

TAD TL-1801



Low-Frequency Loudspeaker

The TL-1801 from TAD (Technical Audio Devices) is a low-frequency loudspeaker featuring an 18-inch (460mm) driver. It features a high power maximum capacity of 800W thanks to the combined use of a 100mm diameter x 23mm winding depth, edgewise-wound, oxygen-free copper voice coil, a ferrite magnetic circuit with a high flux density of 11,200G, a lightweight transducer system using a cone made of highly rigid pulp and Kevlar fibers, and an advanced heat radiation design. As a result, powerful sound reproduction with a minimum of distortion is possible, even with high-power input.

The frame for the driver is made of rigid die-cast aluminum alloy to support the magnetic circuit and to allow the transducer system to reproduce powerful, accurate bass. Frame resonance is suppressed by the seven frame arms. The cone is laminated with macromolecular film, and its surface specially treated to make it water-repellent and to prevent cone breakup from degrading sound quality.

Lightweight moving parts are employed and the voice coil is of the long-travel design, to ensure a high sensitivity of 96.5dB/1W, an exceptionally high figure for its size. The large input terminal permits direct connection of speaker cables up to 14mm² (6 Gauge) in diameter.

General	TL-1801
Nominal Impedance	8 Ohm
Lowest Resonance Frequency (Fo)	26 Hz
Frequency Range	26-2600 Hz
Rated Input Power	200 Watt
Maximum Input Power	800 Watt
Sound Pressure Level	96,5 dB/W (1m)
Total Magnetic Flux	282.200 Mx
Magnetic Flux Density	11.200 G
Highest Recommended Crossover	800 Hz
Recommended Enclosure	170 - 500 liter
Effective Piston Diameter	394,0 mm
Baffle Opening	426,0 mm
Mounting Dimensions	441,0 mm
Weight	12,6 kg
Dimensions (diameter x depth)	464 x 176 mm
Theile-Small Parameters	TL-1801
sd - Piston Area	0,122 Sq M
Revc - DV Voice Coil Resistance	7 Ohm
Levc - Voice Coil Inductance 1kHz (mH)	2,0
BL - Flux Density (TM)	21,0
Vas - Equivalent Acoustic Volume (Liter)	500 liter
Cms - Mechanical Suspension Compliance (x 10-4 m/N)	2372
Mms - Mechanical Mass of Cone and Free Air Load	158 g

Mmd	114 g
Fs - Free Air Resonance Frequency	26 Hz
Qms - Mechanical Q Factor	7,94
Qes - Electrical Q Factor	0,39
Qts - Total Q factor	0,37
Xmax - Max Linear Peak Excursion (O-P)	7,5 mm
Pmax - RMS Thermal power Limit	800 Watt
no - Relative Efficiency	2,20 %
Vd (cm ²)	914
Max. Excursion Before Damage (P-P)	40,0 mm