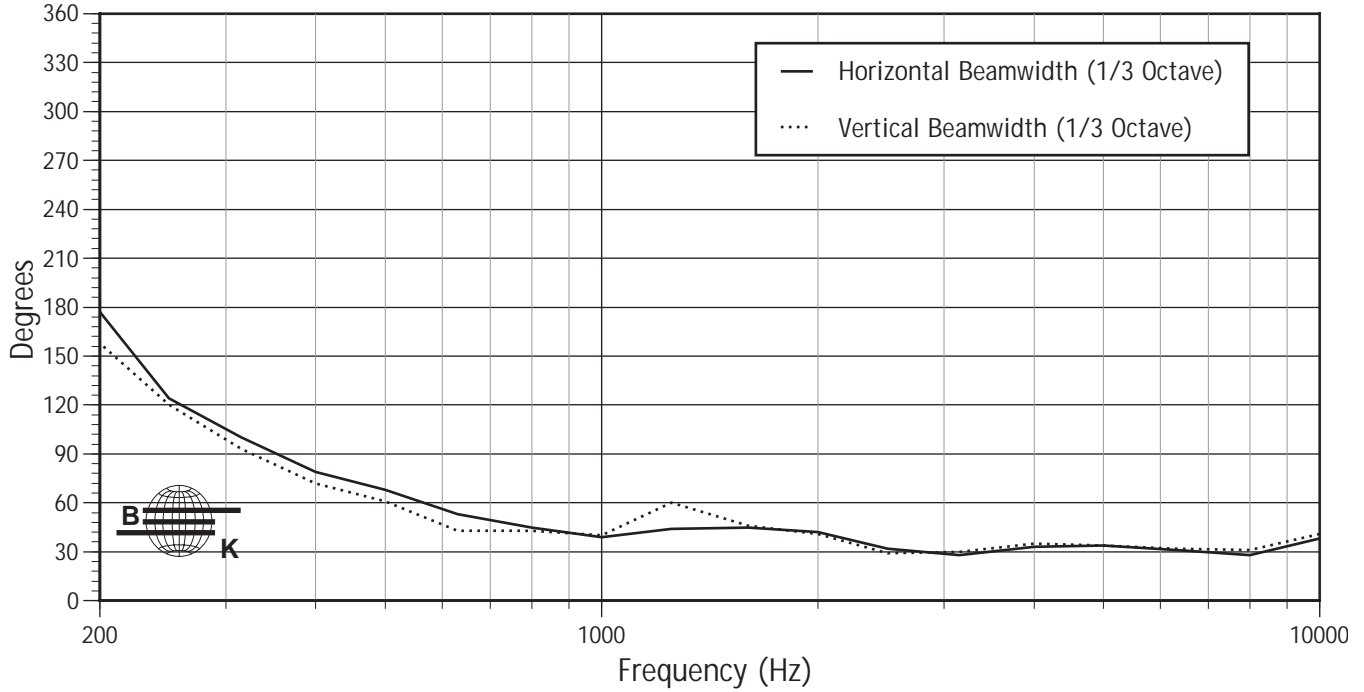




PERFORMANCE SPECIFICATIONS KF750F

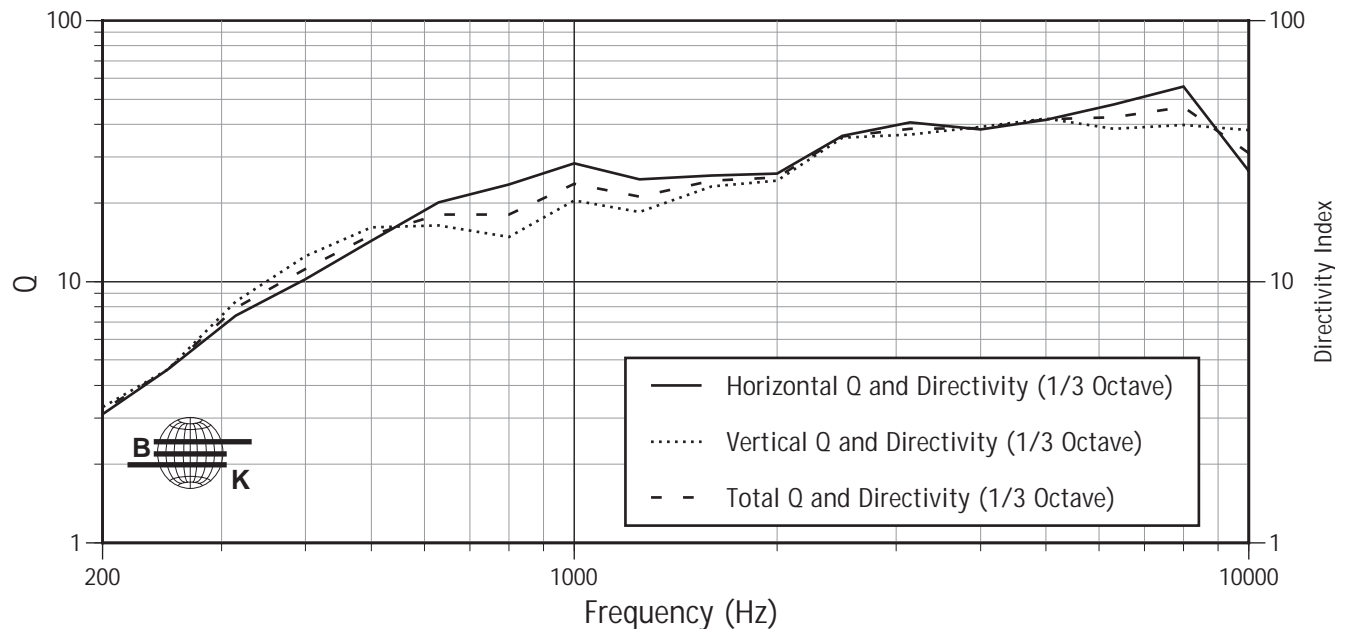
BEAMWIDTH

KF750F Beamwidth vs Frequency



Q & DIRECTIVITY INDEX (DI)

