SOVOX

M300

SPECIFICATION

Modular three-way, bi-amplified screen-channel system with dual 15-inch LF and twin 12-inch midranges. Hall depth ≤ 27 m/37 m [1]

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



- ● Dual 15-inch woofers establish the low-frequency foundation, matched in scale to the twin midranges.
- ● Twin 12-inch midranges side by side expand both radiating area and power handling in the dialogue band.
- ● 3-inch compression driver with HLMS™ dual shorting rings (copper sleeve + aluminium ring) for linear motor behaviour at high output.
- ▲ 250 Hz LR24 active crossover, bi-amplified, matched to the capability of the twin midranges.
- ▲ Sealed mid/high enclosure with an internal horn keeps reflex airflow out of the midband for a cleaner, more controlled midrange.
- ■ Twin midranges and twin woofers sit in two separate enclosures; the heaviest piece is 44.3 kg and can be carried and serviced separately.

02 OVERVIEW

The M300 is a modular three-way, bi-amplified screen channel system in the SOVOX M Series for medium and large commercial cinemas, covering behind-screen main channels, multiplex auditoria and screening or dubbing rooms. It pairs a dual-15-inch low-frequency module with a mid/high module carrying twin 12-inch midranges and a 3-inch compression driver, covering 42 Hz–18 kHz (±3 dB, half-space) with a 32 Hz–20 kHz usable range and 90° × 45° nominal coverage.

The 15-inch woofers use large magnetic assemblies with 75.5 mm voice coils and 22.5 mm windings for sustained low-frequency duty. The twin 12-inch midranges operate in a sealed mid/high enclosure with an integrated horn, keeping the upper module compact and acoustically controlled, while the 3-inch titanium-diaphragm compression driver uses the HLMS™ copper-sleeve-plus-aluminium-ring dual shorting structure. The system crosses over actively at 250 Hz (LR24) with independent amplifier channels for LF and mid/high, and an internal 2.0 kHz passive network links the midrange and high-frequency sections. The 450 mm-deep LF module and 302 mm-deep mid/high module (approx. 44.3 kg and 25.5 kg net) can be handled and positioned separately, simplifying installation planning behind the screen.

03 APPLICATIONS

Behind-screen main channels · Large commercial auditoriums · Dubbing rooms · Large-format screens · Dome cinemas

04 SPECIFICATIONS

M300 ACTIVE CROSSOVER SYSTEM

PRODUCT TYPE	Cinema Screen Loudspeaker System
SYSTEM TYPE	3-Way, Bi-Amplified
FREQUENCY RESPONSE (±3 DB @ 2Π) [2]	42 Hz–18 kHz
FREQUENCY RANGE (-10 DB @ 2Π) [2]	32 Hz–20 kHz
COVERAGE ANGLE (H×V)	90° × 45°

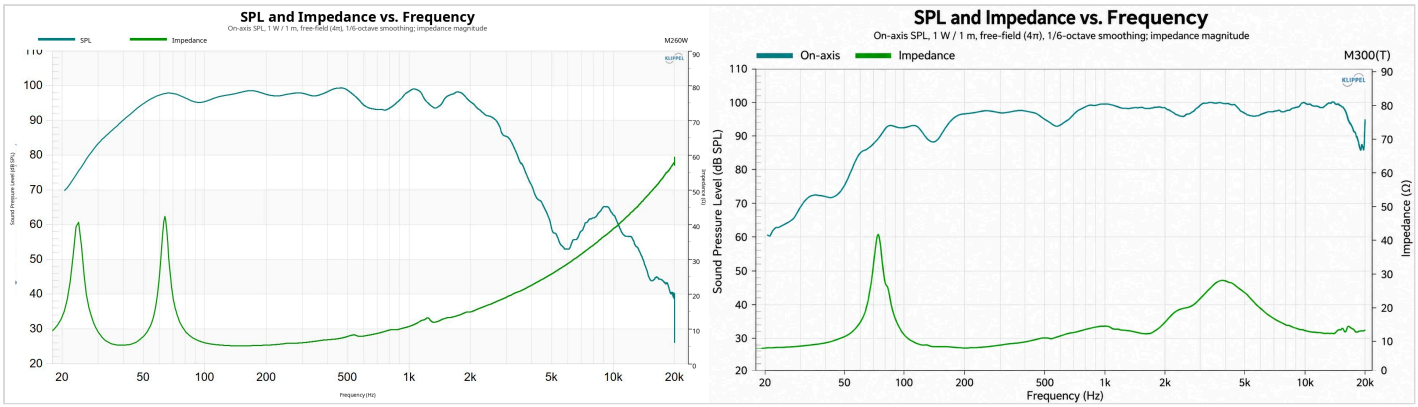
	M260(W) LF MODULE	**M300(T)** MF / HF MODULE
DRIVER CONFIGURATION	15"LF × 2	12"MF × 2 + 3"HF
NOMINAL IMPEDANCE	4Ω	4Ω
AES 100-HOUR POWER RATING [3]	800W	600W
AES 2-HOUR POWER RATING	1000W	750W
PROGRAM POWER [4]	1600W	1200W
SENSITIVITY (2Π) @1W/1m	102dB	102dB
RATED MAXIMUM SPL /1m @ 2Π	131dB	129.8dB
CALCULATED MAXIMUM SPL /1m @ 2Π [5]	137dB	135.8dB
CROSSOVER FREQUENCY	LR-24dB oct @250 Hz (LF–MF HF)	2.0 kHz passive (MF–HF)
RECOMMENDED HPF	30 Hz, LR24	-
ENCLOSURE TYPE	Bass-reflex enclosure	Sealed enclosure with built-in horn
ENCLOSURE MATERIAL / FINISH	MDF · PVC laminate	MDF · PVC laminate
INPUT CONNECTORS	Binding posts	Binding posts
MOUNTING OPTIONS	Screen-frame mounting	On top of the LF module
DIMENSIONS W×H×D (mm)	W701 × H961 × D450 mm	W410 × H990 × D302 mm
NET WEIGHT	44.3 kg	25.5 kg

