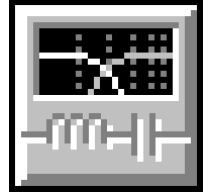


Custom Two-Way Crossover Network Design

By Chris, Solen Inc.



2-Way Crossover Network

Low-Pass (LP) Filter: 1 required

Type: 2nd-Order Linkwitz-Riley

Desired Corner Frequency: 2400 Hz

High-Pass (HP) Filter: 1 required

Type: 2nd-Order Linkwitz-Riley

Desired Corner Frequency: 2400 Hz

C1 = 5.6 μ F, AGM560, 0.00675 ohms

C2 = 5.6 μ F, Polypropylene, 0.00662 ohms

L1 = 0.82 mH, Air Core (#20), 0.636 ohms

L2 = 0.75 mH, Litz (#16), 0.336 ohms

Tweeter

5.95 dB L-Pad

Rp1 = 3 ohms

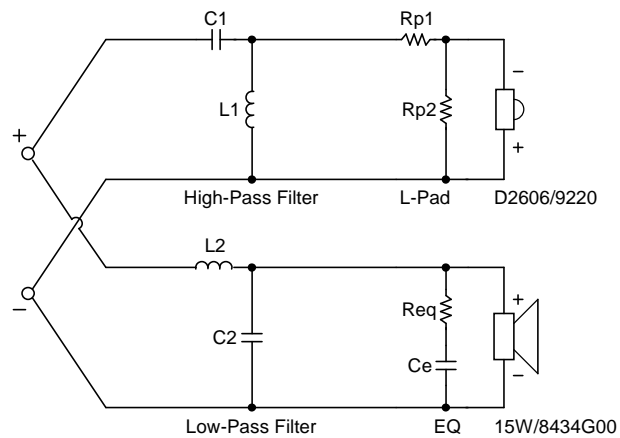
Rp2 = 6.2 ohms

Woofers

Impedance EQ

Req = 6.8 ohms

Ce = 18 μ F





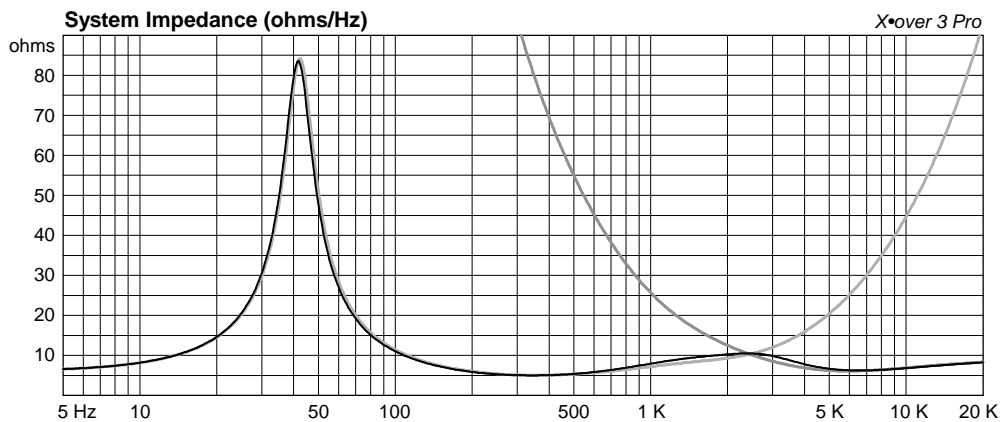
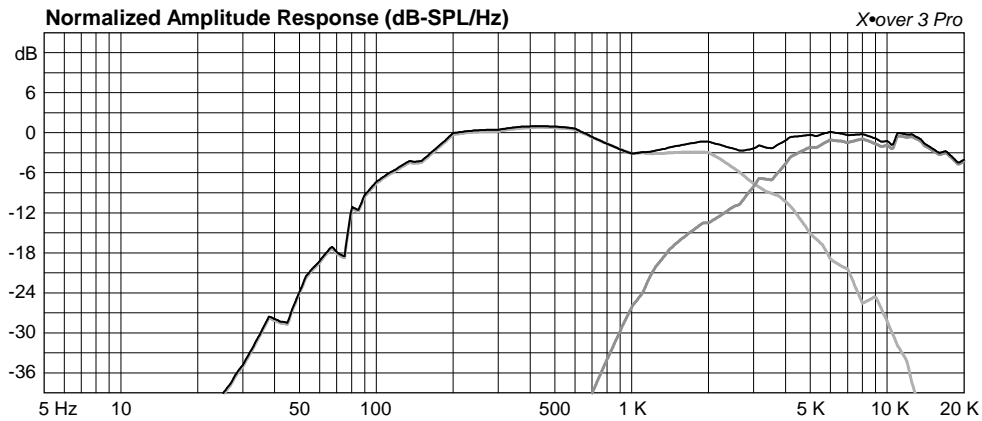
Tweeter Properties

