Yagi Antenna Post-Build Estimate SRT-3 2/17/16

# Recycled Resources From Prototype

**Aluminum elements (1-reflector) excluding # 4.**

Most likely in order to not have to re-order another segment of quarter inch aluminum tubing we will be reusing the elements from the prototype antenna excluding antenna element number 4 which had a slight manufacturing error and would be replaced with some of the scrap tubing from our first aluminum segment.

**Balun (RPSMA Connector Female)**

The balun or at least the connector will be reused in order to buy one new RPSMA connector and not have to order two new ones.

**3D Printed Insulating Brackets for Elements**

The insulating brackets can be reprinted again easily if required but reusing the brackets from the prototype will cut down manufacturing time for the two final antennas.

# Replaced Resources From Prototype

**Folded Dipole**

The dipole will be replaced from the prototype due to a slight manufacturing error. This will allow me to build two new dipoles with higher precision and experience for the final antennas.

**Boom**

More than likely the boom will be replaced with a scrap square metal boom of slightly longer distance in order to have a stronger antenna and space for mounting to tripod, beam, ect. (All elements including driven element must remain insulated in order to remain within calculator dimensions)

**3D Printed Folded Dipole Mounting Bracket**

The 3D printed insulating mount for the folded dipole will have to be slightly redesigned and reprinted for easier mounting capabilities and angle retention.

# New components for Post-Prototype Build

**Rubber End Caps** [**http://www.mcmaster.com/#2517t31/=116pkc0**](http://www.mcmaster.com/#2517t31/=116pkc0) **24 required**

Optional for order. Will make our antenna look very cool and protect the elements from small impacts or bends.

**3D Printed XBee Housing (x2)**

The housing box for the Xbee’s and USB modules can be easily printed at no particular cost to the team and will be required for the two final Yagis regardless of whether the antenna is homemade or commercial.

**Aluminum Section for Second Set of Elements**

The majority of the remaining 6 foot aluminum tubing we ordered will be used to manufacture new antenna elements and along with the reused prototype elements we will have enough elements for both final antennas.

**RPSMA Coax Connector 1 or 2 required** [**http://www.digikey.com/product-search/en?mpart=CONREVSMA012&vendor=343**](http://www.digikey.com/product-search/en?mpart=CONREVSMA012&vendor=343)

The closest I could find on digi Key to the RPSMA Jack we have on the balun. It is the same just at a 90 degree angle and would still connect fine.