TECHNICAL SPECIFICATIONS KF850EF

DESCRIPTION

A 3-way triamplified full range system in a trapezoidal enclosure. Includes a 15-in woofer in a wave guide cavity with ARC™ device, a horn-loaded 10-in midrange cone and a 2-in exit compression driver mounted coaxially in the wave guide cavity on a 55 x 40 constant directivity horn..

APPLICATIONS

The KF850 Virtual Array loudspeaker is the world touring standard, accepted in more technical riders than any other loudspeaker. True 3-way design dramatically improves the quality of vocal reproduction while the cone-driven midrange horn and horn-loaded woofer extend pattern control to the lowest octaves. Effective for large format permanent or portable applications. Six year warranty.

Applications include:

Concert Tours	Corporate Events
Large Theaters	Stadiums
Cathedrals	Live Music Clubs

DESCRIPTIVE DATA

Part Number	999100
Product Group	S
LF Subsystem & Loading	1x 15-in Horn Loaded Cone in Wave Guide Cavity with ARC™
MF Subsystem & Loading	1x 10-in Horn Loaded Cone
HF Subsystem & Loading	1x 2-in Exit Compression Driver on Constant Directivity Horn
System Configuration	3-way, Full Range
Powering Configuration(s)	Triamplified
Recommended High-Pass Frequency (24 dB/Octave)	60Hz
Cabinet Type (shape)	Trapezoidal
Enclosure Materials	Baltic Birch Plywood
Finish	Black Catalyzed Polyurethane
Connectors	1 each male and female AP6
Suspension Hardware	(4) 19-postition Flytracks (2 each top and bottom)
Grill	Vinyl Coated Perforated Steel, Foam Backed
Options	179001 Flyclip with ring 179002 Flyclip with hook Mounting Bracket 255010 Caster Pallet 850

NOMINAL DATA

Frequency Response (Hz)	
±3 db	86Hz to 17kHz
-10 dB	65Hz
Axial Sensitivity (dB SPL/1 Watt/1m)	
LF	102
MF	109
HF	112

Impedance (Ohms)	
LF	8
MF	8
HF	10
Power Handling, AES Standard (Watts)	
LF	1000
MF	400
HF	200
Calculated Maximum Output (dB SPL, @ 1m)	
LF Peak	138.0
MF Peak	141.0
HF Peak	141.0
LF Long Term	132.0
MF Long Term	135.0
HF Long Term	135.0
Nominal Coverage Angle / -6 dB points (degrees)	
Horizontal	55
Vertical	40
Recommended Complementary Systems	
Sub	SB850/SB1000e

Dimensions	**inches**	**millimeters**
Height	42	1067
Width	26.375	670
Width (Front)	26.375	670
Width (Rear)	16.5	419
Depth	29.5	749
Trapezoid Angle	9.5 degrees per side	
Weights	**pounds**	**kilograms**
Net Weight	250	113.8
Shipping Weight	258	117.4

EAW
EASTERN ACOUSTIC WORKS
One Main Street, Whitinsville, MA 01588 • (508) 234 - 6158 • FAX (508) 234 - 8251 • Email info@eaw.com • Web http://www.eaw.com
 • PUB# KF850EF 999100 (A)/2p/3/14/97 • Printed In USA

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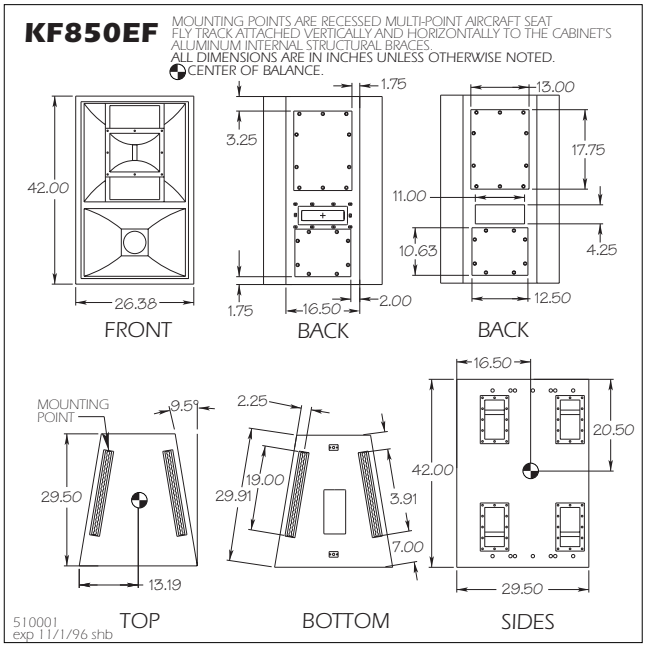
DIMENSIONAL DRAWING



SERVICE ITEMS

LF: Complete Cone Driver:	
EAW Part No.	804036
MF: Complete Cone Driver	
EAW Part No.	804022
HF: Complete Compression Driver/Tweeter	
EAW Part No.	803011
Filter/Crossover Network: Complete Assembly	
EAW Part No.	201062

ARCHITECTURAL SPECIFICATIONS

The three-way full range loudspeaker systems shall incorporate a 15-in LF transducer, a 10-in cone MF transducer and a 2-in exit compression driver HF transducer.

The LF driver shall be mounted in a wave guide cavity for optimum low frequency directivity. 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 mounted in the wave guide cavity directly in front of the LF driver and shall be loaded on a constant directivity horn with a nominal coverage pattern of 55° (h) x 40° (v). An acoustical filter shall be installed in the LF waveguide cavity behind the HF section to absorb refracted HF energy. An internal filter network shall provide system equalization.

System frequency response shall vary no more than ±3 dB from 86 Hz to 17 kHz measured on axis. The low frequency section shall produce a Sound Pressure Level (SPL) of 102 dB SPL on axis at 1 meter with a power input of 1 Watt, and shall be capable of producing a peak output of 138 SPL on axis at 1 meter. It shall handle 1000 Watts of amplifier power (AES Standard) and shall have a nominal impedance of 8 Ohms. The midrange frequency section shall produce a Sound Pressure Level (SPL) of 109 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 SPL on axis at 1 meter. It shall handle 400 Watts of amplifier power (AES Standard) and shall have a nominal impedance of 8 Ohms. 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 SPL on axis at 1 meter. It shall handle 200 Watts of amplifier power (AES Standard) and shall have a nominal impedance of 10 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 one each male and female AP6. A total of four 19-positition flytracks (2 each top and bottom) shall be provided. The front of the loudspeaker shall be covered with a vinyl coated perforated steel grill backed with open cell foam to protect against dust.

The three-way full range loudspeaker shall be the EAW model KF850EF.

