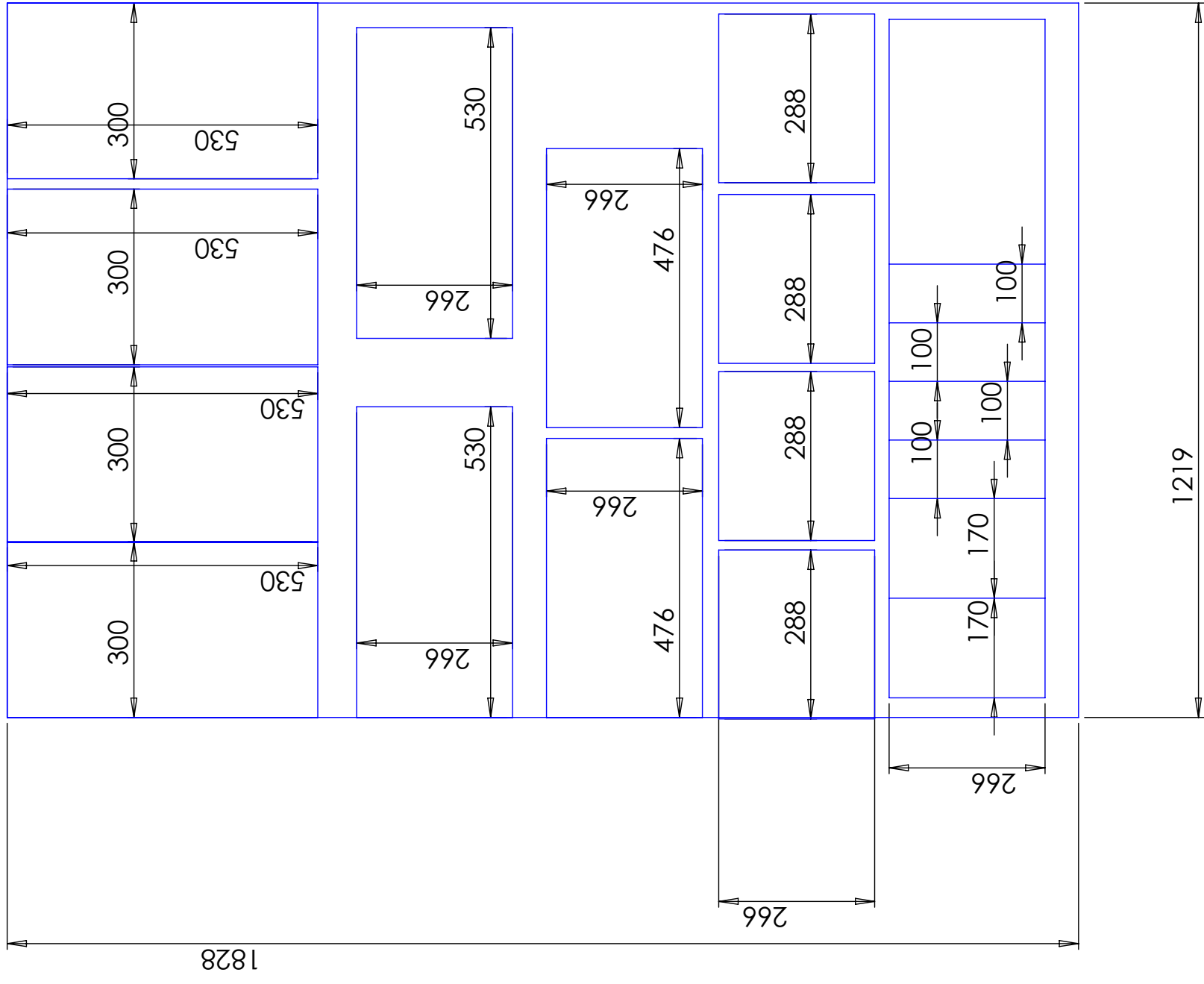
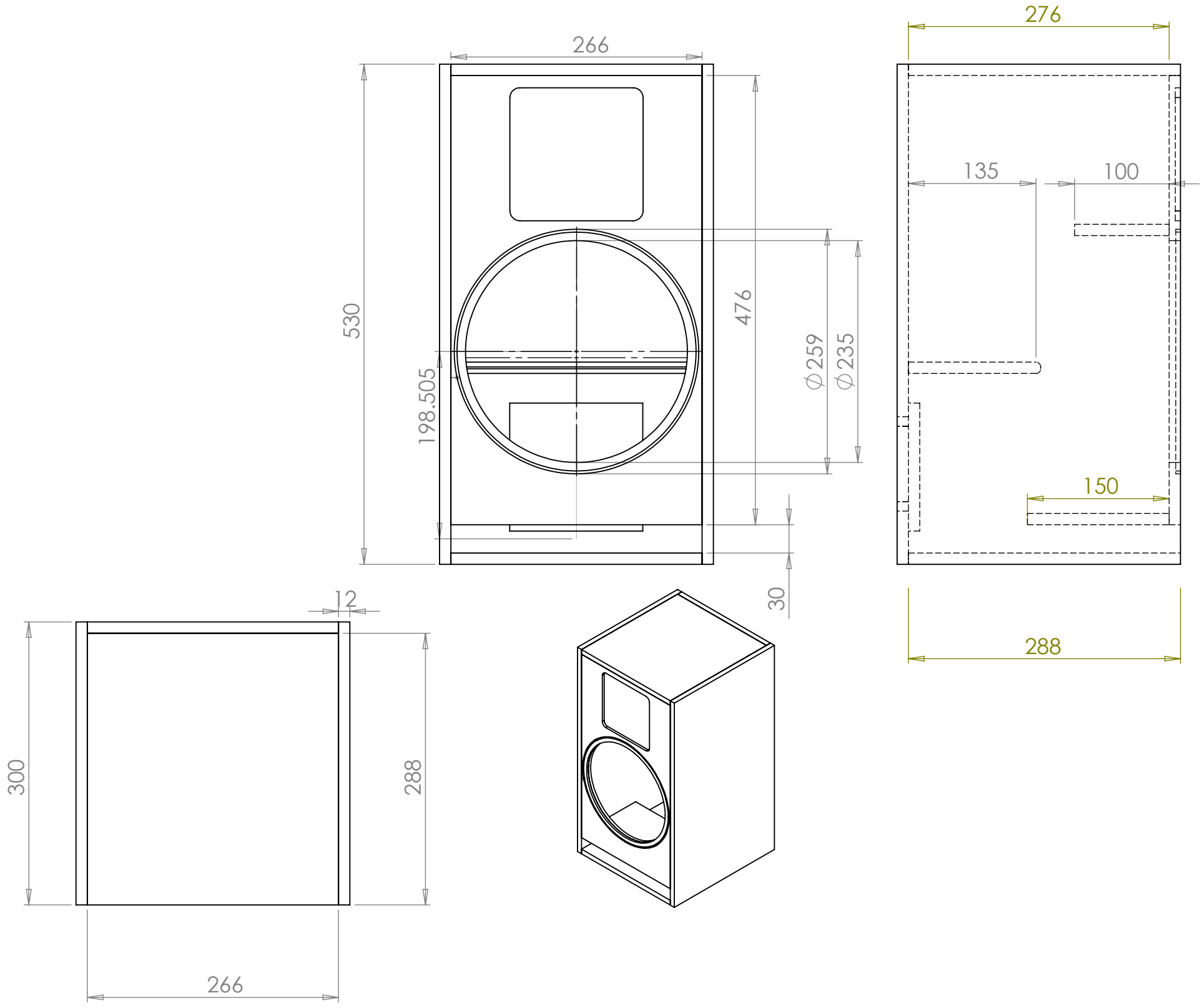
