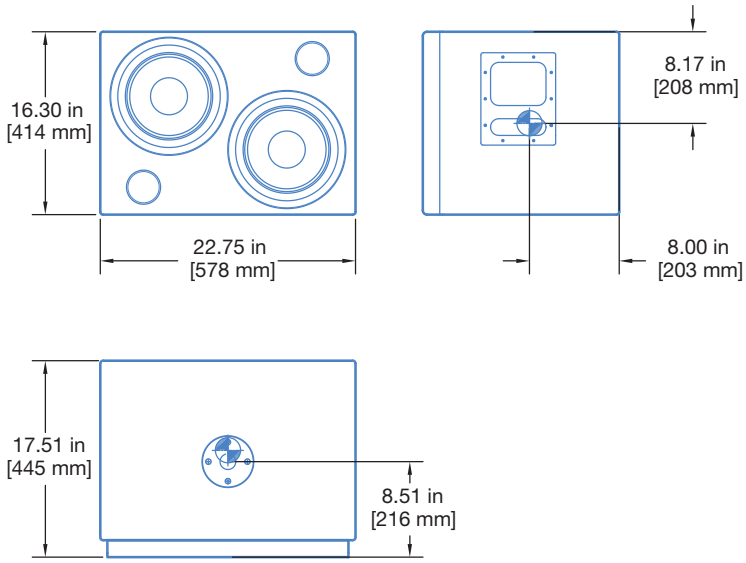
UMS-1P UltraCompact Subwoofer



An extremely compact, self-powered system, the UMS-1P ultracompact subwoofer provides powerful low-frequency extension in applications where both excellent audio quality and an unobtrusive cabinet size are required. The system's output is 123 dB linear peak SPL within its operating range of 25–160 Hz. Although designed primarily as a companion for Meyer Sound's UPM-1P wide coverage and UPM-2P narrow coverage ultracompact loudspeakers, the UMS-1P is equally adaptable for use with other Meyer Sound models, such as the HD-1 high-definition studio monitor. The UMS-1P may be used singly or stacked to provide even greater low-frequency output.

The tuned bass-reflex enclosure houses two 10 in cone drivers, each powered by a dedicated channel of an integral class AB/bridged power amplifier with complementary MOSFET output stages. Total peak power is 800 watts. Each channel incorporates a limiter that prevents driver over-excursion and regulates the voice coil temperature. A smooth limiting characteristic effectively protects the drivers without the compression effects imposed by typical limiters, allowing high output levels across the drivers' entire frequency range.

The internal electronics also provide active signal processing, including phase correction circuitry that delivers flat frequency and phase response over the entire operating range. Integrating a built-in low-pass crossover while accepting a full-range signal, the UMS-1P's input allows for simple daisy-chain signal distribution and eliminates the need for external crossovers.

Field-replaceable audio input modules accommodate a range of applications. The standard version offers looping XLR input and output connectors, while an enhanced looping version adds polarity switching (the looping output is not affected) and input attenuation (0–18 dB). A mono summing version with two inputs is also available.

The standard UMS-1P is switchable between the 115 V AC and 230 V AC ranges. A 100 V AC version is also available. The integral power supply suppresses high-voltage transients and also provides EMI filtering. Dual locking PowerCon connectors facilitate AC looping.

Meyer Sound constructs the UMS-1P's durable enclosure from premium multi-ply birch, covers it with a slightly textured black finish, and includes a powder-coated, hex-stamped steel grille with black mesh cover. A pole mount for supporting a UPM-1P or UPM-2P is fitted as standard. An optional variant, the UMS-SM, ships with nut plates instead of handles and includes a U-bracket for applications requiring individual mounting. Other options include custom color finishes for applications requiring specific cosmetics.

The UMS-1P is compatible with the RMS™ remote monitoring system, which offers comprehensive monitoring of loudspeaker parameters from a Mac® or Windows®-based computer running Compass® control software.

FEATURES AND BENEFITS

- Powerful, extended low-frequency response in a very compact cabinet
- Linear driver excursion ensures exceptionally clean bass response with very low distortion
- Extend or supplement low frequency output of UPM and HD-1 systems
- Flat, phase-corrected response ensures maximum fidelity

APPLICATIONS

- Mix suites
- Small theatre and audio-visual
- Houses of worship

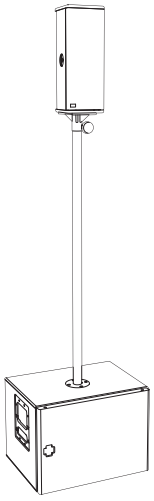
ACCESSORIES AND ASSOCIATED PRODUCTS

MPK-POLE 35MM Adjustable Pole: Pole with adjustable length of 32–55 in, 35 mm diameter; includes a 38 mm adapter to be used with 38 mm stand adapters.