KF750F Q and Directivity

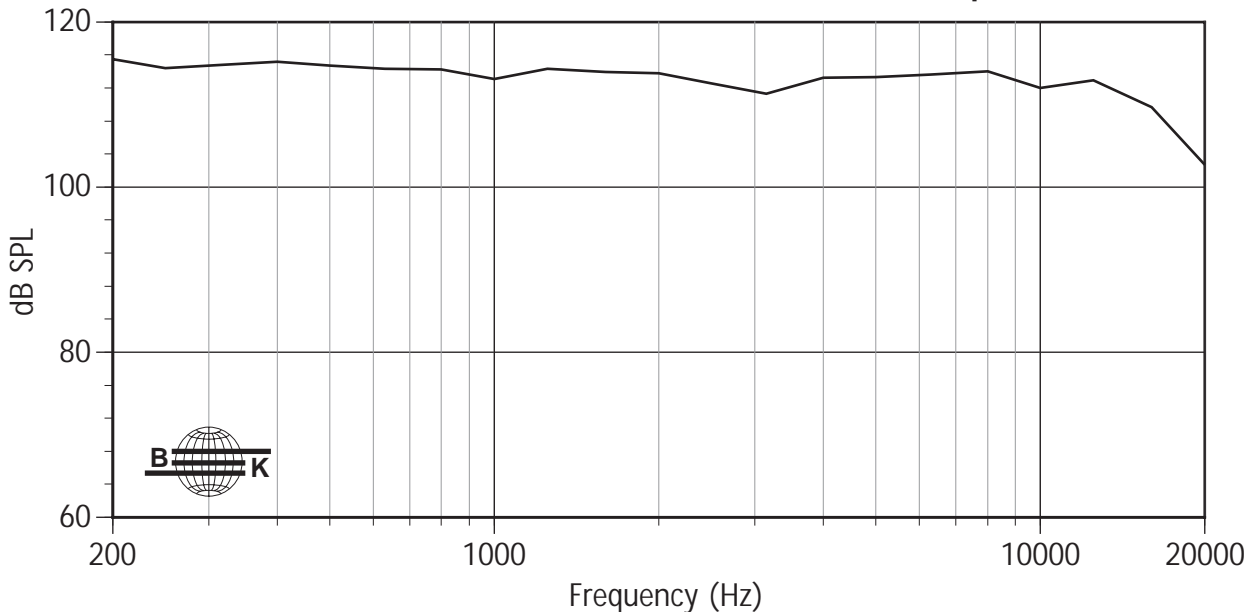




PERFORMANCE SPECIFICATIONS KF750F

POWER RESPONSE

KF750F Beamwidth Delimited Power Response





PERFORMANCE SPECIFICATIONS KF750F

Q & DIRECTIVITY & BEAMWIDTH BY FREQUENCY

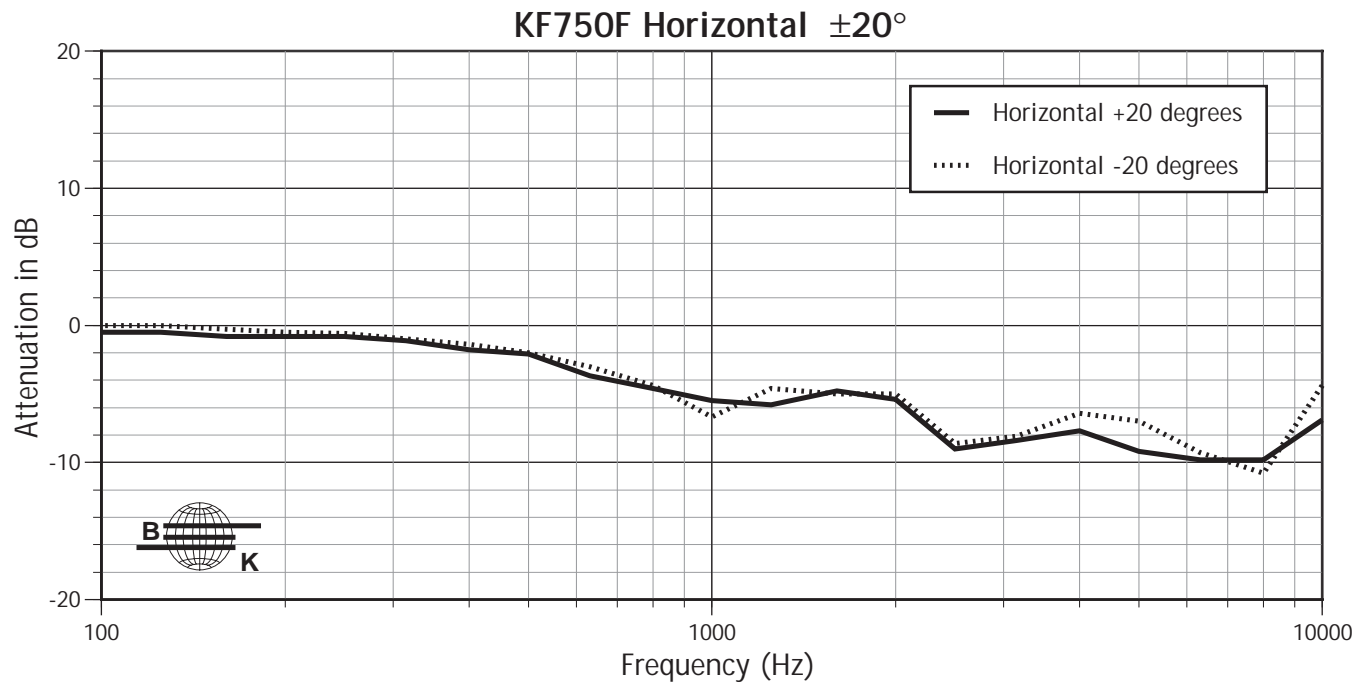
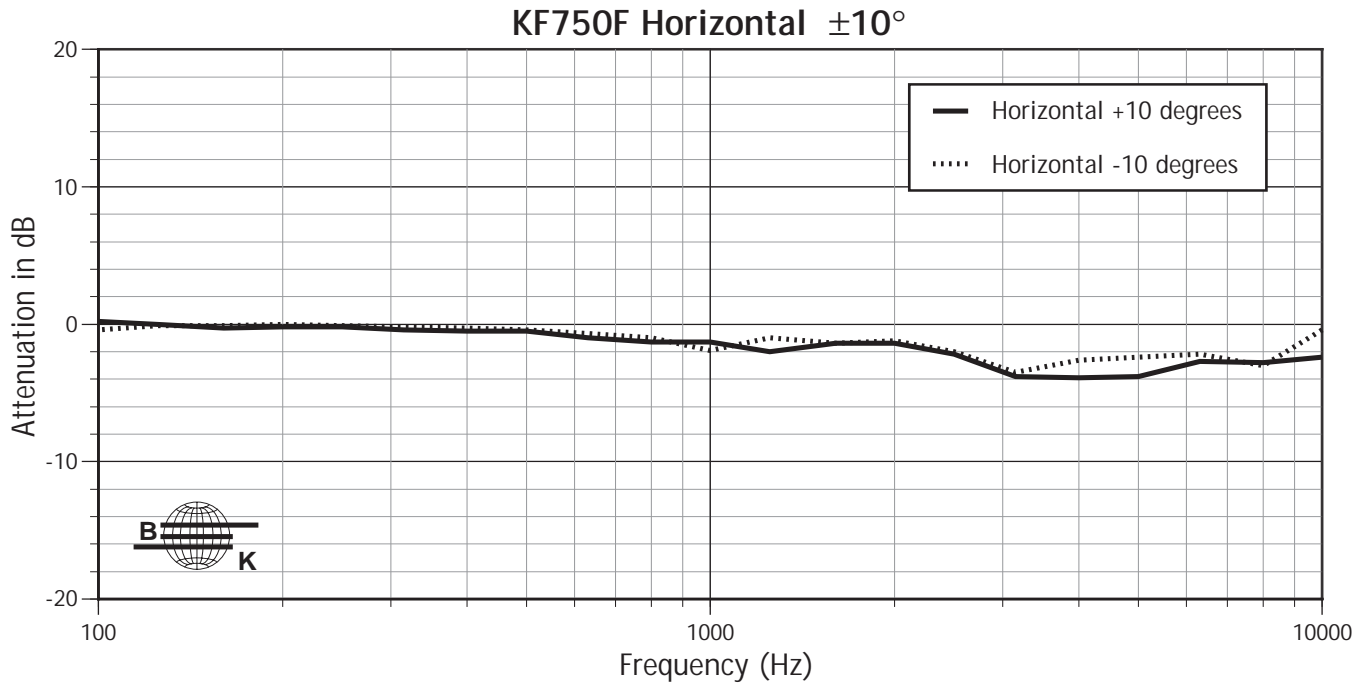
Frequency	Hor Beamwidth	Ver Beamwidth	Hor Q & Dir	Ver Q & Dir	Tot Q & Dir
100	239	172	2.3	2.8	2.4
125	226	179	2.4	2.7	2.5
160	213	179	2.6	2.9	2.7
200	177	158	3.1	3.3	3.2
250	124	120	4.6	4.6	4.6
315	100	93	7.4	8.4	7.9
400	79	72	10.2	12.5	11.2
500	68	61	14.3	16.1	15.1
630	53	43	20.1	16.4	18.1
800	45	43	23.5	14.8	18.1
1000	39	40	28.4	20.4	23.7
1250	44	60	24.7	18.5	21.1
1600	45	46	25.5	23.2	24.3
2000	42	41	25.9	24.4	25.1
2500	32	29	36.2	35.6	35.9
3150	28	30	40.7	36.6	38.5
4000	33	35	38.3	39.2	38.7
5000	34	34	41.6	42.2	41.9
6300	31	32	47.7	38.4	42.6
8000	28	31	55.7	39.9	46.6
10000	38	41	26.5	38.1	31.1
12500	37	33	41.4	43.8	42.6
16000	30	35	52.6	39	44.8
20000	35	35	46.9	45.1	46.00



PERFORMANCE SPECIFICATIONS KF750F

HORIZONTAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.

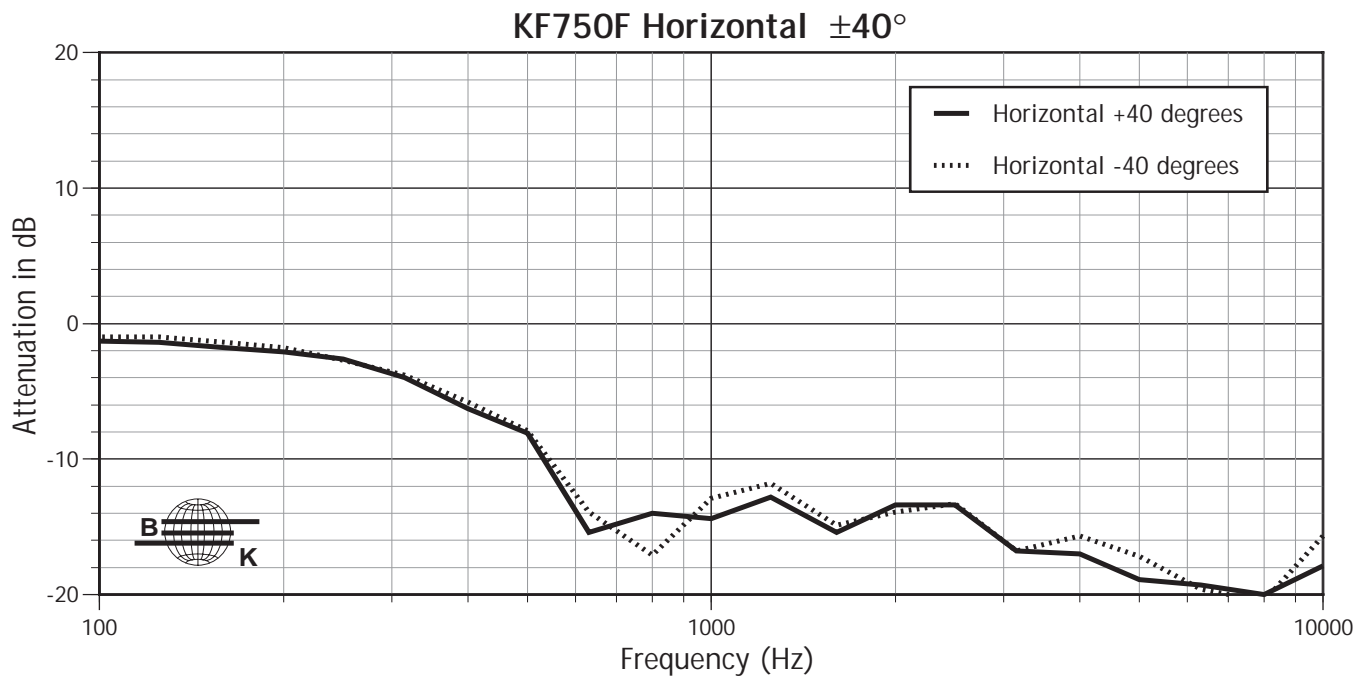
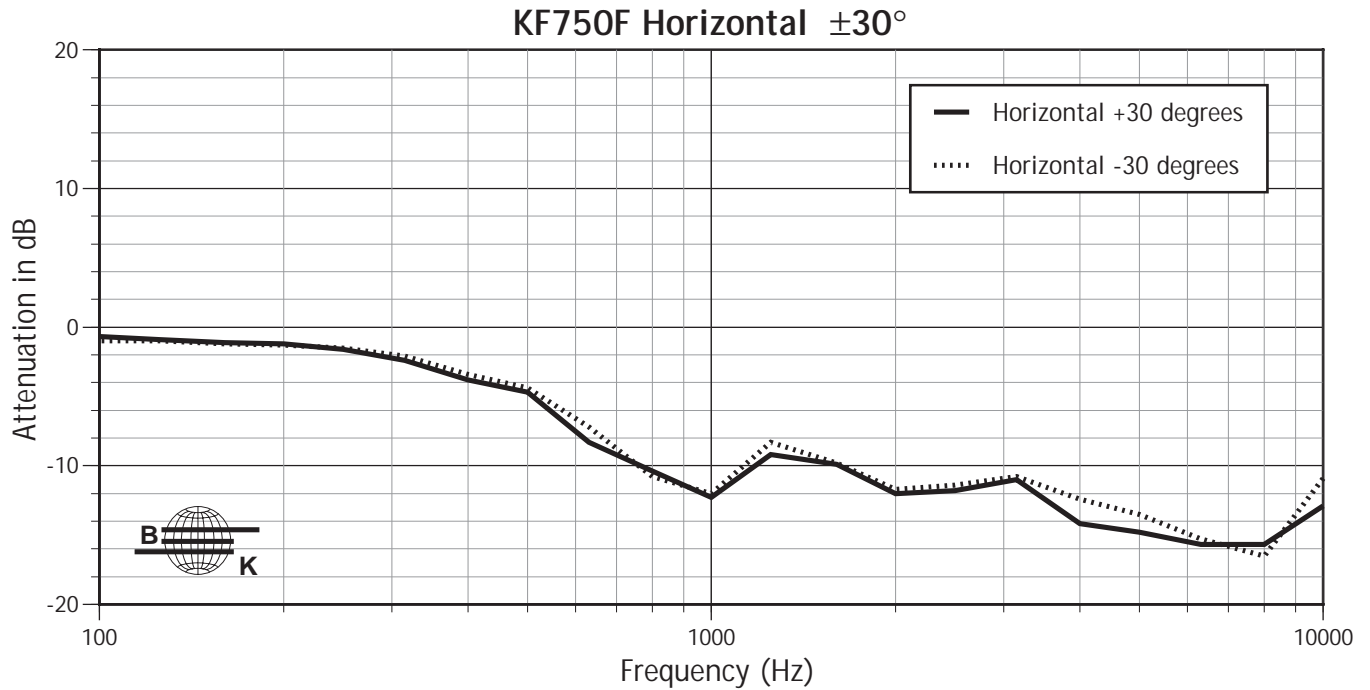




