



MVC-5 : Graduated Vertical Coverage Loudspeaker

The MVC-5 graduated vertical coverage loudspeaker is a self-powered, multiple-driver, curvilinear array with fixed splay angles, housed in a single compact enclosure. The system is ideally suited for voice reproduction in large spaces with single-level listening areas, where vertical control in the key intelligibility bands is required. Its high SPL capabilities for longer throw applications and the advantages of self-powering make the use of multiple MVC-5 cabinets extremely useful for distributed systems in large spaces. Smaller spaces may be effectively filled by only one or two cabinets. Though primarily intended for voice, the MVC-5 is also capable of reproducing recorded music and sound for audio-visual presentations in the context of meetings, corporate and other events, or in houses of worship.

The low- and mid-frequency section of the MVC-5 consists of 10 precisely spaced five-inch cone drivers arranged in a two-by-five configuration. At lower frequencies, all drivers combine to reproduce powerful, coherent bass response. In the mid frequencies, the crossover feeds the signal to only the five drivers adjacent to the high-frequency horns. The high-frequency section consists of 15 vertically aligned 0.75-inch dome drivers installed in five constant-directivity horns with a broad 100-degree horizontal coverage.

The aligned set of drivers functions as a line array, focusing the sound into a graduated, controlled vertical coverage pattern ideal to cover single-level listening areas. The unique graduated stepped vertical coverage can produce similar sound pressure levels and frequency response at both longer distances on axis to the upper portion of the enclosure and shorter distances below and closer to the loudspeaker. Overall vertical coverage extends downward approximately 50 degrees below direct on-axis positioning.

When suspended in a venue, the MVC-5 loudspeaker can achieve levels useful for speech reinforcement (approximately 90 dB peak on



axis) at distances up to 300 feet (90 meters). By distributing and properly delaying enclosures approximately 100 to 200 feet from each other in the on-axis orientation, the system will provide smooth, even coverage throughout a very large single-level listening area.

The MVC-5 is powered with a proprietary eight-channel, class AB/bridged power amplifier, with complementary MOSFET output stages. Total burst power output is 2150 watts. Audio is processed through an electronic crossover and correction filters for phase and frequency response, as well as driver protection. The field-replaceable amplifier/processing package incorporates Meyer Sound's Intelligent AC™, which auto-selects the correct operating voltage, suppresses high-voltage transients, filters EMI and provides soft-start power-up. The standard version offers looping XLR input and output connectors, while an enhanced looping version adds polarity switching and input attenuation from 0 dB to -18 dB (looping output is not affected).

Dimensions	21.00" w x 36.73" h x 18.50" d (533 mm x 933 mm x 470 mm)
Weight	125 lbs (56.80 kg)
Enclosure	Premium birch plywood
Finish	Black textured
Protective Grille	Powder-coated hex-stamped steel lined with black mesh and foam
Rigging	Four ring and stud pan fittings on top, one ring and stud fitting on the bottom for pull-up; working load for each fitting is 250 lbs (113.6 kg), 1/5 of the cabinet breaking strength (with straight tensile pull)

The durable enclosure of premium birch plywood is covered with a black textured hard-shell finish. A protective hex-stamped steel grille lined with black mesh and charcoal grey foam are included. The MVC-5 is designed for single-enclosure suspension and features four ring and stud fittings on top with a load rating of 250 lbs (113.60 kg) at a 5:1 safety factor, plus a single fitting on the bottom to adjust the pull-up angle. The tightly sealed enclosure, special adhesives and paint, multi-layer grille, and other dust- and weather-resistant appointments form a distributed, self-powered loudspeaker system that will maintain its reliability and performance for many years under continual use. Options include custom color finishes, and cabinets with no handles for applications requiring specific cosmetics.

The MVC-5 is compatible with the RMS™ remote monitoring system, which offers comprehensive monitoring of system parameters on a Windows®-based network.

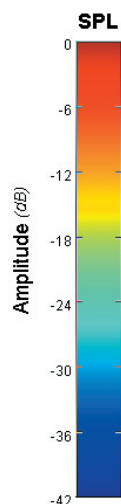
FEATURES & BENEFITS

- Graduated vertical coverage for similar SPL at varying distances
- High SPL for voice reinforcement in areas with high ambient noise
- Excellent vertical control in key intelligibility bands
- Provides useful levels for speech reinforcement at long distances
- Use as distributed system for large areas or singly for smaller areas

APPLICATIONS

- Convention and trade show venues
- Industrial/manufacturing floors
- Airports, hangars and transportation hubs
- Theme parks, city walks and promenades
- Presentation rooms and houses of worship

