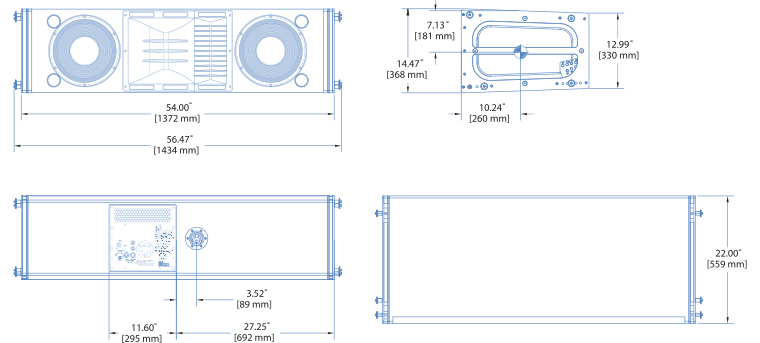


MILO 60 : High-Power Narrow Coverage Curvilinear Array Loudspeaker



- Dimensions** 54.00" w x 14.47" h x 22.00" d (1372 mm x 368 mm x 559 mm)
- Weight** 235 lbs (106.60 kg)
- Enclosure** Multi-ply hardwood
- Finish** Black textured
- Protective Grille** Powder-coated hex-stamped steel
- Rigging** MRF-MILO rigging frame, custom AlignaLink connectors and quick release pins

A variation on the popular MILO™ high-power curvilinear loudspeaker, the MILO 60 high-power narrow coverage curvilinear array loudspeaker excels where controlled horizontal coverage is needed. The self-powered MILO 60 is a compact, lightweight four-way system that provides 60 degrees of horizontal coverage, and vertical coverage matching the original MILO. The coverage pattern is optimized for applications requiring tight horizontal coverage, such as at the top in mixed arrays with standard MILO or M3D line array loudspeaker systems, or for side fill hangs where keeping sound off of side walls is important.

The MILO 60 shares the same dimensions and rigging components as the MILO and MILO 120 expanded coverage high-power curvilinear array loudspeakers to facilitate seamless integration. The flexibility of the MILO 60 allows it to be configured with other Meyer Sound loudspeakers in complex systems. MILO 60 arrays and combined

arrays with other M Series models are easy to deploy using the MILO QuickFly® rigging accessories, such as the MG-3D/M multi-purpose grid and MCF-MILO caster frame. Because rigging connections are rigid, the array tilt is easy to adjust, often eliminating the need for a pullback strap in flown configurations.

MILO 60 produces a peak output of 140 dB SPL with exceptionally flat phase and frequency response. Its wide operating frequency range (60 Hz to 18 kHz) is complemented by extended high-frequency headroom and a dedicated very-high-frequency section (4.2 kHz to 18 kHz) that renders delicate transient information with detailed resolution through its coverage pattern. Its acoustical characteristics are designed to facilitate seamless integration when used with other MILO curvilinear array elements.

A combined MILO 60/MILO/MILO 120 array with M3D-Subs affords the precise low-

frequency directional control that has won widespread acclaim for M3D systems. The M3D-Sub provides a well-controlled coverage pattern to 30 Hz, assuring that very low-frequency energy does not spill onto the stage or cause excessive reverberation. In applications where directional low-frequency control is not a primary consideration, a MILO array can be flown adjacent to or ground stacked with 700-HP subwoofers. The 700-HP's power and bandwidth handle high continuous operating levels and extreme transient information with minimal distortion in its operating frequency range.

Meyer Sound's RMS™ remote monitoring system is fitted as standard, providing comprehensive monitoring of system performance parameters over a Windows-based network.

A weather-protected version with a folding rain hood that safeguards the electronics is optionally available.

