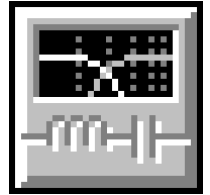


Custom Two-Way Crossover Network Design

By Dr F. Mark Carter, Walberswick Studios



2-Way Crossover Network

Low-Pass (LP) Filter: 1 required

Type: 3rd-Order Butterworth

Desired Corner Frequency: 3000 Hz

High-Pass (HP) Filter: 1 required

Type: 2nd-Order Linkwitz-Riley

Desired Corner Frequency: 3000 Hz

C1 = 5.5 μ F, Polypropylene, 0.00693 ohms

C2 = 10 μ F, Polypropylene, 0.0051 ohms

L1 = 0.8 mH, Air Core (#16), 0.314 ohms

L2 = 0.56 mH, Air Core (#16), 0.314 ohms

L3 = 0.2 mH, Air Core (#16), 0.273 ohms

Tweeter

5.02 dB L-Pad

Rp1 = 2.5 ohms

Rp2 = 10 ohms

Woofers

Impedance EQ

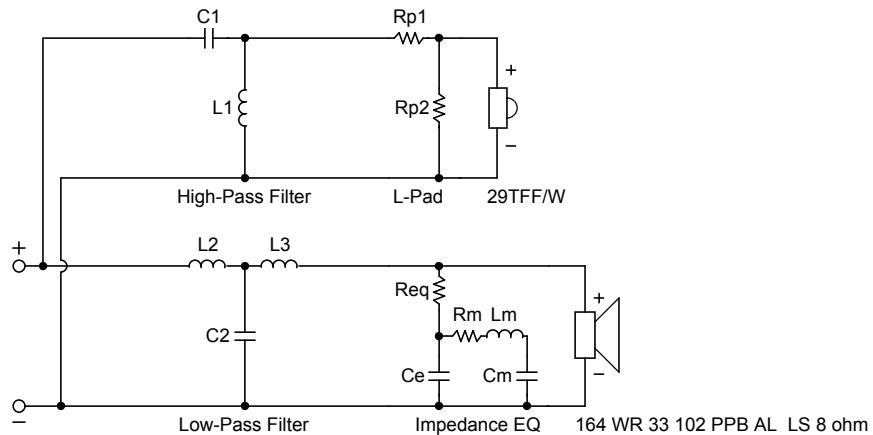
Req = 6.8 ohms

Ce = 24 μ F

Rm = 1.2 ohms

Cm = 1 mF

Lm = 11 mH





Tweeter Properties

--Driver Description--

Name: 29TFF/W
 Type: Standard one-way driver
 Company: Seas Fabrikker A.S.
 Comment: H 1318

--Driver Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 950 Hz
 Qms = 2.88
 Mms = 0.35 g
 Xmax = 0.25 mm
 Sd = 8 sq.cm
 Qes = 0.8
 Re = 4.7 ohms
 Le = 0.05 mH
 Z = 6 ohms
 BL = 3.5 Tm
 Pe = 90 watts
 Qts = 0.63
 2.83-V SPL = 92 dB

Woofers Properties

--Driver Description--

Name: 164 WR 33 102 PPB AL LS 8 ohm
 Type: Standard one-way driver
 Company: Peerless (Denmark)
 Comment: 830874

--Driver Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 47.3 Hz
 Qms = 2.73
 Vas = 16.7 liters
 Cms = 0.63 mm/N
 Mms = 18.1 g
 Rms = 1.97 kg/s
 Xmax = 5.5 mm
 P-Dia = 133 mm
 Sd = 139 sq.cm
 Qes = 0.47
 Re = 7 ohms
 Le = 1.2 mH
 Z = 8 ohms
 BL = 8.5 Tm
 Pe = 100 watts
 Qts = 0.4
 2.83-V SPL = 87.8 dB

Graph Key: — LP — HP — Net

