

Inverted Pursuits Lab

SCREWBALL

Parts:

3D Printed

- Nose Cone Tip (IP100501)
- Nose Cone Lower (IP100502)
- Nose Cone Retention (IP100503)
- Fin Can (IP100506)
- 2x Body Section 1 (BS1) (IP100505)
- Body Section 2 (BS2) (IP100504)
- Motor Housing (IP100507)
- Motor Shock Mount (IP100508)
- Tail Cone Motor Retention (IP100509)

Standard Parts

- 7 inch 38mm Cardboard Tube
- 2x 1/4-20 Eyebolt
- 4x 1/4 Washers
- 4x 1/4-20 Nut
- Rail Button set

Additionally Needed

- Motor and Igniter of choice
- 1/8in Kevlar 10-15ft
- 24"-36" Nylon Parachute

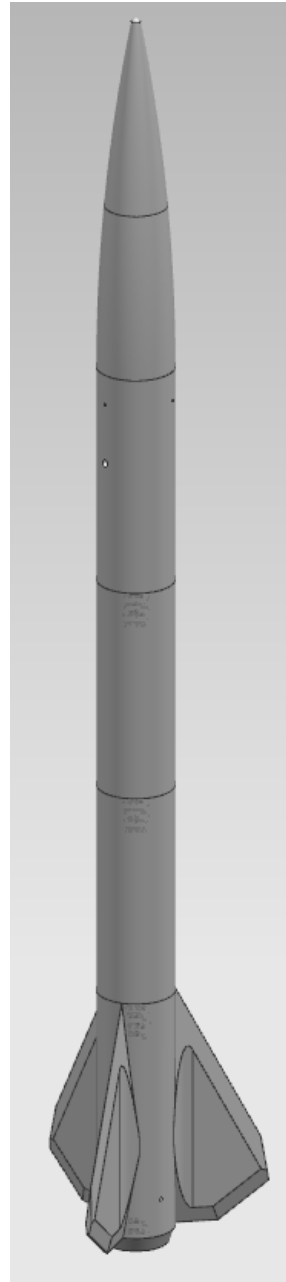


Figure 1: SCREWBALL Rocket

Assembly Instructions

1. An assembly video is available on YouTube at Inverted Pursuits Laboratory. Simply search the rocket name on the channel.
2. Be sure to test fit and sand all components as needed prior to proceeding.
3. The components stack from bottom to top as follows: Fin Can, BS1, BS1, BS2 and are screwed together using the printed threads. **NO GLUE NEEDED**

