VECTOR CS699

Vector™ Performance Loudspeaker – 6.5” 2-Way Coaxial 90° x 90°

- *A compact, professional performance loudspeaker for small rooms and fill applications*
- *High-performance 6.5” (165 mm) coaxial transducer with 90° x 90° HF horn*
- *High-frequency compression driver with 1 inch (25 mm) diaphragm*
- *Delivers superior performance in combination with a Crestron Avia™ DSP*
- *Precisely tuned for accurate, uncolored sound reproduction*
- *Produces high intelligibility and natural sound quality for speech and program material*
- *Achieves smooth bandwidth performance both within and beyond the specified coverage pattern*
- *Uniform directionality affords consistent, targeted pattern control*
- *Capable of relatively high SPLs without coloration or distortion*
- *Affords a clean, unimposing appearance in tight spaces*
- *Ruggedly constructed for maximum reliability*
- *Optional yoke bracket available separately*
- *Compatible with third-party speaker mounts*
- *Neutrik® speakON® input and pass-through connections*
- *16 Ohm nominal impedance*

Crestron® Vector™ Performance Loudspeakers provide a professional sound reinforcement speaker solution for large indoor spaces and venues. Featuring a revolutionary coaxial transducer design complemented by advanced Crestron Avia™ digital signal processing, Vector loudspeakers deliver exceptional intelligibility and natural sound quality for speech reinforcement, foreground music, and multimedia presentation applications. Compact, aesthetically-pleasing enclosures afford remarkable performance in less space. A choice of sizes and coverage patterns is offered to address the varying applications and room geometries found in auditoriums, theaters, lecture halls, houses of worship, convention centers, hotel ballrooms, sports facilities, night clubs, and public spaces.

The Vector CS699 is a very compact speaker enclosure loaded with one 2-way coaxial transducer composed of a 6.5” (165 mm) LF driver and a 90° x 90° HF horn with 1” (25 mm) diaphragm compression driver. Advanced engineering and construction of the complete speaker achieves a highly space-efficient design with unusually high output capability and consistent off-axis response. Its coaxial transducer aligns the low-frequency and high-frequency elements to produce precise transient response and uniform directionality.

High-Performance Coaxial Transducer

The coaxial transducer in the Vector CS699 features a true high-frequency horn and compression driver married to a powerful 6.5” woofer, affording high efficiency and exceptional clarity for both speech and program material. Its broad 90° x 90° coverage pattern works well in small spaces and short-throw applications. Tight integration between the compression driver diaphragm and woofer voice coil achieves coherent summation in the crossover region, allowing a passive crossover to be used to seamlessly blend the horn and woofer into a single point source.

Crestron Avia™ Digital Signal Processing

Every aspect of the Vector CS699 is designed to take advantage of the signal refining abilities of a Crestron Avia DSP. Vector loudspeakers and Crestron Avia processing work synergistically to produce a superior speaker system tuned for accurate, uncolored reproduction of voice and program signals. Precision signal processing is employed to accomplish what can’t be done physically, strategically eliminating harsh-sounding resonances caused by horn reflections while retaining every nuance of the original signal.

Further refinements are employed to maximize transient response and deliver smooth bandwidth performance both within and beyond the speaker’s nominal coverage pattern. The result is an extremely natural sounding speaker system with superior pattern control, improved intelligibility, reduced listener fatigue, and higher gain before feedback.

Versatile Installation

The Vector CS699 is particularly effective in applications where compact dimensions and targeted pattern control are desirable. Such applications include front fill, delay fill, under-balcony, control room, and background music, especially when mated with a subwoofer. Its clean appearance facilitates acceptance by architects and interior designers, and its diminutive size allows it to be mounted close to walls or ceilings without obstructing sight lines. Concealed M6 mounting points are included to accommodate either an optional yoke bracket (sold separately) or third-party pan/tilt type speaker mount.

