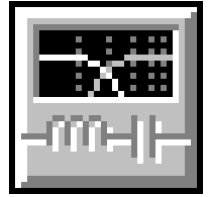


Custom Two-Way Crossover Network Design

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: 2000 Hz

High-Pass (HP) Filter: 1 required

Type: 2nd-Order Linkwitz-Riley

Desired Corner Frequency: 2000 Hz

C1 = 6 μ F, Polypropylene, 0.00654 ohms

C2 = 16 μ F, Polypropylene, 0.00435 ohms

L1 = 0.5 mH, Air Core (#16), 0.279 ohms

L2 = 1.2 mH, Air Core (#16), 0.365 ohms

Tweeter

6.14 dB L-Pad

Rp1 = 3 ohms

Rp2 = 8 ohms

Woofers

Impedance EQ

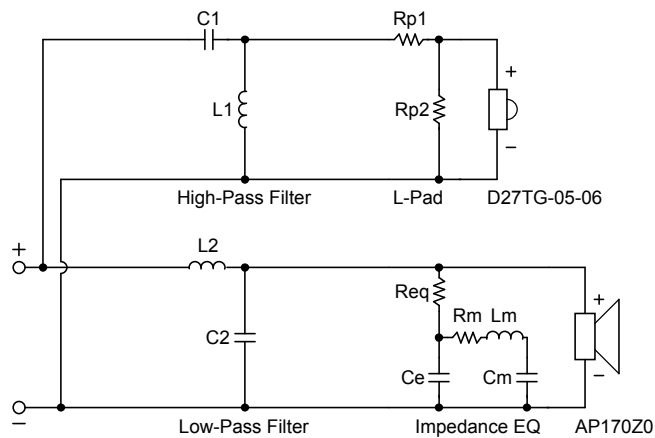
Req = 5 ohms

Ce = 25 μ F

Rm = 1.5 ohms

Cm = 1 mF

Lm = 9 mH





Tweeter Properties

--Driver Description--

Name: D27TG-05-06

Type: Standard one-way driver

Company: Vifa

Piston: Coated silk dome

Voice Coil: Diameter-26 mm, replaceable voice coil

Magnet: 240 g, vented pole piece

Ferrofluid included

--Driver Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 1000 Hz
 Qms = 2.15
 Vas = 0.006 liters
 Mms = 0.3 g
 Xmax = 0.15 mm
 Sd = 7.1 sq.cm
 Qes = 1.19
 Re = 4.6 ohms
 Le = 0.0481 mH
 Z = 6 ohms
 BL = 2.7 Tm
 Pe = 100 watts
 Qts = 0.77
 1-W SPL = 91 dB
 2.83-V SPL = 92 dB

Woofers Properties

--Driver Description--

Name: AP170Z0

Type: Standard one-way driver

Company: Audax Industries

--Driver Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 48.5 Hz
 Qms = 1.61
 Vas = 24.65 liters
 Cms = 0.996 mm/N
 Mms = 10.82 g
 Rms = 2.05 kg/s
 Xmax = 3 mm
 Xmech = 4.5 mm
 P-Dia = 129.6 mm
 Sd = 132.7 sq.cm
 P-Vd = 0.0396 liters
 Qes = 0.5
 Re = 5.3 ohms
 Le = 0.74 mH
 Z = 6 ohms
 BL = 5.76 Tm
 Pe = 60 watts
 Qts = 0.38
 no = 0.542 %
 1-W SPL = 89.3 dB
 2.83-V SPL = 91.28 dB

Graph Key: — LP — HP — Net