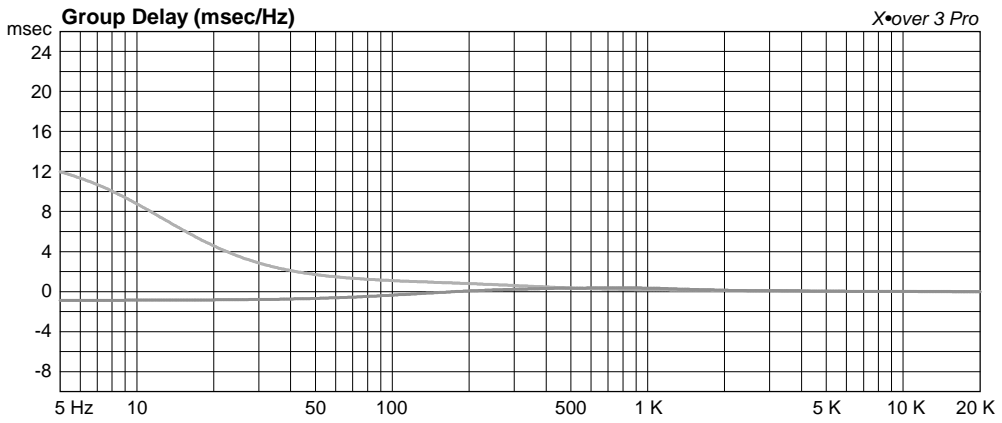
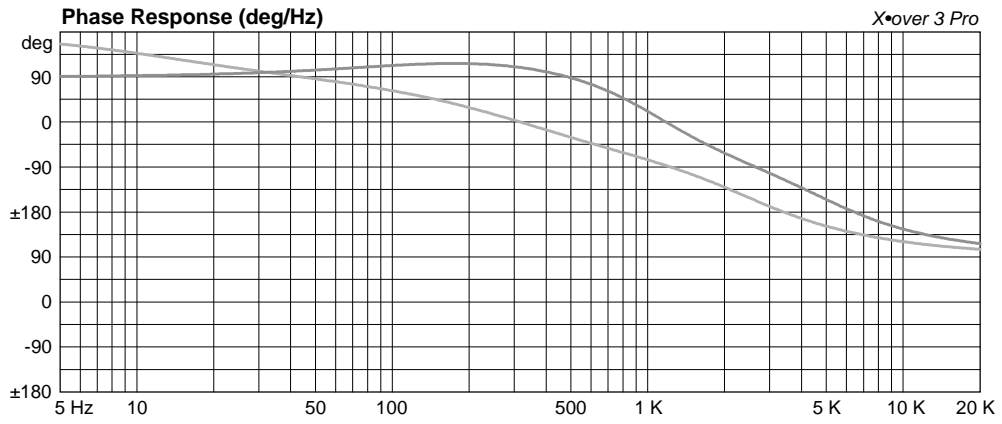
--Driver Description--
 Name: D2606/9220
 Type: Standard one-way driver
 Company: Scan-Speak A/S
 Ferrofluid included
 --Driver Configuration--
No. of Drivers = 1
 --Driver Parameters--
 Fs = 850 Hz
 Qms = 1.22
 Vas = 0.00788 liters
 Cms = 0.11 mm/N
 Mms = 0.33 g
 Rms = 1.395 kg/s
 Xmax = 0.2 mm
 Xmech = 0.3 mm
 Sd = 7.1 sq.cm
 P-Vd = 0.000142 liters
 Qes = 1.07
 Re = 4.6 ohms
 Le = 0.19 mH
 Z = 6 ohms
 BL = 2.753 Tm
 Pe = 50 watts
 Qts = 0.57
 no = 0.436 %
 1-W SPL = 90 dB
 2.83-V SPL = 91.4 dB

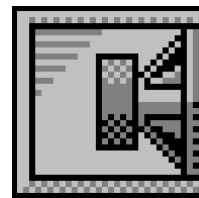
Woofers Properties

--Driver Description--
 Name: 15W/8434G00
 Type: Standard one-way driver
 Company: Scan-Speak A/S
 --Driver Configuration--
No. of Drivers = 1
 --Driver Parameters--
 Fs = 45.41 Hz
 Qms = 3.74
 Vas = 12.89 liters
 Cms = 1.43 mm/N
 Mms = 8.61 g
 Rms = 0.655 kg/s
 Xmax = 4.2 mm
 Xmech = 6.3 mm
 P-Dia = 100.7 mm
 Sd = 80 sq.cm
 P-Vd = 0.0335 liters
 Qes = 0.27
 Re = 5.7 ohms
 Le = 0.8 mH
 Z = 8 ohms
 BL = 7.27 Tm
 Pe = 60 watts
 Qts = 0.25
 no = 0.431 %
 1-W SPL = 86 dB
 2.83-V SPL = 86.88 dB

