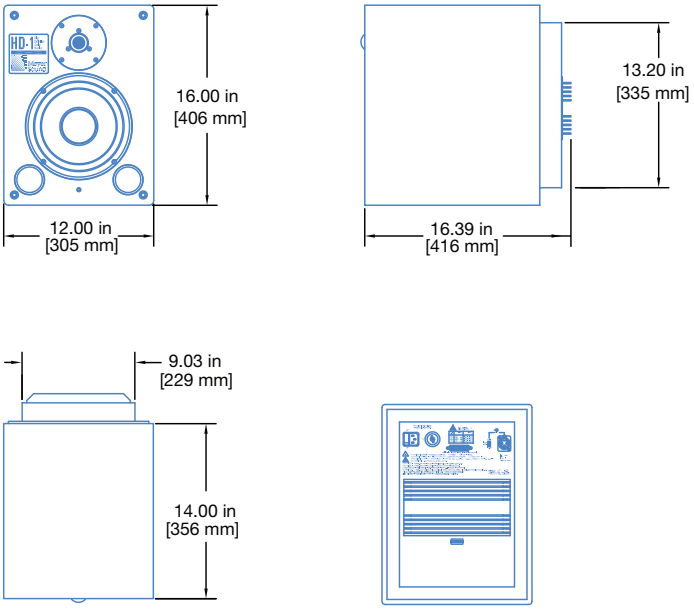
HD-1 High Definition Audio Monitor



The HD-1 high definition audio monitor is a self-powered loudspeaker designed for ultraprecise near-field monitoring. Optimized to approximate a point source radiator, the HD-1 yields exceptionally broad directivity with a generous "sweet spot." Its patented circuitry minimizes time delay response and deviations from linear phase.

The HD-1 incorporates a 2-channel power amplifier and a sophisticated active crossover with optimized pole-zero filters for acoustical transparency and a flat frequency response. The power amplifier features complementary MOSFET output stages and operates at class A at low to moderate levels (less than 90 dB SPL) and class AB at high levels.

The HD-1 delivers a high peak SPL with a dynamic range of over 110 dB, with extremely low distortion. Its free field frequency response is flat from 40 Hz to 18 kHz (within ±1 dB) , with each unit being individually calibrated at Meyer Sound's Berkeley, California factory.

The HD-1 has an active, balanced input that is switchable between a +4 dBu and –10 dBV nominal operating level.

The HD-1's transducers include a low-frequency 8 in cone driver and a high-frequency 1 in soft dome tweeter. The low-frequency driver's ample magnet and 2 in voice coil yield high efficiency with rapid heat dissipation. The tweeter employs a silk-infused dome that affords smooth frequency response while minimizing breakup and coloration. A vented cabinet houses the proprietary drivers, which Meyer Sound individually tests for maximum linearity and low distortion.

FEATURES AND BENEFITS

- Unprecedented accuracy for mixes that translate consistently
- Exceptional transparency for fine control of EQ and effects
- Consistent, smooth coverage pattern for a very wide "sweet spot"
- Individual alignment provides matched pairs with pinpoint imaging
- Low-frequency range down to 32 Hz without subwoofers
- High peak power minimizes distortion and compression

APPLICATIONS

- Near-field tracking and mixing studio monitor
- High-end stereo and surround sound playback systems
- Mastering studio reference monitor
- Surround mixing for post-production