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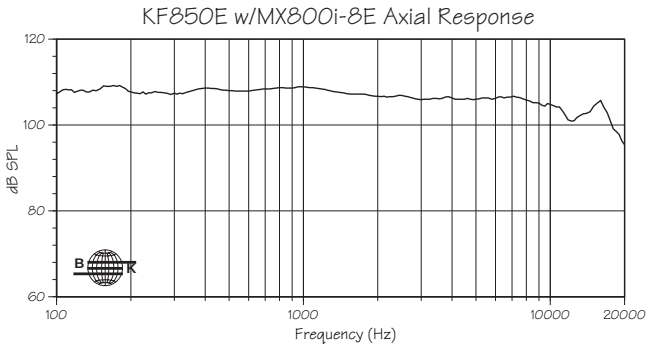
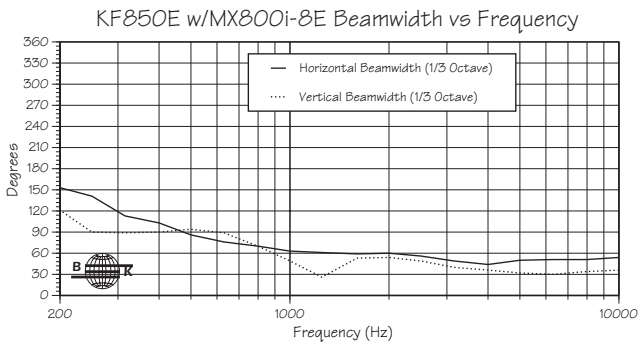
TECHNICAL SPECIFICATIONS KF850EF

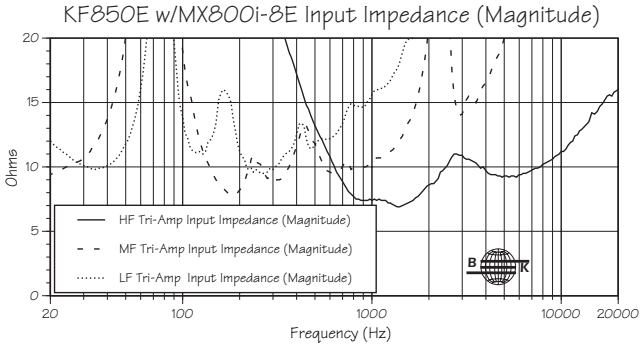
FREQUENCY RESPONSE



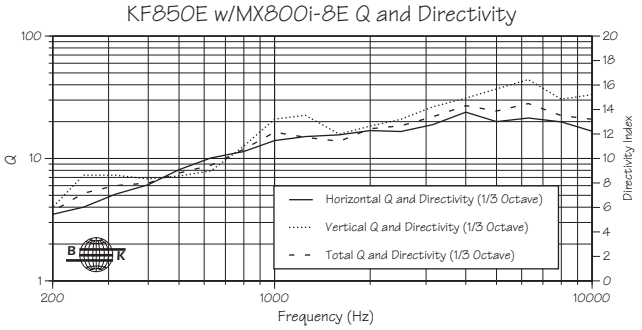
BEAMWIDTH



INPUT IMPEDANCE



Q & DIRECTIVITY INDEX (DI)



Q & BEAMWIDTH BY FREQUENCY

Freq	Hor Q	Ver Q	Tot Q	Hor Beamwidth	Ver Beamwidth
100	2.4	2.3	2.3	360	360
125	2.6	2.6	2.6	185	182
160	2.5	3	2.7	191	166
200	3.5	4	3.7	153	121
250	4	7.3	5.2	141	90
315	5.1	7.3	6	113	89
400	6.1	6.8	6.3	103	90
500	8.1	7.2	7.6	86	94
630	10.1	7.9	8.8	76	89
800	11.4	12.6	11.9	70	70
1000	14	21	16.4	63	49
1250	15.1	22.5	14.9	61	26
1600	15.6	15.8	13.8	59	53
2000	16.9	18.4	17.5	60	54
2500	16.6	20.9	18.5	56	49
3150	18.9	26.4	21.9	49	40
4000	23.9	31.1	27	44	36
5000	20	37	24.4	50	32
6300	21.4	44.1	28.1	51	30
8000	19.9	30.5	22.4	51	34
10000	16.7	33.2	20.9	54	36
12500	8.7	19.3	14	65	48
16000	21.2	29.2	25.7	51	39
20000	31.9	20.4	24.7	32	40

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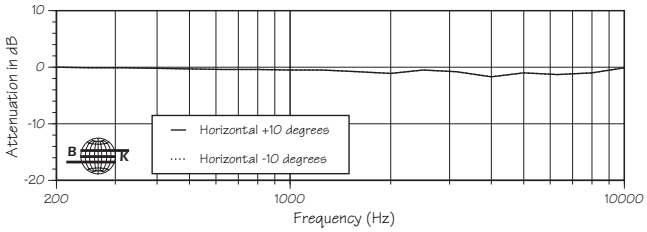
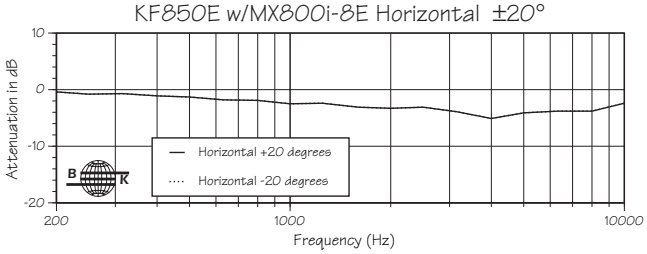
HORIZONTAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.

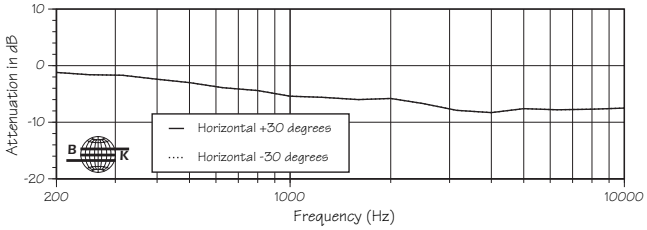
KF850E w/MX800i-8E Horizontal ±10°



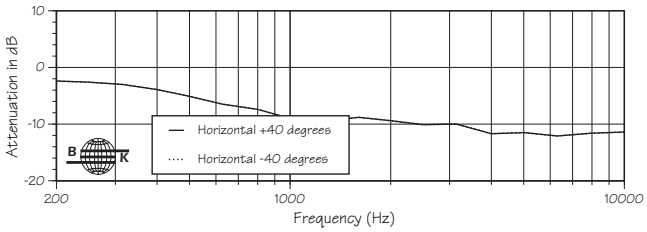
KF850E w/MX800i-8E Horizontal ±20°



KF850E w/MX800i-8E Horizontal ±30°



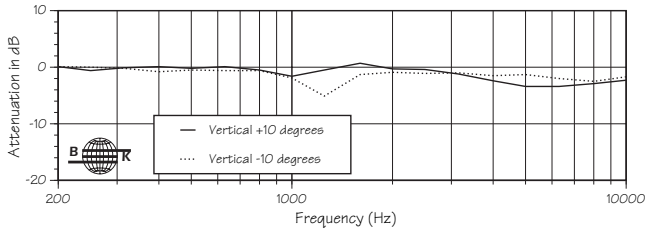
KF850 w/MX800i-8E Horizontal ±40°



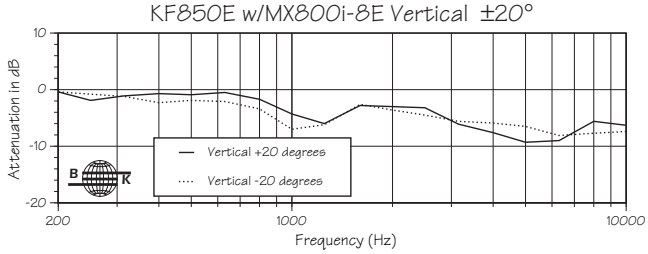
VERTICAL OFF-AXIS RESPONSE

On-axis response normalized to 0 dB.

