

KPT-250

12" 3-WAY CINEMA SURROUND LOUDSPEAKER



Klipsch®

KLIPSCH PROFESSIONAL | CINEMA | DATA SHEET



PRODUCT OVERVIEW

The Klipsch KPT-250 three-way cinema surround loudspeaker system brings an exciting three-dimensional sound field to larger auditoriums. It offers high power handling, extreme efficiency, extended bass response and exceptional coverage control. Because it has a tight vertical coverage pattern, it is perfect for use as an extra or rear surround.

The KPT-250 is able to deliver a lesson in you-are-there realism by employing a highpower K-42-EPK 12-inch woofer coupled to a K-66-E 2-inch titanium diaphragm compression driver and a K-792-KP 1-inch diaphragm compression driver. The system's proprietary Tractrix® Horn technology reproduces accurately focused midrange and high frequencies and maintains a pleasing open and neutral character without tonal coloration.

The system's black .75-inch void-free plywood enclosure features a 15-degree down-firing angle baffle and pre-drilled holes that fit industry-standard mounting brackets for fast, easy and secure installation. The continuous power rating and built-in high frequency protection circuit provide absolute reliability.

Adept at establishing enveloping ambient sound fields and localizing specific surround effects, the KPT-250 provides the ultimate in digital sound reproduction, putting movie audiences right in the middle of the action.

DESIGNED AND MADE IN THE USA USING DOMESTIC AND IMPORTED COMPONENTS

In 1946, Paul W Klipsch, genius & maverick, hand-built his first loudspeaker in a tin shed with the intention of bringing live music into his living room. Remember great sound? We do, too. Today, Klipsch's cinema speaker enclosures are made in the USA, by proud craftsmen in Hope, Arkansas. Just like PWK intended.

SPECIFICATIONS

FREQUENCY RESPONSE¹	70 Hz - 19 kHz +/- 3 dB 52 Hz - 20 kHz - 10 dB
POWER HANDLING²	AES: 250 watts (34V), 40 Hz - 10 kHz IEC: 480 watts (47V)
MAXIMUM SPL³	127.4 dB Continuous 133.4 dB Peak
SENSITIVITY⁴	103 dB @ 2.83V
COVERAGE	Horizontal: 100° +/- 40° 400 Hz - 20 kHz Vertical: 50° +/- 30° 3 kHz - 20 kHz
DIRECTIVITY INDEX (DI)	7 dB +/- 3 dB 1.6 kHz - 20 kHz
DIRECTIVITY FACTOR (Q)	5
NOMINAL IMPEDANCE	8 ohms (4.6 min. @ 8 kHz)
COMPONENTS	One K-42-EP 12" woofer One K-52-TI 1.5" titanium diaphragm compression driver on a K-704-T horn One K-100-TI-FF 1" diaphragm compression driver on a K-79-T horn
INPUT CONNECTION	Barrier Strip
HEIGHT	25" (63.5cm)
WIDTH	16" (40.6cm) front
DEPTH	15.5" (39.37cm)
WEIGHT	46 lbs. (20.9 kg)
TILT	15° downward
GRILLE	Cloth

¹ 3M, Half-space anechoic

² AES Standard, continuous pink noise, 6dB peaks, 40Hz-10KHz
IEC: 60268-1 noise signal for 2 hours

³ Calculated at 1M half-spaced at IEC power handling power input

⁴ SPL at 1M, half spaced anechoic 40Hz-10KHz

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	KPT-MCM-II-Q				KPT-MCM-II-T			KPT-MCM-II-B	
	HF	MF	MB	LF	HF/MF	MB	LF	HF/MF/MB	LF
SENSITIVITY	108 dB	111 dB	105 dB	108 dB		105 dB	108 dB		108 dB
POWER HANDLING	50W (20V)	50W (20V)	200W (32V)	400W (49V)		200W (32V)	400W (49V)		400W (49V)
MAXIMUM SPL	125 dB	128 dB	126 dB	133 dB		126 dB	133 dB		133 dB
NOMINAL IMPEDANCE	8 ohm	8 ohm	8 ohm	2 x 8 ohm		8 ohm	8 ohm		2 x 8 ohm

RECOMMENDED ACTIVE PROCESSOR SETTINGS

HF **KPT-Grand HF-T**

HIGHPASS CROSSOVER	6.2 kHz Linkwitz Riley 24 dB
PEQ1	7.2 kHz Q: 2 Gain: +3 dB
PEQ2	8 kHz Q: 9 Gain: +2 dB
PEQ3	7.2 kHz Q: 6 Gain: -3 dB
PEQ4	3.7 kHz Q: 7 Gain: -4 dB
UHF DELAY	6.18 ms
OUTPUT GAIN	0 dB

