

# Impero 18C Small Vented Design

By Jerry McNutt, Eminence Speaker LLC

1200 Watt design; F3 at 51 Hz. Use a steep high pass at 40 Hz.

Compact Woofer Box for PA or MI uses. Extreme Output. Four Ohm.



## Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square (optimum)

--Box Parameters--

Vb = 4 cu.ft

V(total) = 4.63 cu.ft

Fb = 50 Hz

QL = 7

F3 = 50.73 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 6 in

Lv = 8.715 in

## Driver Properties

--Description--

Name: Impero 18C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer, 4 ohm

--Configuration--

**No. of Drivers = 1**

--Mechanical Parameters--

Fs = 31.48 Hz

Qms = 10.13

Vas = 317 liters

Cms = 0.17 mm/N

Mms = 147.6 g

Rms = 2.88 kg/s

Xmax = 8.13 mm

Xmech = 20.17 mm

P-Dia = 382 mm

Sd = 1159 sq.cm

P-Vd = 0.932 liters

--Electrical Parameters--

Qes = 0.35

Re = 3.13 ohms

Le = 1.09 mH

Z = 4 ohms

BL = 16.1 Tm

Pe = 1200 watts

--Electromech. Parameters--

Qts = 0.34

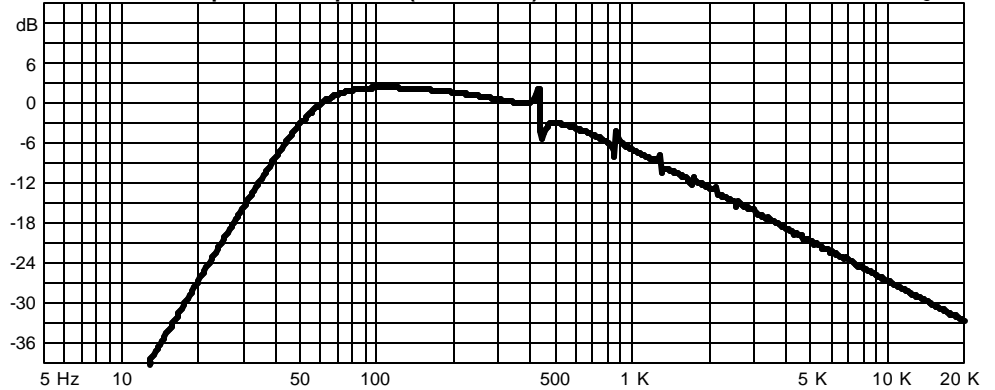
no = 2.724 %

1-W SPL = 96.5 dB

2.83-V SPL = 100.6 dB

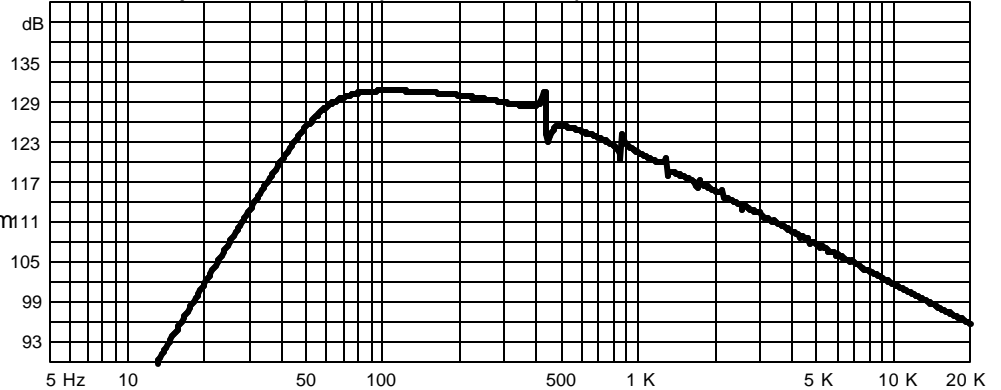
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



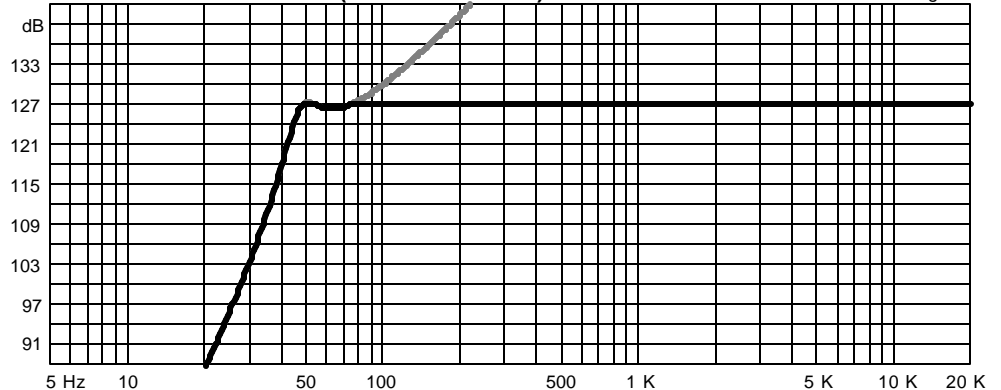
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 1200 watts

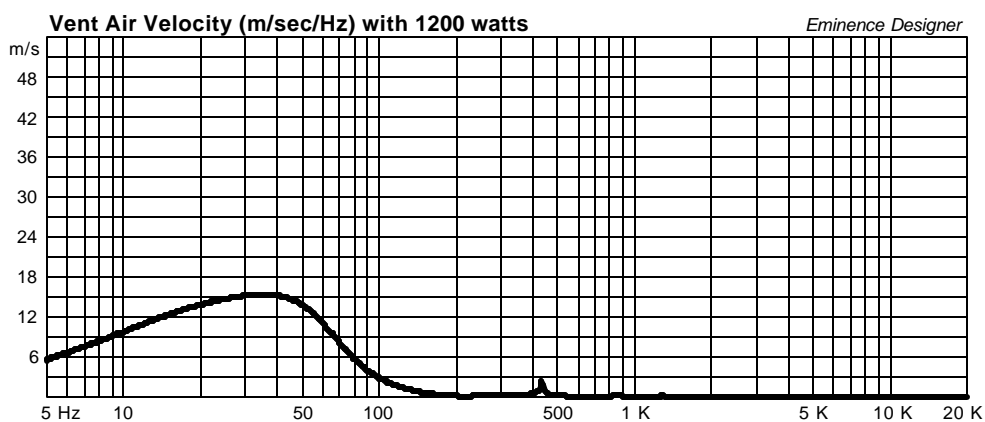
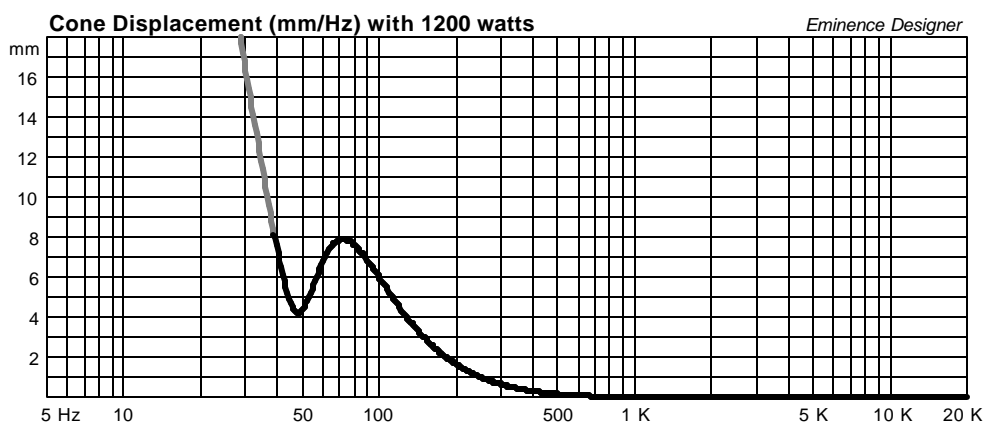
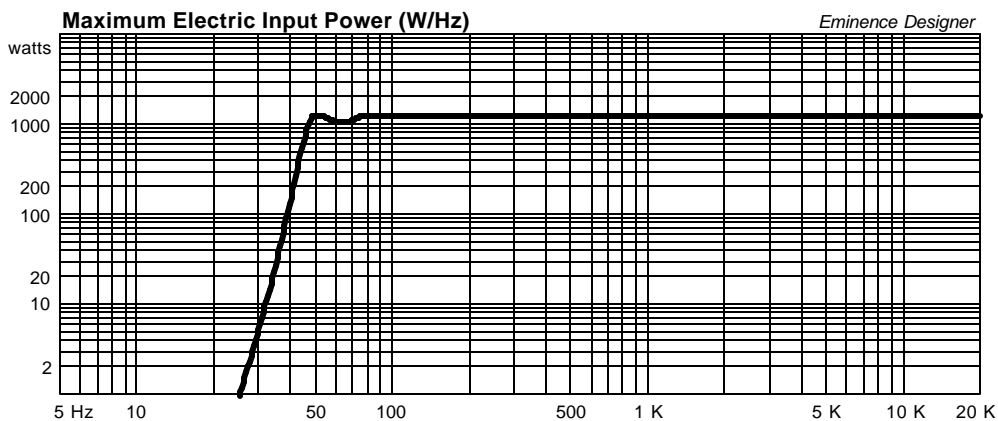
Eminence Designer

