

1/9th Scale Honest John “Builders Kit”

Thank you for purchasing a Boyce Aerospace Hobbies BT-80 Honest John “Builders Kit”. Please review the drawings below before gluing and assembling your kit. Visit us at boyceaerospacehobbies.com

Additional parts needed to complete your 1/9th scale Honest John model:

- 1) BT-80 x 18” body tube.
- 1) 29mm LOC motor tube long enough to be cut to 12 inches in length.
- 1) 29mm screw on motor retainer (Estes recommended).
- 1) 29mm to BT-80 wood centering ring.
- 1) Small “U” bolt with nuts and washers.
- 1) Length of shock cord 4 feet long.
- 1) Length of Heavy Kevlar 4 feet long
- 1) 36 inch parachutes.

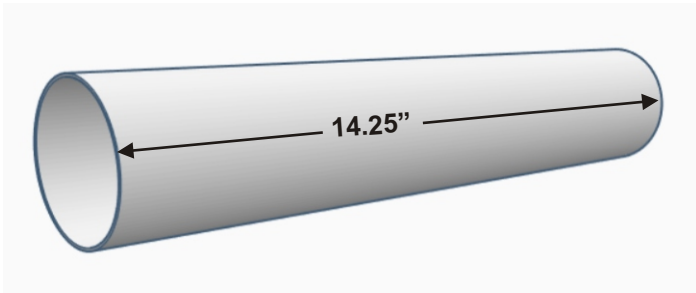
Prepare all 3D printed parts for finishing first. Sand and use fillable primer as shown in the following Youtube video tutorial:

<https://www.youtube.com/watch?v=0vgynnYzo08>

Do not sand or primer surfaces that will be glued together. Make sure to check the fit of each part in relation to other parts during assembly and sand as required for a good fit.

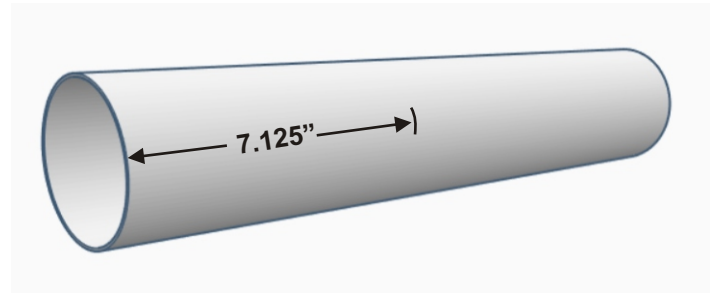
1

Cut a length of BT-80 to 14.25 inches.



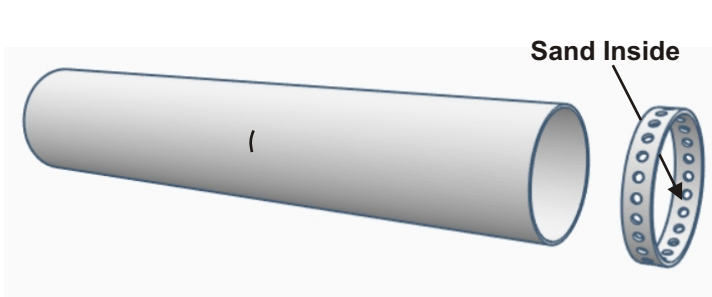
2

Mark the mid way point of the tube (7.125 inches) with a pencil.



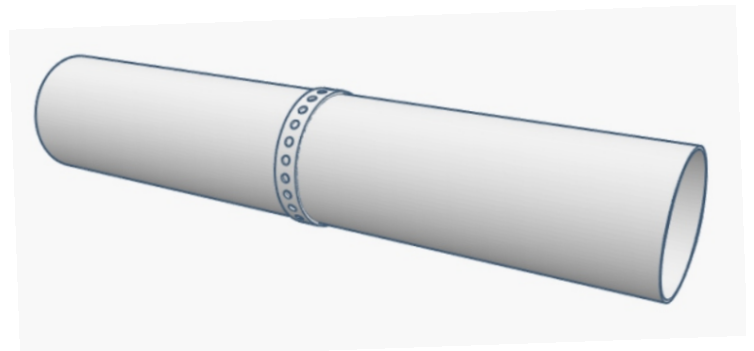
3

Sand the inside of the motor band with holes until it slides down the BT-80 easily.