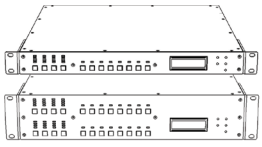
Galileo GALAXY Network Platform: The Galileo GALAXY Network Platform provides state-of-the-art audio control technology for loudspeaker systems with multiple zones. With immaculate sonic performance, it provides a powerful tool set for corrective room equalization and creative fine-tuning for a full range of applications.

MDM-832 Distribution Module: MDM-832 units conveniently power multiple UPM-1Ps, routing up to eight channels of AC power, balanced audio and RMS signals to the loudspeakers.

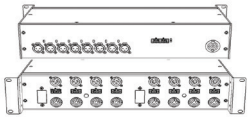
UMS-SM Cabinet with included U-Bracket: A variant of the UMS-1P, the UMS-SM, ships with nut plates instead of handles and includes a U-bracket to allow mounting of a single UMS-SM cabinet.



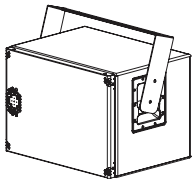
MPK-POLE 35MM Adjustable Pole



GALAXY Network Platform



MDM-832 Distribution Module



UMS-SM Cabinet Option with included U-Bracket

SPECIFICATIONS

ACOUSTICAL[1]	
Operating Frequency Range[2]	25 Hz - 160 Hz
Frequency Response[3]	29 Hz - 135 Hz ±4 dB
Phase Response	41 Hz - 155 Hz ±30°
Linear Peak SPL[4]	**123 dB (M-noise),** 123 dB (Pink noise), 125 dB (B-noise)
COVERAGE	
	360° single unit; varies for multiple units, depending on number and configuration
TRANSDUCERS	
Low Frequency	Two 10 in cone drivers; 4 Ω nominal impedance
AUDIO INPUT	
Type	Differential, electronically balanced
Maximum Common Mode Range	±15 V DC, clamped to earth for voltage transient protection
Connectors	XLR 3-pin female with male loop; optional 5-pin connectors accommodate both balanced audio and RMS signals.
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 - (optional polarity reversal switch)[5] Case: Earth ground and chassis
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) into 600 Ω to produce the maximum peak SPL over the operating bandwidth of the loudspeaker.
AMPLIFIER	
Type	Two-channel complementary MOSFET output stages (class AB/bridged)
Total Output Power[6]	800 W peak
THD, IM, TIM	< 0.02%
Cooling	Convection
AC POWER	
Connector	powerCON 20 input with loop output
Voltage Selection	External 115/230 V AC switch (100 V AC version available)[7]
Safety Rated Voltage Range	105–130 V AC (115 V AC); 210–260 V AC (230 V AC)
Turn-on and Turn-off Points	Fuse-protected above 135 V AC (115 V AC switch position) and 265 V AC (230 V AC switch position).
CURRENT DRAW[8]	
Idle Current	0.13 A rms (115 V AC); 0.065 A rms (230 V AC); 0.15 A rms (100 V AC)
Maximum Long-Term Continuous Current (>10 sec)	1 A rms (115 V AC); 0.5 A rms (230 V AC); 1.2 A rms (100 V AC)
Burst Current (<1 sec)[9]	1.3 A rms (115 V AC); 0.65 A rms (230 V AC); 1.5 A rms (100 V AC))
Maximum Instantaneous Peak Current	2.9 A pk (115 V AC); 2.0 A pk (230 V AC); 3.3 A pk (100 V AC)
Inrush Current	18 A pk (115 V AC); 12 A pk (230 V AC); 15 A pk (100 V AC)
RMS NETWORK (OPTIONAL)	
	Equipped with two-conductor twisted-pair network, reporting all operating parameters of amplifiers to system operator's host computer.

SPECIFICATIONS, CONT'D.

