

Alpha 2-8 Six Driver Array in a Sealed Box

By Jerry McNutt, Eminence Speaker LLC

120 Watts Power Handling. Use above 300 Hz.

Make into a stick and put it on top of a 15" or a pair of 12" woofers.



Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 0.0948 cu.ft

V(total) = 0.105 cu.ft

Qtc = 0.688

QL = 20

F3 = 220 Hz

Fill = heavy

Driver Properties

--Description--

Name: Alpha 2-8

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: 2" Full Range Driver

--Configuration--

No. of Drivers = 6

Mounting = Standard

Wiring = Series-Parallel

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 185.6 Hz

Qms = 3.06

Vas = 0.18 liters [1.08]

Cms = 0.84 mm/N [0.14]

Mms = 0.88 g [5.28]

Rms = 0.33 kg/s [1.98]

Xmax = 1.7 mm

Xmech = 2.2 mm

P-Dia = 39.55 mm [96.87]

Sd = 12.37 sq.cm [74.22]

P-Vd = 0.00209 liters [0.0125]

--Electrical Parameters--

Qes = 0.94

Re = 6.4 ohms [4.267]

Le = 0.13 mH [0.0867]

Z = 8 ohms [5.333]

BL = 2.64 Tm [5.287]

Pe = 20 watts [120]

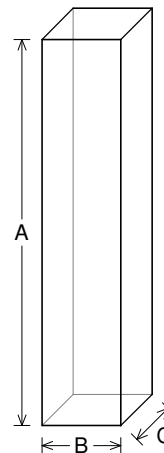
--Electromech. Parameters--

Qts = 0.719

no = 0.118 % [0.709]

1-W SPL = 82.87 dB [90.65]

2.83-V SPL = 83.84 dB [93.38]



--External Dimensions--

A = 22.34 in

B = 4.557 in

C = 3.403 in

--Internal Dimensions--

A = 21.34 in

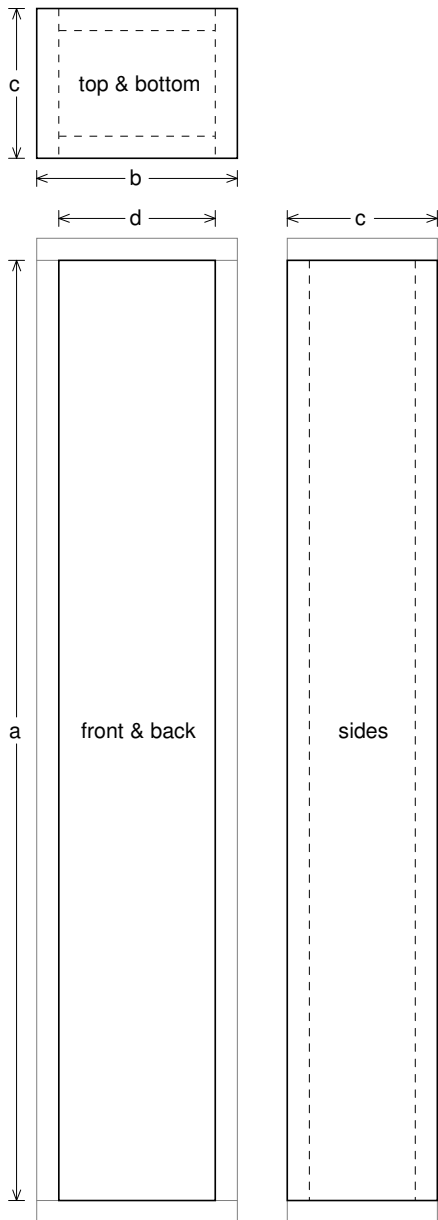
B = 3.557 in

C = 2.403 in

--Wall Thickness--

Front = 0.5 in

Side = 0.5 in



Box Parts

Box Shape: Square Prism

1 Top, 1 Bottom: depth (c) = 3.403 in
width (b) = 4.557, thickness = 0.5 in

1 Front, 1 Back: height (a) = 21.34 in
width (d) = 3.557, thickness = 0.5 in

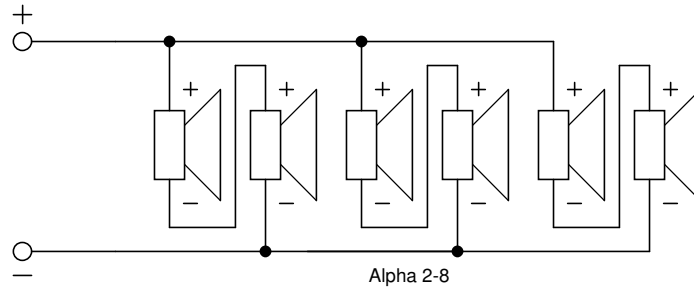
2 Sides: height (a) = 21.34 in
depth (c) = 3.403, thickness = 0.5 in