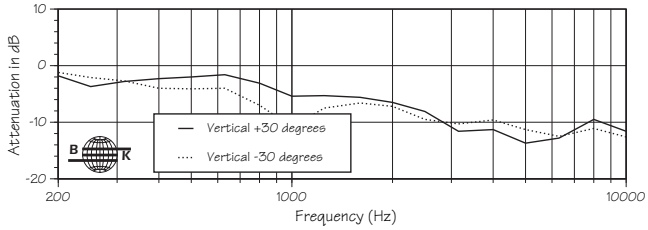
KF850E w/MX800i-8E Vertical ±10°



KF850E w/MX800i-8E Vertical ±20°



KF850E w/MX800i-8E Vertical ±30°



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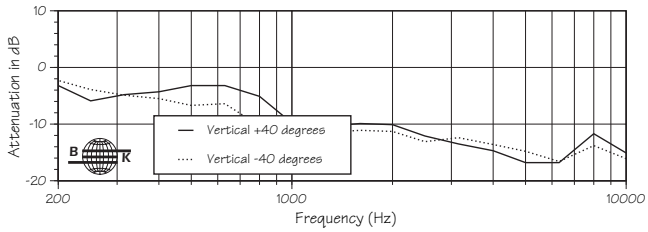

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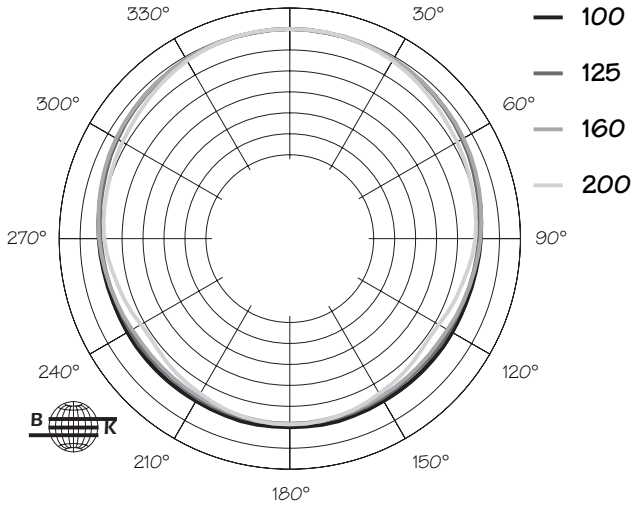
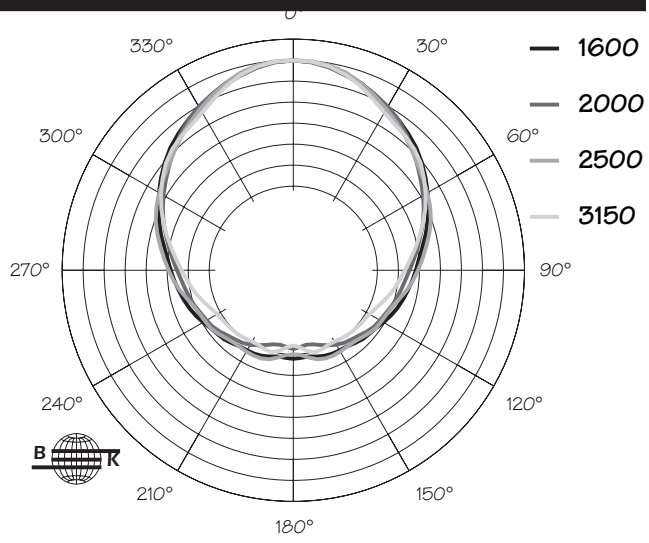
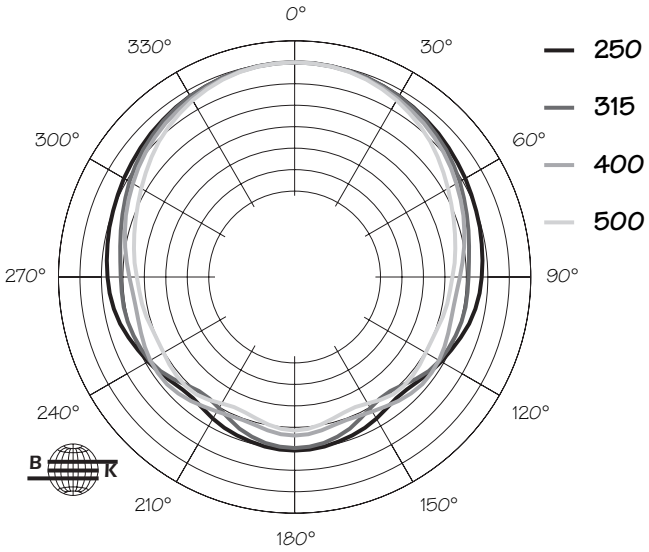
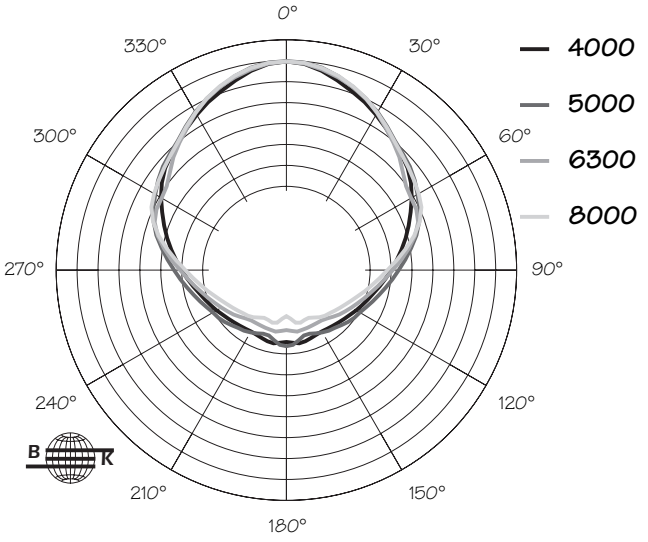
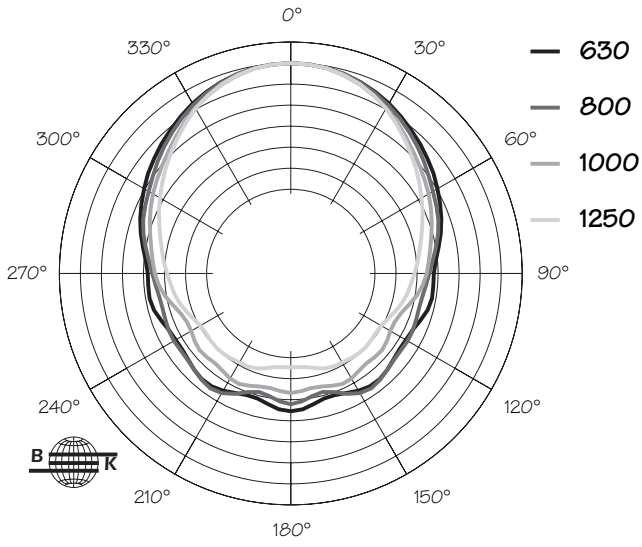
HORIZONTAL 1/3 OCTAVE POLAR DATA