PERFORMANCE SPECIFICATIONS KF750F

VERTICAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.



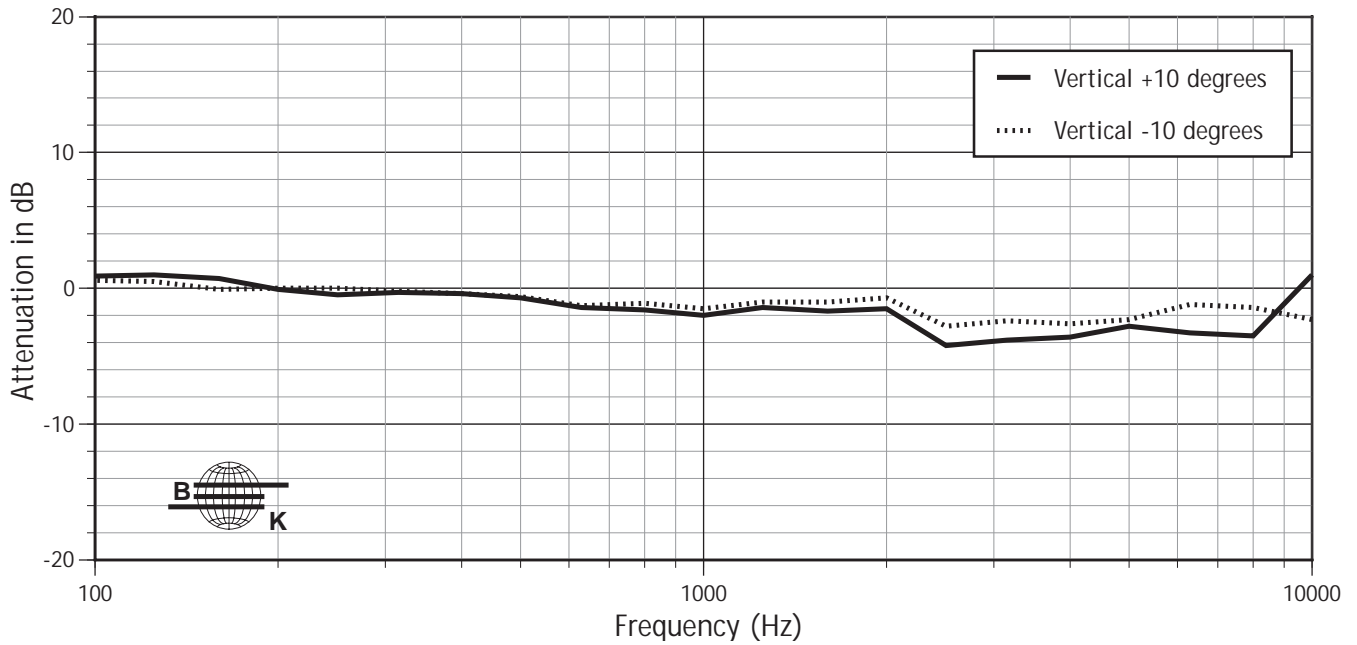


PERFORMANCE SPECIFICATIONS KF750F

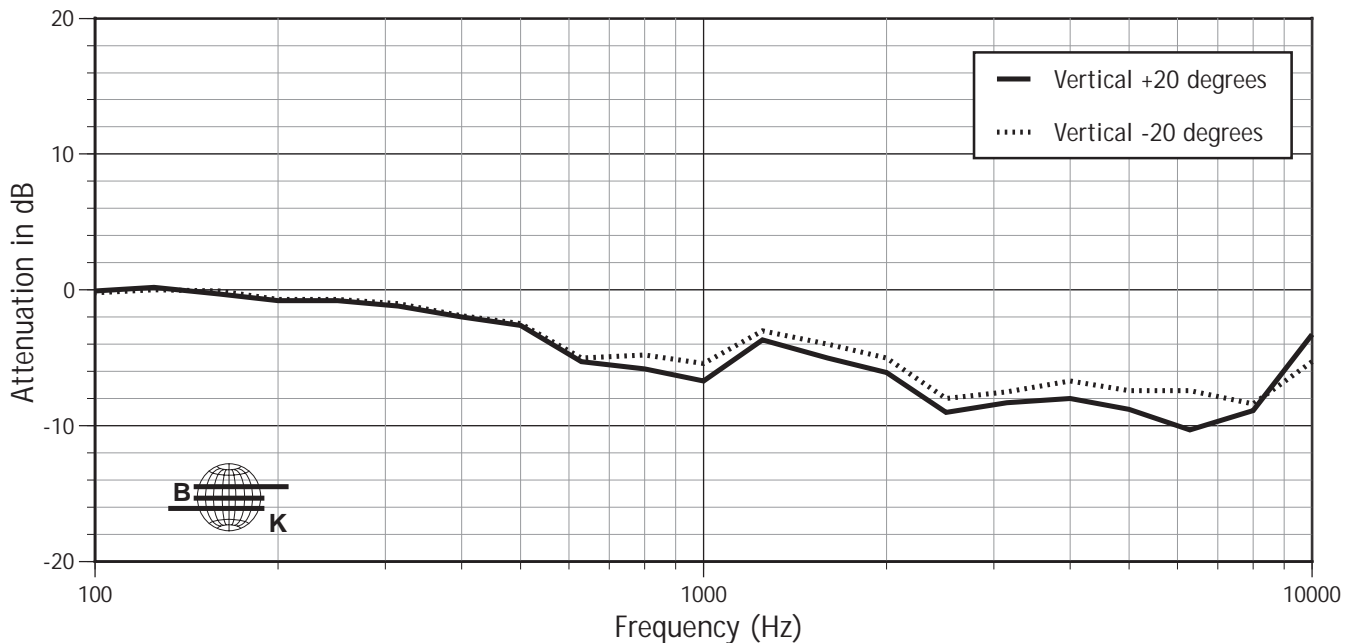
VERTICAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.

