Akoustik

Nouveau pavillon
TH4001 EXtended

TAD

IMPORTATION EXCLUSIVE

Gérald KAAS





www.Akoustik.fr

High Frequency driver

TD-2001

TD-2001 High Frequency Rear Compression Driver



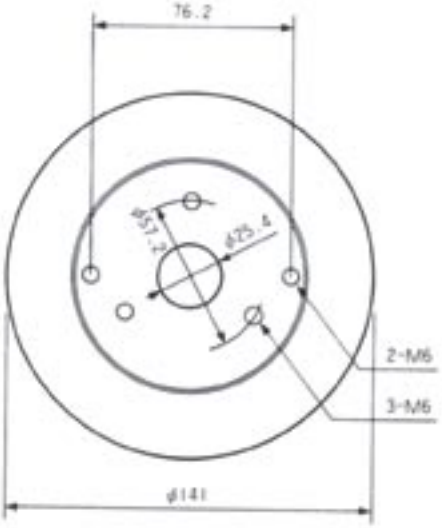
The TD-2001 is designed to an exceptionally wide frequency range of 500 to 22,000Hz, high efficiency and high dependability.

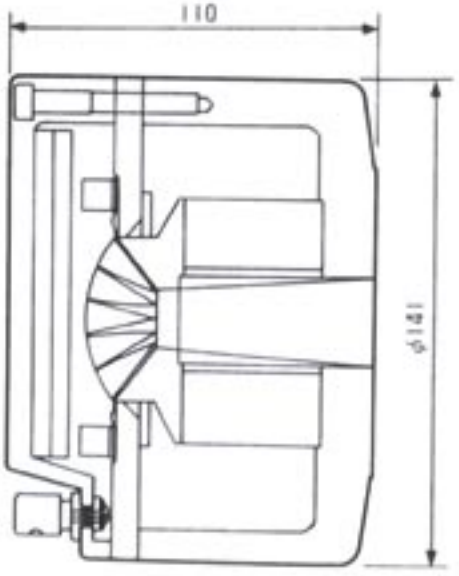
DIAPHRAGM - A pure beryllium diaphragm is employed in the TD-2001. This diaphragm ensures rapid sound wave transmission, extremely flat frequency response, minimal cone breakup, excellent transient response and exceptional sound image definition. Deformation is prevented by a surround formed of a special high-polymer compound. It also effectively prevents fatigue and rupture caused by an excessive input level.

VOICE COIL - For the voice coil, the TD-2001 employs edgewise-wound aluminum ribbon wire, insulated in alumite film. This design provides an exceptionally high acoustic conversion efficiency. It is wound on a bobbin formed from a high-polymer compound having ideal heat resistance up to 752°F (400°C).

MAGNETIC CIRCUIT - The magnetic circuit includes a 2.2 lb. (1kg) Alnico magnet for a total magnetic flux of 68,500Mx. The center pole is capped by a ring of pure silver to prevent an increase in impedance (and resultant distortion) at high frequencies.

DESIGN - A rear-compression mounting system is employed for the diaphragm and voice coil assembly. This assures enhanced clarity, for rear compression neatly avoids the resonance generated at the edge of the diaphragm. It also improves the phase uniformity of all frequencies, particularly highs, since they are emitted from virtually all points on the diaphragm. A phasing plug serves to eliminate phase disturbances at the throat region, for a virtually flat frequency response.

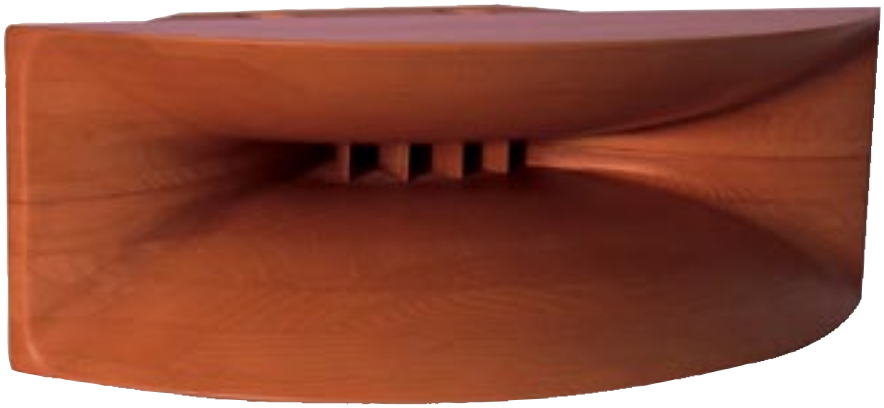




specifications

Nominal Impedance:	8 ohms
Voice Coil Diameter:	1 7/8 inches / 48 mm
Phasing Plug:	3-slit type
Frequency Range:	500 - 22,000Hz
Rated Input Power:	10 watts (800Hz, -12dB/oct.)
Maximum Input Power:	30 watts (800Hz, - 12dB/oct.)
Sound Pressure Level:	109dB/W (1 M)
Crossover Frequency:	over 800Hz (-12 dB/oct.)
Total Magnetic Flux:	68,500 maxwells
Magnetic Flux Density:	18,000 gauss
Hole size for Throat Connection:	1 inch / 25.4 mm
Mounting Dimensions:	3 inches / 76.2 mm (for 2 holes); 2 1/4 inches / 57.2 mm (for 3 holes)
Weight:	14 lbs. 2 oz. / 6.4 kg
Outer Dimensions (diameter x depth):	5 9/16 x 4 3/16 inches / 141 x 107 mm

