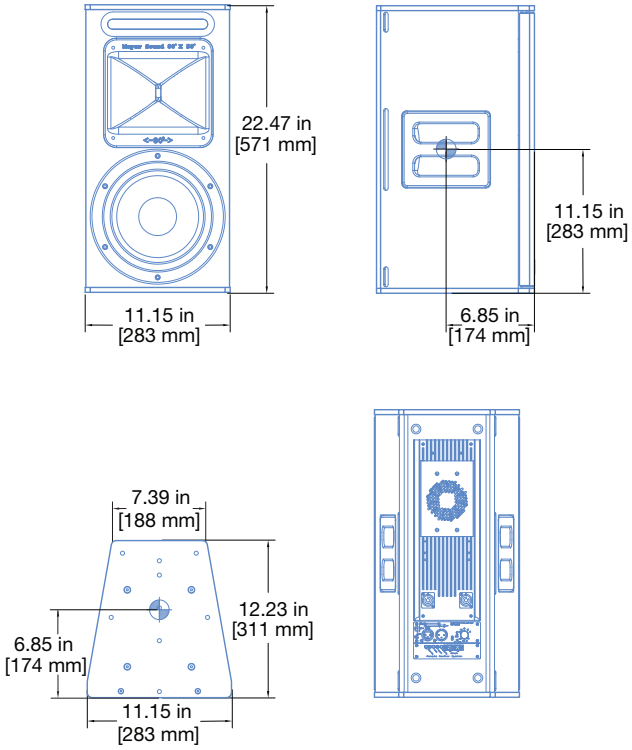
UPJ-1P Compact VariO™ Loudspeaker



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 linear peak SPL output of 125 dB with 18 dB crest factor, making it suitable for use either singly as a primary loudspeaker or in multi-cabinet horizontal or vertical clusters. Applications include audio-visual presentations, small- to medium-sized main sound reinforcement systems, fill, delay, effects, under-balcony or under-canopy coverage and distributed systems.

Meyer Sound designed the UPJ-1P for flexibility: whether oriented vertically or horizontally, it provides 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. With a 10-inch low-frequency neodymium magnet cone driver and 3-inch diaphragm compression driver in the high-frequency section, the UPJ-1P delivers uncompromising quality and coverage.

Sophisticated amplification and protection circuitry produce consistent and predictable results in any system design. A proprietary Meyer Sound two-channel, class AB/bridged power amplifier with complementary MOSFET output stages provides a total output of 550 watts. Internal circuitry processes the incoming audio signal through an electronic crossover and correction filters for flat phase and frequency response, as well as for driver protection. Each channel has peak and rms limiters that prevent driver over-excursion 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. The UPJ-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.

The UPJ-1P's end plates are made of heavy duty, high-strength, corrosion-resistant 6061-T6 aluminum. Strategically placed metric M8 threaded points allow simple mounting using eyebolts or directly to third-party pole assemblies. QuickFly® rigging options including the MAAM-UPJ array adapter (also made from 6061-T6 aluminum), MUB-UPJ U-bracket and the MYA-UPJ mounting yoke assembly provide unprecedented mounting, flying and arraying flexibility. Other options include weather protection and custom color finishes for applications requiring specific cosmetics.

FEATURES AND BENEFITS

- Exceptional fidelity and extended high frequency enhance performance
- Compact package delivers surprising power capability
- Extraordinarily flat amplitude and phase response provide tonal accuracy and precise imaging
- Constant-Q horn affords uniform response throughout the coverage area
- Predictable array performance ensures system design flexibility
- VariO horn enables versatile coverage options, whether orienting loudspeakers horizontally or vertically

APPLICATIONS

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

ACCESSORIES AND ASSOCIATED PRODUCTS

MAAM-UPJ Array Adapter: Facilitates installation of multiple UPJ-1Ps in both horizontal and vertical arrays.

MYA-UPJ Mounting Yoke Assembly: Cradle-style mounting yoke that suspends a single UPJ-1P loudspeaker and supports a wide range of horizontal and vertical adjustments.

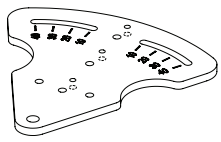
MUB-UPJ U-Bracket: Allows the UPJ-1P to be mounted on any flat surface at adjustable angles.

MSA-STAND Adapter Cup 35MM: This compact cup-type adapter mounts the UPJ-1P loudspeaker on a 35 mm pole. In addition, this adapter can be used to mount the MYA-UPJ yoke on a pole to allow easy panning and tilting of the UPJ-1P.

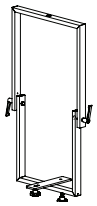
35MM Pole Stand Adapter: This large base stand adapter mounts the loudspeaker on a 35 mm pole. In addition, this adapter can be used to mount the MYA-UPJ yoke on a pole to allow easy panning and tilting.

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.

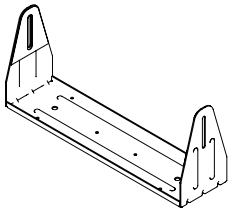
MPK-POLE 35MM Adjustable Pole: Pole with adjustable length of 32–55 in, 35 mm diameter; includes a 38 mm adapter to be used with 38 mm stand adapters.



