SOVOX

MX3105

SPECIFICATION

Passive three-way screen-channel loudspeaker with dual 15-inch dual-baffle LF and an aim-adjustable mid/high section. Hall depth ≤ 28 m/40 m [1]

01 FEATURES ● Performance | ▲ Engineering | ■ Economy & Maintenance



- ● Dual-baffle structure houses the two 15-inch woofers on separate baffles, with usable extension to 28 Hz.
- ● Dedicated 10-inch midrange: 75 mm voice coil and a rigid cast-aluminium chassis.
- ● 3-inch compression driver with SOVOX HLMS™ dual shorting rings.
- ▲ Mid/high section mounted on a movable baffle, so directivity can be aimed while the cabinet stays suspended.
- ▲ Passive crossover network drives the complete three-way system from a single amplifier channel.
- ■ The 4-ohm load requires an amplifier with adequate current capability, cabling and protection settings.

02 OVERVIEW

The MX3105 is a passive three-way screen-channel loudspeaker for large commercial cinema auditoria, intended for the L/C/R main channels behind acoustically transparent screens. It combines dual 15-inch low-frequency drivers, a dedicated 10-inch cone midrange and a 3-inch compression driver, covering 38 Hz–20 kHz with usable extension to 28 Hz and 100° × 60° nominal coverage.

The cabinet uses a dual-baffle structure that gives each 15-inch woofer its own baffle, increasing the low-frequency radiating area. Both the woofers and the 10-inch midrange use SOVOX ADM™ cones; the midrange adds a cast-aluminium chassis and heat-resistant braided leads. The 3-inch compression driver uses SOVOX HLMS™ dual shorting rings, a linear-motor design for higher fidelity at high drive levels. The mid/high assembly is mounted on a movable baffle, so directivity can be aimed at the screen and seating without lowering the cabinet. Passive crossovers at 900 Hz and 2.1 kHz allow one amplifier channel to drive the system at a 4-ohm nominal impedance; amplifier current capability, cabling and protection settings should be verified. The bass-reflex MDF/PVC cabinet can be screen-frame mounted or suspended.

03 APPLICATIONS

Behind-screen main channels · Large commercial auditoriums · Large-format screens

04 SPECIFICATIONS

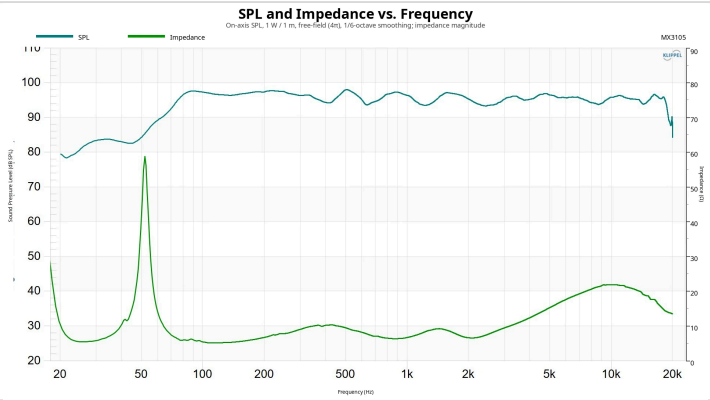
MODEL	MX3105
PRODUCT TYPE	Cinema Screen Speaker
SYSTEM TYPE	3-Way, Passive
DRIVER CONFIGURATION	15" LF × 2+ 10" MF + 3" HF
NOMINAL IMPEDANCE	4Ω
FREQUENCY RESPONSE (±3 DB @ 2Π) [2]	38 Hz–20 kHz
FREQUENCY RANGE (-10 DB @ 2Π) [2]	28 Hz–20 kHz
AES 100-HOUR POWER RATING [3]	1100W
AES 2-HOUR POWER RATING	1375W
PROGRAM POWER [4]	2200W
SENSITIVITY (2Π) @1W/1m	100dB
RATED MAXIMUM SPL /1m @ 2Π	130.4dB
CALCULATED MAXIMUM SPL /1m @ 2Π [5]	136.4dB
CROSSOVER FREQUENCY	900 Hz 2.1 kHz passive
RECOMMENDED HPF	25 Hz, LR24
COVERAGE ANGLE (H×V)	100° × 60°
ENCLOSURE TYPE	Bass-reflex enclosure with adjustable mid/high-frequency section and baffle
ENCLOSURE MATERIAL / FINISH	MDF · PVC laminate
INPUT CONNECTORS	Binding posts
MOUNTING OPTIONS	Screen-frame mounting or suspended installation under guidance
DIMENSIONS W×H×D (mm)	W1475 × H1707 × D450 mm
NET WEIGHT	150 kg (with baffle) 125 kg (without baffle)

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05 FREQUENCY RESPONSE

On-axis frequency response, 1W/1 m, free-field, 1/6-octave smoothing[6]

