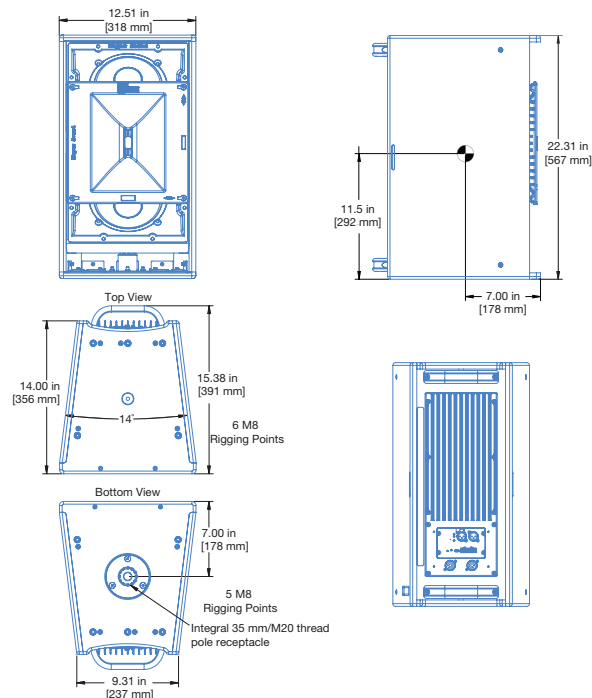


# ULTRA-X42 Compact Narrow Coverage Loudspeaker



Meyer Sound's ULTRA-X42 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 theater 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-X42 design:

- An innovative, highly efficient class D amplifier that reproduces any sound source with linearity over a wide dynamic range.
- Weight reduction of 25 lb (11 kg), 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-X42 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 70° x 50° Constant-Q horn. A wider coverage pattern is available on the ULTRA-X40 model, which is fitted with a 110° 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-X42 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-X42 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 multiply birch with a slightly textured black finish. A powder-coated, round-perforated steel grille provides protection to the front of the loudspeaker.

The ULTRA-X42 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-X42 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, a U-bracket, a yoke, a pinnable link on a channel that allows the hanging of multiple units from a single pick-up point, 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
- Controlled coverage pattern
- Rotatable horn provides installation flexibility
- Integral stand mount and QuickFly® mounting options facilitate rigging

## APPLICATIONS

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

## ACCESSORIES AND ASSOCIATED PRODUCTS

**MCP50-X40 Cluster Plate Kit:** The MCP50-X40 50° Cluster Plate kit includes two cluster plates to facilitate installation of ULTRA-X40/42 loudspeakers in both horizontal and vertical clusters at variable angles between 10° and 50°. The kit includes eight M8 bolts and eight M8 knobs. The MCP50-X40 Cluster Plate also accepts the MTC-X40 top channel for use as pick up point (sold separately).

**MCP70-X40 Cluster Plate Kit:** The MCP70-X40 70° Cluster Plate kit includes two cluster plates to facilitate installation of ULTRA-X40/42 loudspeakers in both horizontal and vertical clusters at variable angles between 40° and 70°. The kit includes eight M8 bolts and eight M8 knobs. The MCP70-X40 Cluster Plate also accepts the MTC-X40 top channel for use as pick up point (sold separately).

**MPK-POLE-35MM-M20 Adjustable Pole Kit:** Adjustable length 927–1524 mm (36.5–60 in), 35 mm (1.375 in) pole with assisted lift. Lower shaft fits 35 mm cups or use the removable M20 threaded lug for added stability. Upper shaft includes the PAS-M20 Adapter Sleeve to fit loudspeakers with 35 mm and M20 internal pole mounts onto a 35 mm speaker stand. (The PAS-M20 Adapter Sleeve is also sold separately). Additional 38 mm (1.5 in) adapter included.

**MTB-X40 Top Bracket Kit:** The MTB-X40 Top Bracket kit includes a heavy-duty, U-bracket style accessory that facilitates mounting of up to three ULTRA-X40/42 loudspeakers from the ceiling or a truss. The design supports up to 25° of downtilt and 5° of uptilt. In addition, the MTB-X40 Top Bracket enables mounting of a single ULTRA-X40/42 onto the floor for front-fills. The kit includes four M8 bolts and four M8 knobs.

