

Specifications

LQ™10 Loudspeaker

LQ10 Loudspeaker				
frequency response	74 Hz to 18 kHz ±3 dB			
usable low frequency limit (-10 dB point)	57 Hz			
power handling	Full Range	250 W continuous	500 W program	
sound pressure level	Full Range	96.0 dB SPL, (2.83 V input)		
maximum sound pressure level (1 meter)	Full Range	120.0 dB SPL continuous	126.0 dB SPL peak	
radiation angle measured	90 degrees horizontal x 40 degrees vertical			
transducer complement	Low Freq	1x 10" woofer, vented long throw heavy-duty woofer		
	High Freq	1x 1" exit/34 mm voice coil compression driver HF™ 1 on a CD horn		
box tuning frequency	Fbox	75 Hz		
crossover frequency (internal passive)	Low Freq	2,200 Hz		
time offset	Low Freq	0.00 ms		
	High Freq	Horn spatially aligned		
impedance (Z)	Full Range	Nominal 8.0Ω	Minimum - 6.7Ω	
input connections	2x Neutrik® Speakon® for full-range inputs			

enclosure materials and finish		Dark gray high impact polypropylene 1/4" thick finished in textured molded surface	
mounting provisions		(8) 1/4" threaded mounting points, four each top and bottom	
dimensions (H x W x D)		front	18.75" x 14.00" x 13.19"476 mm x 356 mm x 335 mm
		rear	16.69" x 8.00" x 13.19"424 mm x 203 mm x 335 mm
net weight		31 lbs. (14.1 kg)	

Architects’ & Engineers’ Specifications:

The loudspeaker system shall have an operating bandwidth of 74 Hz to 18 kHz. The nominal output level shall be 96.0 dB when measured at a distance of one meter with an input of one Watt. The nominal impedance shall be 8.0 Ohms. The maximum continuous power handling shall be 250 Watts, maximum program power of 500 Watts and a peak power input of at least 1,000 Watts, with a minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 90 degrees in the horizontal plane and 40 degrees in the vertical plane. The outside dimensions shall be 18.75 inches high by 14.00 inches wide by 13.19 inches deep. The weight shall be 31 pounds. The loudspeaker system shall be a Crest model LQ 10.



LQ™10

Loudspeaker





Power Handling Full Range	Continuous	Peak
LQ10	250W	1,000W
Other LQ series loudspeakers		
LQ12	500W	2,000W
LQ15	500W	2,000W

Features

- Quadratic Throat Geometry horn

- 500 W program, 1000 W peak

- 10" long throw heavy-duty woofer

- Crest HF™1 one and a quarter inch titanium compression driver

- DPS (Dynamic Protection System) tweeter protection

- High power crossover components

- Top and bottom flying point inserts

- Multiple handles and 1-3/8" stand mount

- Available in white

Description

The Crest LQ 10 is an injection-molded two-way speaker system, engineered in the Crest tradition to provide superior performance from a compact and durable package. The enclosure is made from very high impact injection-molded polypropylene in a trapezoidal shape, with extensive ribbing and bracing. The grille is comprised of perforated metal protected by a high quality vinyl coating process.

The two-way system is comprised of a 10" long throw heavy-duty woofer, and a water-resistant treated cone and dust cap for superior environmental stability. The high frequencies are handled by a Crest HF™1 one and a quarter inch titanium diaphragm compression driver, coupled to a 1" Quadratic Throat Geometry horn, molded integral to the cabinet. This horn provides outstanding dispersion coupled with a well-controlled pattern, and a smooth, even response. Utilizing Quadratic Throat Horn™ technology, under US Patent 6,059,069, the horn has lower distortion than many popular CD horn geometries.

Input connection to the system is made via two 4-pin Neutrik® jacks connected in parallel for full-range signal input and daisy chaining capability

The internal passive crossover features the DPS™ (Dynamic Protection System) tweeter protection circuit, an advanced topology crossover with high performance components, to provide high power handling and reliability. The crossover provides driver roll-off and protection, as well as driver EQ for the woofer and horn. High-quality, reliable crossover components include polypropylene capacitors, and high current inductors and input connectors. The optimal integration of the crossover with the selected drivers results in a smooth frequency response from 74 Hz to 18 kHz.



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Power Handling

There are many different approaches to power handling ratings. Crest rates this loudspeaker system's power handling using a full-range form of the AES Standard 2-1984. Using audio band 20 Hz to 20 kHz pink noise with peaks of four times the RMS level, this strenuous test signal assures the user that every portion of this system can withstand today's high technology music. This rating is contingent upon having a minimum of 3 dB of amplifier headroom available.