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SPECIFICATIONS

Performance

Transducers: 6.5 inch (165 mm) woofer with 2 inch (51 mm) voice coil and ceramic magnet, coaxial horn with 1 inch (25 mm) diaphragm compression driver and neodymium magnet
Beamwidth: 90° x 90° nominal
Impedance: 16 Ohms nominal
Frequency Range: 87 Hz to 20 kHz (+3/-10 dB)
Power Handling: 175 Watts based on the AES power handling of the transducers
Nominal Sensitivity: 100 dB at 1W/1m whole space using band limited pink noise without processing
Nominal Maximum SPL: 129 dB peak, 123 dB continuous, at 175W/1m without processing
Equalized Sensitivity: 89 dB at 1W/1m using an EIA-426-B signal with processing
Equalized Maximum SPL: 118 dB peak, 112 dB continuous, at 175W/1m with processing

Processing & Amplification

Digital Signal Processing: Requires processing using one output channel of a Crestron Avia DSP, settings provided via model-specific “Speaker Profiles” in the Crestron Avia Audio Tool software (SW-AAT)
Amplification: Requires a single channel of amplification
Recommended Amplifier Power: 175 to 350 Watts at 16 Ohms

Connections

Input: (2) Neutrik NL4 speakON 4-pole chassis connectors;
Pins 1 +/–: Speaker input and pass-through;
Pins 2 +/–: Pass-through only

Environmental

For indoor use only

Construction

Enclosure: Void-free, exterior grade Baltic Birch plywood; black painted finish
Grille: Steel, black powder coat finish
Yoke Mounting: (2) M6 yoke points (yoke bracket sold separately)
Pan/Tilt Mounting: (2) M6 mounting points, 3 inch (76.2 mm) spaced, for third-party speaker mount (not included)

Dimensions

Height: 10.75 in (273 mm)
Width: 7.12 in (181 mm)
Depth: 6.50 in (165 mm)

Weight

12.0 lb (5.4 kg)

MODELS & ACCESSORIES

Available Models

VECTOR CD896: Vector™ Performance Loudspeaker – 6.5” 2-Way Coaxial 90° x 90°

Available Accessories

VECTOR YOKE6: Yoke Bracket for VECTOR CS699
VECTOR CONN2: Neutrik® NL2 speakON® 2-Pole Cable Connector
VECTOR CONN4: Neutrik® NL4 speakON® 4-Pole Cable Connector
DSP Series: Crestron Avia™ Digital Signal Processors
CA-PWRSFT-1604: Powersoft Duecanali 1604 2-Channel Power Amplifier, 800W/Ch.
CA-PWRSFT-2404: Powersoft Quattrocanali 2404 4-Channel Power Amplifier, 600W/Ch.
VECTOR SUBS15: Vector™ 15” Performance Subwoofer

Notes:

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at https://www.crestron.com/How-To-Buy/Find-a-Representative or by calling 855-263-8754.

The specific patents that cover this and other Crestron products are listed online at https://www.crestron.com/legal/patents.

Certain Crestron products contain open source software. For specific information, visit https://www.crestron.com/opensource.

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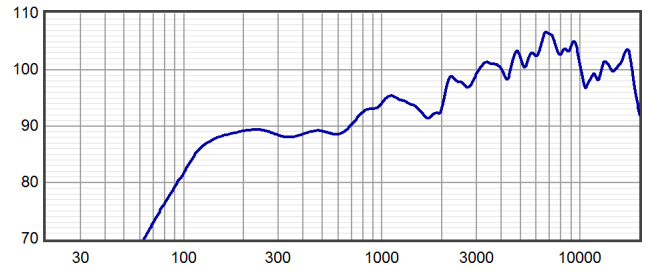
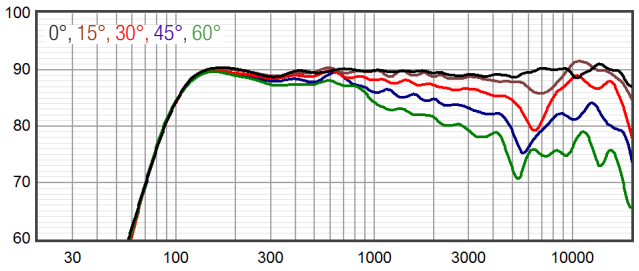
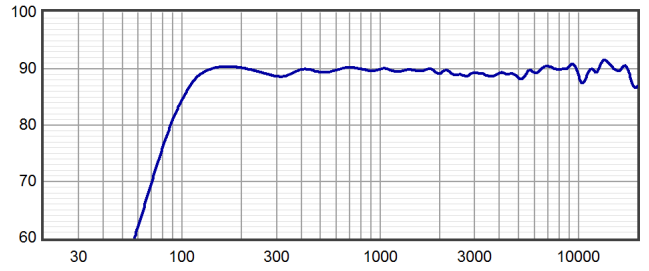