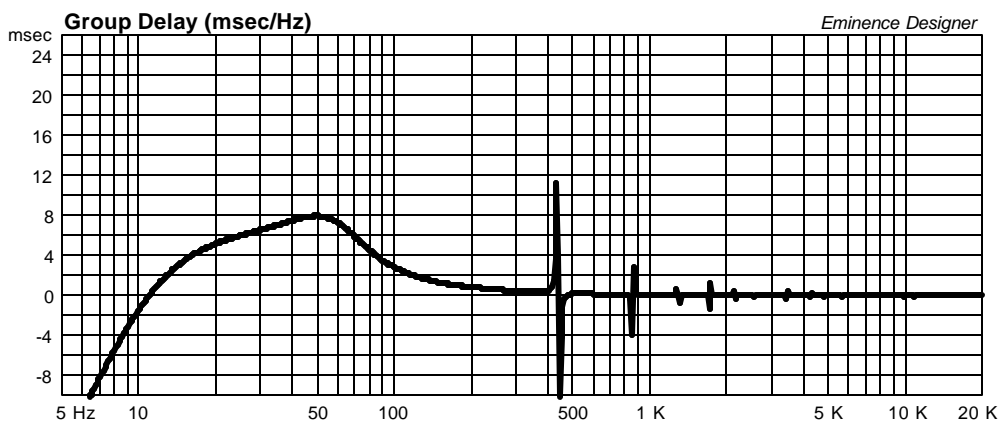
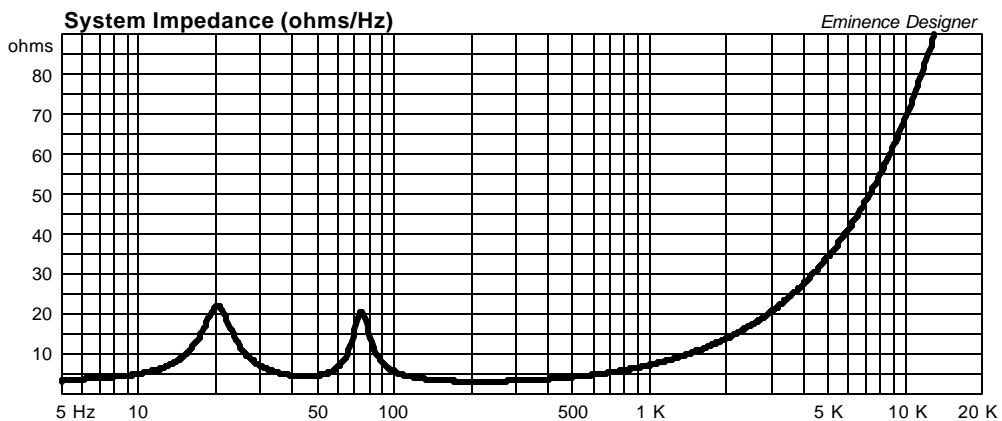


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







# Impero 18C Med Vented Design

By Jerry McNutt, Eminence Speaker LLC

800 Watt design; F3 at 44 Hz. Use a steep high pass at 30 Hz.

Woofer or Subwoofer Box for PA, MI, or Bass Guitar uses. Four Ohm.



## Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square (optimum)

--Box Parameters--

Vb = 6 cu.ft

V(total) = 6.625 cu.ft

Fb = 41 Hz

QL = 7

F3 = 44.42 Hz

Fill = minimal

--Vents--

No. of Vents = 2

Vent shape = round

Vent ends = one flush

Dv = 6 in

Lv = 8.58 in

## Driver Properties

--Description--

Name: Impero 18C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer, 4 ohm

--Configuration--

**No. of Drivers = 1**

--Mechanical Parameters--

Fs = 31.48 Hz

Qms = 10.13

Vas = 317 liters

Cms = 0.17 mm/N

Mms = 147.6 g

Rms = 2.88 kg/s

Xmax = 8.13 mm

Xmech = 20.17 mm

P-Dia = 382 mm

Sd = 1159 sq.cm

P-Vd = 0.932 liters

--Electrical Parameters--

Qes = 0.35

Re = 3.13 ohms

Le = 1.09 mH

Z = 4 ohms

BL = 16.1 Tm

Pe = 1200 watts

--Electromech. Parameters--

Qts = 0.34

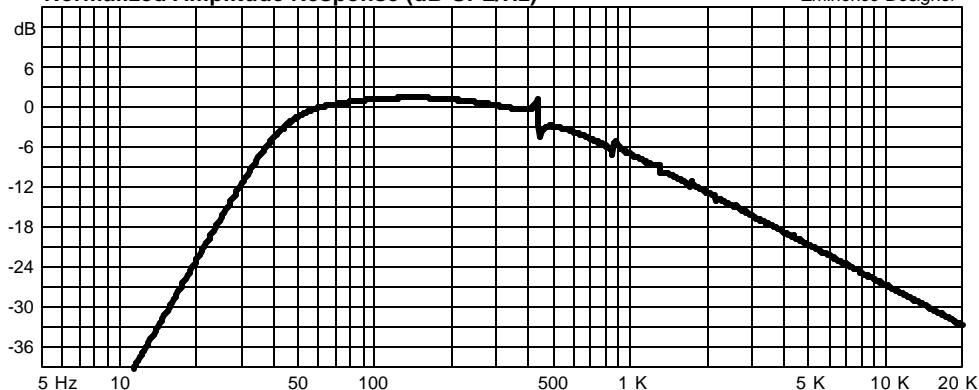
no = 2.724 %

1-W SPL = 96.5 dB

2.83-V SPL = 100.6 dB

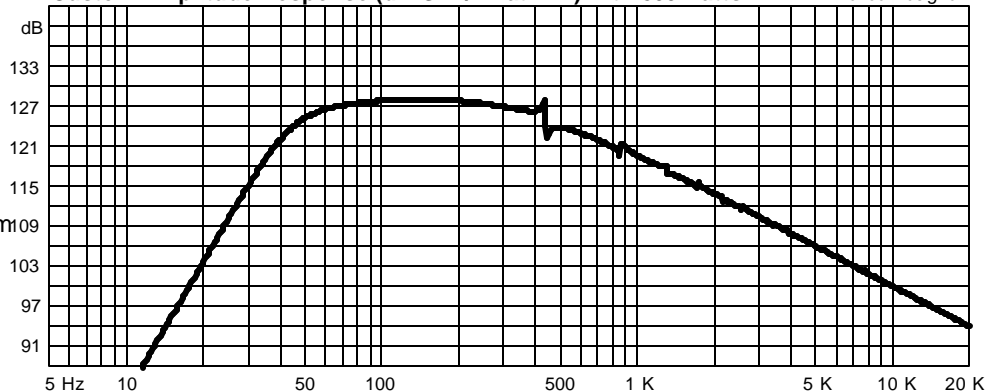
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