FEATURES & BENEFITS

- Controlled horizontal coverage angle of 60 degrees
- Patented REM™ ribbon emulation manifolds dramatically minimize distortion
- Exceptional fidelity and peak capability assure clean, high-impact response

- Seamless integration with other M Series models
- QuickFly rigging™ system simplifies use in flown or ground-stacked arrays

APPLICATIONS

- Stadiums, arenas, concert halls and theatres
- Touring sound reinforcement
- Large-scale events

MILO 60 SPECIFICATIONS

ACOUSTICAL¹		Operating Frequency Range² 60 Hz – 18 kHz Frequency Response³ 65 Hz – 17.5 kHz ±4 dB Phase Response 750 Hz – 16 kHz ±30° Maximum Peak SPL⁴ 140 dB Dynamic Range >110 dB
COVERAGE		
CROSSOVER⁵	Horizontal Coverage	60° horiz.; vertical varies depending on array length & configuration
TRANSDUCERS		560 Hz, 4.2 kHz
	Low/Low-Mid Frequency⁷	Two 12" cone drivers with neodymium magnets Nominal impedance: 4 Ω Voice coil size: 4" Power-handling capability: 1200 W (AES) ⁶
	Mid-High Frequency	One 4" compression driver Nominal impedance: 8 Ω Voice coil size: 4" Diaphragm size: 4" Exit size: 1.5" Power handling capability: 250 W (AES) ⁶ on REM
	Very-High Frequency⁸	Three 2" compression drivers Nominal impedance: 12 Ω Voice coil size: 2" Diaphragm size: 2" Exit size: 0.75" Power handling capability: 100 W (AES) ⁶ on REM
AUDIO INPUT		
	Type	Differential, electronically balanced
	Maximum Common Mode Range	±15 V DC, clamped to earth for voltage transient protection
	Connectors	Female XLR input with male XLR loop output or VEAM all-in-one connector (integrates AC, audio and network)
	Input Impedance	10 kΩ differential between pins 2 and 3
	Wiring	Pin 1: Chassis/earth through 220 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 2: Signal + Pin 3: Signal - Case: Earth ground and chassis
	DC Blocking	None on input, DC blocked through signal processing
	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 V rms, 1.4 V pk) continuous is typically the onset of limiting for noise and music
	Input Level	Audio source must be capable of producing a minimum of +20 dBV (10 V rms, 14 V pk) into 600 Ω in order to produce maximum peak SPL over the operating bandwidth of the loudspeaker
AMPLIFIER		
	Type	Complementary power MOSFET output stages (class AB/H)
	Output Power	3935 W (four channels; three x 1125 W, one x 560 W) ⁹
	THD, IM, TIM	<.02%
	Load Capacity	4 Ω low, low-mid and very-high channels; 8 Ω mid-high channel
	Cooling	Forced air cooling, four fans (two ultrahigh-speed reserve fans)
AC POWER		
	Connector	250 V AC NEMA L6-20 (twistlock) inlet, IEC 309 male inlet, or VEAM Automatic, two ranges, each with high-low voltage tap
	Safety Agency Rated Operating Range	95 V AC – 125 V AC, 208 V AC – 235 V AC; 50/60 Hz
	Turn-on and Turn-off Points	85 V AC – 134 V AC; 165 V AC – 264 V AC
	Current Draw:	
	Idle Current	1.1 A rms (115 V AC); 0.55 A rms (230 V AC); 1.3 A rms (100 V AC)
	Max Long-Term Continuous Current (>10 sec)	11.2 A rms (115 V AC); 5.6 A rms (230 V AC); 12.9 A rms (100 V AC)
	Burst Current (<1 sec)¹⁰	14.4 A rms (115 V AC); 7.2 A rms (230 V AC); 16.6 A rms (100 V AC)
	Ultimate Short-Term Peak Current Draw	32 A pk (115 V AC); 16 A pk (230 V AC); 37 A pk (100 V AC)
	Inrush Current	7 A (115 V AC and 110 V AC); 10 A (230 V AC)
RMS NETWORK		
		Equipped for two conductor twisted-pair network, reporting amplifier operating parameters to system operator's host computer.

NOTES:

- The low-frequency power response of the system will increase according to the length of the array.
- Recommended maximum operating frequency range. Response depends upon loading conditions and room acoustics.
- Free field, measured with 1/3 octave frequency resolution at 4 meters.
- Measured with music at 1 meter.
- At these frequencies, the transducers produce equal sound pressure levels: 560 Hz for the low-mid and mid-high and 4.2 kHz for the mid-high and very-high frequency drivers.
- Power handling is measured under AES standard conditions: transducer driven continuously for two hours with band limited noise signal having a 6 dB peak-average ratio.
- To eliminate interference at short wavelengths, the two 12-inch cone drivers work in combination at low frequencies (60 Hz – 300 Hz). At mid frequencies (300 Hz – 560 Hz) only one cone driver is fed from the crossover to maintain optimal polar and frequency response characteristics.
- The three drivers are coupled to a constant-directivity horn through a proprietary acoustical combining manifold (REM).
- Amplifier wattage rating is based on the maximum unclipped burst sine-wave rms voltage the amplifier will produce in to the nominal load impedance. Low, low-mid and very-high frequency channels 67 V rms (95 V pk) into 4 ohms; mid-high frequency channel 67 V rms (95 V pk) into 8 ohms.
- AC power cabling must be of sufficient gauge so that under burst current rms conditions, cable transmission losses do not drop voltage below specified operating range at the speaker.