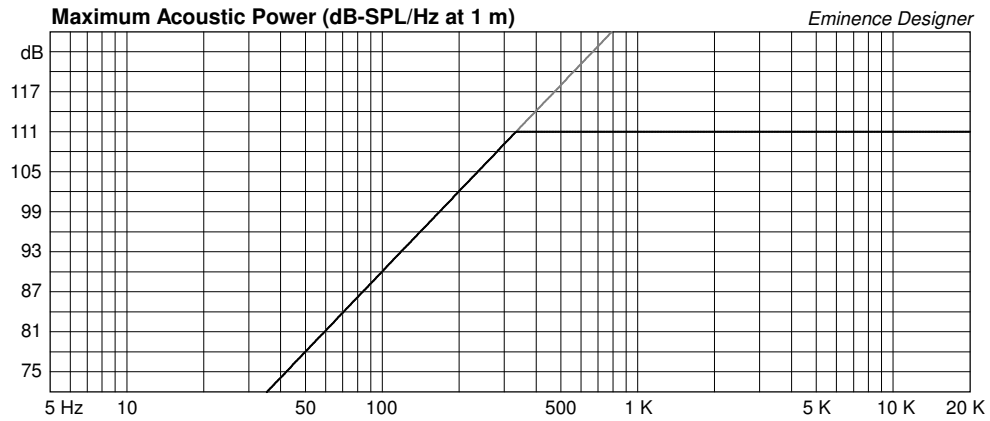
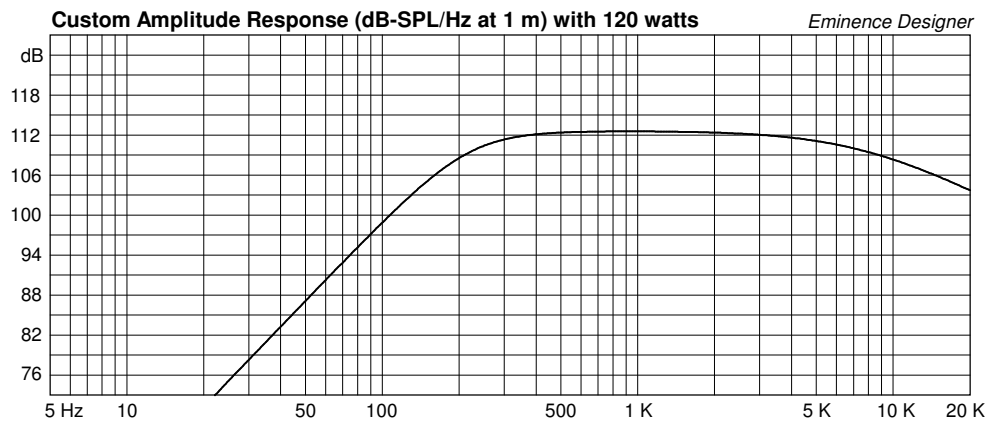
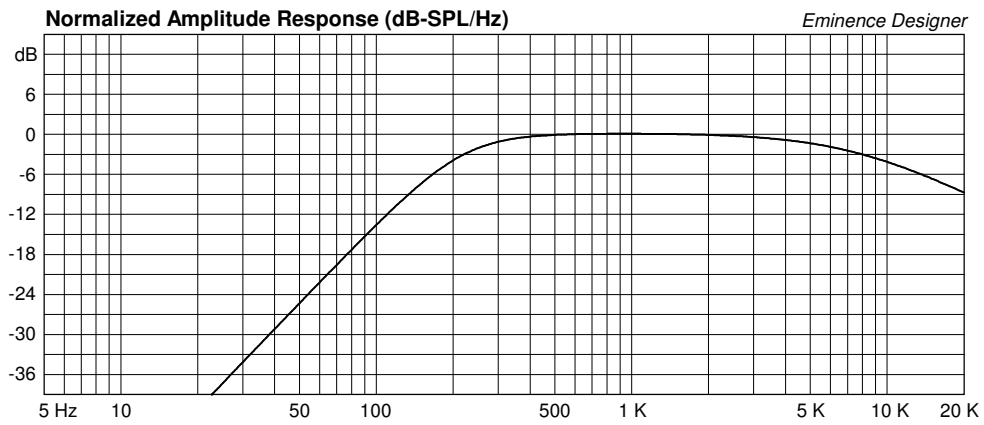
--Driver Mounting--

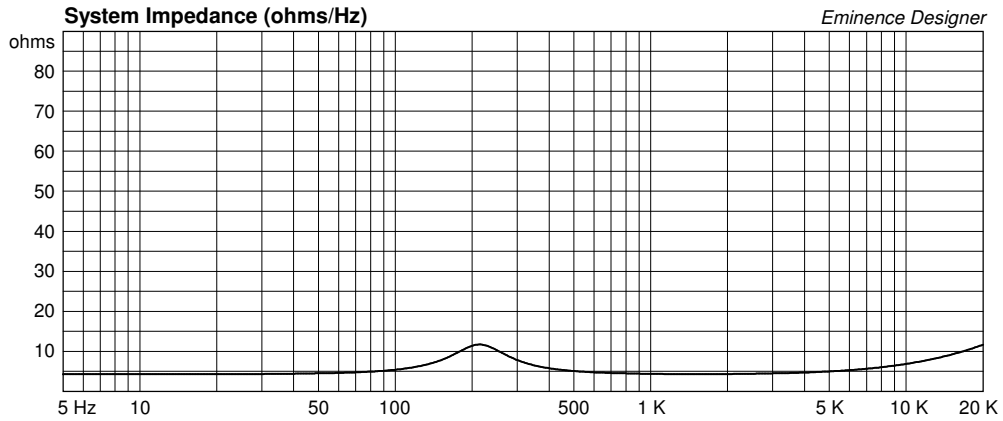
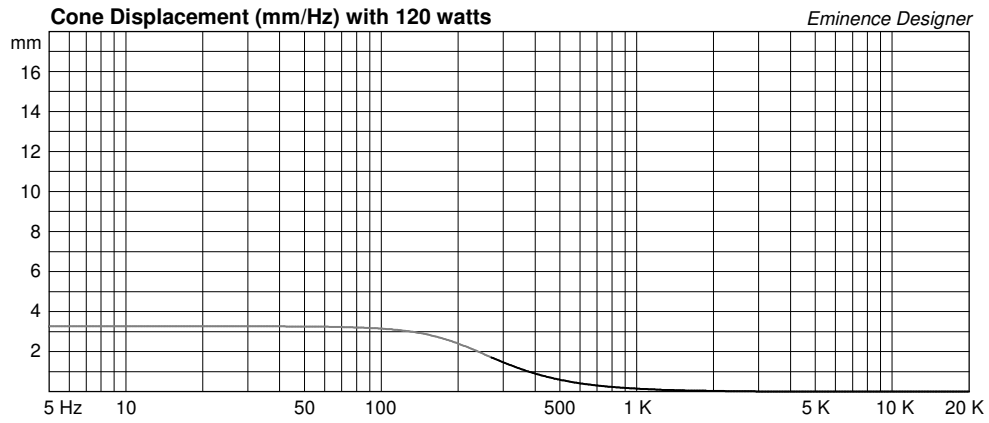
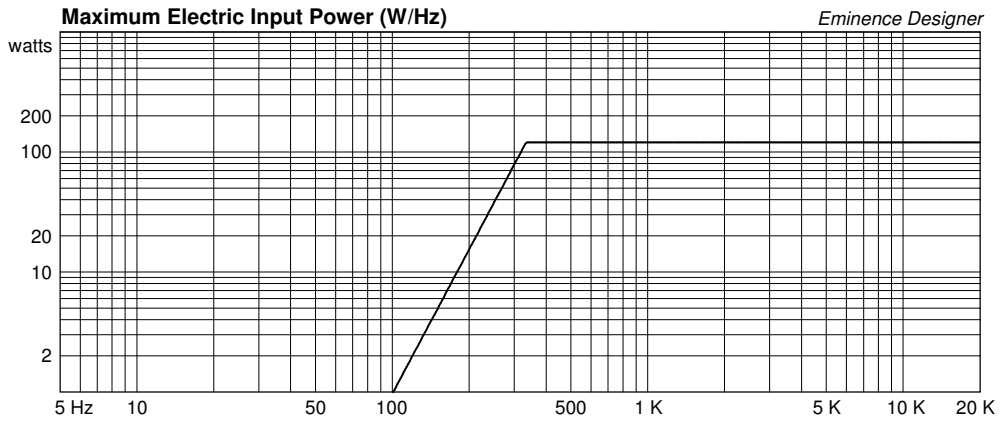
Mounting: Flush