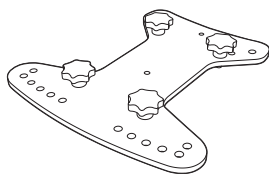
**MTC-X40 Top Channel Kit:** The MTC-X40 Top Channel kit includes a pinnable link in a channel that mounts directly to the ULTRA-X40/42 rig nuts or into an MCP plate and supports pick-up of up to three ULTRA-X40/42 loudspeakers from a single point using the two included lock pins and 3/8 in black shackle. The kit includes two M8 bolts for attaching to the speaker or to an MCP50-X40 or MCP70-X40 plate.

**MUB-X40 U-Bracket Kit:** The MUB-X40 U-Bracket allows a single ULTRA-X40/42 loudspeaker to be mounted to a wall (in either vertical or horizontal orientations), to the ceiling or onto the floor. The kit includes two M8 bolts, two M8 knobs, and the **Thread Reducer M20 to M8 (35 mm)** thread size adapter to convert the cabinet's built-in pole mount internal threads to M8 size.

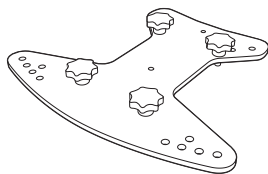
**MYA-X40 Yoke Kit:** The MYA-X40 Yoke suspends a single ULTRA-X40/42 loudspeaker and supports a wide range of horizontal and vertical adjustments. The yoke attaches to the top of the loudspeaker using three rig nuts. The kit includes three M8 bolts and three M8 knobs. The yoke may also be mounted onto a 35 mm pole using the optional MSA-STAND adapter accessory to facilitate easy panning and tilting.

**MSA-STAND Adapter Cup 35MM:** The MSA-STAND Adapter Cup can be used to mount the MYA-X40 yoke onto a 35 mm pole to allow for easy panning and tilting of the ULTRA-X40/42.

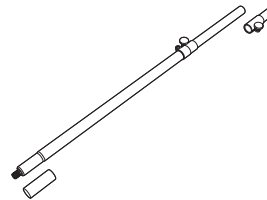
**Thread Reducer M20 to M8 (35 mm):** The Thread Reducer kit includes a 35 mm diameter, M20 to M8 thread size adapter to convert the cabinet's built-in pole mount internal threads to M8 size.



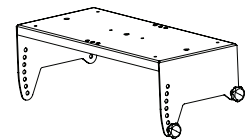
MCP50-X40 Cluster Plate



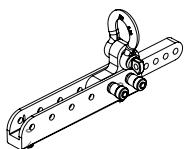
MCP70-X40 Cluster Plate



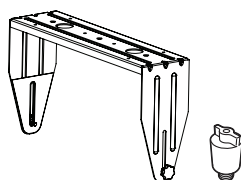
MPK-POLE 35MM M20 Pole Kit  
(PAS-M20 Adapter Sleeve and  
38 mm (1.5 in) adapter included)



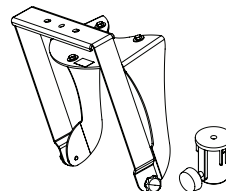
MTB-X40 Top Bracket



MTC-X40 Top Channel



MUB-X40 U-Bracket  
(Thread Reducer M20 to M8  
(35 mm) included)



MYA-X40 Yoke and optional  
MSA-STAND Adapter Cup 35MM



Thread Reducer M20 to M8  
(35 mm)

