

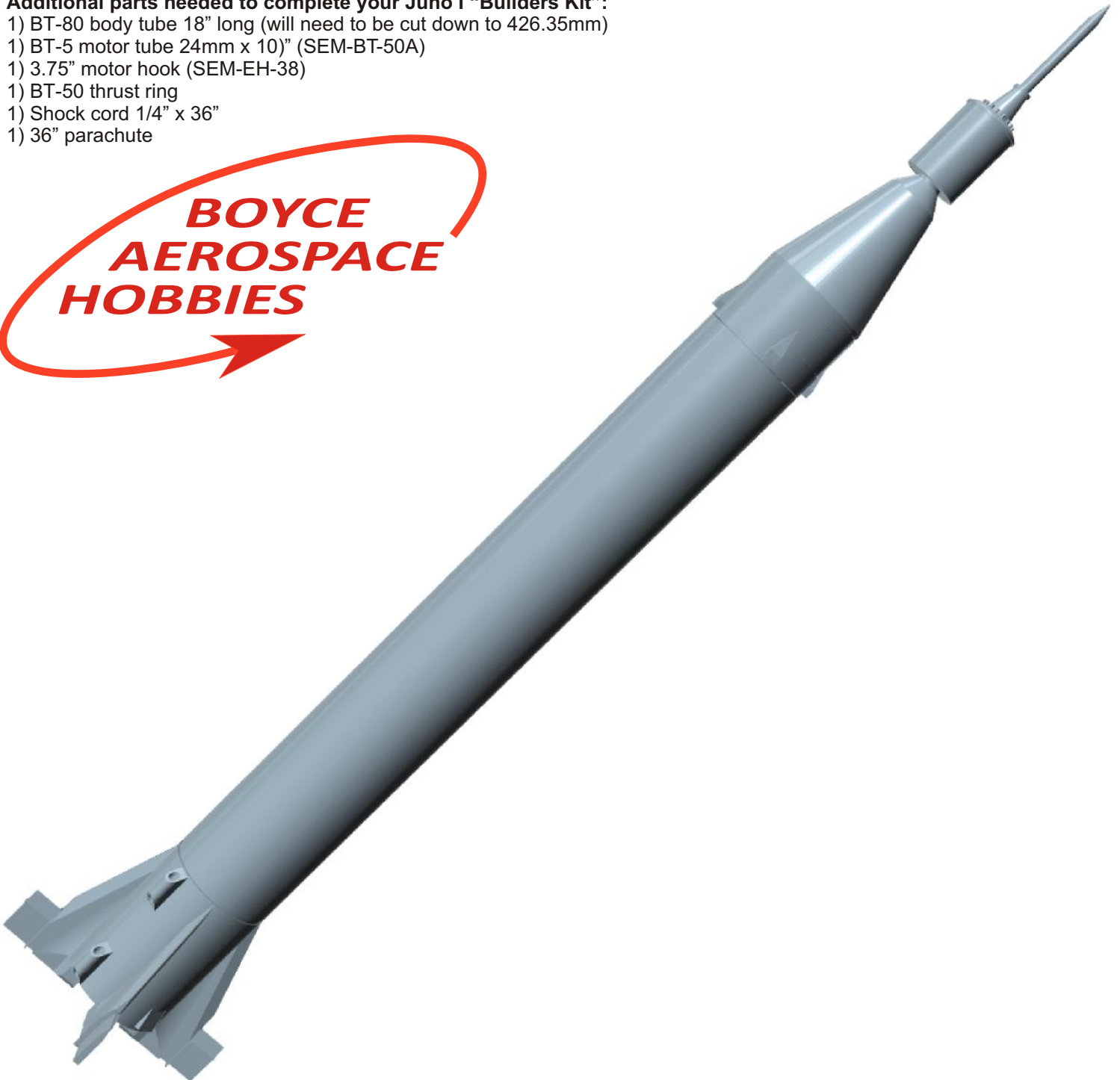
I-27TH SCALE JUNO I BUILDERS KIT BT-80

DISCLAIMER - *The products sold by Boyce Aerospace Hobbies are intended for display and/or flight with use of explicitly stated model rocket motors. Launching of model rockets may be dangerous; use our products at your own risk. Boyce Aerospace Hobbies is not responsible for any damages or injuries incurred from the use or misuse of our products. Our kits are not intended to be modified or used with motor sizes different than stated. The product should be purchased by an adult and if used by a minor, under the supervision of a parent at all times.*

