

DYNAUDIO®

TECHNOLOGY UNLIMITED



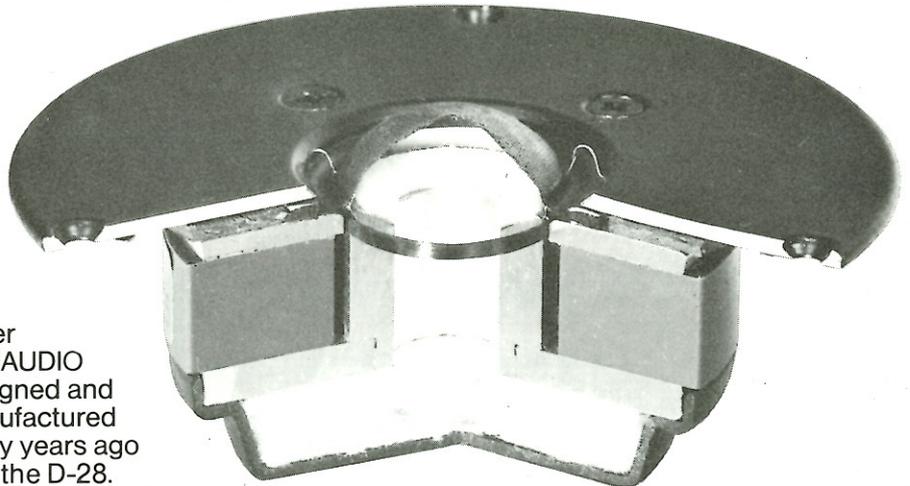
APPLICATIONS

1.1" (28 mm) soft dome tweeter
ideal in 2-way design
because of low fs with
impedance maximum
extremely damped
high end high fidelity
multi way systems
car audio claiming high
fidelity standard

FEATURES

rigid all aluminium V.C. in
Hexacoil technique
V.C. cooled and damped
by Magnaflex
very high power handling
sine-shaped suspension
high SPL without
compression
wide dynamic range
very low THD
no phase shifts
movement of dome
aperiodically
damped by double
chamber construction
soft roll off at both ends
copper strand connector
wires

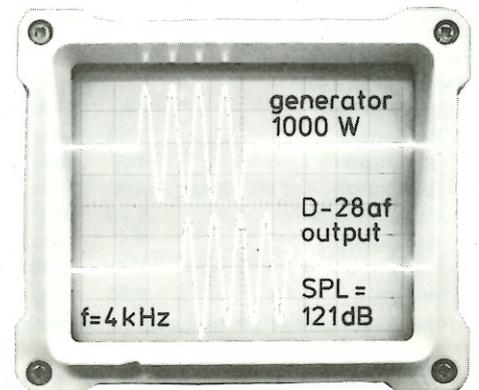
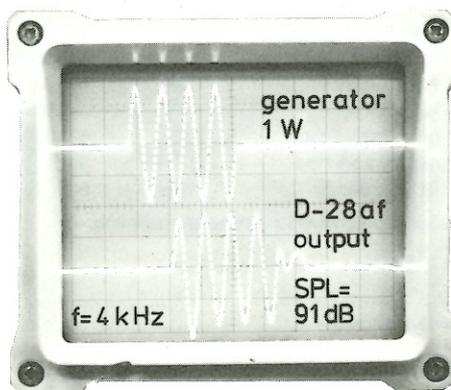
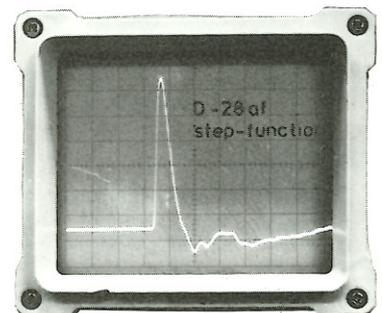
The first raw driver DYNAUDIO designed and manufactured many years ago was the D-28. This dome tweeter received worldwide recognition especially by manufactures of high end speaker systems. The D-28 AF is derived from the D-28 having all the advantages but an extended dome: the same wide dispersion, good resolution and imaging. The fabric dome as the bearing material of the synthetic soft dome is the ultimate principle as with increasing frequency the dome will act as a ring radiator with no movement of the center area. The more sturdy the material is the more break-ups will occur, i.e. with hard plast or metal, both materials beeing a fashion for a while. The sectional view shows the engineering care: vented pole piece, reflexion damper on slanted head section of pole piece, vented alu former, damping of optimized volume of back enclosure, vented area between magnet ring and pole piece towards the back enclosure.