4

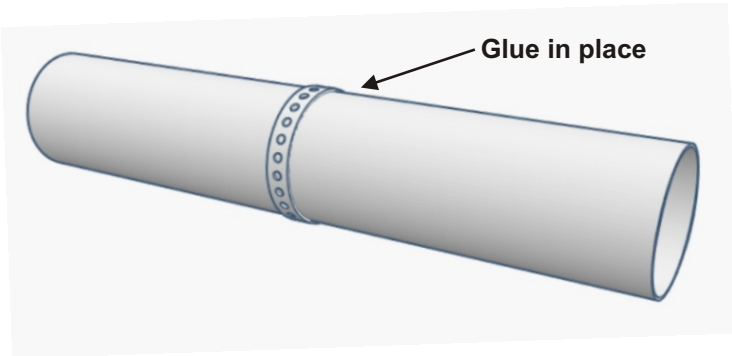
Slide the motor band to the mid point mark.



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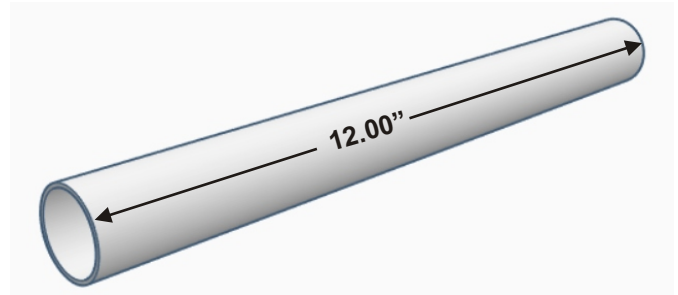
5

CA glue the band to the tube (wick CA under each side of the band).



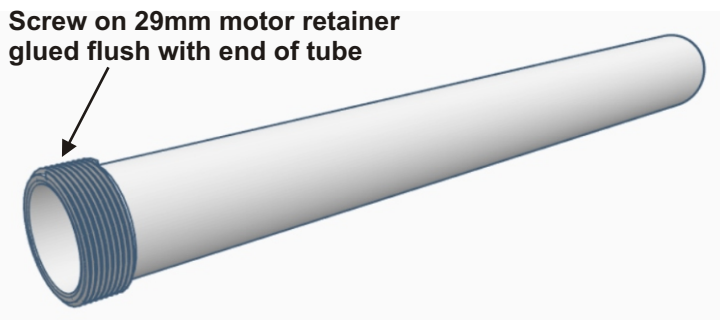
6

Cut a length of 29mm motor tube 12 inches long.



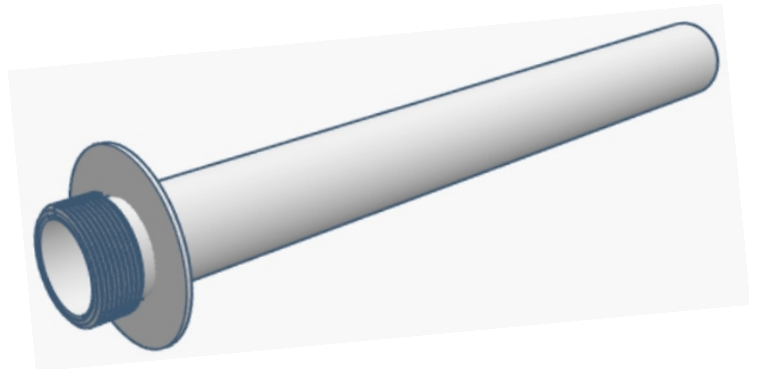
7

Glue on the Estes screw on motor retainer flush to one end of the tube.



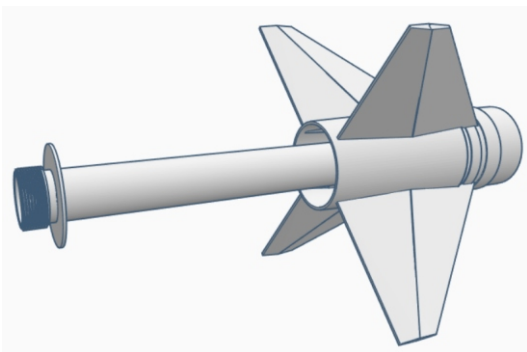
8

Slide the rear bulkhead onto the tube and position it next to the glued on motor retainer.