PHYSICAL	
Dimensions	W: 22.75 in (578 mm) x H: 16.30 in (414 mm) x D: 17.51 in (445 mm)—16 in (406 mm) without grille
Weight	62 lb (28.10 kg)
Enclosure	Premium multi-ply birch with slightly textured black finish
Protective Grille	Powder-coated, hex-stamped steel with black mesh
Rigging	The UMS-SM is available from the factory with threaded side plates and the UMS-SM U-bracket for single mount configurations; all versions have a 1.5 in (38 mm) pole mount.

NOTES

1. Loudspeaker system predictions for coverage and SPL are available in Meyer Sound's MAPP System Design Tool.
2. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
3. Measured in half-space with pink noise at 4 m, 1/3-octave frequency resolution.
4. **Linear Peak SPL** is measured in half-space at 4 m referred to 1 m. Loudspeaker SPL compression measured with M-noise at the onset of limiting, 2-hour duration, and 50-degree C ambient temperature is <2 dB.

   M-noise is a full bandwidth (10 Hz–22.5 kHz) test signal developed by Meyer Sound to better measure the loudspeaker's music performance. It has a constant instantaneous peak level in octave bands, a crest factor that increases with frequency, and a full bandwidth Peak to RMS ratio of 18 dB.

   Pink noise is a full bandwidth test signal with Peak to RMS ratio of 12.5 dB.

   B-noise is a Meyer Sound test signal used to ensure measurements reflect system behavior when reproducing the most common input spectrum, and to verify there is still headroom over pink noise.
5. Two additional 3-pin XLR input module options are available with a polarity reversal switch and an attenuator (0 dB to -18 dB): one looping and one with two inputs for mono summing.
6. Peak power based on the maximum unclipped peak voltage the amplifier will produce into the nominal load impedance.
7. 100 V AC version, range 90–100 V AC; recommended maximum 115 V AC.
8. Current draw for a single loudspeaker. Loop out not used.
9. 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.

ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be a self-powered, sub-bass system able to be used singly or ground-stacked in multiples. The transducers shall consist of two 10 in cone drivers with 2 in voice coils, each rated to handle 400 AES W. (Driven continuously for two hours with band-limited noise signal having a 6 dB peak-average ratio.)

The loudspeaker shall incorporate internal processing electronics and a two-channel amplifier. Each amplifier channel shall be class AB/bridged with complementary MOSFET output stages. Burst capability shall be 800 watts total with a nominal impedance of 4 ohms both channels. Distortion (THD, IM, TIM) shall not exceed 0.02%.

Performance specifications for a typical production unit shall be as follows: operating frequency range shall be 25–160 Hz; phase response shall be 41–155 Hz ±30°; linear peak SPL shall be 123 dB measured in half-space with M-noise at 4 m referred to 1 m. Beamwidth shall be 360° for a single unit. Directional characteristics can be achieved with multiple cabinets.

The audio input shall be electronically balanced with a 10 kΩ impedance and accept a nominal 0 dBV (1 V rms) signal (+20 dBV to produce maximum peak SPL). Connectors shall be XLR 3-pin female with male loop. Two additional input module options shall be offered with an attenuator and polarity reversal switch; one with loop-through output, and another with two summing inputs instead of the loop-through input and output.

Two versions of the loudspeaker shall be available: a switchable 115/230 V and a non-switchable 100 V version. The voltage selection must be manually selected. The internal power supply shall perform EMI filtering, soft current turn-on and surge suppression. Powering requirements shall be nominal 100 V AC (100 V version) and 110 or 230 V AC (115/230 version) line current at 50 or 60 Hz. UL and CE operating voltage range shall be 115–240 V AC. Ultimate short-term peak current draw shall be 2.9 A at 115 V AC, 2 A at 230 V AC and 3.3 A at 100 V AC. Current inrush during turn-on shall not exceed 18 A at 115 V AC. AC power connectors shall be PowerCon with looping output. The loudspeaker system shall provide facilities for installing the optional RMS remote monitoring system.

All loudspeaker components shall be mounted in an acoustically vented rectangular enclosure constructed of premium multi-ply birch with a slightly textured black finish. The front protective grille shall be powder-coated hex-stamped steel with black mesh. Dimensions shall be W: 22.75 in (578 mm) x H: 16.30 in (414 mm) x D: 17.51 in (445 mm)—16 in (406 mm) without grille. Weight shall be 62 lb (28.10 kg). A pole mount for supporting a UPM-1P or UPM-2P shall be fitted as standard.

The loudspeaker shall be the Meyer Sound UMS-1P.

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UMS-1P
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