MF **KPT-305-MB**

HIGHPASS CROSSOVER	340 Hz Linkwitz Riley 24 dB
LOWPASS CROSSOVER	1.52 kHz Linkwitz Riley 24 dB
PEQ1	540 Hz Q: 5 Gain: -6 dB
PEQ2	940 Hz Q: 9 Gain: -3 dB
PEQ3	760 Hz Q: 8 Gain: +3 dB
PEQ4	1.12 kHz Q: 7 Gain: -6 dB
HF DELAY	5.35 ms
OUTPUT GAIN	+1 dB

MB **KPT-402-MF**

HIGHPASS CROSSOVER	1.04 kHz Linkwitz Riley 24 dB
LOWPASS CROSSOVER	8.2 kHz Linkwitz Riley 24 dB
PEQ1	600 Hz Q: 4 Gain: -6 dB
PEQ2	2 kHz Q: 1.5 Gain: -4 dB
PEQ3	2.5 kHz Q: 6 Gain: -4 dB
PEQ4	920 Hz Q: 6 Gain: +2 dB
HF DELAY	5.5 ms
OUTPUT GAIN	0 dB

LF **KPT-MWM-LF**

LOWPASS CROSSOVER	300 Hz Linkwitz Riley 24 dB
LF DELAY	0 ms
OUTPUT GAIN	0 dB

HF MF **KPT-Grand HF-N
KPT-402-MF**

HIGHPASS CROSSOVER	1.04 kHz Linkwitz Riley 24 dB
PEQ1	1.48 kHz Q: 5 Gain: -4 dB
PEQ2	1 kHz Q: 2.6 Gain: +3 dB
PEQ3	7.4 kHz Q: 1.5 Gain: +2 dB
PEQ4	3.7 kHz Q: 7 Gain: -3 dB
UHF DELAY	5.35 ms
OUTPUT GAIN	+3 dB

MB **KPT-305-MB**

HIGHPASS CROSSOVER	340 Hz Linkwitz Riley 24 dB
LOWPASS CROSSOVER	1.52 kHz Linkwitz Riley 24 dB
PEQ1	540 Hz Q: 5 Gain: -6 dB
PEQ2	940 Hz Q: 9 Gain: -3 dB
PEQ3	760 Hz Q: 8 Gain: +3 dB
PEQ4	1.12 kHz Q: 7 Gain: -6 dB
HF DELAY	5.35 ms
OUTPUT GAIN	+1 dB

LF **KPT-MWM-LF**

LOWPASS CROSSOVER	300 Hz Linkwitz Riley 24 dB
LF DELAY	0 ms
OUTPUT GAIN	0 dB

HF MF MB **KPT-Grand HF-T
KPT-402-MF
KPT-305-MB
KPT-305/402/GRAND N2**

HIGHPASS CROSSOVER	320 Hz Linkwitz Riley 24 dB
PEQ1	630 Hz Q: 4 Gain: -3 dB
PEQ2	5 kHz Q: 2 Gain: +3 dB
PEQ3	2.4 kHz Q: 6.5 Gain: -2 dB
PEQ4	12.4 kHz Q: 4 Gain: -4 dB
UHF DELAY	5.35 ms
OUTPUT GAIN	+2 dB

LF **KPT-MWM-LF**

LOWPASS CROSSOVER	300 Hz Linkwitz Riley 24 dB
LF DELAY	0 ms
OUTPUT GAIN	0 dB

Digital Signal Processing (DSP) equipment is required for all versions of the KPT-MCM-II.

The DSP parameters listed above are to establish crossover, gain, equalization and delay. They are recommended for the initial set-up evaluation and will yield the corresponding component specifications at the top of this page.