Additional parts needed to complete your Juno I "Builders Kit":

- 1) BT-80 body tube 18" long (will need to be cut down to 426.35mm)
- 1) BT-5 motor tube 24mm x 10" (SEM-BT-50A)
- 1) 3.75" motor hook (SEM-EH-38)
- 1) BT-50 thrust ring
- 1) Shock cord 1/4" x 36"
- 1) 36" parachute

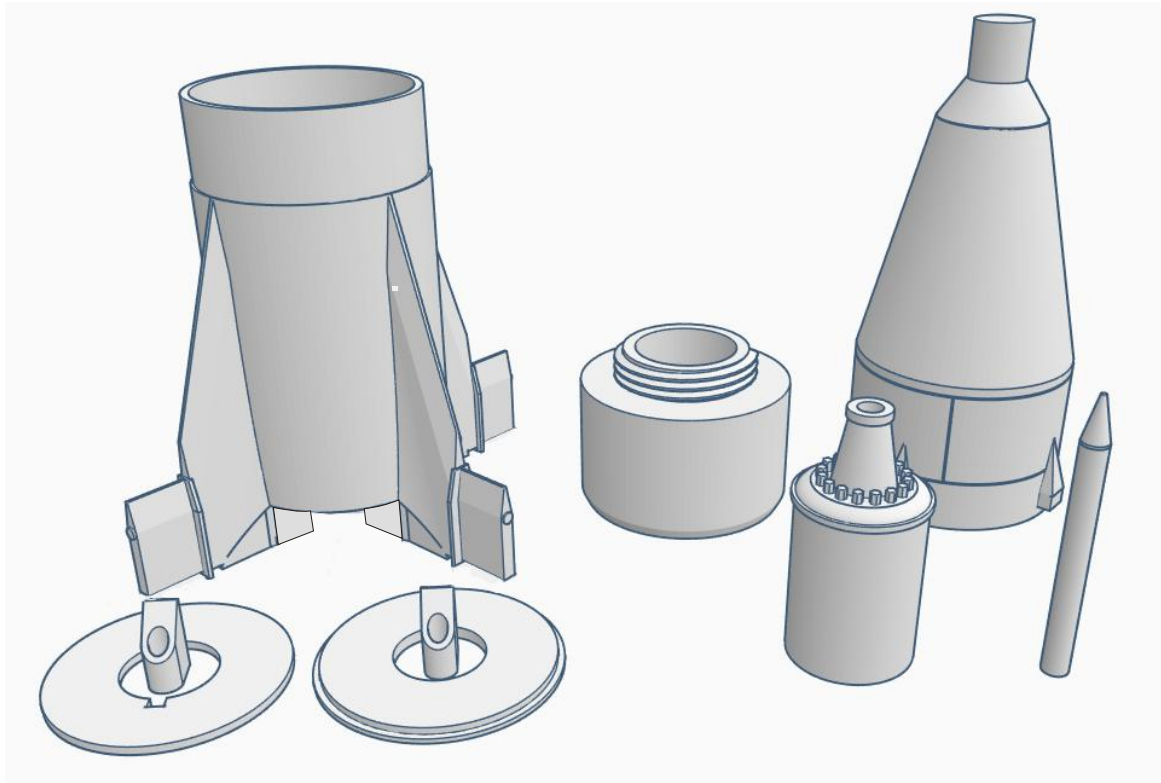
**BOYCE
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1/27th Scale Juno I Builders Kit (BT-80)