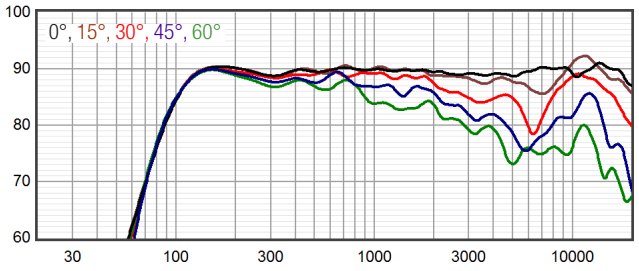
Axial Sensitivity (dB SPL, 1W/1m)
Plotted against frequency for a 1 watt swept sine wave, referenced to 1 m without processing



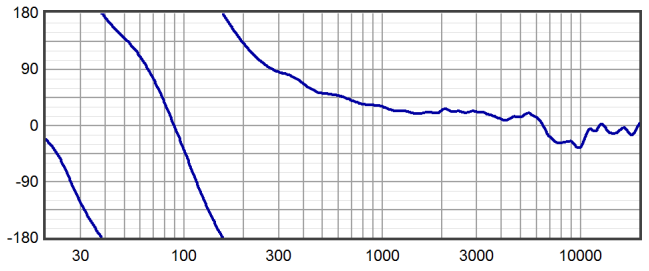
Horizontal Off Axis Response
The magnitude response at various angles off axis, with proceessing



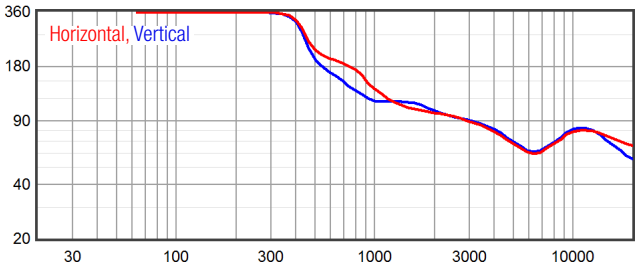
Axial Processed Response (dB)
The axial magnitude response with processing



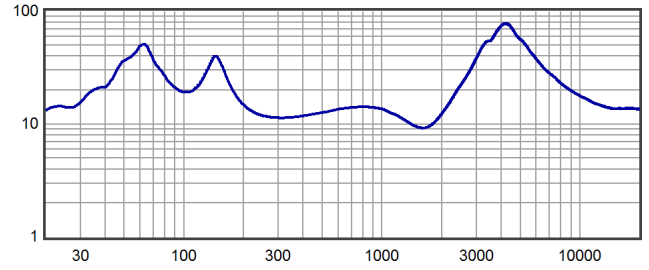
Vertical Off Axis Response
The magnitude response at various angles off axis, with proceessing



