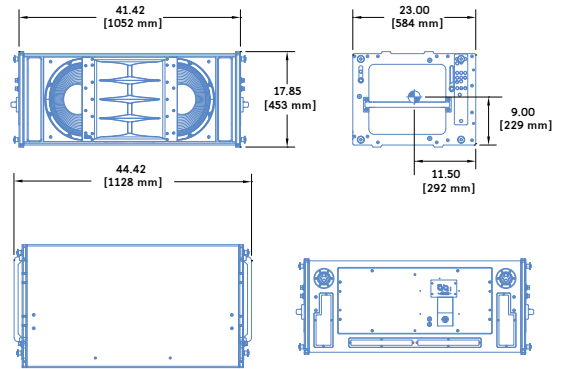




LEO-M™ : Advanced Linear Array Loudspeaker



- Dimensions** 44.42" w x 17.85" h x 23.00" d
(1128 mm x 453 mm x 584 mm)
- Weight** 265 lbs (120.2 kg)
- Enclosure** Multi-ply hardwood
- Finish** Black textured
- Protective Grille** Hex-stamped steel with acoustical black mesh
- Rigging** Endframes with captive GuideALinks, quick-release pins, and detachable handles



The LEO-M advanced linear array loudspeaker is defined by its sonic linearity at any output level. With exceptional headroom, extremely low distortion, and optimized rigging options, LEO-M forms the nucleus of Meyer Sound's next-generation LEO array systems, conceived for long-throw applications. LEO arrays are ideally paired with Meyer Sound's 1100-LFC low-frequency control element for bass reproduction, and the LYON™ linear line array loudspeaker for downfill. The MICA® compact high-power curvilinear array loudspeaker is also well suited for downfill. Entire systems are driven by Meyer Sound's Galileo Callisto™ 616 array processor, which provides matrix routing, alignment, and processing for array components.

To guarantee optimum system performance, LEO array systems should be designed with Meyer Sound's MAPP Online XT® acoustical prediction software. The intuitive, cross-platform application accurately predicts coverage patterns, frequency and impulse responses, and maximum peak SPL for LEO array systems, ensuring that systems deliver the required SPL and ideal coverage for the intended audience areas.

LEO-M's high-frequency section is comprised of two proprietary compression drivers coupled to a constant-directivity horn through a patented REM™ manifold. The manifold's smooth radiating characteristics afford tight vertical coverage. The low-frequency section includes two long-excursion cone drivers, also proprietary, capable of withstanding high, continuous output levels. Precise phase and magnitude alignment between low- and high-frequency drivers yields consistent and well-behaved system responses.

The unit's power amplifier operates at nominal voltages from 208–235 V AC at 50–60 Hz. TruPower® limiting ensures maximum driver protection, minimizing power compression while yielding high constant output under high continuous and peak power conditions. The amplifier, control electronics, and power supply are contained in a single field-replaceable module located on the rear of the cabinet.

Meyer Sound's RMS™ remote monitoring system comes standard with all LEO-M loudspeakers and provides comprehensive monitoring of system parameters on a Mac® or Windows®-based computer. Convenient XLR 5-pin connectors allow the use of composite cables carrying both RMS and balanced audio.

LEO-M offers intuitive rigging with captive GuideALinks™ that can be set to the desired splay angles while cabinets rest in caster frames. The MTG-LEO-M top grid flies arrays of up to 18 LEO-Ms at a 7:1 safety factor (with some restrictions). Optional transition frames are available for flying LYONs or MICAs below LEO-M arrays for downfill. Stacks of up to four LEO-Ms can be securely transported with the optional MCF-LEO-M caster frame; durable nylon covers, accommodating stacks of two, three, or four units, are available to protect the cabinets during transport.

The vented LEO-M cabinet is constructed of multi-ply hardwood and coated with a black-textured finish. A hex-stamped, steel grille with acoustical black mesh protects the unit's drivers. The cabinet is weather protected and includes a collapsible rain hood that shields user panel connectors from water intrusion.