Office: Room A401, Gaosheng Building, Zhongxin Road, Bao'an District, Shenzhen,China
Factory: SOVOX Technology Park, Qingling Road, Huiyang District, Huizhou,China
Email · info@sovox.com
Web · www.sovox.com
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05 FREQUENCY RESPONSE

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

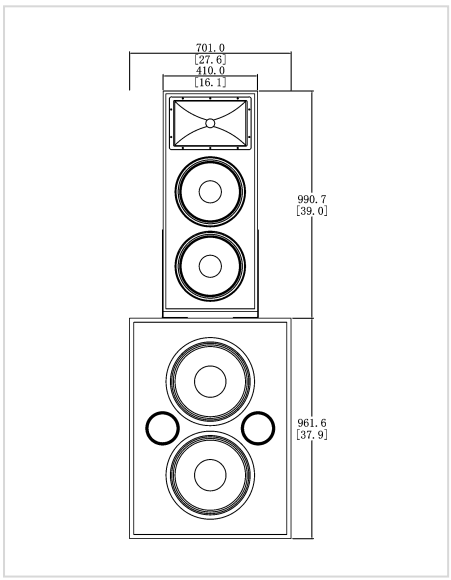
M260(W) · M300(T)



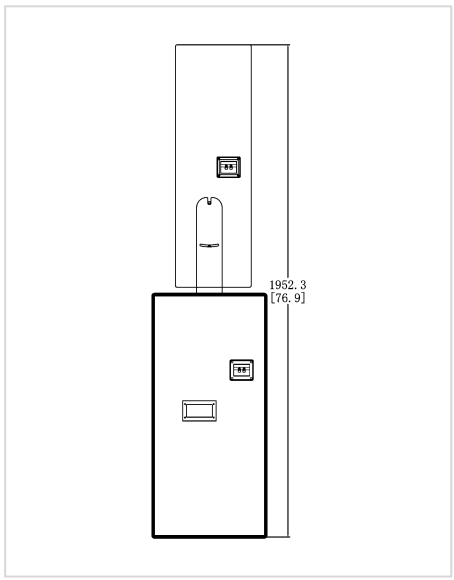
06 DIMENSIONAL DRAWINGS

Front, side and top views, dimensioned in millimetres

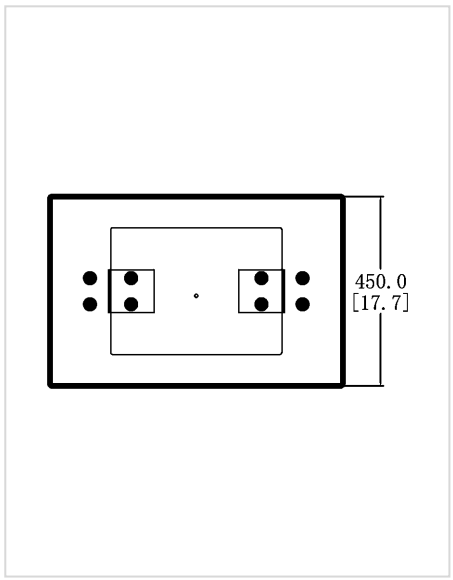
THREE EQUAL IMAGE FRAMES · FIT WITHOUT CROPPING



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.

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