Aim: All drivers face same direction

Wiring Diagram







Custom Vented Box Design

By Matt Marcum, Eminence Speaker LLC
120 Watts Power Handling. Use steep high pass filter at 200 Hz.
Great column array to pair with a subwoofer.



Box Properties

--Description--

Name: Alpha2-8StraightSixVented160Watts

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 0.0694 cu.ft

V(total) = 0.0823 cu.ft

Fb = 221.8 Hz

QL = 7

F3 = 176.3 Hz

Fill = heavy

--Vents--

No. of Vents = 2

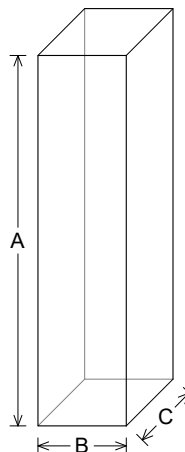
Vent shape = rectangle

Vent ends = one flush

Hv = 1 in

Wv = 3 in

Lv = 2.5 in



--External Dimensions--

A = 16.8 in

B = 4 in

C = 4 in

--Internal Dimensions--

A = 15.8 in

B = 3 in

C = 3 in

--Wall Thickness--

Front = 0.5 in

Side = 0.5 in

Driver Properties

--Description--

Name: Alpha2-8

Type: Standard one-way driver

Company: Eminence Speaker LLC

--Configuration--

No. of Drivers = 6

Mounting = Standard

Wiring = Series-Parallel

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 185.6 Hz

Qms = 3.06

Vas = 0.18 liters [1.08]

Cms = 0.84 mm/N [0.14]

Mms = 0.88 g [5.28]

Rms = 0.33 kg/s [1.98]

Xmax = 1.7 mm

Xmech = 2.55 mm

P-Dia = 39.55 mm [96.88]

Sd = 12.37 sq.cm [74.22]

P-Vd = 0.00209 liters [0.0125]

--Electrical Parameters--

Qes = 0.94

Re = 6.4 ohms [4.267]

Le = 0.13 mH [0.0867]

Z = 8 ohms [5.333]

BL = 2.64 Tm [5.287]

Pe = 20 watts [120]

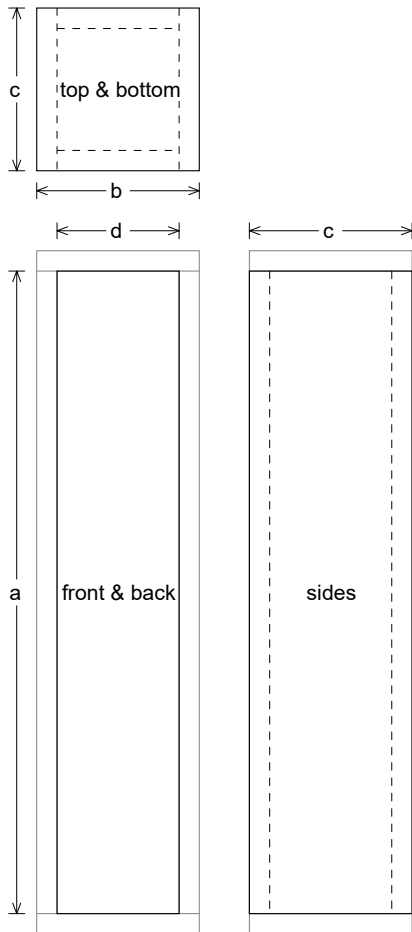
--Electromech. Parameters--

Qts = 0.719

no = 0.118 % [0.708]

1-W SPL = 82.87 dB [90.65]

2.83-V SPL = 83.84 dB [93.38]