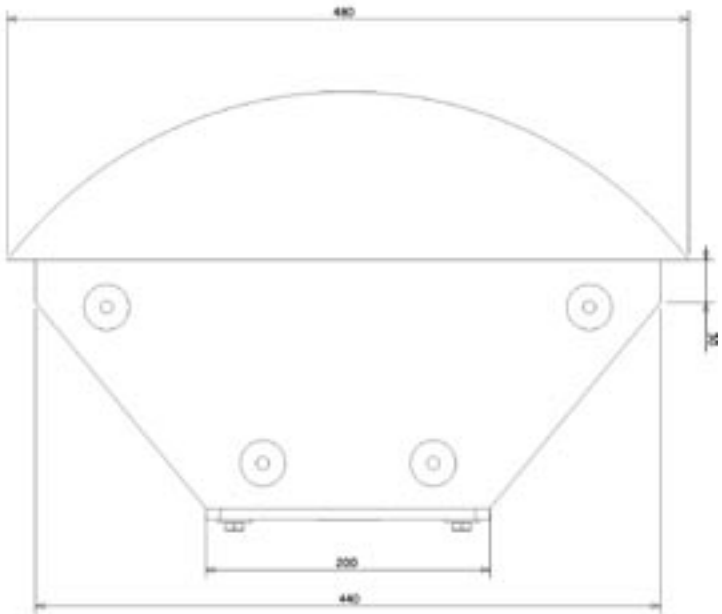
Stabilized dispersion Horns

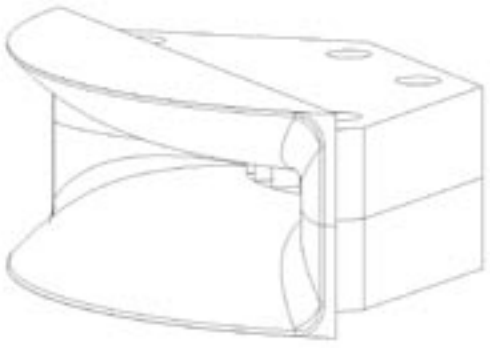


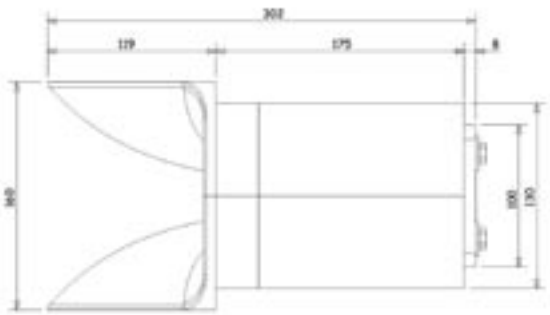
The TH-2001EX is a stabilized dispersion horn designed specifically for use with the TAD TD-2001 high-frequency driver. It allows you to exploit the wide frequency response of this unit, providing excellent dispersion of all frequencies, including high frequencies up to 25kHz. Special care has been taken in corner diffraction, as well as modal vibration of the horn resulting in a pair of solid wood piece design. The throat output is threatened to avoid swirling effect. As a result, the entire output of the TAD TD-2001 is uniformly distributed over the all area. The horn is a high resolution one made of ash wood, for clean, rich and natural sound. Special care as been taken in corner to eliminate border effects.

TH-2001EX

Main Features HP-2001	
Frequency Range	500 Hz-25 Khz
Dispersion	40 °V x 90 °H
Recommended Crossover Cutoff Frequency	800 Hz-12 dB/Oct 600 Hz- 24dB/Oct
Driver Mounting Holes	3no. countersink Ø6.5 mm @120° on Ø57.2 mm PCD 2no. countersink Ø6.5 mm @180° on Ø76.2 mm PCD
Throat diameter	Ø25.4 mm
Weight (without driver)	7 kg
Overall Dimensions	480 mm x 160 mm x 302 mm
Baffle opening	442 mm x 132 mm







High Frequency driver

TD-4001

TD-4001 High Frequency Rear Compression Driver

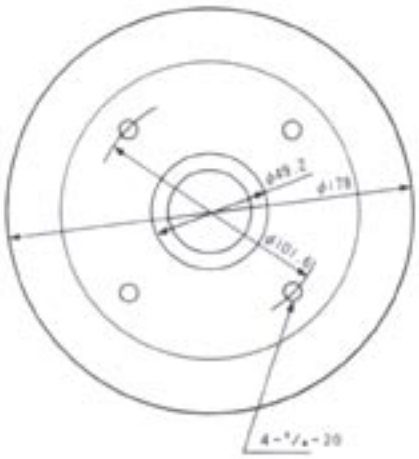


The TD-4001 successfully achieves all the design objectives we set forth - very high efficiency, wide and perfectly flat response from 600Hz to 20kHz, and low distortion.