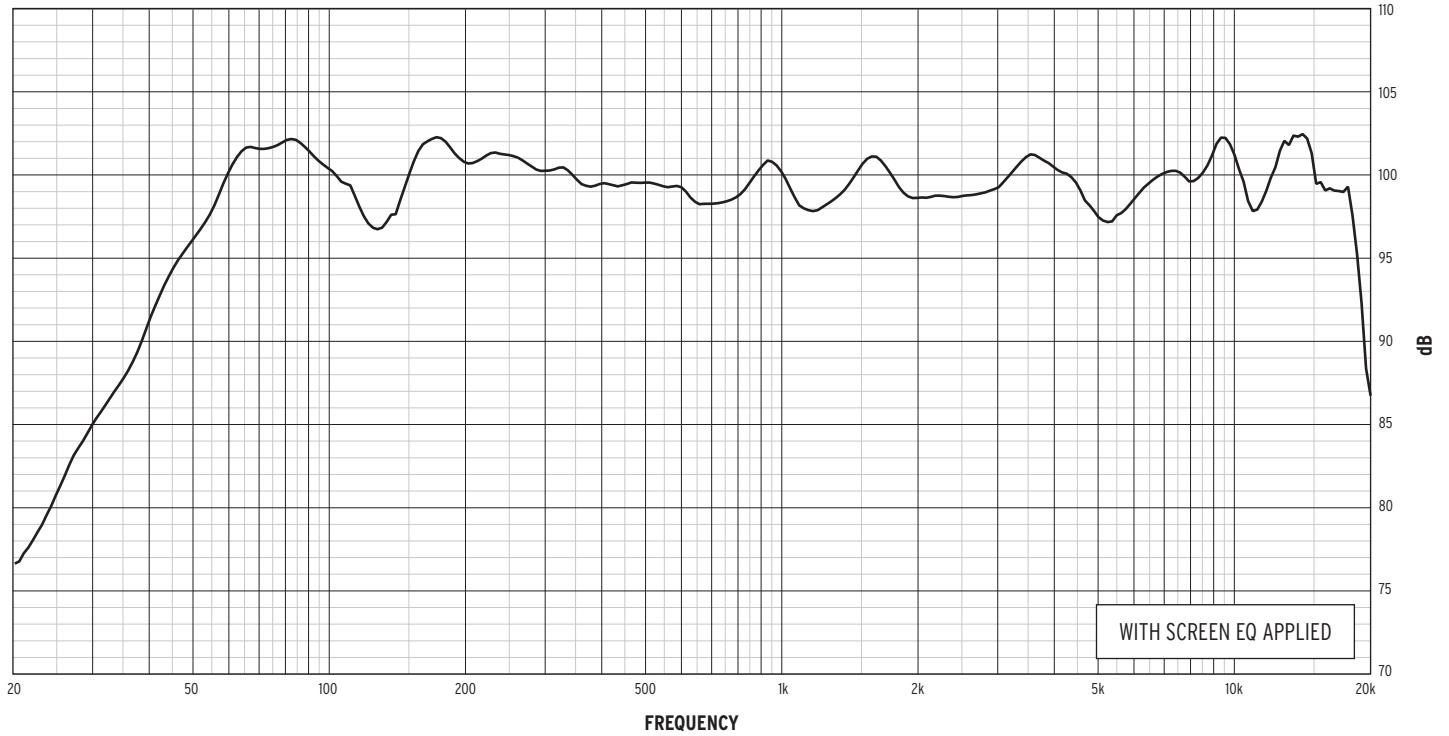
KPT-250

12" 3-WAY CINEMA SURROUND LOUDSPEAKER

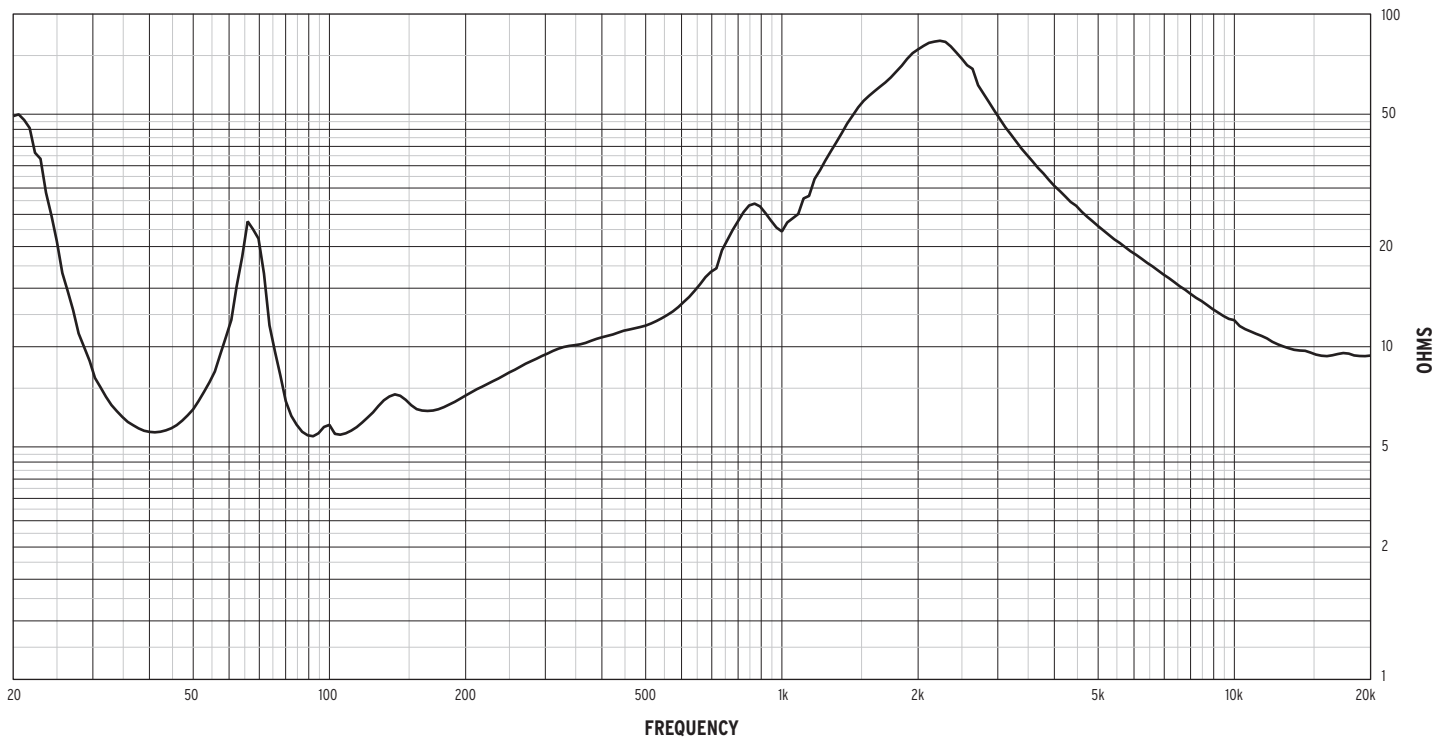


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FREQUENCY RESPONSE



IMPEDANCE



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