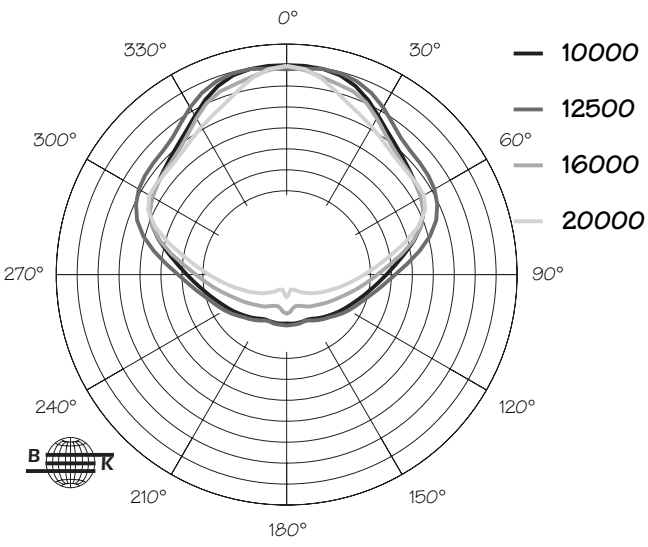




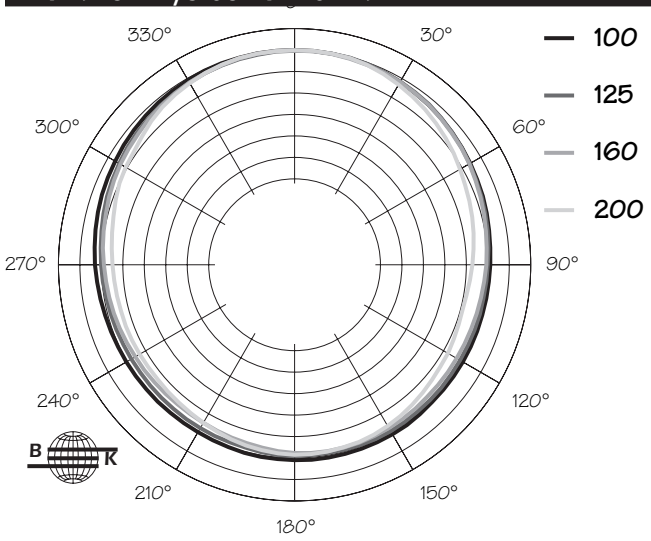


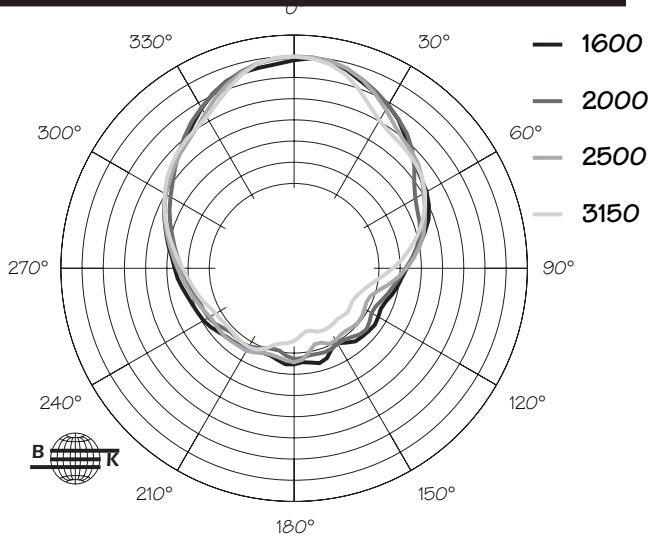


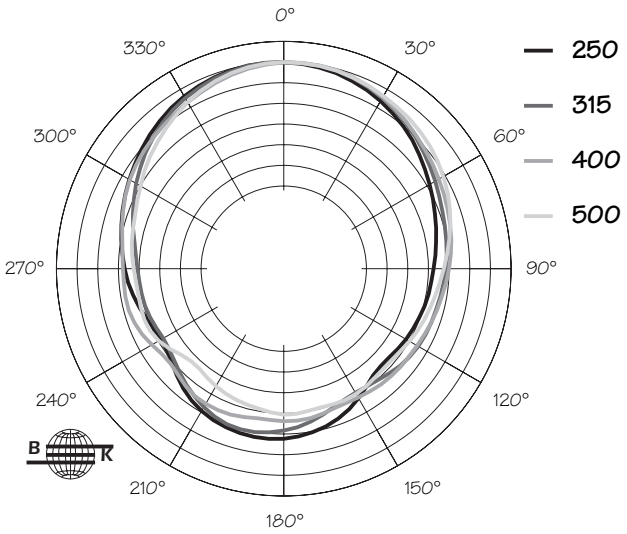


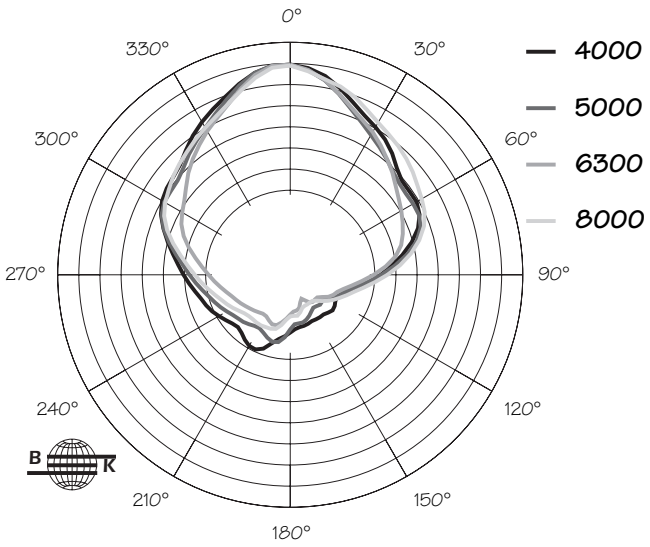


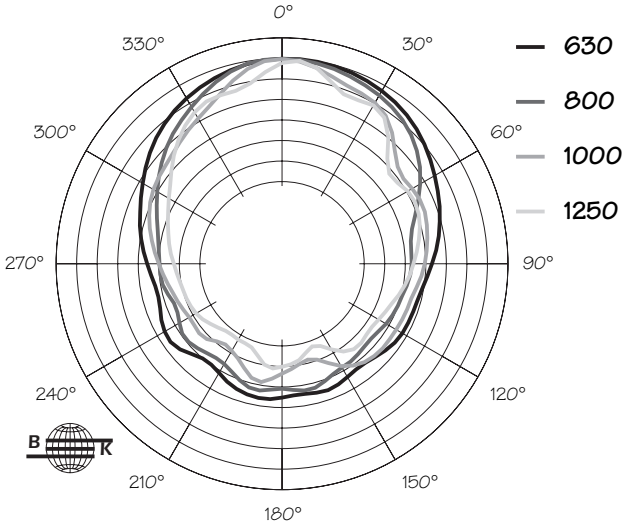
VERTICAL 1/3 OCTAVE POLAR DATA