VERTICAL DIRECTIVITY PLOTS

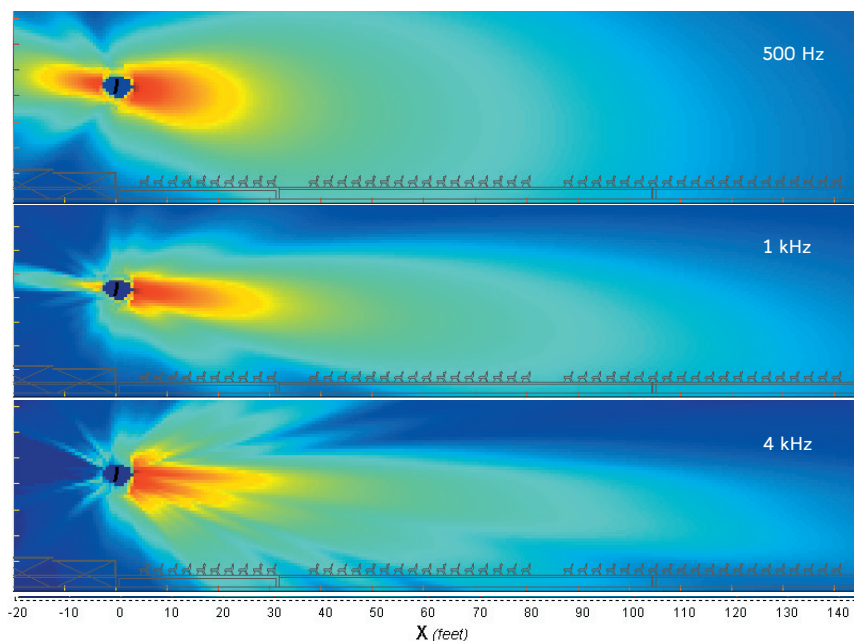


The color images at right are sound intensity plots made using the Meyer Sound MAPP Online® acoustic prediction program, a unique and highly accurate visualization tool for professional sound system designers.

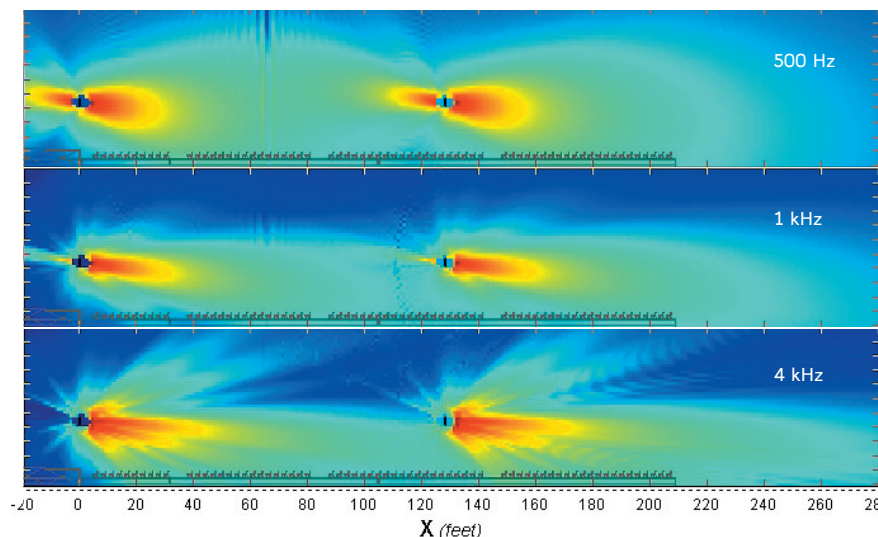
Using an Internet-connected personal computer, the designer specifies Meyer Sound loudspeaker models, their locations, how they are aimed and, optionally, the locations and composition

of walls. This information travels over the Internet to a powerful server computer at Meyer Sound headquarters in Berkeley, Calif. Running a sophisticated algorithm and using highly accurate measured data that describe each loudspeaker's directional characteristics, the server predicts the sound field that the loudspeakers will produce, forms a color representation, and sends the result back for the designer's computer to display.

In these sound field plots, the color spectrum is used to represent levels of sound intensity, with red being the loudest and blue the softest, as shown in the scale above. These examples illustrate the vertical coverage characteristics for the MVC-5 loudspeaker.



Above: Application example of a single MVC-5 loudspeaker suspended at 18 feet (5.5 meters) to cover 140 feet (43.5 meters) for speech.



Above: Application example of a distributed system using 2 MVC-5 loudspeakers suspended at 18 feet (5.5 meters) to cover 280 feet (85 meters) with increased SPL with respect to the above example.

PRELIMINARY SPECIFICATIONS

Operating Frequency Range ¹	60 Hz – 18 kHz
Free Field Frequency Response ²	75 Hz – 15 kHz ±4 dB
Maximum Peak SPL	134 dB (referred to 1 m free field)
Coverage	Horizontal 100°; graduated vertical, 50° downward from on-axis
Transducers: Low Frequency	Ten 5" cone drivers ³
High Frequency	Fifteen 0.75" metal dome tweeters with neodymium magnet ⁴
Amplifier Power ⁵	2150 W total
Automatic Voltage Selection	85 V AC – 134 V AC; 165 V AC – 264 V AC; 50/60 Hz
Audio Connector	Female XLR input with male XLR loop output
AC Connector	PowerCon
Max. Long-term Cont. Current Draw (>10 sec)	9.2 A rms (115 V AC); 4.6 A rms (230 V AC); 10.6 A rms (100 V AC)

- NOTES:**
1. Recommended maximum operating frequency range. Dependent upon loading conditions and room acoustics.
 2. Measured with 1/3 octave frequency resolution at 4 meters.
 3. To eliminate interference at short wavelengths, all ten drivers work in combination at low frequencies (60 Hz – 1000 Hz). At mid frequencies (1000 Hz – 1900 Hz) only five cone drivers adjacent to the horns are fed from the crossover to maintain optimal polar and frequency response characteristics.
 4. Drivers are coupled (in sets of three) to five constant-directivity horns.
 5. Amplifier wattage rating based on the maximum unclipped burst sine-wave rms voltage that the amplifier will produce into the nominal load impedance: low channels 28 V rms (40 V pk) and high channels 25 V rms (35 V pk).

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MVC-5 — 04.146.025.01, PRE

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