

Rocket Data Sheet and Launch Record

Rocket Description		Recovery Information		Altimeter Two Data	
Owner:	Nic Buck/Savanna Judson	Ejection Occurred		Apogee Altitude:	394
Rocket Name:	Breaking Bad	“ During Ascent	“ At Apogee	Top Speed:	89
Type:	Modelrockets.us	“ After Apogee	“ During Descent	Burn Time (burn):	2.2
Length: (inches)	22.625 in	“ Ejection Failure		Peak Acc (Pacc):	9
Diameter: (inches)	1.645 in	Parachute Deployment		Avg Acc (Aacc):	1.9
Fins:	3	“ Full	“ Partial	Coast Apogee (C2AP):	3.2
Listed Mass: (g)	2.5oz	“ Did not deploy		Apogee to Eject (AP2E):	1.8
Date of Construction:	9/23/2013	Parachute Descent		Ejection Alt. (EALt):	359
Recommended Motors: (C only)		“ Stable Descent	“ Tangled lines	Descent Speed (dESc):	34
C6-3, C6-5		“ Some swaying	“ Sprial descent	Flight Duration (durA):	13.7
Center Gravity(CG):	20.45 cm	Reason for Recovery Failure		Altimeter Data Analysis	
Center Pressure(CP):		“ Damaged Chute		Rocket flew straight up at a top speed of 89mph up to 394 feet in the air. The engine burned for 2.2 seconds. The peak acceleration of the rocket was 9 m/s/s, yet the average acceleration was 1.2 m/s/s. It coasted in the air for 3.2 seconds and then coasted from apogee to eject at 1.8 seconds. The rocket began its descent which was straight down at 34 mph. The parachute attempted to eject at 359 feet but failed to eject and the rocket nosedived into the ground. The total flight took 13.7 seconds.	
Estimated Cd:	0.5	“ Tight Upper Body tube			
Predicted Altitude:	375 Ft	“ Improper setup			
Prediction Notes		“ Chute Separated			
Prediction spreadsheet says 530 ft but last years launches were not even close to that. Last year was a bit windy so I am going with a value just a little higher. The rocket with the closest mass to ours had an altitude of around 380. It was a windy day, so if it is not windy on the day we launch, I am predicting an altitude of a little higher than 380.		“ Motor Ejected			
		“ Unplanned Separation			
		“ Other _____			
		Descent Speed			
		“ Slow	“ Average speed		
		“ Very fast	“ Ballistic		
Launch Information		Landing			
Date:	10/9/2013	“ Soft	“ Water		
Time of Launch:		“ Tree	“ Caught on Wire		
Location:		“ Hard	“ Crash		
Rocket Mass:	73.8g	“ Landed on Building		Post Launch Information	
Motor:	C6-5	Recovery		Rocket Damage	
Motor Mass:	25.1g	“ Full Recovery	“ Lost	“ No Damage	
Altimeter Mass:	6.7g	“ Not Recoverable	“ Parts lost	“ Scuffed Paint	
Liftoff Mass:	105.6g	Distance & Direction from pad:		“ Launch Lugs	
Wind Direction:		About 50 meters Southwest of launch pad		“ Engine Stuck	
Wind Speed:		Recovery Notes		“ Fins Damaged	
Igniter:	Estes	Was unhardmed, although it had a hard landing. Nose cone was still attached to the body tube		Describe any damage to the rocket:	
No. of tries to ignite:				No damage	
Ignition					
“ Successfull	“ Blow Out				
“ Caught on clips	“ Motor Failure				
Trajectory					
“ Straight-Up	“ Spinning				
“ Corkscrew	“ Non-vertical				
“ Into the wind	“ Unstable				
Launch Notes		Lessons Learned		Flight Grade	
Parachute deployed, but failed to leave the body tube. 12 mph wind speed to the north. The rocket was tilted with the wind so the wind hit the fins and went straight up.		Put parachute into the body tube looser so that it will deploy correctly. Shave parts of body tube end to make the nose cone fit looser. Maybe added too much paint, would have gone higher if it didn't weigh as much.		“ Excellent	
				“ Good	
				“ Poor	
				Rocket Project Suggestions	
				Better representation of how to put parachute into the body tube	