Box Parts

Box Shape: Square Prism

1 Top, 1 Bottom: depth (c) = 4 in

width (b) = 4, thickness = 0.5 in

1 Front, 1 Back: height (a) = 15.8 in

width (d) = 3, thickness = 0.5 in

2 Sides: height (a) = 15.8 in

depth (c) = 4, thickness = 0.5 in

--Vent Parts--

2 Tops, 2 Bottoms:

width (e) = 3, length (h) = 2.5 in

thickness = 0.125 in

4 Sides:

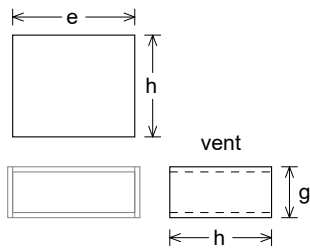
height (g) = 1.25, length (h) = 2.5 in

thickness = 0.125 in

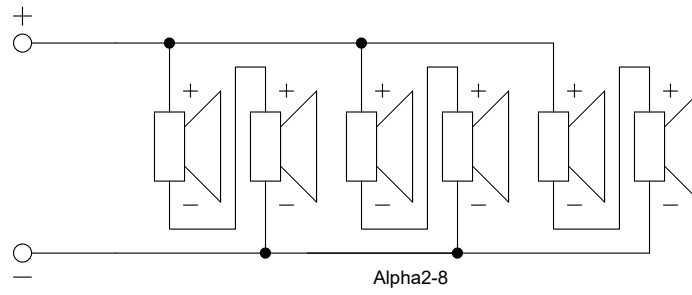
--Driver Mounting--

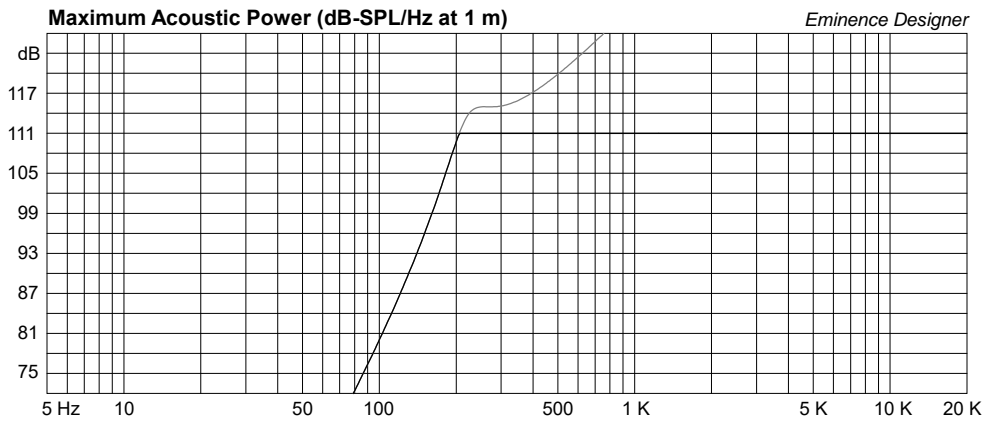
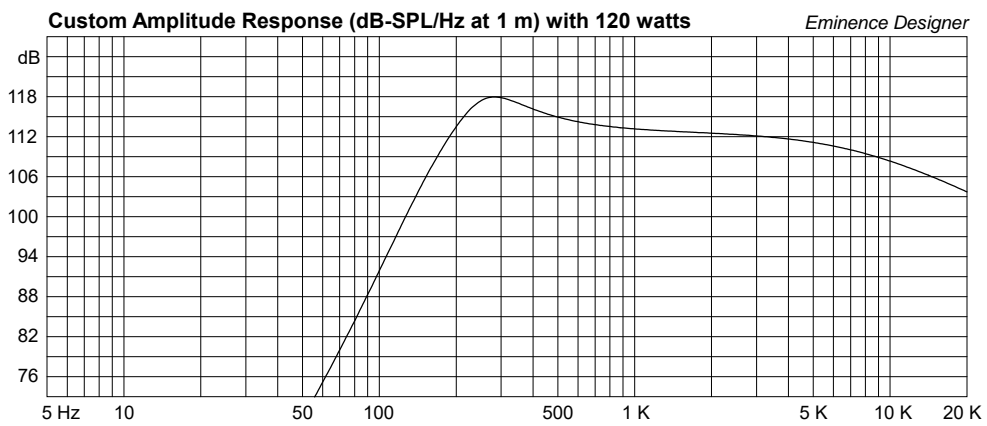
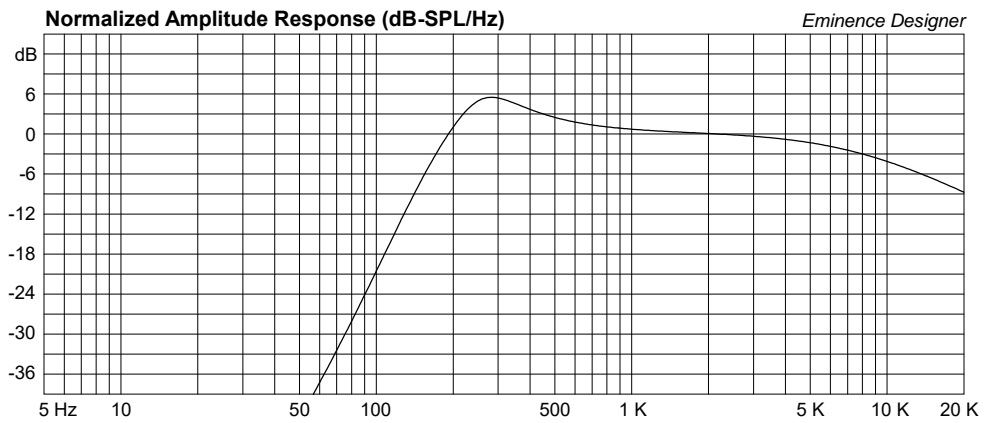
Mounting: Flush

