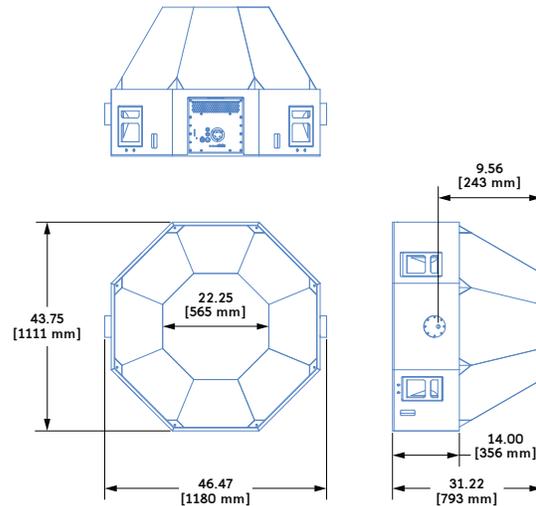


SB-2 : Parabolic Wide-Range Sound Beam



- Dimensions** 46.47" w x 43.75" h x 31.22" d
(1180 mm x 1111 mm x 793 mm)
- Weight** 254 lbs (115.2 kg)
- Shipping Weight** 437 lbs (198.2 kg)
- Enclosure** Fiberglass and multi-ply hardwood birch
- Finish** Black textured
- Protective Grille** Powder-coated, hex-stamped steel
- Mounting** Optional MYA-SB-2 yoke assembly kit; optional VAK-SB-2 vertical array kit; optional HAK-SB-2 horizontal array kit

The SB-2 is a bi-amplified sound reinforcement loudspeaker housed in an octagonal enclosure with a parabolic dish front face. Capable of high sound pressure levels with precisely defined narrow coverage, the SB-2 offers a unique solution for large-scale distributed paging and music systems.

While distributed ceiling loudspeakers are often employed in an attempt to overcome reverberation and improve intelligibility, large venues pose problems of scale that conventional ceiling loudspeakers cannot effectively address. In applications where the ceiling height is

40 feet or more, a conventional distributed system lacks both the power to overcome air losses and the directionality to avoid combing and excessive reverberation.

The SB-2 provides a unique and effective solution to these problems. Featuring a tight 20-degree coverage pattern with high output capability, the SB-2 offers the ability to cover individual zones with highly intelligible, full-range sound while avoiding overlapping. A hybrid two-way system, the SB-2 uses a waveguide to achieve directionality at high frequencies and a parabolic array of cone

drivers at mid-to-low frequencies. The result is tightly controlled coverage from 500 Hz to 16 kHz with low-frequency response extending down to 130 Hz.

The SB-2 is comprised of 28 4-inch cone drivers, a single 2-inch throat, 4-inch diaphragm compression driver, an integral complementary MOSFET power amplifier with 1240 W burst capability, and optimized signal processing circuitry. It features options for L6-20, IEC 309, or VEAM all-in-one AC connectors, as well as compatibility with Meyer Sound's RMS™ remote monitoring system.

FEATURES & BENEFITS

- Exceptional long-throw capability with very high-Q
- Maximum intelligibility and ultra-low distortion
- Tightly defined coverage with minimized overlap
- Minimum reverberation
- Integrated amplifier and control electronics
- TruPower™ Limiting (TPL) driver protection
- Intelligent AC™ power supply with automatic voltage selection
- Optional RMS™ remote monitoring system module

APPLICATIONS

- Airports, sports arenas, and shopping malls
- Specialized coverage to compliment large-scale music reinforcement systems
- Indoor and outdoor large-scale distributed systems
- Paging systems for reverberant environments