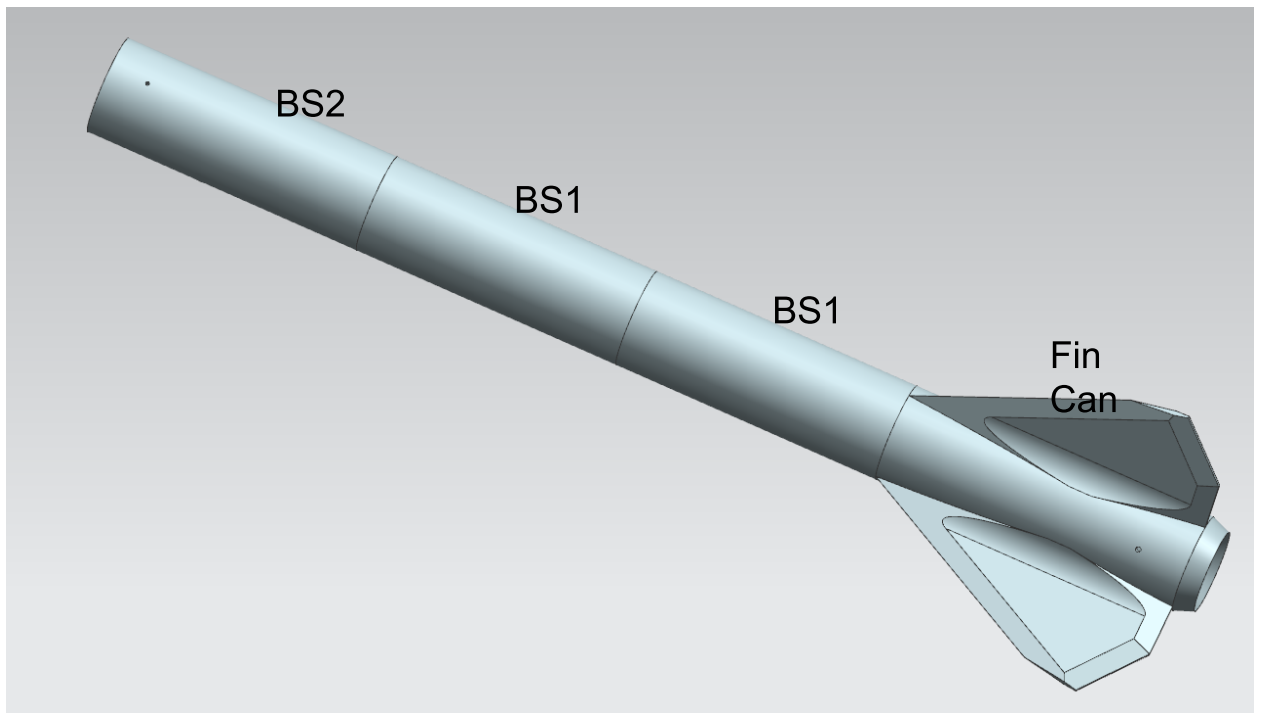
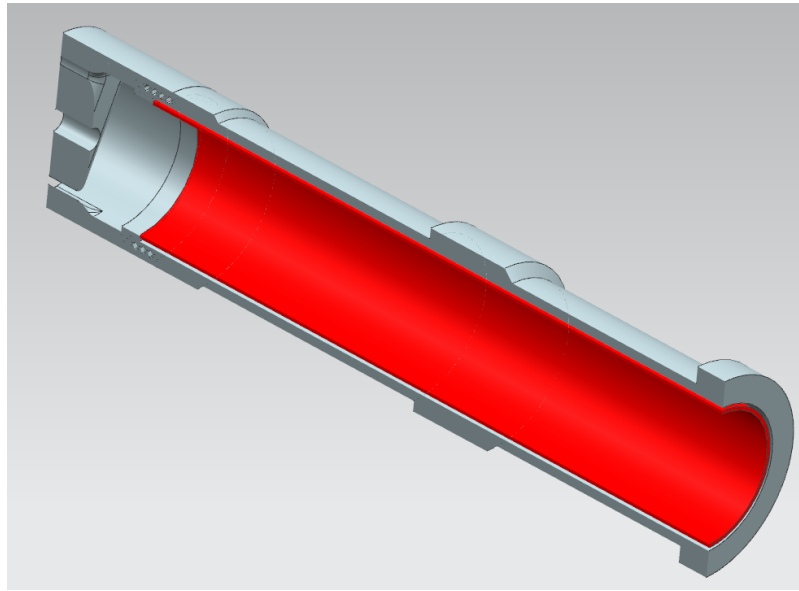
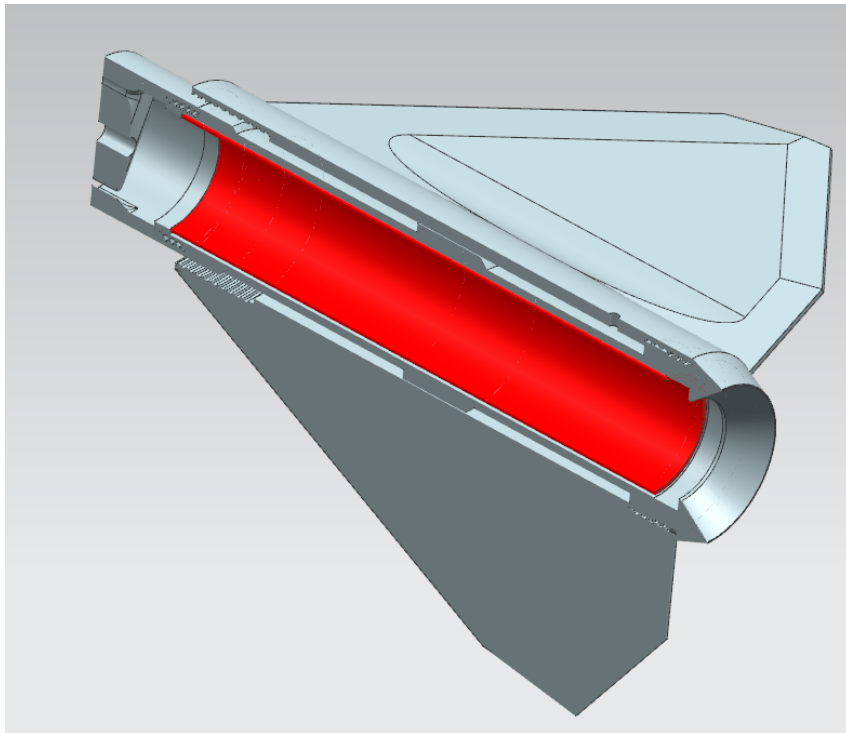