Graph Key: — LP — HP — Net







Box Properties

--Description--

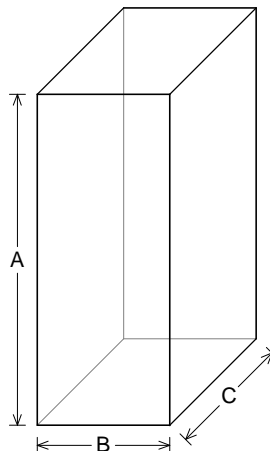
Name: Discovery Mini Monitor
Type: Vented Box
Shape: Prism, square
Company: Scan-Speak A/S
Core Material: 3/4" MDF

--Box Parameters--

Vb = 0.25 cu.ft
V(total) = 0.278 cu.ft
Fb = 61.43 Hz
QL = 7
F3 = 61.58 Hz
Fill = minimal

--Vents--

No. of Vents = 1
Vent shape = round
Vent ends = one flared
Dv = 1.5 in
Lv = 4.25 in



--External Dimensions--

A = 16.26 in
B = 6.5 in
C = 8 in

--Internal Dimensions--

A = 14.76 in
B = 5 in
C = 6.5 in

--Wall Thickness--

Front = 0.75 in
Side = 0.75 in

Driver Properties

--Description--

Name: 15W/8434G00
Type: Standard one-way driver
Company: Scan-Speak A/S

--Configuration--

No. of Drivers = 1

--Mechanical Parameters--

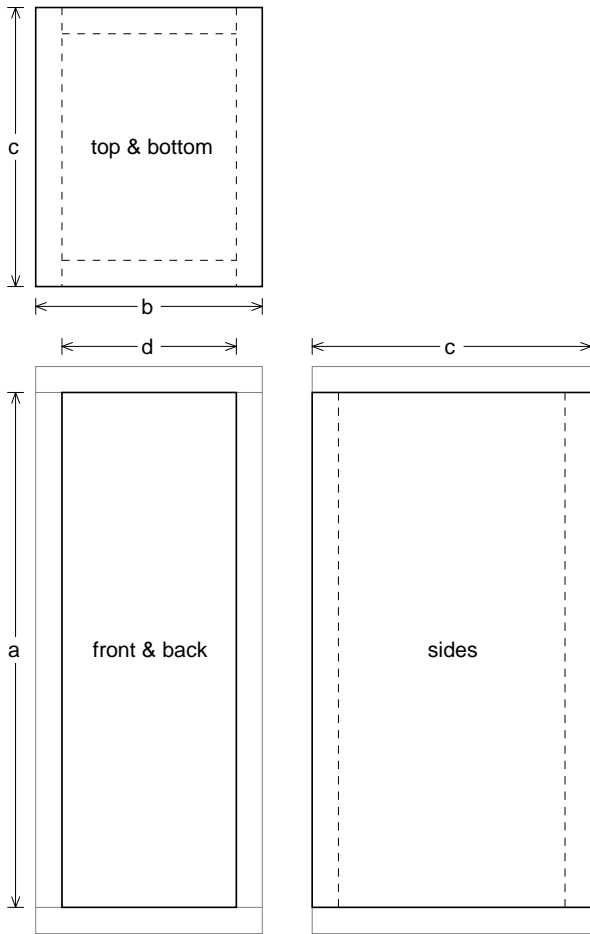
Fs = 45.41 Hz
Qms = 3.74
Vas = 12.89 liters
Cms = 1.43 mm/N
Mms = 8.61 g
Rms = 0.655 kg/s
Xmax = 4.2 mm
Xmech = 6.3 mm
P-Dia = 100.7 mm
Sd = 80 sq.cm
P-Vd = 0.0335 liters

--Electrical Parameters--

Qes = 0.27
Re = 5.7 ohms
Le = 0.8 mH
Z = 8 ohms
BL = 7.27 Tm
Pe = 60 watts

--Electromech. Parameters--

Qts = 0.25
no = 0.431 %
1-W SPL = 86 dB
2.83-V SPL = 86.88 dB



Box Parts

Box Shape: Square Prism

- 1 Top, 1 Bottom: depth (c) = 8 in
width (b) = 6.5, thickness = 0.75 in
- 1 Front, 1 Back: height (a) = 14.76 in
width (d) = 5, thickness = 0.75 in
- 2 Sides: height (a) = 14.76 in
depth (c) = 8, thickness = 0.75 in

--Driver Mounting--
Mounting: Flush

--Vent Parts--

- 1 Duct: outside diameter (e) = 1.75 in
inside diameter (g) = 1.5 in
length (h) = 4.25 in

--Misc Objects Inside or Part of Box--

Object: Brace

No. of Objects: 1

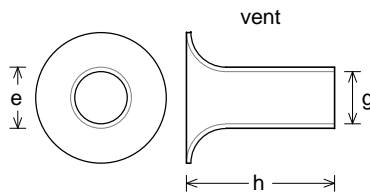
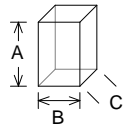
Volume: 0.0141 cu.ft (reduces box)

Shape: Square Prism

A = 0.75 in

B = 5 in

C = 6.5 in





Wiring Diagram