FEATURES & BENEFITS

- Optimized line arrays with controlled directivity for even coverage and consistent responses over long throws
- High peak power output with exceptional linearity and transient reproduction at extreme levels

- Self-powered for simplified setup and increased reliability
- Optimized rigging allows splay angles to be set while stacks rest in caster frames
- Integrates seamlessly with 1100-LFC, LYON, and MICA

APPLICATIONS

- Stadiums
- Arenas
- Touring sound reinforcement
- Large-scale public events

LEO-M SPECIFICATIONS

ACOUSTICAL	
Operating Frequency Range ¹	55 Hz – 16 kHz
Phase Response	375 Hz – 14 kHz ±30°
TRANSDUCERS	
Low Frequency	Two 15" long-excursion cone drivers
High Frequency ²	Two 4" compression drivers
AUDIO INPUT	
Type	Differential, electronically balanced
Maximum Common Mode Range	±15 V DC, clamped to earth for voltage transient protection
Connectors	XLR 5-pin female input with XLR 5-pin male loop output
Input Impedance	10 kΩ differential between pins 2 and 3
Wiring	Pin 1: Chassis/earth through 1 kΩ, 1000 pF, 15 V clamped network to provide virtual ground lift at audio frequencies Pin 2: Signal + Pin 3: Signal – Pin 4: RMS Pin 5: RMS Case: Earth ground and chassis
DC Blocking	Differential DC blocking up to the maximum common mode voltage
CMRR	>50 dB, typically 80 dB (50 Hz – 500 Hz)
RF Filter	Common mode: 425 kHz Differential mode: 142 kHz
TIM Filter	Integral to signal processing (<80 kHz)
Nominal Input Sensitivity	0 dBV (1.0 V rms) continuous is typically the onset of limiting for noise and music
Input Level	Audio source must be capable of producing of +20 dBV (10 V rms, 14 V peak) into 600 Ω to produce the maximum peak SPL over the operating bandwidth of the loudspeaker
AMPLIFIER	
Type	3-channel complementary MOSFET output stages (class AB/H bridged)
Cooling	Two ultrahigh-speed primary fans, two ultrahigh-speed reserve fans
AC POWER	
Connectors	powerCON 32
Automatic Voltage Selection ³	208–235 V AC, 50–60 Hz
Operational Voltage Range	Turn-on: 165 V AC; Turn-off: 264 V AC
Current Draw:	
Idle Current	0.6 A rms (230 V AC)
Maximum Long-Term Continuous Current (>10 sec)	6.0 A rms (230 V AC)
Burst Current (<1 sec) ⁴	8.0 A rms (230 V AC)
Maximum Instantaneous Peak Current	24 A peak (230 V AC)
Inrush Current	<15 A peak (230 V AC)
RMS NETWORK	
Equipped with 2-conductor, twisted-pair network, reporting all amplifier operating parameters to host computer	

NOTES:

1. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
2. High-frequency drivers coupled to a constant-directivity horn through a patented REM manifold.
3. Indicates the safety agency rated operational voltage range.
4. AC power cabling must be of sufficient gauge so that under burst current rms conditions, cable transmission losses do not cause the loudspeaker's voltage to drop below the specified operating range.



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ARCHITECT SPECIFICATIONS

The loudspeaker shall be a self-powered, linear, low-distortion, line array loudspeaker. Its transducers shall include two four-inch compression drivers coupled to a constant-directivity horn through a patented REM manifold, and two 15-inch long-excursion cone drivers.

The loudspeaker shall incorporate internal processing and a 3-channel class AB/H bridged amplifier with complementary MOSFET output stages. Protection circuits shall include TruPower limiting. The audio input shall be electronically balanced with a 10 kΩ impedance and accept a nominal 0 dBV (1.0 V rms) signal (+20 dBV to produce maximum SPL). Audio connectors shall

be XLR 5-pin, female and male, accommodating both balanced audio and RMS. RF filtering shall be provided, and CMRR shall be greater than 50 dB (50 Hz – 500 Hz).

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: operating frequency range, 55 Hz to 16 kHz; phase response, 375 Hz to 14 kHz ±30 degrees.

The internal power supply shall perform EMI filtering, soft current turn-on, and surge suppression. Power requirements shall be nominal 230 V AC line current at 50–60 Hz. UL and CE operating voltage range

shall be 208–235 V AC at 50–60 Hz. Current draw during burst shall be 8 A rms at 230 V AC. Current inrush during soft turn-on shall not exceed 15 A at 230 V AC. The AC power connector shall be a powerCON 32. The loudspeaker shall include an RMS remote monitoring system module.

Components shall be mounted in an optimally tuned, vented enclosure constructed of multi-ply hardwood and coated with a black-textured finish. Dimensions shall be 44.42" wide x 17.85" high x 23.00" deep (1128 mm x 453 mm x 584 mm). Weight shall be 265 lbs (120.2 kg).

The loudspeaker shall be the Meyer Sound LEO-M.