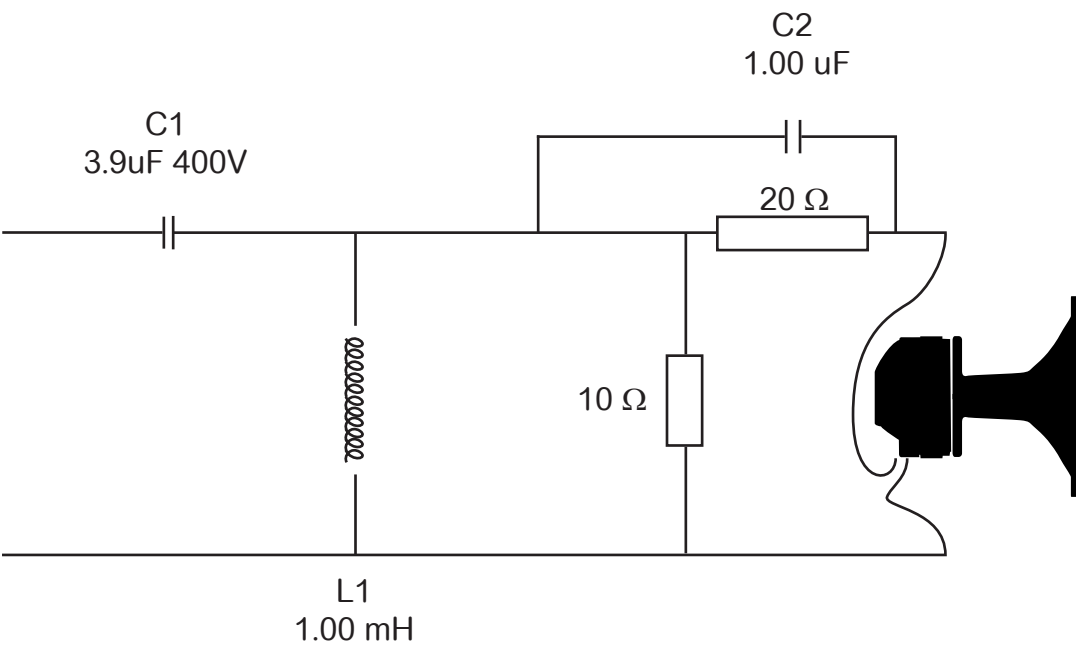




