

The Saga of low, loud and light...

(Or, the story of my 3 month Obsession...)



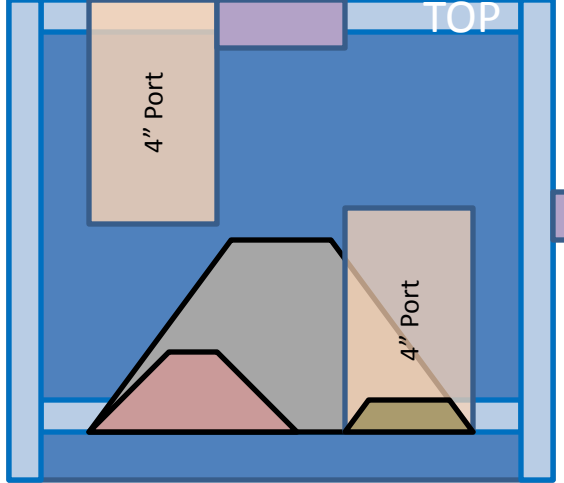
Specs:

600W

45Hz to 20KHz +3 /- 3dB

>120dB-SPL at 1m full band
all at 600 Continuous Watts

<30 Pounds



Interior volume 2.4 cu ft

Fb 48

F3 45

2 - 4" diameter vents, each 7.85" long, 1 front, 1 rear

Mid chamber $8 \times 8 \times 4 = 256 \text{ in}^3 \text{ (exterior)} = 0.15 \text{ ft}^3$

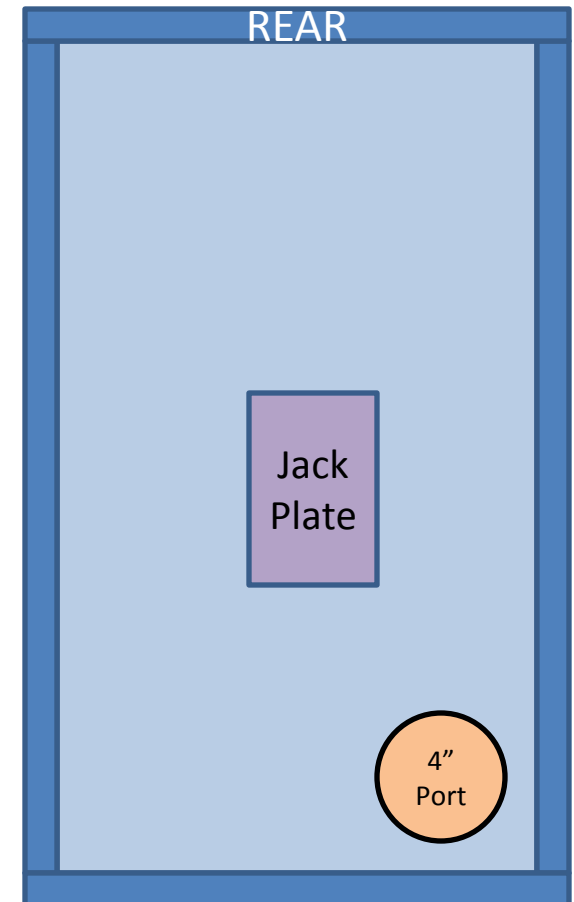
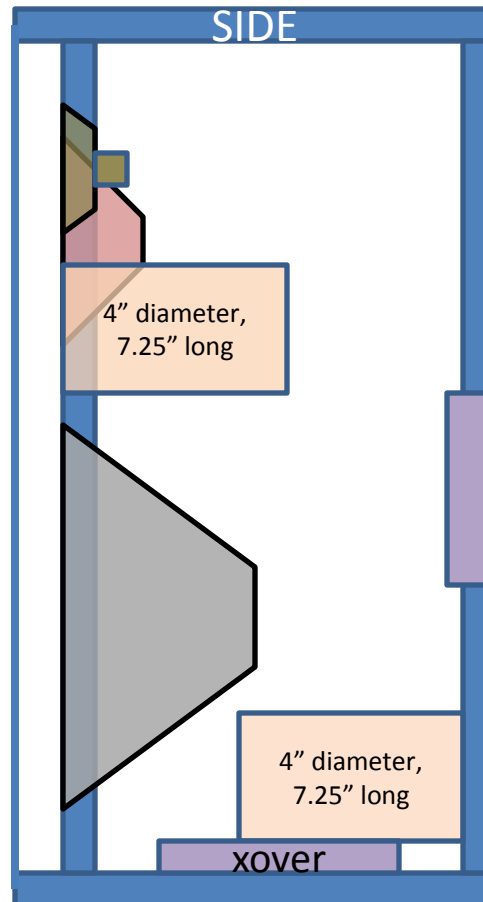
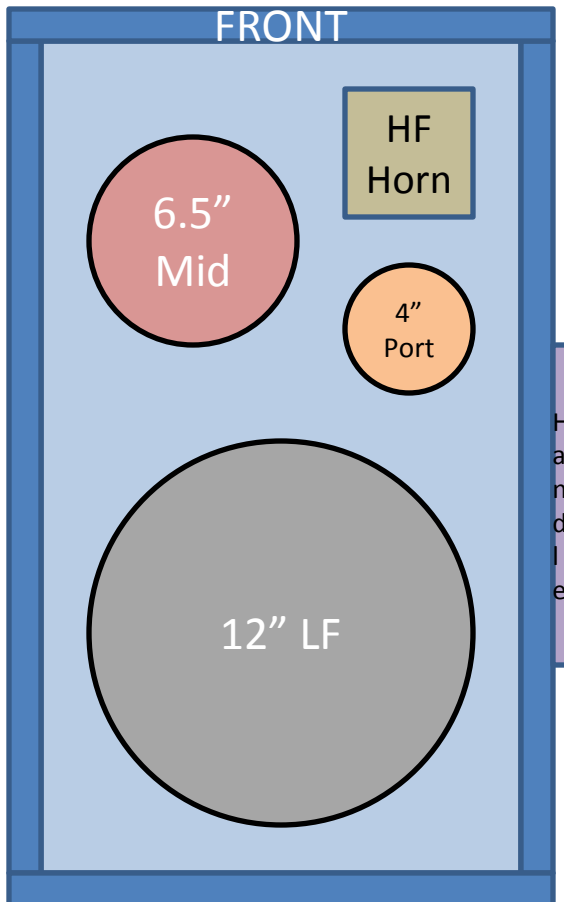
Exterior dimensions:

