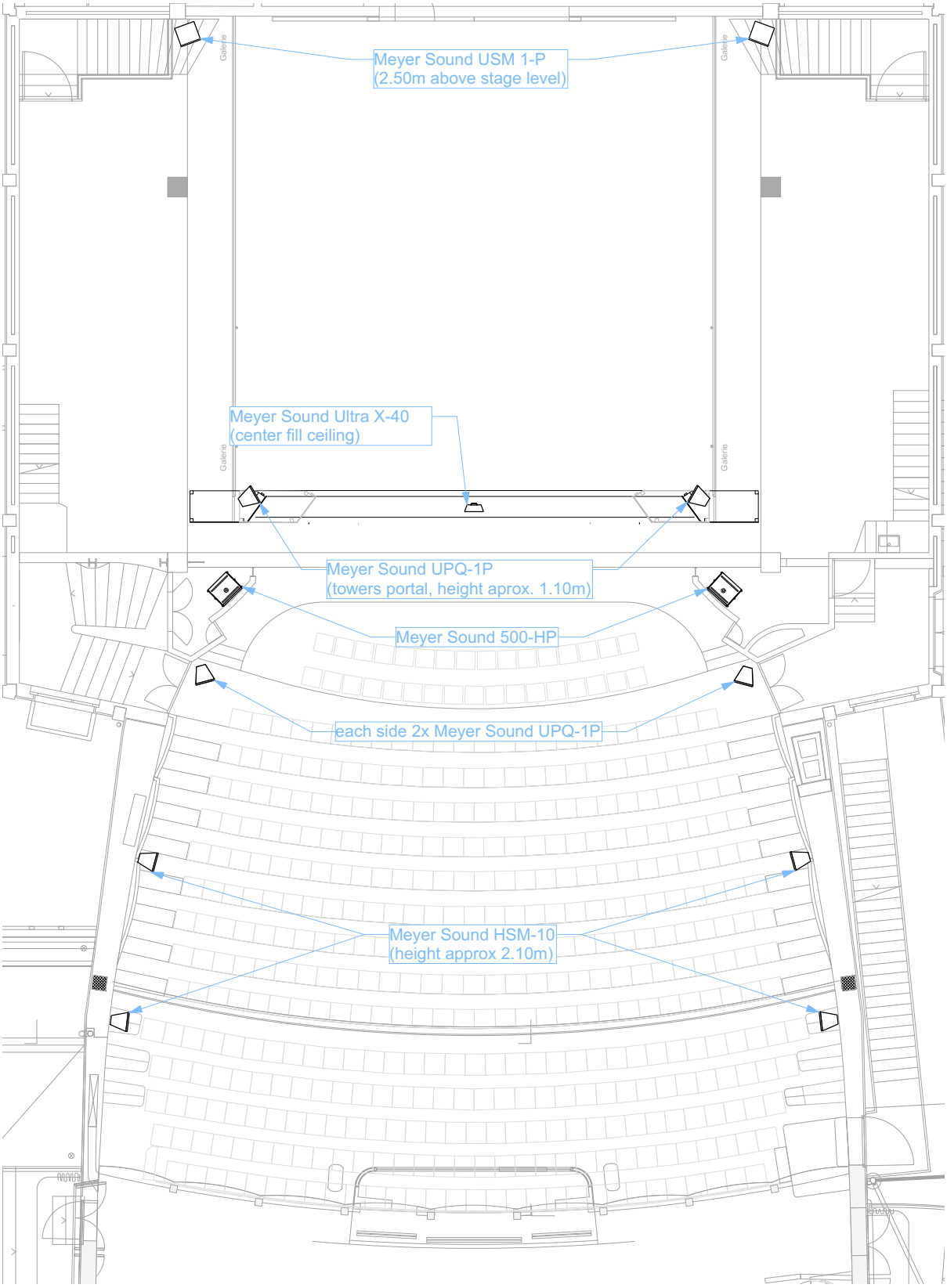
Speakers Theatersaal:



Theatersaal, Front of House PA:

Controller & Connections

We use Meyer Sound active point source speakers for all purposes.

Front of House System is controlled via a Galileo Galaxy controller.

Although our system is tuned, we can give your audio engineers full access to the controller to do finetuning.

Although we have 590 seats, our auditorium is very compact, so point sources work fine.

Inputs:

If you use our mixing console (DigiCo Quantum 338):

Tops L/R ; Subs L/R ; Centerfill & all surrounds and monitors on matrix outputs.

If you use your own console:

All inputs on stage. We DON'T have any analog-connections from FOH to stage. But if needed, we can install a multicore-cable through the auditorium.

Cat.6: at the moment we have only 2 available Cat.6 lines from FOH to stage. One to stage left, one to stage right. DANTE & AES67 (like Midas/Behringer) works fine.

Fiber: 4 Neutrik OpticalCon Duo Single Mode Lines from FOH to Stage

Guest-Input on stage: 2x XLR L/R analog to Galileo Galaxy controller

Or if you like separate controls: 5x XLR AES-EBU (Front L/R, Sub L/R, Center-fill)

Alternative: Use our Mixing Console as a matrix

Important: We can not remove our Quantum 338 console from FOH, but we have a nice solution for placing your consoles, please refer to separate document "Kurtheater FOH"

Sound preassure levels:

Swiss Federal Loudness Law:

Summary: Sound pressure level must not exceed 96dB(A) LEQ 60min (average measurement over 1h) and 125dB(A) peak at any time during rehearsals and show. We're using a sound pressure level meter with recording, as specified by law. Level-display at FOH. We measure the loudest point in the auditorium. By law, the promoter of the show is fully responsible for compliance of this law. So if you rent our house, it's you. If it's a curated show of our house, it's us.

But: don't worry! 96dB LEQ60 is really loud for theatre, we never ever touched this level, not even with contemporary dance-shows.

House rules:

Because "loud" doesn't mean "better" our sound engineer and/or the art-director of the house reserves the right to take down the level. But this is usually never necessary, because you will bring professional sound engineers with healthy ears. Just saying…No worries, we will have fun;)

For further questions, please contact philipp.ernst@kurtheater.ch

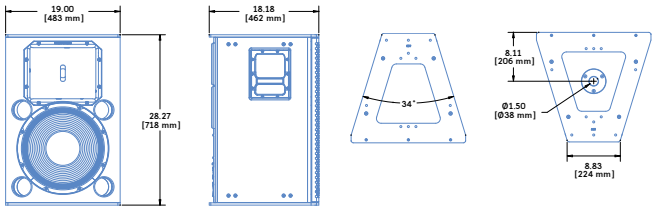
Theatersaal, Front of House PA: Top-Speakers: 4x UPQ-1P

Speakers on fixed positions, can't be moved under any circumstances

DATASHEET ULTRASERIES

UPQ-1P : Wide Coverage Loudspeaker

thinking sound Meyer Sound



Dimensions	19.00" w x 28.27" h x 18.18" d (483 mm x 718 mm x 462 mm)
Weight	108 lbs (49 kg)
Enclosure	Multi-ply hardwood
Finish	Black textured
Protective Grille	Powder-coated hex-stamped steel, black mesh screen
Rigging	Aluminum end plates on top and bottom with metric M10 threaded points; integral 1-1/2" (38 mm) pole mount receptacle on bottom

The UPQ-1P self-powered wide coverage loudspeaker offers an extremely consistent polar response, and is distinguished by its constant-Q horn that provides 80-degree horizontal by 50-degree vertical coverage (-6 dB points) and a gentle coverage rolloff that extends uniformly out to its -10 dB points of 100 by 60 degrees. The horn's smooth and consistent performance is the result of meticulous research in Meyer Sound's anechoic chamber, and it exhibits a remarkably consistent beamwidth in both the horizontal and vertical planes across a wide frequency range of 1 kHz to 18 kHz. In addition, the UPQ-1P horn delivers uniform attenuation for all frequencies outside the specified beamwidth.

