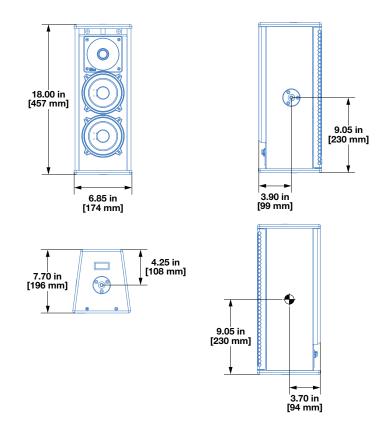
DATASHEET ULTRA

UPM-2XP UltraCompact Narrow-Coverage Loudspeaker







The UPM-2XP, with IntelligentDC technology, is a compact, externally-powered, narrow-coverage loudspeaker for professional sound reinforcement. It offers the same high sound pressure levels, low distortion, and uniform directional control as the UPM-2P but with the added flexibility of external DC power and support for lengthy cable runs without AC conduits. The UPM-2XP is ideally suited for narrow-coverage applications requiring a small, inconspicuous cabinet where AC cabling is not feasible.

As a standalone loudspeaker, the UPM-2XP can be used for vocal reinforcement, frontfill coverage, or delay coverage for underbalcony applications. For full-range systems, the UPM-2XP can be paired with Meyer Sound's UMS-1XP ultracompact subwoofer with IntelligentDC technology.

The UPM-2XP's high-frequency section includes a 1-inch metal dome tweeter on a constant-directivity, high-frequency horn with a 45° beamwidth. The low/mid-frequency section includes two 5-inch cone transducers that work in parallel at low frequencies—delivering a combined acoustic output—with one of the drivers rolling off above 320 Hz to prevent interference in the crossover region due to comb filtering effects.

Three channels of onboard power amplification that include an active crossover, driver protection, and frequency and phase correction circuitry power the proprietary drivers, which Meyer Sound manufactures at its factory in Berkeley, California.

With IntelligentDC technology, the UPM-2XP receives DC power and balanced audio from a single loudspeaker connector,

available as Phoenix[™] 5-pin male, sealed SwitchCraft® EN3[™] 5-pin male, or sealed ECO-M 7-pin male. Powering the unit from an external source eliminates the need for wiring conduits while still preserving the advantages of self-powered systems. The UPM-2XP's amplifier and signal-processing circuits store DC power and tolerate voltage drops, thereby accommodating light-gauge cables and lengthy cable runs.

The UPM-2XP requires an external Meyer Sound IntelligentDC power supply. The single-space rack-mount MPS-488HP unit distributes DC power and balanced audio to up to eight UPM-2XP loudspeakers, or other Meyer Sound IntelligentDC loudspeakers. For smaller installations, the MPS-482HP IntelligentDC power supply offers two channels of audio and DC power.

Composite multiconductor cables, such as Belden® 1502 or equivalent, can deliver both DC power and balanced audio to loudspeakers at cable lengths up to 150 feet with just 1 dB of loss in peak SPL using 18 AWG wire. Longer cable runs are possible with heavier gauge wires.

Meyer Sound's RMS remote monitoring system is optionally available for the MPS-488HP. Meyer Sound coats the UPM-2XP cabinet with a slightly textured black finish and includes three threaded, recessed nut plates (3/8 in-16 or metric M10). Optional rigging hardware includes the MYA-UPM mounting yoke, MUB-UPM U-bracket, and MSA-UPM stand adapter. Other UPM-2XP options include weather protection and custom color finishes for fixed installations and installations with specific cosmetic requirements.

FEATURES AND BENEFITS

- IntelligentDC technology affords the flexibility of lengthy cable runs without AC conduits
- Extraordinary fidelity and power capability come together in an ultracompact package
- Metal dome tweeter delivers a smooth high-frequency response
- Narrow, symmetrical pattern provides precise coverage control
- Unique crossover design eliminates combing and yields a consistent midrange response
- Exceptional SPL to size ratio supports a variety of applications

APPLICATIONS

- Frontfill and under-balcony fill coverage
- Theatrical sound reinforcement
- Portable and installed audio-visual systems
- Effects for theater
- Compact voice reinforcement systems

ACCESSORIES AND ASSOCIATED PRODUCTS

MUB-UPM U-Bracket: Allows a UPM-2XP loudspeaker to be mounted to a wall (in either vertical or horizontal orientations), to the ceiling or on the floor.

MYA-UPM Yoke: Cradle-style mounting yoke that suspends a single UPM-2XP loudspeaker and supports a wide range of horizontal and vertical adjustment. The yoke attaches to the top and bottom nut plates and includes 3/8-inch-16 and M10 hardware.

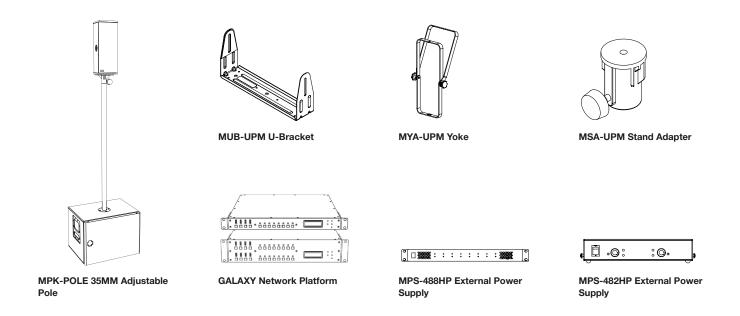
MSA-UPM Stand Adapter: Mount the UPM-2XP loudspeaker on a stand using the MSA-UPM stand adapter along with a third-party loudspeaker stand. The MSA-UPM kit includes 3/8-inch-16 and M10 hardware.