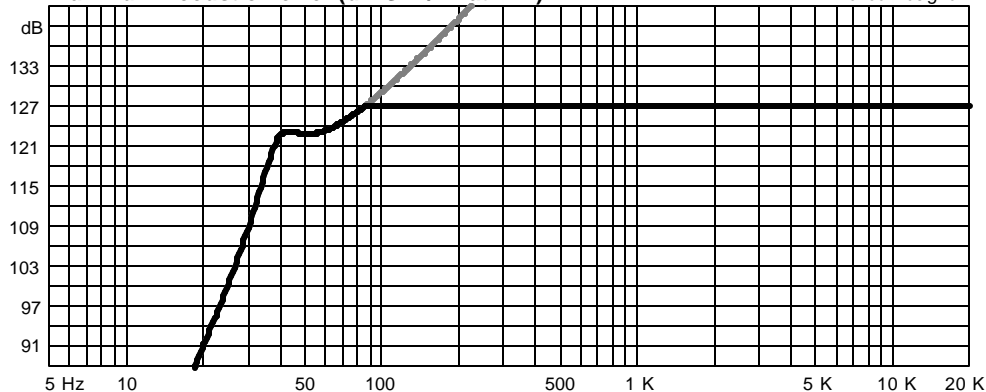
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 800 watts

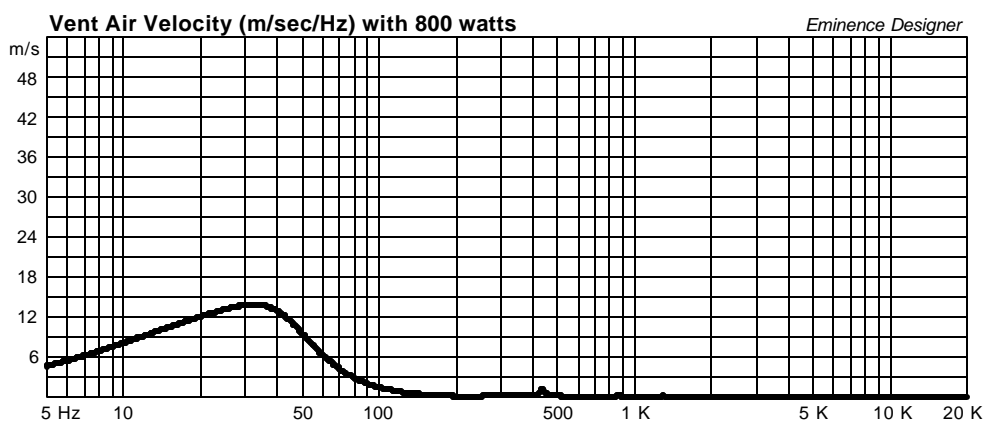
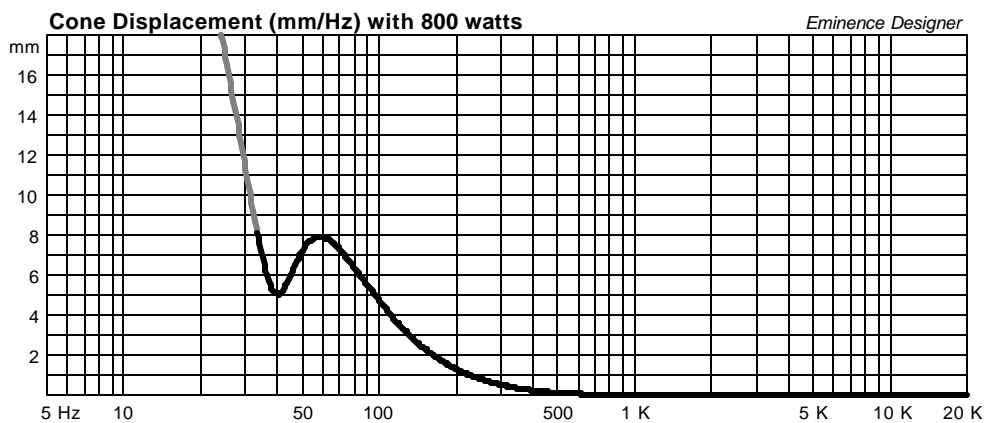
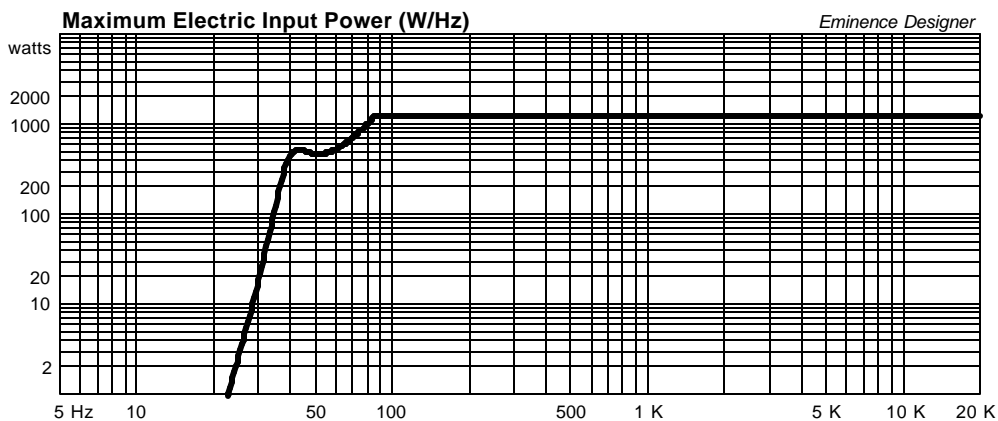
Eminence Designer

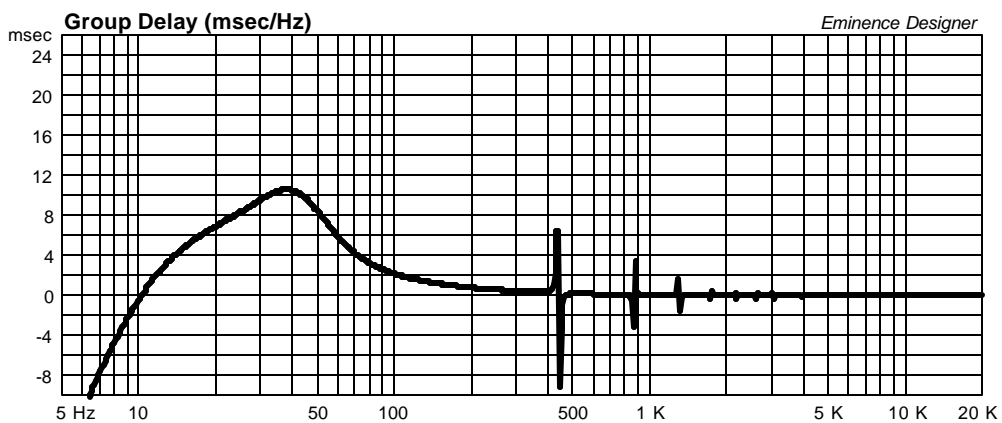
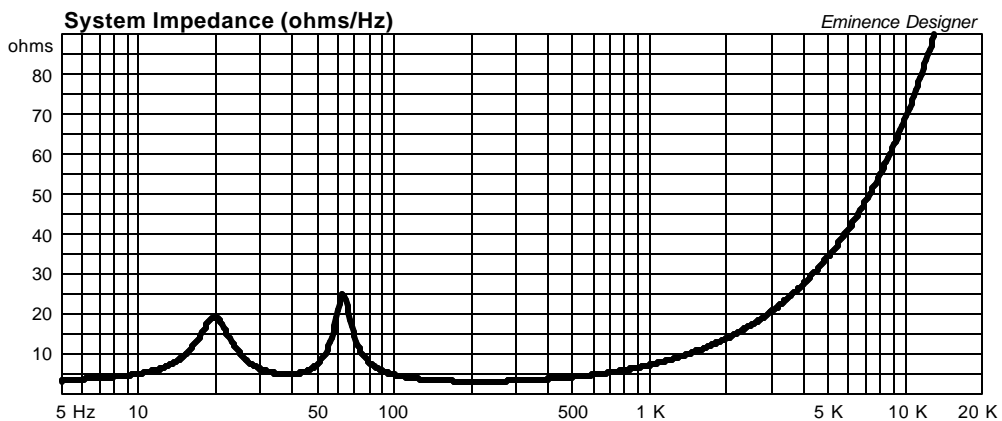


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







# Impero 18C Large Subwoofer

By Jerry McNutt, Eminence Speaker LLC  
550 Watt design; F3 at 36 Hz. Use a steep high pass at 25 Hz.  
Subwoofer Box for PA, MI, or Theater uses. Four Ohm.



## Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 9 cu.ft

V(total) = 10.55 cu.ft

Fb = 36 Hz

QL = 7

F3 = 36.41 Hz

Fill = minimal

--Vents--

No. of Vents = 4

Vent shape = round

Vent ends = one flush

Dv = 6 in

Lv = 18.69 in

## Driver Properties

--Description--

Name: Impero 18C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer, 4 ohm

--Configuration--

**No. of Drivers = 1**

--Mechanical Parameters--

Fs = 31.48 Hz

Qms = 10.13

Vas = 317 liters

Cms = 0.17 mm/N

Mms = 147.6 g

Rms = 2.88 kg/s

Xmax = 8.13 mm

Xmech = 20.17 mm

P-Dia = 382 mm

Sd = 1159 sq.cm

P-Vd = 0.932 liters

--Electrical Parameters--

Qes = 0.35

Re = 3.13 ohms

Le = 1.09 mH

Z = 4 ohms

BL = 16.1 Tm

Pe = 1200 watts

--Electromech. Parameters--

Qts = 0.34

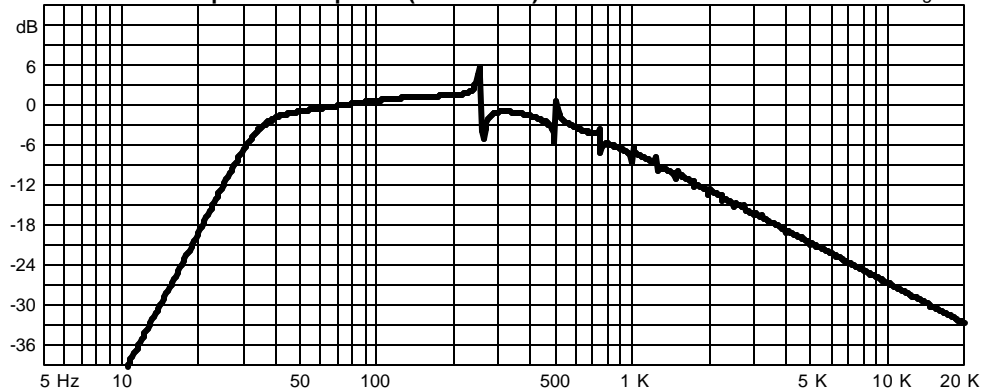
no = 2.724 %

1-W SPL = 96.5 dB

2.83-V SPL = 100.6 dB

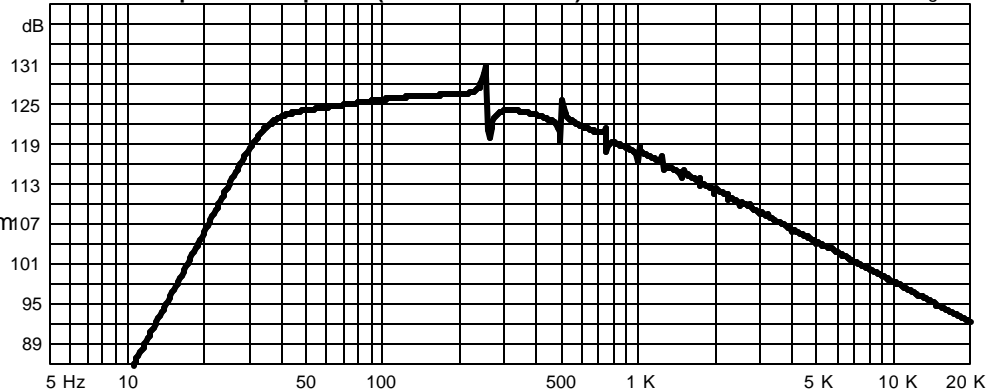
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



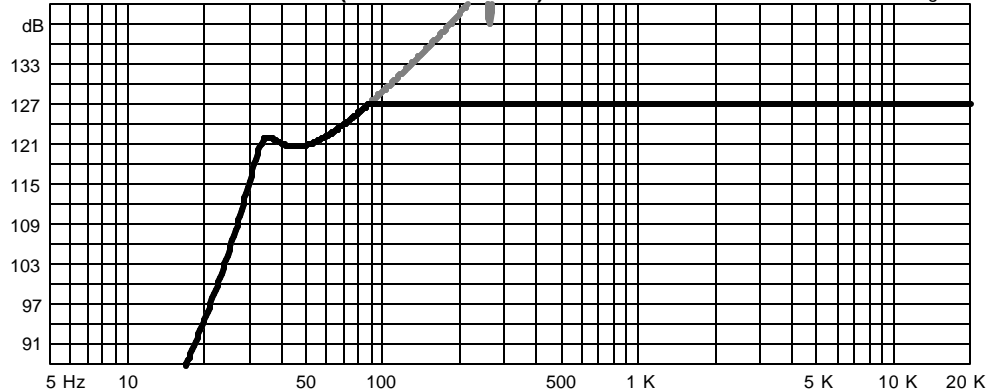
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 550 watts

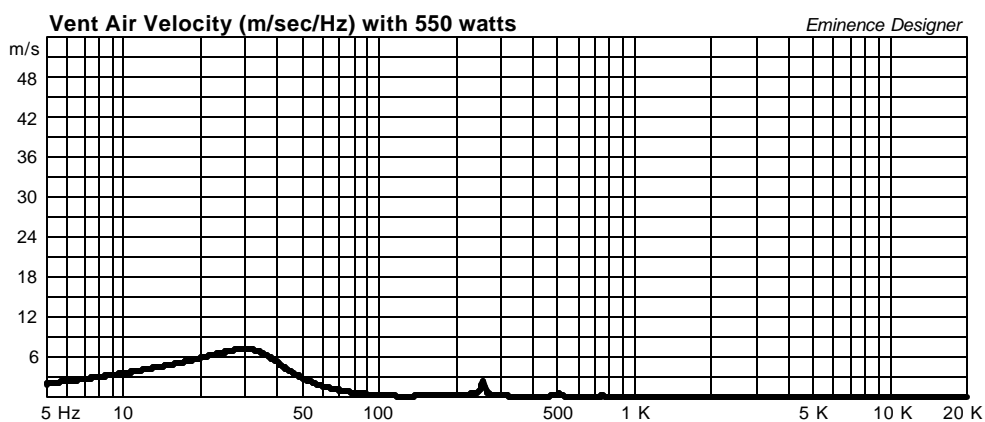
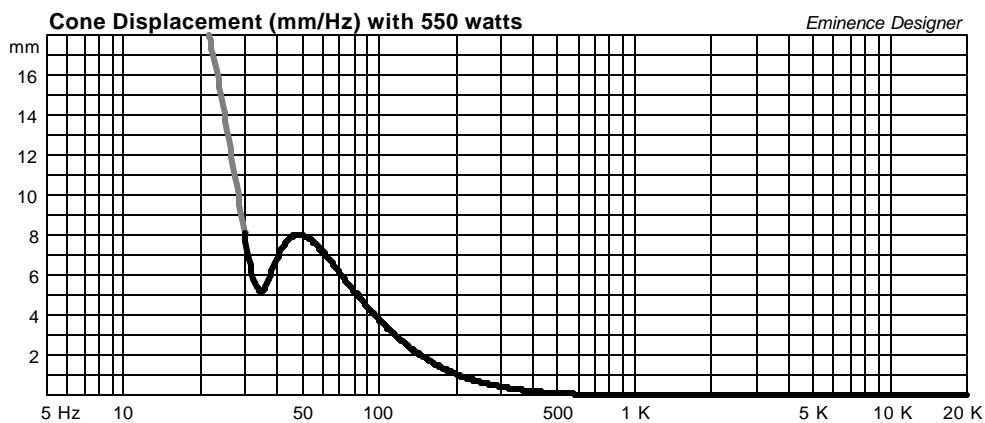
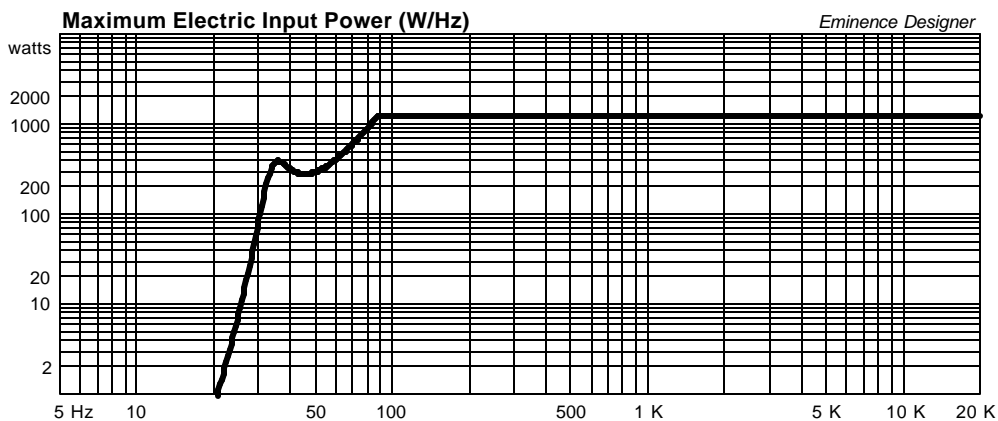
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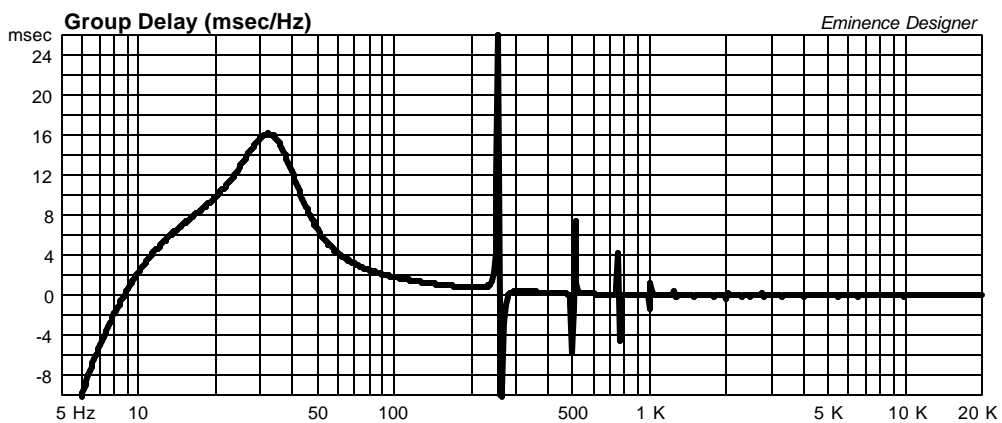
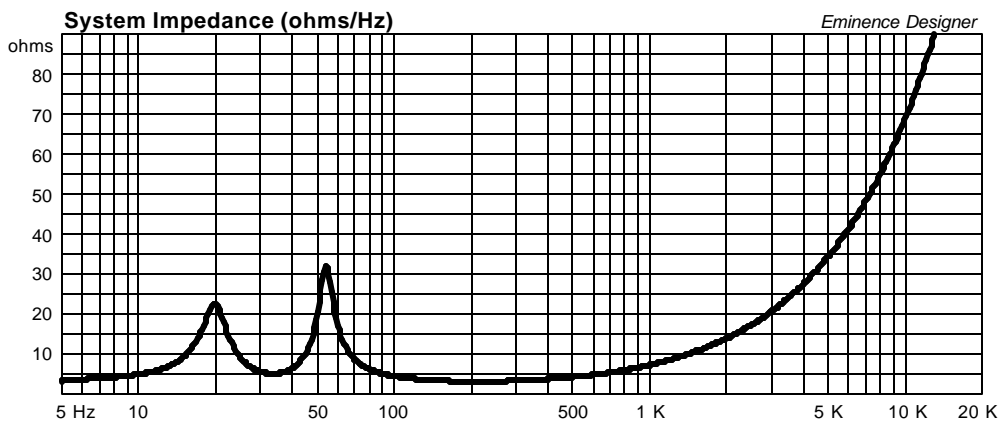
Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer









