

HM-1S *Self-Powered Studio Monitor*

FEATURES



Full-Range Response
(42 Hz – 20 kHz)



Dual-concentric Drivers



Compact Enclosure



Integrated Electronics



400 Watts Stereo Amplifier



Phase-corrected to 15 kHz



Magnetically Shielded Drivers



48 VDC Powered

*Superior
engineering
for the art
and science
of sound.*



**Meyer
Sound**

The Meyer HM-1S Studio Monitor is a compact, full-range, self-powered reference monitor that employs a concentric tweeter mounting structure to achieve true point-source performance. Sophisticated phase-correction circuitry provides superb imaging without the off-axis cancellation effects, back-wave interference, and IM distortion commonly exhibited by dual-concentric speakers.

The HM-1S Studio Monitor is a two-way system comprising a 7-inch graphite cone low-frequency driver, and a concentrically-mounted, 1-inch soft-dome high-frequency driver. A constant-directivity, high-frequency horn affords a symmetric 100° beam width. The HM-1S employs optimized electronics, drivers, and cabinet venting (tuned to 40 Hz) to achieve low frequency response far exceeding that of most small speakers.

The LF (low frequency) response can be extended down to 42 Hz if the HM-1S is placed next to a wall or ceiling (half-space loading), or used with the HM-1S Studio Subwoofer. Although each HM-1S Studio Monitor can power a subwoofer, substantial LF energy may be obtained by driving one subwoofer from two HM-1S Studio Monitors, resulting in a correctly-summed mono signal. Subwoofer usage



depends on the loading conditions, the LF gain desired, and whether a stereo LF signal is required. The subwoofer is powered from the Sub output on the rear panel of the HM-1S.

The HM-1S Studio Monitor and Subwoofer cabinets are constructed from medium density fiberboard and finished with an attractive, durable oak veneer (natural wood or black). The drivers in both cabinets are magnetically shielded and the magnet structures employ field-cancelling techniques to minimize magnetic leakage, allowing speaker placement within one foot of color video monitors. Although external heatsinks on the rear of the cabinet provide adequate convection cooling, a variable-speed cooling fan assembly (driven from a rear-panel output and mounted on the

rear of the speaker) is available if the HM-1S will be operated in hot temperatures or in an unventilated, enclosed area.

The enclosure contains a built-in, 400 W stereo amplifier, an active crossover, frequency and phase response alignment circuitry, and driver protection voltage limiters. Front-panel LEDs indicate power, signal limit, and thermal overload, and a rear-panel circuit breaker provides overall DC power protection.

The HM-1S accepts a unipolar 48 VDC power source, which may be supplied by the Meyer PS-1 AC Adapter. Using a DC supply enables long power cable runs with minimal induced noise or hum, which is particularly important for recording studios and other noise sensitive environments.

HM-1S SPECIFICATIONS

ACOUSTICAL¹

Frequency Range	42 Hz – 20 kHz
Amplitude Response ²	±2.5 dB 100 Hz – 20 kHz; –6 dB 42 Hz – 100 Hz
Free Field Half-Space ³	±2.5 dB 90 Hz – 20 kHz; –3 dB 42 Hz – 90 Hz
Free Field with Subwoofer ⁴	±2.5 dB 42 Hz – 20 kHz;
Phase Response ⁵	±20° 250 Hz – 15 kHz
Maximum SPL ⁶	Without Sub: 116 dB; With Sub: 120 dB
Beam Width	–6 dB at H: 100°, V: 100°
Off-axis Amplitude Response	±3.5 dB 100 Hz – 20 kHz up to 45° coverage ⁷
Crossover	Complex roll-off shape, free field 3 kHz equal acoustic amplitude
Signal to Noise Ratio	> 100 dB (A-weighted noise floor to max SPL)

TRANSDUCERS

Dual-Concentric Drivers (magnetically shielded)	
Low Frequency	7" graphite cone driver
High Frequency	1" soft-dome tweeter
Subwoofer (optional)	10" cone driver (not shielded)

AMPLIFIERS

Type	Complementary MOSFET output stages class A/B, bridged
Output Power	400 Watts RMS, 200 Watts/channel at 4 Ω
THD, IM, TIM	< .02 %

AUDIO INPUT

Connector	1 female XLR
Type	Differential balanced input circuit ⁸
Impedance	10 kΩ differential (between pins 2 and 3)
XLR Wiring	Pin 1: chassis; Pin 2: + signal; Pin 3: – signal
RF Filter	Common Mode: 425 kHz low-pass; Differential Mode: 142 kHz low-pass
Common Mode Rejection Ratio	> 80 dB (50 Hz – 1 kHz); typically 90 dB

POWER SUPPLY

Voltage	Nominal: 48 VDC; Maximum: 52 VDC; Minimum: 35 VDC;
Current ⁹	Typical: 2.0 Arms, 3.5 Apk; Maximum in limiting: 3.0 Arms, 5.0 Apk

PHYSICAL

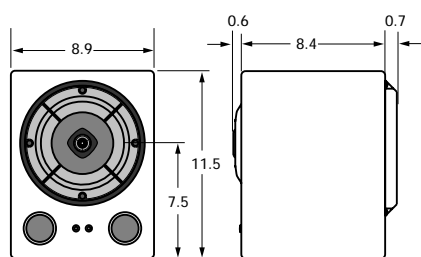
Dimensions	Height: 11.5"; Width: 8.9"; Depth: 9.7", 10.5" with fan attachment
Weight	11.0 lb (5.0 kg); shipping: 13.5 lb (6.1 kg)
Protective Cover	Removable wood frame with cloth cover
Enclosure/Finish	Medium Density Fiberboard (MDF) /Oak Veneer (natural or black)

NOTES

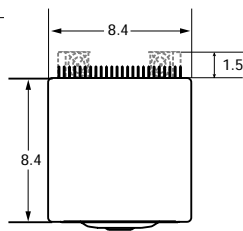
- Measurements are for a single HM-1 taken at 1 m on-axis, 1/3 octave, unless otherwise stated.
- Amplitude tolerance depends on loading conditions and whether the subwoofer is used.
- Flush-mounted into single boundary surface.
- A single subwoofer adds approx. 8 dB 42 – 100 Hz to the amplitude response a single HM-1.
- Phase variation from pure delay.
- Pink noise or music.
- A gradual amplitude attenuation occurs as the angle increases beyond 45°. Greater attenuation occurs at 2 kHz and beyond 10 kHz. There are no response peaks.
- Capacitively coupled; accepts up to ±50 VDC common mode.
- Idle current ≅ 0.4 A; using the slaved subwoofer increases stated currents by ≅ 20%.

PHYSICAL DIMENSIONS

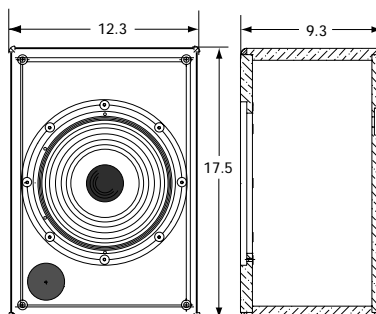
ALL UNITS IN INCHES



HM1-S



HM1-S Subwoofer



Meyer Sound Laboratories has devoted itself to designing, manufacturing, and refining components that deliver superb sonic reproduction. Every part of every component is designed and built to exacting specifications and undergoes rigorous, comprehensive testing in the laboratories.

Research remains an integral, driving force behind all production. Meyer strives for sound quality that is predictable and neutral over an extended lifetime and across an extended range.

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