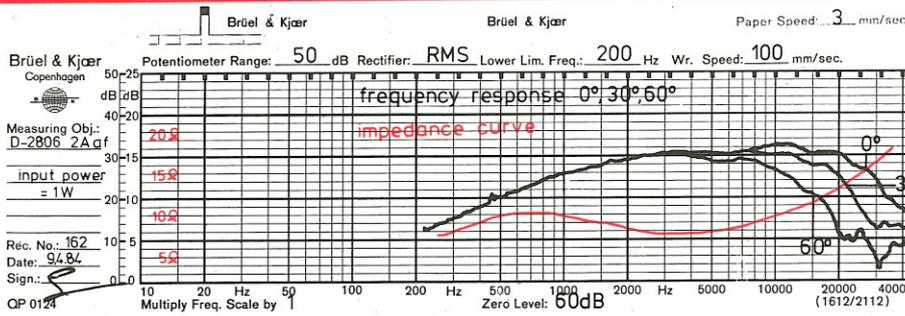


The extremely low weight of the moving system together with the excellent magnetic damping, the aperiodic construction and the magnaflex magnetic fluid produce a step funktion as this: no overshoot, no ringing and exceptional low rise time.

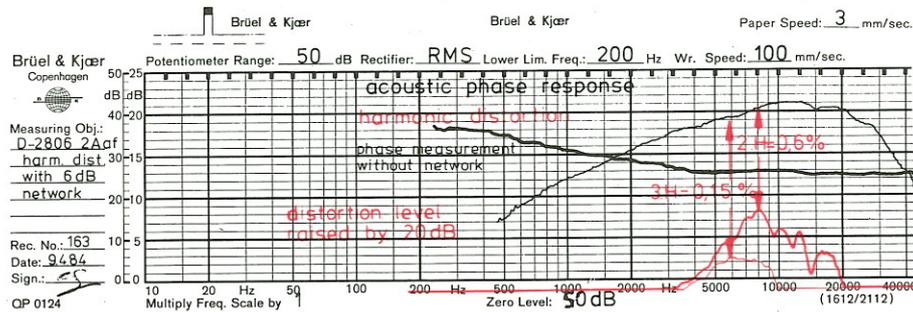
Many years of research and practice with all kinds of new and old methods have corroborated the conviction that measurement and resulting considerations should only be made on dynamic and not on static basis. This is the key to further development and improvements of the principles of the most successful speaker type, the dynamic speaker.

Tone bursts are the best way to obtain an accurate picture of overall acoustic performance. Regrettably they are mostly used only to test rise-time and ringing - which is shown much more clearly with a step function test! With a tone burst all the moving parts of a speaker can be loaded without burning the voice coil. With a given frequency the SPL should be 30 dB higher at 1000 W input when compared with a 1 W input, if the output is linear. This test shows the driver's ability to reproduce the transients without compression. The picture to the right shows that even a 1000 W input is not the limit: the dynamic response is absolutely linear. Datas given in catalogues (and even test reports) normally are calculated figures and not measured values.

