

TAD

TECHNICAL AUDIO DEVICES LABORATORIES, INC.



Since their introduction, TAD professional driver units have been selected for demanding professional audio applications worldwide—from recording studio monitors to concert hall sound systems—where the highest standards of sound reproduction are required.

Notes on TAD Professional Driver Units

- All dimensions are maximum external measurements and include protrusions and terminals.
- Diaphragm replacement requires specialized knowledge, skills, and tools.
- Specifications and appearance are subject to change without notice.
- We assume no liability for damage or loss of performance resulting from repairs or modifications performed by customers.

TECHNICAL AUDIO DEVICES LABORATORIES, INC.

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TAD

Professional



Professional Driver Units

Low Frequency Speakers

TL-1601b



- The TL-1601b builds on the proven technology of the legendary TL-1601a while incorporating an advanced high-power-handling design for digital audio applications.
- A thermal-management design channels airflow through the frame and magnetic circuit, enabling a maximum input power of 500 W.

Specifications

Dimensions	φ400 mm × 191 mm (D)	Rated Impedance	8 Ω
Weight	13 kg	Frequency Range	28 Hz–2,000 Hz
Magnetic Flux Density	1.24 T	Crossover Frequency	900 Hz or lower (Recommended)
Total Magnetic Flux	2.77 × 10 ⁻³ Wb	Rated Input Power	200 W
Diaphragm Repair Parts	DP-1603	Maximum Input Power	500 W

Thiele–Small Parameters

Fs	28 Hz	Mms	117 g
Qms	6.8	Mmd	86 g
Qes	0.32	Cms	2.76 × 10 ⁻⁴ m/N
Qts	0.31	Vas	0.304 m ³
BL	20.5 Tm	Sd	0.0881 m ²
η _o	2.00%	Pe (max.)	500 W

- A highly linear suspension and long-travel voice coil deliver 97.5 dB sensitivity with low distortion at high output levels.

Sound Pressure Level	97.5 dB at 1 W, 1 m
Enclosure	113–304 liter (Recommended)
Mounting Information	Baffle Opening Diameter: 352 mm Mounting Dimensions: 370 mm

X _{max} (0-P)	8.0 mm
Max. (P-P)	36 mm
V _d	705 cm ³
Revc	6.6 Ω
Levc (at 1 kHz)	1.7 mH

Low Frequency Speakers

TL-1801



- The TL-1801 is a 460 mm large-format woofer combining a maximum input power of 800 W with a frequency range of 26 Hz–2,000 Hz, making it suitable for two-way system.
- A high-rigidity pulp cone reinforced with aramid fiber is laminated with polymer film and surface-treated for water repellence, helping reduce sound-quality degradation caused by cone breakup.

Specifications

Dimensions	φ464 mm × 176 mm (D)	Rated Impedance	8 Ω
Weight	12.6 kg	Frequency Range	26 Hz–2,000 Hz
Magnetic Flux Density	1.12 T	Crossover Frequency	800 Hz or lower (Recommended)
Total Magnetic Flux	2.82 × 10 ⁻³ Wb	Rated Input Power	200 W
Diaphragm Repair Parts	DP-1801	Maximum Input Power	800 W

Thiele–Small Parameters

Fs	26 Hz	Mms	162 g
Qms	7.9	Mmd	114 g
Qes	0.39	Cms	2.37 × 10 ⁻⁴ m/N
Qts	0.37	Vas	0.500 m ³
BL	21.0 Tm	Sd	0.122 m ²
η _o	2.20%	Pe (max.)	800 W

- A ferrite magnetic circuit with a flux density of 1.12 T is paired with a 100 mm diameter voice coil wound edgewise with oxygen-free copper ribbon. Its 23 mm winding depth allows a 15 mm peak-to-peak excursion without reducing driving force.