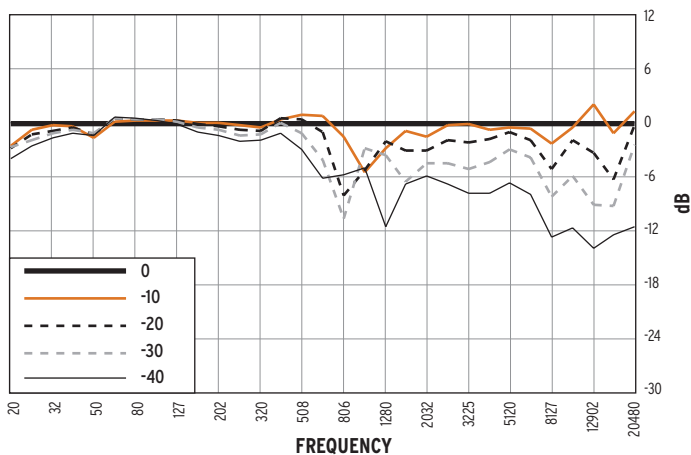
12" 3-WAY CINEMA SURROUND LOUDSPEAKER



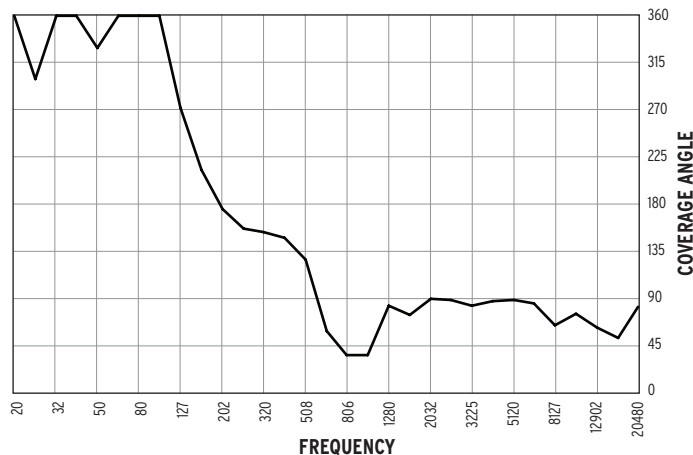
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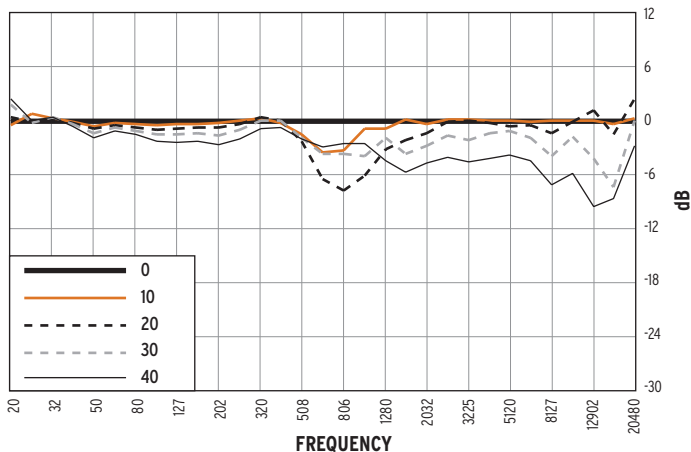
HORIZONTAL OFF AXIS TRANSFER FUNCTION LEFT



