

# Inverted Pursuits Lab

## **MACEY**

[www.jboyson.com](http://www.jboyson.com)

### Parts:

#### 3D Printed

- Nose Cone (IP100201)
- Fin Can Body (IP100202)

#### Standard Parts

- 200lb Spectra Cord 36 inches
- 1" x 18" Streamer
- 2.25 inch Estes BT-20 Tube (003085)

#### Additionally Needed

- Estes Porta-Pad II (002215)
- Estes Launch Controller (002220)
- Super Glue

#### Anticipated Altitudes

- Estes B6-4 - 164 ft
- Estes C6-3 - 540 ft
- Aerotech Q-Jet D16-6 - 1620 ft

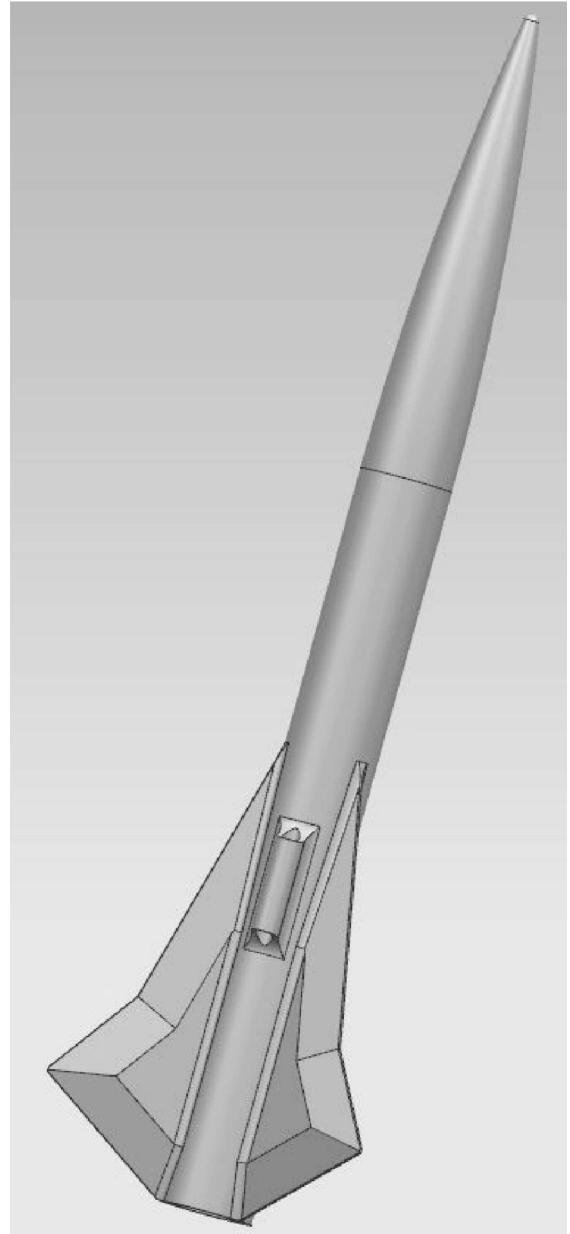


FIGURE 1: MACEY Rocket

## Assembly Instructions

1. An assembly video is available on YouTube at Inverted Pursuits Laboratory
2. Be sure to test fit and sand all components prior to proceeding.
3. Slide the BT-20 segment into the bottom of the Fin Can Body to test fit and then glue in place with super glue.