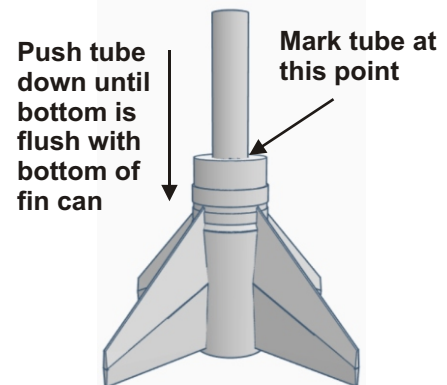
9

Slide the motor tube into the rear of the fin can to check for fit. Sand as needed. Place a 29 mm motor in the tube, secure the retainer, and slide the tube in place.



10

With the fin can on a flat surface push the tube down until the bottom of the screw on retainer is flush with the base of the fin can. Mark the tube where it exits the top of the fin can. Extract the motor tube, apply glue to the inside of the fin can, then push the tube into place making sure the mark on the tube is in the proper position.

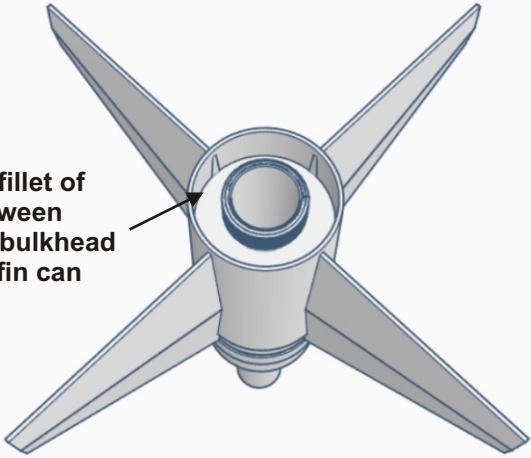


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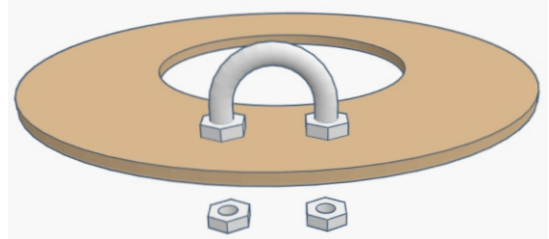
When dry, apply a fillet of glue between the rear bulkhead and the fin can. Also fillet the joint between the tube and the bulkhead.

Apply a fillet of glue between the rear bulkhead and the fin can



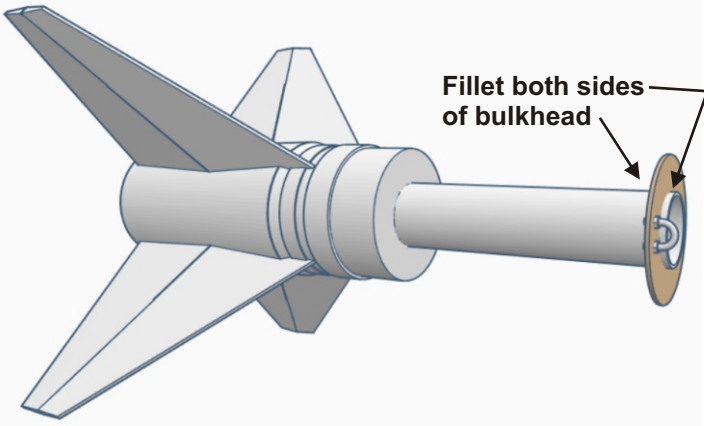
12

Attach a small "U" bolt to 29mm to BT-80 centering ring for the recovery system anchor point.



13

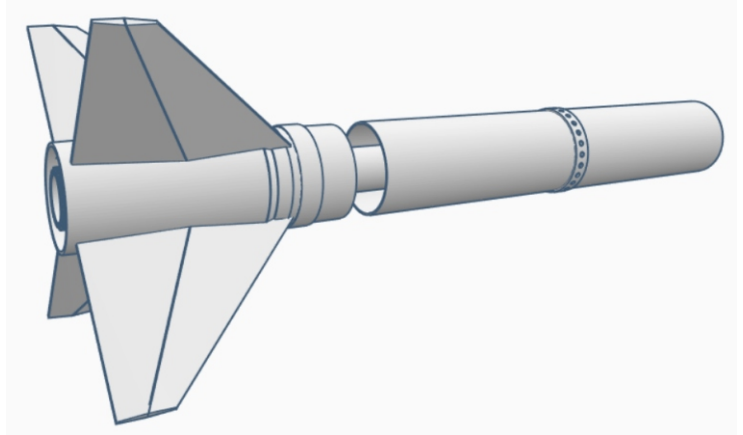
Glue the bulkhead to the end of the 29 mm motor tube and fillet both sides of it for strength.