DIAPHRAGM - The TD-4001 employs a pure beryllium diaphragm 3-15/16 inches (100mm) across. Beryllium is a light but very rigid material that features very high-speed sound propagation. The weight of the dome section has been reduced to a mere 1g contributing to the very high efficiency (110dB/W) of this driver

VOICE COIL - The TD-4001 employs an aluminum ribbon voice coil, insulated by alumite film and wound edgewise on the bobbin. The voice coil has a small mass, yet offers a high conversion efficiency. The bobbin is formed of polyimide film, displaying excellent heat resistance to temperatures as high as 752°F (400°C).

MAGNETIC CIRCUIT - Total magnetic flux for the TD-4001 is 228,000Mx, with flux density of 20,000G, thanks to the use of a very heavy (6 lbs. 10 oz./3kg) Alnico *5DG* magnet. An oxygen-free copper shorting ring prevents impedance rise, resulting in low distortion.

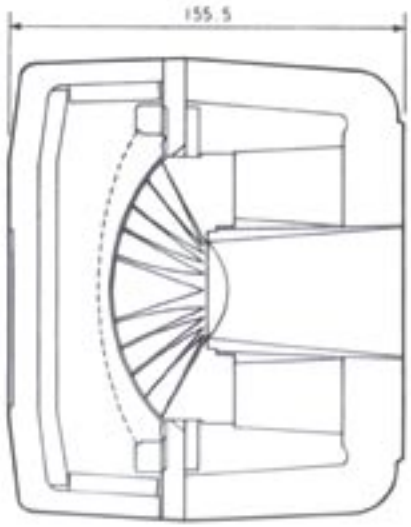


DESIGN - The TD-4001 is a rear compression design, which eliminates the resonance and phase distortion produced by a surround. It also eliminates cavity resonance interference, achieving an exceptionally flat frequency response, extremely natural sound and superb definition. A phasing plug helps smooth the response of extra high frequencies.

CROSSOVER - We recommend the use of a crossover frequency of 600Hz or higher, and a cutoff slope of -12dB/oct. or sharper.

specifications

Nominal Impedance:	16 ohms
Voice coil Diameter:	4 inches / 101 mm
Phasing Plug:	5-slit type
Frequency Range:	600 - 20,000Hz
Rated Input Power	30 watts (600Hz -12dB/oct.)
Maximum Input Power:	60 watts (600Hz -12dB/oct.)
Sound Pressure Level:	110dB/W (1 M)
Crossover Frequency:	over 600 Hz (-12dB/oct.)
Total Magnetic Flux:	228,000 maxwells
Magnetic Flux Density:	20,000 gauss
Hole Size for Throat Connection:	1 15/16 inches / 49.4 mm
Mounting Dimensions:	4 inches / 101.6 mm (for 4 holes)
Weight:	29 lbs. 12 oz. / 13.5 kg
Outer Dimensions (diameter x depth):	7 x 6 7/8 inches / 178 x 155.5 mm