= (w) 17" x (h) 28" x (d) 15" (including 1.5" spacing for grill)

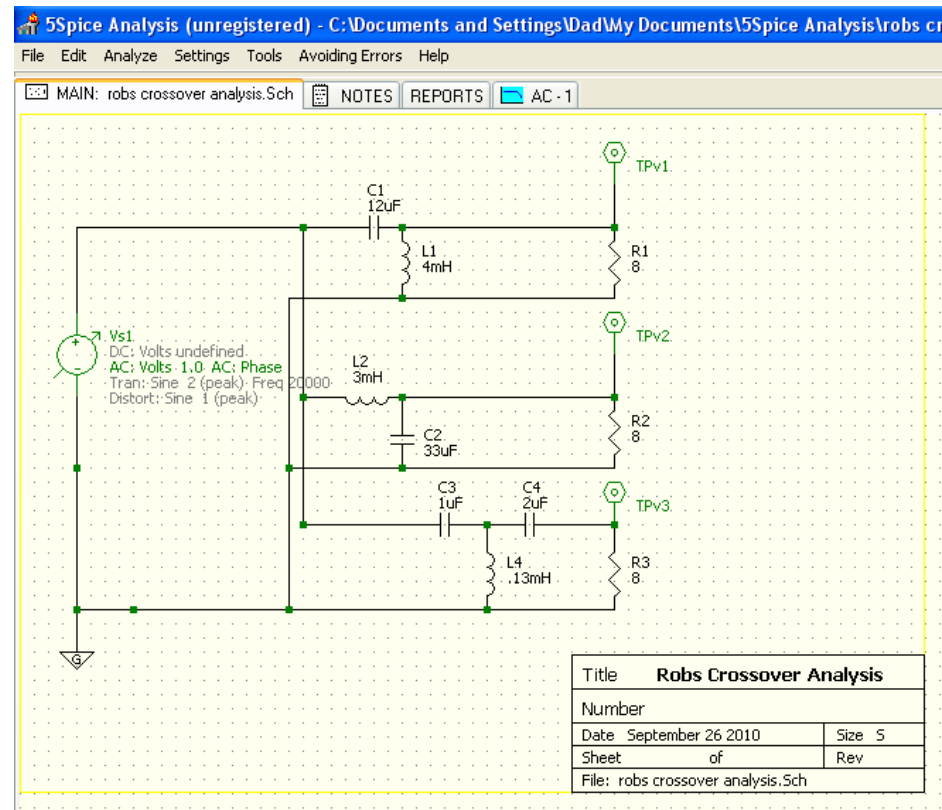
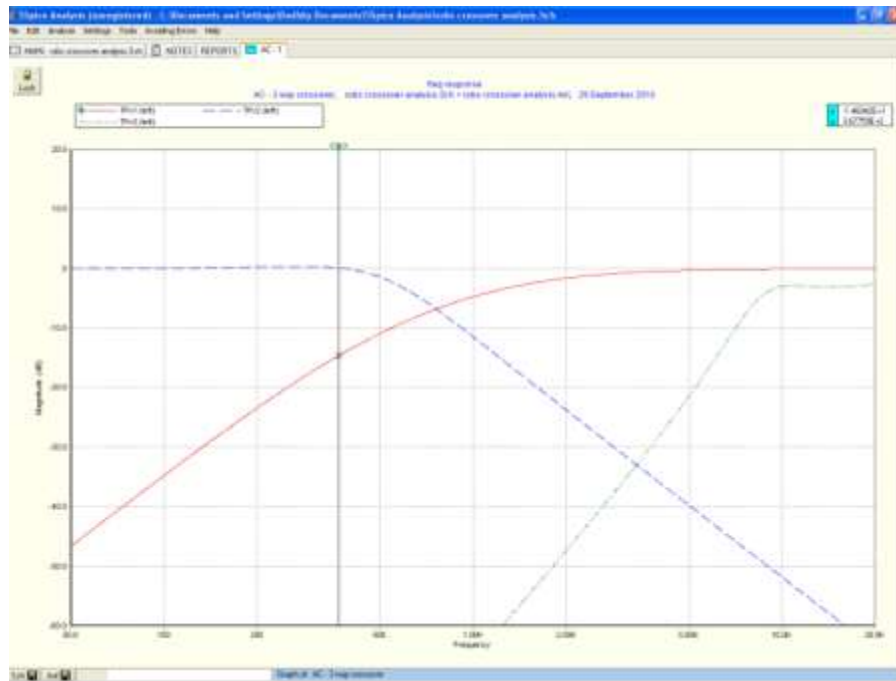
Interior dimensions:

= (w) 15" x (h) 26" x (d) 11.75"

