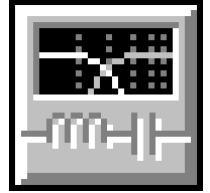


Custom Two-Way Crossover Network Design

By Steve Dunlap, Dunlap MFE



2-Way Crossover Network

Low-Pass (LP) Filter: 1 required

Type: 1st-Order Butterworth

Desired Corner Frequency: 250 Hz

High-Pass (HP) Filter: 1 required

Type: 3rd-Order Butterworth

Desired Corner Frequency: 250 Hz

C1 = 130 μ F, Polypropylene, 0.00145 ohms

C2 = 400 μ F, Polypropylene, 0.001 ohms

L1 = 1.5 mH, Air Core (#14), 0.26 ohms

L2 = 2.102 mH, Air Core (#14), 0.32 ohms

Tweeter

5.58 dB L-Pad

Rp1 = 2 ohms

Rp2 = 5 ohms

Woofers

Impedance EQ

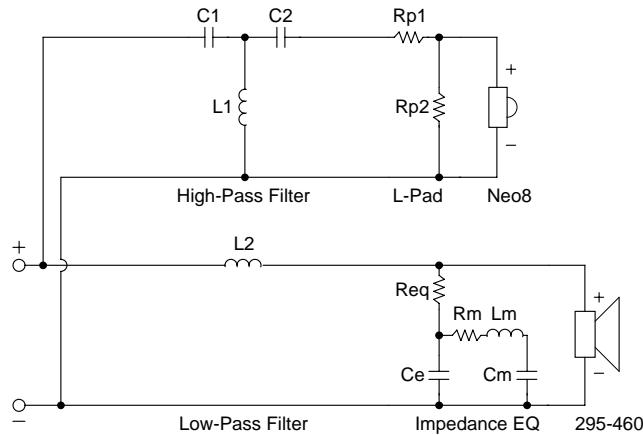
Req = 3.3 ohms

Ce = 330 μ F

Rm = 0.51 ohms

Cm = 4.7 mF

Lm = 11 mH





Tweeter Properties

--Driver Description--

Name: Neo8

Type: Standard one-way driver

Company: BG Corp

Comment: Radia series

--Driver Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 300 Hz

Qms = 0.38

Sd = 6.38 sq.in

Qes = 15.2

Re = 4 ohms

Le = 0.01 mH

Z = 4 ohms

Pe = 50 watts

Qts = 0.37

2.83-V SPL = 93 dB

Woofers Properties

--Driver Description--

Name: 295-460

Type: Standard one-way driver

Company: Dayton Loudspeaker Co.

--Driver Configuration--

No. of Drivers = 1

--Driver Parameters--

Fs = 22.7 Hz

Qms = 3.02

Vas = 1.932 cu.ft

Cms = 0.0613 in/lb

Mms = 4.921 oz

Rms = 14.62 lb/s

Xmax = 0.551 in

P-Dia = 8.11 in

Sd = 51.43 sq.in

P-Vd = 0.0164 cu.ft

Qes = 0.47

Re = 3.3 ohms

Le = 3.598 mH

Z = 4 ohms

BL = 2.668 lb/A

Pe = 350 watts

Qts = 0.4

no = 0.131 %

1-W SPL = 83.33 dB

2.83-V SPL = 87.17 dB

--Box Parameters--

Type: Closed Box

Vb = 43.8 liters

QL = 20

Fill = heavy

Graph Key: — LP — HP — Net