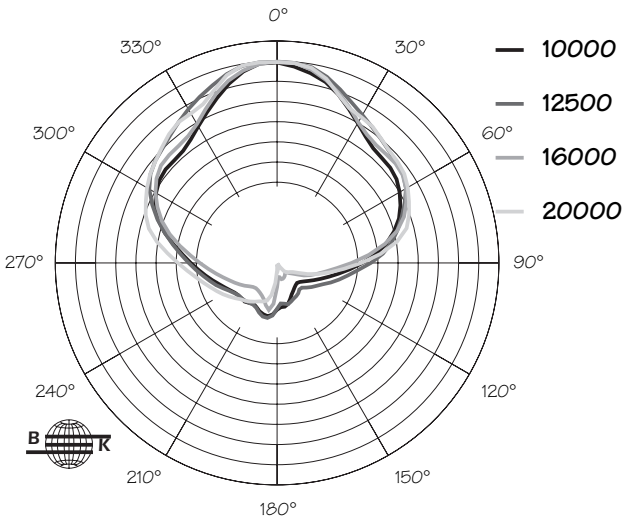




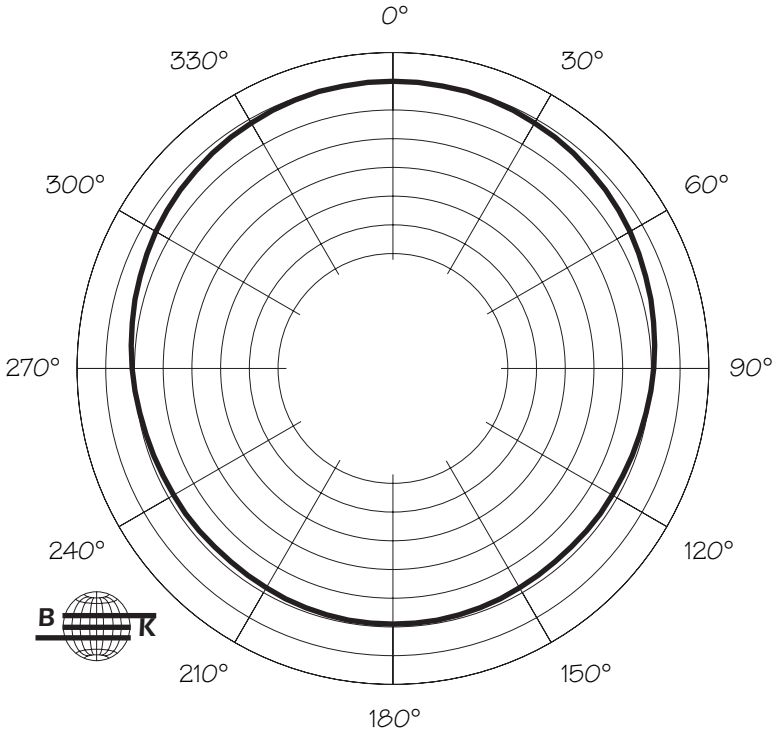




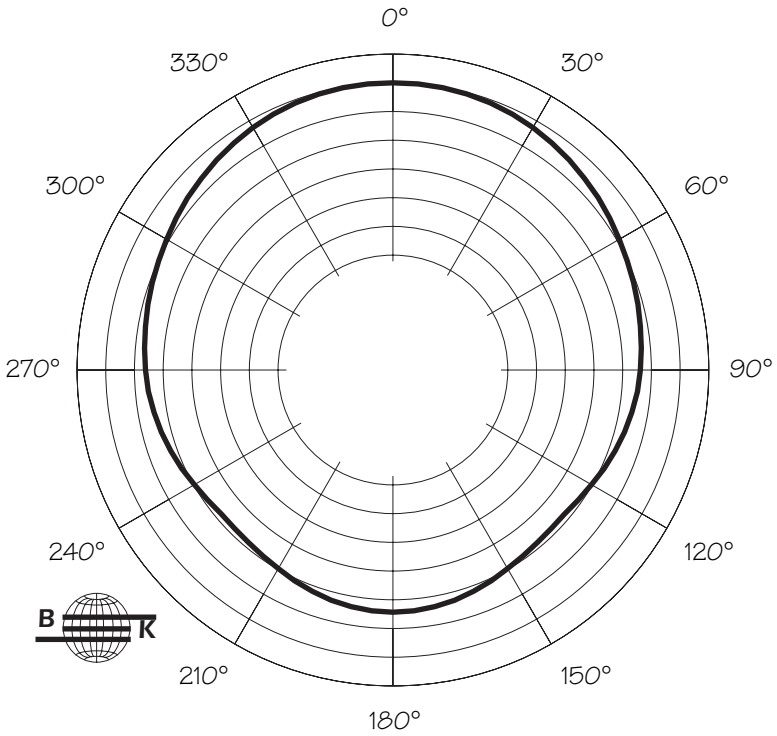




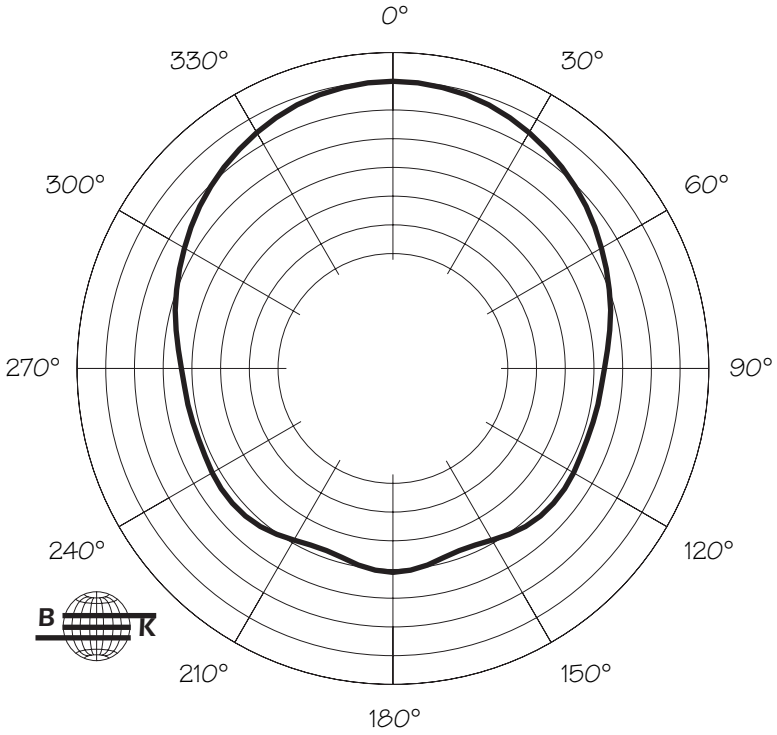
KF850E 125 Hz Horizontal Octave Polar Data



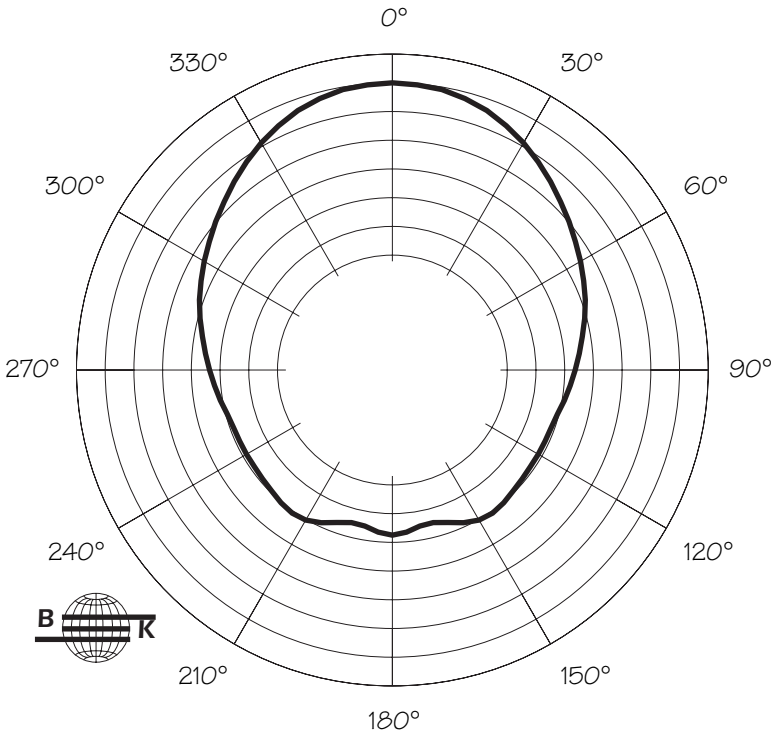
KF850E 250 Hz Horizontal Octave Polar Data



