

**TAD TL-1601b**



**Low-Frequency Loudspeaker**

The TL-1601b has many of the traits of the TL-1601a - such as low distortion and low coloration. But it has the added advantage of an eminently high input power of 500 watts. The unit is designed for professional applications including digital-recording monitoring systems and sound reinforcement systems for synthesizer music.

**VOICE COIL** To increase the input power the unit can handle, the bobbin for the voice coil has ventilation holes which help efficiently dissipate heat. The voice coil is a long-travel type to improve sensitivity and enable a high sound pressure level of 97.5dB/m (1W). Pure, straightforward sound is assured thanks to the use of super-low-impedance OFC (Oxygen-free Copper) wire for leads.

**MAGNETIC CIRCUIT** Holes in the frame's opening and the magnetic circuit serve to disperse heat quickly, boosting the unit's maximum input power to 500 watts. High-quality magnetic material is used in the circuit to permit high magnetic flux density of 12,400G, and to increase the sound pressure level.

**DIAPHRAGM** A rugged yet lightweight cone diaphragm is supported by a corrugated cloth surround coated with special damping agent and suspended by a highly linear suspension system. The result is high sensitivity, low distortion and uncolored sound reproduction.

**HOUSING** A highly rigid die-cast aluminum frame minimizes resonance and vibration. Terminals are rugged binding types that allow the use of thick speaker cables.

<b>General</b>	<b>TL-1601b</b>
Nominal Impedance	8 Ohm
Lowest Resonance Frequency (Fo)	28 Hz
Frequency Range	28-2000 Hz
Rated Input Power	200 Watt
Maximum Input Power	500 Watt
Sound Pressure Level	97.5 dB/W (1m)
Total Magnetic Flux	277.000 Mx
Magnetic Flux Density	12.400 G
Highest Recommended Crossover	1.200 Hz
Recommended Enclosure	113 - 304 liter
Effective Piston Diameter	335,0 mm
Baffle Opening	352,0 mm
Mounting Dimensions	370,0 mm
Weight	11 kg
Dimensions (diameter x depth)	400 x 167 mm
<b>Theile-Small Parameters</b>	<b>TL-1601b</b>
sd - Piston Area	0,0881 Sq M
Revc - DV Voice Coil Resistance	7 Ohm
Levc - Voice Coil Inductance 1kHz (mH)	1,7
BL - Flux Density (TM)	20,5
Vas - Equivalent Acoustic Volume (Liter)	304 liter
Cms - Mechanical Suspension Compliance (x 10-4 m/N)	2761
Mms - Mechanical Mass of Cone and Free Air Load	117 g

Mmd	86 g
Fs - Free Air Resonance Frequency	28 Hz
Qms - Mechanical Q Factor	6,8
Qes - Electrical Q Factor	0,32
Qts - Total Q factor	0,31
Xmax - Max Linear Peak Excursion (O-P)	8,0 mm
Pmax - RMS Thermal power Limit	500 Watt
no - Relative Efficiency	2.00%
Vd (cm <sup>2</sup> )	705
Max. Excursion Before Damage (P-P)	36,0 mm