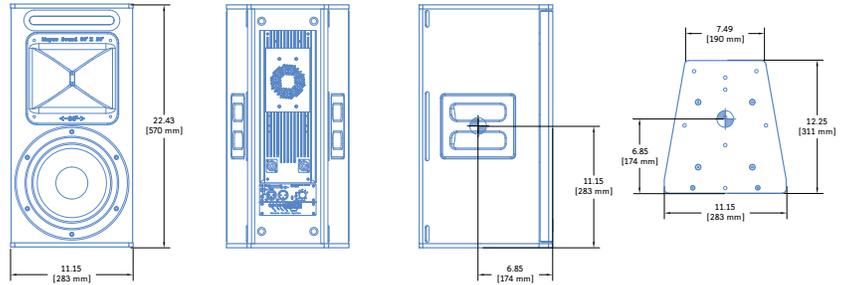




UPJ-1P : Compact VariO™ Loudspeaker



Dimensions	11.15" W x 22.43" H x 12.25" D (283 mm x 570 mm x 311 mm)
Weight	46.00 lbs (20.87 kg)
Enclosure	Multi-ply hardwood
Finish	Black textured
Protective Grille	Powder-coated hex stamped steel
Rigging	Aluminum end plates for mounting/flying cabinets with QuickFly® and standard rigging options

The UPJ-1P combines the advantages of self-powered systems with the placement and arraying flexibility afforded by a VariO™ rotatable horn. Though remarkably compact and lightweight, the UPJ-1P produces a robust peak power output of 128 dB SPL at 1 meter, making it suitable for use either singly as a primary loudspeaker or in multi-cabinet horizontal or vertical arrays. Applications include A/V presentations, small- to medium-sized main sound reinforcement systems, fill, delay, effects, under-balcony or under-canopy coverage and distributed systems.

The UPJ-1P was bred for flexibility: whether oriented vertically or horizontally, it can provide narrow, targeted coverage or wide coverage, with a simple turn of the VariO rotatable horn, changing its 80° x 50° coverage pattern between the horizontal and vertical planes. In size and weight, the UPJ-1P fits into the UltraSeries™ between the UPM and UPA. With a 10-inch low-fre-

quency neodymium magnet cone driver and a 0.75-inch exit, 3-inch diaphragm compression driver in the high-frequency section, the UPJ-1P delivers uncompromising quality and coverage.

The UPJ-1P's sophisticated amplification and protection circuitry produces consistent and predictable results in any system design. A proprietary Meyer Sound two-channel, class AB power amplifier with complementary MOSFET output stages provides a total output of 300 watts, and processes audio through an electronic crossover and correction filters for phase and frequency response, as well as driver protection circuitry. Each channel has peak and rms limiters that prevent driver over-excitation and regulate voice coil temperature. Limiter activity is easy to monitor with the limit LEDs on the rear panel.

The modular, field-replaceable amplifier/processing package also incorporates

Meyer Sound's Intelligent AC™ power supply, which automatically adjusts for any line voltage worldwide and provides both soft turn-on and transient protection. Meyer Sound's RMS™ remote monitoring system interface may be optionally fitted, allowing engineers to monitor and troubleshoot an entire UPJ-1P system from a remote Windows®-based computer.

The UPJ-1P's end plates are made of heavy duty, high-strength, corrosion-resistant 6061-T6 aluminum. Strategically placed M8 threaded points allow simple mounting using eyebolts or directly to third party pole assemblies. QuickFly rigging options including the MAA-UPJ array adapter (also made from 6061-T6 aluminum), MLB-UPJ L-brackets and MYA-UPJ mounting yoke assembly provide unprecedented mounting, flying and arraying flexibility. A weather-protected version is available with a removable rain hood.

FEATURES & BENEFITS

- Exceptional fidelity and extended high frequency performance
- Surprising power capability in a compact package
- Extraordinarily flat amplitude and phase response for tonal accuracy and precise imaging

- Constant-Q horn affords uniform response throughout the coverage area
- Predictable array performance ensures system design flexibility
- VariO horn allows loudspeakers to be oriented horizontally or vertically

APPLICATIONS

- Portable and installed audio-visual systems
- Theatrical sound reinforcement
- Front and under-balcony fill
- Conference centers, presentations, ballrooms and houses of worship

