

MSL-5

High Power
Loudspeaker
System



The Meyer Sound MSL-5 is an extremely high-power, high-definition loudspeaker system designed for large-scale music reinforcement and public address applications. Unique in its class, it combines exceptionally consistent directivity with seamless arraying performance for precise coverage control.

The MSL-5 comprises an all-horn, integral loudspeaker cabinet constructed as a 30-degree arrayable section, with two proprietary 12-inch cone low-frequency drivers in a vented, horn-loaded enclosure and three 2-inch throat (4-inch diaphragm) high-frequency horn drivers. The cabinet is fitted with handles and with rigging lift rings having a 1500 lb. maximum safe

working load capacity that are bolted directly to an internal steel frame.

Designed specifically for use with SIM® System II, the MSL-5 requires the M-5 Control Electronics Unit, and its standard minimum configuration comprises two loudspeaker cabinets. The MSL-5 effectively covers the vocal range, and may be used alone for paging applications. In music reinforcement applications, the DS-2 Mid-Bass Loudspeaker is recommended to supplement the low-frequency performance of the system.

Features

Extremely High Power

Exceptional Clarity

Point Source Arraying

Compact Enclosure

Long-Term Reliability

Applications

Large-Scale Touring

Concert Reinforcement

Paging and Announcing

Outdoor Sports Arenas

Stadiums

Racetracks



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M E Y E R S O U N D

Specifications

Acoustical — MSL-5/M-5 System¹

Frequency Response ²	100 Hz - 16 kHz \pm 4 dB
Maximum SPL at 100 feet (30 meters)	
Continuous	110 dB
Peak	120 dB
Coverage	40° vertical x 60° horizontal
MSL-5 Loudspeaker (one 30° section)	
Driver Complement	(2) MS-12 12" cone drivers (3) MS-2001A 2" throat (4" diaphragm) horn drivers
HF DC Protection	50 μ f polypropylene capacitor
Enclosure	Vented, horn-loaded, 12-ply hardwood
Finish	Black textured, charcoal grey carpet or weather protected (optional)
Protective Grill	Two-piece hex punched metal screen, damped, charcoal grey foam covering
Rigging	Twelve points, pivoting lift rings, 1500 lb. maximum safe working load capacity
Dimensions	42 1/2" W x 56 3/4" H x 32" D
Weight	500 lbs (227 kg)
Connector	EP-4, EP-5 (Europe only), Pyle National (optional)
M-5 Control Electronics Unit	
Input Type	Active balanced, 10k ohms, ISO™ Input
Output Type	Active push-pull, 600 ohm drive
Maximum Input/Output Level	
Unbalanced	+20 dBv
Balanced	+26 dBv
Hum and Noise	-90 dBv ("A" weighted)
Dynamic Range	110 dB
Electronic Crossover Frequency	800 Hz
Driver Protection Circuits	
Low Frequency	RMS, peak and excursion limiters
High Frequency	RMS, peak and excursion limiters
Indicators	Power LED HF and LF Sense LED's HF and LF Limit LED's Safe LED
Controls	Power switch Safe/AutoSafe switch Input Attenuation (calibrated in dB)
Connectors	
Input	3-pin XLR-type female, rear panel mounted
Hi and Lo Output	3-pin XLR-type male, rear panel mounted
Sense	Dual banana receptacles, rear panel mounted

Notes:

1. Acoustical specifications are given for the standard configuration of two 30° sections.
2. Measured 5 meters on axis, free-field conditions, pink noise input, in third-octave bands.

M-5 Control Electronics Unit



The MSL-5 loudspeaker operates as a system with the M-5 Control Electronics Unit (one per channel). Optimized for the MSL-5 and aligned at the factory, the M-5 contains frequency and phase response alignment circuitry, and Meyer Sound's exclusive SpeakerSense™ driver protection circuitry, incorporating peak and RMS signal limiting as well as excursion protection. A single-channel device operating at line level, the M-5 is intended to be the final component in the signal chain before the power amplifier.

The M-5 SpeakerSense circuitry protects the MSL-5 loudspeaker components from damage due to overheating or excessive excursion. This unique circuit continuously monitors the power applied to the MSL-5 drivers, and limits the signal output when the safe operating areas of the drivers are exceeded. Until overload, the SpeakerSense circuitry has no effect on the signal.

The M-5 SpeakerSense circuit incorporates Meyer Sound's MultiSense™ func-

tion, which allows the unit to accommodate two amplifiers through separate Sense inputs. The circuit, which implements an analog OR condition, tracks the power amplifier with the greatest output voltage swing to control the system protection limiters. This function prevents loss of protection should one of the two power amplifiers fail during high-level operation.

Also provided is a Safe/Autosafe switch that affects the action of the protection limiting circuitry. When the switch is in the Safe position, the RMS limiters come on at 6 dB lower power levels, affording added protection when heavy continuous power demands are placed on the system. A green LED indicator is provided on the M-5 front panel which lights when the M-5 is in the Safe mode. In the Autosafe position, the M-5 monitors system power over time, and automatically switches into Safe mode if the power demands become too high.