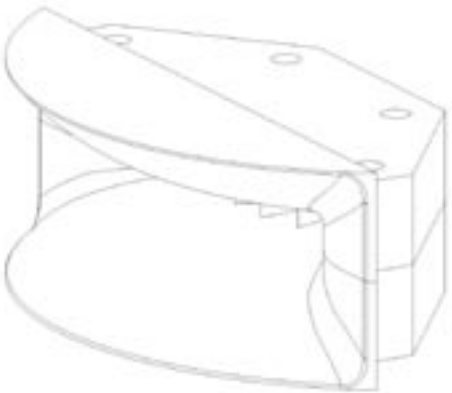
Stabilized dispersion Horns

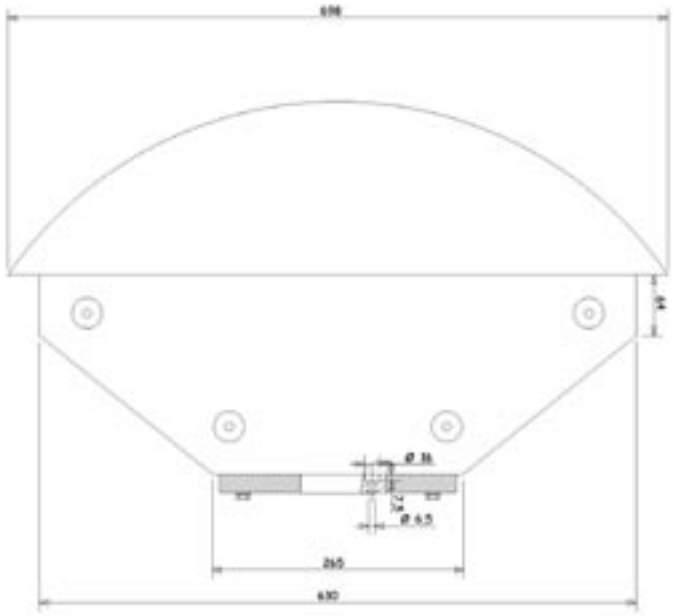


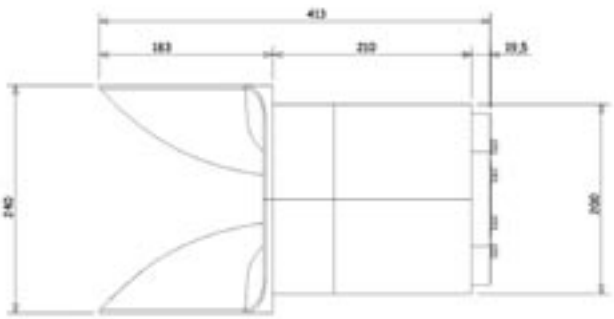
The TH-4001EX is a stabilized dispersion horn designed specifically for use with the TAD TD-4001 high-frequency driver. It allows you to exploit the wide frequency response of this unit, providing excellent dispersion of all frequencies, including high frequencies up to 20kHz. Special care has been taken in corner diffraction, as well as modal vibration of the horn resulting in a pair of solid wood piece design. The throat output is threatened to avoid swirling effect. As a result, the entire output of the TAD TD-4001 is uniformly distributed over the all area. The horn is a high resolution one made of ash wood, for clean, rich and natural sound. Special care as been taken in corner to eliminate border effects.

TH-4001EX

Main Features	TH-4001
Frequency Range	300 Hz-20 Khz
Dispersion	40 °V x 90 °H
Recommended Crossover Cutoff Frequency	600 Hz-12 dB/Oct 500 Hz- 24dB/Oct
Driver Mounting Holes	4no. Ø6.5 mm @90° on Ø101.6 mm PCD
Throat diameter	Ø49 mm
Weight (without driver)	22 kg
Overall Dimensions	698 mm x 240 mm x 413 mm
Baffle opening	632 mm x 202 mm







High Frequency driver

ET-703

ET-703 Super High Frequency Compression Horn Driver



The ET-703 is a super high frequency compression horn driver designed for a high frequency range and high input power. This makes the driver especially suitable for monitoring digital sound.

VOICE COIL - The voice coil is formed by an edgewise-wound pure aluminum wire coated with a thin film of alumite, in order to maximize the magnetic circuit's high magnetic flux. High input power is also achieved through the use of heat-resistant materials for the voice-coil bobbin and thermosetting resin.

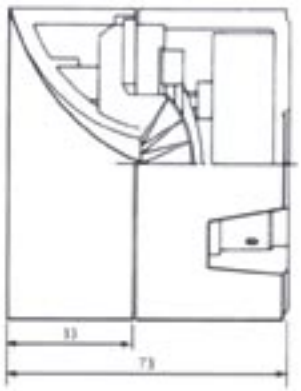
MAGNETIC CIRCUIT - A high-energy, rare-earth cobalt magnet is used in the magnetic circuit that, together with powerful soft iron for the pole yoke and plate, provides a high magnetic flux density of 20,000G.

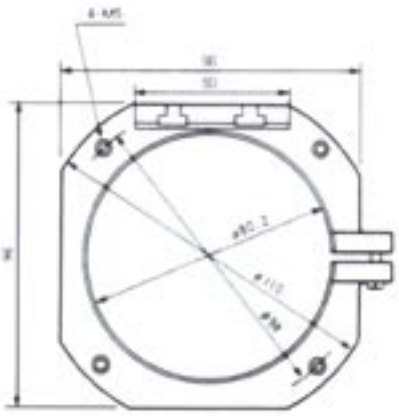
DIAPHRAGM - The diaphragm and surround are made from a single piece of pure beryllium manufactured by advanced vacuum deposition. With the highest resonance frequency set at 45kHz, the sound from the driver is free of coloration that can otherwise be caused by resonance. Extremely lightweight at 0.07g, it combines a wide frequency range, superb transient response and clear-cut definition.

DESIGN - The ET-703 is a rear compression design featuring a computer-optimized precision phase plug. This ensures uniform phase response across the entire frequency range the unit covers. Moreover, because the surround is virtually vibration-free, transparent sound and smooth response are achieved.

CROSSOVER - We recommend that the crossover frequency for the ET-703 be higher than 5,000Hz and the cutoff slope of -12dB/oct. or sharper.







specifications

Nominal Impedance:	8 ohms
Voice Coil Diameter:	1 3/8 inches / 35 mm across
Phasing Plug:	Rear triple-slit system
Frequency Range:	5,000 ~ 45,000Hz
Rated Input Power:	15 watts (5,000Hz, -12dB/oct.)
Maximum Input Power:	30 watts (5,000Hz, -12dB/oct.)
Sound Pressure Level:	107dB/W (1 M)
Crossover Frequency:	Higher than 5,000Hz (-12dB/oct.)