UPJ-1P SPECIFICATIONS

ACOUSTICAL	<p>Operating Frequency Range¹ Frequency Response: Free Field² Phase Response Maximum Peak SPL³ Dynamic Range</p>	<p>55 Hz – 20 kHz 66 Hz – 18 kHz ±4 dB ±45° 750 Hz to 18 kHz 128 dB >110 dB</p>
COVERAGE	Coverage ⁴	80° x 50°
CROSSOVER		2 kHz ⁵
TRANSDUCERS	<p>Low Frequency</p> <p>High Frequency⁶</p>	<p>One 10" cone driver with neodymium magnet Nominal impedance: 4 Ω Voice coil size: 2" Power-handling capability: 400 W (AES)⁷</p> <p>One 3" compression driver Nominal impedance: 16 Ω Voice coil size: 3" Diaphragm size: 3" Exit size: 0.75" Power-handling capability: 100 W (AES)⁷</p>
AUDIO INPUT	<p>Type Maximum Common Mode Range Connectors Input Impedance Wiring</p> <p>DC Blocking CMRR RF Filter TIM Filter Nominal Input Sensitivity</p> <p>Input Level</p>	<p>Differential, electronically balanced ±15 V DC, clamped to earth for voltage transient protection Female XLR input with male XLR loop output 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 - Case: Earth ground and chassis</p> <p>Differential DC blocking up to maximum common mode voltage >50 dB, typically 80 dB (50 Hz – 500 Hz) Common mode: 425 kHz; Differential mode: 142 kHz <80 kHz, integral to signal processing 0 dBV (1 V rms, 1.4 V pk) continuous average is typically the onset of TPL limiting for noise and music.</p> <p>Audio source must be capable of producing a minimum of +20 dBV (10 V rms, 14 V pk) into 600 Ω to produce maximum peak SPL over the operating bandwidth of the loudspeaker</p>
AMPLIFIERS	<p>Type Output Power⁸ THD, IM, TIM Load Capacity Cooling</p>	<p>Two-channel complementary MOSFET output stages (class AB) 300 W total <.02% 4 Ω low channel, 16 Ω high channel Forced air cooling over amplifier heatsink</p>
AC POWER	<p>Connector Voltage Selection Safety Agency Rated Operating Range Turn-on and Turn-off Points⁹ Current Draw: Idle Current Max Long-Term Continuous Current (>10 sec) Burst Current (<1 sec)⁷ Ultimate Short-Term Peak Current Draw Inrush Current</p>	<p>PowerCon with looping output Automatic 100 V AC – 240 V AC; 50/60 Hz 90 V AC to 264 V AC; 50/60 Hz 0.41 A rms (115 V AC); 0.33 A rms (230 V AC); 0.42 A rms (100 V AC) 3.2 A rms (115 V AC); 1.6 A rms (230 V AC); 3.7 A rms (100 V AC) 5 A rms (115 V AC); 2.5 A rms (230 V AC); 5.8 A rms (100 V AC) 17 A pk (115 V AC); 8.5 A pk (230 V AC); 20 A pk (100 V AC) 15 A pk (115 V AC); 13 A pk (230 V AC); 15 A pk (100 V AC)</p>
RMS NETWORK		Equipped for two conductor twisted-pair network, reporting all operating parameters of amplifiers to system operator's host computer.

NOTES:

- Recommended maximum operating frequency range. Response depends upon loading conditions and room acoustics.
- Measured with 1/3 octave frequency resolution at 4 meters.
- Measured with music at 1 meter.
- The UPJ horn can be rotated to provide an 80° x 50° coverage pattern in either the horizontal or vertical plane.
- At this frequency, the transducers produce equal sound pressure levels.
- The driver is coupled to an 80° x 50° constant-directivity horn.
- Power handling is measured under AES standard conditions: transducer driven continuously for two hours with band-limited noise signal having a 6 dB peak-average ratio.
- Wattage rating is based on the maximum unclipped burst sine-wave rms voltage the amplifier will produce into the nominal load impedance – low and high channels 30 V rms (42 V pk) into load impedance
- No automatic turn-off voltages. Voltages above 265 V AC are fuse protected but may cause permanent damage to the power supply. Voltages below 90 V AC may result in intermittent operation.



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ARCHITECT SPECIFICATIONS

The loudspeaker shall be a self-powered, full range system. The transducers shall consist of a 10-inch diameter cone driver and a 3-inch diaphragm compression driver on a 80° x 50° horn. The horn shall allow rotation to provide the wider coverage pattern in either the horizontal or vertical plane relative to the cabinet's vertical axis.

The loudspeaker system shall incorporate internal processing electronics and a two-channel amplifier. Processing functions shall include equalization, phase correction and signal division for the high- and low-frequency sections. The acoustical crossover point shall be 2 kHz. Each amplifier channel shall be class AB/bridged with complementary MOSFET output stages. Burst capability shall be 300 watts total into a nominal load of 4-ohms low channel and 16-ohms high channel. 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 20 kHz. Phase response shall be ±45° from 750 Hz to 18 kHz. Maximum SPL shall be 128 dB at 1 meter. Coverage (–6 dB points) shall be 80° x 50°, horizontal or vertical dependent on horn orientation.

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) input signal. Connectors shall be XLR (A–3) type with male input and female loop-through output. RF filtering shall be provided, and CMRR shall be greater than 50 dB and typically 80 dB (50 Hz – 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 V, 115 V or 230 V AC line current at 50 Hz or 60 Hz frequency. Current draw during burst (<1 sec) shall be 5 A at 115 V, 2.5 A at 230 V and 5.8 A at 100 V. Current inrush during soft turn-on shall not exceed 15 A at 115 V.

AC power connector shall be a locking connector with looping output.

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

All loudspeaker components shall be mounted in an acoustically vented trapezoidal enclosure constructed of 5/8" plywood with a hard, damage resistant black textured finish. The front protective grille shall be perforated steel. Dimensions shall be 11.15" wide x 22.43" high x 12.25" deep (283 mm x 570 mm x 286 mm). Weight shall be 46.00 lbs (20.87 kg). Integral high strength, 6061-T6 aluminum top plates with threaded M8 metric holes shall accommodate Meyer Sound proprietary rigging hardware and third-party accessories.

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