Thanks for purchasing a Boyce Aerospace Hobbies Juno I "Builders Kit". These instructions cover the building and flying of the Redstone Juno 1. Please read all directions prior to beginning the assembly of your model. Please visit us at: boyceaerospacehobbies.com

Your Juno I "Builders Kit" will contain the following parts:



Additional parts needed to complete your Juno I "Builders Kit":

- 1) BT-80 body tube 18" long (will need to be cut down to 426.38mm)
- 1) BT-5 motor tube 24mm x 10" (SEM-BT-50A)
- 1) 3.75" motor hook (SEM-EH-38)
- 1) BT-50 thrust ring
- 1) Shock cord 1/4" x 36"
- 1) 36" parachute

Additional modeling supplies needed to complete your kit:

Super glue (CA) or ABS glue
400 Grit wet dry sandpaper
Assorted modeling paints

220 grit wet dry sandpaper
Automotive sandable grey primer paint
Blue painters tape

Prior To Assembly

Test fit all parts for proper fit with all body tube and each other where applicable. Sand with 220 grit sandpaper until a proper fit is achieved. At this point the part surfaces should carefully be sanded with 220 grit sandpaper until smooth to the touch, Use new sandpaper and let the sandpaper do the work. Once the parts are smooth to the touch thoroughly clean them with warm soapy water and allow to dry. When dry, spray the parts with a good quality sandable automotive primer. Make sure to evenly coat all parts. When dry give the parts a second coat. After both coats of primer have dried completely wet sand the parts in a bucket of water (or the sink if your wife's not around) with 400 grit sandpaper. Inspect the parts and give the model additional coats of spray primer focusing on the areas that need attention. Wet sand again with 400 grit wet/dry paper. Repeat the process as many times as needed.

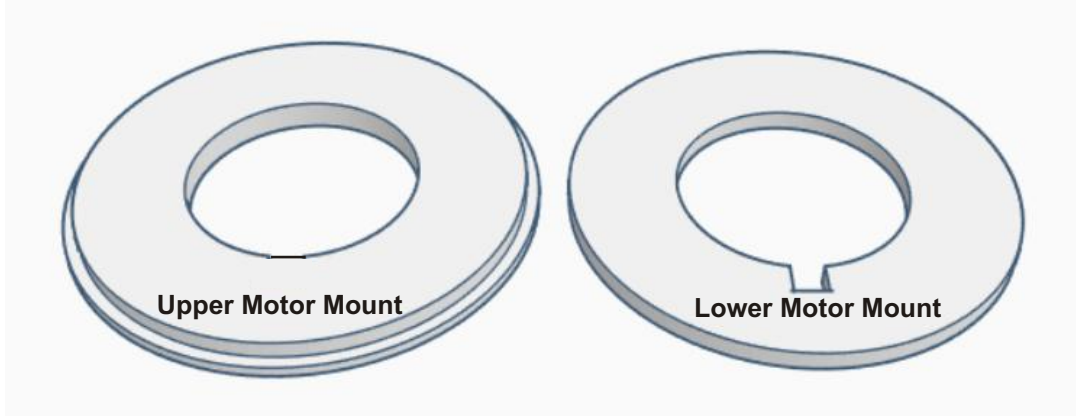
Avoid using spray primer on the screw on shoulder. It is not visible when the model is displayed and the primer will make it difficult to screw the shoulder onto the nose cone and will also create friction between the shoulder and the body tube increasing the possibility that the nose cone will not clear the body tube at motor ejection. Painting the parts of the model is not recommended until sub assemblies are done.