Total Magnetic Flux:	40,000 maxwells
Magnetic Flux Density:	20,000 gauss
Baffle Opening (diameter):	3 3/16 inches / 81 mm across
Mounting Pitch: (when mounting on baffle)	3 7/8 inches / 98 mm across (using 4 M5 screws)
Mounting pitch: (when setting on cabinet):	1 inch / 25 mm (using 2 wood screws)
Weight:	2 lbs. 7 oz. / 1.1 kg
Outer Dimensions: (diameter x depth)	3 1/8 x 2 15/16 inches / 80 x 74 mm

TL-1601a

TL-1601a Low Frequency Loudspeaker



The TL-1601a is a low-frequency loudspeaker conforming to the very highest technical standards. It is specifically designed to reduce all forms of distortion and coloration to a bare minimum.

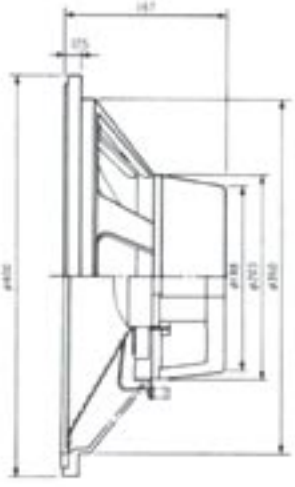
VOICE COIL - The TL-1601a employs an edgewise-wound long-travel type voice coil. Since the coil remains completely within the magnetic gap even during peak excursions, bass output is powerful while achieving low distortion at all input levels.

MAGNETIC CIRCUIT - The magnetic circuit is designed for low distortion and high efficiency. Thanks to the use of a powerful Alnico ring magnet (3 lbs. 10 oz. or 1.65kg), it features an extremely high flux density of 11,800G. In combination with light weight moving parts and a long-travel coil, the TL-1601a delivers an exceptionally high efficiency for a unit of this size.

DIAPHRAGM - The cone diaphragm of the TL-1601a is made of a tough yet lightweight material that is capable of withstanding high amplitude levels without deformation. Corrugations are added across the cone surface to assure smooth response down to the extreme low end. The surround is coated with a damping material to ensure proper internal loss and linear excursions as well as reducing cone breakup in higher frequencies. The result is a loudspeaker with extremely low distortion and coloration.

HOUSING - The TL-1601a is mounted in a virtually resonance-free aluminum alloy diecast frame that supports the heavy magnetic circuit.







specifications

Nominal Impedance:	8 ohms	**Qo:**	0.31 (f_o = 28Hz)
Lowest Resonance Frequency (f_o):	28Hz	**Total Magnetic Flux:**	260,000 maxwells
Frequency Range:	28 - 2,000Hz	**Magnetic Flux Density:**	11,800 gauss
Rated Input Power:	150 watts	**Baffle Opening:**	13 7/8 inches / 352 mm
Maximum Input Power:	300 watts	**Mounting Dimensions (diameter):**	14 9/16 inches / 370 mm
Sound Pressure Level:	97dB/W (1 M)	**Weight:**	24 lbs. 5 oz. / 11 kg
Equivalent Mass (infinite baffle):	4.1 oz. / 117g	**Outer Dimensions: (diameter x depth)**	15 3/4 x 6 9/16 inches / 400 x 167 mm

LOW FREQUENCY loudspeakers

TL-1601b

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.

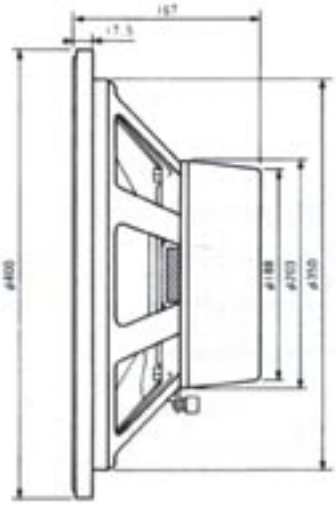
VOICE COIL - To increase the power handling capability, the bobbin for the voice coil incorporates ventilation holes, which help efficiently dissipate heat. The voice coil is a long-travel type to improve sensitivity and to enable a high sound pressure level of 97.5dB/m (1W). Pure, uncolored sound is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

