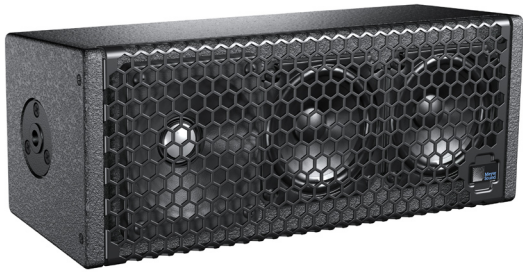
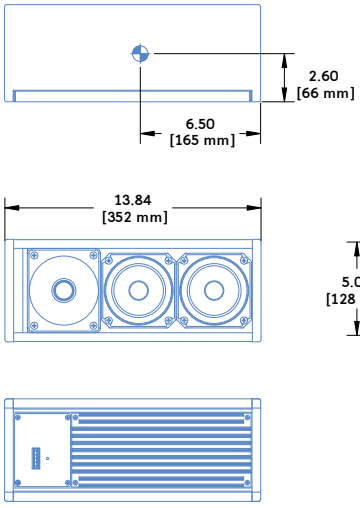
thinking sound Meyer Sound

UP-4XP™ : UltraCompact Loudspeaker





Dimensions	13.84" w x 5.54" h x 5.25" d (352 mm x 141 mm x 133 mm)
Weight	12.2 lbs (5.53 kg)
Enclosure	Premium birch plywood
Finish	Black textured
Protective Grille	Powder-coated, hex-stamped steel with black mesh screen
Rigging	Top and bottom plates available with 3/8"-16 or M10 threads nuts

The UP-4XP ultracompact loudspeaker is ideally suited for applications requiring a small, inconspicuous cabinet that also delivers high sound pressure levels, low distortion, and uniform directional control. The self-powered UP-4XP offers exceptional audio performance in a compact package with the advantages of a remote power supply. As a standalone loudspeaker, the UP-4XP can be used for vocal reinforcement, frontfill coverage, and delay coverage for under-balcony applications. The UP-4XP can also be paired with an optional subwoofer to create a full-range system.

The UP-4XP boasts a wide operating frequency range of 66 Hz to 18 kHz and a maximum peak SPL of 121 dB, with very low distortion. The unit's high-frequency section includes a 1-inch metal dome tweeter on a constant-directivity, high-frequency horn with a 100-degree beamwidth. The low/mid-frequency section includes two 4-inch cone transducers that work in parallel at low frequencies — delivering a combined acoustic output — with one of the drivers rolling off at higher frequencies to prevent interference (due to comb filtering effects) in the crossover region. The proprietary UP-4XP drivers, which are manufactured at Meyer Sound's factory in Berkeley, California, are powered by three channels of onboard power amplification that include an active crossover, driver protection, and frequency and phase correction circuitry.

The UP-4XP can be equipped with either a Phoenix™ 5-pin male or sealed SwitchCraft® EN3™ male connector for receiving balanced audio and DC power. Powering the unit from an external source eliminates the need for wiring conduits while still preserving the advantages of self-powered systems. The UP-4XP's amplifier and signal-processing circuits are designed to store DC power and tolerate voltage drops, thereby accommodating light-gauge cables and lengthy cable runs.

UP-4XP loudspeaker systems require an MPS-488 external power supply. The rack mount multi-channel power supply can deliver both balanced audio and 48 V of DC power to four UP-4XP loudspeakers at cable lengths of up to 150 feet, with just 1 dB of loss in peak SPL using 18 AWG wire. The use of composite multiconductor cables (such as Belden® 1502) allows a single cable to carry both audio and DC power to the UP-4XPs. Longer cable lengths are possible for moderate applications that don't drive the loudspeakers to maximum output, or when using heavier wire gauges for the DC power.

The UP-4XP's durable cabinet is coated with a black textured finish and includes top and bottom mounting plates with 3/8"-16 or metric M10 threaded nuts. QuickFly mounting options include the MUB-UP4 U-bracket, MYA-UP4 cradle-style yoke, and 1-3/8" (35 mm) diameter pole-mount adaptor.

Other options include weather protection (with the sealed EN3 connector) and custom color finishes for installations and applications with specific cosmetic requirements.

** For details and specifications on the MPS-488 power supply, refer to the MPS-488 Datasheet.*

Features & Benefits

- Extraordinary fidelity and power capability in an ultracompact package
- Metal dome tweeter delivers a smooth high-frequency response
- Wide, symmetrical pattern covers a broad listening area
- Unique crossover design eliminates combing and yields a consistent midrange response
- Exceptional SPL to size ratio
- Supports long cable runs with light-gauge cables

Applications

- Frontfill and under-balcony fill coverage
- Theatrical sound reinforcement and special effects
- Portable and installed AV systems
- Compact voice reinforcement systems