KF750F Vertical $\pm 10^\circ$



KF750F Vertical $\pm 20^\circ$

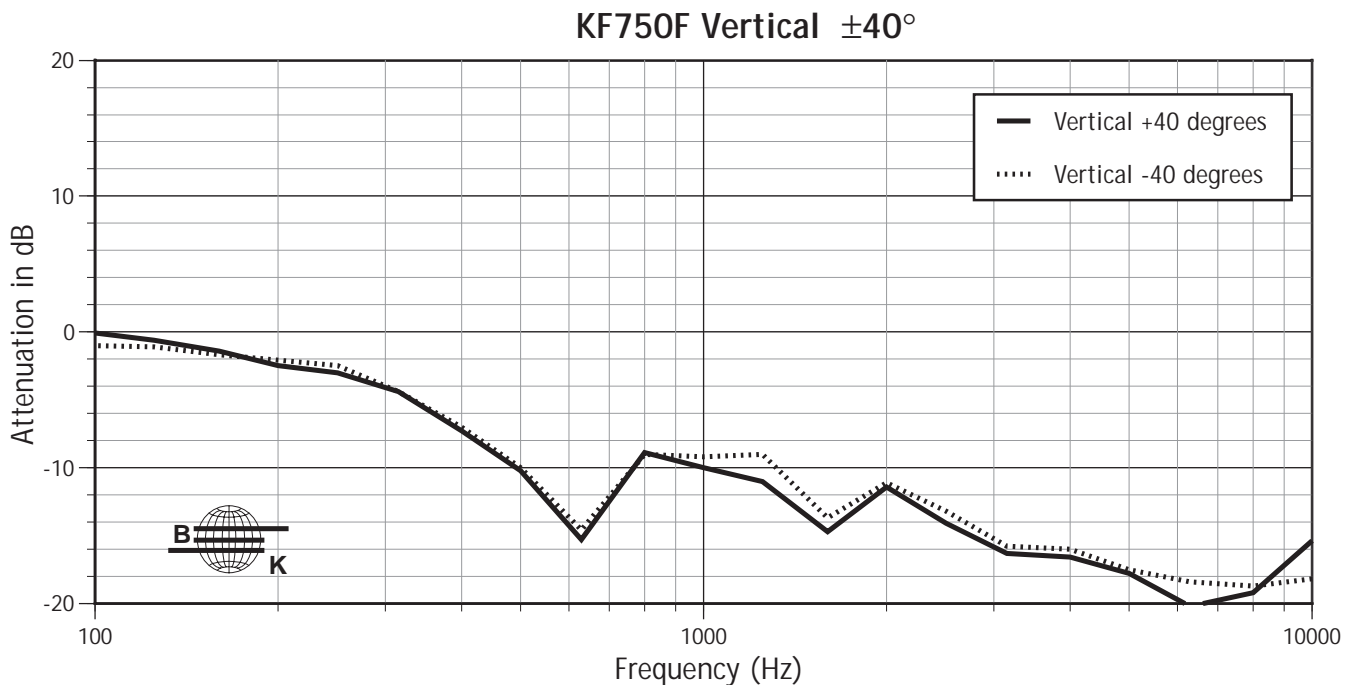
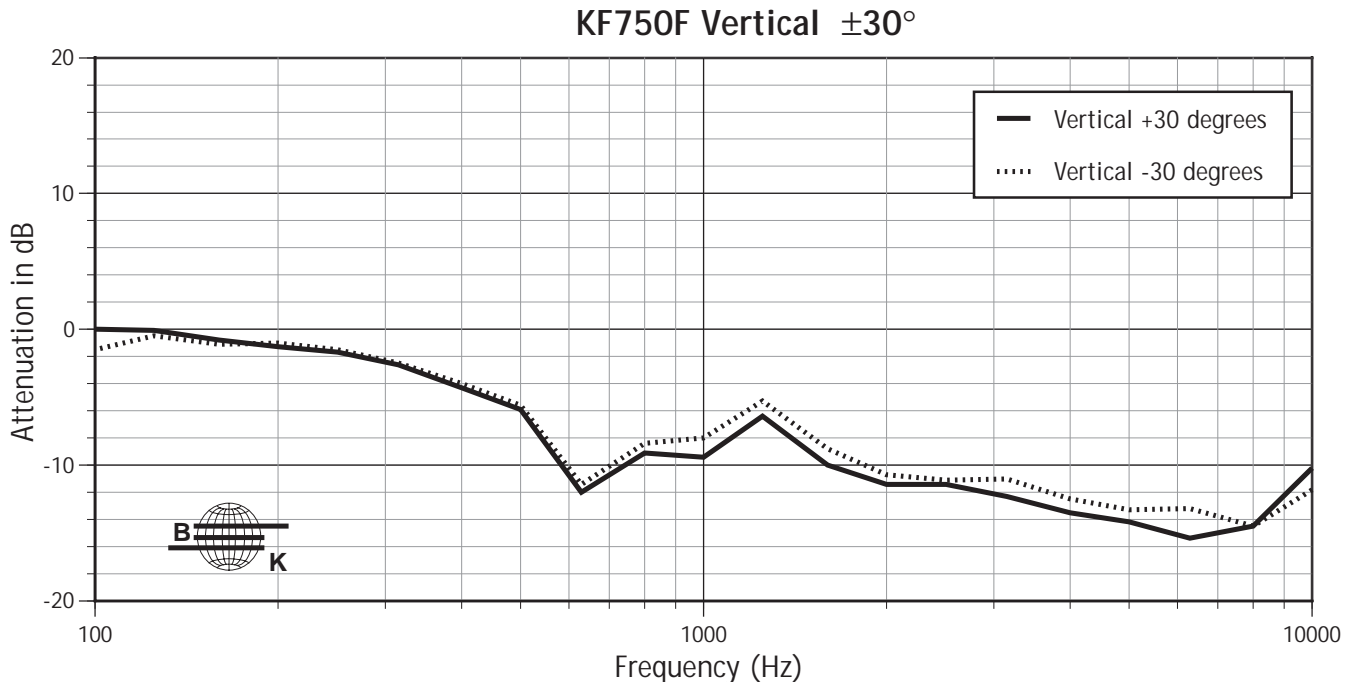




PERFORMANCE SPECIFICATIONS KF750F

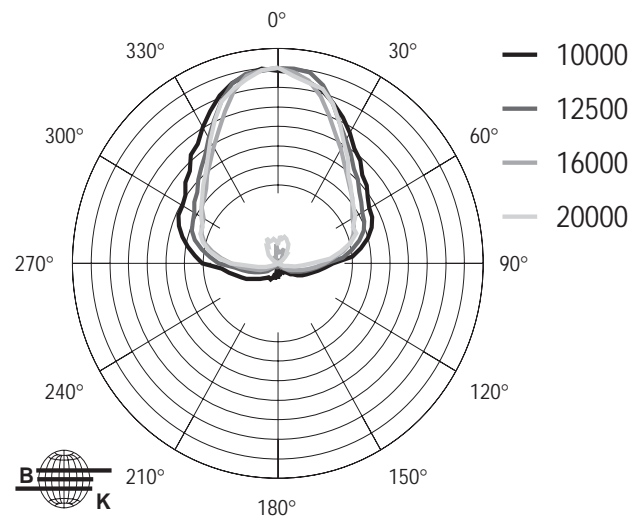
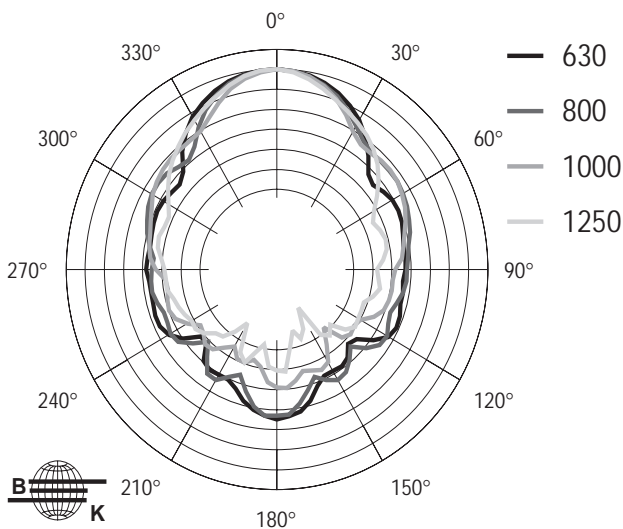
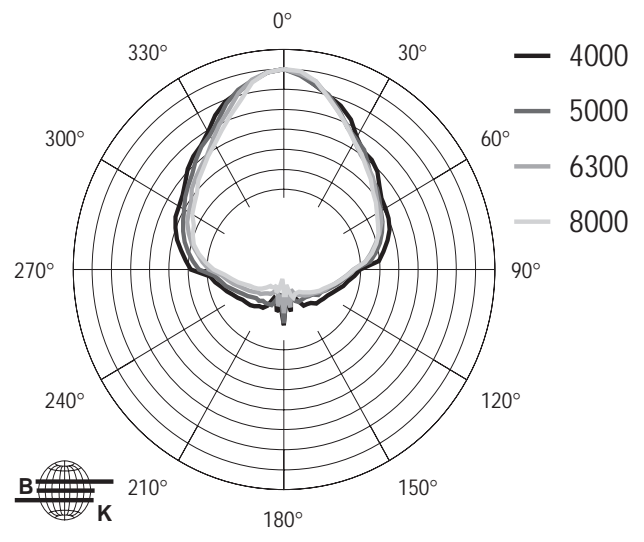
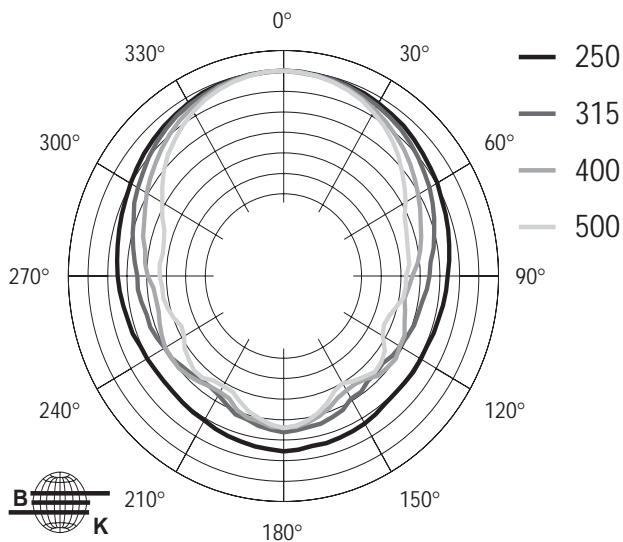
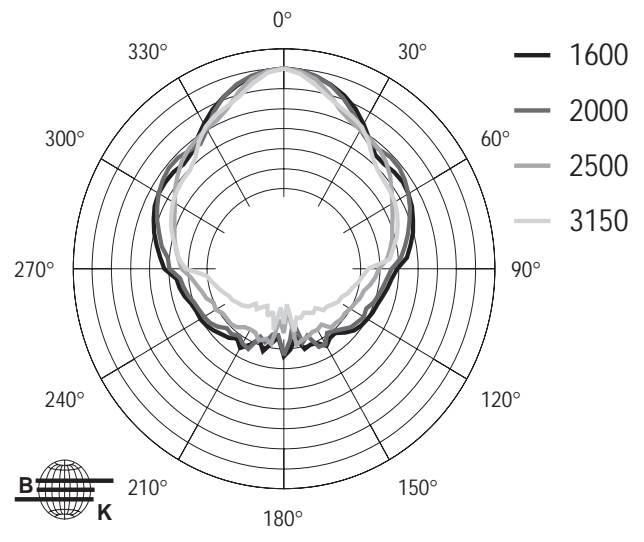
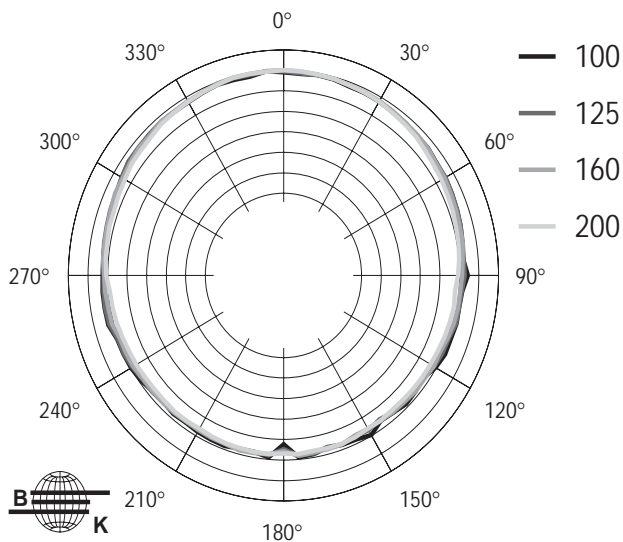
VERTICAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.