The UPQ-1P also provides extremely high power output with low distortion in a compact, vented two-way enclosure. In addition to the constant-Q horn, the loudspeaker features a low frequency 15-inch neodymium magnet cone driver and 4-inch diaphragm compression driver, which are designed and manufactured at Meyer Sound's Berkeley, California headquarters. The UPQ-1P is suitable for a range of sound reinforcement applications, as a front-of-house main loudspeaker in small to mid-sized venues, or as a fill loudspeaker in larger systems. A proprietary two-channel, class AB/H power amplifier with complementary MOSFET output stages yields a total power output of 1275 W. Audio input is routed through an electronic crossover and correction filters, as well as through driver-protection circuitry. Phase-corrected processing ensures a flat acoustical amplitude and phase response, resulting in an exceptional impulse response and precise imaging.

Each amplifier channel has sophisticated limiters that are easily monitored with the limit LEDs on the unit's rear panel. The UPQ-1P's modular amplifier and processing electronics incorporate Meyer Sound's Intelligent AC™ power supply, which adapts to any power voltage worldwide and provides soft-turn on and transient protection. The UPQ-1P comes standard with XLR input and looping output connectors; an optional version of the loudspeaker includes polarity switching and input attenuation (from 0 dB to -18 dB). The UPQ-1P is also compatible with Meyer Sound's RMS™ remote monitoring system, which offers comprehensive monitoring of system parameters on a Windows®-based network.

The UPQ-1P's durable trapezoidal enclosure has a textured, hard-shell black finish, an integral pole mount receptacle, and versatile rigging end plates. The end plates are made of heavy-duty, high-strength, corrosion-resistant 6061-T6 aluminum, with threaded M10 attachment points for basic eyebolt rigging. QuickFly® rigging options include the MPA-UPQ pick-up and array plate and MYA-UPQ mounting yoke. Other options include Meyer Sound weather protection, custom cabinets without handles, and custom color finishes for specific cosmetic requirements.

FEATURES & BENEFITS

- Wide, symmetrical pattern covers broad listening areas
- Extraordinarily flat amplitude and phase response for tonal accuracy and precise imaging
- Integral pole mount and quick and easy QuickFly mounting options
- Constant-Q horn affords uniform response throughout coverage area
- Exceptional size to power ratio
- Consistent and predictable performance ensures accurate system design

APPLICATIONS

- Theatrical sound reinforcement
- Houses of worship
- Portable and installed audio-visual systems
- Centerfill and sidefill
- Nightclubs

UPQ-1P SPECIFICATIONS

ACOUSTICAL	
Operating Frequency Range[1]	55 Hz – 18 kHz
Frequency Response[2]	60 Hz – 16 kHz ±4 dB
Phase Response	470 Hz – 16 kHz ±45˚
Maximum Peak SPL[3]	136 dB
Dynamic Range	›110 dB
COVERAGE	
	80˚ horizontal x 50˚ vertical (–6 dB) 100˚ horizontal x 60˚ vertical (–10 dB)
CROSSOVER[4]	
	770 Hz
TRANSDUCERS	
Low Frequency	High-power 15" cone driver with neodymium magnet Nominal impedance: 2 Ω Voice coil size: 4" Power handling capability: 1200 W (AES)[5]
High Frequency	4" compression driver Nominal impedance: 8 Ω Voice coil size: 4" Diaphragm size: 4" Exit size: 1.5" Power handling capability: 250 W (AES)[5]
AUDIO INPUT	
Type	Differential, electronically balanced
Maximum Common Mode Range	±15 V DC, clamped to earth for voltage transient protection
Connectors	Female XLR input with male XLR loop output or VEAM all-in-one connector (integrates AC, audio, and network)
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)[6] Case: Earth ground and chassis
DC Blocking	Differential DC blocking up to max common mode voltage
CMRR	›50 dB, typically 80 dB (50 Hz–500 Hz)
RF Filter	Common mode: 425 kHz; Differential mode: 142 kHz
TIM Filter	Integral to signal processing (‹80 kHz)
Nominal Input Sensitivity	0 dBV (1 V rms, 1.4 V pk) continuous is typically the onset of limiting for noise and music
Input Level	Audio source must be capable of producing +20 dBV (10 V rms, 14 V pk) into 600 Ω in order to produce maximum peak SPL over the operating bandwidth of the loudspeaker
AMPLIFIER	
Type	Two-channel complementary MOSFET output stages (class AB/H)
Output Power[7]	1275 W (1 x 1000 W, 1 x 275 W)
Total Output[8]	2550 W peak
THD, IM, TIM	‹.02%
Load Capacity	2 Ω low channel; 8 Ω high channel
Cooling[9]	Convection at low to mid audio levels; fan-assisted only at high audio levels
AC POWER	
Connector	PowerCon with looping output or VEAM
Voltage Selection	Automatic, two ranges, each with high-low voltage tap (uninterrupted)
Safety Agency Rated Operating Range	95 V AC – 125 V AC; 208 V AC – 235 V AC, 50/60 Hz
Turn-on and Turn-off Points	85 V AC – 134 V AC; 165 V AC – 264 V AC
Current Draw: Idle Current	0.5 A rms (115 V AC); 0.28 A rms (230 V AC); 0.56 A rms (100 V AC)
Max Long-Term Continuous Current (›10 sec)	3.9 A rms (115 V AC); 2.0 A rms (230 V AC); 4.4 A rms (100 V AC)
Burst Current (‹1 sec)[10]	7.0 A rms (115 V AC); 3.9 A rms (230 V AC); 8.2 A rms (100 V AC)
Ultimate Short-Term Peak Current Draw	18.0 A pk (115 V AC); 10.5 A pk (230 V AC); 20.0 A pk (100 V AC)
Inrush Current	6.0 A pk (115 V AC); 8.4 A pk (230 V AC); 7.1 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

NOTES:

1. *Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.*
2. *Free field measured with 1/3-octave frequency resolution at 4 meters.*
3. *Measured with music, free field, referred to 1 meter.*
4. *At this frequency, the transducers produce equal sound pressure levels.*
5. *Power handling is measured under AES standard conditions: transducers driven continuously for two hours with band limited noise signal having a 6 dB peak-average ratio.*
6. *An additional input module option is available with a polarity reversal switch and an attenuator (0 dB to –18 dB).*
7. *Amplifier wattage rating based on the maximum unclipped burst sine-wave rms voltage that the amplifier will produce for at least 0.5 seconds into the nominal load impedance.*
8. *Peak power based on the maximum unclipped peak voltage that the amplifier will produce for at least 100 milliseconds into the nominal load impedance.*
9. *The fan is controlled by audio level. It remains off at turn-on and at low to mid audio levels. Operating only at high audio levels makes it virtually inaudible.*
10. *AC power cabling must be of sufficient gauge so that under burst current rms conditions, cable transmission losses do not drop voltage below specified operating range at the speaker.*

N775

UPQ-1P – 04.185.004.01 A

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ARCHITECT SPECIFICATIONS

The loudspeaker shall be a self-powered, full-range system; the transducers shall consist of a 15-inch diameter cone driver and a 4-inch diaphragm compression driver on an 80-degree horizontal x 50-degree vertical horn. The loudspeaker system shall incorporate internal processing electronics and a two-channel amplifier, one channel for each driver. Processing functions shall include equalization, phase correction, signal division, and protection for the high- and low-frequency sections. The crossover point shall be 770 Hz.