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Fin Can Assembly

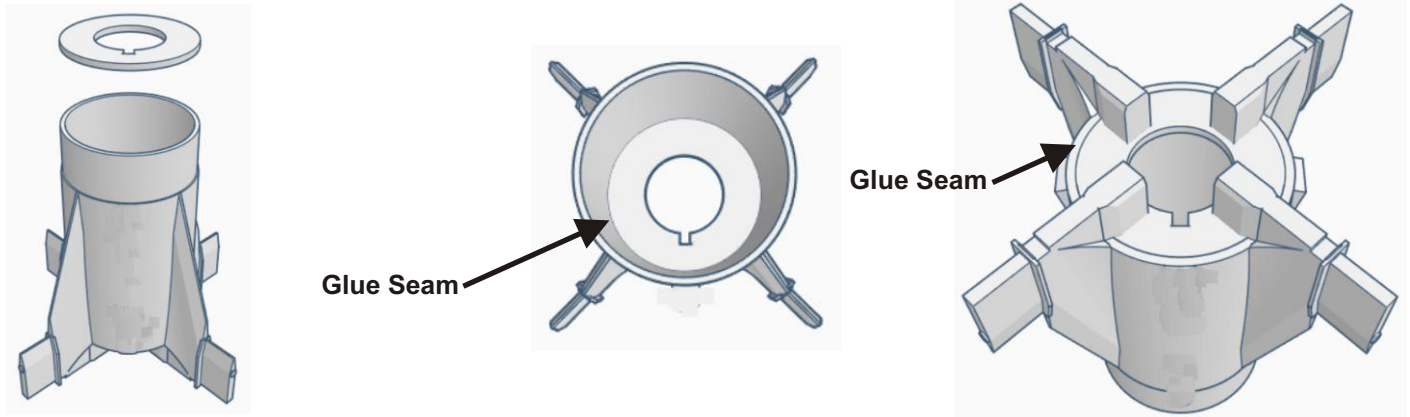
1

Sand the inside hole edges of both motor mounts until they are a nice slide fit with your 24 mm motor tube. Test fit both motor mounts into the fin can. The lower mount should slide all the way to the bottom of the fin can. The upper mount will just fit on the top of the fin can.



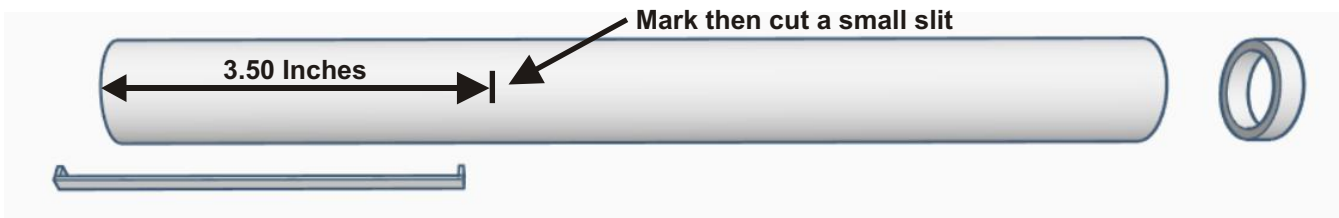
2

Install the lower motor mount into the fin can with the motor retainer notch aligned with the launch lugs on the fin can. Apply super glue (CA) to the mount from inside the fin can. Roll the fin can at an angle to spread the super glue all the way around the mount. When dry carefully apply super glue to the joint between the motor mount and the fin can allowing the glue to wick into the joint.



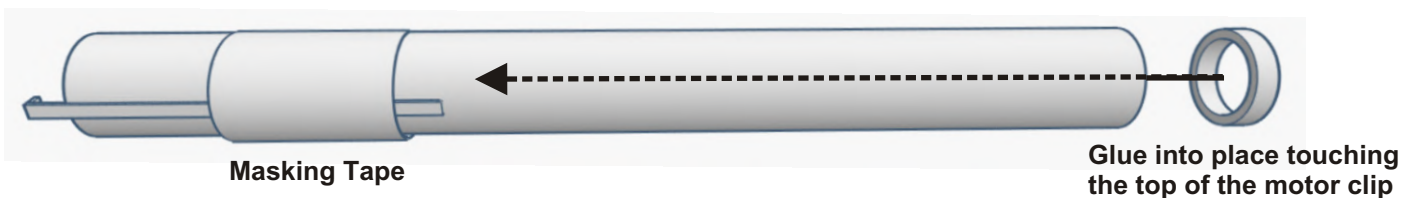
3

Using a pencil mark on end of the 24 mm motor tube at a point 3.5 inches from one end. Using a hobby knife cut a small slit in the tube at the mark for the end of the motor retention clip.



