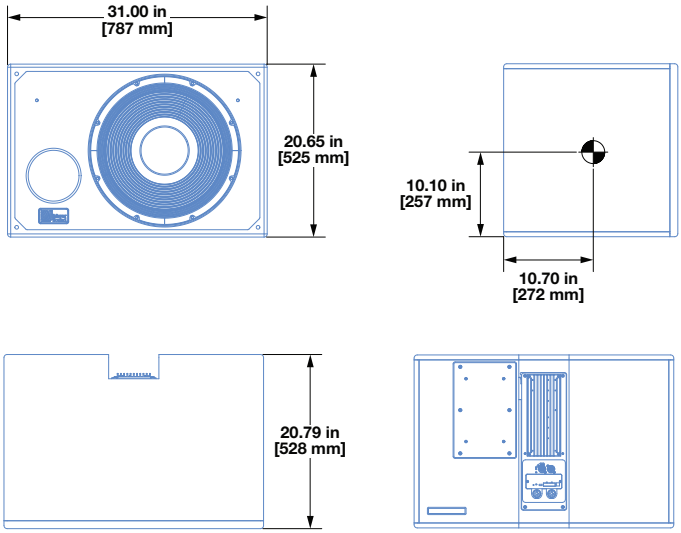
X-400C Compact Cinema Subwoofer

(Shown without optional black cloth-covered grille frame.)



Part of Meyer Sound's cinema series, the X-400C Compact Cinema Subwoofer boosts low-frequency headroom in cinema applications and other fixed installations. The linear, self-powered X-400C offers similar sonic characteristics to the X-800C subwoofer—low-frequencies down to 20 Hz, clean, punchy transients, and excellent phase coherence—in a more compact cabinet that can be installed singly or as multiple units.

The X-400C comprises a single 18-inch low-frequency, long-excursion cone driver housed in an optimally tuned, vented cabinet and powered by a single-channel amplifier. On-board processing includes driver protection circuitry, low-pass filtering, and correction filters for flat phase and frequency responses.

The Intelligent AC™ power supply provides automatic voltage selection, EMI filtering, soft current turn-on, and surge suppression.

The X-400C integrates seamlessly with other cinema loudspeakers, including the Acheron screen channel loudspeakers and HMS surround loudspeakers.

Meyer Sound constructs the X-400C cabinet of premium multi-ply birch and coats it with a slightly textured black finish. The cabinet includes attachment points for an optional grille frame covered with black cloth.

Meyer Sound's optional RMS™ remote monitoring system module facilitates comprehensive monitoring of the loudspeaker parameters from a Mac® or Windows®-based computer running Compass® control software when used in conjunction with an RMServer™ hardware unit.

FEATURES AND BENEFITS

- High peak power output with excellent transient reproduction
- Extended low frequency response down to 20 Hz
- Extremely low distortion for exceptional low-frequency clarity
- Exceptionally reliable and durable
- Optional grille frame with black cloth

APPLICATIONS

- Motion picture theaters
- Residential cinema
- Production and post production facilities
- Soundtrack recording and mixing

SPECIFICATIONS

ACOUSTICAL[1]	
Operating Frequency Range[2]	20 Hz – 200 Hz
Frequency Response[3]	23 Hz – 160 Hz ±4 dB
Phase Response	32 Hz – 175 Hz ±30°
Linear Peak SPL[4]	**127.5 dB with crest factor > 11.5 dB (M-noise),** 127.5 dB (Pink noise), 131.5 dB (B-noise)
COVERAGE	
	Varies with number of units and configuration
TRANSDUCERS	
Low Frequency	One 18 in long-excursion cone driver; 4 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
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 – Case: Earth ground and chassis
Pad Switch	Normal position: no effect; Pad position: -7.5 dB input pad added to reduce upstream noise when loudspeaker is in close proximity to listeners
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	Single channel
Total Output Power[5]	900 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
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	0.26 A rms (115 V AC); 0.16 A rms (230 V AC); 0.30 A rms (100 V AC)
Maximum Long-Term Continuous Current (>10 sec)	1.4 A rms (115 V AC); 0.7 A rms (230 V AC); 1.6 A rms (100 V AC)
Burst Current (<1 sec)[6]	2.7 A rms (115 V AC); 1.1 A rms (230 V AC); 3.0 A rms (100 V AC)
Maximum Instantaneous Peak Current	9 A peak (115 V AC); 6 A peak (230 V AC); 10 A peak (100 V AC)
Inrush Current	10 A peak (115 V AC); 8 A peak (230 V AC); 10 A peak (100 V AC)
RMS NETWORK (OPTIONAL)	
	Two-conductor twisted-pair network module: reports all operating parameters of amplifiers to system operator's host computer via the RMServer hardware unit[7].

SPECIFICATIONS, CONT'D.

PHYSICAL	
Dimensions	W: 31.00 in (787 mm) x H: 20.65 in (525 mm) x D: 20.79 in (528 mm)
Weight	85 lb (38.6 kg)
Enclosure	Premium multi-ply birch with slightly textured black finish
Protective Grille	Optional grille frame with black cloth

NOTES

1. Loudspeaker system predictions for coverage and SPL are available in Meyer Sound's MAPP System Design Tool.
2. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
3. Measured in half-space at 4 m, 1/3 octave frequency resolution.
4. **Linear Peak SPL** is measured in half-space 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. The presence of a greater-than (>) symbol with regard to crest factor indicates it may be higher depending on EQ and boundary loading.

   Pink noise is a full bandwidth test signal with Peak to RMS ratio of 12.5 dB.

   B-noise is a Meyer Sound test signal used to ensure measurements reflect system behavior when reproducing the most common input spectrum, and to verify there is still headroom over pink noise.
5. Peak power based on the maximum unclipped peak voltage the amplifier will produce into the nominal load impedance.
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.
7. RMServer hardware unit required and sold separately.

ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be a self-powered, sub-bass system with a single 18-inch low-frequency, long-excursion cone driver.

The loudspeaker shall incorporate internal processing electronics and a single-channel amplifier. Total output power shall be 900 watts peak with a 4Ω nominal impedance. Distortion (THD, IM, TIM) shall not exceed 0.02%. The audio input shall be electronically balanced with a 10 kΩ impedance and accept a nominal 0 dBV (1 V rms) signal (20 dBV to produce maximum peak SPL). Connectors shall be XLR 3-pin male and female.

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: operating frequency range, 20 Hz to 200 Hz; phase response, 32 Hz to 175 Hz ±30°; linear peak SPL 127.5 dB with crest factor >11.5 dB, measured in half-space with M-noise at 4 m referred to 1 m.

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 or 60 Hz. UL and CE operating voltage ranges shall be 200 to 240 V AC. The maximum long-term continuous current draw (>10 sec) shall be 1.4 A rms at 115 V AC, 0.7 A rms at 230 V AC, and 1.6 A rms at 100 V AC. Current inrush during soft turn-on shall not exceed 10 A peak at 115 V AC, 8 A peak at 230 V AC, and 10 A peak at 100 V AC. AC power connectors shall be powerCON 20 with loop output. The loudspeaker shall optionally include an RMS remote monitoring system module.

Loudspeaker components shall be mounted in a premium multi-ply birch enclosure with a slightly textured black finish. Dimensions shall be W: 31.00 in (787 mm) x H: 20.65 in (525 mm) x D: 20.79 in (528 mm). Weight shall be 85 lb (38.6 kg).

The loudspeaker shall be the Meyer Sound X-400C Compact Cinema Subwoofer.

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