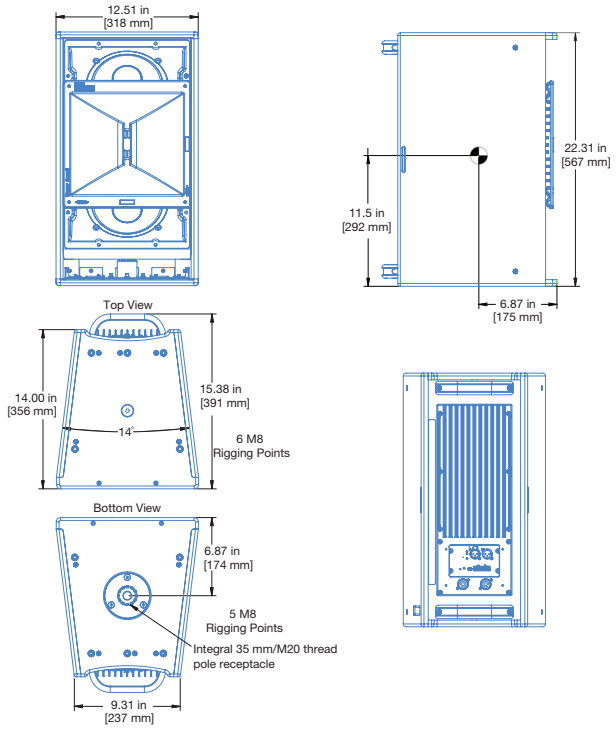
ULTRA-X40 Compact Wide Coverage Loudspeaker



Meyer Sound's new ULTRA-X40 design continues the tradition of the highly successful UPA loudspeakers—so versatile they have been a universal standard in almost every application for over 35 years. From touring performances to theme parks, worship venues to Broadway shows, and lecture halls to large scale concerts, Meyer Sound technology has delivered exceptional fidelity with high power, low distortion, and uniformly predictable behavior.

To this legacy, Meyer Sound incorporated technology from the popular and award-winning LEO® Family of loudspeakers to bring multiple enhancements to bear in the ULTRA-X40 design:

- An innovative, newly designed, highly efficient class D amplifier that reproduces any sound source with linearity over a wide dynamic range.
- Over 20 lbs (10 kgs) of weight reduction, as well as a reduction in overall size compared to the UPA loudspeakers for increased power to weight and size ratios.
- A concentric driver configuration with all the benefits of a coaxial driver, yet none of the disadvantages. In addition, this configuration supports directional control of frequencies down to 400 Hz.
- An extremely well-behaved rotatable horn designed for very precise, even coverage. This horn design, in conjunction with the concentric driver configuration, delivers the same pattern despite the orientation.

With these enhancements, the ULTRA-X40 loudspeaker provides high power output, low distortion, and consistent polar response in a more compact, vented enclosure. The loudspeaker features two 8 in cone low-frequency drivers and one 3 in diaphragm compression driver coupled with a rotatable 110° x 50° Constant-Q horn. A more controlled pattern is available on the ULTRA-X42 model, which is fitted with a 60° x 50° constant-Q horn.

Because of its proprietary, high-frequency horn, the beamwidth remains consistent within close tolerances in both the horizontal and vertical planes, and across the horn's operating frequency range. Uniformly predictable polar behavior takes much of the guesswork out of system design and assures optimal system performance.

A proprietary three-channel, class D digital power amplifier powers the ULTRA-X40 loudspeaker, which has a total peak power output of 1950 watts. Audio processing includes electronic crossover, correction filters for phase and frequency response, and driver protection circuitry. Phase-corrected electronics ensure flat acoustical amplitude and phase response, resulting in exceptional impulse response and precise imaging.

The amplifier/processing package incorporates Meyer Sound's Intelligent AC™, which auto-selects the correct operating voltage, suppresses high voltage transients, filters EMI and provides soft-start power-up. The ULTRA-X40 cabinet provides audio XLR and powerCON20 input and looping output connectors.

The optional RMS™ remote monitoring system module provides comprehensive monitoring of loudspeaker parameters from a host computer running Compass® software.

Meyer Sound builds the trapezoidal enclosure out of premium multi-ply birch with a slightly textured black finish. A powder-coated, hex-stamped steel grille provides protection to the front of the loudspeaker.

The ULTRA-X40 includes 11 integral M8 rigging points. It also includes an integral 35 mm stand mount receptacle with M20 threads for added stability. With this versatile integrated rigging, the ULTRA-X40 is ready for a wide variety of applications including those requiring pole mounting, hanging individually in horizontal or vertical orientations, or clustering.

Optional rigging accessories include an adjustable 35 mm pole with M20 slug, U-bracket, yoke, pick-up plates for horizontal and vertical mounting, and cluster plates for horizontal and vertical loudspeaker grouping. Other options include weather protection and custom color finishes.

FEATURES AND BENEFITS

- Exceptional fidelity and surprising power capability delivered in a compact, light enclosure
- Extraordinarily flat amplitude and phase response ensures tonal accuracy and precise imaging
- Wide pattern covers broad listening areas
- Rotatable horn provides installation flexibility
- Integral stand mount and QuickFly® mounting options facilitate rigging

APPLICATIONS

- Stadiums and themeparks
- Concert halls and houses of worship
- Theatrical sound reinforcement
- Portable and installed audio-visual systems
- Nightclubs
- Compact voice reinforcement systems

PRELIMINARY SPECIFICATIONS

ACOUSTICAL	
Operating Frequency Range	60 Hz – 18 kHz
Phase Response	100 Hz – 16 kHz ±45°
Linear Peak SPL[1]	**130.5 dB (M-noise),** 128 dB (Pink Noise), 131.5 dB (B-noise)
COVERAGE	
	Rotatable horn: 110° x 50° (ULTRA-X40) or 60°x 50° (ULTRA-X42)
TRANSDUCERS	
Low Frequency	Two 8 in cone drivers
High Frequency	One 3 in diaphragm compression driver connected to a rotatable horn
AUDIO INPUT	
Connectors	XLR 3 female input with male loop output. Optional XLR 5-pin connector to accommodate both balanced audio and RMS signals.
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	3-channel, Class-D
Total Output Power	1950 W peak
AC POWER	
Connectors	powerCON 20 input with loop output
Safety Rated Voltage Range	100–240 V AC, 50–60 Hz
CURRENT DRAW	
Maximum Long-Term Continuous Current (>10 sec)	2.3 A rms (115 V AC); 1.16 A rms (230 V AC); 2.8 A rms (100 V AC)
PHYSICAL	
Dimensions	W: 12.51 in (318 mm) x H: 22.31 in (567 mm) x D: 14 in (356 mm)
Weight	< 55 lb (25 kg)
Enclosure	Premium multi-ply birch with slightly textured black finish
Protective Grille	Powder-coated, hex-stamped steel

1. **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 (10Hz–22.5 kHz) test signal developed by Meyer Sound to better measure a 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.

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Pending Approval