

DYNAUDIO®

TECHNOLOGY UNLIMITED

D-21

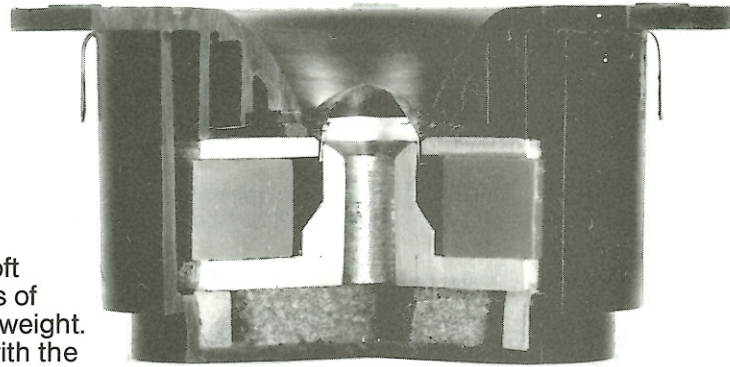
APPLICATIONS

dome tweeter for 3 way or
super tweeter for 4- or
5-way constructions

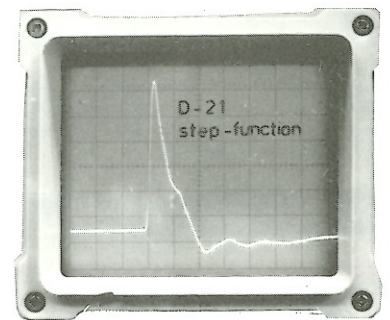
FEATURES

very low rise time
high power handling
rigid hexacoil technique
liquid cooling of vc
flexible wire connectors
soft dome material
no ringings
aperiodic damped double
chamber enclosure
very flat impedance curve
correct time aligned when
used with other DYNAUDIO
drivers

The moving system of this 5/6" (21 mm) soft dome tweeter is of extremely light weight. This together with the high flux density of the magnet system and the magnetic fluid result in an extremely low rise time and the response exceeds 35 kHz. The aperiodic damping and the high power handling give a natural and open sound with very good resolution. Transient peaks of more than 1000 watts are reproduced with full dynamic without compression. Ears used to normal speakers in the beginning will miss the usual ringings and overshoots. In 3-way system to be crossed at around 5000 Hz. As a super tweeter starting from 10 ... 15 kHz, 6 dB.

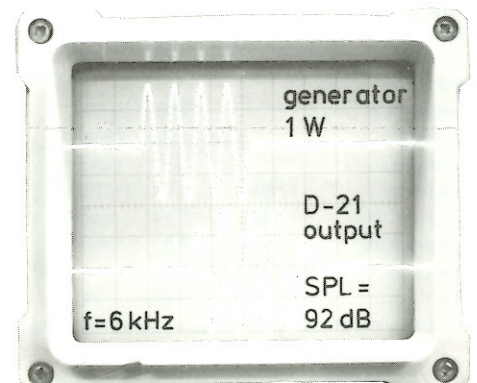
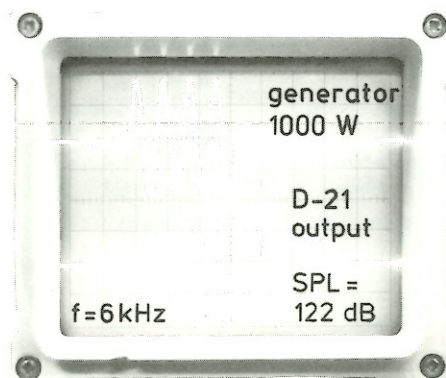


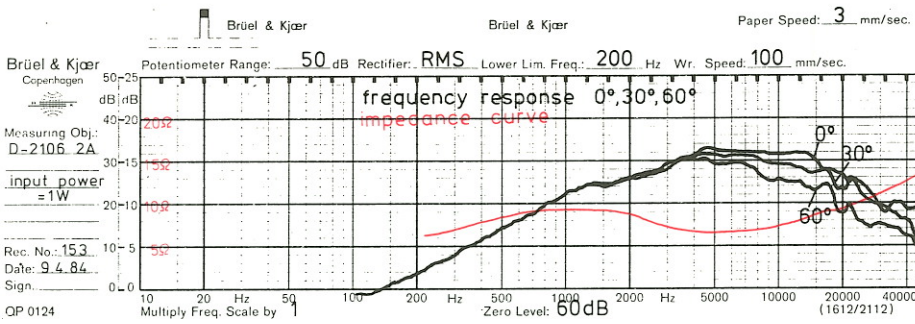
This STEPFUNCTION discloses clearly the quality standard of the unit. The slope drops without re-rising which stands for all frequencies. Very few speaker manufacturers are using this method of testing, perhaps because of the results?



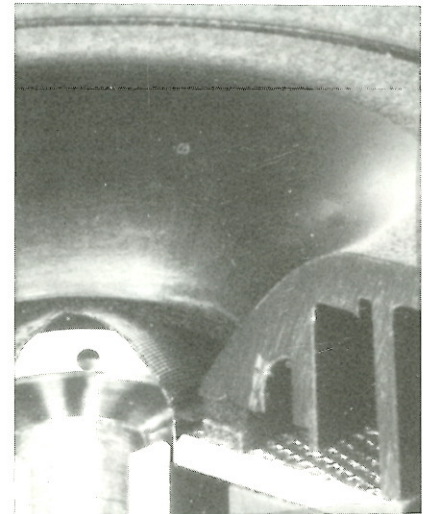
Tone bursts are the best way to obtain an accurate picture of overall acoustic performance. Regrettably they are mostly used only to test rise-time and ringing - which shows much more clearly with a step function test! With a tone burst, all the moving parts of a speaker can be loaded without burning 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 right picture shows that even a 1000 W input is not the limit: the dynamic response is absolutely linear. Data given in catalogues (and even test reports) normally are calculated figures and not measured values.

