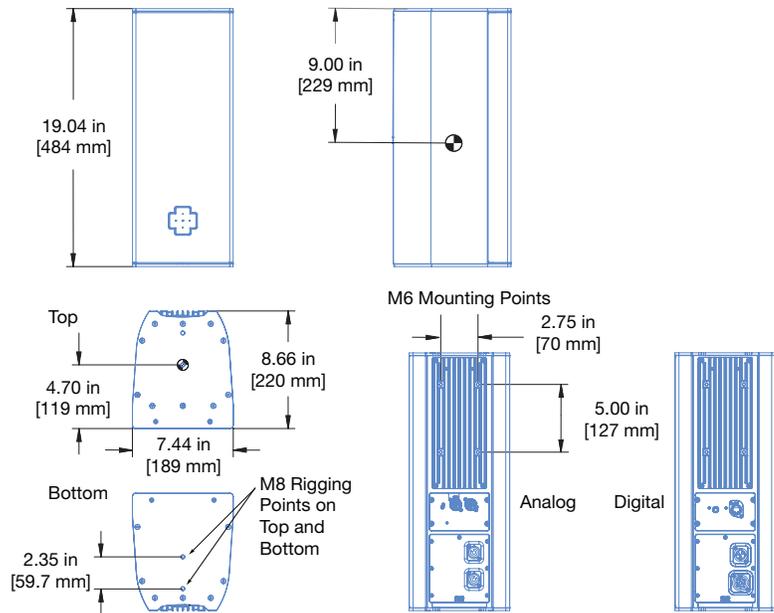
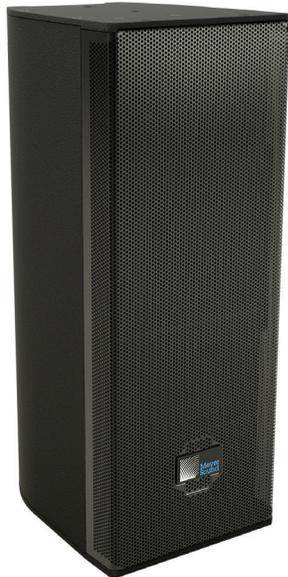


ULTRA-X20 Compact Wide Coverage Loudspeaker

ULTRA-X22 Compact Narrow Coverage Loudspeaker

ULTRA-X23 Compact Broad Coverage Loudspeaker



Meyer Sound's ULTRA-X20™ design extends the award-winning, state-of-the-art ULTRA-X40™ point source technology to a smaller version for size- and weight-critical applications. Features include:

- An innovative, highly efficient class-D amplifier that reproduces any sound source with linearity over a wide dynamic range.
- A concentric driver configuration that has all the benefits of a coaxial driver, yet none of the disadvantages. In addition, this configuration supports directional control of frequencies down to 600 Hz.
- A rotatable, extremely well-behaved horn designed for very precise, even coverage. This horn design, in conjunction with the concentric driver configuration, delivers the same pattern regardless of orientation.

The ULTRA-X20 loudspeaker provides high power output, low distortion, and consistent polar response in a very compact, vented enclosure. The loudspeaker features two 5-inch cone low-frequency drivers and one 2-inch diaphragm compression driver coupled with a rotatable 110° x 50° constant-Q horn. A more controlled pattern is available on the ULTRA-X22™ model, which is fitted with a rotatable 80° x 50° constant-Q horn. A broader coverage version, the ULTRA-X23™, offers a 110° x 110° 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-X20 loudspeaker, which has a total peak power output of 860 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-X20 cabinet has audio XLR and PowerCON 20 input and looping output connectors. The digital audio version provides a Milan Certified format with an etherCON TOP connector and powerCON TRUE1 TOP input and looping output.

Remote monitoring is possible on the analog version via the optional RMS remote monitoring system module, which in conjunction with the optional RMServer™ hardware unit, provides comprehensive monitoring of loudspeaker parameters from a host computer running Compass® Control Software. The digital version provides integrated monitoring via Compass Control Software.

Meyer Sound builds the slightly curved enclosure out of aluminum with a slightly textured black finish. A powder-coated, round-perforated steel grille provides protection to the front of the loudspeaker. The cabinet weighs only 27 lbs (12.3 kg).