SPECIFICATIONS

ACOUSTICAL	
Operating Frequency Range[1]	32 Hz – 22 kHz
Frequency Response[2]	40 Hz – 18 kHz ±1 dB 38 Hz – 20 kHz ±1.5 dB 32 Hz – 22 kHz ±3 dB
Signal to Noise Ratio	>110 dB (noise floor 20 dBA at 1 m)
Linear Peak SPL[3]	**113.5 dB (M-noise), 110.5 dB (Pink noise), 111.5 dB (B-noise)**
COVERAGE	
Horizontal	60°
Vertical	60°
TRANSDUCERS	
Low Frequency	One 8 in cone driver
High Frequency	One 1 in dome tweeter
AUDIO INPUT	
Type	10 kOhm impedance, electronically balanced
Connectors	XLR 3-pin female input
Wiring	Pin 1: Common Pin 2: Signal - Pin 3: Signal + Case: Earth ground and chassis
Nominal Input Level	+4 dBu or –10 dBV, switchable
AMPLIFIER	
Type	2-channel complementary MOSFET output stages (class A at low to moderate levels; class AB at high levels)
Total Output Power[4]	450 W peak (low frequency, 300 W; high frequency, 150 W)
THD, IM, TIM	< 0.02%
Cooling	Convection
AC POWER	
Connectors	3-pin IEC male receptacle
Voltage Selection	Selector switch for 100, 120, 220, and 240 V AC; 50–60 Hz
Safety Rated Voltage Range[5]	90–250 V AC, 50–60 Hz
CURRENT DRAW	
Idle Current	0.40 A rms (120 V AC); 0.23 A rms (220 V AC); 0.47 A rms (100 V AC)
Maximum Long-Term Continuous Current (>10 sec)	1.15 A rms (120 V AC); 0.62 A rms (220 V AC); 1.32 A rms (100 V AC)
Burst Current (<1 sec)	1.82 A rms (120 V AC), 0.99 A rms (220 V AC), 2.16 A rms (100 V AC)
Maxiumum Instantaneous Peak Current	5.60 A peak (120 V AC), 3.20 A peak (220 V AC), 6.05A peak (100 V AC)
Inrush Current	< 20.0 A peak
PHYSICAL	
Dimensions	W: 12.00 in (305 mm) x H: 16.00 in (406 mm) x D: 16.39 in (416 mm) (+0.5 in for HF dome clearance)
Weight	51 lb (23.1 kg)
Enclosure	Oak veneer with smooth medium-gloss black finish

NOTES

1. Subject to room loading. Specified for 8 ft actual distance between HD-1 cabinet and a single boundary surface.
2. Measured free field with 1/3 octave frequency resolution; microphone placed at 18 in from front baffle on tweeter axis.
3. **Linear Peak SPL** is measured in free-field at 4 m referred to 1 m. Loudspeaker SPL compression measured with M-noise at the onset of limiting, 2-hour duration, and 50-degree C ambient temperature is < 2 dB.

   M-noise is a full bandwidth (10Hz–22.5 kHz) test signal developed by Meyer Sound to better measure a 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 verify there is still headroom over pink noise.
4. Amplifier wattage rating based on the maximum unclipped peak voltage the amplifier will produce for at least 0.5 sec into the nominal load impedance.
5. Indicates the safety agency rated voltage range under normal operating conditions.

ARCHITECTURAL SPECIFICATIONS

The loudspeaker shall be a self-powered, high-definition studio monitor. The transducers shall include one 8 in diameter cone driver and one 1 in dome tweeter.

The loudspeaker system shall incorporate internal processing electronics and a 2-channel amplifier, one channel for each driver. The power amplifier shall feature complementary MOSFET output stages and operate as class A at low to moderate levels (less than 90 dB SPL) and class AB at high levels. Performance specifications for a typical production unit shall be as follows, measured free field with microphone placed at 18 in from front baffle on tweeter axis using 1/3-octave resolution: operating frequency range shall be 32 Hz to 22 kHz; linear peak SPL shall be 113.5 dB measured with M-noise, free field at 4 m referred to 1 m; coverage shall be 60 degrees by 60 degrees.

The audio input shall be electronically balanced with a 10 kOhm impedance and accept a nominal input level of +4 dBu or –10 dBV (switchable). The audio connector shall be XLR 3-pin female.

Power requirements shall be nominal 100, 110, 220, or 240 V AC line current at 50–60 Hz. UL and CE operating voltage range shall be 90–250 V AC. Maximum peak current draw during burst shall be 1.82 A rms at 120 V AC and 0.99 A rms at 220 V AC. The AC power connector shall be a 3-pin IEC male receptacle.

Loudspeaker components shall be mounted in an oak veneer enclosure with a smooth medium-gloss black finish. Dimensions shall be W: 12.00 in (305 mm) x H: 16.00 in (406 mm) x D: 16.39 in (416 mm). Weight shall be 51 lbs (23.1 kg).

The loudspeaker shall be the Meyer Sound HD-1.

THX APPROVED

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