Made by Meyer Sound Laboratories
Berkeley, California USA
European Office:
Meyer Sound Lab. GmbH
Carl-Zeiss-Strasse 13
96270 Plohn, Germany

UL **N775**

UL **3K53 COMMERCIAL AUDIO SYSTEM US LISTED**

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Meyer Sound Laboratories Inc.

MEYER SOUND LABORATORIES INC.
2832 San Pablo Avenue
Berkeley, CA 94702

T: +1 510 486.1166
F: +1 510 486.8356

techsupport@meyersound.com
www.meyersound.com

ARCHITECT SPECIFICATIONS

The loudspeaker shall be a self-powered, full-range unit for deployment in line array systems. The low/low-mid frequency transducers shall consist of two 12-inch cone drivers, each rated to handle 1200 watts AES*. The mid-high frequency transducer shall be one 4-inch diaphragm (1.5-inch exit) compression driver, rated to handle 250 watts AES, coupled via a custom manifold to a 60° horizontal constant directivity horn. The very-high frequency transducers shall consist of three 2-inch diaphragm (0.75-inch exit) compression drivers, each rated to handle 100 watts AES, coupled via a patented custom manifold to a 60° horizontal constant directivity horn.

The loudspeaker shall incorporate internal processing electronics and a four-channel amplifier. Processing functions shall include equalization, phase correction, driver protection and signal division for the three frequency sections. The crossover points shall be 560 Hz and 4.2 kHz. An additional low-frequency crossover shall cause the two low/low-mid frequency transducers to work in combination between 60 Hz and 300 Hz, with only one working between 300 Hz and 560 Hz, to maintain optimal polar response characteristics.

Each amplifier channel shall be class AB/H with complementary MOSFET output stages. Burst capability shall be 3935 watts total (three channels 1125 watts, one channel 560 watts) with a nominal 4-ohm load for low, low-mid and very-high frequency channels and an 8-ohm load for the mid-high frequency channel. Distortion (THD, IM, TIM) shall not exceed 0.02%. Protection circuits shall include TruePower limiting. The audio input shall be electronically balanced with a 10 kOhm impedance and accept a nominal 0 dBV (1 V rms, 1.4 V pk) signal (+20 dBV to produce maximum SPL). Connectors shall be XLR (A-3) type male and female. RF filtering shall be provided. CMRR shall be greater than 50 dB (typically 80 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 shall be 60 Hz to 18 kHz. Phase response shall be ±30° from 750 Hz to 16 kHz. Maximum peak SPL shall be 140 dB at 1 meter. Beamwidth shall be 60° horizontal. Vertical coverage in multi-cabinet arrays shall be dependent on system configuration. The internal power supply shall perform automatic voltage selection, EMI filtering, soft current turn-on and surge

suppression. Powering requirements shall be nominal 100, 110 or 230 V AC line current at 50 Hz or 60 Hz. UL and CE operating voltage range shall be 100 to 240 V AC. Maximum peak current draw during burst shall be 14.4 A at 115 V AC and 7.2 A at 230 V AC. Current inrush during soft turn-on shall not exceed 7 A at 115 V AC. AC power connectors shall be locking NEMA connector, IEC male or VEAM all-in-one. The loudspeaker system shall incorporate the electronics module for Meyer Sound's RMS remote monitoring system.

All loudspeaker components shall be mounted in an enclosure constructed of multi-ply hardwood with a hard black textured finish. The front protective grille shall be powder-coated, hex-stamped steel. Dimensions shall be 54.00" wide x 14.47" high (cabinet front) x 22.00" deep (1372 mm x 368 mm x 559 mm). Weight shall be 235 lbs (106.60 kg).

The loudspeaker shall be the Meyer Sound MILO 60.

*Loudspeaker driven with a band-limited noise signal with 6 dB peak-to-average ratio for a period of two hours.