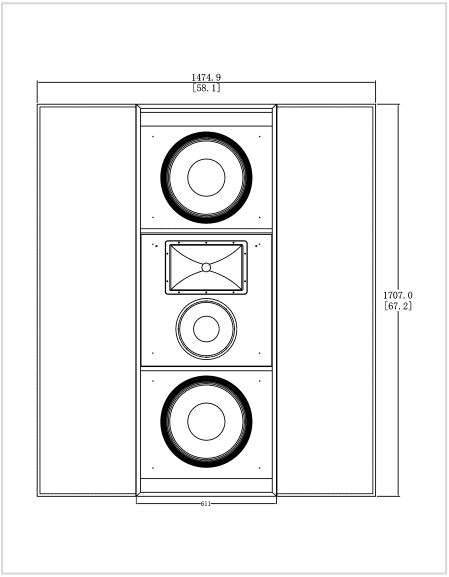
MX3105



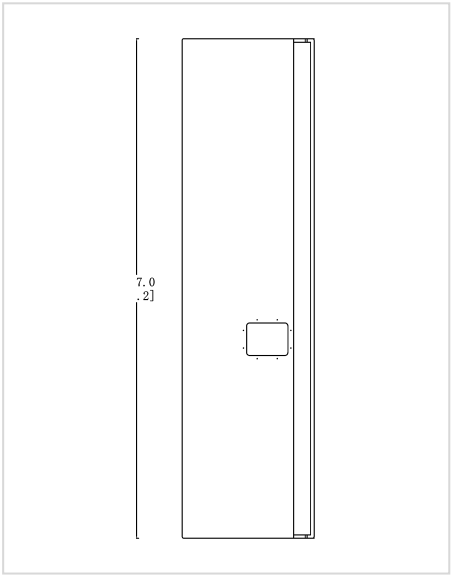
06 DIMENSIONAL DRAWINGS

Front, side and top views, dimensioned in millimetres

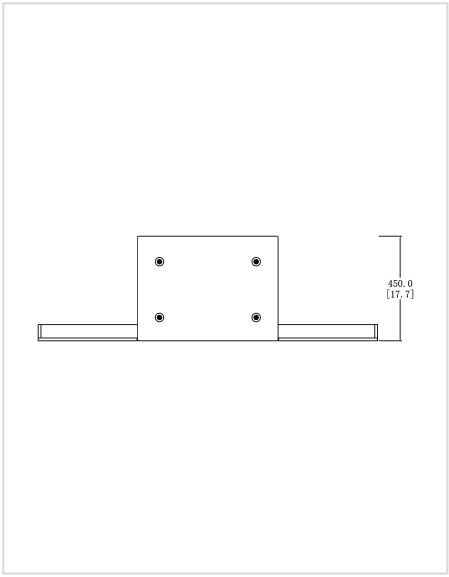
THREE EQUAL IMAGE FRAMES · FIT WITHOUT CROPPING



Front View



Side View



Top View

SPECIFICATION NOTES

1 Two length values are given: the first is the usable range on continuous power, the second on program power. Program power is a short-term maximum output and is not a level the system can sustain continuously. Target levels follow the SMPTE ST 202 / RP 200 cinema reference level: 85 dB for screen channels plus 20 dB peak headroom, measured at the reference listening position (RLP); hall depth = listening distance x 1.5. Listening distance is derived from free-field distance attenuation. The continuous-power range uses the rated maximum SPL in this table; the program-power range uses the rated value +3 dB (program power being twice the continuous power). The calculated maximum SPL (rated +6 dB, short-term peak) is not used for these figures.
Screen loss, power compression, system limiting and room gain are not included - this is a theoretical estimate, not a measured guarantee; on-site verification is recommended. Operating beyond the recommended figure may result in, but is not limited to: dynamic compression, increased distortion, extraneous noise, and in severe cases equipment damage.

2 Low-frequency response and sensitivity specifications are referenced to half-space (2π) conditions, representative of typical cinema baffle-wall installation. Frequency-response graphs are measured in an anechoic free-field (4π) environment unless otherwise noted. In the low-frequency region the same loudspeaker measures about 6 dB higher under 2π than under 4π (in practice 3–6 dB depending on frequency and baffle conditions); this is a difference of measurement convention, not of performance.

3 Rating based on an IEC filtered random-noise test signal, band-limited 50 Hz–20 kHz, with a peak-to-average ratio of 6 dB

4 Recommended amplifier output at the applicable impedance should not exceed the program power, giving an unclipped output waveform while avoiding loudspeaker damage; an amplifier capable of at least the RMS continuous power (AES 100 h) is recommended to realize full loudspeaker performance. The actual amplifier match should be determined by calculation for the listening distance (see note 1).

5 Calculated maximum SPL is derived from the rated (continuous) power and half-space (2π) sensitivity and is a calculated, not measured, figure; at a 6 dB peak-to-average ratio it exceeds the rated value by 6 dB, representing short-term peak capability rather than a level the system can sustain.

6 The frequency-response graphs on this page are measured on-axis at 1 W/1 m in an anechoic free-field (4π) environment with 1/6-octave smoothing; the frequency response and sensitivity in the specification table are stated under half-space (2π) conditions. Lower readings in the low-frequency region of the graph therefore reflect the difference in convention rather than a difference in performance. 2π-format curves are available on request.

7 Passive, single-amplifier-channel enclosure; hall depth above derived from its AES 100-hour rating and system sensitivity, with drive-unit-level verification pending.

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