SB-2 SPECIFICATIONS

ACOUSTICAL¹	Operating Frequency Range² 130 Hz – 18 kHz –6 dB 150 Hz – 13 kHz ±4 dB Phase Response 400 Hz – 11 kHz ±35° Maximum Peak SPL 143 dB at 1 meter Dynamic Range >110 dB
COVERAGE	(–6 dB points) 20° symmetrical at 1 kHz to 16 kHz 40° symmetrical at 500 Hz 90° symmetrical at 250 Hz
CROSSOVER	1.5 kHz
TRANSDUCERS	Low Frequency (28) 4" diameter cone drivers High Frequency (1) 2" throat, 4" diaphragm compression driver
AUDIO INPUT	Type Differential, electronically balanced Connectors XLR 3-pin female input with XLR 3-pin male loop output Input Impedance 10 k Ω differential between pins 2 and 3 Wiring Pin 1: Chassis/earth through a 220 k Ω , 1000 pF, 15 V clamped network to provide virtual ground lift at audio frequencies Pin 2: Signal (+) Pin 3: Signal (–) Case: Earth ground and chassis
AMPLIFIER	Nominal Input Sensitivity +4 dBV (1.23 V rms)
AC POWER	Type 2-channel complementary MOSFET output stages (class AB/H) Burst³ 1240 W total (2 x 620 W) THD, IM, TIM <.02% Cooling One ultrahigh-speed primary fan, one ultrahigh-speed reserve fans
RMS NETWORK (OPTIONAL)	Equipped with 2-conductor, twisted-pair network, reporting all amplifier operating parameters to host computer

NOTES:

1. Measured at 4 meters on axis, free field with pink noise in third-octave bands.
2. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
3. Nominal 8 ohm resistive load, pink noise, 100 V peak.
4. IEC 309 connector rated at 16 A available for European installations.
5. Rated at 88–125 V AC and 182–235 V AC, 50/60 Hz, to satisfy EC standards for –10% to +6% AC line voltage.



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ARCHITECT SPECIFICATIONS

The loudspeaker shall be a self powered, high-Q, vocal range system. The transducers shall consist of twenty-eight 4-inch diameter cone drivers and a single 4-inch diaphragm compression driver on a 20-degree x 20-degree symmetrical horn.

The loudspeaker system shall incorporate internal processing electronics and a 2-channel amplifier. Processing functions shall include equalization, phase correction, and signal division for the low- and high-frequency sections. The crossover point shall be 1.5 kHz. Each amplifier channel shall be class AB/H with complementary MOSFET output stages. Burst capability shall be 620 W per channel (1240 W total) with a nominal 8 ohm resistive load. Distortion (THD, IM, TIM) shall not exceed 0.02 percent. Protection circuits shall include TruPower Limiting.

Performance specifications for a typical production unit

shall be as follows, measured at 1/3 octave resolution in fixed ISO bands: operating frequency range, 150 Hz to 18 kHz (–6 dB points); phase response, 400 Hz to 11 kHz ±35 degrees; maximum peak SPL, 143 dB at 1 meter. Beamwidth shall be 20 degrees ±5 degrees from 1 kHz to 16 kHz.

The audio input shall be electronically balanced with a 10 kohm impedance and accept a +4 dBu (1.23 V rms) signal. The audio connectors shall be XLR 3-pin female and male. RF filtering shall be provided, and CMRR shall be greater than 80 dB from 50 Hz to 1 kHz.

The Intelligent AC 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 95 to 125 V AC and 208 to 235 V AC. Maximum

instantaneous peak current draw shall be 22 A at 115 V, 11 A at 230 V, and 25 A at 100 V. Current inrush during soft turn-on shall not exceed 12 A at 115 V. The AC power connector shall be NEMA L6–20, IEC 309, or VEAM all-in-one.

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

All components shall be mounted in a parabolic dish enclosure constructed of fiberglass and multi-ply hardwood birch with a hard waterproof and damage-resistant, black-textured finish. The front protective grille shall be powder-coated, hex-stamped steel. Dimensions shall be 46.47 inches wide x 43.75 inches high x 31.22 inches deep (1180 mm x 1111 mm x 793 mm). Weight shall be 254 lbs (115.2 kg).

The loudspeaker shall be the Meyer Sound SB-2.