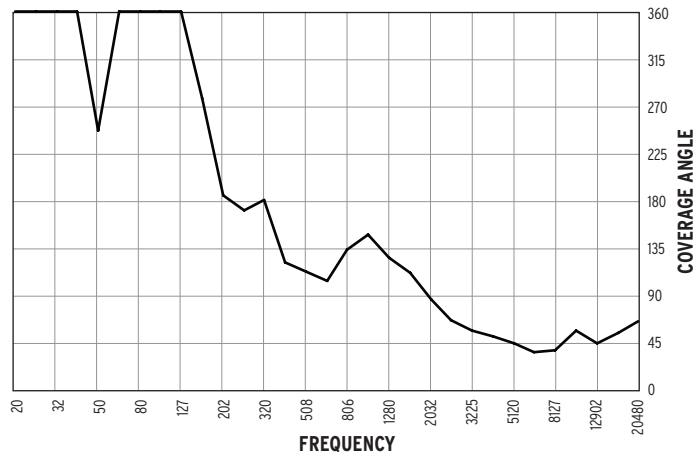
HORIZONTAL COVERAGE (-6dB)



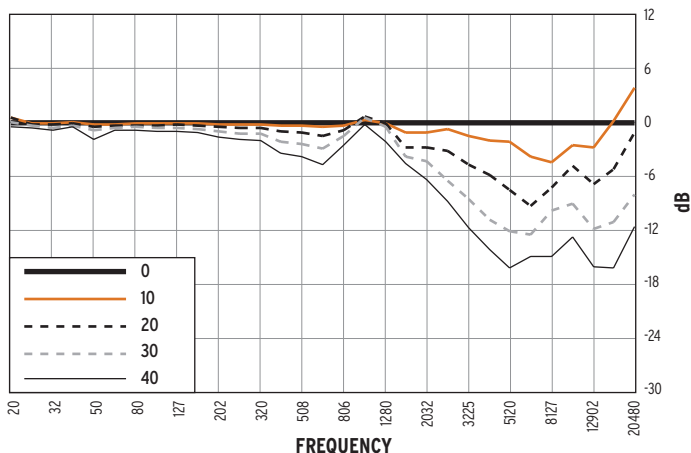
HORIZONTAL OFF AXIS TRANSFER FUNCTION RIGHT



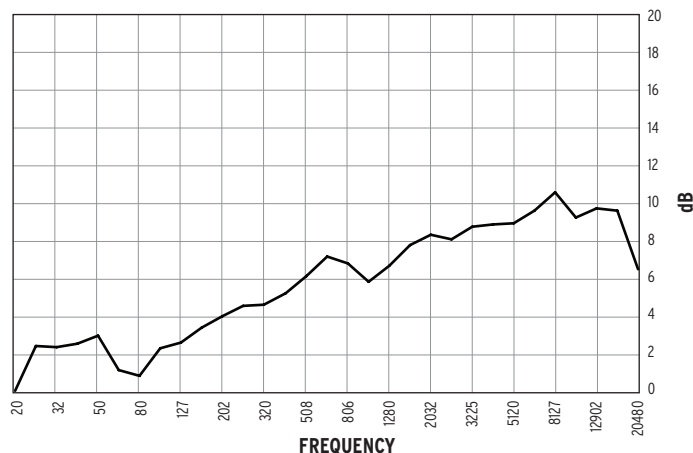
VERTICAL COVERAGE (-6dB)



