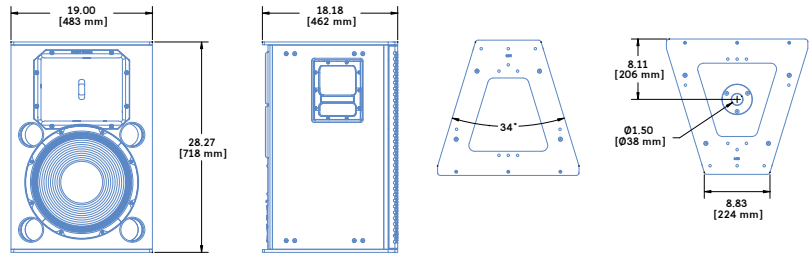


UPQ-1P : Wide Coverage Loudspeaker



Dimensions	19.00" w x 28.27" h x 18.18" d (483 mm x 718 mm x 462 mm)
Weight	108 lbs (49 kg)
Enclosure	Multi-ply hardwood
Finish	Black textured
Protective Grille	Powder-coated hex-stamped steel, black mesh screen
Rigging	Aluminum end plates on top and bottom with metric M10 threaded points; integral 1-1/2" (38 mm) pole mount receptacle on bottom

The UPQ-1P self-powered wide coverage loudspeaker offers an extremely consistent polar response, and is distinguished by its constant-Q horn that provides 80-degree horizontal by 50-degree vertical coverage (-6 dB points) and a gentle coverage rolloff that extends uniformly out to its -10 dB points of 100 by 60 degrees. The horn's smooth and consistent performance is the result of meticulous research in Meyer Sound's anechoic chamber, and it exhibits a remarkably consistent beamwidth in both the horizontal and vertical planes across a wide frequency range of 1 kHz to 18 kHz. In addition, the UPQ-1P horn delivers uniform attenuation for all frequencies outside the specified beamwidth.

The UPQ-1P also provides extremely high power output with low distortion in a compact, vented two-way enclosure. In addition to the constant-Q horn, the loudspeaker features a low frequency 15-inch neodymium magnet cone driver and 4-inch diaphragm compression driver,

which are designed and manufactured at Meyer Sound's Berkeley, California headquarters. The UPQ-1P is suitable for a range of sound reinforcement applications, as a front-of-house main loudspeaker in small to mid-sized venues, or as a fill loudspeaker in larger systems. A proprietary two-channel, class AB/H power amplifier with complementary MOSFET output stages yields a total power output of 1275 W. Audio input is routed through an electronic crossover and correction filters, as well as through driver-protection circuitry. Phase-corrected processing ensures a flat acoustical amplitude and phase response, resulting in an exceptional impulse response and precise imaging.

Each amplifier channel has sophisticated limiters that are easily monitored with the limit LEDs on the unit's rear panel. The UPQ-1P's modular amplifier and processing electronics incorporate Meyer Sound's Intelligent AC™ power supply, which adapts to any power voltage worldwide and pro-

vides soft-turn on and transient protection. The UPQ-1P comes standard with XLR input and looping output connectors; an optional version of the loudspeaker includes polarity switching and input attenuation (from 0 dB to -18 dB). The UPQ-1P is also compatible with Meyer Sound's RMS™ remote monitoring system, which offers comprehensive monitoring of system parameters on a Windows®-based network.

The UPQ-1P's durable trapezoidal enclosure has a textured, hard-shell black finish, an integral pole mount receptacle, and versatile rigging end plates. The end plates are made of heavy-duty, high-strength, corrosion-resistant 6061-T6 aluminum, with threaded M10 attachment points for basic eyebolt rigging. QuickFly® rigging options include the MPA-UPQ pick-up and array plate and MYA-UPQ mounting yoke. Other options include Meyer Sound weather protection, custom cabinets without handles, and custom color finishes for specific cosmetic requirements.

FEATURES & BENEFITS

- Wide, symmetrical pattern covers broad listening areas
- Extraordinarily flat amplitude and phase response for tonal accuracy and precise imaging
- Integral pole mount and quick and easy QuickFly mounting options

- Constant-Q horn affords uniform response throughout coverage area
- Exceptional size to power ratio
- Consistent and predictable performance ensures accurate system design

APPLICATIONS

- Theatrical sound reinforcement
- Houses of worship
- Portable and installed audio-visual systems
- Centerfill and sidefill
- Nightclubs