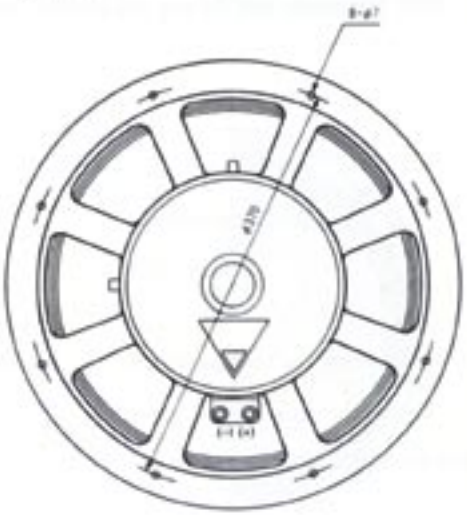
MAGNETIC CIRCUIT - Holes in the frame's opening and the magnetic circuit serve to disperse heat in the TL-1601b quickly, boosting the unit's maximum input power to 500 watts. High-quality magnetic material is used in the circuit to achieve a high magnetic flux density of 12,400G, and to increase the 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 - The use of a highly rigid die-cast aluminum frame minimizes resonance and vibration in the TL-1601b. Terminals are rugged binding types, that allow the use of lower gauge speaker cables.







specifications

Nominal Impedance:	8 ohms	**Qo:**	0.31 (f_o = 28Hz)
Lowest Resonance Frequency (fo):	28Hz	**Total Magnetic Flux:**	277,000 maxwells
Frequency Range:	28 - 2,000Hz	**Magnetic Flux Density:**	12,400 gauss
Rated Input Power:	200 watts	**Baffle Opening (diameter):**	13 7/8 inches / 352 mm
Maximum Input Power:	500 watts	**Mounting Dimensions (diameter):**	14 9/16 inches / 370 mm
Sound Pressure Level:	97.5dB/W (1 M)	**Weight:**	24 lbs. 5 oz. / 11 kg
Equivalent Mass (infinite baffle):	4.1 oz. / 117 g	**Outer Dimensions: (diameter x depth)**	15 3/4 x 6 9/16 inches / 400 x 167mm

TL-1603

TL-1603 Low Frequency Loudspeaker



The TL-1603 is designed specifically to handle the increased power today's amplifiers deliver. In terms of sound, emphasis is placed on low distortion and low coloration.

VOICE COIL - A high maximum input power of 500 watts is achieved through the use of an edgewise-wound, long-travel voice coil. Making more use of the flux within the magnetic gap, this voice coil provides higher transducing efficiency. Moreover, high linearity is maintained over a long distance for lower distortion.

MAGNETIC CIRCUIT - Weighing 2kg (4.4 lbs.), a powerful ferrite magnet combines a high flux density of 11,800G and low distortion. This, along with a long-travel voice coil and new rear suspension design, contributes to the high operating efficiency of 97dB/W (1 M).

DIAPHRAGM - Rigidity and light weight of the TL-1603 diaphragm permits the unit to withstand high-amplitude inputs while maintaining low-distortion. The corrugated cloth surround is coated with a damping material to make diaphragm movement more linear and discourage cone breakup.

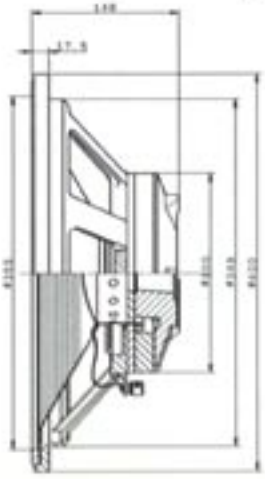
HOUSING - Warp-proof and non-resonating, the TL-1603 heavy die-cast aluminum frame precisely centers the diaphragm for accurate low-distortion sound reproduction.

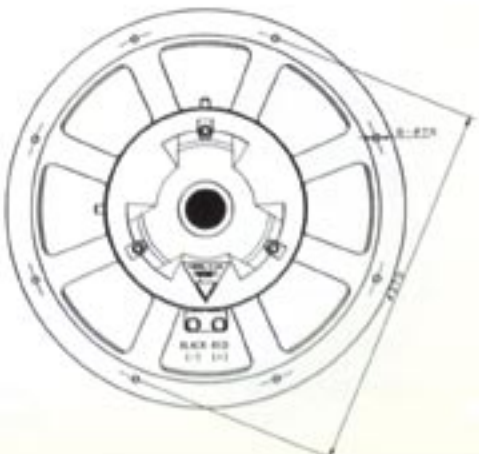
CROSSOVER - We recommended that the dividing network (low-pass filter) for the TL-1603 uses a crossover frequency of 900Hz or lower, and a attenuating slope of -12dB/oct. or -18dB/oct.

specifications

Nominal Impedance:	8 ohms	**Qo:**	0.31 (fo = 28Hz)
Lowest Resonance Frequency (fo):	28Hz	**Total Magnetic Flux:**	260,000 maxwells
Frequency Range:	28 - 2,000Hz	**Magnetic Flux Density:**	11,800 gauss
Rated Input Power:	200 watts	**Baffle Opening (diameter):**	13 7/8 inches / 352 mm
Maximum Input Power:	500 watts	**Mounting Dimensions (diameter):**	14 9/16 inches / 370 mm
Sound Pressure Level:	97dB/W (1 M)	**Weight:**	20 lbs. 15 oz. / 9.5 kg
Equivalent Mass (infinite baffle):	4.1 oz. / 117 g	**Outer Dimensions: (diameter x depth)**	15 3/4 x 5 13/16 inches / 400 x 148 mm