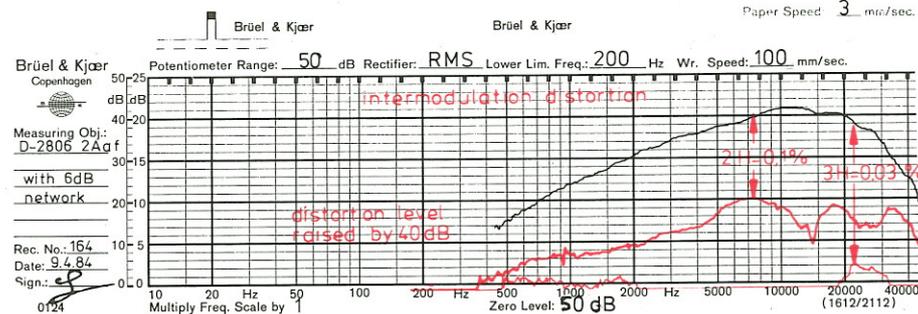




The excellent damping leads to a non-pronounced resonance and the impedance does not exceed 8 Ohms accordingly. No dips and peaks even at 30° and 60° off axis.



Extremely linear phase response up to 40 KHz. The HD is measured at an SPL of 90 dB.



The ID figures give evidence of having chosen the correct material and geometrical shape.

measurement	filter slopes		
	18 dB/oct.	12 dB/oct.	6 dB/oct.
amplitude	linear	nonlinear	linear
phase	nonlinear	nonlinear	linear
impuls	very bad	bad	good

As shown in this chart all main characters of a system come out better with a 6 dB filter.

Besides this it is avoiding the ambiguity of complex impedance load to the amplifier.

Not less important is that the dispersion patterns of all driver systems are much more homogeneous.

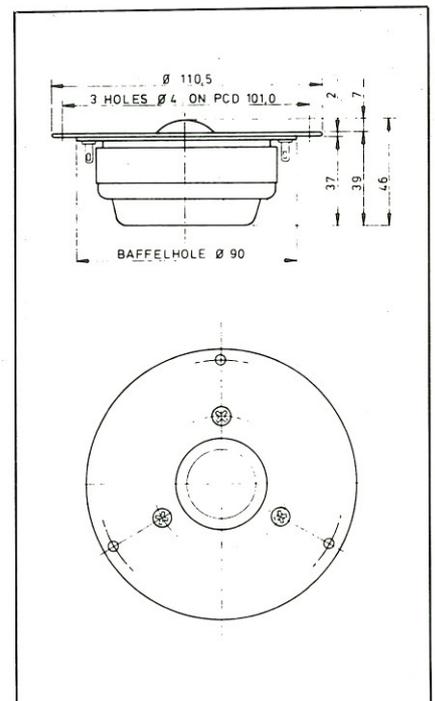
To use a first order filter network requires that the frequency curves of all drivers have no peaks or dips even beyond the desired frequency range.

All DYNAUDIO drive units have soft roll-offs at both ends and a well damped resonance. They are for use of 6 dB filters for excellent results.

Compliance:		Overall dimensions:	Ø 110 x 46 mm
suspension	Cms	Power handling:	
acoustic	Cas	nominal	DIN 300 W
equivalent volume	Vas	music	DIN 1200 W
Cone:		transient	10 ms 1000 W
eff. cone area	SD 8,5	Q-factor:	
moving mass	Mms 0,51	mechanical	Qms 0,61
lin. vol. displacement	Vd 6,0	electrical	Qes 1,11
mech. resistance	Rms	total	Qts 0,39
lin. excursion P-P	Xmax 0,7	Resonance frequency free air:	fs 700 Hz
max. excursion P-P	3,2	Sensitivity:	1 W / 1 m 91 dB
Frequency response:	1.000 / 30.000 Hz	Voice coil:	
Harmonic distortion:	< 0,6 %	diameter	d 28 mm
Intermodulation distortion:	< 0,1 %	length	h 3,2 mm
Magnetsystem:		layers	n 2
total gap flux	340 µWb	inductance (1 kHz)	Le 0,09 mH
flux density	1,53 Tesla	nom. impedance	Zvc 8 Ω
gap energy	156 mWs	min. impedance	Zmin 6,4 Ω
force factor	B x L 4,2	DC resistance	Re 5,3 Ω
air gap volume	Vg 0,16		
air gap height	2,5 mm		
air gap width	0,75 mm		
Net weight:	0,55 kg		

Data given are as after 30 hours of running

* Thiele/Small parameters are measured not statically but dynamically.



All specifications subject to change without notice