# Impero 18C 2x18 Large Vented Design

By Jerry McNutt, Eminence Speaker LLC

1200 Watt design; F3 at 43 Hz. Use a steep high pass at 30 Hz. Use a Divider!

Large 2x18 Sub Box for PA or MI uses. Parallel for 2 ohm; Series for 8 ohm.



## Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 15 cu.ft

V(total) = 16.11 cu.ft

Fb = 35 Hz

QL = 7

F3 = 42.86 Hz

Fill = minimal

--Vents--

No. of Vents = 4

Vent shape = round

Vent ends = one flush

Dv = 6 in

Lv = 8.767 in

## Driver Properties

--Description--

Name: Impero 18C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer, 4 ohm

--Configuration--

**No. of Drivers = 2**

Mounting = Standard

Wiring = Series

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 31.48 Hz

Qms = 10.13

Vas = 317 liters [634]

Cms = 0.17 mm/N [0.085]

Mms = 147.6 g [295.1]

Rms = 2.88 kg/s [5.76]

Xmax = 8.13 mm

Xmech = 20.17 mm

P-Dia = 382 mm [540.2]

Sd = 1159 sq.cm [2318]

P-Vd = 0.932 liters [1.863]

--Electrical Parameters--

Qes = 0.35

Re = 3.13 ohms [6.26]

Le = 1.09 mH [2.18]

Z = 4 ohms [8]

BL = 16.1 Tm [32.31]

Pe = 1200 watts [2400]

--Electromech. Parameters--

Qts = 0.34

no = 2.724 % [5.449]

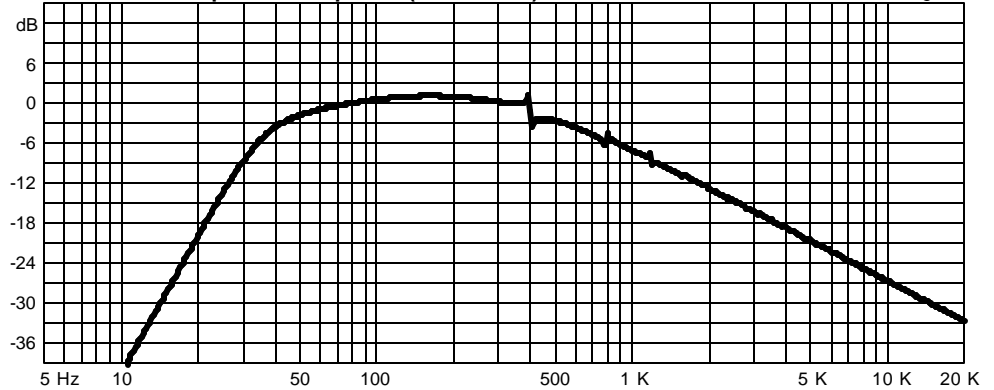
1-W SPL = 96.5 dB [99.51]

2.83-V SPL = 100.6 dB [100.6]

File: Impero18CTwoBy18LargeVentedBox1200Watts.bb6

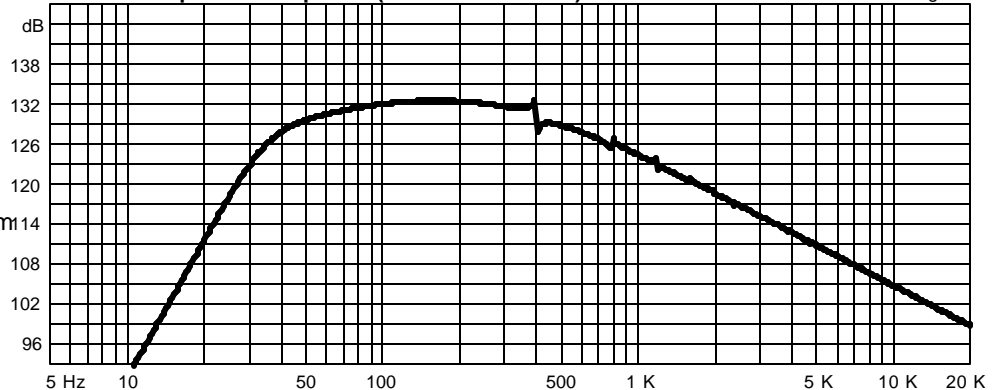
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



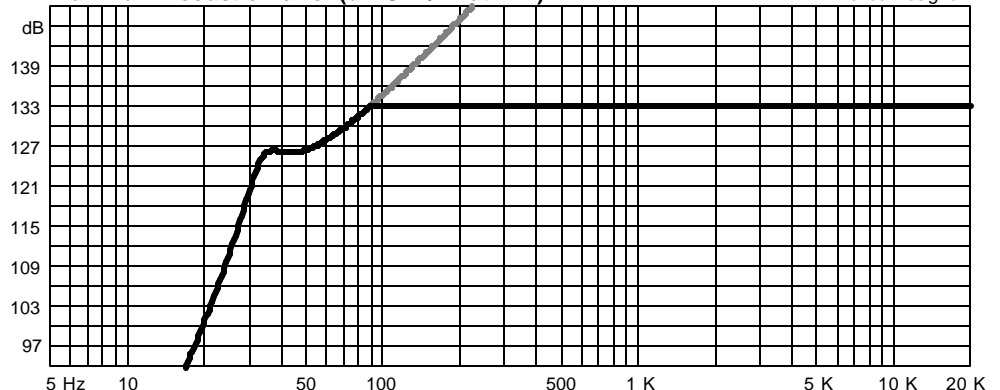
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 1200 watts