TL-1801

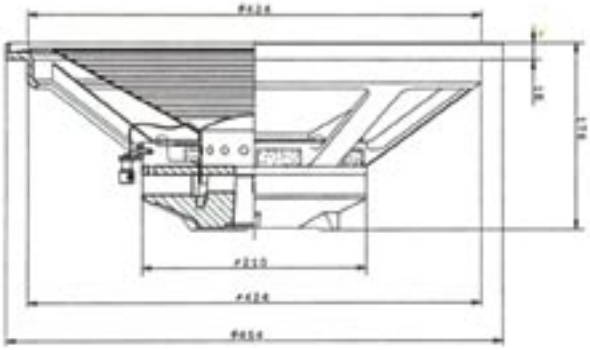
TL-1801 Low Frequency Loudspeaker



The TL-1801 from TAD (Technical Audio Devices) is a low-frequency loudspeaker featuring an 18-inch (460mm) driver.

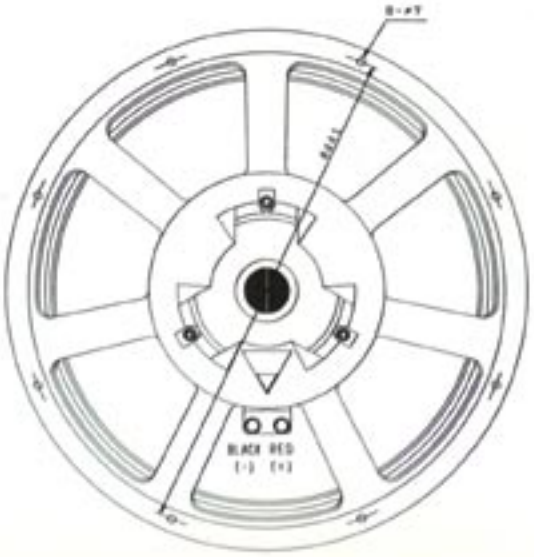
It features a high power input handling capability of 800W thanks to the combined use of a 23mm edgewise-wound, oxygen-free copper voice coil, a ferrite magnetic circuit with a high flux density of 11,200G, a lightweight tranducer system using a cone made of highly rigid pulp and Kevlar fibers, and an 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 TL-1801 is made of rigid die-cast aluminum alloy to support the magnetic circuit and to allow the tranducer system to reproduce powerful, accurate bass. Frame resonance is suppressed by the seven frame arms. The speaker cone is laminated with a 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 a 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.