Each amplifier channel shall be class AB/H with complementary MOSFET output stages. Burst capability for the low-frequency channel shall be 1000 watts total with nominal 2-ohm resistive load and 275 watts for the high-frequency channel with nominal 8-ohm resistive load. Peak power shall be 2550 watts. 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 18 kHz. Phase response shall be ±45˚ from 470 Hz to 16 kHz. Maximum peak SPL shall be 136 dB at 1 meter, free field. Coverage shall be 80-degree horizontal x 50-degree vertical horn at the –6 dB points and 100-degree horizontal x 60-degree vertical horn at the –10 dB points.

The audio input shall be electronically balanced with a 10 kOhm impedance and accept a nominal 0 dBV (1 V rms, 1.4 V pk) signal. Connector shall be XLR (A-3) type female with parallel looping male or VEAM all-in-one multipin connector. An additional input module shall be offered with an attenuator and polarity reversal switch including one with loop-through output. RF filtering shall be provided, and CMRR shall be greater than 80 dB from 50 Hz to 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, 110 or 230 V AC line at 50 or 60 Hz. UL and CE operating voltage range shall be 100 to 240 V AC. Maximum peak current draw during burst shall be 7.0 A at 115 V AC, 3.9 A at 230 V AC, and 8.2 A at 100 V AC. Current inrush during soft turn-on shall not exceed 6.0 A at 115 V AC or 8.4 A at 230 V AC. AC power connectors shall be PowerCon with looping capabilities or VEAM all-in-one multipin connector.

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

All components shall be mounted in an acoustically vented trapezoidal enclosure constructed of premium birch plywood with a hard black textured finish. The enclosure shall include an integral pole mount receptacle and versatile rigging end plates made of high-strength, 6061-T6 aluminum with threaded M10 metric holes for basic eyebolt rigging and shall also accommodate Meyer Sound proprietary rigging hardware. The front protective grille shall be powder-coated hex-stamped steel with black mesh screen.

Dimensions shall be 19.00" wide x 28.27" high x 18.18" deep (483 mm x 718 mm x 462 mm). Weight shall be 108 lbs (49 kg).

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

Theatersaal, Front of House PA: Subwoofers: 2x 500-HP

Speakers on fixed positions, can't be moved under any circumstances

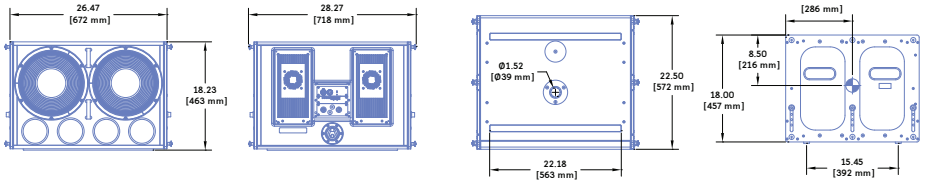
DATASHEET

500-HP : Compact High-Power Subwoofer

thinking sound Meyer Sound

Shown with optional MRF-500 rigging frame

Dimensions	26.55" w x 18.23" h x 22.50" d (674 mm x 463 mm x 572 mm)
Dimensions (w/rigging)	28.27" w x 18.23" h x 22.50" d (718 mm x 463 mm x 572 mm)
Weight	133 lbs (60.32 kg); with rigging, 164 lbs (74.38 kg)
Enclosure	Premium birch plywood
Finish	Black textured, hard-shell
Protective Grille	Powder-coated, hex-stamped steel with black mesh screen
Rigging	Optional QuickFly MRF-500 rigging frame for arrays with M'elodie curvilinear loudspeakers; rigging frame also compatible with MG-M'elodie multipurpose grid; integral 1-1/2" (38 mm) pole-mount receptacle on top



The 500-HP is a self-powered, high-output subwoofer suitable for both flown and groundstacked configurations. Available in two versions — one with side panel handles, one with rigging hardware — the compact subwoofer integrates smartly with Meyer Sound self-powered, full-range loudspeakers. When fitted with the optional QuickFly® MRF-500 rigging frame, the 500-HP arrays directly with the M'elodie™ ultracompact high-power curvilinear array loudspeaker. The integral 1.5-inch pole-mount receptacle, included with all 500-HPs, allows the subwoofer to be easily paired with UltraSeries™ loudspeakers, for either fixed or touring applications.

The 500-HP subwoofer boasts an operating frequency range of 35 Hz to 140 Hz and a peak SPL of 135 dB at 1 meter. Designed and manufactured at Meyer Sound's Berkeley, California headquarters, the unit's two 12-inch cone drivers are engineered to deliver optimal subwoofer performance. The high-excursion, back-vented drivers, each with 4-inch voice coils, are rated to handle 1200 W (AES)* and housed in a tuned, rectangular enclosure that has the same width as the M'elodie loudspeaker.

The low frequency drivers are driven by a two-channel class AB/H amplifier with complementary MOSFET output stages. Ample headroom is delivered with 1800 W of total burst output (900 W per channel). The 500-HP's amplifier and processing electronics are equipped with Meyer Sound's Intelligent AC™ power supply, which adapts to any power voltage worldwide and provides soft-turn on and transient protection. The amplifier, control electronics, and power supply are field-replaceable modules located in the rear of the enclosure.

The 500-HP includes protective, plastic skids on the bottom of the enclosure that securely align with its top slots for stacked units. The optional MRF-500 rigging frame includes captive, recessed GuideALinks™ that allow the subwoofer to be flown from the MG-M'elodie rigging grid, as well as suspend an array of M'elodies or additional 500-HPs. The GuideALinks, located at the front, center, and rear of the frame, are easily set to one of three positions with convenient, pinned handles and slots. A wide range of splay angles and configurations, including cardioid arrays, are possible with the different combinations of positions for the front, center, and rear GuideALinks; the angle for suspended M'elodie arrays can be uptilted by 5 degrees (for balcony coverage) or downtilted up to 15 degrees.

Constructed of premium birch plywood, the durable 500-HP enclosure is coated with a black textured, hard-shell finish. A hex-stamped, steel grille with acoustical black mesh protects the subwoofer's drivers. Other options include weather protection and custom color finishes for fixed installations and applications with specific cosmetic requirements. The dimensions for the 500-HP make its transport compatible with both European and U.S. trucks, and the unit can travel securely in stacks with the optional MCF-500 caster frame.

The RMS™ remote monitoring system — standard with the rigging version of the 500-HP and optional with the side panel configuration — allows comprehensive monitoring of system parameters on a Windows®-based computer.

