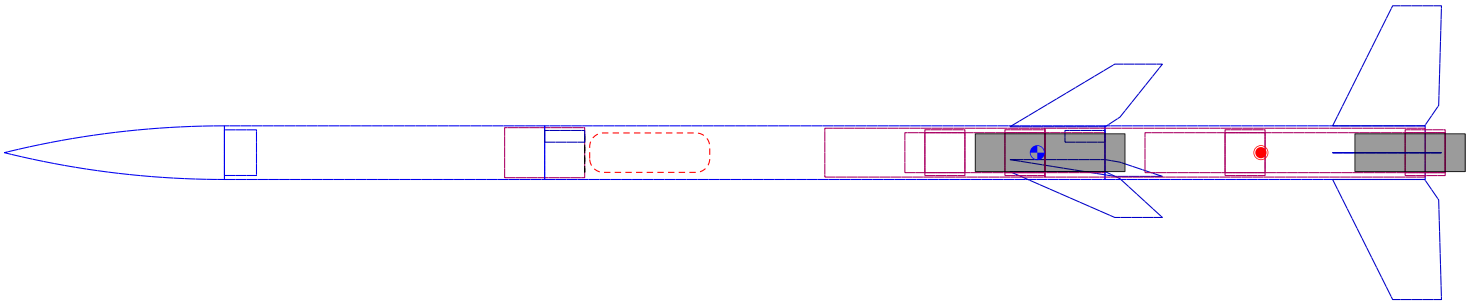
Rocket Design



Centuri Mini Max AEC Rocket - Rocksim file by Steve Naquin, Email <snaquin3@bellsouth.net>

Stages: 2

Mass (with motors): 10.2 oz

Stability: 4.17 cal

CG: 25.8 in

CP: 31.4 in

D12-0/E9-8

Altitude	2277 ft
Flight Time	58.1 s
Time to Apogee	12.3 s
Velocity off Pad	66.9 ft/s
Max Velocity	429 ft/s
Velocity at Deployment	19.1 ft/s
Landing Velocity	50.2 ft/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
E9	9.15 N	3.04 s	19.5 N	27.9 Ns	5.37:1	1.26 oz	0.94/3.74 in
D12	10.4 N	1.61 s	29.7 N	16.8 Ns	3.70:1	0.74 oz	0.94/2.76 in
Total:				44.7 Ns	3.70:1	2.01 oz	

