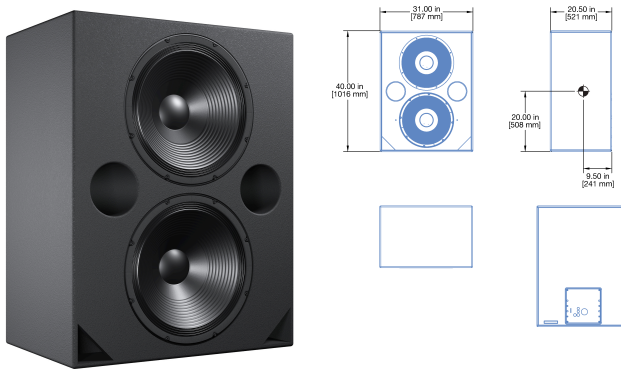


Datasheet — X-800C



High-power cinema subwoofer



X-800C Loudspeaker and Dimensions

The Meyer Sound X-800C High-Power Cinema Subwoofer is designed to provide very low-frequencies with ample headroom in critical applications. The X-800C excels in environments requiring very low distortion, extended bandwidth and extreme low frequency transients.

The X-800C is a linear, powerful self-powered subwoofer offering excellent phase coherence for smooth transitioning from screen channels to low-frequency effects (LFE). The X-800C delivers extended low frequency output down to 20 Hz with clear, punchy transients even at very high levels.

The X-800C houses two Meyer Sound long excursion, high efficiency 18-inch drivers in an optimally tuned, vented cabinet. The X-800C output rolls off well below 250 Hz, avoiding any adverse comb filtering effects that could be generated by the proximity of other X-800C subwoofers when used in arrays.

An integral two-channel class AB/H amplifier with complementary MOSFET output stages supplies a total output of 1240 Watts, providing the system with sufficient headroom to accommodate lowest frequencies of the most extreme digital soundtrack's.

Each amplifier channel features TruPower® limiting technology to maximize loudspeaker reliability, minimize power compression and extend component life. An Intelligent AC™ power supply provides automatic voltage selection, EMI filtering, soft

current turn-on and surge suppression. Sophisticated onboard processing includes phase and frequency response correction filters. This self-powered design not only assures consistent results but also simplifies installation in both new and existing rooms.

The X-800C subwoofer’s premium birch plywood cabinet is coated with a durable medium gloss finish. Meyer Sound’s optional RMS™ remote monitoring system allows comprehensive monitoring of loudspeaker parameters from a Mac® or Windows®-based computer running Compass® control software.

Features and Benefits

- High peak power yields excellent transient reproduction
- Extended low frequency response down to 20 Hz
- Extremely low distortion for ultimate low-frequency clarity
- Exceptionally reliable and durable

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 to 175 Hz ±30°
Linear Peak SPL ⁴	133 dB (M-noise) with crest factor >12 dB , 133 dB (Pink noise), 137 dB (B-noise)

COVERAGE	
	360° (single unit); varies with number of units and configuration
TRANSDUCERS	
Low Frequency	Two 18-inch cone drivers; 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
Input Impedance	10 k Ω differential between pins 2 and 3
Wiring	<p>Pin 1: Chassis/earth through 220 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies</p> <p>Pin 2: Signal + Pin 3: Signal –</p> <p>Case: Earth ground and chassis</p>
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 power MOSFET output stages (class AB/H)
Total Output Power ⁵	1240 W peak
THD, IM, TIM	< 0.02%

Cooling	Forced air cooling, 2 fans (one ultrahigh-speed reserve fan)
AC POWER	
Connector	250 V AC NEMA L6-20 inlet or IEC 309 male inlet
Automatic Voltage Selection	Automatic, two ranges, each with high-low voltage tap (uninterrupted)
Safety Rated Voltage 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; 50–60 Hz
CURRENT DRAW	
Idle Current	0.64 A rms (115 V AC); 0.32 A rms (230 V AC); 0.85 A rms (100 V AC)
Maximum Long-Term Continuous Current (>10 sec)	8 A rms (115 V AC); 4 A rms (230 V AC); 10 A rms (100 V AC)
Burst Current (<1 sec) ⁶	15 A rms (115 V AC); 8 A rms (230 V AC); 18 A rms (100 V AC)
Maximum Instantaneous Peak Current	22 A peak (115 V AC); 11 A peak (230 V AC); 25 A peak (100 V AC)
Inrush Current	<7 A peak (115 V AC & 230 V AC); 10 A peak (100 V AC)
RMS NETWORK (OPTIONAL)	
Type	Two-conductor, twisted-pair network that reports all amplifier operating parameters to host computers
PHYSICAL	
Dimensions	W: 31.00 in (787 mm) x H: 40.00 in (1016 mm) x D: 20.5 in (521 mm)
Weight	221 lb (100.24 kg)

Enclosure

Premium multi-ply birch with smooth medium-gloss black finish; optional textured finish

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.

Architectural Specifications

The loudspeaker shall be a self-powered, sub-bass system. The transducers shall consist of two 18-inch cone drivers.

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. Total output power shall be 1240 watts peak with 8-ohm nominal impedance. Distortion (THD, IM, TIM) shall not exceed 0.02%. Protection circuits shall include TruPower limiting. The audio input shall be electronically balanced with a 10 k Ω impedance and accept a nominal 0 dBV (1 V rms) signal (20 dBV to produce maximum peak SPL). Connectors shall be XLR type male and female or VEAM all-in-one.

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: Operating frequency range shall be 20 Hz to 200 Hz. Phase response shall be 35 Hz to 120 Hz $\pm 30^\circ$. Linear peak SPL shall be 133 dB with crest factor > 12 dB, measured with M-noise, half-space at 4 meters and referred to 1 meter.

The internal power supply shall perform automatic voltage selection, EMI filtering, soft current turn-on and surge suppression. Powering 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 AC. Current draw during burst shall be 15 A rms at 115 V AC, 8 A rms at 230 V AC and 18 A rms at 100 V AC. Current inrush during soft turn-on shall not exceed 7 A at 115 V AC. AC power connectors shall be L6-20, IEC 309 male or VEAM all-in-one.

The loudspeaker shall optionally incorporate the electronics module for Meyer Sound's RMS remote monitoring system.

Loudspeaker components shall be mounted in a premium birch plywood enclosure with a smooth medium-gloss black finish (optional textured finish available). Dimensions shall be W: 31.00 in (787 mm) x H: 40.00 in (1016 mm) x D: 20.5 in (521 mm). Weight shall be 221 lb (100.24 kg).

The loudspeaker shall be the Meyer Sound X-800C High-Power Cinema Subwoofer.

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