** Driven continuously for two hours with a band-limited noise signal having a 6 dB peak-average ratio.*

Features & Benefits

- Exceptional power-to-size ratio
- Efficient low-distortion, high-power, high-excursion cone drivers
- High peak power output yields excellent transient reproduction and low-frequency clarity
- Low-frequency complement to M'elodie and UltraSeries self-powered loudspeakers
- Stackable and flyable with other 500-HPs in regular and cardioid arrays, as well as with M'elodie loudspeakers
- Integral pole-mount receptacle easily pairs the subwoofer with UltraSeries loudspeakers
- Portable in stacks of up to three units with the optional MCF-500 caster frame

Applications

- Small- to medium-sized theatres and clubs
- Houses of worship
- Ballrooms
- Portable and installed AV systems

500-HP Specifications

Acoustical	
Operating Frequency Range[1]	35 Hz – 140 Hz
Frequency Response[2]	36 Hz – 130 Hz ±4 dB
Phase Response	45 Hz – 125 Hz ±45˚
Maximum Peak SPL[3]	135 dB
Dynamic Range	›110 dB
Coverage	
	360˚ for a single unit; varies with number of units and configuration
Transducers	
Low Frequency	Two 12˝ cone drivers with ceramic magnets Nominal impedance: 2 Ω Voice coil size: 4˝ Power handling capability: 1200 W (AES)[4] each
Audio Input	
Type	Differential, electronically balanced
Maximum Common Mode Range	±15 V DC, clamped to earth for voltage transient protection
Connectors	Female XLR input with male XLR loop output or VEAM all-in-one connector (integrates AC, audio, and network)
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 switch)[5] Case: Earth ground and chassis
DC Blocking	Differential DC blocking up to maximum common mode voltage
CMRR	›50 dB, typically 80 dB (50 Hz – 500 Hz)
RF Filter	Common mode: 425 kHz; Differential mode: 142 kHz
TIM Filter	Integral to signal processing (‹80 kHz)
Nominal Input Sensitivity	0 dBV (1 V rms, 1.4 V peak) continuous is typically the onset of limiting for noise and music
Input Level	Audio source must be capable of producing +20 dBV (10 V rms, 14 V peak) into 600 Ω in order to produce the maximum peak SPL over the operating bandwidth of the loudspeaker
Amplifier	
Type	Two-channel complementary MOSFET output stages (class AB/H)
Output Power[6]	1800 W (2 x 900 W)
Total Output[7]	3600 W peak
THD, IM, TIM	‹.02%
Load Capacity	2 Ω each channel
Cooling[8]	Convection at low to mid audio levels; fan-assisted only at high audio levels
AC Power	
Connector	PowerCon with looping output or VEAM
Voltage Selection	Automatic, two ranges, each with high-low voltage tap (uninterrupted)
Safety Agency Rated Operating Range	95–125 V AC; 208–235 V AC, 50/60 Hz
Turn-on and Turn-off Points	85–134 V AC; 165–264 V AC
Current Draw: Idle Current	0.49 A rms (115 V AC); 0.26 A rms (230 V AC); 0.55 A rms (100 V AC)
Maximum Long-Term Continuous Current (›10 sec)	8.4 A rms (115 V AC); 4.2 A rms (230 V AC); 9.7 A rms (100 V AC)
Burst Current (‹1 sec)[9]	18 A rms (115 V AC); 9 A rms (230 V AC); 21 A rms (100 V AC)
Ultimate Short-Term Peak Current Draw	40 A peak (115 V AC); 22 A peak (230 V AC); 46 A peak (100 V AC)
Inrush Current	10 A peak (115 V AC); 13 A peak (230 V AC); 10 A peak (100 V AC)
RMS Network (optional)	
	Equipped with two-conductor twisted-pair network, reporting all operating parameters of amplifiers to the system operator's host computer

Notes:

1. *Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.*
2. *Free field, measured with 1/3-octave frequency resolution at 4 meters.*
3. *Measured with music, referred to 1 meter, half-space loading.*
4. *Power handling measured under AES standards: transducers driven continuously for two hours with a band limited noise signal having a 6 dB peak-average ratio.*
5. *Two additional input module options are available with a polarity switch and attenuator (0 dB to -18 dB), one with a looping output, the other with two summed inputs.*
6. *Amplifier wattage rating based on the maximum unclipped burst sine-wave rms voltage the amplifier will produce for at least 0.5 seconds into the nominal load impedance; both channels, 42 V rms into 2 ohms.*
7. *Peak power based on the maximum unclipped peak voltage the amplifier will produce for at least 100 milliseconds into the nominal load impedance; both channels, 60 V peak into 2 ohms.*
8. *Fan controlled by audio level; remains off at turn-on and at low to mid audio levels. Fan operation at high audio levels makes it virtually inaudible.*
9. *AC power cabling must be of sufficient gauge so that under burst current rms conditions, cable transmission losses do not cause the voltage to drop below the specified operating range at the loudspeaker.*

CE N775
www.meyersound.com
Made in USA with domestic and foreign parts

500-HP — 04.187.004.01 A

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Architect Specifications

The loudspeaker shall be a self-powered, sub-bass system that can be deployed as either a flown or a ground-stacked unit. The transducers shall consist of two 12-inch cone drivers (with 4-inch voice coils), each rated to handle 1200 watts.

The loudspeaker shall incorporate internal processing electronics and a two-channel amplifier. Each amplifier channel shall be class AB/H with complementary MOSFET output stages. Burst power shall be 1800 watts (3600 watts peak) with a nominal 2-ohm resistive load. Distortion (THD, IM, TIM) shall not exceed 0.02%. The audio input shall be electronically balanced with a 10 kOhm impedance and accept a nominal 0 dBV (1 V rms) signal. Connectors shall be XLR (A-3) type male and female or VEAM all-in-one (integrates AC, audio, and network). Two additional input modules shall be offered with a polarity switch and attenuator knob, one with a looping output, the other with two summed inputs. RF filtering shall be provided, and CMRR shall be greater than 50 dB (50 Hz – 500 Hz).

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: operating frequency range shall be 35 Hz to 140 Hz; phase response shall be ±45˚ from 45 Hz to 125 Hz; maximum peak SPL shall be 135 dB at 1 meter, half-space loading.

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, 110 V, or 230 V AC line current at 50 Hz or 60 Hz. UL and CE operating voltage ranges shall be 95 to 125 V AC and 208 to 235 V AC. The maximum long-term continuous current draw (›10 sec) shall be 8.4 A rms at 115 V AC, 4.2 A rms at 230 V AC, and 9.7 A rms at 100 V AC. Current inrush during soft turn-on shall not exceed 10 A at 115 V AC. AC power connectors shall be PowerCon with looping output or VEAM all-in-one.

The loudspeaker system shall include support for the optional RMS remote monitoring system.

Loudspeaker components shall be mounted in a premium birch plywood enclosure with a black textured, hard-shell finish. The front protective grille shall be powder-coated, hex-stamped steel with black mesh screen. The unit shall be available in two versions: one with side panels with handles, the other with a rigging frame that provides arraying capabilities with the M'elodie loudspeaker, the MG-M'elodie multipurpose grid, as well as with other 500-HPs. The enclosure shall include an integral 1.5-inch (38 mm) diameter pole-mount receptacle and protective, plastic bottom skids.

Dimensions without rigging shall be 26.55˝ wide x 18.23˝ high x 22.50˝ deep (674 mm x 463 mm x 572 mm). Weight shall be 133 lbs (60.32 kg). Weight with rigging shall be 164 lbs (74.38 kg).