The ULTRA-X20 includes two integral M8 rigging points on each end to enable a variety of configurations including those requiring pole mounting, hanging individually from a single point, wall mounting or ceiling mounting. In addition, the ULTRA-X20 includes four M6 threaded holes with 5-inch by 2.75-inch (127 mm by 70 mm) hole pattern on the rear for use with third-party wall mounts.

Optional rigging accessories include a 35 mm to M8 pole adapter, a U-bracket, a yoke, and a pinnable link on a channel that allows the hanging of one or two units from a single pick-up point. Other options include weather protection and custom color finishes.

FEATURES AND BENEFITS

- A compact, elegant and light aluminum enclosure encases exceptional fidelity and surprising power capability
- 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

- Multi-purpose Audio/Visual
- Corporate rental
- Houses of worship
- Conference rooms
- High-end private installations
- Retail spaces
- Theater

ACCESSORIES AND ASSOCIATED PRODUCTS

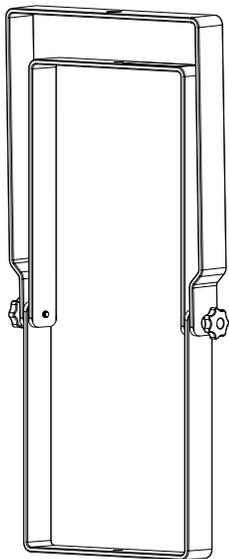
MYA-X20 Yoke Kit (PN 40.297.450.01): The MYA-X20 Yoke suspends a single ULTRA-X20/22/23 loudspeaker and supports a wide range of horizontal and vertical adjustments. The yoke attaches to the top and bottom of the loudspeaker using two included M8 bolts/washers. The kit also includes two M8 knobs/washers. The yoke may also be mounted on a 35 mm pole to facilitate easy panning and tilting by using the optional PAS-M8 Adapter Sleeve.

MTC-X20 Top Channel Kit (PN 40.297.430.01): The MTC-X20 Top Channel kit includes a pinnable link in a channel that mounts directly to the top of the ULTRA-X20/22/23 rig nuts and supports pick-up of up to two ULTRA-X20/22/23 loudspeakers from a single point using the two included lock pins and 3/8-inch shackle. The kit includes two M8 socket head screws for attaching the channel to the loudspeaker.

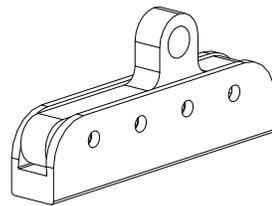
PAS-M8 Adapter Sleeve M8 (35 MM Pole) (PN 40.010.975.01): The PAS-M8 Adapter Sleeve allows the user to connect a 35 mm pole to the ULTRA-X20 M8 rig nuts on the top/bottom of the loudspeaker. It can also be used with the MYA-X20 to pole-mount the yoke (a nut and washer are required for this application).

MUB-X20 U-Bracket Kit (40.297.454.01): The MUB-X20 U-Bracket allows a single ULTRA-X20/22/23 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/washers and two M8 knobs/washers.

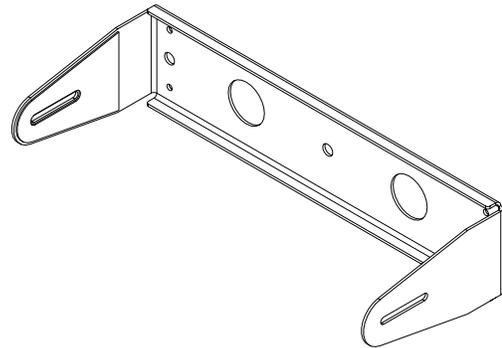
MPK-POLE 35MM/M20 Adjustable Pole Kit (PN 40.010.973.01): Adjustable length 927–1524 mm (36.5–60 inches) pole with assisted lift. Lower shaft fits 35 mm cups or use the removable M20 threaded lug for added stability in pole mount cups. Additional 35 mm to 38 mm (1.5 inch) adapter included. Upper shaft accepts the PAS-M8 Adapter Sleeve to fit loudspeakers with M8 rig nuts onto a 35 mm speaker stand. The PAS-M20 and 750-LFC/900-LFC Subwoofer Internal Pole Mount Cup (35 mm/M20) are also included.