KF850E 500 Hz Horizontal Octave Polar Data



KF850E 1000 Hz Horizontal Octave Polar Data



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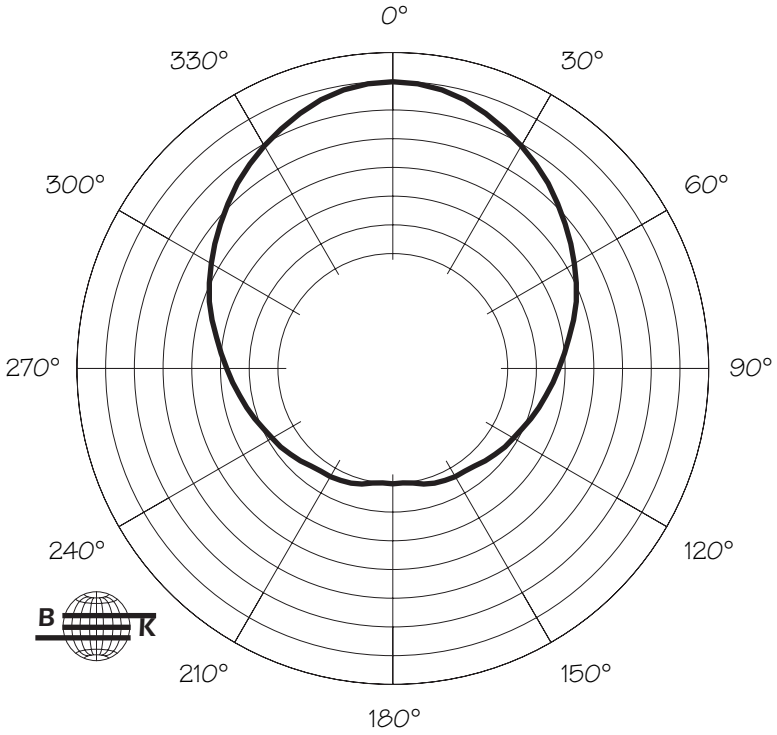
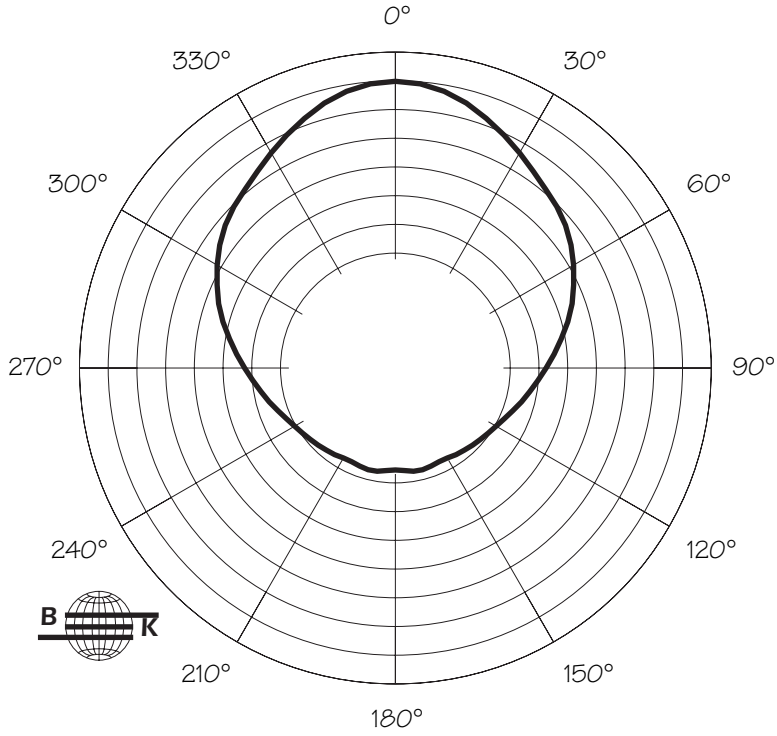
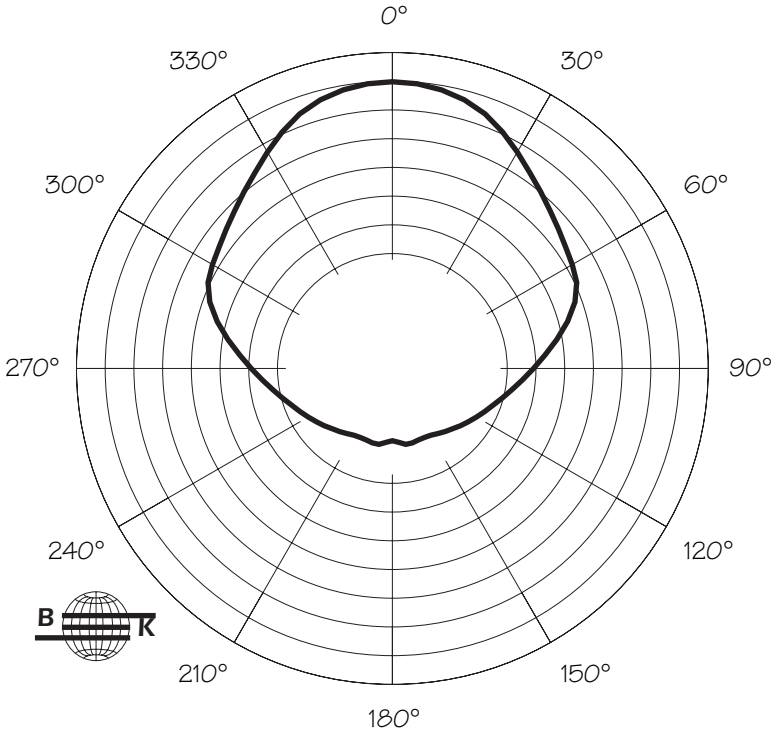


