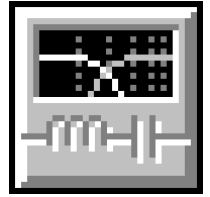


Custom Two-Way Crossover Network Design

By Dr F. Mark Carter, Walberswick Studios



2-Way Crossover Network

Low-Pass (LP) Filter: 1 required

Type: 2nd-Order Linkwitz-Riley

Desired Corner Frequency: 2800 Hz

High-Pass (HP) Filter: 1 required

Type: 2nd-Order Linkwitz-Riley

Desired Corner Frequency: 2800 Hz

C1 = 6 μ F, Polypropylene, 0.00658 ohms

C2 = 10 μ F, Polypropylene, 2.005 ohms

L1 = 0.6 mH, Air Core (#16), 0.313 ohms

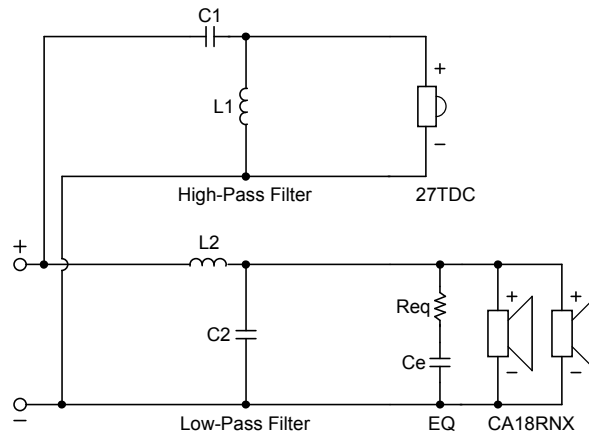
L2 = 0.4 mH, Air Core (#16), 0.29 ohms

Woofer

Impedance EQ

Req = 3 ohms

Ce = 60 μ F





Tweeter Properties

--Driver Description--

Name: 27TDC
 Type: Standard one-way driver
 Company: Seas Fabrikker A.S.
 Comment: H 1149

--Driver Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 550 Hz
 Qms = 0.972
 Mms = 0.3 g
 Xmax = 0.25 mm
 Sd = 7 sq.cm
 Qes = 0.41
 Re = 4.8 ohms
 Le = 0.05 mH
 Z = 6 ohms
 BL = 3.5 Tm
 Pe = 55 watts
 Qts = 0.29
 1-W SPL = 90 dB

Woofers Properties

--Driver Description--

Name: CA18RNX
 Type: Standard one-way driver
 Company: Seas Fabrikker A.S.
 Comment: H 1215

--Driver Configuration--

No. of Drivers = 2

Mounting = Standard

Wiring = Parallel

--Driver Parameters--

Fs = 36 Hz
 Qms = 1.7
 Vas = 36 liters [72]
 Cms = 1.6 mm/N [0.8]
 Mms = 12 g [24]
 Rms = 1.7 kg/s [3.4]
 Xmax = 6 mm
 Xmech = 11 mm
 P-Dia = 126.6 mm [179]
 Sd = 130 sq.cm [260]
 P-Vd = 0.0755 liters [0.151]
 Qes = 0.43
 Re = 6.1 ohms [3.05]
 Le = 1.1 mH [0.55]
 Z = 8 ohms [4]
 BL = 6.4 Tm [6.205]
 Pe = 80 watts [160]
 Qts = 0.35
 no = 0.377 % [0.753]
 1-W SPL = 88 dB [91.01]
 2.83-V SPL = 89.08 dB [95.1]

Graph Key: — LP — HP — Net