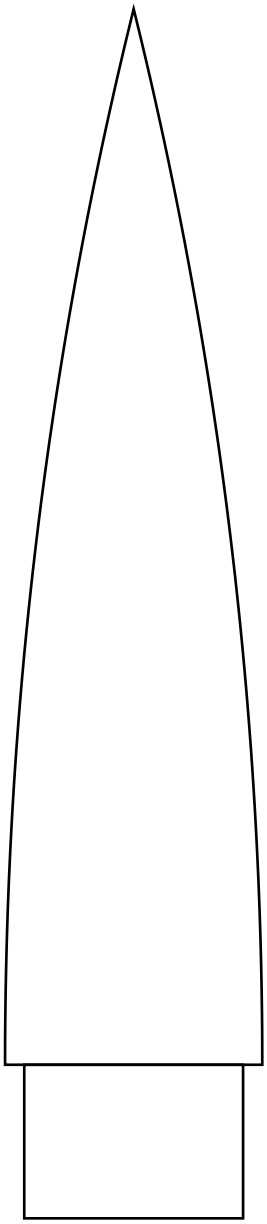
Parts Detail

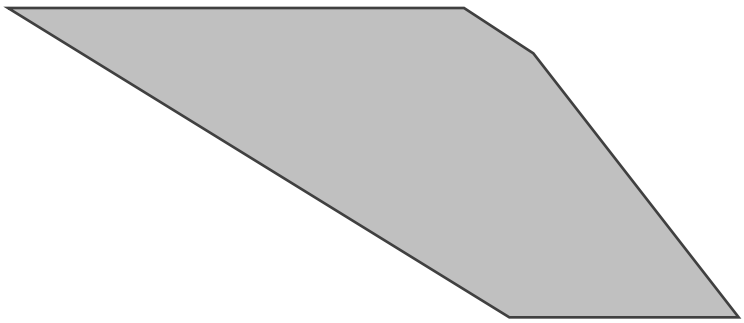
Stage

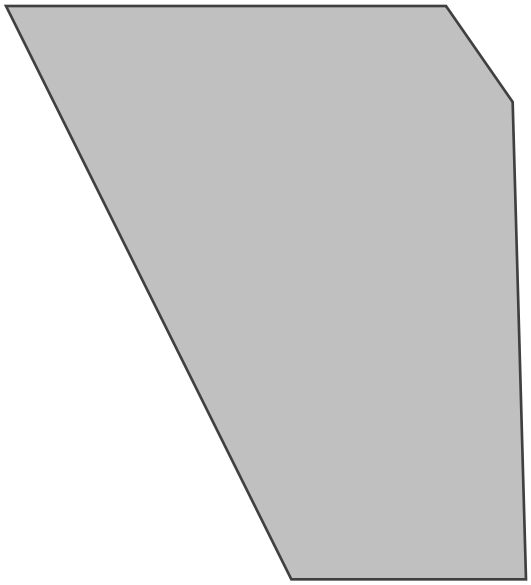
	Nose cone	RS: Balsa (0.07 oz/in³)	Ogive	Len: 5.5in	Mass: 0.34oz
	Sustainer Payload Tube	RS: Spiral/Glassine (0.49 oz/in³)	Dia$_{in}$ 1.25in Dia$_{out}$ 1.34in	Len: 8in	Mass: 0.719oz
	Tube Coupler	RS: Balsa (0.07 oz/in³)	Dia$_{in}$ 0in Dia$_{out}$ 1.25in	Len: 2in	Mass: 0.182oz
	Screw Eye-Large		Dia$_{out}$ 0.984in		Mass: 0.021oz
	Sustainer Airframe Tube	RS: Spiral/Glassine (0.49 oz/in³)	Dia$_{in}$ 1.25in Dia$_{out}$ 1.34in	Len: 14in	Mass: 1.258oz
	Streamer	RS: Paper (0.19 oz/ft²)	Length 36in Width 3in	Len: 3in	Mass: 0.141oz
	Launch Lug	RS: Paper (0.65 oz/in³)	Dia$_{in}$ 0.214in Dia$_{out}$ 0.293in	Len: 1in	Mass: 0.02oz
	Launch Lug	RS: Paper (0.65 oz/in³)	Dia$_{in}$ 0.214in Dia$_{out}$ 0.293in	Len: 1in	Mass: 0.02oz
	Sustainer Fin Set (3)	RS: Basswood (0.24 oz/in³)	Thick: 0.094in		Mass: 0.206oz
	Sustainer Motor Mount	RS: Spiral/Glassine (0.56 oz/in³)	Dia$_{in}$ 1.145in Dia$_{out}$ 1.22in	Len: 5.5in	Mass: 0.426oz
	Sustainer 24mm MMA	RS: Spiral/Glassine (0.56 oz/in³)	Dia$_{in}$ 0.95in Dia$_{out}$ 0.998in	Len: 5in	Mass: 0.204oz
	Ring	RS: Paper (0.65 oz/in³)	Dia$_{in}$ 0.998in Dia$_{out}$ 1.145in	Len: 1in	Mass: 0.16oz
	Ring	RS: Paper (0.65 oz/in³)	Dia$_{in}$ 0.998in Dia$_{out}$ 1.145in	Len: 1in	Mass: 0.16oz