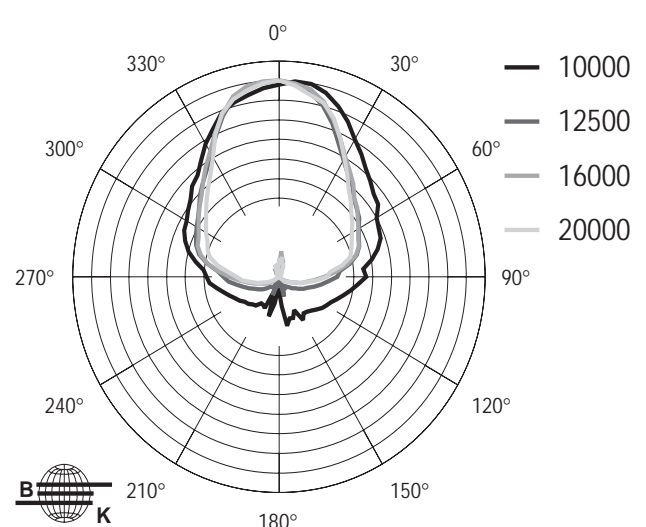
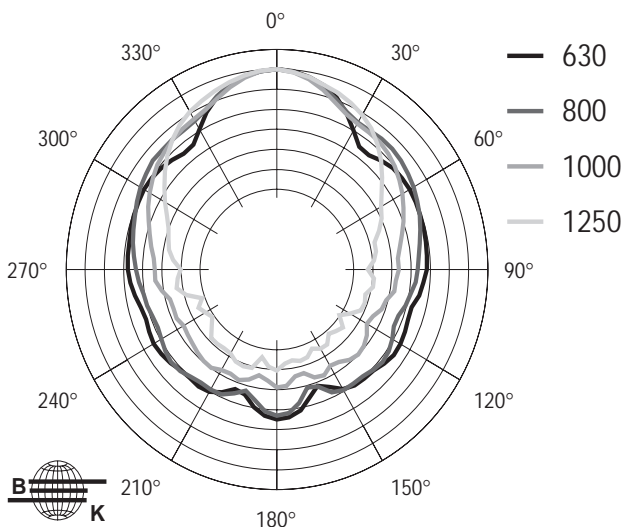
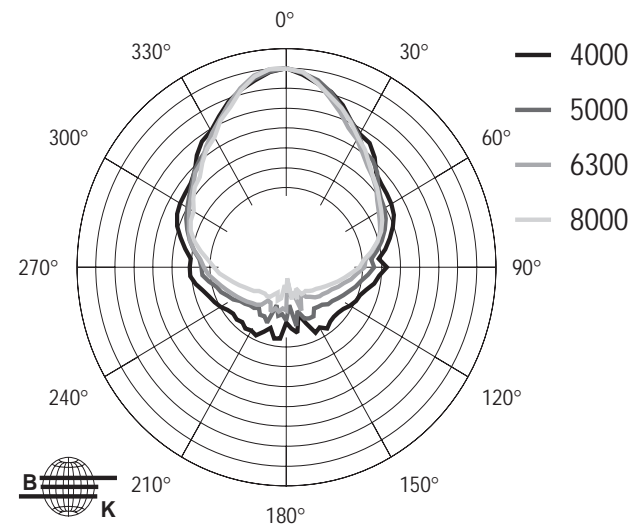
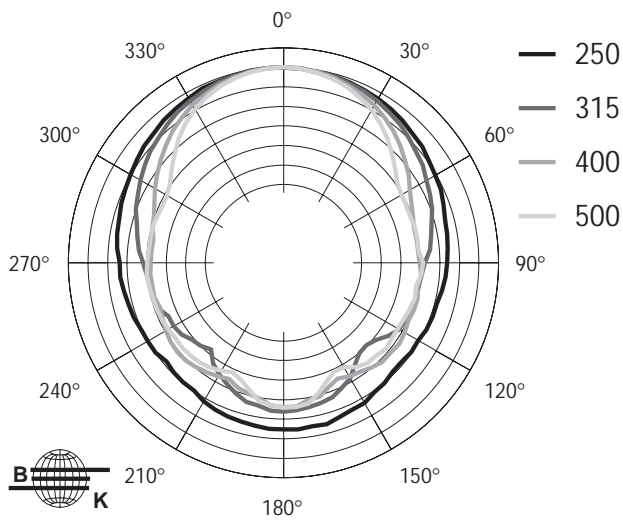
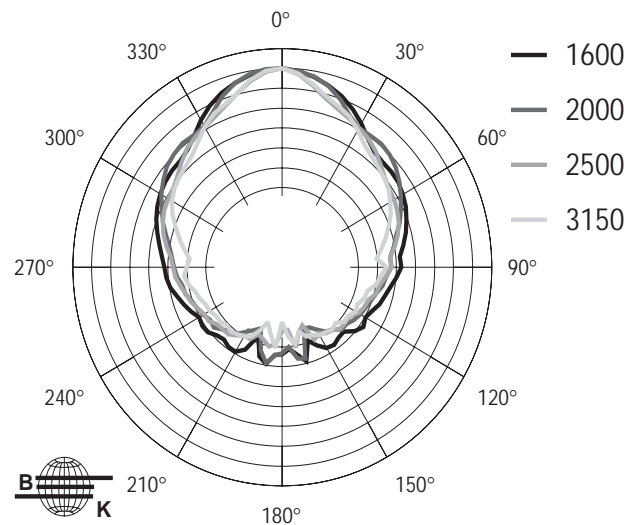
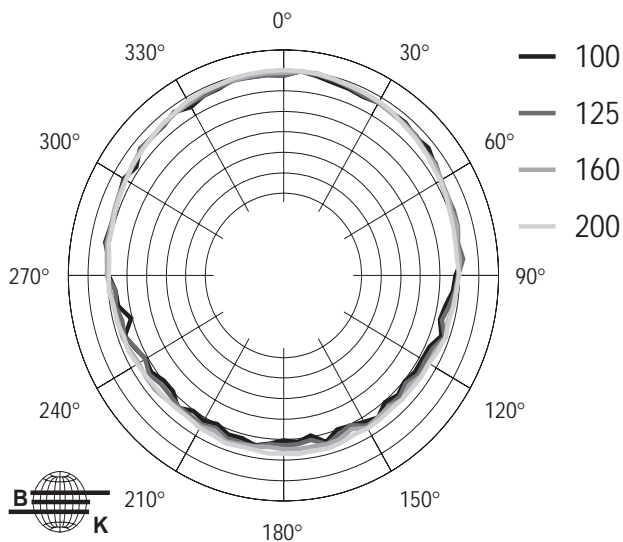
HORIZONTAL 1/3 OCTAVE POLAR DATA KF750F



6 db/div.