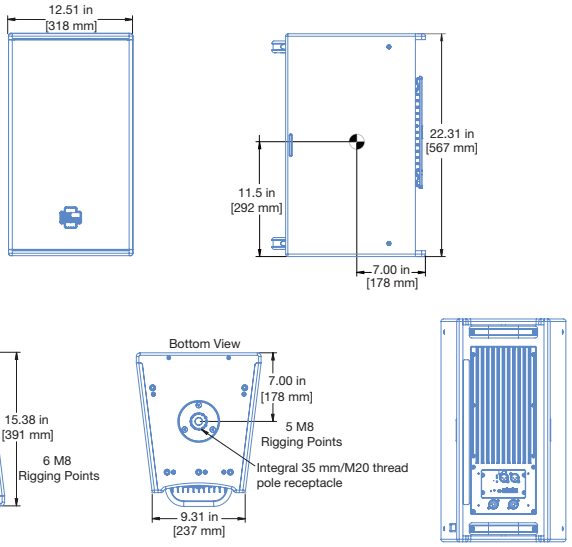
The loudspeaker shall be the Meyer Sound 500-HP compact high-power subwoofer.

Theatersaal, Front of House PA: Center-fill: 1x Ultra-X40
Speakers on fixed positions, can't be moved under any circumstances
This is NOT a Center-Speaker, it's a Center-fill, to fill the gap in the first 3 rows.
However, you can control it separately if you think it's necessary.

DATASHEET ULTRA

ULTRA-X40™ Wide Coverage Loudspeaker
ULTRA-X42™ Controlled Coverage Loudspeaker

Meyer Sound THINKING SOUND



Meyer Sound's ULTRA-X40 and ULTRA-X42 designs continue 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-X40/42 designs:

- Innovative, highly efficient class-D amplifier and advanced signal processing that reproduce 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.
- 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.
- Extremely well-behaved, rotatable horns designed for very precise, even coverage. These horn designs, in conjunction with the concentric driver configuration, deliver consistent patterns despite the orientation.

With these enhancements, the ULTRA-X40/42 loudspeakers provide high power output, low distortion, and consistent polar response in a more compact, vented enclosure. The ULTRA-X40 loudspeaker features two 8-inch cone low-frequency drivers and one 3-inch 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 70° x 50° constant-Q horn.

Because of the proprietary, high-frequency horns, the beamwidth remains consistent within close tolerances in both the horizontal and vertical planes and across the horns' 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-X40/42 loudspeakers, which each have a total peak power output of 1950 watts. Advanced 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-X40/42 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, round-perforated steel grille provides protection to the front of the loudspeaker.

The ULTRA-X40/42 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-X40/42 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.

SPECIFICATIONS

ACOUSTICAL[1]	ULTRA-X40	ULTRA-X42
Operating Frequency Range[2]	55 Hz – 19.5 kHz	55 Hz – 19.5 kHz
Frequency Response[3]	56 Hz – 19 kHz ± 4 dB	58 Hz – 18 kHz ± 4 dB
Phase Response	90 Hz – 19.5 kHz ±45°	90 Hz – 19.5 kHz ±45°
Maximum SPL[4]	138 dB	140 dB
Linear Peak SPL[5]	132.5 dB with 18 dB crest factor (M-noise), 130 dB (Pink Noise), 131 dB (B-noise)	134 dB with 18.5 dB crest factor (M-noise), 132 dB (Pink Noise), 134 dB (B-noise)
COVERAGE		
	Rotatable horn: 110° x 50°	Rotatable horn: 70° x 50°
TRANSDUCERS		
Low Frequency	Two 8-inch cone drivers; 4 Ω nominal impedance	
High Frequency	One 3-inch 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[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.	
AMPLIFIER		
Type	three-channel, Class-D	
Total Output Power[7]	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)[8]	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 peak (115 V AC); 3.4 A peak (230 V AC); 7.9 A peak (100 V AC)	
Inrush Current	<20 A peak	

Theatersaal, Front of House PA: Surround Speakers: 4x HMS-10

Speakers on fixed positions, can't be moved under any circumstances
Sourround speakers only in the stalls/parquet, no surround on balcony due to monument protection restrictions (welcome to Switzerland...;))

IMPORTANT: If you wish to use our sourround speakers, please tell as in advance, because we have to put them in place and this takes some time, thank you! ☺
You can control them separately via analog XLR inputs on stage or with our mixing console or we can plug them to the Galileo Galaxy Controller and setup a downmix for you. Please tell us in advance how you want to use them, thank you.

DATASHEET CINE-STUDIO

HMS Cinema Surround Loudspeaker

thinking sound Meyer Sound®

The HMS cinema surround loudspeaker is optimized for use in cinemas, high-end private theatres, screening rooms, and other surround applications. Designed to complement Meyer Sound's Acheron™

HMS-10 Cinema Surround Loudspeaker with Grille Frame

screen channel loudspeakers, the self-powered HMS maintains a wide dynamic range, exceptional fidelity, and precise clarity during the most demanding of digital soundtracks. Boasting a wide frequency range and a generous linear peak SPL with very low distortion, the HMS delivers the full intensity and nuance of cinema surround channels to every listener without compromise.

The HMS cinema surround loudspeaker is available in five models: HMS-5, HMS-10, HMS-12, HMS-15, and HMS-15AC, ranging in size, weight, driver size, and power to accommodate a wide range of venues and applications. The proprietary long-excursion cone drivers and diaphragm compression drivers are driven by an onboard amplifier that includes an active crossover, driver protection circuitry, and correction filters for flat phase and frequency response. A constant-directivity horn provides uniform, full-range, consistent coverage.

The HMS-5, HMS-10, HMS-12, and HMS-15 are equipped with IntelligentDC technology and receive DC power and balanced audio from composite Phoenix™ 5-pin connectors. Powering the loudspeakers from an external DC source eliminates the need for AC conduits while preserving the advantages of self-powered systems. IntelligentDC loudspeakers require an MPS-488HP external power supply. The single-space 19-inch rack unit distributes DC power and balanced audio to up to eight HMS-5, HMS-10, or HMS-12 loudspeakers, or up to four HMS-15 loudspeakers. Composite multiconductor cables, such as Belden® 1502 or equivalent, can deliver both DC power and balanced audio to loudspeakers at cable lengths up to 150 feet with just 1 dB of loss in peak SPL using 18 AWG wire. Longer cable runs are possible with heavier gauges. The MPS-488HP is optionally available with an RMS™ remote monitoring system module for monitoring voltage and current draw for its attached loudspeakers from a Mac® or Windows®-based computer.

The HMS-15AC is an AC-powered version of the HMS-15. Its Intelligent AC™ power supply provides automatic voltage selection, EMI filtering, soft current turn-on, and surge suppression. The HMS-15AC is optionally available with its own onboard RMS™ remote monitoring system module for comprehensive monitoring of loudspeaker parameters from a Mac or Windows-based computer.

The versatile HMS can be suspended or mounted on walls or ceilings at fixed or adjustable angles with optional half-yoke, U-bracket, or wall-mount brackets, allowing it to be deployed per the requirements of any surround application or immersive cinema format.

Meyer Sound's industry-leading self-powered technology not only delivers unparalleled and consistent audio fidelity but also simplifies installation, whether designing new rooms from scratch or adding surround channels to existing installations. The HMS cabinet features a black textured finish and an acoustically transparent, detachable, black cloth grille that blend smartly with any theatre decor.