UPQ-1P SPECIFICATIONS

ACOUSTICAL	Operating Frequency Range ¹ Frequency Response ² Phase Response Maximum Peak SPL ³ Dynamic Range	55 Hz – 18 kHz 60 Hz – 16 kHz ±4 dB 470 Hz – 16 kHz ±45° 136 dB >110 dB
COVERAGE		80° horizontal x 50° vertical (–6 dB) 100° horizontal x 60° vertical (–10 dB)
CROSSOVER ⁴		770 Hz
TRANSDUCERS	Low Frequency High Frequency	High-power 15" cone driver with neodymium magnet Nominal impedance: 2 Ω Voice coil size: 4" Power handling capability: 1200 W (AES) ⁵ 4" compression driver Nominal impedance: 8 Ω Voice coil size: 4" Diaphragm size: 4" Exit size: 1.5" Power handling capability: 250 W (AES) ⁵
AUDIO INPUT	Type Maximum Common Mode Range Connectors Input Impedance Wiring DC Blocking CMRR RF Filter TIM Filter Nominal Input Sensitivity Input Level	Differential, electronically balanced ±15 V DC, clamped to earth for voltage transient protection Female XLR input with male XLR loop output or VEAM all-in-one connector (integrates AC, audio, and network) 10 kΩ differential between pins 2 and 3 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) ⁶ Case: Earth ground and chassis Differential DC blocking up to max common mode voltage >50 dB, typically 80 dB (50 Hz–500 Hz) Common mode: 425 kHz; Differential mode: 142 kHz Integral to signal processing (<80 kHz) 0 dBV (1 V rms, 1.4 V pk) continuous is typically the onset of limiting for noise and music Audio source must be capable of producing +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 Output Power ⁷ Total Output ⁸ THD, IM, TIM Load Capacity Cooling ⁹	Two-channel complementary MOSFET output stages (class AB/H) 1275 W (1 x 1000 W, 1 x 275 W) 2550 W peak <.02% 2 Ω low channel; 8 Ω high channel Convection at low to mid audio levels; fan-assisted only at high audio levels
AC POWER	Connector Voltage Selection Safety Agency Rated Operating Range Turn-on and Turn-off Points Current Draw: Idle Current Max Long-Term Continuous Current (>10 sec) Burst Current (<1 sec) ¹⁰ Ultimate Short-Term Peak Current Draw Inrush Current	PowerCon with looping output or VEAM Automatic, two ranges, each with high–low voltage tap (uninterrupted) 95 V AC – 125 V AC; 208 V AC – 235 V AC, 50/60 Hz 85 V AC – 134 V AC; 165 V AC – 264 V AC 0.5 A rms (115 V AC); 0.28 A rms (230 V AC); 0.56 A rms (100 V AC) 3.9 A rms (115 V AC); 2.0 A rms (230 V AC); 4.4 A rms (100 V AC) 7.0 A rms (115 V AC); 3.9 A rms (230 V AC); 8.2 A rms (100 V AC) 18.0 A pk (115 V AC); 10.5 A pk (230 V AC); 20.0 A pk (100 V AC) 6.0 A pk (115 V AC); 8.4 A pk (230 V AC); 7.1 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

NOTES:

1. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
2. Free field measured with 1/3-octave frequency resolution at 4 meters.
3. Measured with music, free field, referred to 1 meter.
4. At this frequency, the transducers produce equal sound pressure levels.
5. Power handling is measured under AES standard conditions: transducers driven continuously for two hours with band limited noise signal having a 6 dB peak-average ratio.
6. An additional input module option is available with a polarity reversal switch and an attenuator (0 dB to –18 dB).
7. Amplifier wattage rating based on the maximum unclipped burst sine-wave rms voltage that the amplifier will produce for at least 0.5 seconds into the nominal load impedance.
8. Peak power based on the maximum unclipped peak voltage that the amplifier will produce for at least 100 milliseconds into the nominal load impedance.
9. The fan is controlled by audio level. It remains off at turn-on and at low to mid audio levels. Operating only at high audio levels makes it virtually inaudible.
10. 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.



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ARCHITECT SPECIFICATIONS

The loudspeaker shall be a self-powered, full-range system; the transducers shall consist of a 15-inch diameter cone driver and a 4-inch diaphragm compression driver on an 80-degree horizontal x 50-degree vertical horn. The loudspeaker system shall incorporate internal processing electronics and a two-channel amplifier, one channel for each driver. Processing functions shall include equalization, phase correction, signal division, and protection for the high- and low-frequency sections. The crossover point shall be 770 Hz.

Each amplifier channel shall be class AB/H with complementary MOSFET output stages. Burst capability for the low-frequency channel shall be 1000 watts total with nominal 2-ohm resistive load and 275 watts for the high-frequency channel with nominal 8-ohm resistive load. Peak power shall be 2550 watts. 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 55 Hz to 18 kHz. Phase response shall be ±45° from 470 Hz to 16 kHz. Maximum peak SPL shall

be 136 dB at 1 meter, free field. Coverage shall be 80-degree horizontal x 50-degree vertical horn at the –6 dB points and 100-degree horizontal x 60-degree vertical horn at the –10 dB points.

The audio input shall be electronically balanced with a 10 kΩ impedance and accept a nominal 0 dBV (1 V rms, 1.4 V pk) signal. Connector shall be XLR (A-3) type female with parallel looping male or VEAM all-in-one multipin connector. An additional input module shall be offered with an attenuator and polarity reversal switch including one with loop-through output. RF filtering shall be provided, and CMRR shall be greater than 80 dB from 50 Hz to 500 Hz.

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 at 50 or 60 Hz. UL and CE operating voltage range shall be 100 to 240 V AC. Maximum peak current draw during burst shall be 7.0 A at 115 V AC, 3.9 A at 230 V AC, and 8.2 A at 100 V AC. Current inrush during soft turn-on shall

not exceed 6.0 A at 115 V AC or 8.4 A at 230 V AC. AC power connectors shall be PowerCon with looping capabilities or VEAM all-in-one multipin connector.

The loudspeaker system shall provide facilities for installing Meyer Sound's optional RMS remote monitoring system.

All components shall be mounted in an acoustically vented trapezoidal enclosure constructed of premium birch plywood with a hard black textured finish. The enclosure shall include an integral pole mount receptacle and versatile rigging end plates made of high-strength, 6061-T6 aluminum with threaded M10 metric holes for basic eyebolt rigging and shall also accommodate Meyer Sound proprietary rigging hardware. The front protective grille shall be powder-coated hex-stamped steel with black mesh screen.

Dimensions shall be 19.00" wide x 28.27" high x 18.18" deep (483 mm x 718 mm x 462 mm). Weight shall be 108 lbs (49 kg).

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