Fillet both sides of bulkhead

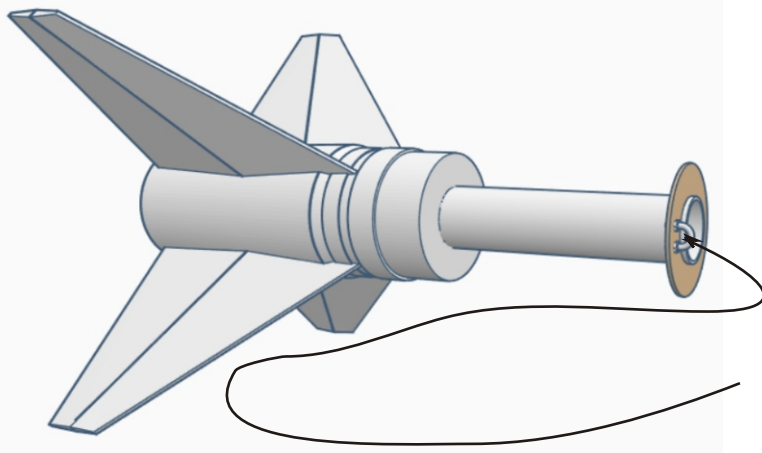
14

Test fit the entire fin can assembly into the BT-80 tube. Sand as needed.



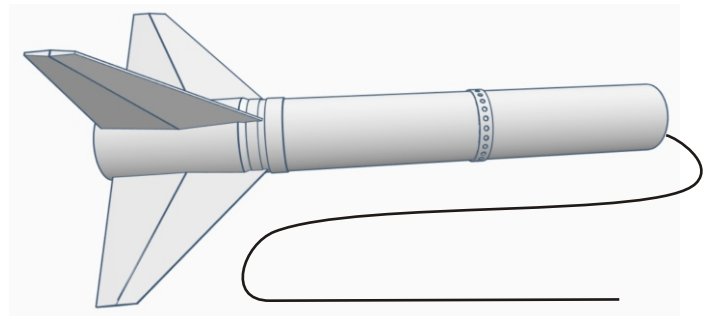
15

Attach your Kevlar cord/lead to the anchor point on the motor tube bulkhead.



16

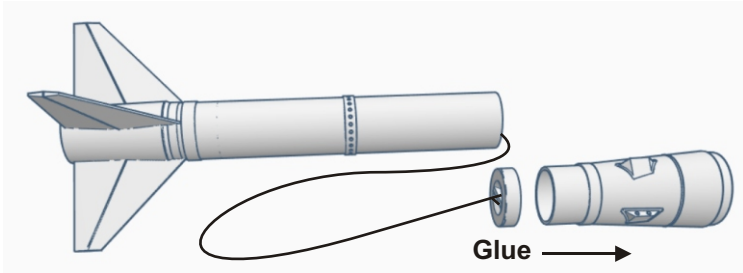
Feed the Kevlar cord through the BT-80 tube and glue the fin can and motor tube bulkhead into the tube.



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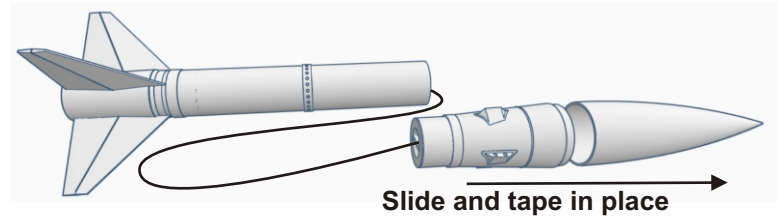
17

Attach the shock cord to the Kevlar leader. Glue the recovery system bulkhead to the bottom of the nose cone base. When dry tie the shock cord to the bulkhead.