HMS-5 Compact Cinema Surround Loudspeaker

HMS-12 High-Power Cinema Surround Loudspeaker

HMS-15 / HMS-15AC High-Power Cinema Surround Loudspeaker

FEATURES & BENEFITS

- Exceptional fidelity and extended high-frequency performance
- Constant-directivity horn yields uniform response throughout coverage area
- Seamless integration with Acheron screen channel loudspeakers and X-800C and X-400C cinema subwoofers
- Extraordinarily flat amplitude and phase response for tonal accuracy
- IntelligentDC power affords the flexibility of lengthy cable runs to the HMS-5, HMS-10, HMS-12, and HMS-15 without conduits
- Optional mounting options provide multiple configurations for attachment to walls, ceilings, or hanging clamps

SOLUTIONS

- Cinemas and theatres
- Screening rooms
- Surround mixing for production and postproduction facilities
- High-end private theatres
- Immersive surround applications

HMS SPECIFICATIONS

	HMS-5 COMPACT CINEMA SURROUND LOUDSPEAKER	HMS-10 CINEMA SURROUND LOUDSPEAKER	HMS-12 HIGH-POWER CINEMA SURROUND LOUDSPEAKER	HMS-15 HIGH-POWER CINEMA SURROUND LOUDSPEAKER	HMS-15AC HIGH-POWER CINEMA SURROUND LOUDSPEAKER
ACOUSTICAL					
Operating Frequency Range[1]	55 Hz – 18 kHz	55 Hz – 18 kHz	59 Hz – 18 kHz	50 Hz – 18 kHz	50 Hz – 18 kHz
Phase Response	250 Hz – 18 kHz ±45°	290 Hz – 18 kHz ±45°	240 Hz – 18 kHz ±45°	290 Hz – 18 kHz ±45°	290 Hz – 18 kHz ±45°
Linear Peak SPL[2]	120.0 dB	123.5 dB	126.0 dB	128.5 dB	128.5 dB
Coverage	80° symmetrical	80° symmetrical	100° symmetrical	80° horiz. by 50° vert.	80° horiz. by 50° vert.
Crossover[3]	1.7 kHz	2.5 kHz	840 Hz	680 Hz	680 Hz
TRANSDUCERS					
Low Frequency	Two 5-inch long-excursion cone drivers	One 10-inch long-excursion cone driver	One 12-inch long-excursion cone driver	One 15-inch long-excursion cone driver	One 15-inch long-excursion cone driver
High Frequency	One 2-inch diaphragm compression driver	One 2-inch diaphragm compression driver	One 3-inch diaphragm compression driver	One 3-inch diaphragm compression driver	One 3-inch diaphragm compression driver
AMPLIFIER					
Type	3-channel with active crossover	2-channel with active crossover	2-channel with active crossover	2-channel with active crossover	2-channel with active crossover
CONNECTORS					
Audio/Power	One Phoenix 5-pin male composite input[4]	One Phoenix 5-pin male composite input[4]	One Phoenix 5-pin male composite input[4]	Two Phoenix 5-pin male composite inputs[5]	*Audio:* XLR 3-pin male input with XLR 3-pin female loop output[6] *AC Power:* powerCON 20 input with loop output
POWER					
Voltage Requirements	48 V DC Requires MPS-488HP[7] IntelligentDC power supply (one channel)	48 V DC Requires MPS-488HP[7] IntelligentDC power supply (one channel)	48 V DC Requires MPS-488HP[7] IntelligentDC power supply (one channel)	48 V DC Requires MPS-488HP[7] IntelligentDC power supply (two channels)	100–240 V AC, 50–60 Hz[8, 9] 90 V AC turn-on, no turn-off; fuse-protection above 265 V AC
RMS					
	Requires RMS option for MPS-488HP IntelligentDC power supply[10]	Requires RMS option for MPS-488HP IntelligentDC power supply[10]	Requires RMS option for MPS-488HP IntelligentDC power supply[10]	Requires RMS option for MPS-488HP IntelligentDC power supply[10]	Optionally equipped with 2-conductor, twisted-pair network[11]
PHYSICAL					
Dimensions	15.00 inches W (381 mm) 12.45 inches H (316 mm) 9.66 inches D (245 mm)	15.50 inches W (394 mm) 19.50 inches H (495 mm) 12.48 inches D (317 mm)	16.80 inches W (427 mm) 25.12 inches H (638 mm) 9.78 inches D (248 mm)	19.00 inches W (483 mm) 29.10 inches H (739 mm) 12.50 inches D (318 mm)	19.00 inches W (483 mm) 29.10 inches H (739 mm) 12.50 inches D (318 mm)
Weight	18.4 lbs (8.3 kg)	26.2 lbs (11.9 kg)	43.0 lbs (19.5 kg)	60.0 lbs (27.2 kg)	64.0 lbs (29.0 kg)
Enclosure	Multi-ply hardwood with black textured finish	Multi-ply hardwood with black textured finish	Multi-ply hardwood with black textured finish	Multi-ply hardwood with black textured finish	Multi-ply hardwood with black textured finish
Grille Frame	Acoustically transparent, detachable, black cloth-covered frame	Acoustically transparent, detachable, black cloth-covered frame	Acoustically transparent, detachable, black cloth-covered frame	Acoustically transparent, detachable, black cloth-covered frame	Acoustically transparent, detachable, black cloth-covered frame
Mounting	Rear attachment points (3.94 inches x 3.94 inches, 100 mm x 100 mm)	Rear attachment points (3.94 inches x 3.94 inches, 100 mm x 100 mm)	Rear attachment points (3.94 inches x 3.94 inches, 100 mm x 100 mm)	Rear attachment points (5.00 inches x 2.75 inches, 127 mm x 70 mm); side attachment points with 3/8"-16 threads	Rear attachment points (5.00 inches x 2.75 inches, 127 mm x 70 mm); side attachment points with 3/8"-16 threads
FMB-HMS Fixed Bracket	✓	✓	✓	✓	✓
AMB-HMS Adjustable Bracket	✓	✓	✓	✓	✓
HY-HMS Half Yoke	✓	✓	✓		
HY-HMS15 Half Yoke				✓	✓
MUB-HMS U-Bracket	✓	✓	✓		
MUB-HMS15 U-Bracket				✓	✓
WH-HMS Wall Hinge Bracket	✓	✓	✓		

NOTES

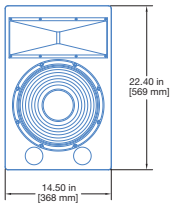
1. *Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.*
2. *Free field, measured with pink noise, onset of nonlinearity, referred to 1 meter.*
3. *At this frequency, the transducers produce equal sound pressure levels.*
4. *Phoenix 5-pin wiring: Pin 1, DC power (–); Pin 2, DC power (+); Pin 3, audio shield, chassis/earth; Pin 4, audio (–), Pin 5, audio (+).*
5. *The HMS-15 must be connected to two adjacent channels of the MPS-488HP IntelligentDC power supply.*
6. *XLR 3-pin wiring: Pin 1, audio shield, chassis/earth; Pin 2,audio (+); Pin 3, audio (–).*
7. *For information and specifications for the MPS-488HP IntelligentDC power supply, refer to its datasheet.*
8. *Indicates the safety rated voltage range for the HMS-15AC.*
9. *The maximum long-term continuous current draw for the HMS-15AC is 1.3 A rms at 115 V AC, 0.7 A rms at 230 V AC, and 1.5 A rms at 100 V AC.*
10. *Reports voltage and current draw for the attached IntelligentDC loudspeakers to the host computer.*
11. *Reports amplifier operating parameters for the HMS-15AC to the host computer.*

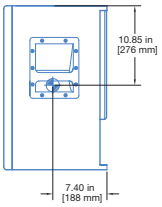
Theatersaal, Stage Sidefills: 2x UPA-1P

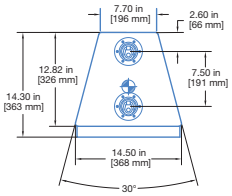
Speakers on fixed positions, can't be removed under any circumstances
But you can turn them: They're fixed in the towers left & right, you can use them as sidefills or monitors on the forestage or even as effect-speakers in FOH direction. It's a smart solution, you will like it ;)
You can control them separately via analog XLR connectors on stage or use our mixing console.