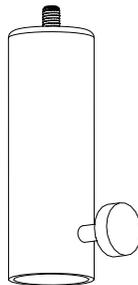
MYA-X20 Yoke
(PN 40.297.450.01)



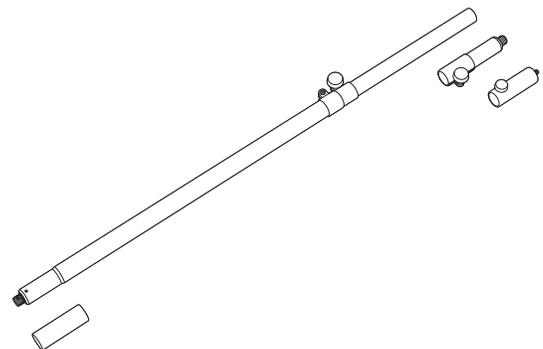
MTC-X20 Top Channel
(PN 40.297.430.01)



MUB-X20 U-Bracket (PN 40.297.454.01)



PAS-M8 Adapter Sleeve
M8 (35 MM Pole)
(PN 40.010.975.01)



MPK-POLE Pole Kit (PN 40.010.973.01)

SPECIFICATIONS

ACOUSTICAL ²	ULTRA-X20	ULTRA-X22	ULTRA-X23
Operating Frequency Range ³	60 Hz – 18 kHz	60 Hz – 18 kHz	60 Hz – 18 kHz
Frequency Response ⁴	65 Hz – 17.5 kHz ± 4 dB	65 Hz – 17.5 kHz ± 4 dB	65 Hz – 17.5 kHz ± 4 dB
Phase Response	95 Hz – 18 kHz ±45°	95 Hz – 18 kHz ±45°	95 Hz – 18 kHz ±45°
Linear Peak SPL ⁵	127 dB with 20 dB crest factor (M-noise), 123.5 dB (Pink Noise), 125.5 dB (B-noise)	128.5 dB with 20 dB crest factor (M-noise), 123.5 dB (Pink Noise), 125 dB (B-noise)	127.5 dB with 20 dB crest factor (M-noise), 124 dB (Pink Noise), 125.5 dB (B-noise)
COVERAGE			
	Rotatable horn: 110° x 50°	Rotatable horn: 80° x 50°	110° x 110°
TRANSDUCERS			
Low Frequency	Two 5-inch cone drivers; 6 Ω nominal impedance		
High Frequency	One 2-inch diaphragm compression driver connected to a rotatable horn; 8 Ω nominal impedance		
AUDIO INPUT	ANALOG AUDIO VERSION		DIGITAL AUDIO VERSION
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 connectors to accommodate both balanced audio and RMS signals; XLR 3-pin TOP (Total Outdoor Protection) connectors on weather-protected units only.		etherCON TOP
Input Impedance	10 kΩ differential between pins 2 and 3		—
Wiring ⁶	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.		—
Digital Format	—		Milan Certified
AMPLIFIER			
Type	Three-channel, Class-D		
Total Output Power ⁷	860 W peak		
THD, IM, TIM	<0.02%		
Cooling	Convection		
AC POWER			
Connector	powerCON 20 input with loop output; powerCON TRUE1 TOP with loop output on digital and weather-protected units		
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		

SPECIFICATIONS, CONT'D.

CURRENT DRAW		
Idle Current	0.15 A rms (115 V AC); 0.13 A rms (230 V AC); 0.16 A rms (100 V AC)	
Maximum Long-Term Continuous Current (>10 sec)	0.9 A rms (115 V AC); 0.5 A rms (230 V AC); 1.1 A rms (100 V AC)	
Burst Current (<1 sec) ⁸	1.6 A rms (115 V AC); 0.8 A rms (230 V AC); 1.8 A rms (100 V AC)	
Maximum Instantaneous Peak Current	3.5 A peak (115 V AC); 1.8 A peak (230 V AC); 4.1 A peak (100 V AC)	
Inrush Current	< 20 A peak	
REMOTE MONITORING	ANALOG AUDIO VERSION ⁹	DIGITAL AUDIO VERSION
	Optional RMS module: two-conductor twisted-pair network that reports all operating parameters of amplifiers to system operator's host computer via the RMServer hardware unit.	Integrated monitoring via Compass Control Software
PHYSICAL		
Dimensions	W: 7.44 in (189 mm) x H: 19.04 in (484 mm) x D: 8.66 in (220 mm)	
Weight	27 lb (12.3 kg)	
Enclosure	Aluminum with slightly textured black finish	
IP Rating	Weather-protected version rated IP54. See the ULTRA-X20 Operating Instructions available at meyersound.com/documents for details.	
Protective Grille	Powder-coated, round-perforated steel	
Rigging	Two integrated M8 threaded points on each end; optional accessories for various rigging options (see accessories section); four M6 threaded holes with 5-inch by 2.75-inch (127 mm by 70 mm) hole pattern on the rear for use with third-party wall mounts.	