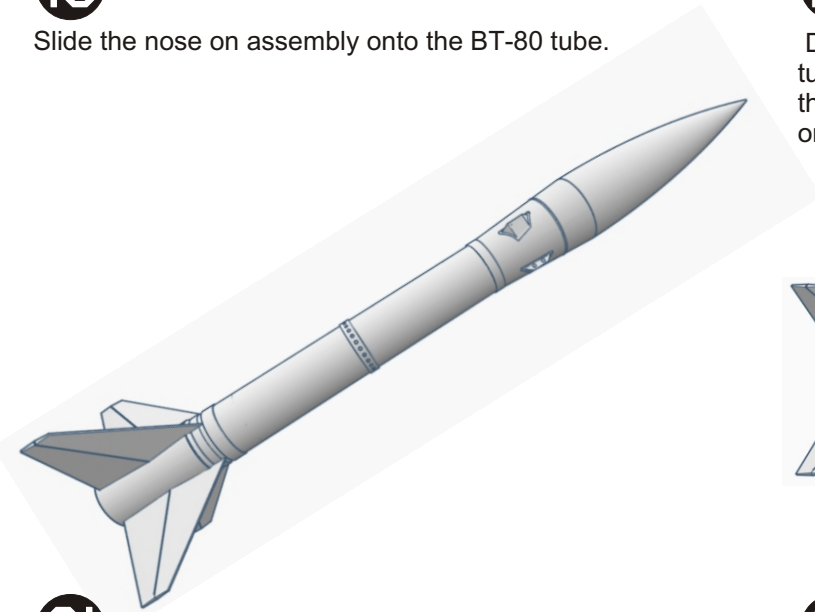
18

Slide the top of the nose cone into place. Don't glue it on yet just tape it into place!



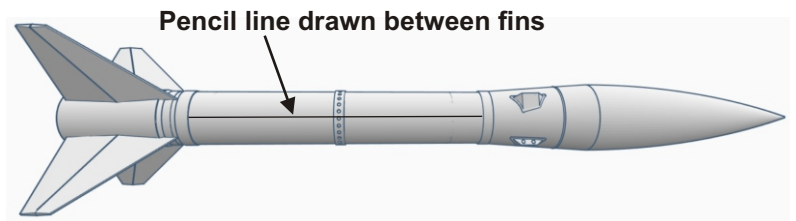
19

Slide the nose on assembly onto the BT-80 tube.



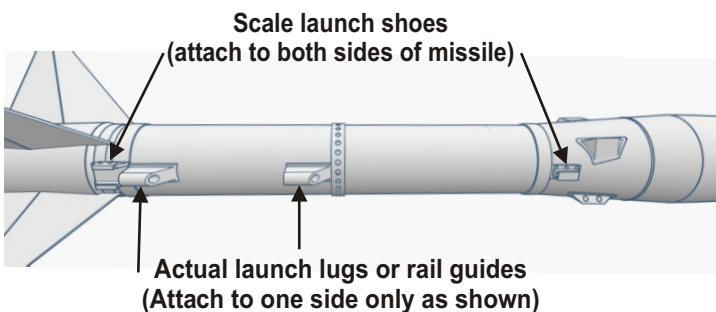
20

Determine the midpoint between two fins and mark the body tube with a pencil where it meets the fin can. Extend the line the entire length of the body tube. Repeat this process again on the opposite side of the tube.



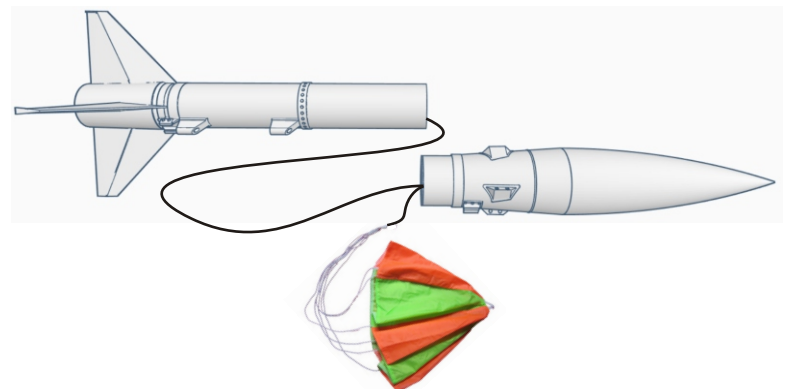
21

Attach the scale launch shoes to both sides of the model as shown. Determine if you plan to use the included 1/4 inch launch lugs or the rail guides. Attach as shown to one side of the model.