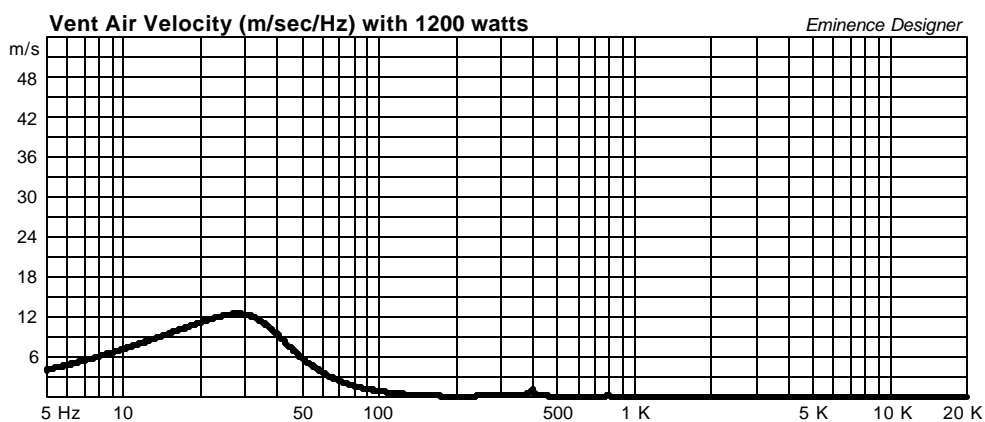
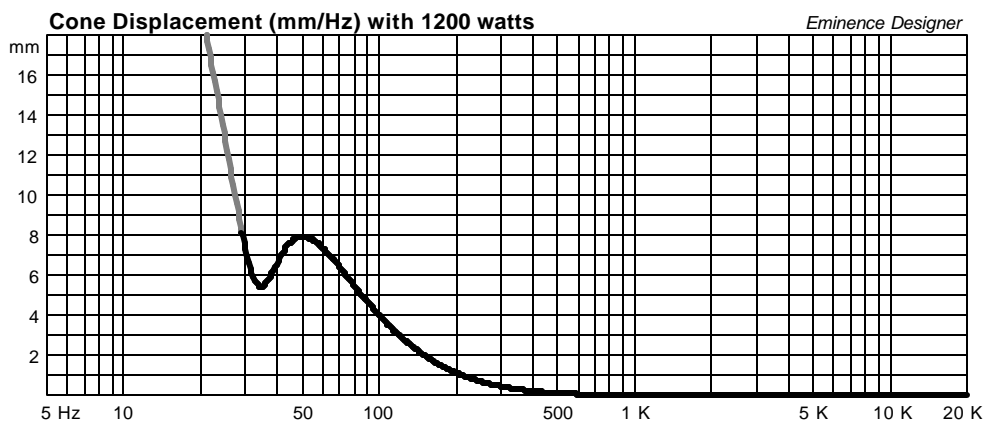
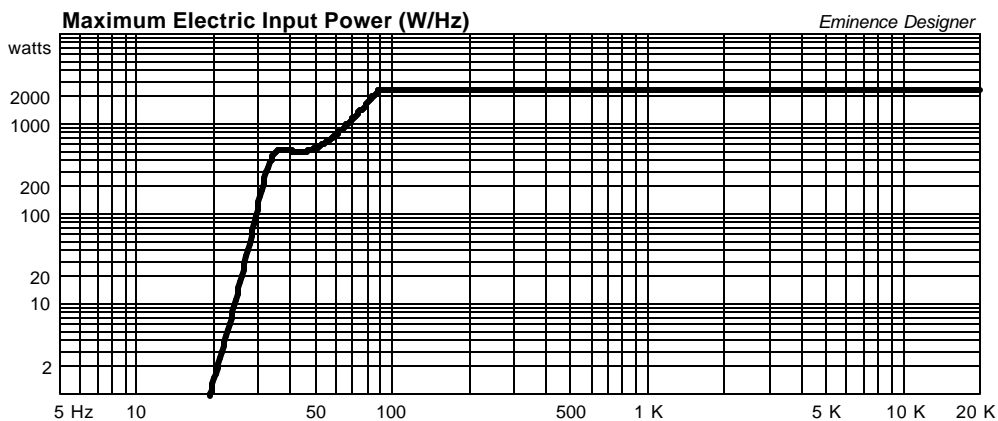
Eminence Designer

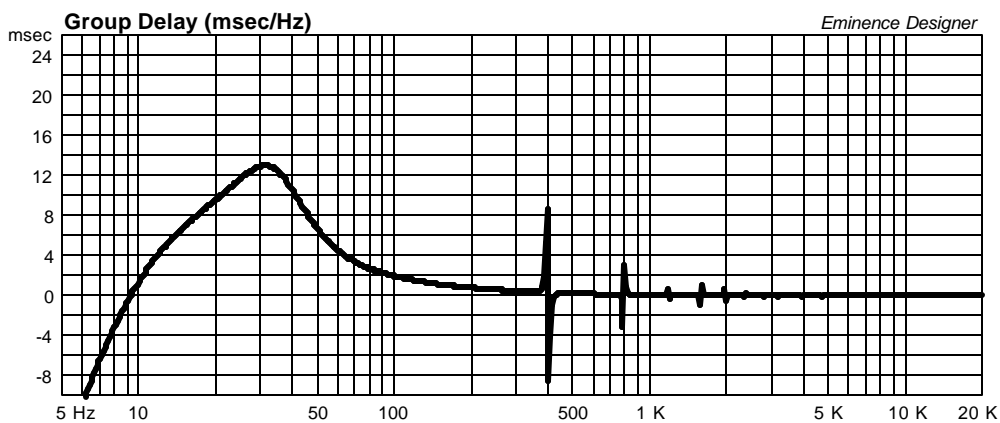
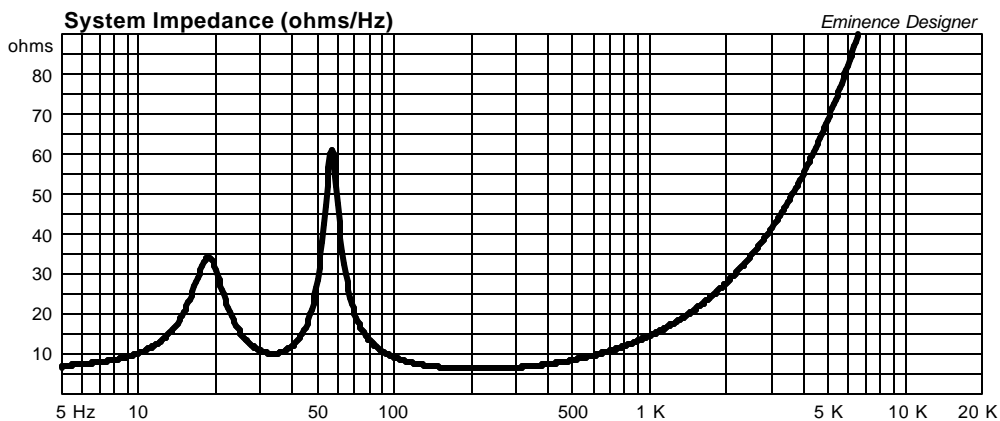


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







# Impero 18C 2x18 Med Sub Design

By Jerry McNutt, Eminence Speaker LLC

1500 Watt design; F3 at 44 Hz. Use a steep high pass at 30 Hz. Use a Divider!  
2x18 Sub Box for PA or MI uses. Parallel for 2 ohm; Series for 8 ohm.



## Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 12.5 cu.ft

V(total) = 13.64 cu.ft

Fb = 38 Hz

QL = 7

F3 = 44.09 Hz

Fill = minimal

--Vents--

No. of Vents = 4

Vent shape = round

Vent ends = one flush

Dv = 6 in

Lv = 9.078 in

## Driver Properties

--Description--

Name: Impero 18C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer, 4 ohm

--Configuration--

**No. of Drivers = 2**

Mounting = Standard

Wiring = Series

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 31.48 Hz

Qms = 10.13

Vas = 317 liters [634]

Cms = 0.17 mm/N [0.085]

Mms = 147.6 g [295.1]

Rms = 2.88 kg/s [5.76]

Xmax = 8.13 mm

Xmech = 20.17 mm

P-Dia = 382 mm [540.2]

Sd = 1159 sq.cm [2318]

P-Vd = 0.932 liters [1.863]

--Electrical Parameters--

Qes = 0.35

Re = 3.13 ohms [6.26]

Le = 1.09 mH [2.18]

Z = 4 ohms [8]

BL = 16.1 Tm [32.31]

Pe = 1200 watts [2400]

--Electromech. Parameters--

Qts = 0.34

no = 2.724 % [5.449]

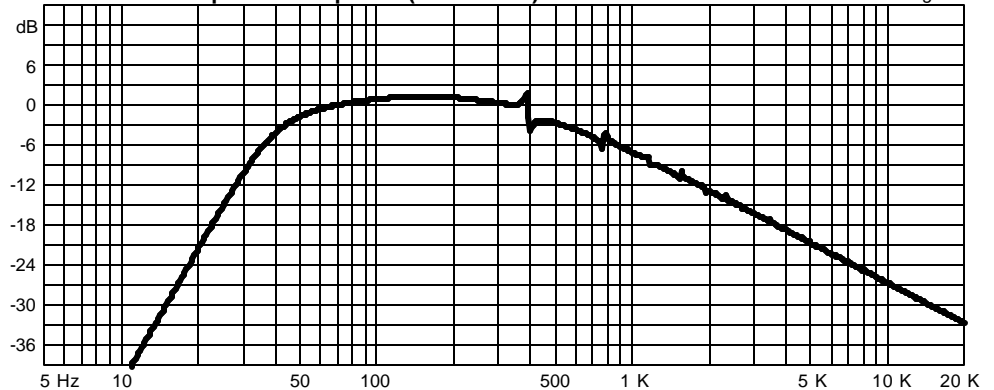
1-W SPL = 96.5 dB [99.51]

2.83-V SPL = 100.6 dB [100.6]

File: Impero18CTwoBy18MedVentedBox1500Watts.bb6

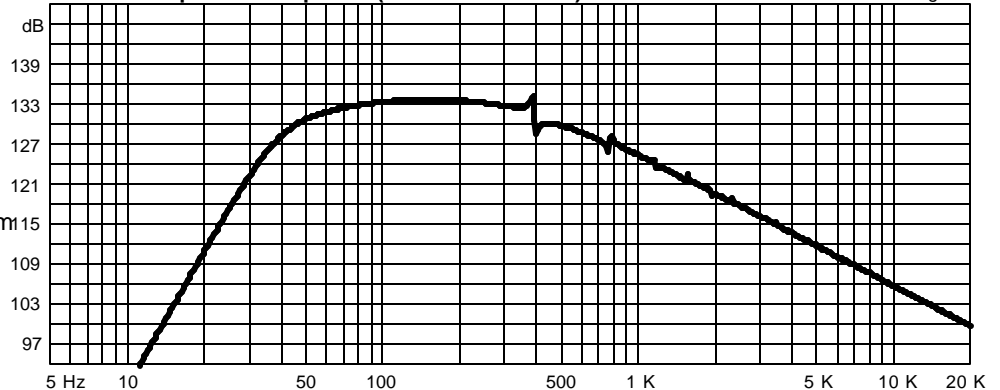
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



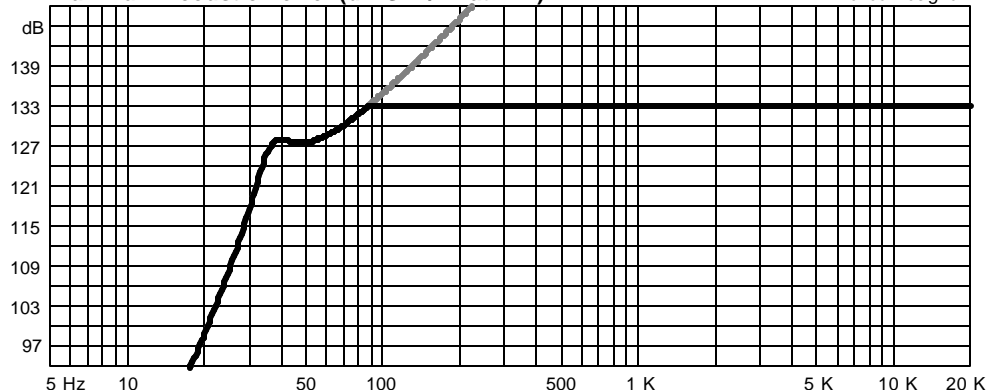
Custom Amplitude Response (dB-SPL/Hz at 1 m) with 1500 watts

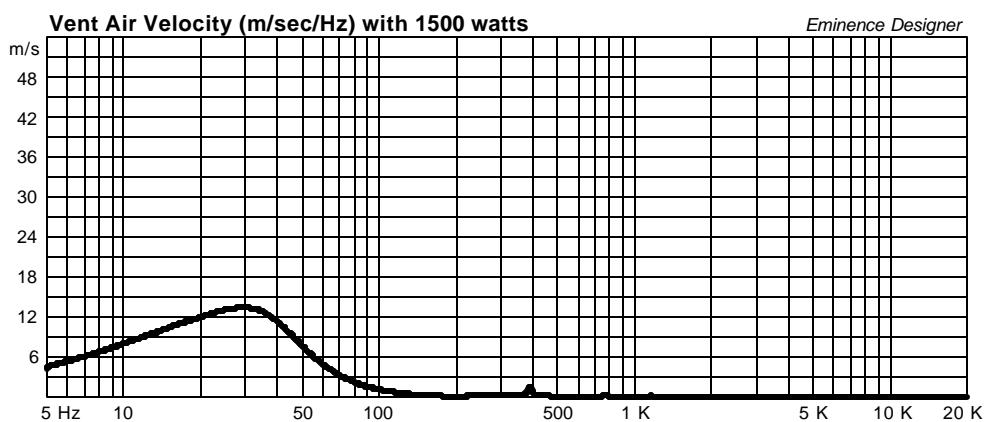
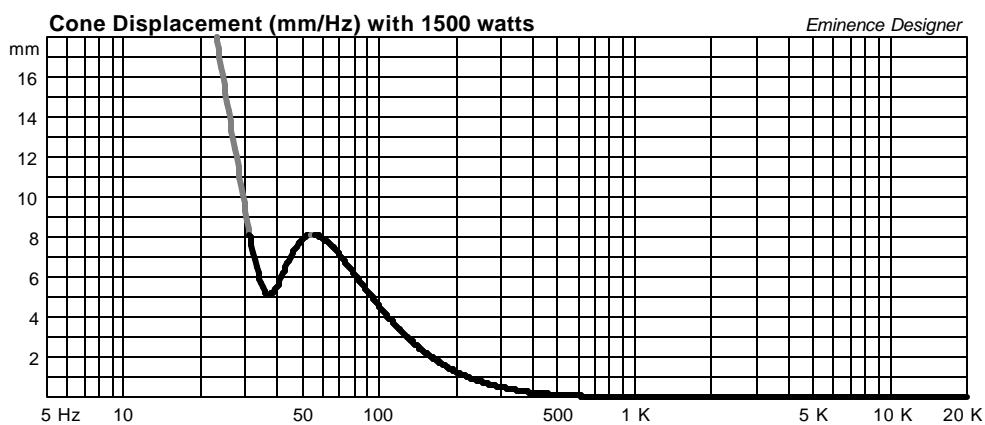
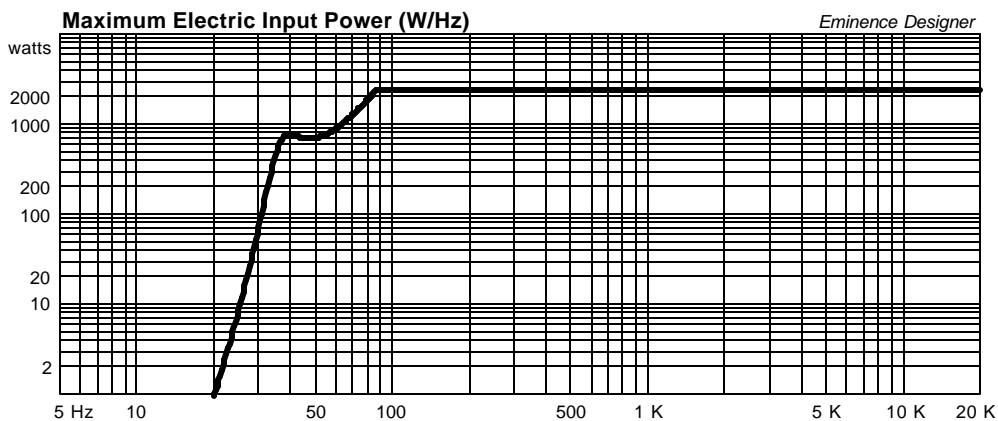
Eminence Designer