Power Amplifier Requirements

The MSL-5 requires a Meyer-approved Type 3 power amplifier (for classification

details, contact Meyer Sound) conforming to the following specifications:

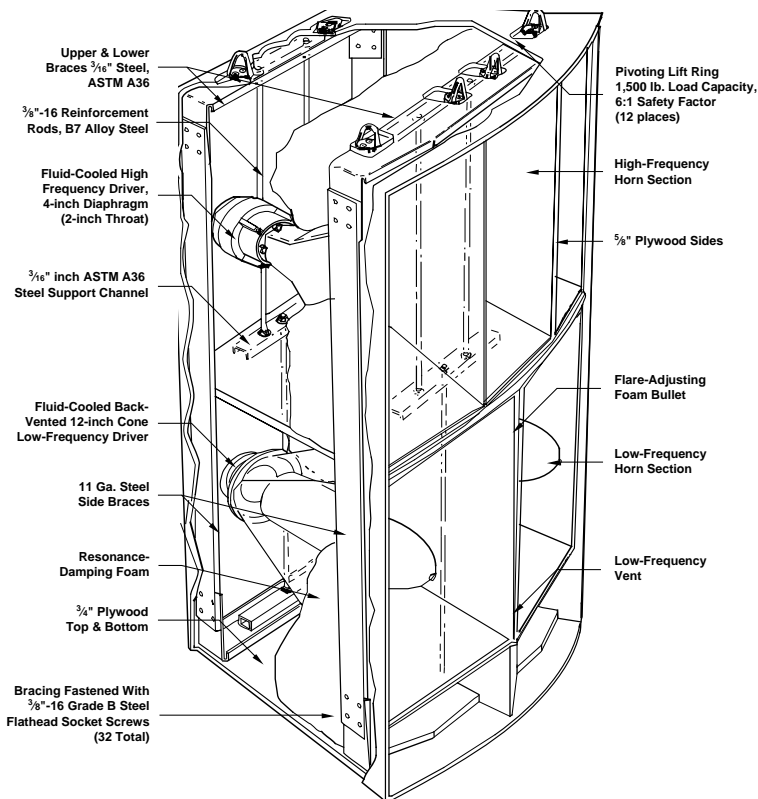
Voltage Gain	16 dB, internally fixed
Power Output	
0.5 sec. Burst at 4 Ohms	1800 watts
FTC Rating at 8 Ohms	1100 watts
Nominal (255 VAC) Operation	With 4 ohm resistive load, reproduce three specified burst waveforms ^{1,2,3} each continuously for 1 hour without shutdown or limiting.
High (255 VAC) Mains Operation	With 8 ohm resistive load, pass the FTC continuous power test.
Low (200 VAC) Mains Operation	With 4 ohm resistive load, reproduce a 400 msec sine wave burst at 255 watts, 2.8 sec burst interval, continuously for 1 hour without shutdown or limiting.
General	Latch-up protection Indicators for clipping, limiting, thermal overload

Notes:

- 1) Cycle consisting of 50 msec sine wave at 120V peak and 450 msec sine wave at 24 V peak.
- 2) Cycle consisting of 25 msec sine wave at 120 V peak and 975 msec sine wave at 41 V peak.
- 3) Cycle consisting of 400 msec sine wave at 120 V peak and 2400 msec interval at 0 V.

Sine wave frequency in all cases is 1 kHz.

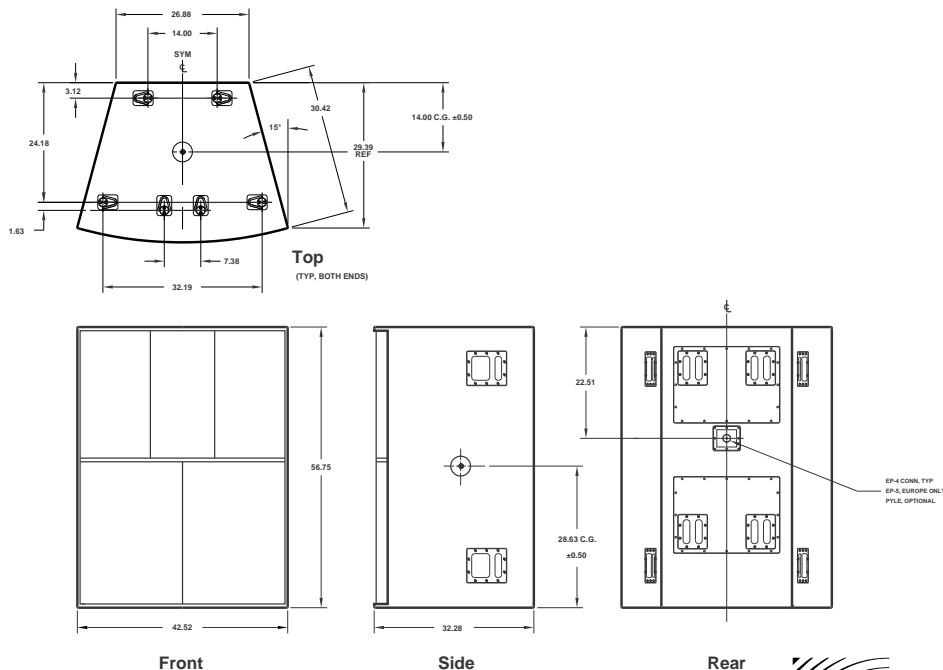
Physical Construction



Meyer Sound Laboratories has devoted itself to designing, manufacturing, and refining components that deliver superb sonic reproduction. Every part of every component is designed and built to exacting specifications and undergoes rigorous, comprehensive testing in the laboratories.

Research remains an integral, driving force behind all production. Meyer strives for sound quality that is predictable and neutral over an extended lifetime and across an extended range.

Dimensions



**Sound
engineering
for the art
and science
of sound.**



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