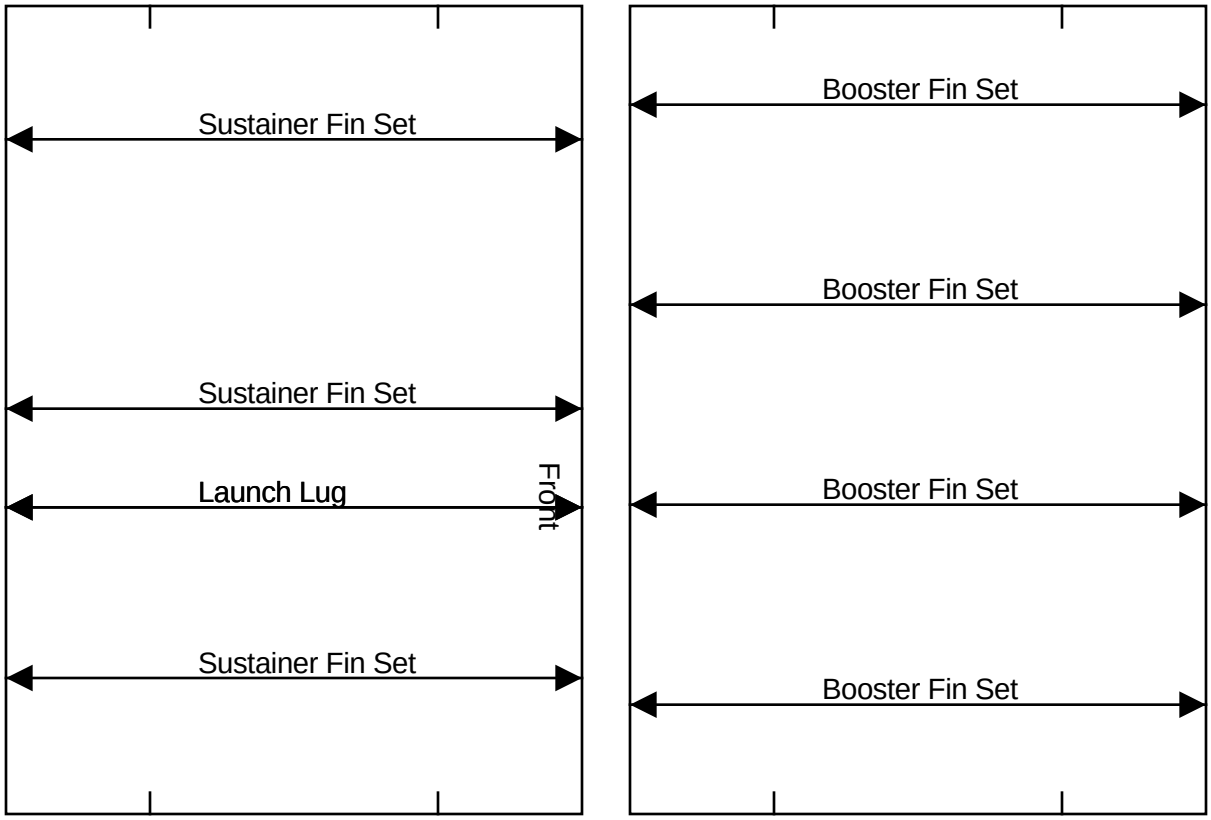
Stage

	Booster airframe tube	RS: Spiral/Glassine (0.49 oz/in³)	Dia$_{in}$ 1.25in Dia$_{out}$ 1.34in	Len: 8in	Mass: 0.719oz
	Booster Motor Mount / Tube Coupler LT-11555	RS: Spiral/Glassine (0.49 oz/in³)	Dia$_{in}$ 1.145in Dia$_{out}$ 1.22in	Len: 9.5in	Mass: 0.649oz
	Booster 24mm MMA	RS: Spiral/Glassine (0.56 oz/in³)	Dia$_{in}$ 0.95in Dia$_{out}$ 0.998in	Len: 7.5in	Mass: 0.306oz
	Ring	RS: Paper (0.65 oz/in³)	Dia$_{in}$ 0.998in Dia$_{out}$ 1.145in	Len: 1in	Mass: 0.16oz
	Ring	RS: Paper (0.65 oz/in³)	Dia$_{in}$ 0.998in Dia$_{out}$ 1.145in	Len: 1in	Mass: 0.16oz
	Booster Fin Set (4)	RS: Basswood (0.24 oz/in³)	Thick: 0.094in		Mass: 0.52oz








Sustainer Fin Set
Sustainer Fin Set
Launch Lug
Front
Sustainer Fin Set
Booster Fin Set
Booster Fin Set
Booster Fin Set
Booster Fin Set