A 10” mid woofer produced for the pro audio market matched to a Compression driver. The aim of this design is to produce a full range speaker that has a clear dynamic sound. In many respects this project is a work in progress.





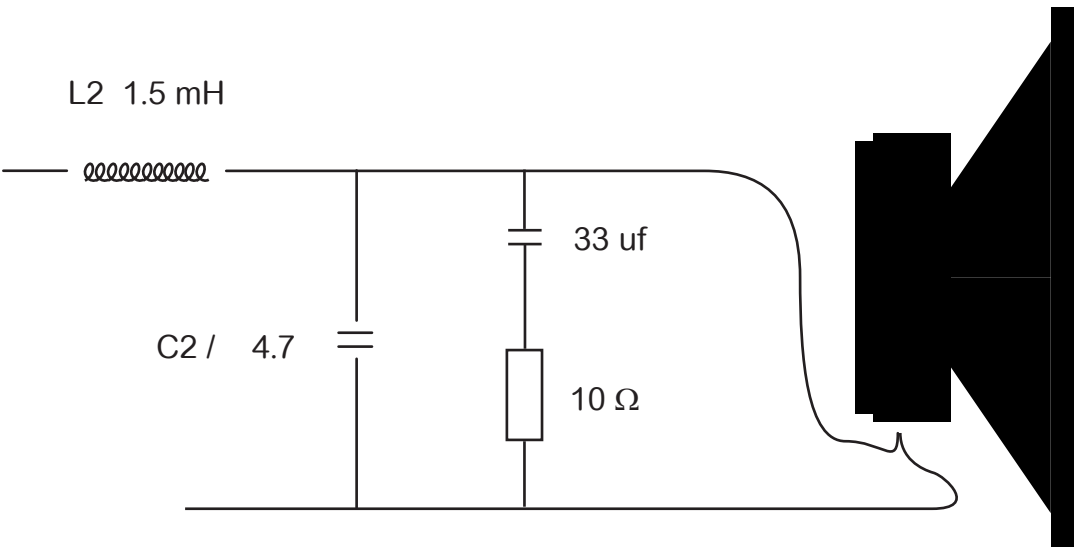
High Pass

Driver CD10FE Beyma
109 dB SPL (Manurfacturer rated)