VERTICAL OFF AXIS TRANSFER FUNCTION



DIRECTIVITY INDEX



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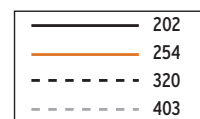
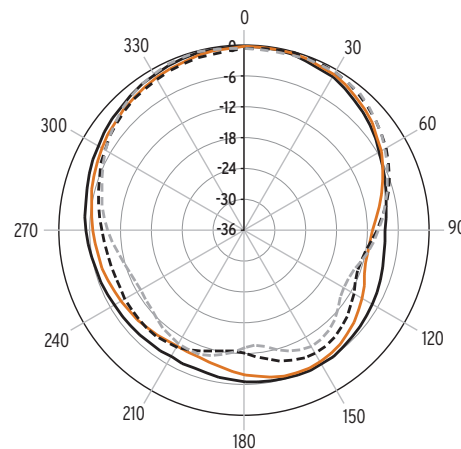
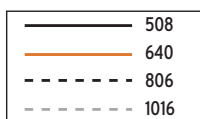
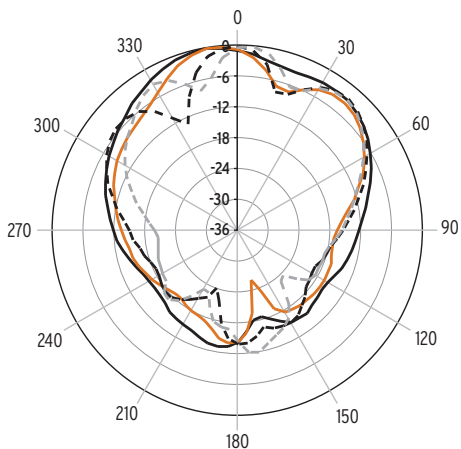
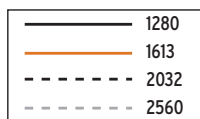
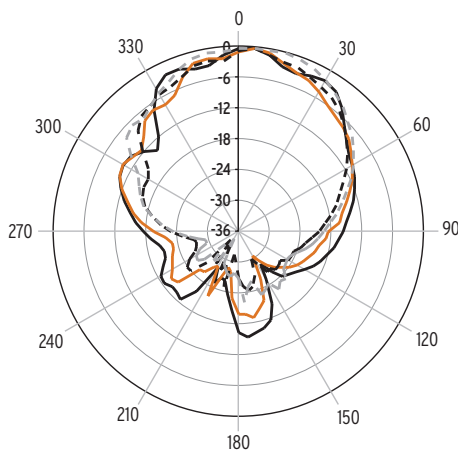
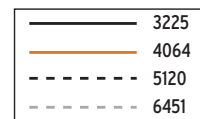
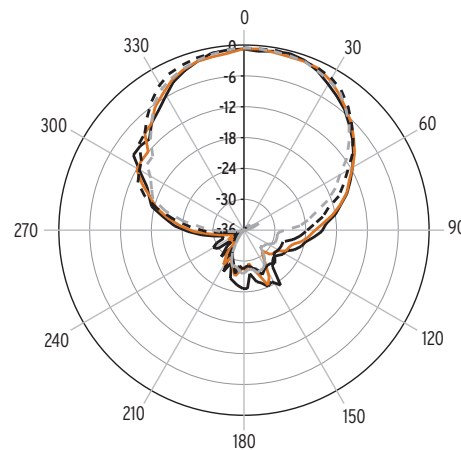
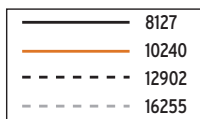
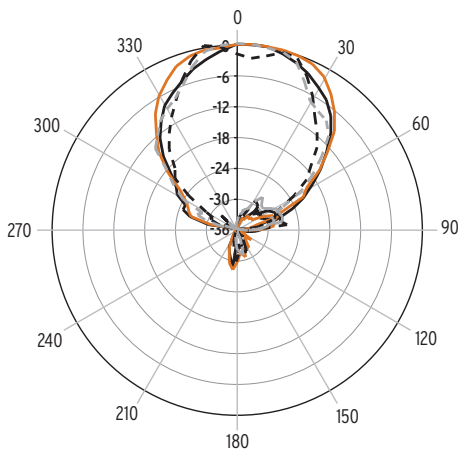
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HORIZONTAL 1/3 OCTAVE POLARS



