Selecting Hardware

The nose cone mount system has been tested to withstand at least 110 lbs of force applied to the eyebolt without damage. This exceeds the opening strength of many non-forged eyebolts. Therefore, it is recommended to use a forged eye bolt with a shank length of 29 - 31 mm. The nut capture within the sled is approximately 11 mm in diameter which is ideal for most 1/4-20 nylon lock nuts (M6 is also a good choice). You can however use any nut that fits. In the case that the nut is too small to be captured while turning you can wedge a small screwdriver or other tool along the nut while tightening the eyebolt. Care should be taken to ensure the nut cannot spin free during descent, therefore we recommend the use of nylon lock nuts or thread lock whenever attaching an anchor point. 1/4-20 Stainless steel welded eye bolts with 1.5 inch shanks are available in our shop. Swivels inserted between the eyebolt and shockcord also help protect the anchor point from becoming free. These choices again are the responsibility of, and at the sole discretion of, the flyer.

Secure your sled

Eggfinder mini sled used as example in pictures: The nose cone mount system has been tested with the stock fiberglass bulkhead placed between the bulkhead and the sled. This is the recommended configuration. In the event a stock fiberglass bulkhead is not available, we would recommend a fender washer that extends as close as possible to the edge of the bulkhead. In testing we have omitted the washer and fiberglass bulkhead, and still applied up to 110 lbs of force to the attachment point without damage. Test fit the entire stack (sled with nut - fiberglass bulkhead/fender washer - Printed nose cone bulkhead), and measure the required shank length for your eyebolt (likely in 26-31 mm range). Cut your eye bolt to length, and screw the assembly together taking care to torque the base of the sled, and not the top during assembly.

Drilling the Nose Cone Shoulder

When using the Nose Cone mount it is imperative that the holes in the shoulder be drilled as to be in alignment with those printed into the bulkhead. When using the drill alignment guide the thin part must be flush with the AFT END of the nose cone shoulder/coupler. This is easily accomplished by standing the nose cone on a table and holding the drill guide flush with the table. One hole is then drilled with a 1/8” bit, the drill guide removed and the hole tapped for M4-0.7. Replace the drill guide and insert an M4 set screw through the guide and part being drilled to ensure they remain indexed. Drill remaining holes and tap as before being careful to maintain the guide flush with the bottom of the shoulder/coupler.

Final Assembly and Flight

When it's time to fly there are a few simple steps. Hook up the power, and properly secure the connector to something to support it in flight...I like to tape the JST connectors, and cable tie them to a fixed point for support, usually a battery support cable tie. Next, carefully slide the bulkhead assembly into the nose cone and secure with three M4 set screws, making sure that the screws are recessed into the nose cone shoulder sufficiently that they do not interfere with the airframe - nose cone fit, and therefore, safe ejection.