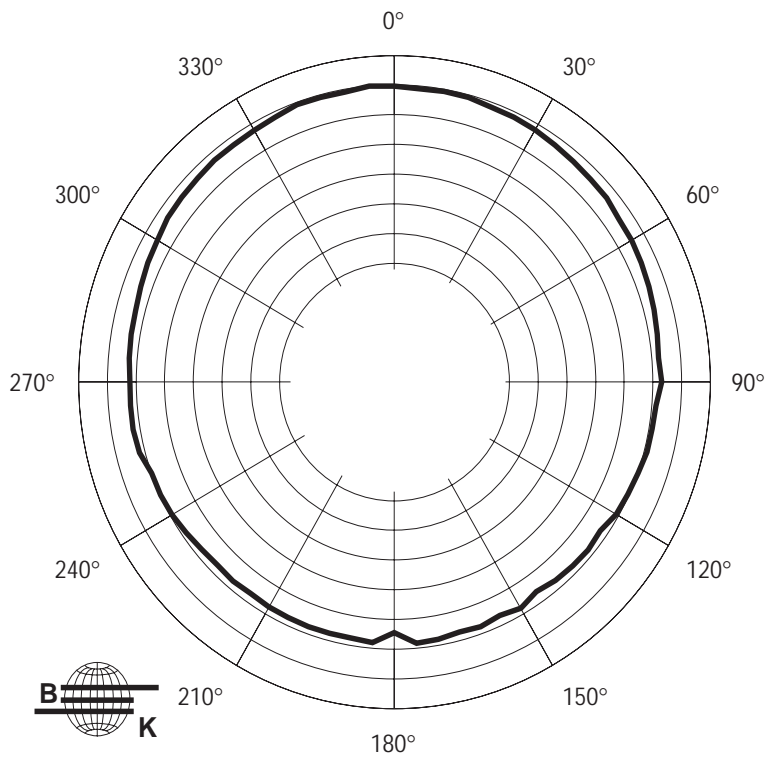
VERTICAL 1/3 OCTAVE POLAR DATA KF750F



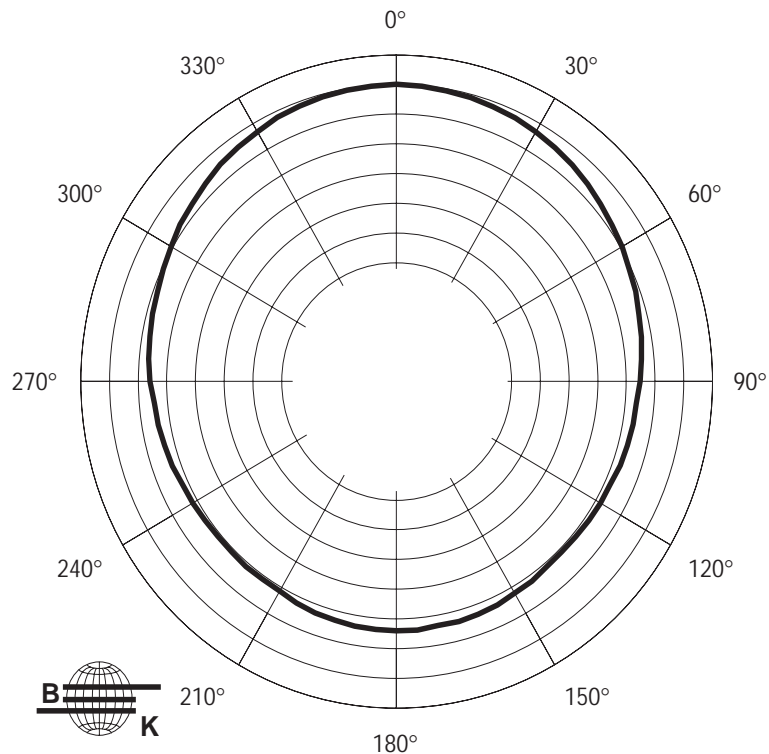


HORIZONTAL OCTAVE POLAR DATA KF750F

KF750F 125 Hz Horizontal Octave Polar Data



KF750F 250 Hz Horizontal Octave Polar Data

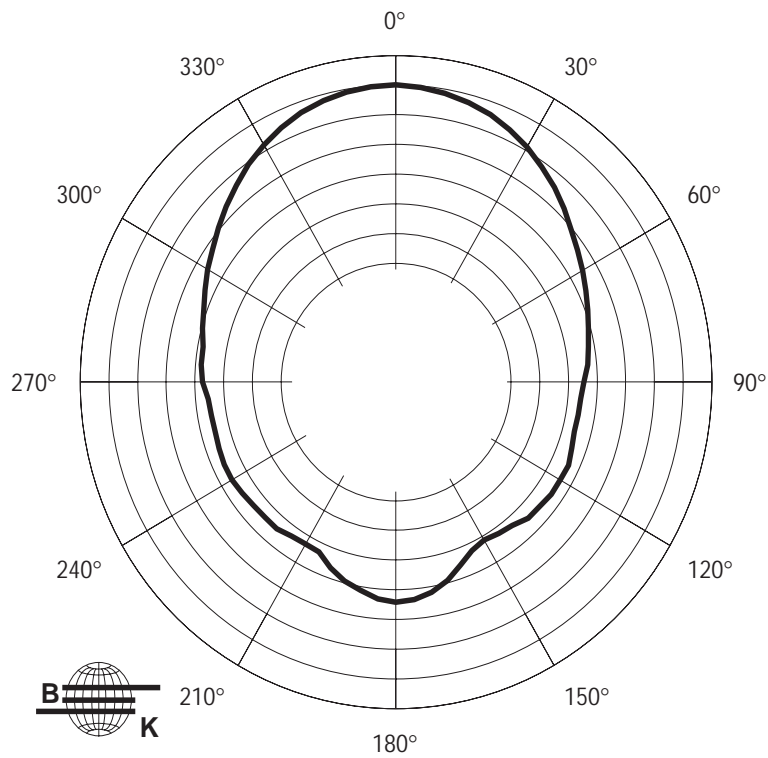


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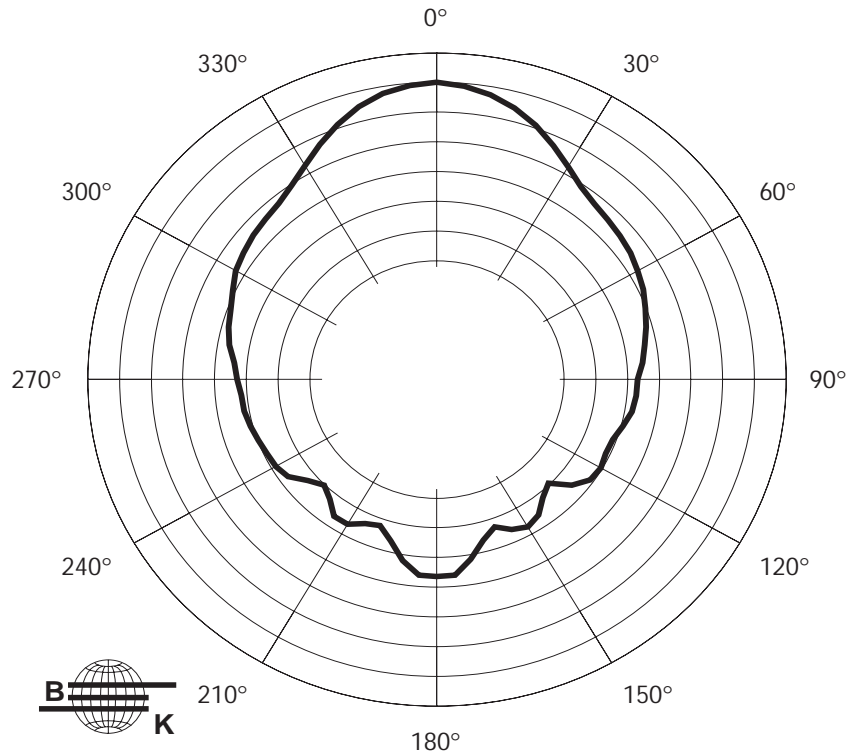


HORIZONTAL OCTAVE POLAR DATA KF750F

KF750F 500 Hz Horizontal Octave Polar Data



KF750F 1000 Hz Horizontal Octave Polar Data

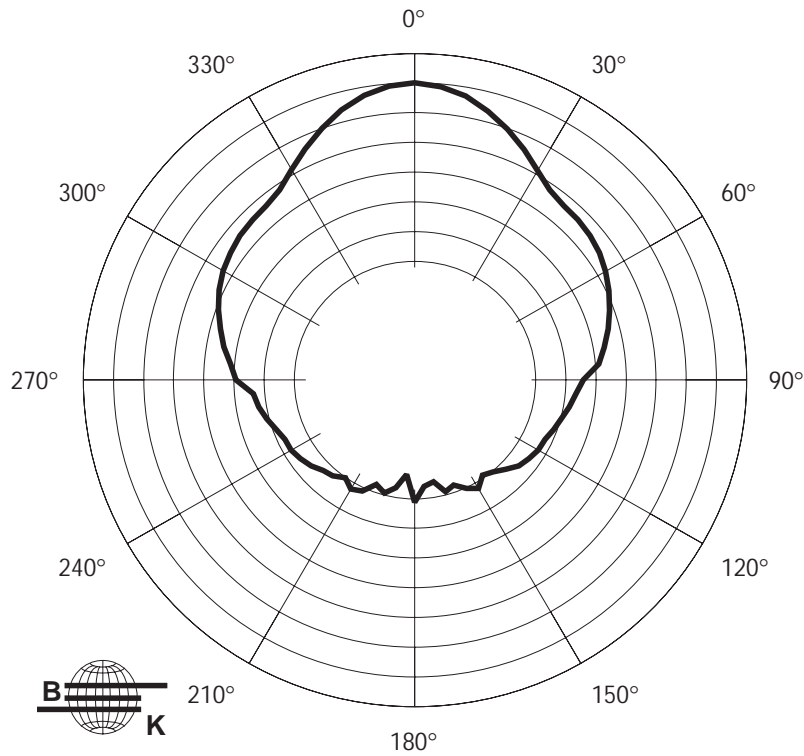


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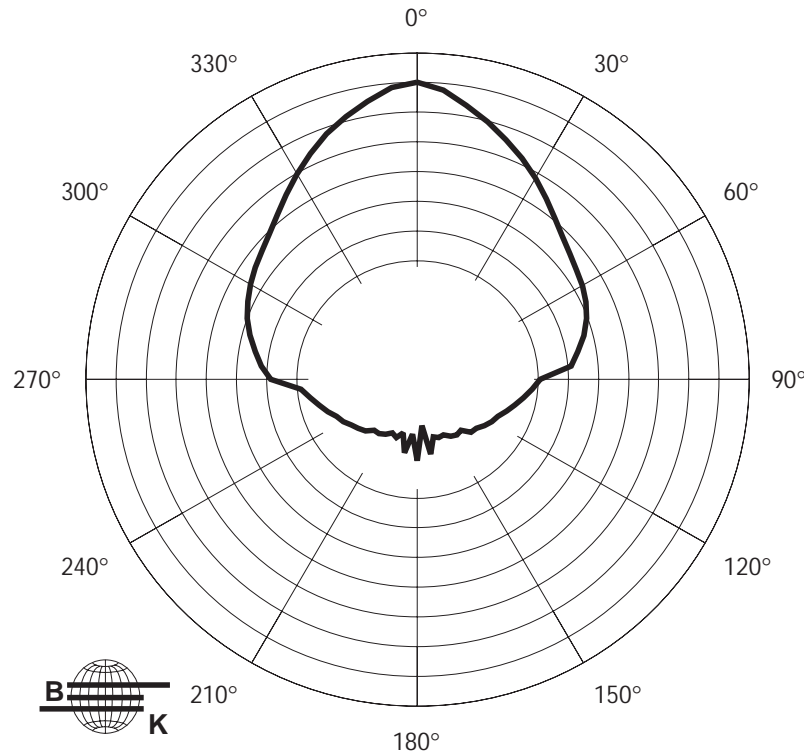