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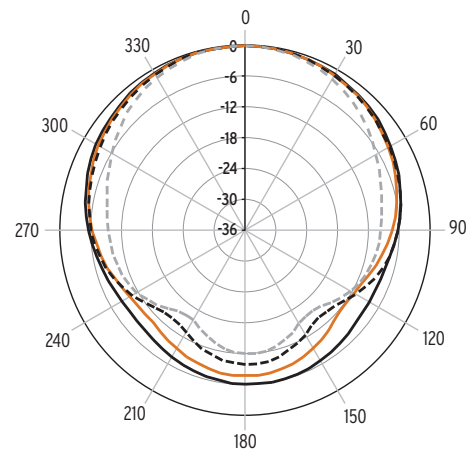
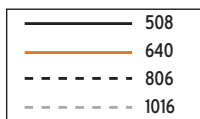
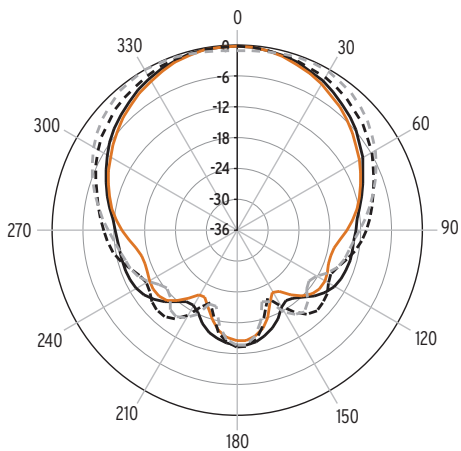
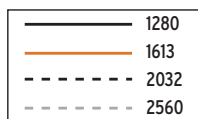
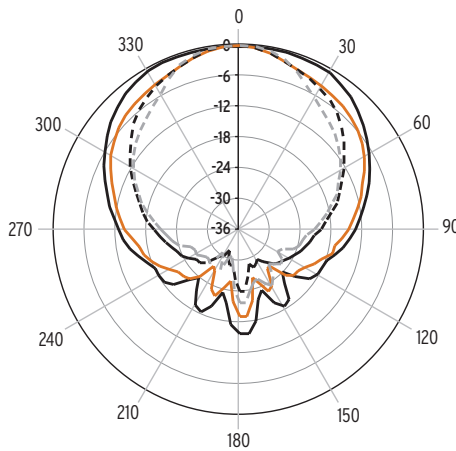
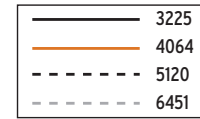
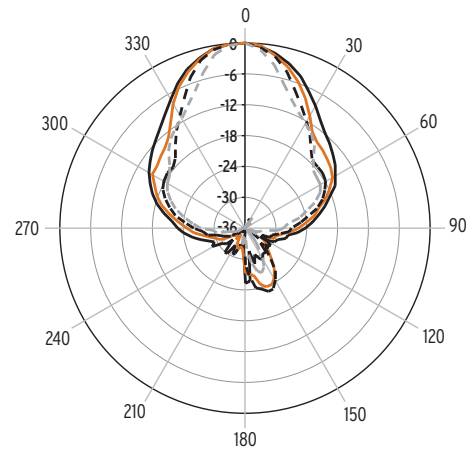
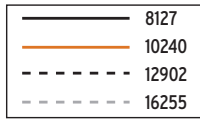
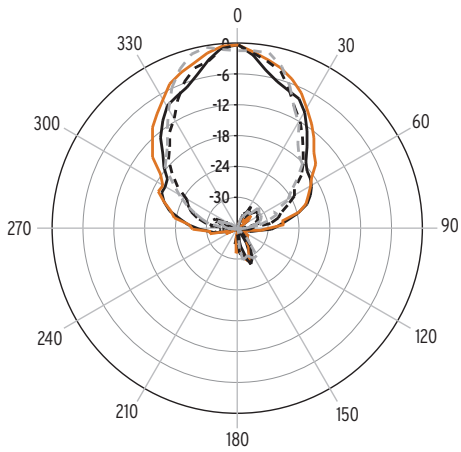
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VERTICAL 1/3 OCTAVE POLARS



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ARCHITECTURAL SPECIFICATIONS

The KI-398-RGL two-way professional cinema surround speaker system shall include an 15" (380 mm) K-48-ST low-frequency transducer utilizing a 3" (75 mm) voice coil, 104 ounce (2.95 kg) magnet and motor magnet assembly and a KDE-75-8P 3" (76.2 mm) titanium diaphragm high-frequency 60-ounce (1.70 kg) magnet compression driver mounted on a 90° X 50° injection molded modified Tractrix Horn. Signal shall be applied to the transducers via a full-range frequency-dividing network. The enclosure tuning shall be of a vented design.

Frequency response shall be 51 Hz to 18 kHz, +/- 3 dB, with the -10dBpoint at 38Hz, measured at three meters, half-space anechoic. The high-frequency dispersion angle shall be 90° X 50° nominal. Directivity shall be 8 dB. Sensitivity shall be 100dB SPL, measured at one meter, half-space anechoic, with a 2.83V input. Power handling shall be 600 watts (57 volts), to AES standards, continuous pink noise, 40 Hz to 10 kHz, 6 dB peaks. Calculated maximum continuous output at one meter shall be 126dB SPL. Nominal impedance shall be 8 ohms, with 5.5 ohms minimum at 90 Hz.

The internal passive crossover frequency shall be 750Hz with a slope of 24dB/octave on the low frequency and 24dB/octave on the high- frequency. Signal connections shall be made via a two point barrier strip.

The enclosure panels shall be CNC-fabricated using .75" (19mm) 7-ply natural hardwood plywood, assembled using rabbet and dado joinery. The motorboard baffle shall be 1" (2.54cm) molding grade MDF. Dimensions for the enclosure shall be 39" (99.1 cm) high by 16.0" (40.04 cm) deep by 19.8" (50.2cm) front width and 6.8" (17.2cm) rear width in a symmetrical trapezoidal shape, with both side panels angled at 22.5° Net weight shall be 78 lbs. (35.5kg).

Enclosure flying capability shall be provided via sixteen internal 3/8"-16 thread mounting points, 4 points per panel with additional compatibility with readily available commercial flying hardware.

The system shall be a Klipsch KI-398-RGL loudspeaker.

NEED HELP WITH YOUR PRO SYSTEM DESIGN?