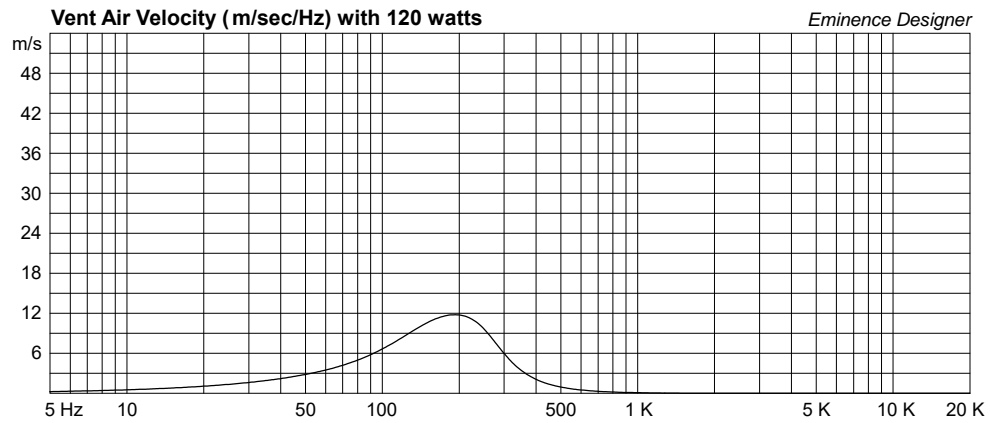
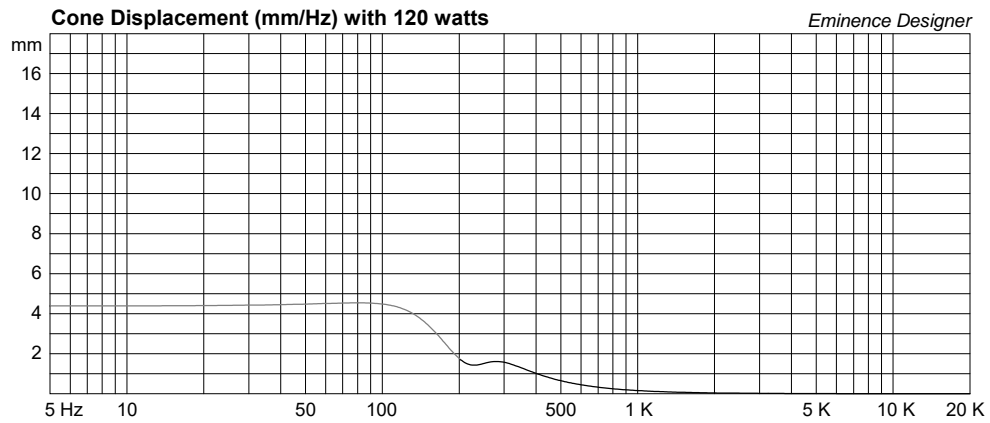
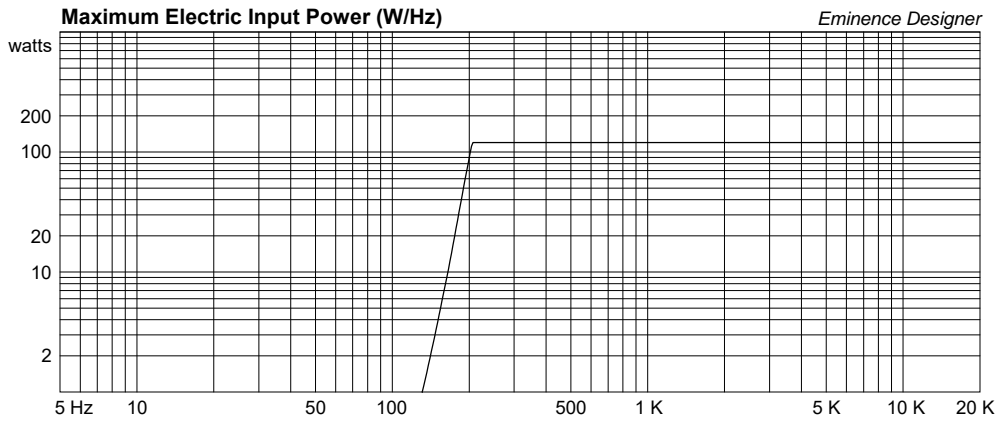
Aim: All drivers face same direction

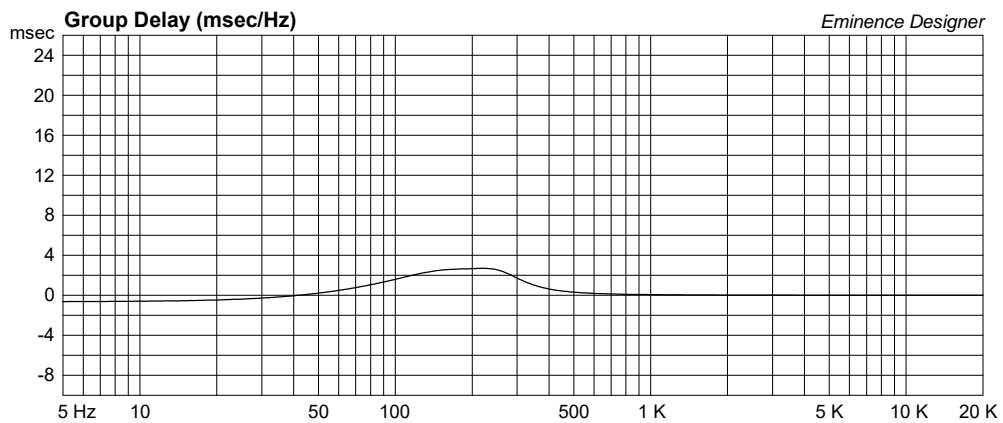
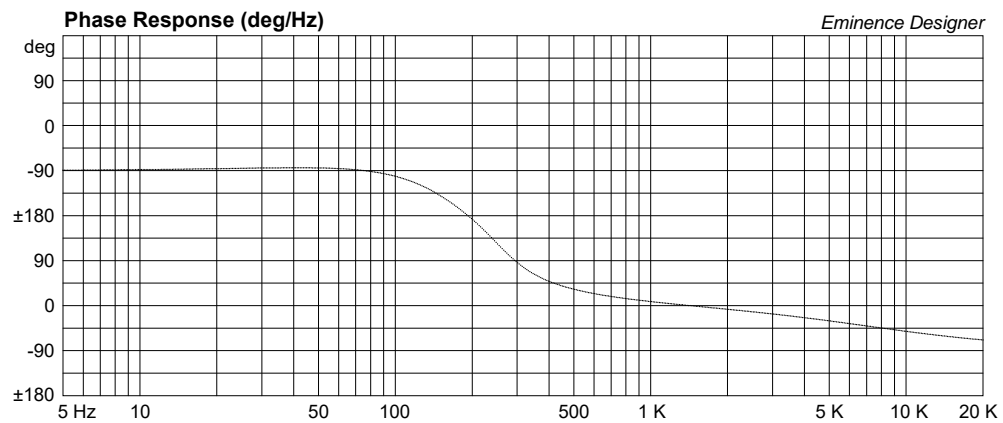
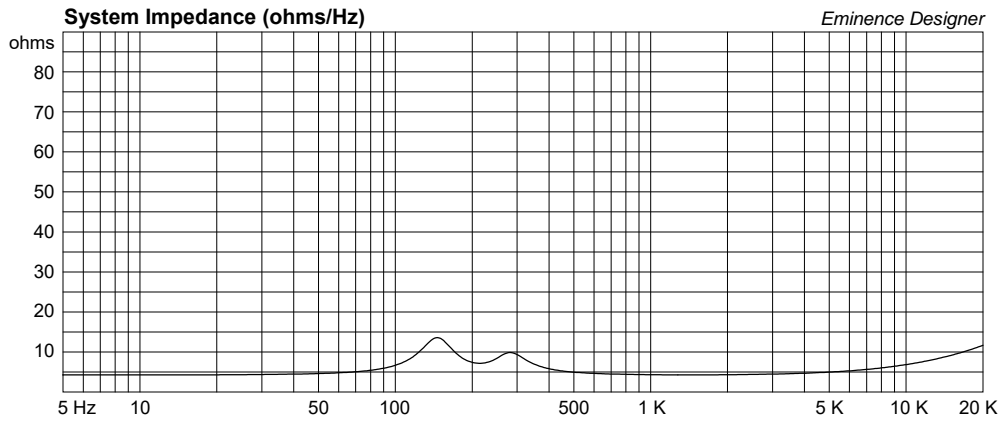


Wiring Diagram









Alpha 2-8 Eight Driver Array In Sealed Box

By Jerry McNutt, Eminence Speaker LLC

160 Watts Power Handling. Use above 300 Hz.

Make into a stick and put it on top of a 15" or a pair of 12" woofers.



