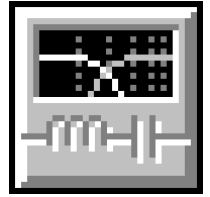


# Custom Three-Way Crossover Network Design

By Parts, Express



## 3-Way Crossover Network

Low-Pass (LP) Filter: 1 required

Type: 2nd-Order Constant-Power (CPC)

Desired Corner Frequency: 500 Hz

Band-Pass (BP) Filter: 1 required

Type: 2nd-Order Constant-Power (CPC)

Desired Lower Corner Freq: 500 Hz

Desired Upper Corner Freq: 6000 Hz

High-Pass (HP) Filter: 1 required

Type: 2nd-Order Constant-Power (CPC)

Desired Corner Frequency: 6000 Hz

C1 = 3.9  $\mu$ F, Polypropylene, 0.00736 ohms

C2 = 39  $\mu$ F, Polypropylene, 0.00269 ohms

C3 = 2.7  $\mu$ F, Polypropylene, 0.00774 ohms

C4 = 68  $\mu$ F, Polypropylene, 0.00192 ohms

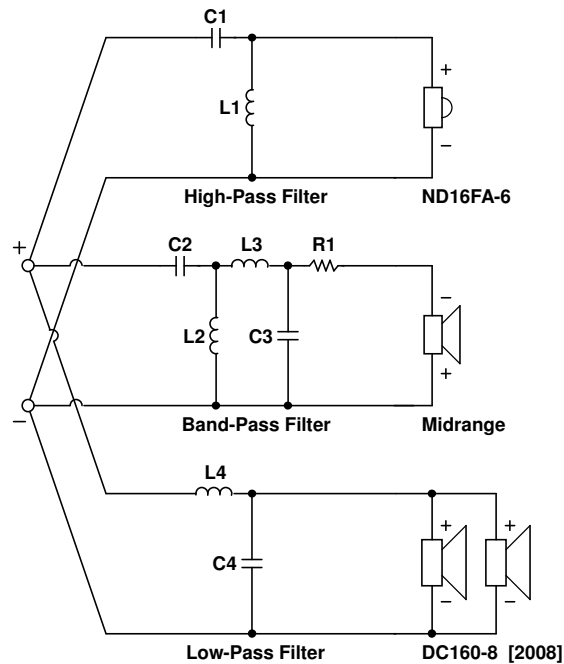
L1 = 0.2 mH, Air Core (#16), 0.273 ohms

L2 = 3 mH, Air Core (#16), 0.595 ohms

L3 = 0.24 mH, Air Core (#16), 0.278 ohms

L4 = 1.5 mH, Air Core (#16), 0.423 ohms

R1 = 0.56 ohms





### **Tweeter Properties**

--Driver Description--

Name: ND16FA-6

Type: Standard one-way driver

Company: Dayton Audio

--Driver Configuration--

**No. of Drivers = 1**

--Driver Parameters--

Fs = 2283 Hz

Qms = 2.42

Qes = 3.1

Re = 5 ohms

Le = 0.05 mH

Z = 6 ohms

2.83-V SPL = 91.04 dB

### **Midrange Properties**

--Driver Description--

Name:

Type: One-way open back driver

--Driver Configuration--

**No. of Drivers = 1**

--Driver Parameters--

Fs = 341 Hz

Qms = 3.16

Sd = 26.4 sq.cm

Qes = 1.18

Re = 6 ohms

Le = 0.13 mH

Z = 8 ohms

2.83-V SPL = 90.65 dB

### **Woofers Properties**

--Driver Description--

Name: DC160-8 [2008]

Type: Standard one-way driver

Company: Dayton Audio

Comment: Published at Parts Express website and PDF.

--Driver Configuration--

**No. of Drivers = 2**

Mounting = Standard

Wiring = Parallel

--Driver Parameters--

Fs = 34.3 Hz

Qms = 3.47

Vas = 24.5 liters [49]

Sd = 134.8 sq.cm [269.6]

Qes = 0.36

Re = 6.7 ohms [3.35]

Le = 2.34 mH [1.17]

Z = 8 ohms [4]

2.83-V SPL = 87.15 dB [93.17]