NOTES

- Milan is a trademark of the Avnu Alliance (avnu.org).
- 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 °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.
- Pins 4 and 5 (RMS) only included with XLR 5-pin connector that accommodates both balanced audio and RMS signals. The 5-pin XLR connector is not available on weather-protected models.
- 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.
- RMServer hardware unit required and sold separately.

ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be a self-powered, full-range system. The transducers shall consist of two 5-inch cone drivers and one 2-inch diaphragm compression driver connected to horns with different coverage depending on the model. The wide coverage model shall have a 110° x 50° rotatable horn. The narrow coverage model shall have a 80° x 50° rotatable horn. The broad coverage shall have a 110° x 110° 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 860 W total with 8 Ω nominal impedance for the high-frequency channel and 6 Ω nominal impedance 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 60 Hz – 18 kHz; phase response shall be 95 Hz – 18 kHz ±45°. Linear peak SPL for the wide coverage version shall be 127 dB with 20 dB crest factor, measured with M-noise, free-field at 4 m referred to 1 m, and its coverage pattern (–6 dB points) shall be 110° by 50°, horizontal or vertical dependent on horn orientation. Linear peak SPL for the narrow coverage version shall be 128.5 dB with 20 dB crest factor, measured with M-noise, free-field at 4 m referred to 1 m, and its coverage pattern (–6 dB points) shall be 80° by 50°, horizontal or vertical dependent on horn orientation. Linear peak SPL for the broad coverage version shall be 127.5 dB with 20 dB crest factor, measured with M-noise, free-field at 4 m referred to 1 m, and its coverage pattern (–6 dB points) shall be 110° by 110°.

For the analog version, the audio input shall be electronically balanced with a 10 kΩ impedance and shall accept a nominal 0 dBV (1 V rms) signal. The connector shall be a XLR 3-pin female with male loop. On weather-protected units, the connectors shall be 3-pin XLR TOP connectors. For the digital

version, the audio format shall be Milan Certified, and the connector shall be etherCON TOP.

The internal power supply shall perform automatic voltage selection, EMI filtering, soft current turn-on and surge suppression. Powering requirements shall be nominal 100, 115 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 1.6 A rms (115 V AC); 0.8 A rms (230 V AC); 1.8 A rms (100 V AC). Current inrush during soft turn-on shall not exceed 20 A at 115 V AC. The AC power connector shall be powerCON. For digital and weather-protected units, the AC power connector shall be powerCON TRUE1 TOP with loop output.

The loudspeaker shall provide capability to install Meyer Sound's optional RMS remote monitoring system on the analog version. Remote monitoring shall be integrated in the digital version.

All loudspeaker components shall be mounted in an acoustically vented trapezoidal enclosure constructed of aluminum with a slightly textured black finish with two integrated M8 threaded points on each end and four M6 threaded holes with 5-inch by 2.75-inch (127 mm by 70 mm) hole pattern on the rear. The front protective grille shall be powder-coated, round-perforated steel. Dimensions shall be W: 7.44 in (189 mm) x H: 19.04 in (484 mm) x D: 8.66 in (220 mm).

Weight shall be 27 lb (12.3 kg).

The wide coverage loudspeaker model shall be the Meyer Sound ULTRA-X20. The narrow coverage loudspeaker model shall be the Meyer Sound ULTRA-X22. The broad coverage loudspeaker model shall be the Meyer Sound ULTRA-X23.



Digital Version