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.

MPS-488HP External Power Supply: Rack-mount unit that delivers balanced audio and high-current DC power to up to eight loudspeakers; versions available with either Phoenix or EN3 channel output connectors.

MPS-482HP External Power Supply: 1RU 1/2 width rack unit that delivers balanced audio and high-current DC power to up to two audio channels; rack mount or use available options to mount on ceiling, wall, pole or truss configurations.



SPECIFICATIONS

ACOUSTICAL ¹			
Operating Frequency Range ²	80 Hz – 20 kHz		
Frequency Response ³	85 Hz – 19 kHz ±4 dB		
Phase Response	300 Hz - 18 kHz ±60 degrees		
Linear Peak SPL ⁴	123 dB with 18 dB crest factor (M-noise), 120 dB (Pink noise), 120.5 dB (B-noise)		
COVERAGE			
Horizontal Coverage	45°		
Vertical Coverage	45°		
TRANSDUCERS			
Low Frequency	Two 5-inch cone drivers; 8 Ω nominal impedance		
High Frequency	One 1-inch metal dome tweeter; 8 Ω nominal impedance		
AUDIO INPUT			
Туре	Differential, electronically balanced		
Maximum Common Mode Range	±15 V DC, clamped to earth for voltage transient protection		
Connectors	Phoenix 5-pin Male; SwitchCraft 5-pin Male; ECO-M 7-pin Male (two pins for 48 V DC power, three pins for balanced audio)		
Input Impedance	10 kΩ differential between positive (+) and negative (-) audio pins		
Wiring⁵	Phoenix 5-pin Male Pin 1: DC Power (-) Pin 2: DC Power (+) Pin 3: Chassis/earth through 1 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 4: Audio (-) Pin 5: Audio (+)	SwitchCraft EN3 5-pin Male Pin 1: DC Power (-) Pin 2: DC Power (+) Pin 3: Chassis/earth through 1 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 4: Audio (-) Pin 5: Audio (+)	ECO-M 7-pin Male ⁵ Pin 1: DC Power (-) Pin 2: DC Power (+) Pin S: Chassis/earth through 1 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 5: Audio (-) Pin 6: Audio (+)
Nominal Input Sensitivity	, ,	` '	. ,
Input Level	$-8.0~\text{dBV}$ (0.4 V rms) continuous average is typically the onset of limiting for noise and music 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			
Туре	3-channel, Class-D		
Total Output Power ⁶	650 W peak		
THD, IM, TIM	< 0.02%		
Cooling	Convection		
DC POWER Connector	Phoenix 5-pin Male; SwitchCraft 5-pin Male; ECO-M 7-pin Male (two pins for 48 V DC power, three pins for balanced audio)		
Safety Rated Voltage Range	48 V DC		
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: 6.85 in (174 mm) x H: 18.00 in (457 mm) x D: 7.70 in (196 mm)	
Weight	17 lb (7.7 kg)	
Enclosure	Premium multi-ply birch with slightly textured black finish	
Protective Grille	Powder-coated, hex-stamped steel with black mesh	
Rigging	Three 3/8-inch-16 or metric M10 nut plates	

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. Free-field, measured with 1/3 octave frequency resolution at 4 m.
- 4. Linear Peak SPL is measured in free-field 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.</p>

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. Pins 3 and 4 not used in ECO-M connector.
- 6. Peak power based on the maximum unclipped peak voltage the amplifier will produce into the nominal load impedance.

ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be a self-powered, full-range system. Its transducers shall include two 5-inch cone drivers and one 1-inch metal dome tweeter.

The loudspeaker system shall incorporate internal processing and a three-channel amplifier, one channel for each driver. Processing functions shall include equalization, phase correction, signal division, and driver protection. Amplifier burst output power shall be 650 W total. Distortion (THD, IM, TIM) shall not exceed 0.02%.

Performance specifications for a typical production unit shall be as follows: operating frequency range, 80 Hz–20 kHz; phase response, 300 Hz–18 kHz $\pm 60^{\circ}$; linear peak SPL, 123 dB with 18 dB crest factor, measured with M-noise at 4 m referred to 1 m; coverage shall be 45° horizontal by 45° vertical.

The loudspeaker shall receive DC power and balanced audio from a single input connector, available as Phoenix 5-pin male, sealed EN3 5-pin

male, or sealed ECO-M 7-pin male (two pins for DC power, three pins for balanced audio). The audio input shall be electronically balanced with a $10 \text{ k}\Omega$ impedance and accept a nominal -8.0 dBV (0.4 V rms) input signal.

Power requirements for the loudspeaker shall be a Meyer Sound IntelligentDC power supply capable of delivering 48 V DC.

All components shall be mounted in an acoustically vented trapezoidal enclosure constructed of premium multi-ply birch with a slightly textured black finish. The protective grille shall be powder-coated, hex-stamped steel with black mesh screen. Rigging shall be three 3/8-inch-16 or M10 nut plates. Dimensions shall be W: 6.85 in (174 mm) x H: 18.00 in (457 mm) x D: 7.70 in (196 mm). Weight shall be 17 lb (7.7 kg).

The loudspeaker shall be the Meyer Sound UPM-2XP.