Box Properties

--Description--

Name:

Type: Closed Box

Shape: Prism, square

--Box Parameters--

Vb = 0.141 cu.ft

V(total) = 0.155 cu.ft

Qtc = 0.681

QL = 20

F3 = 219.6 Hz

Fill = heavy

Driver Properties

--Description--

Name: Alpha 2-8

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: 2" Full Range Driver

--Configuration--

No. of Drivers = 8

Mounting = Standard

Wiring = Series-Parallel

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 185.6 Hz

Qms = 3.06

Vas = 0.18 liters [1.44]

Cms = 0.84 mm/N [0.105]

Mms = 0.88 g [7.04]

Rms = 0.33 kg/s [2.64]

Xmax = 1.7 mm

Xmech = 2.2 mm

P-Dia = 39.55 mm [111.9]

Sd = 12.37 sq.cm [98.96]

P-Vd = 0.00209 liters [0.0167]

--Electrical Parameters--

Qes = 0.94

Re = 6.4 ohms [3.2]

Le = 0.13 mH [0.065]

Z = 8 ohms [4]

BL = 2.64 Tm [5.287]

Pe = 20 watts [160]

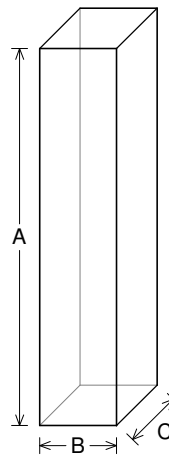
--Electromech. Parameters--

Qts = 0.719

no = 0.118 % [0.945]

1-W SPL = 82.87 dB [91.9]

2.83-V SPL = 83.84 dB [95.88]



--External Dimensions--

A = 22.34 in

B = 4.557 in

C = 4.522 in

--Internal Dimensions--

A = 21.34 in

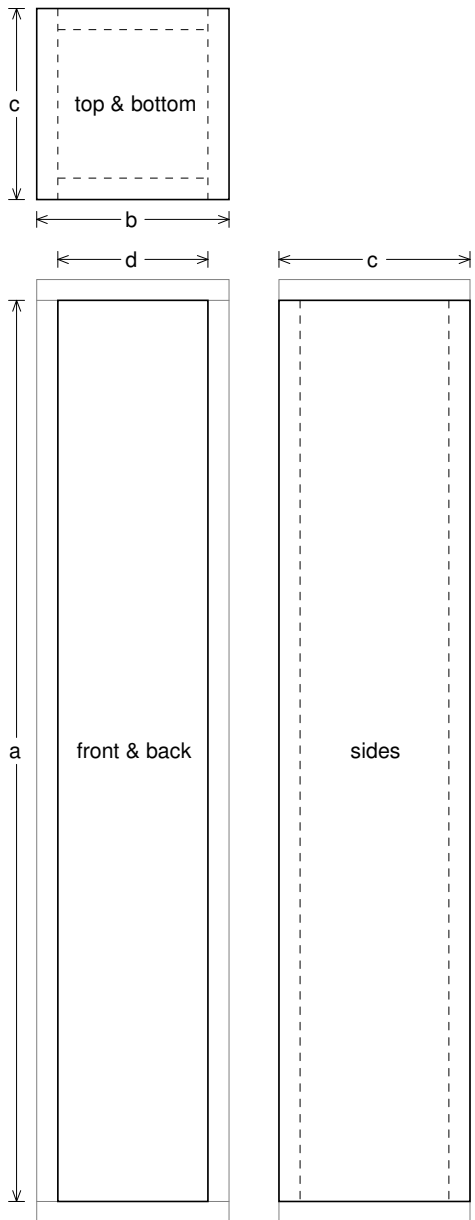
B = 3.557 in

C = 3.522 in

--Wall Thickness--

Front = 0.5 in

Side = 0.5 in



Box Parts

Box Shape: Square Prism

1 Top, 1 Bottom: depth (c) = 4.522 in
width (b) = 4.557, thickness = 0.5 in

1 Front, 1 Back: height (a) = 21.34 in
width (d) = 3.557, thickness = 0.5 in

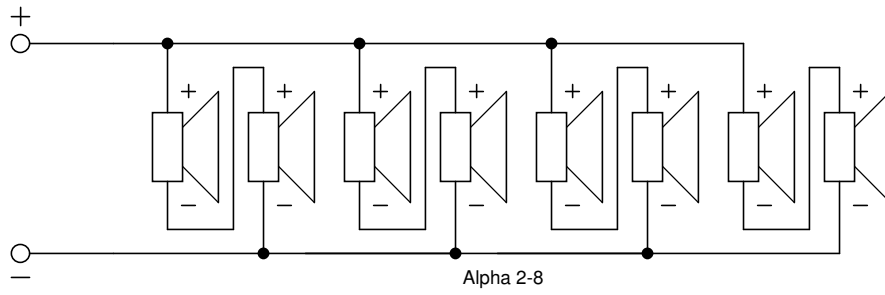
2 Sides: height (a) = 21.34 in
depth (c) = 4.522, thickness = 0.5 in