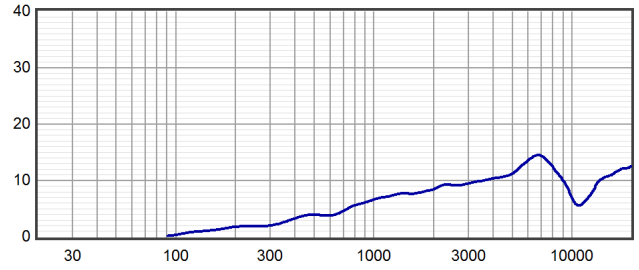
Axial Processed Phase Response (degrees)
The axial phase response with processing



Beamwidth
The angle between the -6 dB points in the speaker’s polar response



Impedance (Ohms)



Directivity Index (dB)
The ratio of the on-axis sound pressure squared to the spherical average of the sound pressure squared at a particular frequency expressed in dB. To convert the directivity index (Di) to directivity factor (Q) use the formula: 10 Di/10

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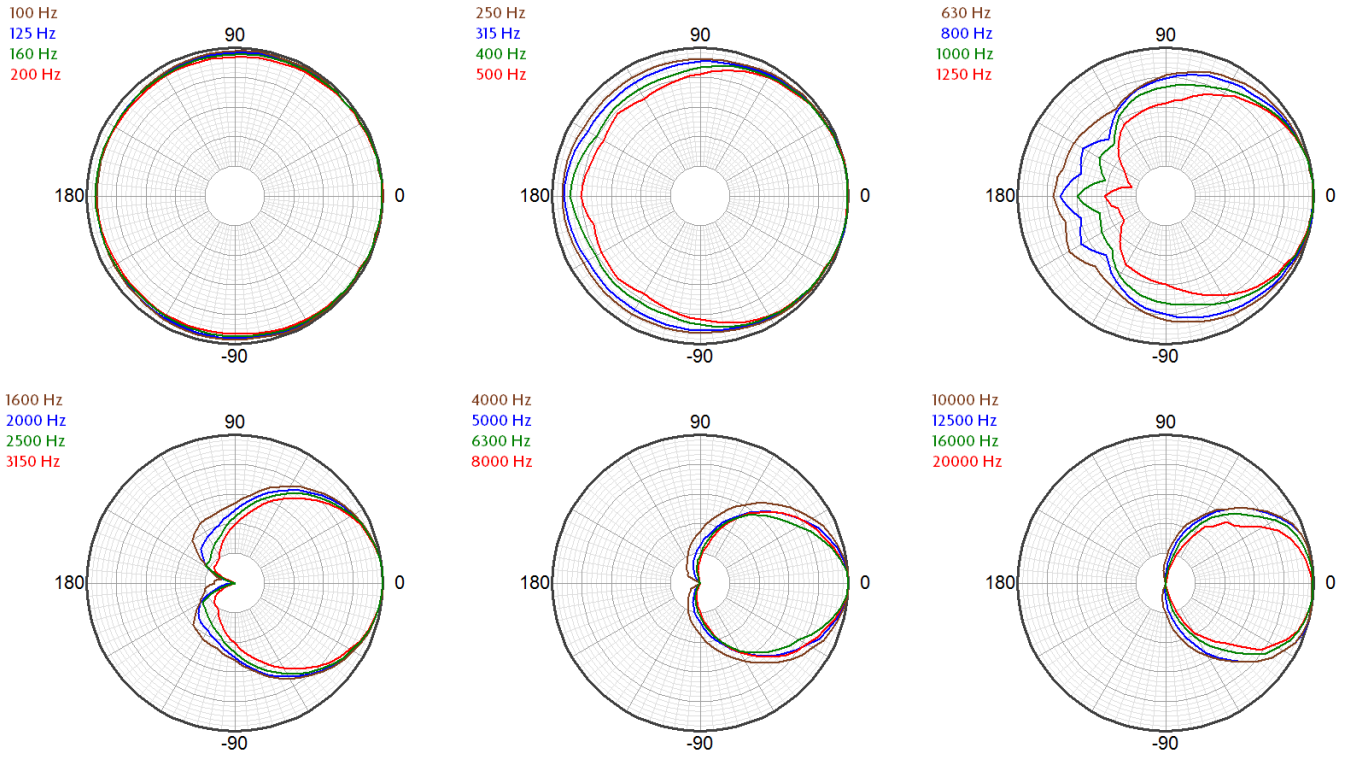
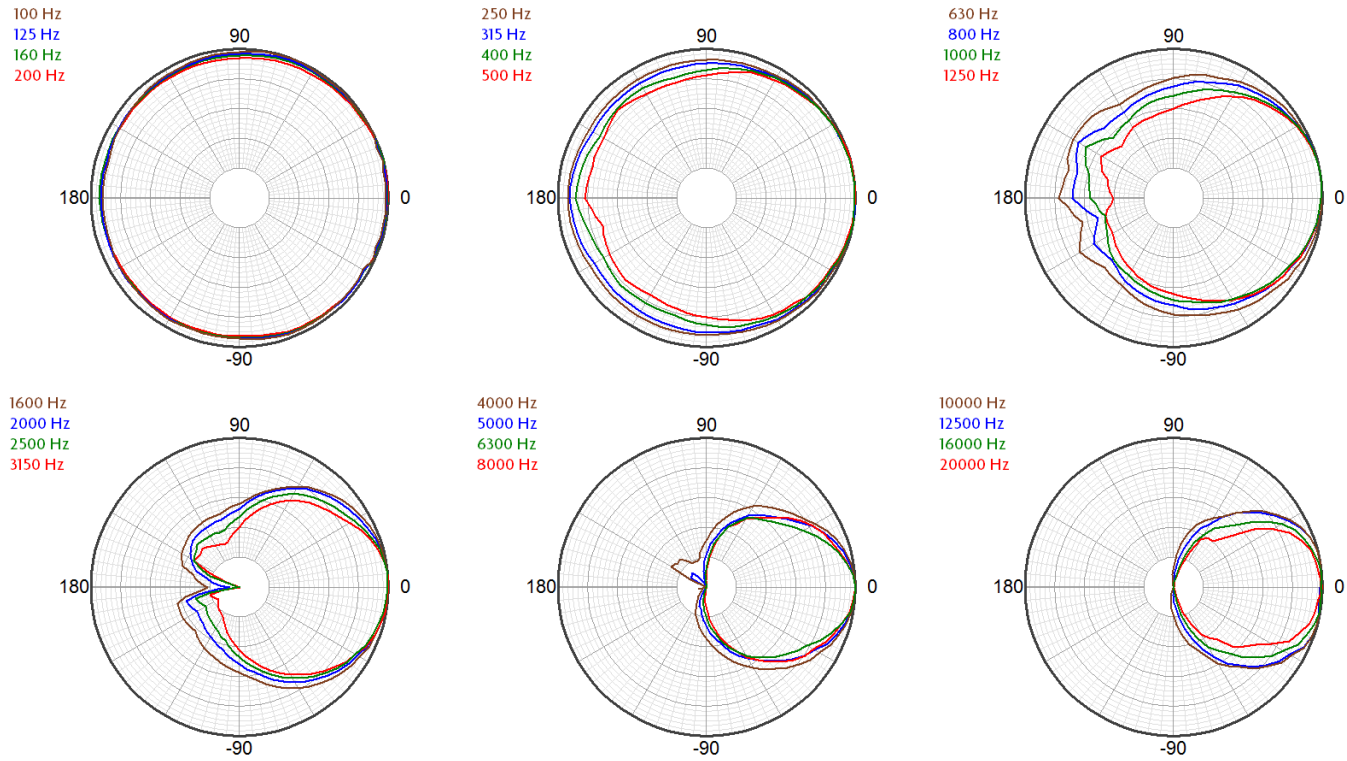


Horizontal Polar Response (30 dB Scale, 6 dB per Major Division)



Vertical Polar Response (30 dB Scale, 6 dB per Major Division)