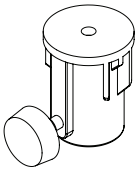
MAAM-UPJ Array Adapter



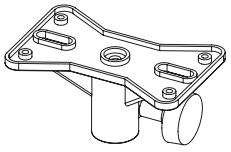
MYA-UPJ Mounting Yoke Assembly



MUB-UPJ U-Bracket

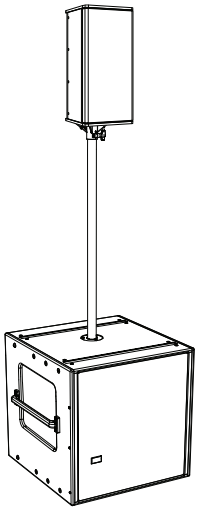


MSA-STAND Adapter Cup 35MM



35MM Pole Stand Adapter

GALAXY Network Platform



MPK Pole 35MM Adjustable Pole

SPECIFICATIONS

ACOUSTICAL[1]	
Operating Frequency Range[2]	55 Hz - 20 kHz
Frequency Response[3]	66 Hz - 18 kHz ±4 dB
Phase Response	750 Hz - 18 kHz ±45°
Linear Peak SPL[4]	**125 dB with 18 dB crest factor (M-noise),** 122.5 dB (Pink noise), 125 dB (B-noise)
COVERAGE[5]	
	80° x 50° (rotatable horn)
TRANSDUCERS	
Low Frequency	One 10-inch cone driver with neodymium magnet; 4 Ω nominal impedance
High Frequency	One 3-inch diaphragm compression driver; 16 Ω nominal impedance
AUDIO INPUT	
Type	Differential, electronically balanced
Maximum Common Mode Range	±15 V DC, clamped to earth for voltage transient protection
Connectors[6]	XLR 3-pin female input with male loop output; optional 5-pin XLR 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)[7] 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[7]	550 W peak
THD, IM, TIM	< 0.02%
Cooling	Forced air cooling over amplifier heat sink
AC POWER	
Connector	powerCON 20 input with loop output
Automatic Voltage Selection	90–264 V AC
Safety Rated Voltage Range	100–240 V AC, 50–60 Hz
Turn-on and Turn-off Points[8]	90 V AC turn-on, no turn-off; internal fuse-protection above 265 V AC
CURRENT DRAW	
Idle Current	0.41 A rms (115 V AC); 0.33 A rms (230 V AC); 0.42 A rms (100 V AC)
Maximum Long-Term Continuous Current (>10 sec)	3.2 A rms (115 V AC); 1.6 A rms (230 V AC); 3.7 A rms (100 V AC)
Burst Current (<1 sec)	5 A rms (115 V AC); 2.5 A rms (230 V AC); 5.8 A rms (100 V AC)
Maximum Instantaneous Peak Current	17 A pk (115 V AC); 8.5 A pk (230 V AC); 20 A pk (100 V AC)
Inrush Current	15 A pk (115 V AC); 13 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: 11.15 in (283 mm) x H: 22.47 in (571 mm) x D: 12.23 in (311 mm)
Weight	46 lb (20.87 kg)
Enclosure	Premium multi-ply birch with slightly textured black finish
Protective Grille	Powder-coated, hex-stamped steel with black mesh
Rigging	Aluminum end plates for mounting/flying cabinets with QuickFly and standard rigging options; metric M8 threaded points are used in all UPJ-1P rigging hardware

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 upon 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.

   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. The UPJ horn can be rotated to provide an 80° x 50° coverage pattern in either the horizontal or vertical plane.
6. Two additional 3-pin XLR input module options are available with polarity reversal switch and an attenuator (0 dB to -18 dB): one looping and one with two inputs for mono summing.
7. Amplifier wattage rating based on the maximum unclipped burst sine-wave rms voltage the amplifier will produce into the nominal load impedance.
8. 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.

ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be a self-powered, full-range system. The transducers shall consist of a 10-inch diameter cone driver with neodymium magnet 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, signal division, and driver protection for the high- and low-frequency sections. Each amplifier channel shall be class AB/bridged with complementary MOSFET output stages. Burst capability shall be 550 W total into nominal loads of 4 Ω low channel and 16 Ω high channel. 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 55 Hz – 20 kHz; phase response shall be 750 Hz – 18 kHz ±45°; linear Peak SPL shall be 125 dB with 18 dB crest factor, measured with M-noise, free-field at 4 m referred to 1 m; 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) input signal. Connectors shall be XLR 3-pin female input with male loop output.

The internal power supply shall perform automatic voltage selection, EMI filtering, soft current turn-on and surge suppression. Power 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. The AC power connector shall be a PowerCON with looping output.

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

All loudspeaker components shall be mounted in an acoustically vented trapezoidal 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: 11.15 in (283 mm) x H: 22.47 in (571 mm) x D: 12.23 in (311 mm). Weight shall be 46 lb (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.

Meyer Sound Laboratories, Inc.
2832 San Pablo Avenue
Berkeley, CA 94702

+1 510 486.1166
www.meyersound.com/contact
www.meyersound.com

UPJ-1P
04.134.097.01 C5