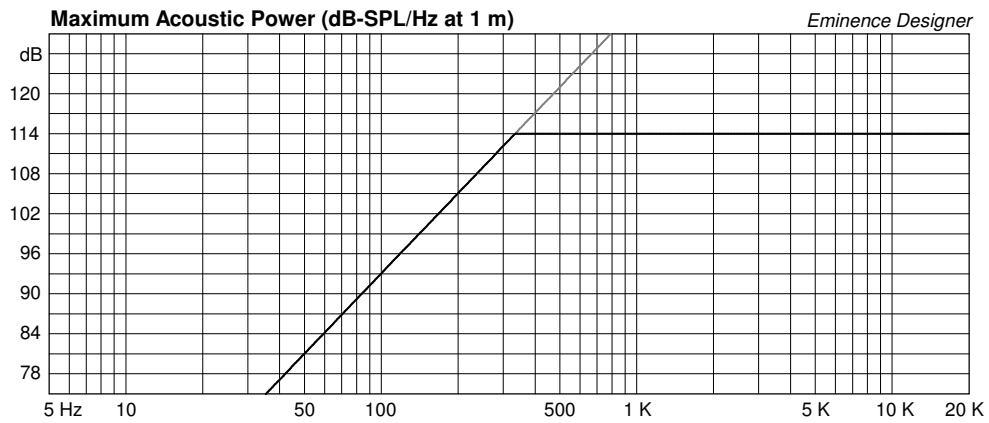
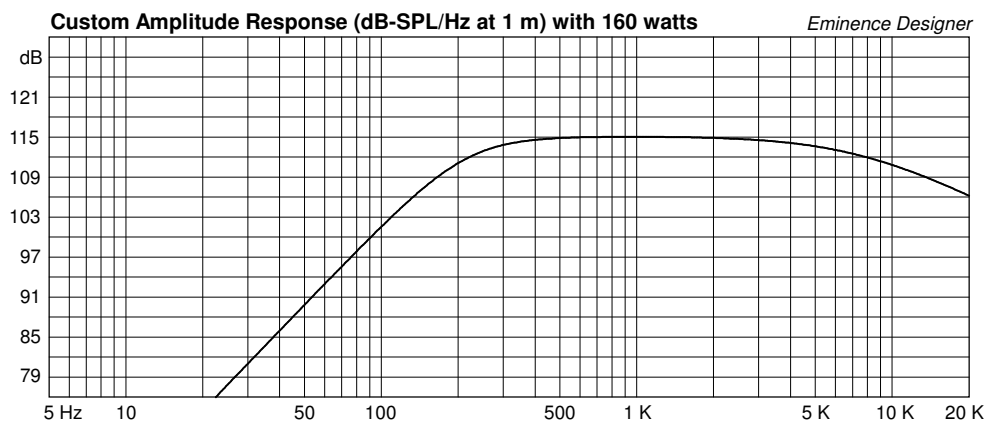
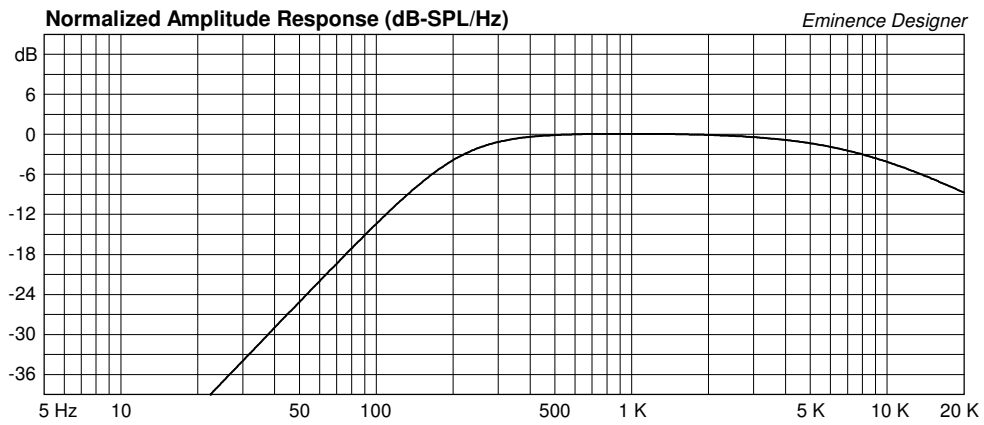
--Driver Mounting--

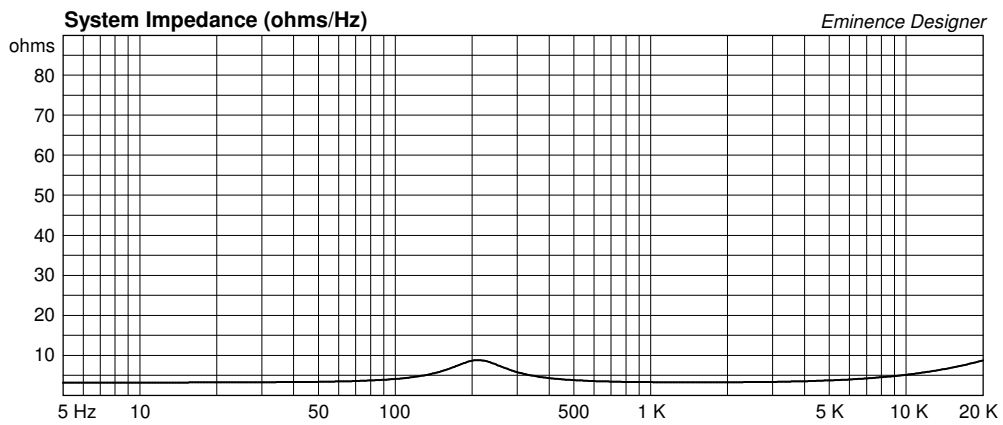
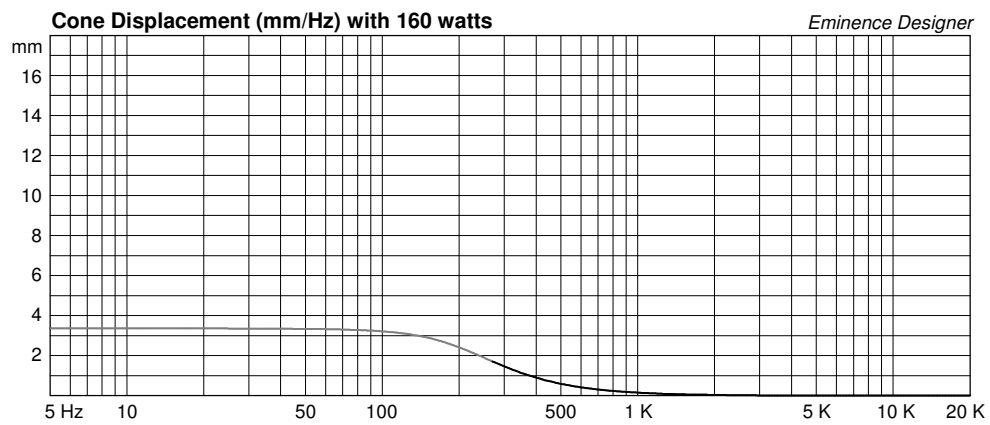
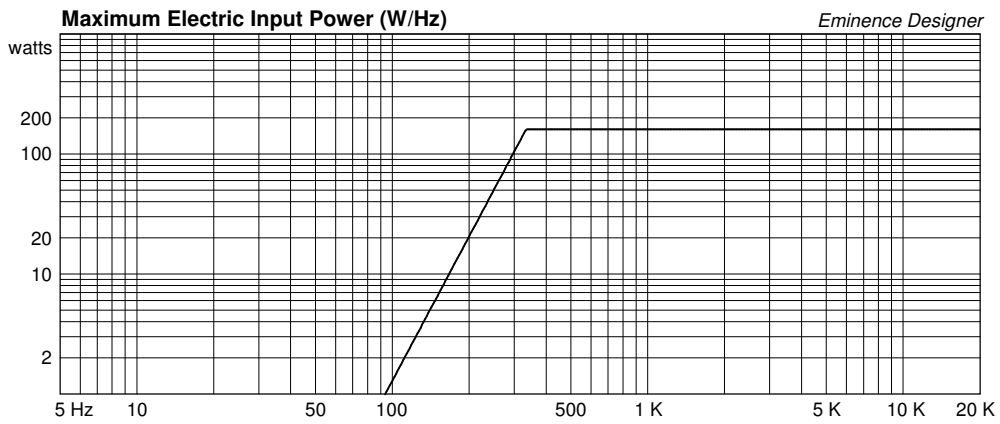
Mounting: Flush