DATASHEET ULTRA

UPA-1P Compact Wide Coverage Loudspeaker







The UPA-1P loudspeaker provides high power output, low distortion, and consistent polar response in a compact, vented two-way enclosure. The loudspeaker features a 12 in cone low-frequency driver and a 3 in diaphragm compression driver coupled with a 100° horizontal by 40° vertical constant-Q horn. The versatile UPA-1P has a variety of sound reinforcement applications including as a main front-of-house loudspeaker in small- to mid-sized venues and as a fill loudspeaker in larger systems.

The extraordinarily smooth and predictable behavior of its proprietary high-frequency horn distinguishes the UPA-1P. The result of intensive research in Meyer Sound's anechoic chamber, the patented UPA-1P horn design exhibits constant Q. The beamwidth remains consistent within close tolerances, in both the horizontal and vertical planes and across the horn's operating frequency range of 1200 Hz to 18 kHz. The result is uniform attenuation of all frequencies outside the specified beamwidth with minimal side lobing. Uniformly predictable polar behavior takes much of the guesswork out of system design and ensures arrays that exhibit minimal destructive interference.

A proprietary two-channel, class AB/bridged power amplifier with complementary MOSFET output stages drives the UPA-1P. Total peak power output is 1000 watts; audio is processed through an electronic crossover and correction filters for phase and frequency response, as well as driver protection circuitry. Phase-corrected electronics ensure flat acoustical amplitude and phase response, resulting in exceptional impulse response and precise imaging.

The field-replaceable 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 high common-mode rejection of the laser-trimmed differential input circuit permits long signal runs through a simple shielded twisted-pair cable. The UPA-1P cabinet provides XLR input and looping output connectors for balanced audio and a powerCON20 connector for power. The optional RMS™ remote monitoring system module provides comprehensive monitoring of loudspeaker parameters from a host computer running Compass® software.

Meyer Sound covers the durable trapezoidal enclosure with a slightly textured black finish and includes a protective powder-coated, hex-stamped steel grille with a black mesh. Standard rigging points are four ring and stud pan fittings (two each, top and bottom) with load rating of 420 lb (190.51 kg) at a 5:1 safety factor. Adjustable yokes and pole mount adaptors are available. Options include weather protection and custom color finishes for applications requiring specific cosmetics.

FEATURES AND BENEFITS

- Exceptional fidelity, power capability and extended high-frequency performance
- 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
- Surprising power capability in a compact package

APPLICATIONS

- Concert halls, clubs, houses of worship
- Theatrical sound reinforcement
- Portable and installed audio-visual systems
- Cinema surround sound and effects
- Compact voice reinforcement systems
- Frontfill and under balcony

SPECIFICATIONS

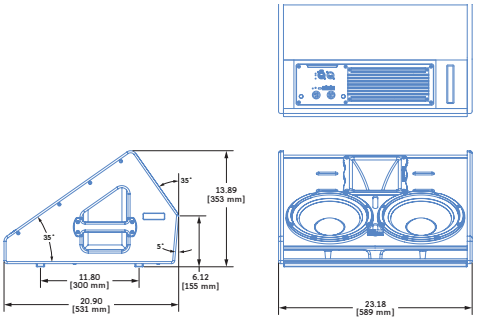
ACOUSTICAL[1]	
Operating Frequency Range[2]	60 Hz - 18 kHz
Frequency Response[3]	80 Hz - 17 kHz ±4 dB
Phase Response	600 Hz - 16 kHz ±35°
Linear Peak SPL[4]	**130.5 dB (M-noise), 128 dB (Pink noise), 131.5 dB (B-noise)**
COVERAGE	
Horizontal Coverage	100°
Vertical Coverage	40°
TRANSDUCERS	
Low Frequency	One 12 in cone driver; 2 Ω nominal impedance
High Frequency	One 3 in 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[5]	XLR 3 female input with male loop output; optional XLR 5-pin connectors to 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) Pin 4: RMS Pin 5: RMS 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[6]	1000 W peak
THD, IM, TIM	< 0.02%
Cooling	Convection; 24 V DC output for optional external fan
AC POWER	
Connector	PowerCON20 input
Automatic Voltage Selection	90–265 V AC
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	0.25 A rms (115 V AC); 0.13 A rms (230 V AC); 0.3 A rms (100 V AC)
Maximum Long-Term Continuous Current (>10 sec)	2.8 A rms (115 V AC); 1.4 A rms (230 V AC); 3.2 A rms (100 V AC)
Burst Current (<1 sec)[7]	3.2 A rms (115 V AC); 1.6 A rms (230 V AC); 3.7 A rms (100 V AC)
Maximum Instantaneous Peak Current	5.0 A pk (115 V AC); 2.5 A pk (230 V AC); 5.8 A pk (100 V AC)
Inrush Current	< 9 A pk (115 V AC and 230 V AC)

Monitors: 4x MJF-210
No flying, no stands possible. If you want to use them as sidefills, we put them on cases, works fine!
Connectors: Powercon / XLR analog. Our hybrid-cables do the job.

DATASHEET ULTRA

MJF-210 Low-Profile High-Power Stage Monitor

thinking sound Meyer Sound



Dimensions	23.18" w x 13.89" h x 20.90" d (589 mm x 353 mm x 531 mm)
Weight	67 lbs (30.4 kg)
Enclosure	Premium birch plywood
Finish	Black textured
Protective Grille	Powder-coat, hex-stamped steel with black mesh screen

The MJF-210 low-profile high-power stage monitor reproduces audio faithfully with high intelligibility at high output levels with ample low-frequency headroom. The self-powered MJF-210 exceeds the stringent requirements of today's touring applications, withstanding the rigors of road and stage while occupying a small, lightweight footprint and a fraction of the truck space of similar monitors requiring external amplification.

The MJF-210's phase-corrected 55 Hz to 18 kHz frequency range ensures that vocals and instruments are reproduced accurately with low distortion and no signal coloration. Exhibiting flat phase and frequency responses, as well as exceptional impulse response, the MJF-210 surpasses the sonic capabilities of conventional stage monitors while offering the simplicity of self-powered setup and operation.

The MJF-210's durable, vented enclosure houses two high-power, long-excursion, 10-inch low-frequency drivers, as well as a 4-inch diaphragm compression driver coupled to a 50-degree horizontal by 70-degree vertical constant directivity horn. The face of the low-profile cabinet slopes 35 degrees from the stage, ensuring optimal monitoring for the performer, permitting freedom to move upstage and downstage while remaining within the horn's consistent, wide vertical coverage.

Drivers are powered by a 3-channel, class D amplifier. The Intelligent AC™ power supply provides automatic voltage selection, EMI filtering, soft current turn-on, and surge suppression.

The optional RMS™ remote monitoring system module provides comprehensive monitoring of loudspeaker parameters from a Mac® or Windows®-based computer. Optional XLR 5-pin connectors allow the use of composite cables carrying both RMS and balanced audio.

Constructed of premium birch plywood, the MJF-210's cabinet is coated with a black-textured finish and includes protective rubber strips on the bottom of the unit that prevent changes in position due to vibrations. A hex-stamped steel grille lined with acoustical black mesh protects the drivers.