Sound Pressure Level	96.5 dB at 1 W, 1 m
Enclosure	170–500 liter (Recommended)
Mounting Information	Baffle Opening Diameter: 426 mm Mounting Dimensions: 441 mm

X _{max} (0-P)	7.5 mm
Max. (P-P)	40 mm
V _d	914 cm ³
Revc	6.6 Ω
Levc (at 1 kHz)	2.0 mH

Diaphragm Repair Parts for Discontinued Products

Product	Repair Parts
TL-1102	SVX1003
TL-1601a	DP-1601a
TL-1601c	SVX1002
TL-1603	DP-1603

Product	Repair Parts
TD-2001	DP-2001
TD-4002	DP-4001
TD-4003	SVX1004
ET-703	SXE-503

Super High Frequency Loudspeaker

ET-703a



- The ET-703a uses a vapor-deposited pure beryllium diaphragm with an integrated surround, extending response to 45 kHz while delivering excellent transient response and high resolution.
- The rear-compression design maintains phase coherence for transparent, extended treble.
- A precision-machined three-slit phasing plug provides smooth response and high resolution at ultra-high frequencies.

Specifications

Dimensions	φ80 mm × 74 mm (D)	Rated Impedance	8 Ω
Weight	1.1 kg	Voice Coil Diameter	35 mm
Magnetic Flux Density	2.0 T	Frequency Range	5,000 Hz–45,000 Hz
Total Magnetic Flux	4.0 × 10 ⁻⁴ Wb	Rated Input Power	15 W [for crossover frequency]
Diaphragm Repair Parts	SXE-503	Maximum Input Power	30 W [at 5 kHz, -12 dB/oct]

- An edge-wound voice coil made of anodized pure aluminum maximizes efficiency, while heat-resistant bobbin materials and adhesives support long-term stability.
- A powerful magnetic circuit combines a samarium-cobalt magnet with a pole yoke and plate made of ultra-low-carbon, low-impurity electromagnetic soft iron.

Sound Pressure Level	107 dB at 1 W, 1 m	
Crossover Frequency	5,000 Hz or higher (-12 dB/oct or higher)	
Phasing Plug	3-slit rear compression type	
Mounting	On the Baffle	Opening Diameter: 81 mm / Mounting Pitch: 98 mm
	On the Enclosure	25 mm (for two wood screws)

High Frequency Driver

TD-4001



- The TD-4001 employs a large-format pure beryllium diaphragm with an integrated surround to deliver high efficiency, wide bandwidth, and low distortion.
- A 2.0 T alnico magnetic circuit is paired with a computer-designed and precision-machined five-slit phasing plug.

Specifications

Dimensions	φ178 mm × 155.5 mm (D)	Rated Impedance	16 Ω
Weight	12.6 kg	Voice Coil Diameter	101 mm
Magnetic Flux Density	2.0 T	Frequency Range	600 Hz–20,000 Hz
Total Magnetic Flux	2.28 × 10 ⁻³ Wb	Rated Input Power	30 W (600 Hz, -12 dB/oct)
Diaphragm Repair Parts	DP-4001	Maximum Input Power	60 W (600 Hz, -12 dB/oct)

Sound Pressure Level	110 dB at 1 W, 1 m
Crossover Frequency	600 Hz or higher (-12 dB/oct or higher)
Phasing Plug	5-slit rear type
Hole Size	49.2 mm for Throat Connection
Mounting Dimensions	101.6 mm (4 holes)

High Frequency Driver

TD-2002



- The TD-2002 uses a lightweight, high-rigidity 48 mm diaphragm made of high-purity beryllium to deliver a flat response, high resolution, and excellent transient response.
- A powerful internal magnetic circuit with an alnico magnet maintains low distortion and linear response into the ultra-high-frequency range.

- Direct Power Coupling connects the input leads directly to the diaphragm assembly, reducing unwanted resonance caused by alternating-current interference.
- A precision-machined three-slit phasing plug improves high-frequency response and resolution.

Specifications

Dimensions	φ141 mm × 137 mm (D)	Rated Impedance	8 Ω
Weight	6.9 kg	Voice Coil Diameter	48 mm
Magnetic Flux Density	1.95 T	Frequency Range	800 Hz–22,000 Hz
Total Magnetic Flux	7.42 × 10 ⁻⁴ Wb	Rated Input Power	10 W (800 Hz, -12 dB/oct)
Diaphragm Repair Parts	SVX1005	Maximum Input Power	40 W (800 Hz, -12 dB/oct)

Sound Pressure Level	111 dB at 1 W, 1 m
Crossover Frequency	800 Hz or higher (-12 dB/oct or higher)
Phasing Plug	3-slit rear type
Hole Size	25.4 mm for Throat Connection
Mounting Dimensions	57.2 mm (3 holes) / 76.2 mm (4 holes)