Aim: All drivers face same direction

Wiring Diagram







Custom Vented Box Design

By Matt Marcum, Eminence Speaker LLC
160 Watts Power Handling. Use steep high pass filter at 200 Hz.
Great column array to pair with a subwoofer.



Box Properties

--Description--

Name: Alpha2-8GreatEightVented160Watts

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 0.0945 cu.ft

V(total) = 0.106 cu.ft

Fb = 202.3 Hz

QL = 7

F3 = 160.7 Hz

Fill = heavy

--Vents--

No. of Vents = 2

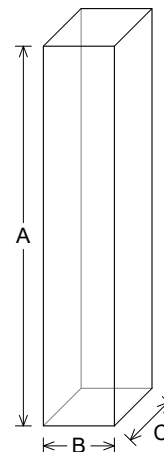
Vent shape = rectangle

Vent ends = one flush

Hv = 1 in

Wv = 3 in

Lv = 2 in



--External Dimensions--

A = 21.4 in

B = 4 in

C = 4 in

--Internal Dimensions--

A = 20.4 in

B = 3 in

C = 3 in

--Wall Thickness--

Front = 0.5 in

Side = 0.5 in

Driver Properties

--Description--

Name: Alpha2-8

Type: Standard one-way driver

Company: Eminence Speaker LLC

--Configuration--

No. of Drivers = 8

Mounting = Standard

Wiring = Series-Parallel

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 185.6 Hz

Qms = 3.06

Vas = 0.18 liters [1.44]

Cms = 0.84 mm/N [0.105]

Mms = 0.88 g [7.04]

Rms = 0.33 kg/s [2.64]

Xmax = 1.7 mm

Xmech = 2.55 mm

P-Dia = 39.55 mm [111.9]

Sd = 12.37 sq.cm [98.96]

P-Vd = 0.00209 liters [0.0167]

--Electrical Parameters--

Qes = 0.94

Re = 6.4 ohms [3.2]

Le = 0.13 mH [0.065]

Z = 8 ohms [4]

BL = 2.64 Tm [5.287]

Pe = 20 watts [160]

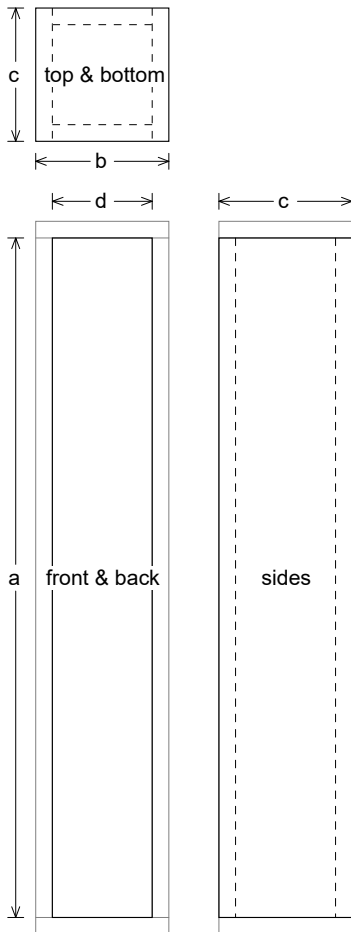
--Electromech. Parameters--

Qts = 0.719

no = 0.118 % [0.944]

1-W SPL = 82.87 dB [91.9]

2.83-V SPL = 83.84 dB [95.88]



Box Parts

Box Shape: Square Prism

1 Top, 1 Bottom: depth (c) = 4 in

width (b) = 4, thickness = 0.5 in

1 Front, 1 Back: height (a) = 20.4 in

width (d) = 3, thickness = 0.5 in

2 Sides: height (a) = 20.4 in

depth (c) = 4, thickness = 0.5 in

--Vent Parts--

2 Tops, 2 Bottoms:

width (e) = 3, length (h) = 2 in

thickness = 0.125 in

4 Sides:

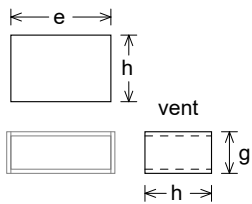
height (g) = 1.25, length (h) = 2 in

thickness = 0.125 in

--Driver Mounting--

Mounting: Flush

Aim: All drivers face same direction



Wiring Diagram