Rated impedance 8 Ω
D.C. Resistance 4.3 Ω

Lpad
 $(4.6 \times 10) / (4.6 + 10) = 3.1$
 $46 / 14.6 = 3.1$
18 dB attenuation on 3.1 Ω =
20 Ω

$(24.3 \times 10) / (10 + 24.3)$
 $(243) / (34.3) = 7 \text{ Ω}$
 $(218) / (33.3) = 7 \text{ Ω}$



LOW PASS

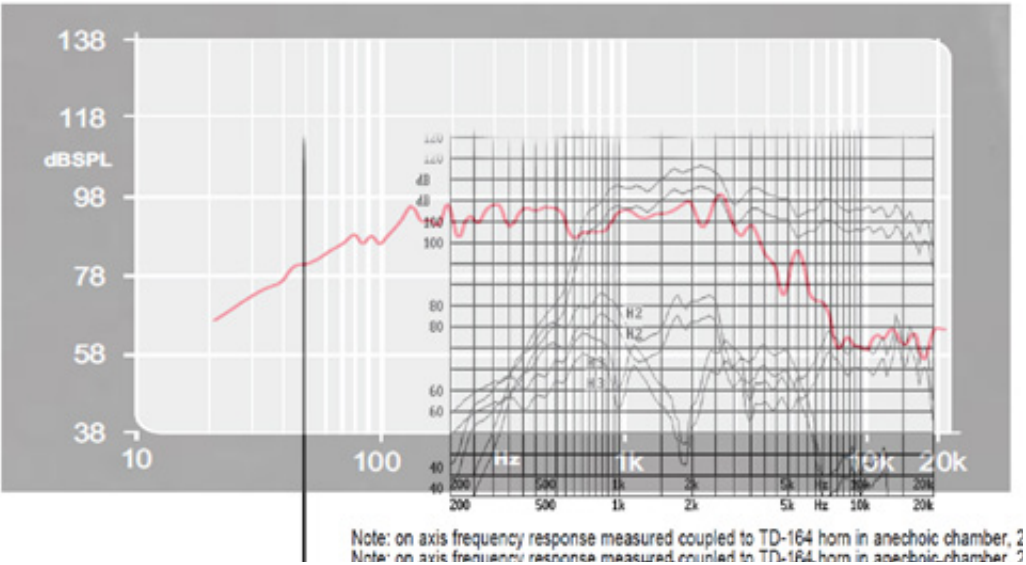
Fane Sovereign 275w

Rated impedance 8 Ω
D.C. Resistance 4.3 Ω

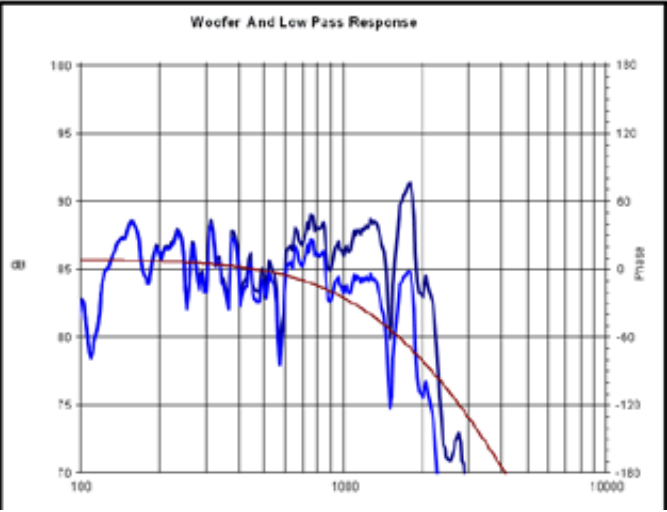
- L2 ARONIT-COILS 1.2mH 0.23 7029 £9.41
- L1 Mundorf M Coil air core coils 0.71mm 1.2mH 1.01 4020 £3.61
- Mundorf MKP 630V 5.6 £3.80
- Mundorf MKP 630V 4.7 £2.77
- Mundorf MKP 630V 0.47 £1.94
- Bipolar electrolytic 33 uF £1.27
- Resitors 3 x £1.50 = £4.50