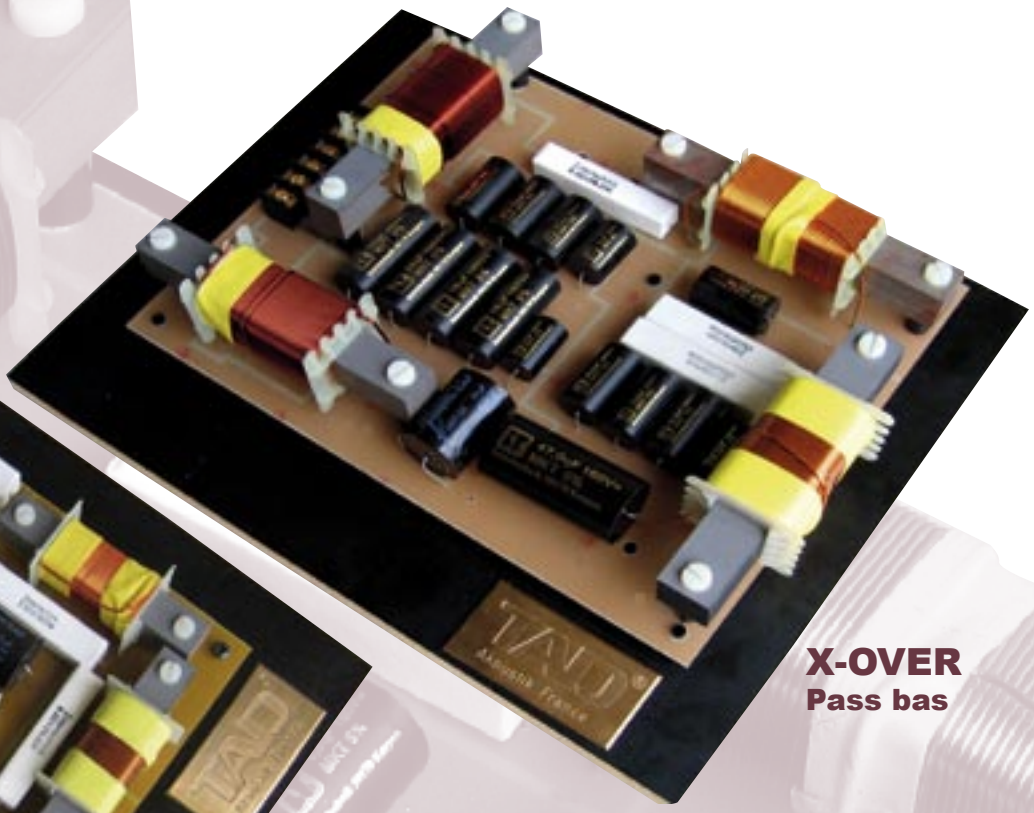


specifications

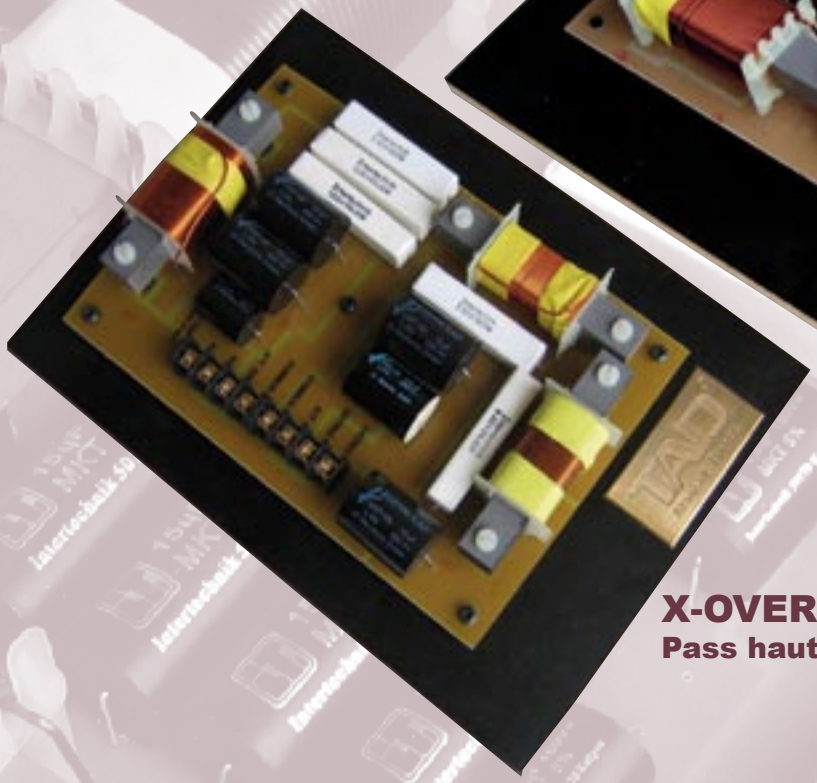
Nominal Impedance:	8 ohms
Lowest Resonance Frequency (fo):	26Hz
Frequency Range:	26 - 2,000Hz
Rated Input Power:	200 watts
Maximum Input Power:	800 watts
Sound Pressure Level:	96.5B/W (1 M)
Equivalent Mass: (infinite baffle)	158 g
Qts:	0.37 (fo = 26Hz)
Vas:	500l (17.7 ft³)
Total Magnetic Flux:	282,000 maxwells
Magnetic Flux Density:	11,200 gauss
Baffle Opening (diameter):	16 3/4 inches / 426 mm
Mounting Dimensions: (diameter)	17 3/8 inches / 441 mm
Weight:	27 lbs. 12 oz. / 12.6 kg
Outer Dimensions: (diameter x depth)	18 1/4 x 6 15/16 inches / 464 x 176 mm



CROSSOVER TSM1/TSM2



X-OVER
Pass bas



X-OVER
Pass haut

PARAMETERS speakers

THIELE & SMALL PARAMETERS

TAD Speakers

Description	Spec	Scale	TL-1601a	TL-1601b	TL-1603	TL-1801
Nominal Impedance	Nom Z	Ohms	8	8	8	8
Piston Area	Sd/	m²	0,0881	0,0881	0,0881	0,122
DC Voice coil	Rev	Ohms	6,6	6,6	6,6	6,6
Voice Coil Inductance	Levc	mH	1,7	1,6	1,6	2
Flux Density	BL	TM	20,5	19,5	19,5	21
Equivalent Volume	Vas	Liter	304	307	304	500
Mechanical Compliance	Cms	x10-² n/M	2,761	2,785	2,761	2,372
Mechanical mass	Mms	grams	117	116	117	158
	Mmd	grams	86	85	86	114
Resonance	Fs	Hz	28	28	28	26
Mechanical Q Factor		Qms	6,8	6,8	6,8	7,94
Electrical Q Factor		Qes	0,32	0,36	0,36	0,39
Total Q Factor		Qts	0,31	0,34	0,34	0,37
Maimum Excursion O-P	Xmax	mm	8	8	8	7,5
RMS Power Thermal Limit	Pmax	Watts	300	500	500	800
Relative Efficiency no		1	82%	2,00%	1,81%	2,20%
	Vd	Cm3	705	705	705	914
Maximum Excursion before Damage		mm	36	36	36	40

Akoustik



DEMONSTRATION SUR RENDEZ VOUS 01 43 98 22 00

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