4

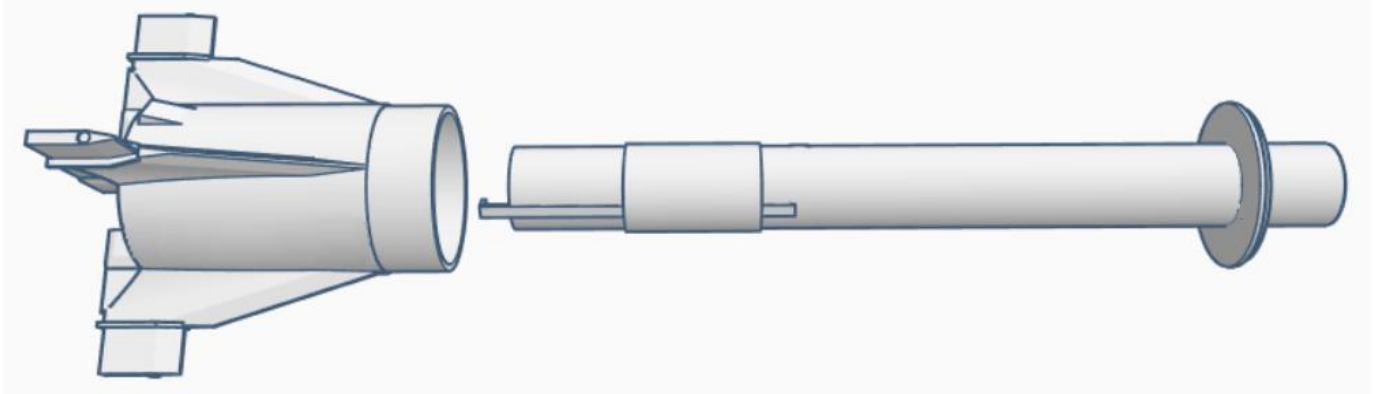
Install the motor retention clip and masking tape in place as shown. Using a dowel stick spread white glue in the motor tube just above the top of the motor clip. Use the dowel stick to slide the motor block into place.



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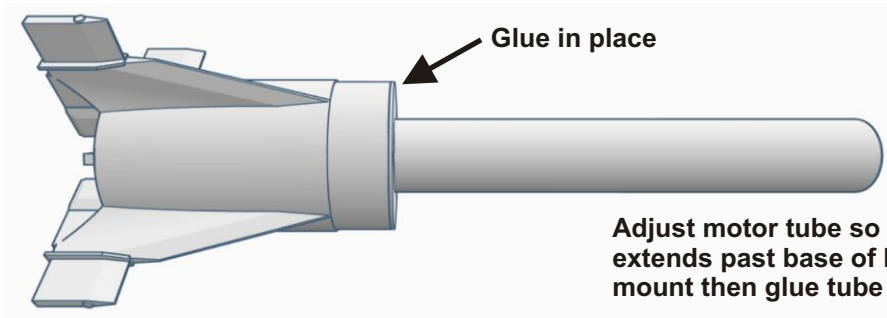
5

Slide the top motor mount onto the motor tube and slide the assembly into the fin can as shown.

