

18" Neodymium Low Frequency Driver

Technical Specification & CLIO Measurement Curves



High-performance neodymium magnet structure for maximum flux density, combined with a large voice coil and reinforced cone for exceptional low-frequency extension and power handling.



Advanced Magnet Circuit

Optimized neodymium magnet assembly with shorting rings minimizes inductance and distortion, delivering tight, controlled bass response across the frequency spectrum.



CLIO Verified Performance

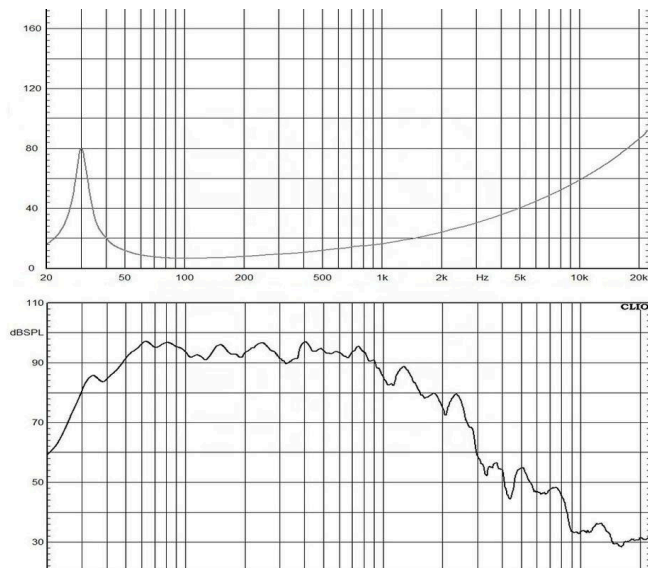
Precision CLIO measurements confirm flat impedance curve (<500Hz) and extended frequency response down to 28Hz, ensuring accuracy in professional audio applications.



High Power Handling

1200W AES power rating with a 4-inch voice coil and vented core design for superior heat dissipation, ideal for high-SPL live sound and installation systems.

Impedance Parameters



The impedance curve illustrates the complex relationship between frequency and opposition to current flow, highlighting resonance and inductive behavior across the audio spectrum.

Nominal Rated Impedance

8 Ω

DC Coil Resistance (R_e)

4.30 Ω

Voice Coil Inductance (L_e)
@1kHz

1.56 mH

Minimum Impedance

6.0 Ω

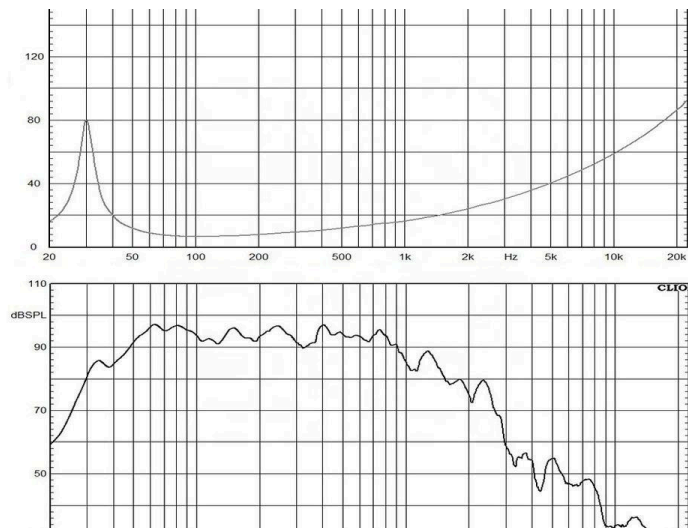
Measured at 45~60 Hz frequency range, indicating low-frequency performance stability.

Resonance Peak Impedance

$\approx 80 \Omega$

Occurs at resonance frequency (F_s) of 30 Hz, representing the mechanical-electrical transition point.

SPL Response (1W/1m, Half-space, 20–200Hz)



The measured impedance and SPL response curves clearly show the speaker's SPL performance across the full frequency range from 20Hz to 20kHz, focusing on the response characteristics in the low-frequency range.

20Hz

Low-frequency extension down to 20Hz with an SPL of approximately 65dB, demonstrating excellent low-frequency potential and providing a solid foundation for the ultra-low frequency range.

30Hz (Fs)

At the resonant frequency of 30Hz, the sound pressure level rises to approximately 85dB, forming a natural low-frequency boost and enhancing the low-frequency impact and sense of envelopment.

50~120Hz (Flat)

This frequency band exhibits an extremely flat response, maintaining 95-97dB (rated reference sensitivity 97dB), ensuring accuracy, fullness, and stability in the mid-low frequencies.

150~200Hz

The sound pressure level gradually drops back to 94-95dB, achieving a smooth transition in the upper mid-low frequencies and effectively avoiding an abrupt crossover feeling between the mid-low and mid frequencies.

Thiele-Small Parameters & Power Rating

01. THIELE-SMALL ELECTROACOUSTIC DATA

Resonance & Quality Factors

$F_s = 30\text{Hz}$ | $Q_{ts} = 0.33$, $Q_{es} = 0.36$, $Q_{ms} = 3.60$ — Optimized for large vented enclosures with extended low-frequency response and controlled decay.

Motor Force & Compliance

$BL = 25.7 \text{ T} \cdot \text{m}$, $M_{ms} = 284\text{g}$, $V_{as} = 193\text{L}$, $S_d = 0.122\text{m}^2$ — High motor force and large suspension compliance deliver exceptional control over cone movement and output.

02. POWER HANDLING SPECIFICATION

 **1500_w**

AES Continuous Power

Standardized thermal power handling for sustained, distortion-free operation under real-world conditions.

 **3000_w**

Program Power (Peak)

Dynamic peak power capacity for transient-rich audio material, ensuring no signal clipping or driver damage.