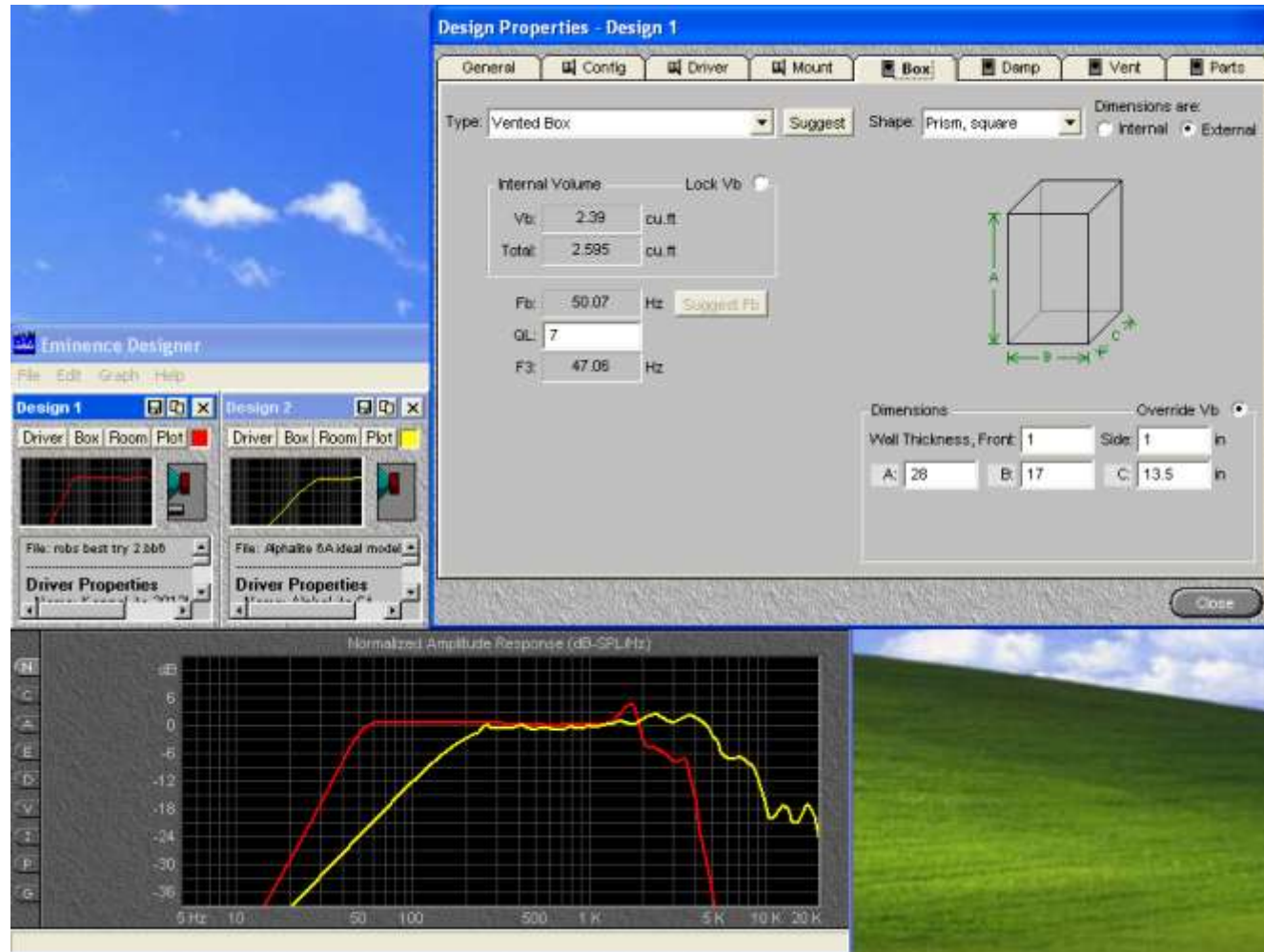
1.5" Acoustic foam on all walls except floor



Spice Analysis of Crossover



Eminence Designer Box Simulation (without Crossovers), only LF and Mid Drivers (not including HF Elliptical Horn)



Cutting Up the Extruded Foam and securing the Pieces Together in preparation for epoxy and fiberglassing