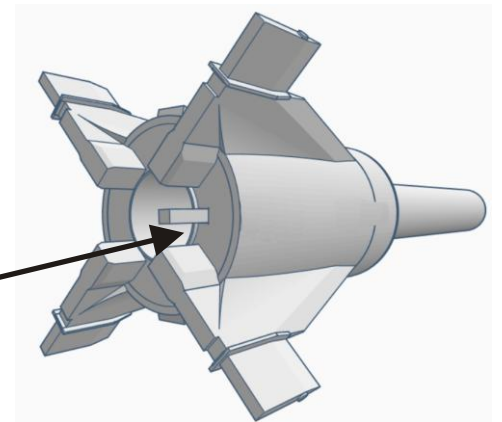


6

Super glue the top motor mount onto the top of the fin can. After the glue has dried adjust the motor tube so just 1/8th of an inch of the motor tube extends past the bottom motor mount of the fin can. Super glue the motor tube in place from both sides of the fin can.



Adjust motor tube so 1/8th inch extends past base of bottom mount then glue tube in place

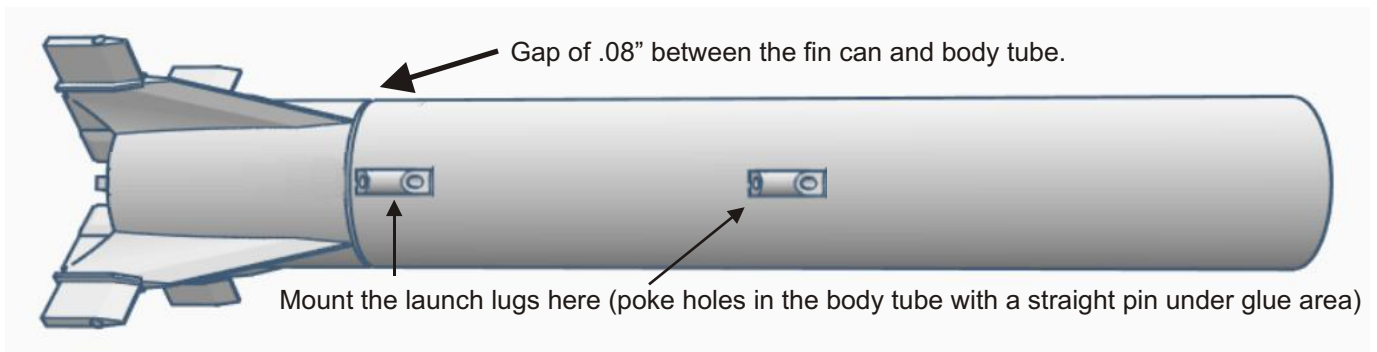


7

Using a sharp hobby knife cut the BT-80 body tube to the following dimensions for the "Builders Kit" you purchased:

For the Juno I cut the body tube to a length of 16.7866 inches (426.38mm).

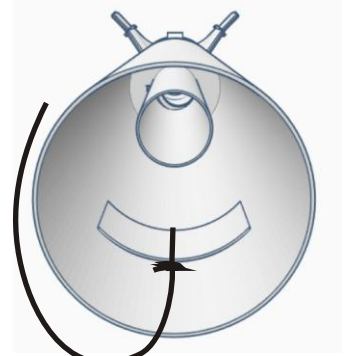
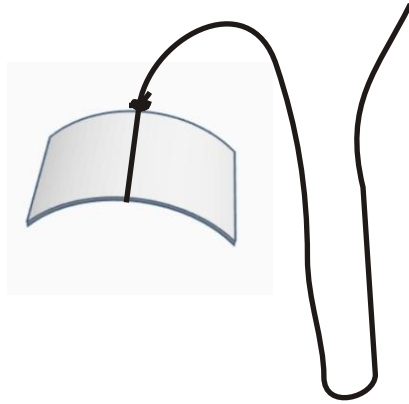
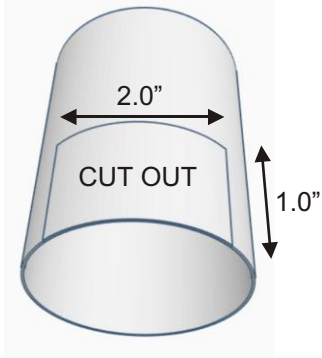
Super glue the body tube to the fin can leaving a gap of .08 inches then attach the launch lugs as shown.