Features & Benefits

- Self-powered system guarantees simplified setup and operation
- Small lightweight footprint with no external amplification occupies less truck space
- Low profile cabinet preserves onstage sight lines
- Wide vertical coverage permits the freedom to move upstage and downstage
- High peak power ensures excellent transient response
- Flat frequency and phase responses yield high gain before feedback

Solutions

- Main vocal monitor
- High output instrument monitor

MJF-210 Specifications

Acoustical			
Operating Frequency Range[1]	55 Hz – 18 kHz		
Frequency Response[2]	60 Hz – 16 kHz ±4 dB		
Phase Response	200 Hz – 16 kHz ±45 degrees		
Coverage			
Horizontal	50 degrees		
Vertical	70 degrees		
Crossover			
	830 Hz[3]		
Transducers			
Low Frequency	Two high-power 10-inch cone drivers		
High Frequency	One 4-inch diaphragm compression driver		
Audio Input			
Type	Differential, electronically balanced		
Maximum Common Mode Range	±5 V DC		
Connectors[4]	XLR female input with XLR male loop output		
Input Impedance	10 kOhm differential between pins 2 and 3		
Wiring[5]	Pin 1: Chassis/earth through 1 kOhm, 1000 pF, 15 V clamped 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		
DC Blocking	Differential DC blocking up to the maximum common mode voltage		
CMRR	>50 dB, typically 80 dB (50 Hz – 500 Hz)		
RF Filter	Common mode: 425 kHz; Differential mode: 142 kHz		
TIM Filter	Integral to signal processing (<80 kHz)		
Nominal Input Sensitivity	0.0 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 +20 dBV (10 V rms, 14 V peak) into 600 oms to produce the maximum peak SPL over the operating bandwidth of the loudspeaker		
Amplifier			
Type	3-channel, class D		
THD, IM, TIM	<.02%		
Cooling	Convection		
AC Power			
Connectors	powerCON 20 with loop output		
Safety Rated Voltage Range	100–240 V AC, 50–60 Hz		
Turn-on/off Points	90 V AC turn-on, no turn-off; internal fuse-protection above 265 V AC		
	115 V AC	230 V AC	100 V AC
Current Draw: Idle	0.26 A rms	0.25 A rms	0.28 A rms
Maximum Long-Term Continuous (>10 sec)	1.8 A rms	1.1 A rms	2.6 A rms
Burst (<1 sec)[6]	3.5 A rms	1.8 A rms	4.2 A rms
Maximum Instantaneous Peak	16 A peak	8 A peak	18 A peak
Inrush	17 A peak	20 A peak	15 A peak
RMS Network (Optional)			
	Equipped with 2-conductor, twisted-pair network, reporting all amplifier operating parameters to host computer		

Notes:

1. *Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.*
2. *Half-space loading, measured with 1/3-octave frequency resolution at 4 meters.*
3. *At this frequency, the transducers produce equal sound pressure levels.*
4. *Audio connectors available as XLR 5-pin or XLR 3-pin. XLR 5-pin connectors accommodate both balanced audio and RMS signals.*
5. *Pins 4 and 5 (RMS) included only with XLR 5-pin connectors.*
6. *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.*

N775

MJF-210 — 04.235.004.02 B3

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Berkeley, CA 94702

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techsupport@meyersound.com
www.meyersound.com

Architect Specifications

The loudspeaker shall be a self-powered stage monitor; its transducers shall include two 10-inch cone drivers and one 4-inch diaphragm compression driver on a 50-degree x 70-degree horn. The loudspeaker shall incorporate internal processing electronics and a 3-channel amplifier, one channel for each driver. Processing functions shall include equalization, phase correction, signal division, and protection for the low- and high-frequency sections. The crossover point shall be 830 Hz.

Amplifier channels shall be class D. 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, 55 Hz to 18 kHz; phase response, 200 Hz to 16 kHz ±45 degrees. Coverage shall be 50 degrees horizontal by 70 degrees vertical.

The audio input shall be electronically balanced with a 10 kOhm impedance and accept a nominal 0 dBV (1.0 V rms) signal. Audio connectors shall be XLR 3-pin, female and male, accommodating balanced audio, or XLR 5-pin, accommodating both balanced audio and RMS. RF filtering shall be provided, and CMRR shall be greater than 80 dB from 50 Hz to 500 Hz.

The internal power supply shall perform automatic voltage selection, EMI filtering, soft current turn-on, and surge suppression. Power requirements shall be nominal 100, 110, or 230 V AC line current at 50–60 Hz. UL and CE operating voltage range shall be 100–240 V AC at 50–60 Hz. Maximum instantaneous peak current draw shall be 15.8 A peak at 115 V AC, 7.9 A peak at 230 V AC, and 18.2 A peak at 100 V AC. Current inrush during soft turn-on shall not exceed 16.8 A peak at 115 V AC. AC power connectors shall be powerCON 20 with loop output.

The loudspeaker shall optionally include the RMS remote monitoring system module.

Loudspeaker components shall be mounted in an acoustically-vented, wedge-shaped enclosure constructed of premium birch plywood with a black-textured, hard-shell finish. The protective grille shall be hex stamped steel with black mesh screen. Dimensions shall be 23.18 inches wide x 13.89 inches high x 20.90 inches deep (589 mm x 353 mm x 531 mm). Weight shall be 67 lbs (30.4 kg). The enclosure's front angle shall be 35 degrees.

The loudspeaker shall be the Meyer Sound MJF-210.

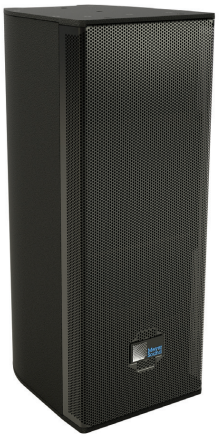
Satellite-Systems: 4x Top/Sub-Systems consisting of 4x ULTRA-X20 & 4x USW-112P
You can use them wherever you want.
These are truly remarkable speaker-systems. They bring at least twice the power and coverage as you would expect! Coverage 110°x50°, rotatable horns

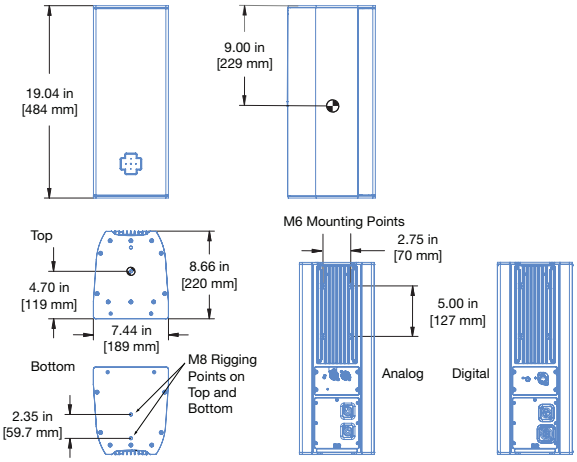
IMPORTANT: If you like to use them, please tell us in advance, because these systems are normally used in the rehearsal room and foyer.
Connectors: Powercon / XLR analog. Our hybrid-cables do the job.

DATASHEET ULTRA

ULTRA-X20 Compact Wide Coverage Loudspeaker
ULTRA-X22 Compact Narrow Coverage Loudspeaker
ULTRA-X23 Compact Broad Coverage Loudspeaker

Meyer Sound THINKING SOUND





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.

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		