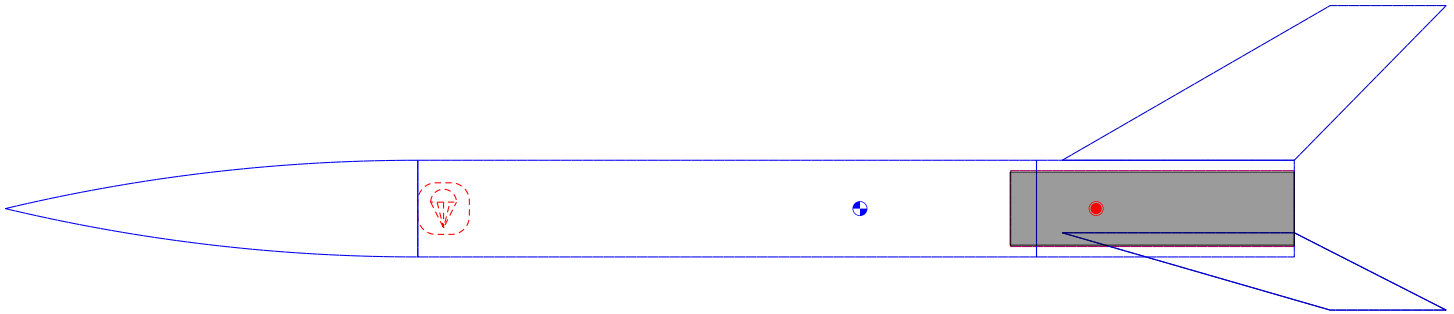


Rocket Design



Make-It Take-It Rocket

Stages: 1

Mass (with motor): 2.28 oz

Stability: 2.44 cal

CG: 8.288 in

CP: 10.578 in

B6-4

Altitude 442 ft
 Flight Time 54 s
 Time to Apogee 5.23 s
 Optimum Delay 4.37 s
 Velocity off Pad 58.4 ft/s
 Max Velocity 188 ft/s
 Velocity at Deployment 5.32 ft/s
 Landing Velocity 8.94 ft/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
B6	5.23 N	0.826 s	12.1 N	4.33 Ns	8.24:1	0.198 oz	0.709/2.7 6 in







A8-3

Altitude 225 ft
 Flight Time 29 s
 Time to Apogee 3.92 s
 Optimum Delay 3.3 s
 Velocity off Pad 53.4 ft/s
 Max Velocity 124 ft/s
 Velocity at Deployment 1.84 ft/s
 Landing Velocity 8.98 ft/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
A8	5.11 N	0.518 s	12 N	2.68 Ns	8.44:1	0.11 oz	0.709/2.7 6 in

Parts Detail

Sustainer

	Nose Cone	Cardboard (0.393 oz/in ³)	Ogive	Len: 4 in	Mass: 0.215 oz
	Body Tube	Cardboard (0.393 oz/in ³)	Dia _{in} 0.875 in Dia _{out} 0.938 in	Len: 6 in	Mass: 0.21 oz
	Parachute	Ripstop nylon (0.22 oz/ft ²)	Dia _{out} 18 in	Len: 0.5 in	Mass: 0.61 oz
	Shroud Lines	Braided nylon (3 mm, 1/8 in) (0.038 oz/ft)	Lines: 6	Len: 11.811 in	
	Body Tube	Cardboard (0.393 oz/in ³)	Dia _{in} 0.78 in Dia _{out} 0.938 in	Len: 2.5 in	Mass: 0.209 oz
	Trapezoidal Fin Set (3)	Cardboard (0.393 oz/in ³)	Thick: 0.118 in		Mass: 0.353 oz
	Inner Tube Estes BT-20J, 30326, 30332, 30408	Paper, spiral kraft glassine, Estes avg, bulk (0.517 oz/in ³)	Dia _{in} 0.71 in Dia _{out} 0.736 in	Len: 2.75 in	Mass: 0.042 oz