## SPECIFICATIONS

ACOUSTICAL <sup>1</sup>	
Operating Frequency Range <sup>2</sup>	56 Hz – 18.5 kHz
Frequency Response <sup>3</sup>	60 Hz – 17.5 kHz ± 4 dB
Phase Response	92 Hz – 18 kHz ±45°
Linear Peak SPL <sup>4</sup>	<b>134 dB (M-noise)</b> , 132 dB (Pink Noise), 134 dB (B-noise)
COVERAGE	
	Rotatable horn: 70° x 50°
TRANSDUCERS	
Low Frequency	Two 8 in cone drivers; 4 Ω nominal impedance
High Frequency	One 3 in diaphragm compression driver connected to a rotatable horn; 8 Ω nominal impedance
AUDIO INPUT	
Type	Differential, electronically balanced
Maximum Common Mode Range	±15 V DC, clamped to earth for voltage transient protection
Connectors	XLR 3-pin female input with male loop output; optional XLR 5-pin connector to accommodate both balanced audio and RMS signals.
Input Impedance	10 kΩ differential between pins 2 and 3
Wiring <sup>5</sup>	Pin 1: Chassis/earth through 1 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 2: Signal + Pin 3: Signal – Pin 4: RMS (polarity insensitive) Pin 5: RMS (polarity insensitive) 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	3-channel, Class-D
Total Output Power <sup>6</sup>	1950 W peak
THD, IM, TIM	<0.02%
Cooling	Convection
AC POWER	
Connector	powerCON 20 input with loop output
Automatic Voltage Selection	90–265 V AC, 50–60 Hz
Safety Rated Voltage Range	100–240 V AC, 50–60 Hz
Turn-on and Turn-off Points	90 V AC turn-on, no turn-off; internal fuse protection above 265 V AC
CURRENT DRAW	
Idle Current	0.27 A rms (115 V AC); 0.25 A rms (230 V AC); 0.29 A rms (100 V AC)
Maximum Long-Term Continuous Current (>10 sec)	1.9 A rms (115 V AC); 1.0 A rms (230 V AC); 2.2 A rms (100 V AC)
Burst Current (<1 sec) <sup>7</sup>	3.1 A rms (115 V AC); 1.5 A rms (230 V AC); 3.4 A rms (100 V AC)
Maximum Instantaneous Peak Current	6.9 A rms (115 V AC); 3.4 A rms (230 V AC); 7.9 A rms (100 V AC)
Inrush Current	<20 A peak
RMS NETWORK (OPTIONAL)	
	Two-conductor twisted-pair network that reports all operating parameters of amplifiers to system operator's host computer.

## SPECIFICATIONS, CONT'D.

PHYSICAL	
Dimensions	W: 12.51 in (318 mm) x H: 22.31 in (567 mm) x D: 14 in (356 mm); D with handles: 15.38 in (391 mm)
Weight	52 lb (23.6 kg)
Enclosure	Premium multi-ply birch with slightly textured black finish
Protective Grille	Powder-coated, round-perforated steel
Rigging	11 integrated M8 threaded points; 35 mm Pole Mount with M20 thread; optional accessories for various rigging options (see accessories section).

## NOTES

- Loudspeaker system predictions for coverage and SPL are available in Meyer Sound's MAPP System Design Tool.
- Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
- Free-field, measured with 1/3 octave frequency resolution at 4 m.
- 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.  
**Pinknoise** 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.
- Pins 4 and 5 (RMS) only included with XLR 5-pin connector that accommodates both balanced audio and RMS signals.
- Peak power based on the maximum unclipped peak voltage the amplifier will produce into the nominal load impedance.
- AC power cabling must be of sufficient gauge so that under burst current rms conditions, cable transmission losses do not cause the loudspeaker's voltage to drop below the specified operating range.

## ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be a self-powered, full-range system. The transducers shall consist of two 8 in cone drivers and one 3 in diaphragm compression driver connected to a 70° x 50° rotatable horn.

The loudspeaker system shall incorporate internal processing electronics and a three-channel, class D amplifier. Processing functions shall include equalization, phase correction, signal division and protection for the high- and low-frequency sections. Peak output power shall be 1950 W total with nominal 8 Ω resistive load for the high-frequency channel and 4 Ω for the low-frequency channels. 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 56 Hz – 18.5 kHz; phase response shall be 92 Hz – 18 kHz ±45°; linear peak SPL shall be 134 dB measured with M-noise, free-field at 4 m referred to 1 m; Coverage (–6 dB points) shall be 70° by 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) signal. Connector shall be XLR 3-pin female male loop.

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 current at 50 or 60 Hz. UL and CE operating voltage range shall be 100–240 V AC. Maximum peak current draw during burst shall be 3.1 A rms (115 V AC), 1.5 A rms (230 V AC), and 3.4 A rms (100 V AC). Current inrush during soft turn-on shall not exceed 20 A at 115 V AC. AC power connector shall be powerCON.

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, round-perforated steel. Dimensions shall be W: 12.51 in (318 mm) x H: 22.31 in (567 mm) x D: 14 in (356 mm) or 15.38 in (391 mm) with handles. Weight shall be 52 lb (23.6 kg).

The loudspeaker shall be the Meyer Sound ULTRA-X42.