This compression effect is either under-rated or ignored very often. That is why many speakers do not produce SPL's above 100 dB, in spite of higher theoretical specifications. However this test exposes such anomalies between calculations and actual measurements.

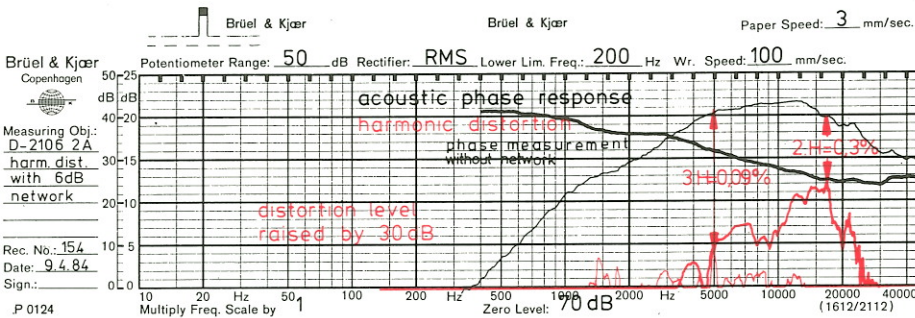




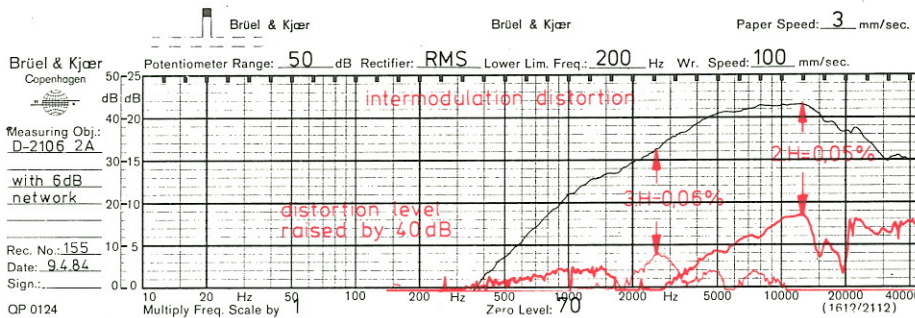
The 30° and 60° curves indicate wide dispersion with correct phase. The impedance curve is flat because of aperiodic damping and magnaflux.



The front of the D-21 has a typical design evoked by having moved the acoustic center inwards for correct phase array. The mouth very often is mistaken as a short horn arrangement. The frequency diagram to the left indicates clearly that no horn effect at all is there, no directional radiation, to the contrary a wide and ideal dispersion is measured.



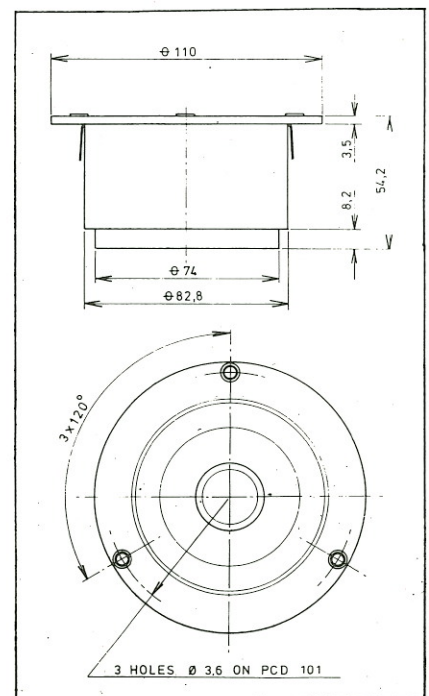
Low harmonic distortions. No phase shift to be noted. 6 dB filter used.



The intermodulation distortion diagram demonstrates: the D-21 converts the input signal into clean sound pressure.

Compliance:		Overall dimensions:		Ø 110x55 mm	
suspension	Cms	-	Power handling:	DIN	600 W
acoustic	Cas	-	* nominal	DIN	1200 W
equivalent volume	Vas	-	* music		10 ms 1000 W
Cone:		Q-factor:			
eff. cone area	SD	4,9	cm ²	mechanical	Qms 0,62
moving mass	Mms	0,24	g	electrical	Qes 1,21
lin. vol. displacement	Vd	3,4	cm ³	total	Qts 0,41
mech. resistance	Rms	-		Resonance frequency free air: fs	1300 Hz
lin. excursion P-P	Xmax	0,7	mm	Sensitivity:	1 W / 1 m 92 dB
max. excursion P-P		2,0	mm	Voice coil:	
* Frequency response:		2000 / 35000	Hz	diameter	d 21 mm
Harmonic distortion:		< 0,3	%	length	h 3,2 mm
Intermodulation distortion:		< 0,06	%	layers	n 2
Magnetsystem:		inductance (1 kHz)		Le	0,08 mH
total gap flux		280	µ Wb	nom. impedance	Zvc 8 Ω
flux density		1,75	Tesla	min. impedance	Zmin 6,4 Ω
gap energy		125	mWs	DC resistance	Re 5,3 Ω
force factor	B x L	4,01	Tm	Data given are as after 30 hours of running	
air gap volume	Vg	0,11	cm ³		
air gap height		2,5	mm		
air gap width		0,65	mm		
Net weight:		0,65	kg		

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



All specifications subject to change without notice