HORIZONTAL OCTAVE POLAR DATA KF750F

KF750F 2000 Hz Horizontal Octave Polar Data



KF750F 4000 Hz Horizontal Octave Polar Data

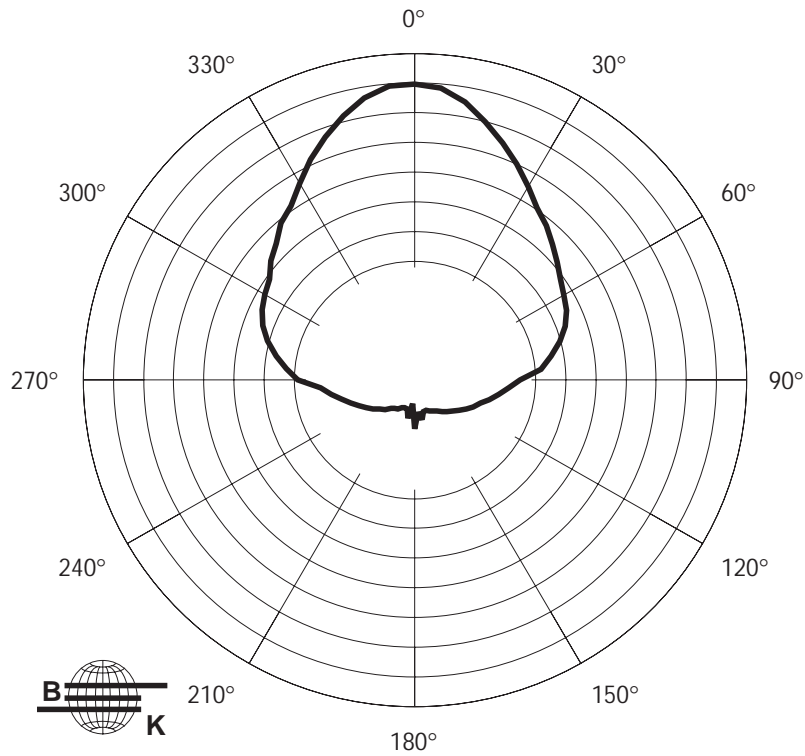


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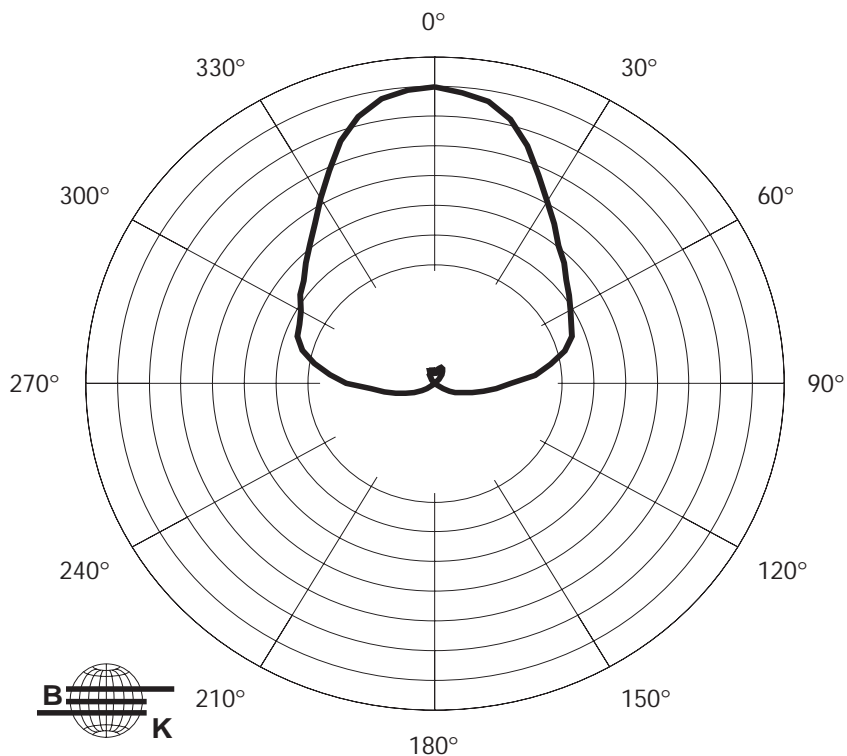


HORIZONTAL OCTAVE POLAR DATA KF750F

KF750F 8000 Hz Horizontal Octave Polar Data



KF750F 16000 Hz Horizontal Octave Polar Data

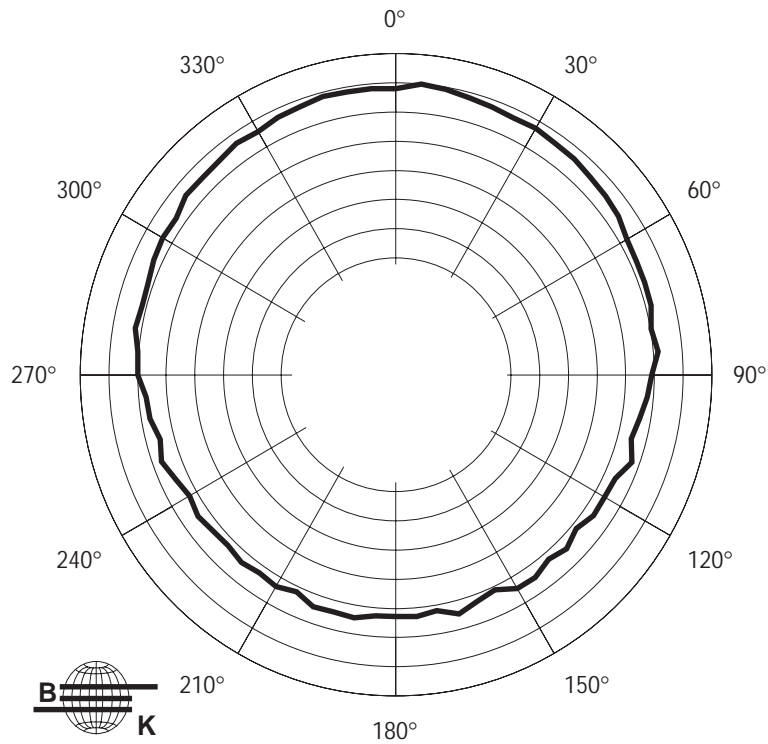


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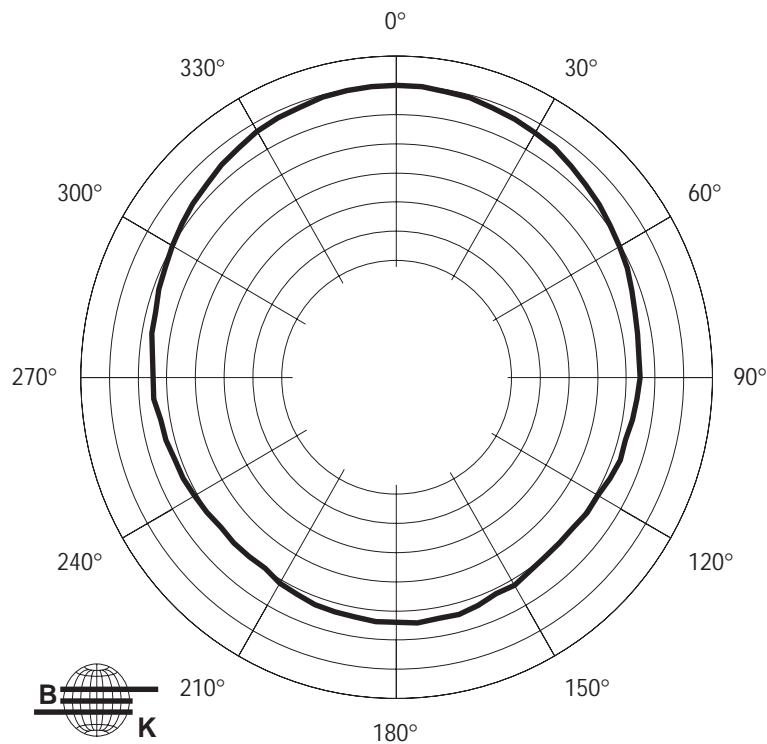