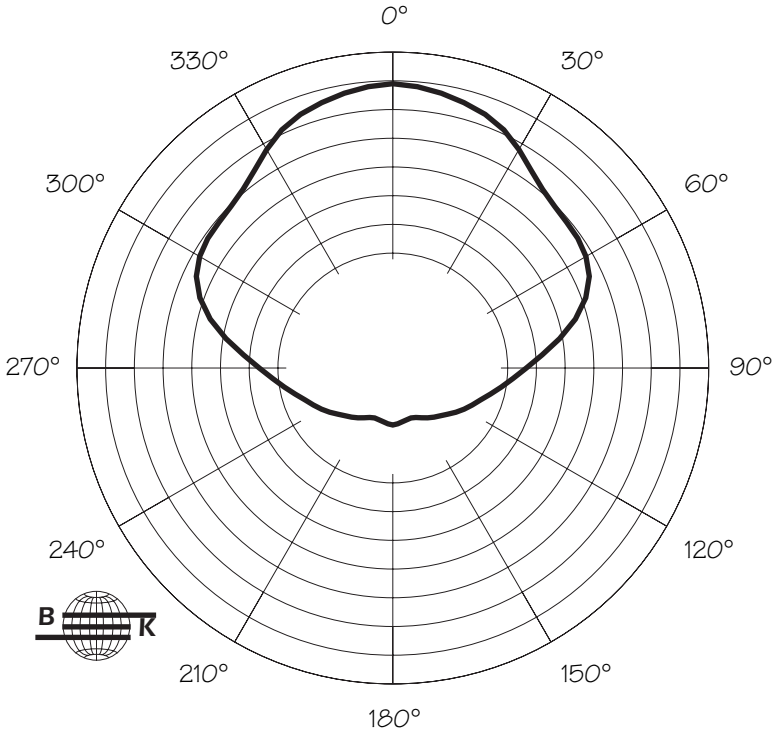
KF850E 4000 Hz Horizontal Octave Polar Data



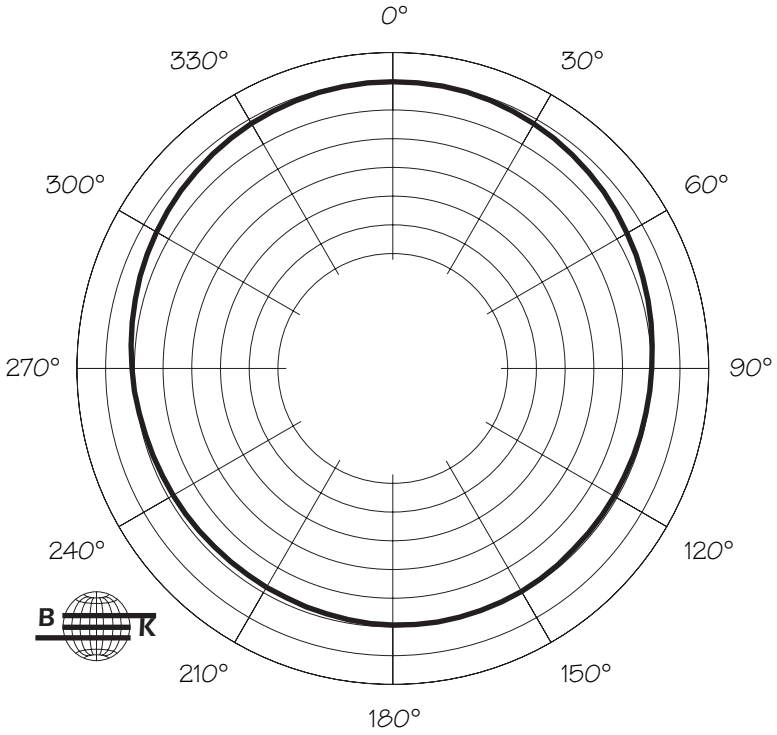
KF850E 8000 Hz Horizontal Octave Polar Data



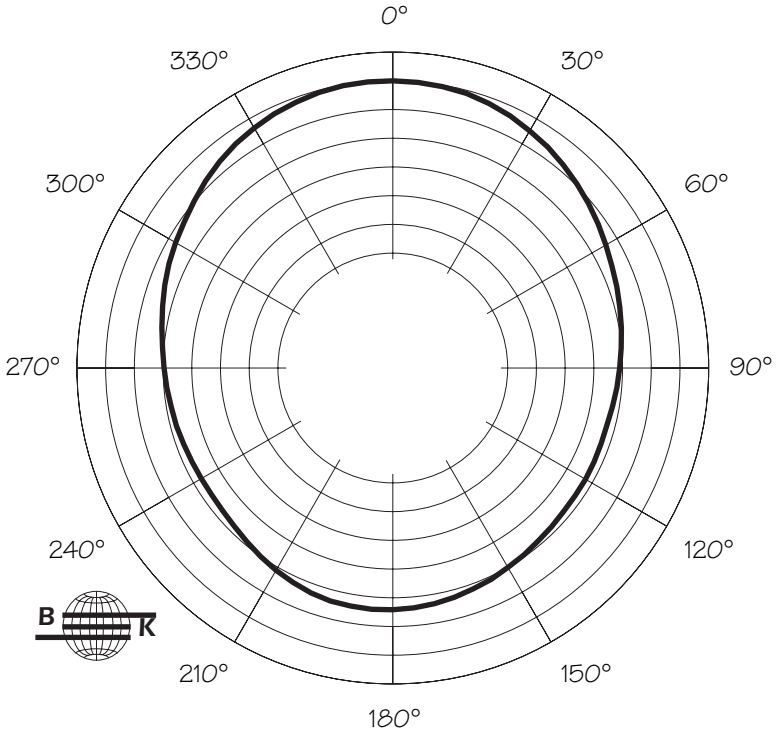
KF850E 16000 Hz Horizontal Octave Polar Data