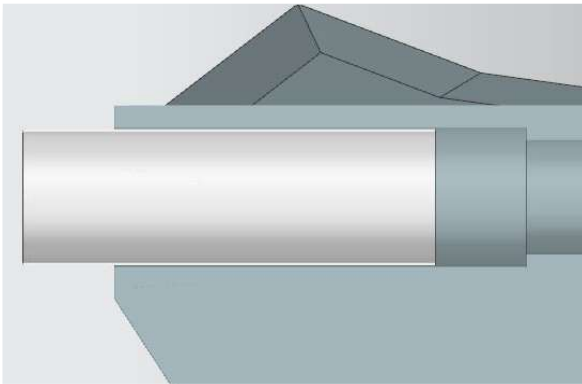


Figure 3: BT-20 slides into FCB

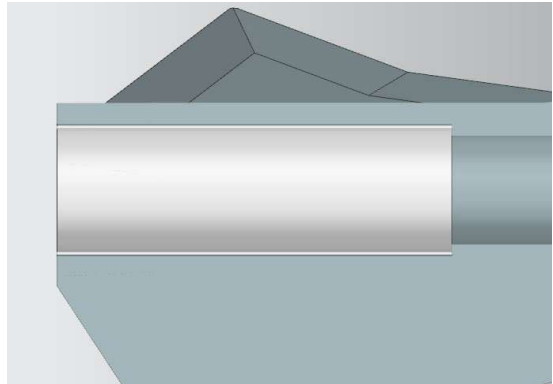


Figure 4: BT-20 Final Position

4. The Shock Cord (RED) ties around the internal shock mount as shown below. Tie a loop around the main cord to allow you to pull tight around the mount.

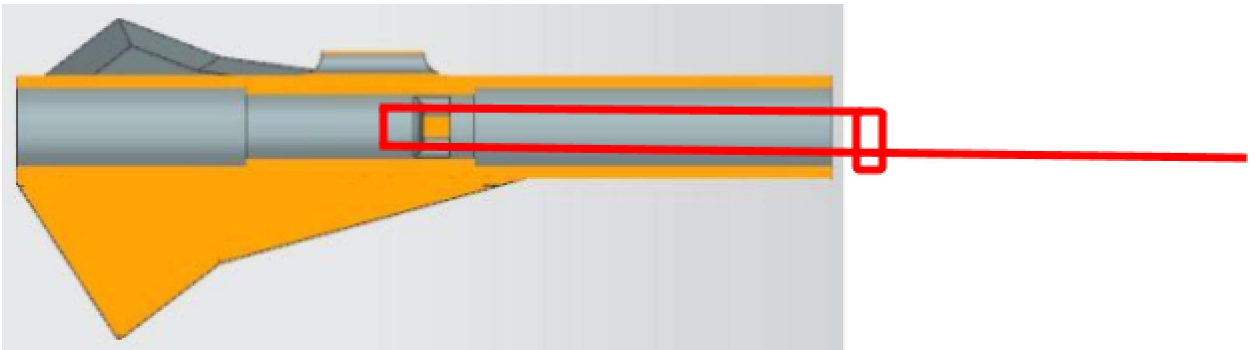


Figure 5: Shock Cord Attachment Body Tube Cross Section

5. Attach the other end of the shock cord (RED) to the Nose Cone and tie the streamer (BLUE) to the shock cord just below the nose cone.

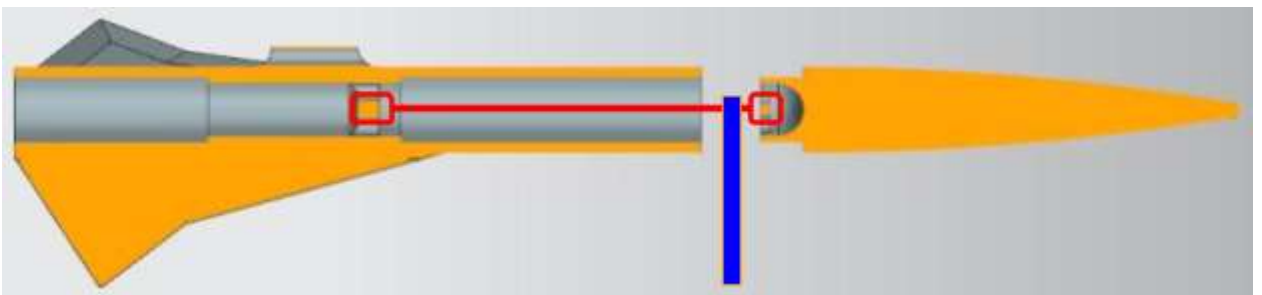


Figure 6: Shock Cord Attachment Nose Cone Cross Section

6. The motor needs to be a snug fit into the rocket, use a piece of tape on the side of the motor to ensure snug fit. Adjust amount of tape as needed.
7. Flight Characteristics can be verified through the provided OpenRocket file.
8. Once the motor is placed, go out to the launch pad and enjoy.