Amplitude Response (1W 1m On-Axis)

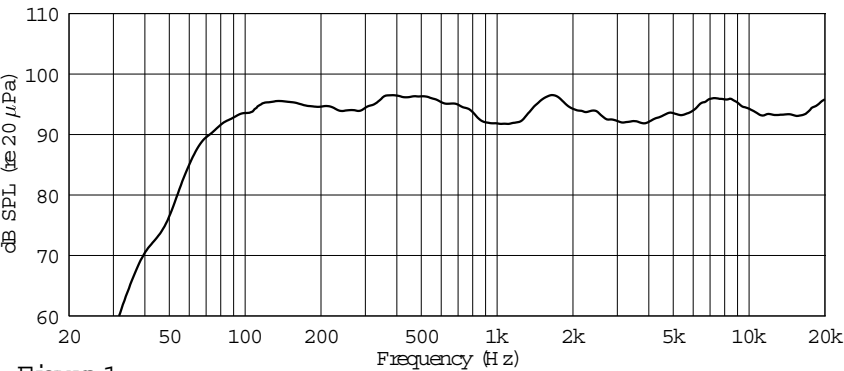


Figure 1

Frequency Response

This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the Crest LQ 10 is measured at a distance of 1-meter using a 1-Watt (into the nominal impedance) swept-sine input signal. As shown in figure 1, the selected drivers in the Crest LQ 10 combine to give a smooth frequency response from 74 Hz to 18 kHz.

Impedance

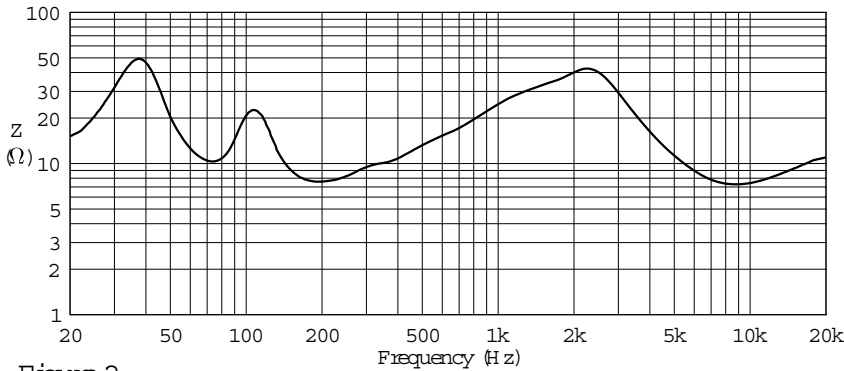


Figure 2

Directivity

Beamwidth is derived from the -6 dB points from the polar plots (see figure 3) which are measured in a whole space anechoic environment. Q and Directivity Index are plotted for the on-axis measurement position. These are specifications that provide a reference to the coverage characteristics of the unit. These parameters provide insight for proper placement and installation in the chosen environment. The blending of the components of the Crest LQ 10 exhibit a desirable beamwidth and directivity (figure 3 and 4) suitable for sound reinforcement applications.