KF850E 125 Hz Vertical Octave Polar Data



KF850E 250 Hz Vertical Octave Polar Data



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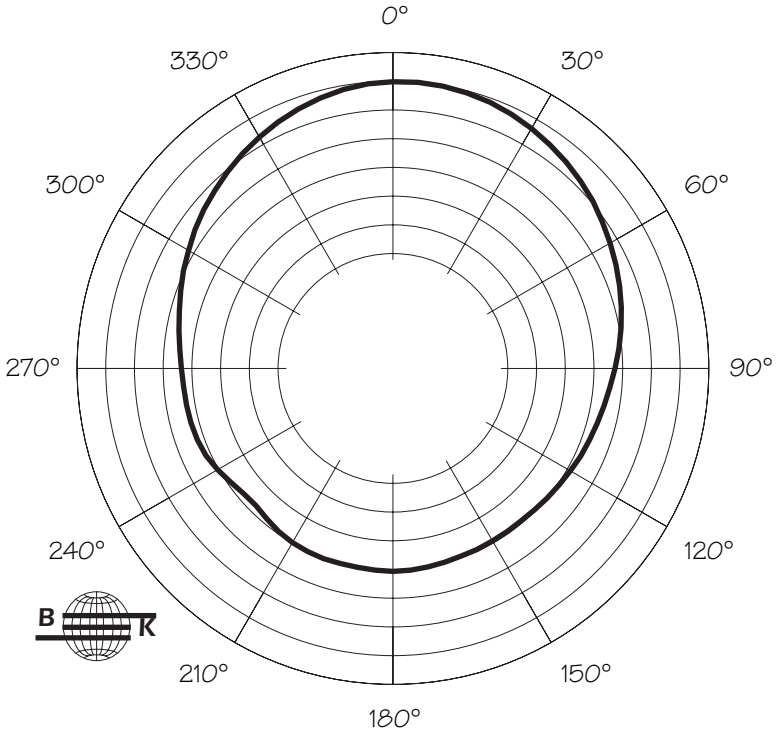
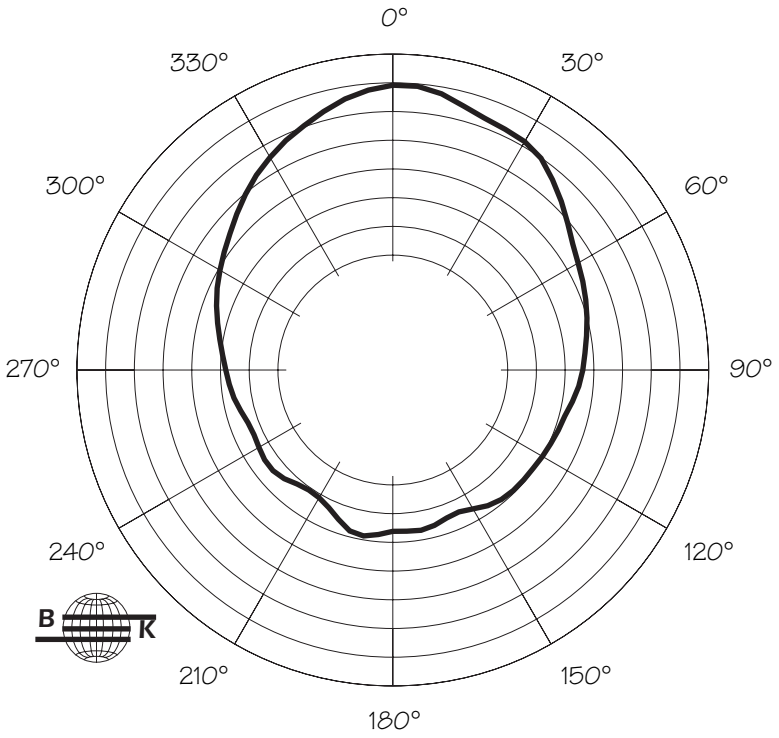
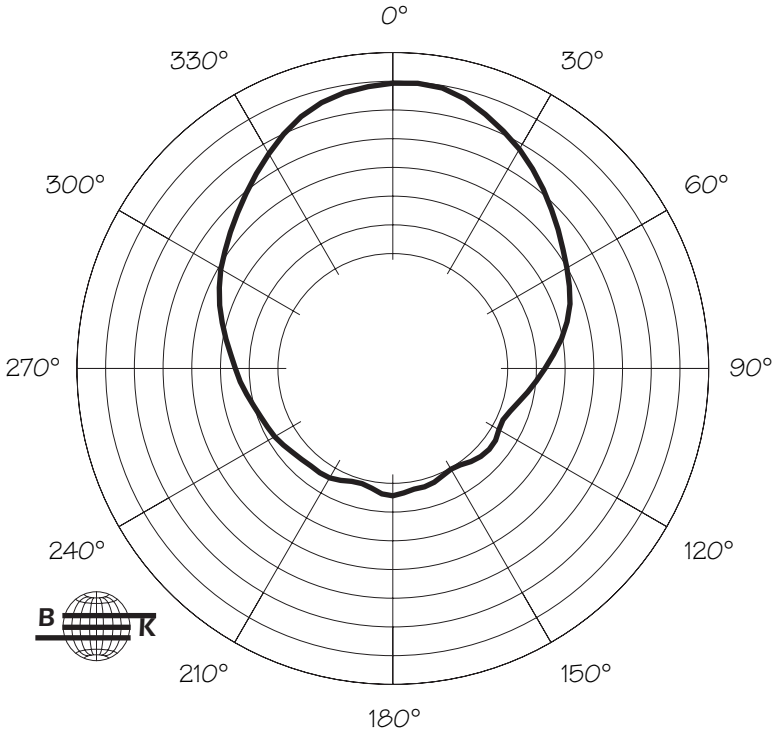
KF850E 500 Hz Vertical Octave Polar Data



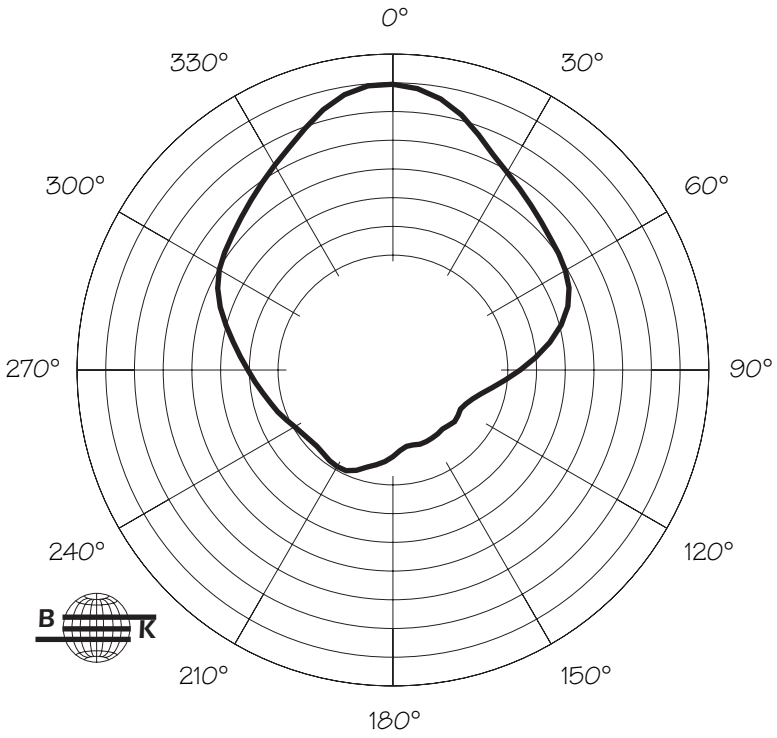
KF850E 1000 Hz Vertical Octave Polar Data



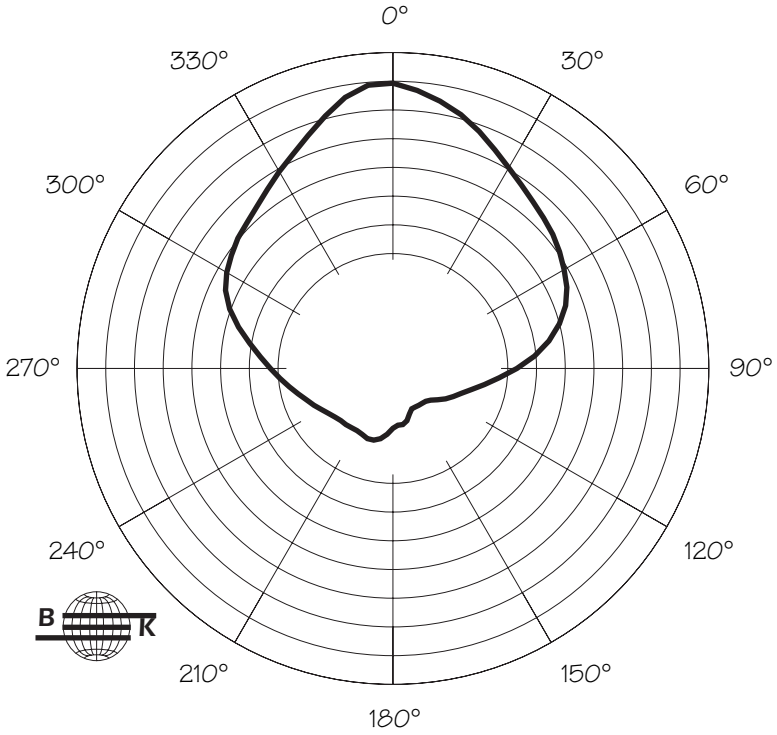
KF850E 2000 Hz Vertical Octave Polar Data



KF850E 4000 Hz Vertical Octave Polar Data



KF850E 8000 Hz Vertical Octave Polar Data



KF850E 16000 Hz Vertical Octave Polar Data