£27.50

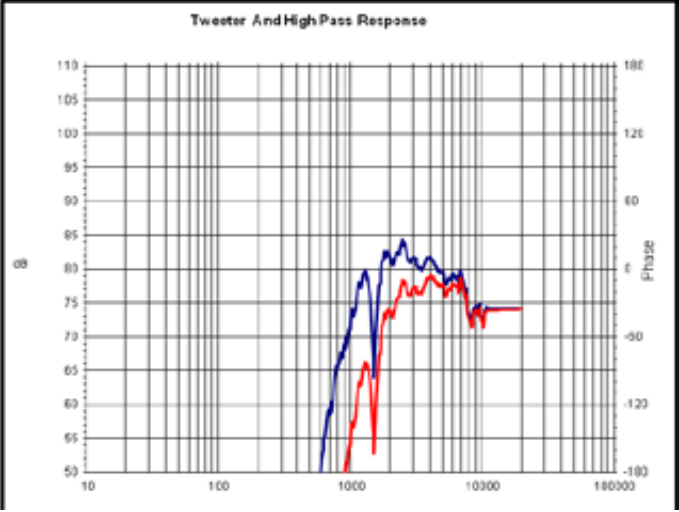
x2 £55.00



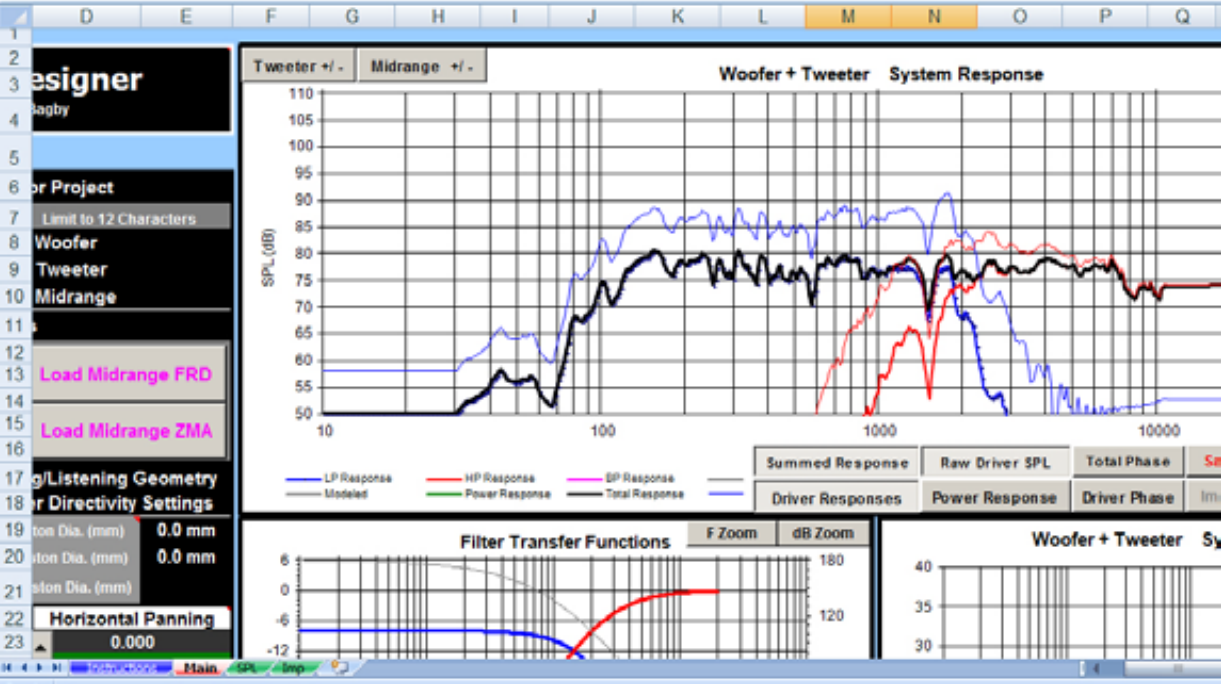
Manurfacutres response data, overlayed to give a rough idea of attenuation needed for tweeter.