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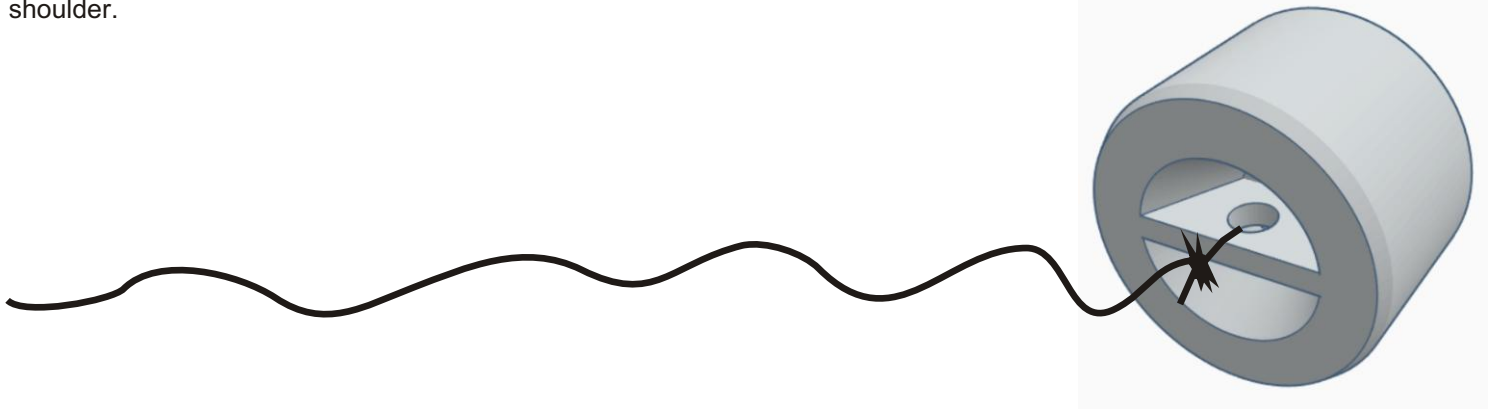
8

Take the short section of body tube that remains after the tube was cut down. With scissors or a sharp hobby knife cut a section out of the scrap tube as shown below. Wrap your shock cord around the piece, tie a knot, and glue it into the top end of your body tube making sure it is deep enough in the tube to clear the nose cone shoulder when the cone is in place.