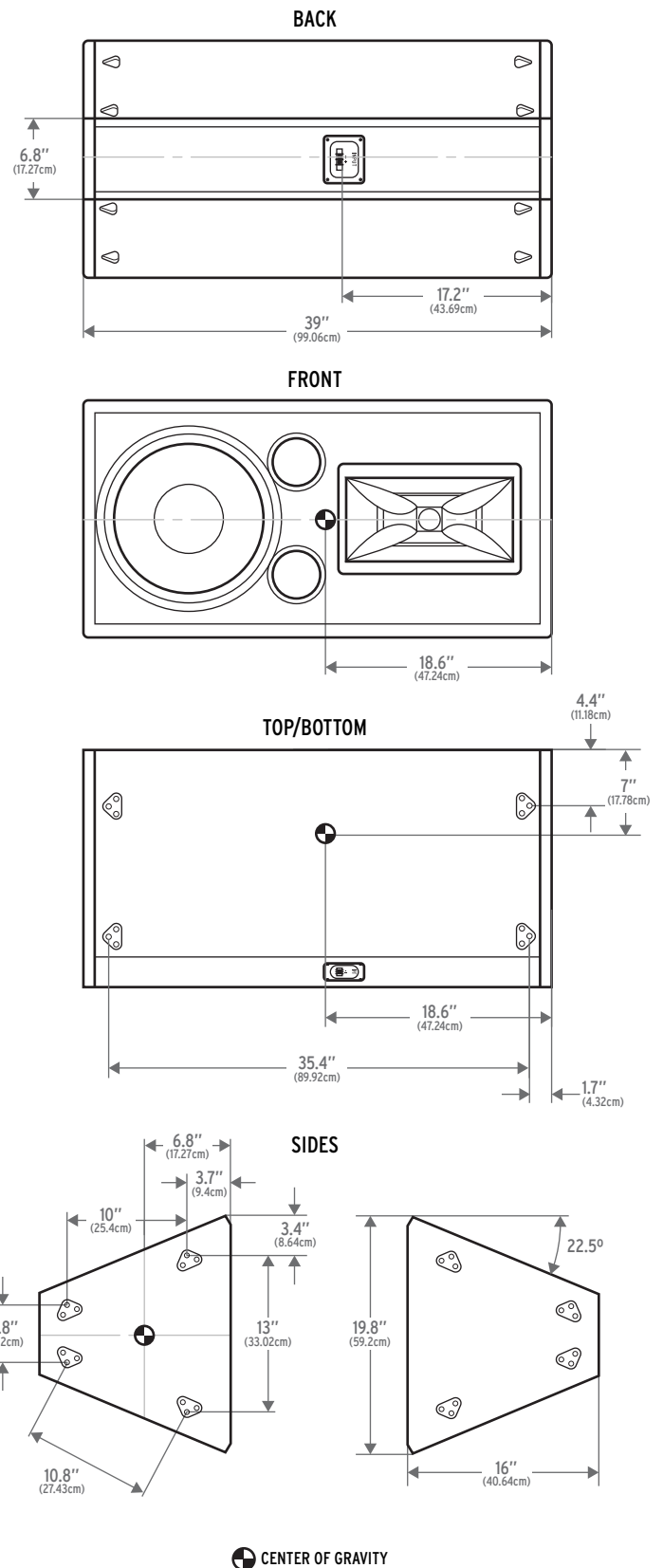
You need to make the best impression, from the initial job quote through the completed installation. We can help choose the best Klipsch speakers for the application and help design a system that unleashes your venue's full potential.

Send us your plans or questions to us at:

PROSYSTEMDESIGN@KLIPSCH.COM

NOT A SUSPENSION POINT! 8 PLCS on each side and 8 PLCS on each top and bottom panels

3/8"-16 threaded hole suspension point 4 PLCS on each side panel and 4 PLCS on top and bottom panels



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ORDERING INFORMATION

KI-398-RGL

PART NUMBER	MODEL NAME	FINISH	PACKED QUANTITY	DESCRIPTION	UPC
1015031	KI-398-B-RGL	Black	1	Standard 8 ohm speaker	743878027792

KI-398 SIDE-PLATE MOUNTING KIT

PART NUMBER	MODEL NAME	FINISH	PACKED QUANTITY	DESCRIPTION	UPC
1061616	KI-398-RGL PLT Mounting Kit	Black	1	2 Side-Plates plus hardware	NA

KI-398-RGL CARTON DIMENSIONS

HEIGHT	41.5" (105.4cm)
WIDTH	21.0" (53.3cm)
DEPTH	17.0" (43.2cm)

KI-398 SIDE-PLATE MOUNTING KIT CARTON DIMENSIONS

HEIGHT	1" (2.5cm)
WIDTH	18.5" (33.0cm)
DEPTH	12.5" (31.8cm)