Figure 2: Rocket Body Assembly

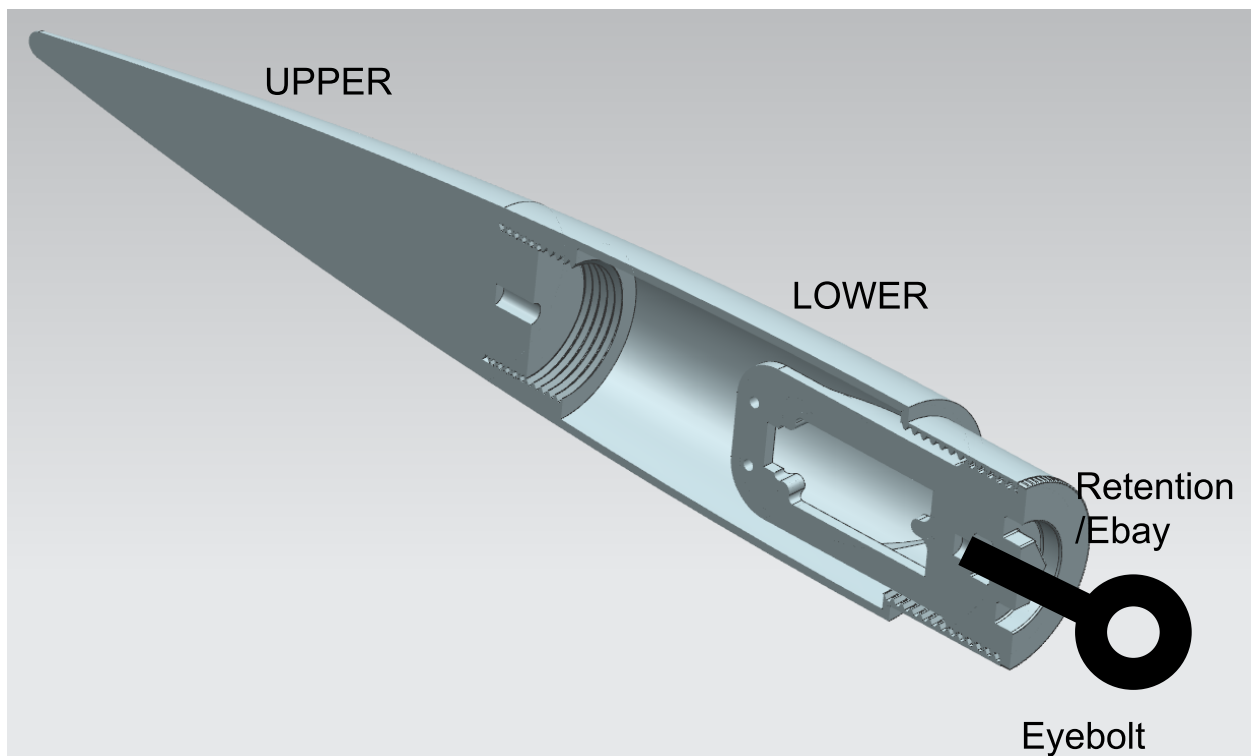
4. Motor Mount Assembly consists of 3 pieces: Phenolic Motor Tube, Printed Motor Tube and the Shock Cord Mount. The Printed Motor tube and Shock Cord Mount Screw together with printed threads.



5. An Eyebolt, 2 washers and 2 nuts are bolted through the top hole of the Shock Cord Mount so you can use quick link attachments for shock cord.
6. The Unit Then Slides into the Fin can and is retained with the Tail Cone/Motor Retainer. It is made removable to aid in rocket disassembly.



7. The Nose Cone consists of 3 pieces: Upper, Lower and Retention. The 3 screw together and combined with the remaining eyebolt, washers and nut allow you to have an attachment point for the shock cord. As shown below.



8. Rail Buttons Mount in the provided hole in the Fin can and the 2nd one will mount near your CG, drill a hole where you want and simply thread in the rail button.
9. Attach the shock cord to the Nose Cone and Motor Shock Cord Mount.
10. Tie a loop into the shock cord just below the Nose Cone to attach your parachute to.
11. Attach the parachute to the newly created loop.
12. Flight Characteristics and anticipated altitudes need to be verified through the provided OpenRocket file at www.jboyson.com.
13. Remember to add wadding, dog barf or a chute protector to keep the ejection charge from burning / melting the parachute.
14. Once the motor is installed, go out to the launch pad and enjoy.
15. Remember to keep it Pointy End Up!