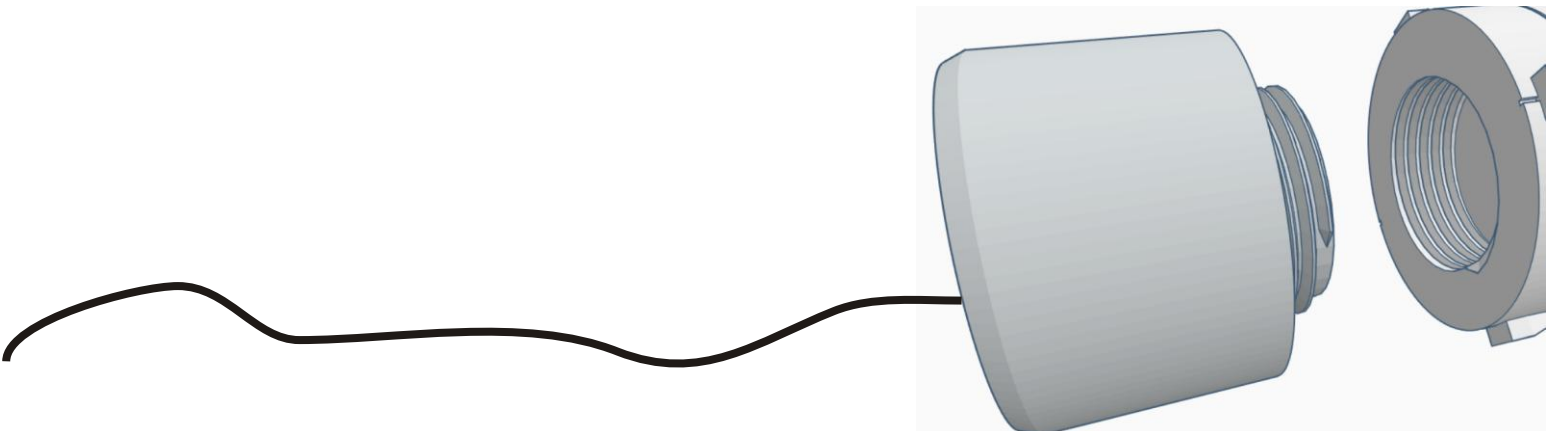
9

Attach the shock cord from your rocket to the screw on shoulder as shown. Before flight attach a 36\" parachute to the screw on shoulder.



10

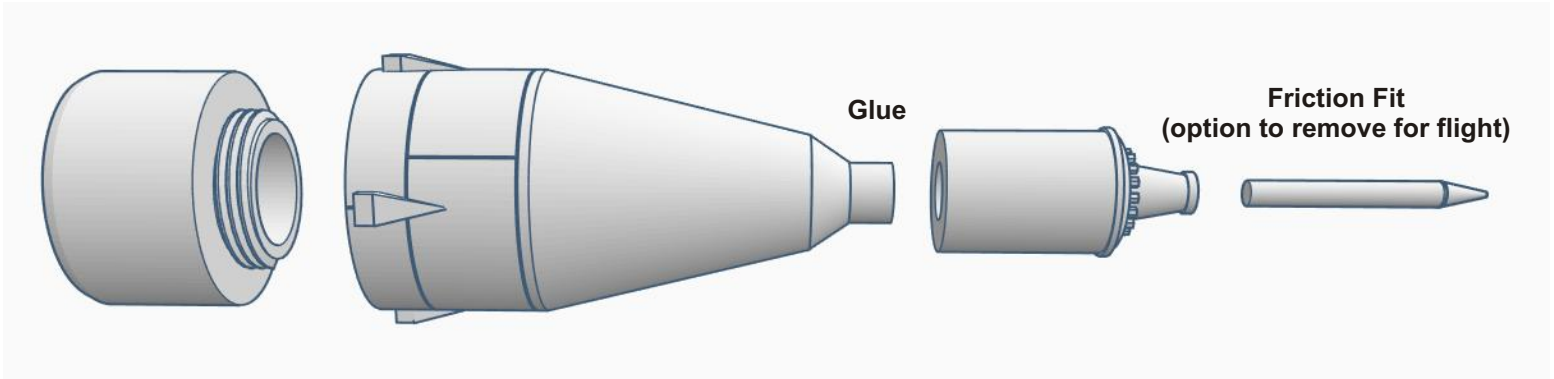
Screw the nose cone shoulder onto the nose cone of the "Builders Kit" you purchased. Slide the nose cone into place on the body tube.



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Assembly Of Nose Cone

11



IMPORTANT!

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Put a Estes E12-4 rocket motor in the model, add recovery wadding and 36" parachute. Add clay (pack it tightly with a finger) to the inside of the screw on shoulder, screw the nose cone on, and balance the model until it balances at the required C.G. (center of gravity) as shown below. When the model balances correctly mix up a small amount of 5 minute epoxy and carefully pour it over the clay to lock it in position. When the epoxy has cured complete the model by screwing the shoulder to the bottom of the nose cone.



Failure to adjust the models C.G. to the position shown will result in a unstable flight that could injure someone, damage personal property and damage or destroy your model.

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Estes E12-4 or larger 24mm Aerotech's are the recommended flight motors for Redstone "Builders Kits".