UP-4XP Specifications

Acoustical	
Operating Frequency Range[1]	66 Hz – 18 kHz
Frequency Response[2]	72 Hz – 17.5 kHz ±4 dB
Phase Response	360 Hz – 12 kHz ±45˚
Maximum Peak SPL[3]	121 dB
Dynamic Range[4]	› 105 dB
Coverage	
	100˚ symmetrical
Crossover[5]	
	1.5 kHz
Transducers	
Low Frequency[6]	Two 4" low-frequency cone drivers
High Frequency	One 1" metal dome tweeter
Connector	
Audio/Power Connector	Phoenix 5-pin male or EN3 5-pin male (3 pins for balanced audio, 2 pins for DC power)
Power Wiring	Pin 1: 48 V DC – Pin 2: 48 V DC +
Audio Wiring	Pin 3: Chassis/earth through 220 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 4: Signal – Pin 5: Signal +
Audio Input	
Type	Differential, electronically balanced
Maximum Common Mode Range	±5 V DC
Input Impedance	10 kΩ differential between pins 4 (–) and 5 (+)
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	–2.0 dBV (0.80 V rms, 1.12 V peak) continuous average is typically the onset of limiting for noise and music
Input Level	Audio source must be capable of producing +16 dBV (6.3 V rms, 9.0 V peak) into 600 Ω to produce the maximum peak SPL over the operating bandwidth of the loudspeaker
Amplifier	
Amplifier Type	Three-channel (class D)
Output Power[7]	500 W total for all three channels
THD, IM, TIM	‹ .02%
Load	4 Ω each low channel; 8 Ω high channel
Cooling	Convection
DC Power	
Voltage Requirement	48 V DC
Current Draw[8]: Idle Current	0.23 A average
Maximum Long-Term Continuous Current (›10 sec)	1.00 A average
Burst Current (‹1 sec)	4.05 A average
Ultimate Short-Term Peak Current Draw	4.50 A peak
Inrush Current	‹ 4.0 A peak

Notes:

1. *Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.*
2. *Measured free-field with pink noise at 1 meter, 1/3-octave frequency resolution.*
3. *Measured free-field with music, referred to 1 meter.*
4. *Taken from peak SPL, referred to A-wtd noise floor.*
5. *At this frequency, the metal dome tweeter and top low-frequency driver (closest to the tweeter) produce equal sound pressure levels.*
6. *Below 400 Hz, both low frequency drivers are active. At 400 Hz, the bottom low-frequency driver is attenuated by –3 dB and rolled off at higher frequencies. This reduces interaction in the higher frequencies (shorter wavelengths) of the tweeter and maintains optimum polar and off-axis frequency responses.*
7. *Amplifier wattage based on the maximum unclipped burst sine-wave rms voltage the amplifier will produce into the nominal load impedance.*
8. *Current draw measured at 48 V DC.*

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Made in USA with domestic and foreign parts

ISO 9001 (Pending)

UP-4XP — 04.201.004.02 A2

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Architect Specifications

The loudspeaker shall be a self-powered, full-range system; the transducers shall consist of two 4-inch low-frequency cone drivers and one 1-inch high-frequency metal dome tweeter. The loudspeaker system shall incorporate internal processing electronics and a three-channel amplifier, one channel for each driver. Processing functions shall include equalization, phase correction, signal division, and driver protection. The crossover point shall be 1.5 kHz. Amplifier channels shall be class D. Amplifier output power shall be 500 watts total for all three channels. Distortion (THD, IM, TIM) shall not exceed 0.02%.

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: operating frequency range shall be 66 Hz to 18 kHz; phase response shall be ±45˚ from 360 Hz to 12 kHz; maximum peak SPL shall be 121 dB at 1 meter, free field. Coverage shall be 100-degree horizontal by 100-degree vertical.

The loudspeaker shall be equipped with either a Phoenix 5-pin male or EN3 5-pin male connector (three pins for balanced audio and two pins for DC power). The audio input shall be electronically balanced with a 10-kOhm impedance and accept a nominal –2.0 dBV (0.80 V rms, 1.12 V peak) input signal. DC blocking and RF filtering shall be provided, and CMRR shall be greater than 50 dB and typically 80 dB (50 Hz to 500 Hz).

Power requirements for the loudspeaker shall be a Meyer Sound MPS power supply capable of delivering 48 V DC. Current draw for the loudspeaker during burst (‹ 1 sec) shall be 4.05 A average at 48 V. Current inrush during turn-on shall not exceed 4.0 A peak at 48 V.

All components shall be mounted in an acoustically vented trapezoidal enclosure constructed of premium birch plywood with a black textured finish. Top and bottom rigging plates shall be available in 3/8"-16 or M10 threads. The front protective grille shall be powder-coated, hex-stamped steel with black mesh screen.

Dimensions for the loudspeaker shall be 13.84" wide x 5.54" high x 5.25" deep (352 mm x 141 mm x 133 mm) without mounting bracket. Weight shall be 12.2 lbs (5.53 kg).

The loudspeaker shall be the Meyer Sound UP-4XP.