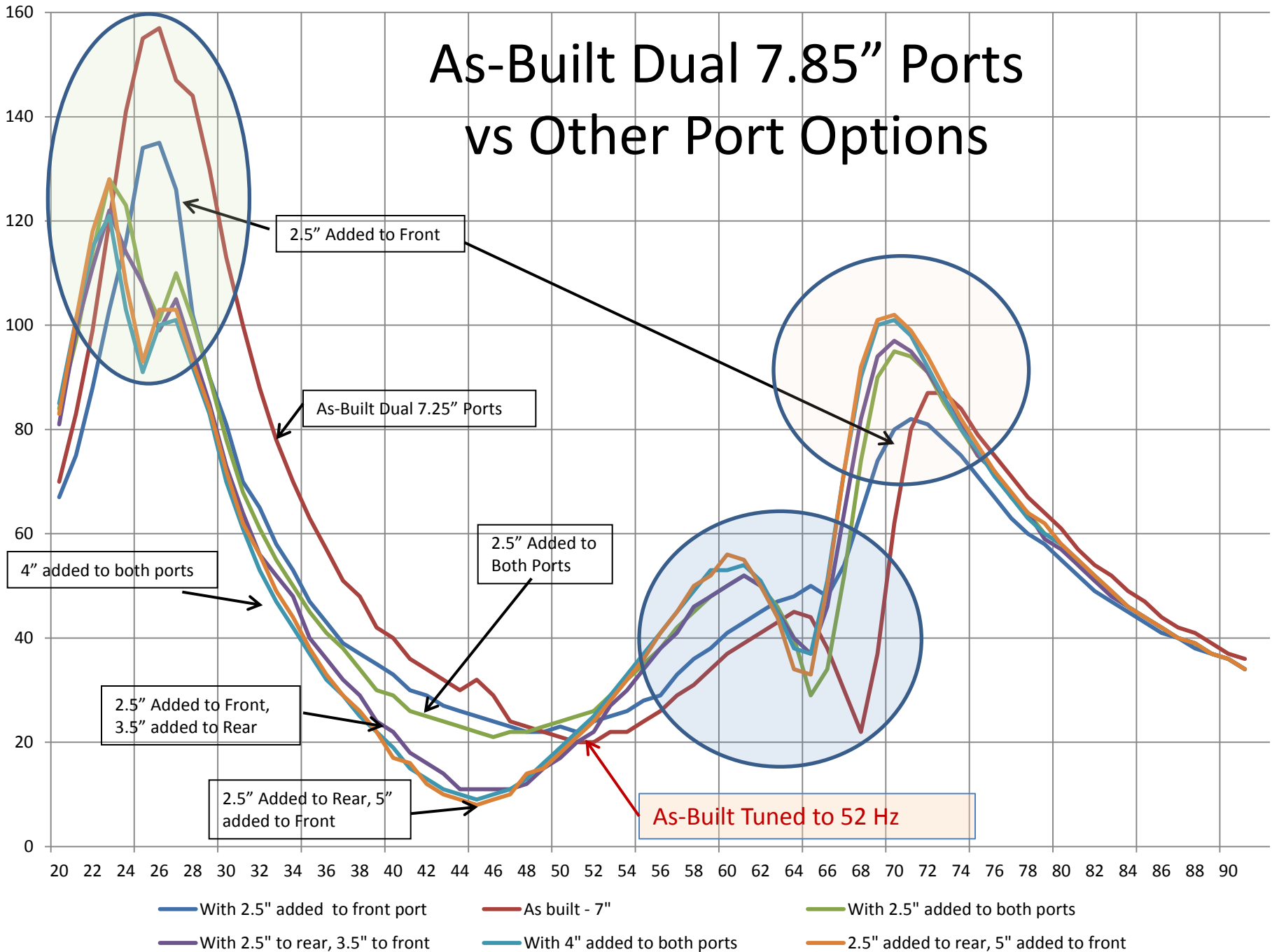
Cutting the Fiberglass Cloth and applying 2 layers on the speaker baffle



Carpet Installation



As-Built Dual 7.85" Ports vs Other Port Options



Woofers Tests

- Q,Fs test

- Vas test

X Box test

- Arb1 sweep

- Arb2 sweep

Start Sweep

ZP Calibrate

Frequency Hz

< 20000.000 >

Drive Level

< 75.000% >

UNMUTED

Meter Readings

Z = 71.957 Ω

R = 34.701 Ω

I = 63.037 Ω

Ph= +61.17 deg

L = 501.636 μ H

162.126 mV

2.273 mA

368.439 μ Var

177.677 μ V

Sweep Pt= 100

SupRatio=1.135



[-] Box Wed Nov 10 19:32:50 2010 [-]

Q,Fs complete	Vas complete	Box complete
Re = 5.2261 ohms	Vas = 151.2233 L (5.3404 ft^3)	Fsb = 33.1975 Hz
Fs = 37.4310 Hz	Diam= 250.8250 mm (9.8750 in)	alpha= 1.3690
Qes = 0.3342	Sd = 49411.8929 mm^2 (76.5886 in^2)	Ha = 1.4633
Qms = 4.8827	BL = 12.3482 N/A	Fm = 48.5773 Hz
Qts = 0.3128	Cms = 436.0045 μ m/N	Qloss= 4.2377
Zmax= 81.5691 ohms	Mms = 2293.5542 N/a	
Le = 1.0991 μ H	Mms = 41.4654 g	Vb =99999.0000 L
	Sens= 95.5000 dB@1W/1m	Vb =3531.4314 ft^3
	Eff = 2.2295 %	
	Rms = 1.9973 ohms	Sine Impedance::Norm

As built cabinet results