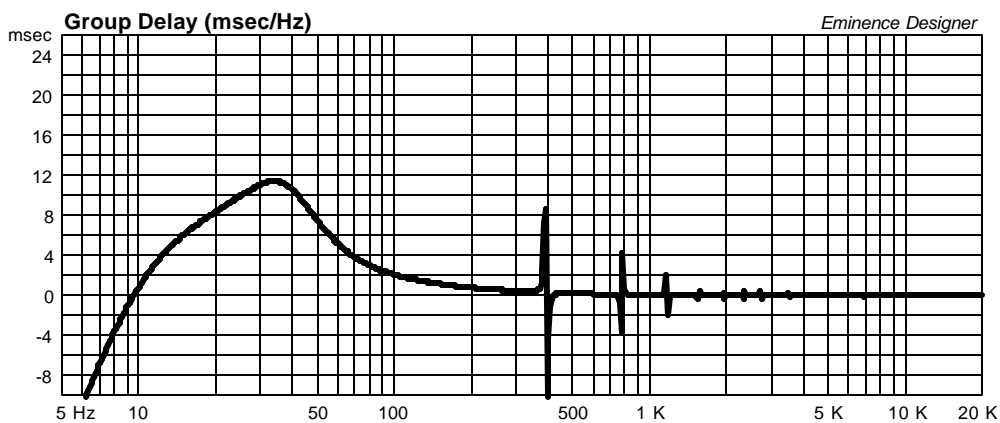
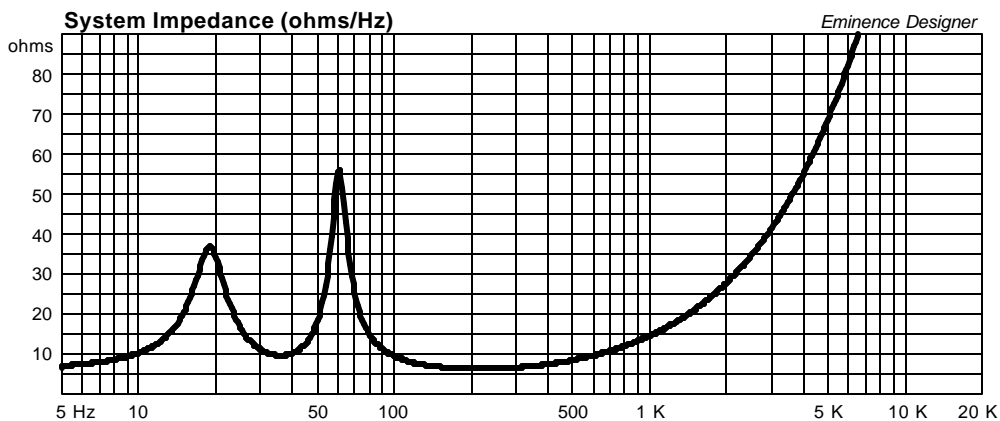


Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer







# Impero 18C 2x18 Small Vented Design

By Jerry McNutt, Eminence Speaker LLC

2400 Watt design; F3 at 49 Hz. Use a steep high pass at 35 Hz. Use a Divider !!!

Compact Sub Box for PA or MI uses. Parallel for 2 ohm; Series for 8 ohm.



## Box Properties

--Description--

Name:

Type: Vented Box

Shape: Prism, square

--Box Parameters--

Vb = 9.5 cu.ft

V(total) = 10.34 cu.ft

Fb = 50 Hz

QL = 7

F3 = 49.18 Hz

Fill = minimal

--Vents--

No. of Vents = 4

Vent shape = round

Vent ends = one flush

Dv = 6 in

Lv = 4.863 in

## Driver Properties

--Description--

Name: Impero 18C

Type: Standard one-way driver

Company: Eminence Speaker LLC

Comment: High Power Pro Woofer, 4 ohm

--Configuration--

**No. of Drivers = 2**

Mounting = Standard

Wiring = Series

Drivers sum coherently = Yes

--Mechanical Parameters--

Fs = 31.48 Hz

Qms = 10.13

Vas = 317 liters [634]

Cms = 0.17 mm/N [0.085]

Mms = 147.6 g [295.1]

Rms = 2.88 kg/s [5.76]

Xmax = 8.13 mm

Xmech = 20.17 mm

P-Dia = 382 mm [540.2]

Sd = 1159 sq.cm [2318]

P-Vd = 0.932 liters [1.863]

--Electrical Parameters--

Qes = 0.35

Re = 3.13 ohms [6.26]

Le = 1.09 mH [2.18]

Z = 4 ohms [8]

BL = 16.1 Tm [32.31]

Pe = 1200 watts [2400]

--Electromech. Parameters--

Qts = 0.34

no = 2.724 % [5.449]

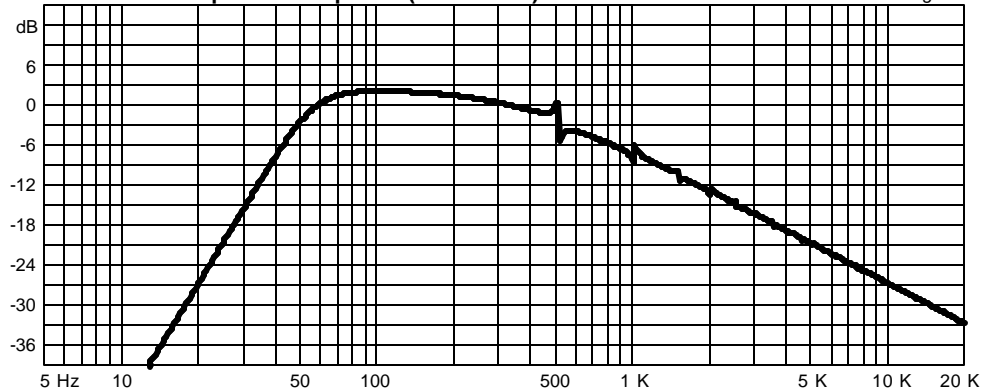
1-W SPL = 96.5 dB [99.51]

2.83-V SPL = 100.6 dB [100.6]

File: Impero18CTwoBy18SmallVentedBox2400Watts.bb6

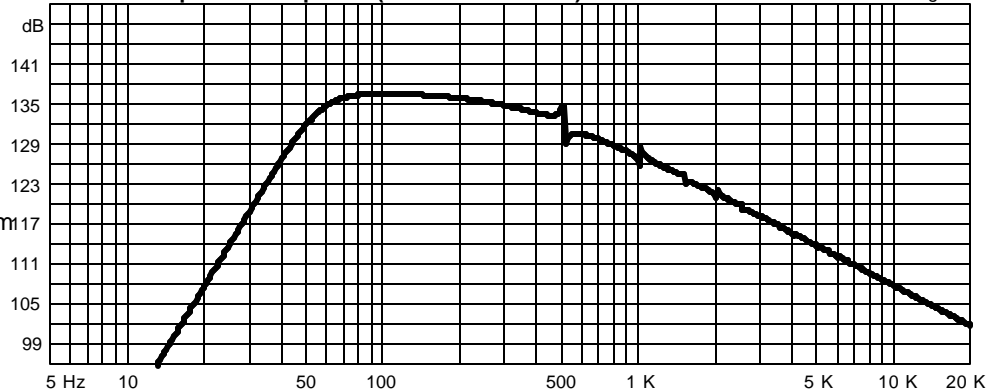
Normalized Amplitude Response (dB-SPL/Hz)

Eminence Designer



Custom Amplitude Response (dB-SPL/Hz at 1 m) with 2400 watts

Eminence Designer



Maximum Acoustic Power (dB-SPL/Hz at 1 m)

Eminence Designer