Beam width

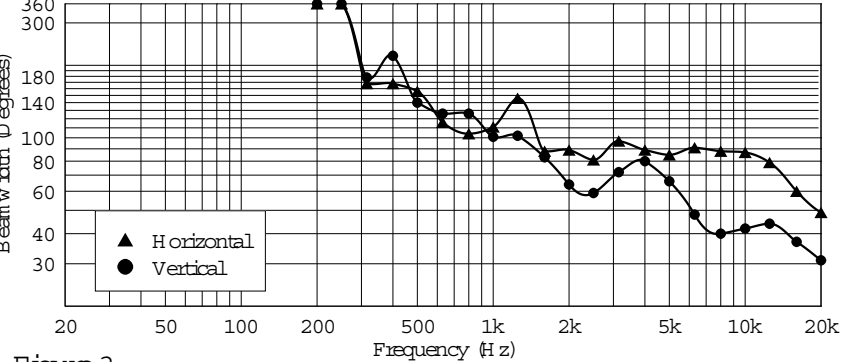


Figure 3

Q & Directivity Index

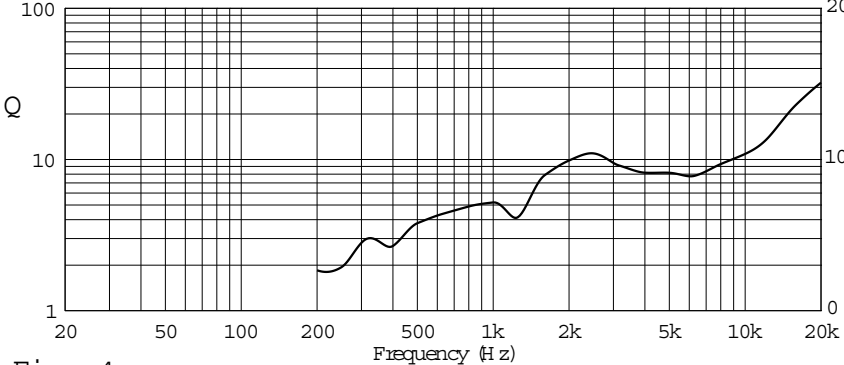
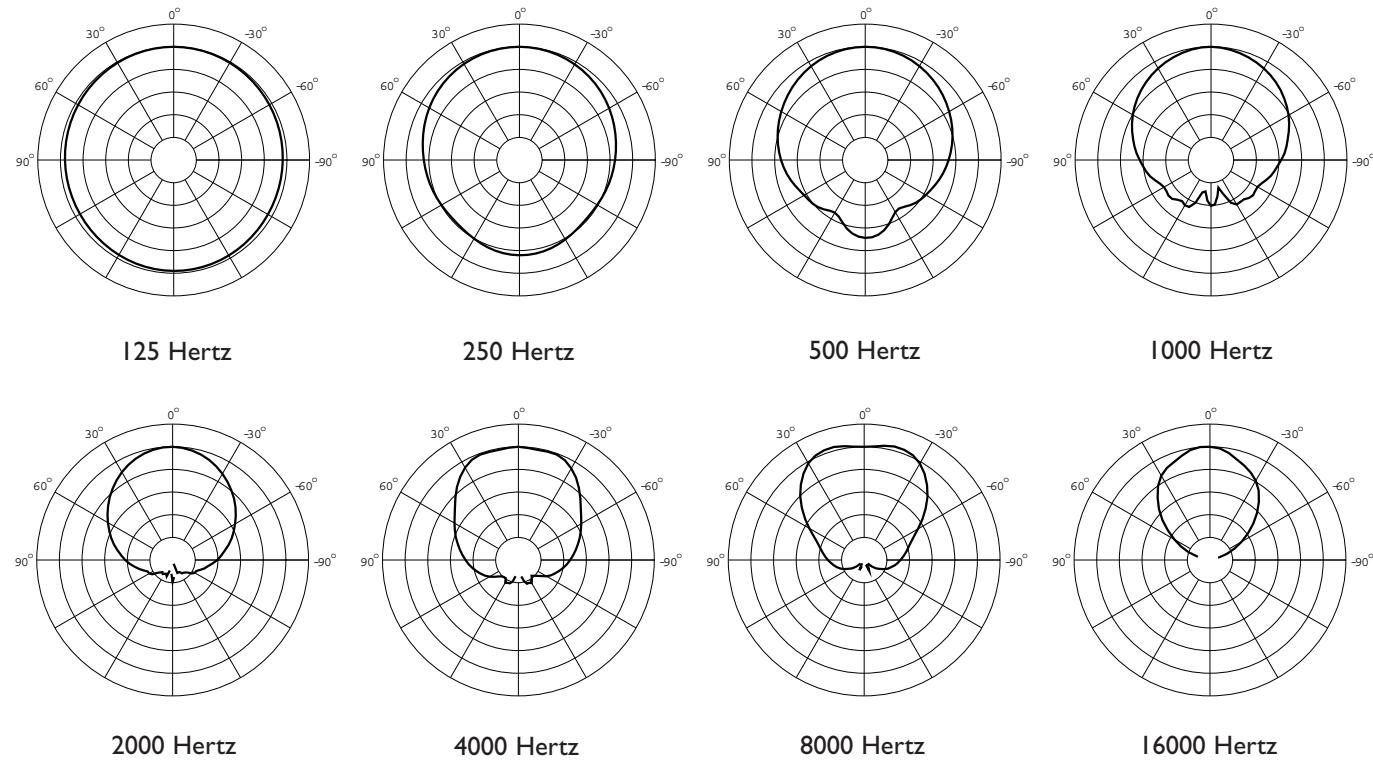


Figure 4

Specifications

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Horizontal Polars



Vertical Polars