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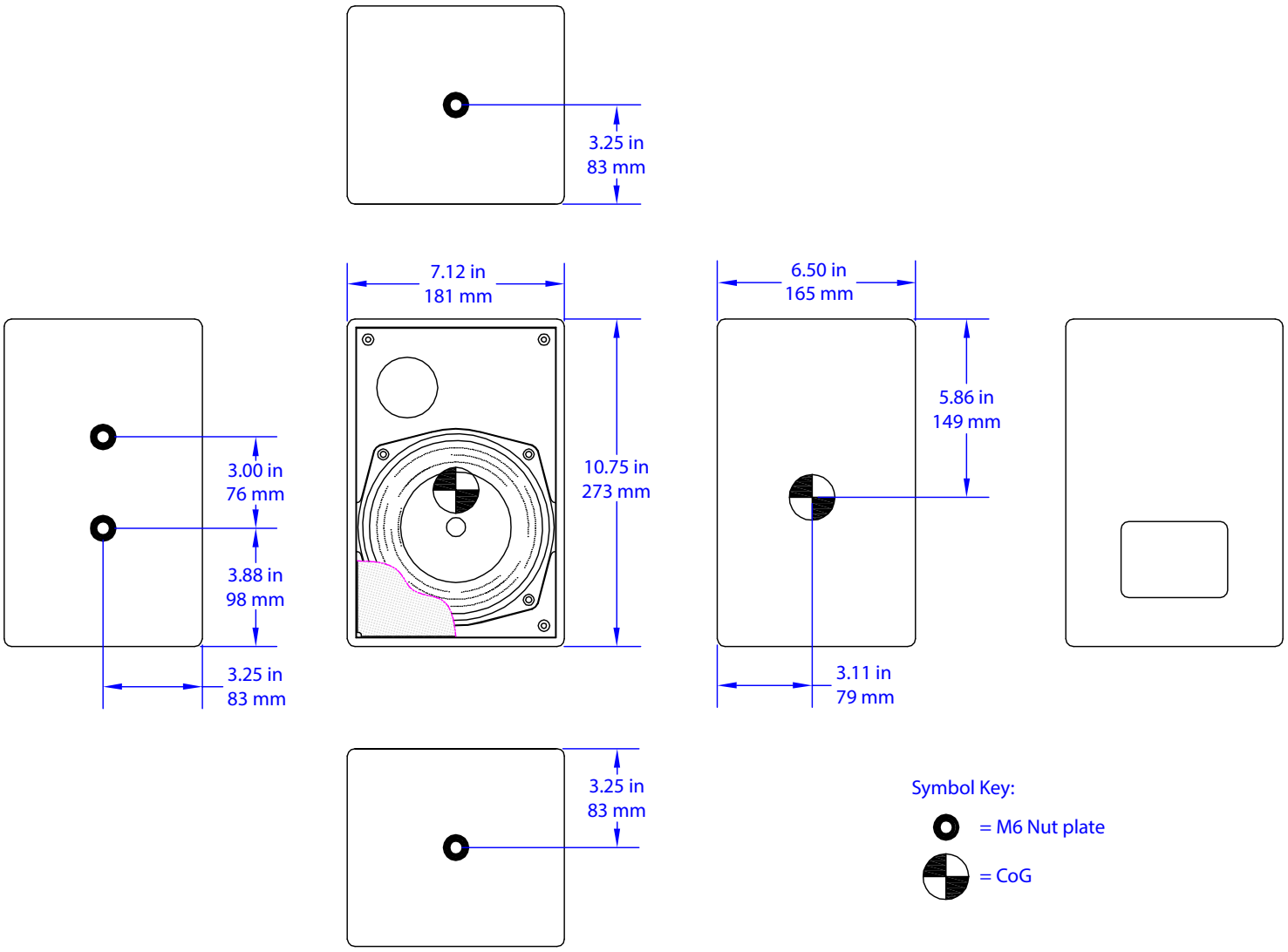

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Specifications subject to change without notice. Revised 02/12/18