VERTICAL OCTAVE POLAR DATA KF750F

KF750F 125 Hz Vertical Octave Polar Data



KF750F 250 Hz Vertical Octave Polar Data

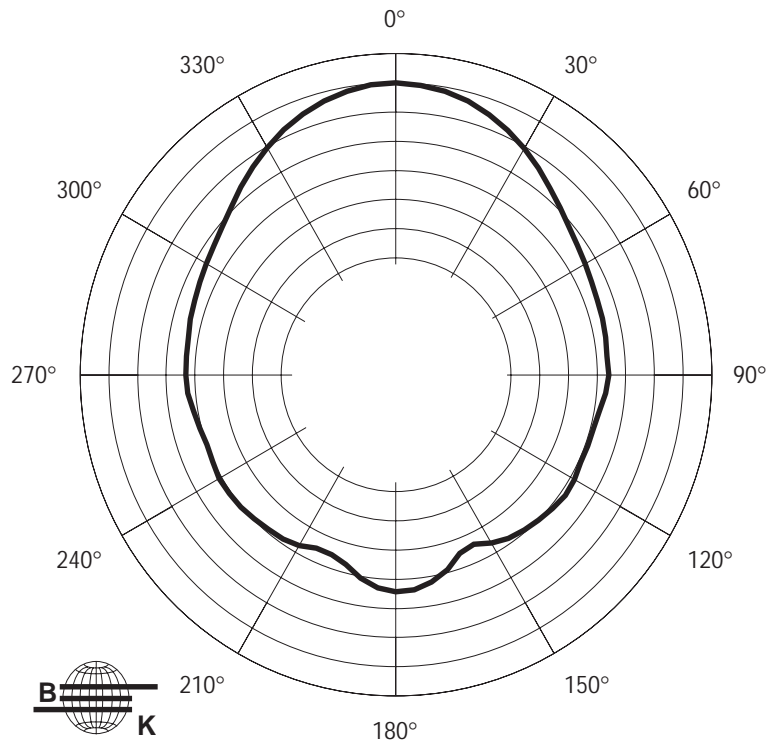


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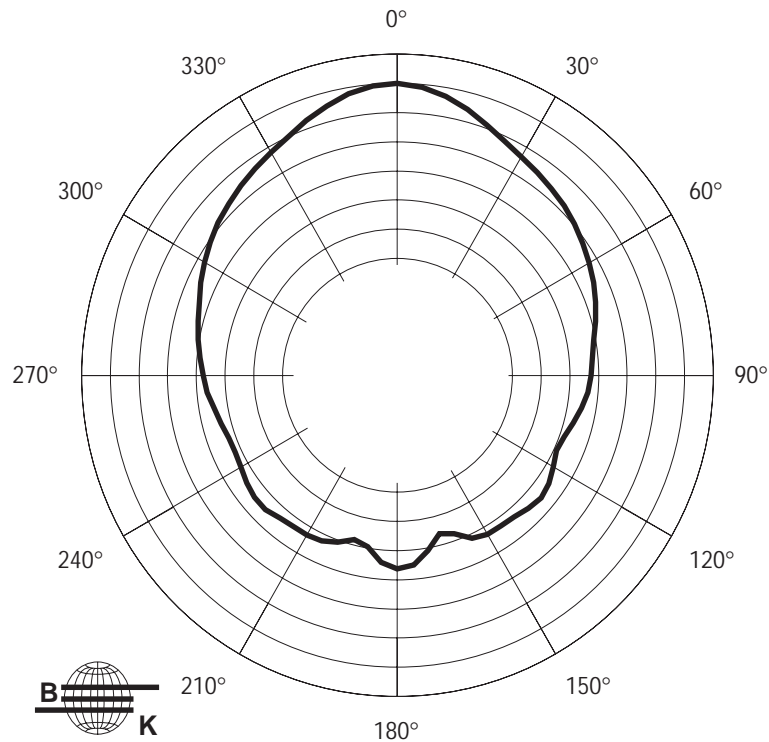


VERTICAL OCTAVE POLAR DATA KF750F

KF750F 500 Hz Vertical Octave Polar Data



KF750F 1000 Hz Vertical Octave Polar Data

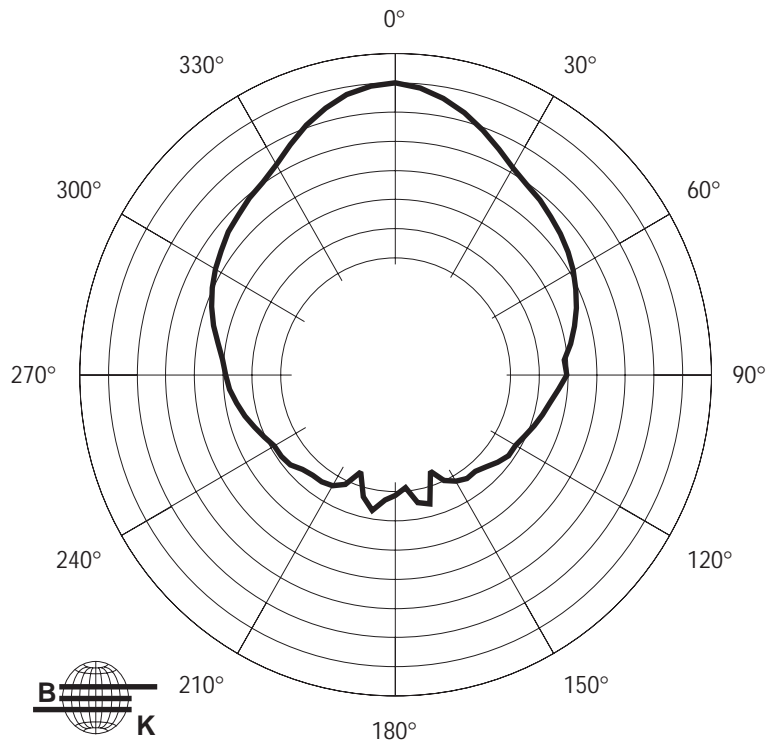


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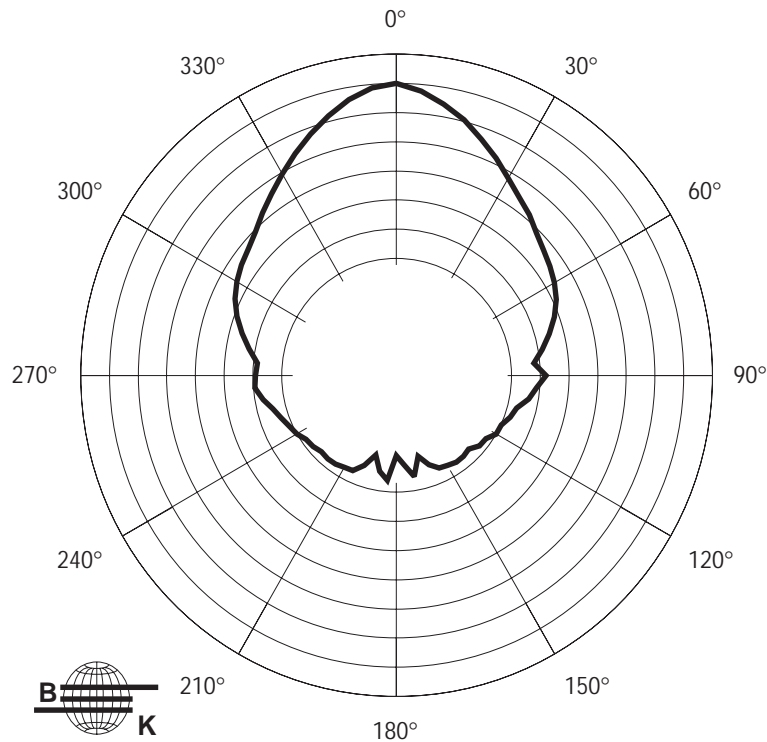


VERTICAL OCTAVE POLAR DATA KF750F

KF750F 2000 Hz Vertical Octave Polar Data



KF750F 4000 Hz Vertical Octave Polar Data

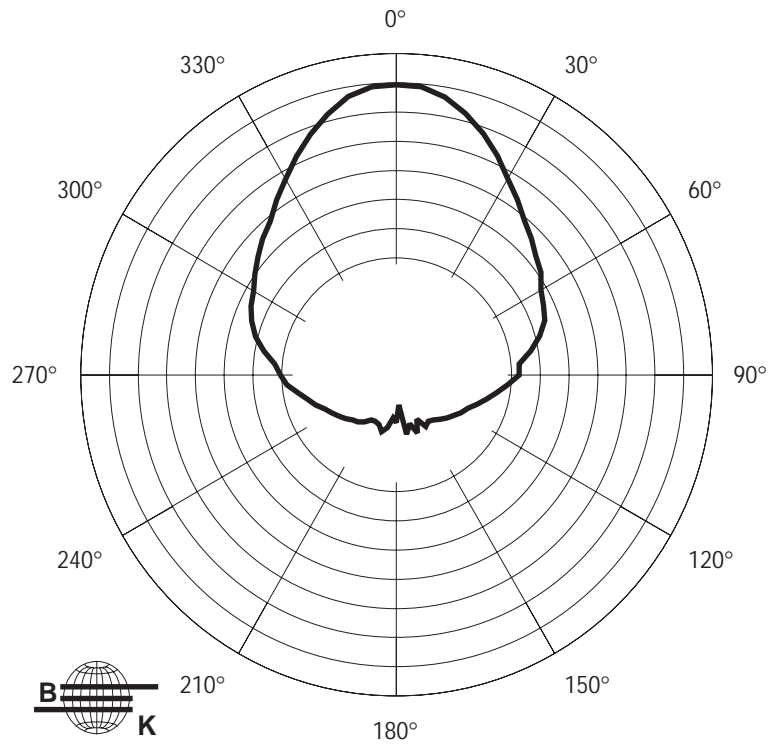


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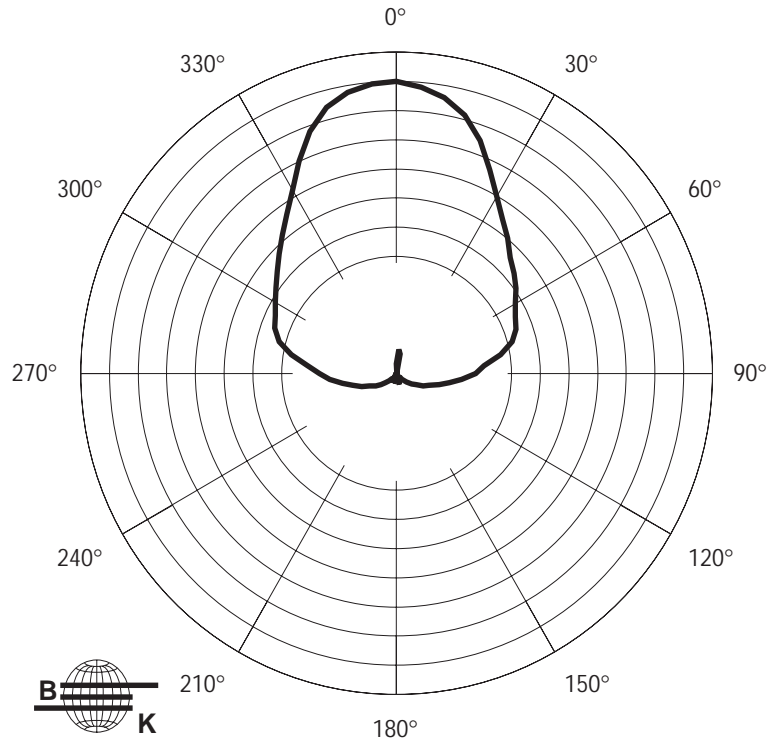


VERTICAL OCTAVE POLAR DATA KF750F

KF750F 8000 Hz Vertical Octave Polar Data



KF750F 16000 Hz Vertical Octave Polar Data



6 db/div.