Crossover simulated from measured response of mid-bass unit. Measurements not accurate so can only be used to inform the crossover design.

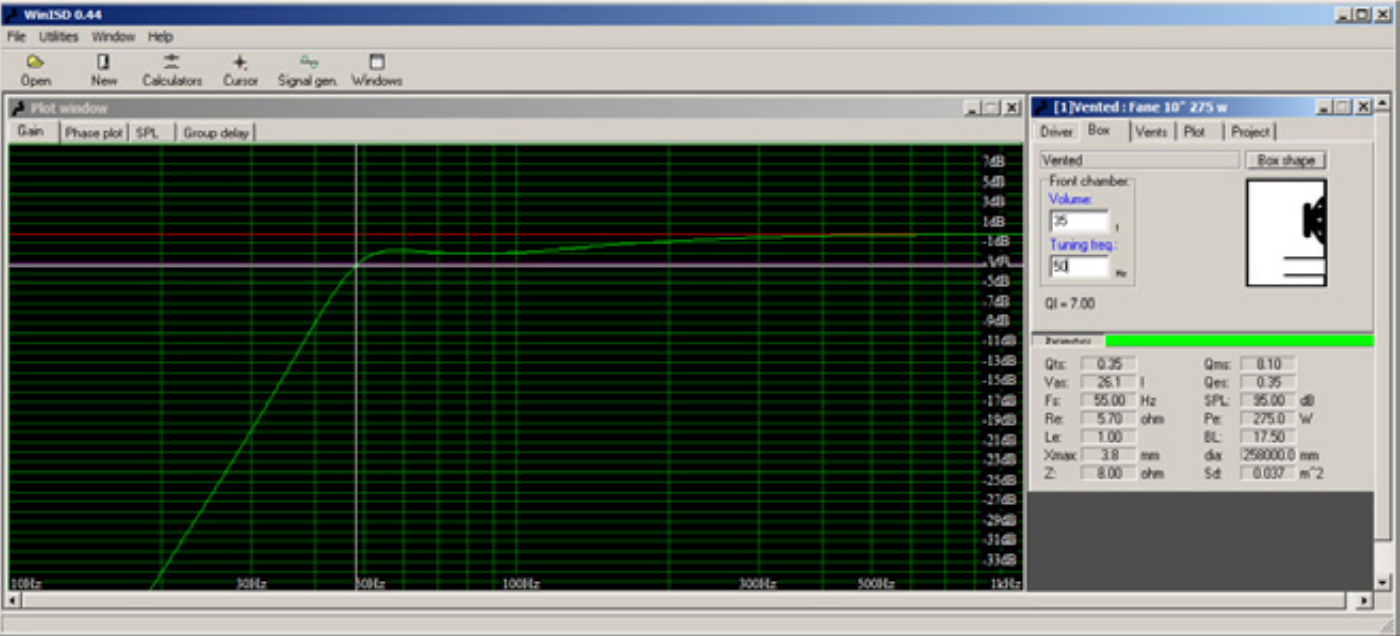


Crossover simulated from measured response of tweeter. Measurements not accurate so can only be used to inform the crossover design.



Simulated crossover design, measurments wich are not accurate but give a clearer understanding of how the components alter the response.

lit is clear that the response of both drivers needs reducing near to the crossover point as both drivers are more sensitive in this region. Baffel step will also increase the sensitivity of the Mid bass driver in this region.



Simulated bass response from manufactures specifications of transformer