22

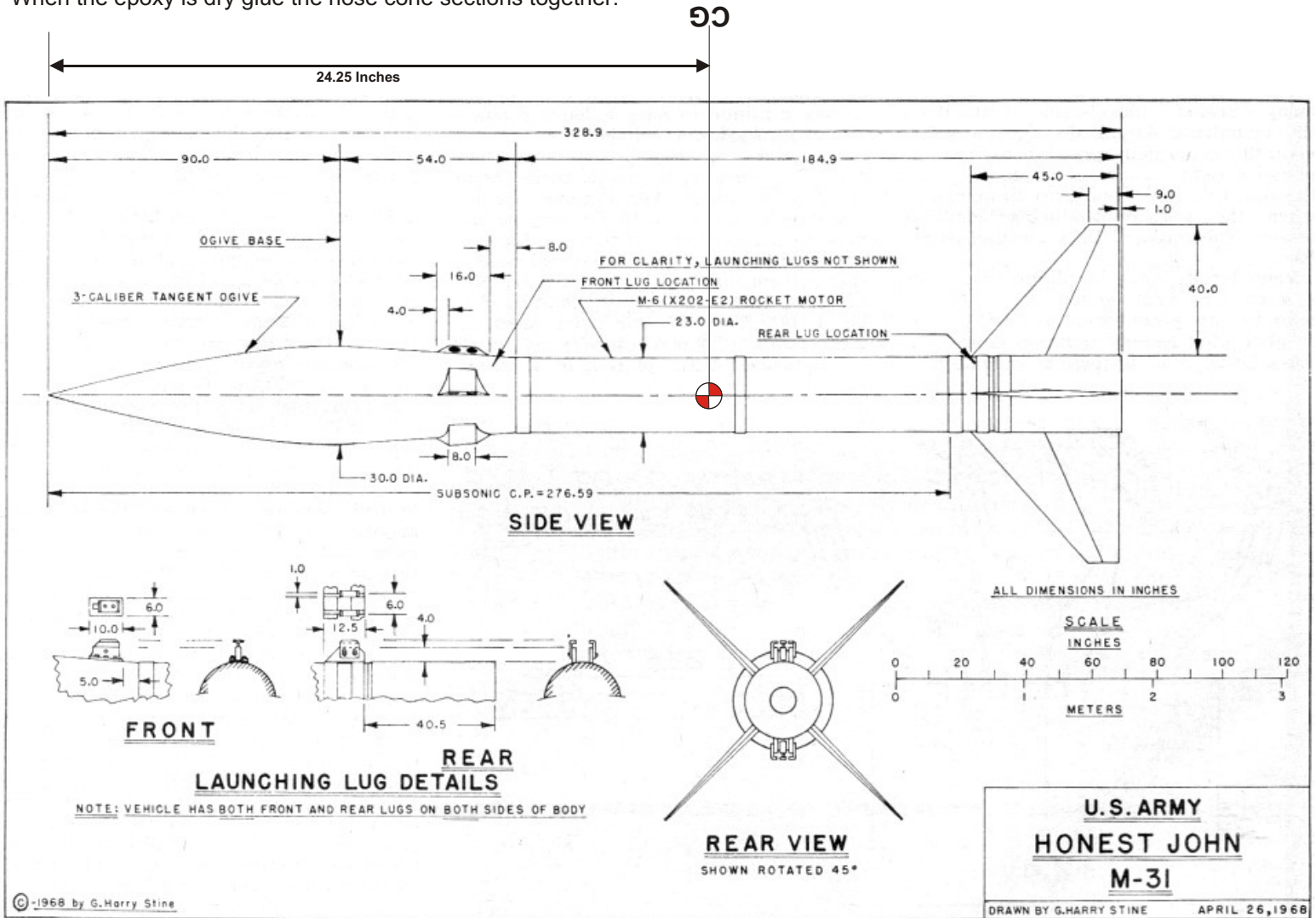
When dry attach the parachute to the model as shown and proceed to the balancing procedures on the next page.



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Balance the model as shown (with motor, recovery wadding and chute in place). Use clay packed into the tip of the nose cone. When the proper balance point (CG or Center of Gravity) has been set pour thinned 5 minute epoxy over the clay to hold it in place. When the epoxy is dry glue the nose cone sections together.



Flying your 1/9th scale Honest John

Your Honest John is a very easy model to prep and fly.

- 1) Place an adequate amount of recovery wadding in the body tube to protect the parachute.
- 2) Carefully fold your chute and wrap the shroud lines around it. Place it in the body tube along with the shock cord.
- 3) Put nose cone in place.
- 4) Load a motor from the recommended list in the model and install the ignitor per the manufacturers instructions.
- 5) Load the model on a mid power pad (either rail or 1/4 inch rod depending on which launch lugs you installed).
- 6) Sky is clear, range is clear/ 5-4-3-2-1 Launch!

Always follow the NAR safety code and fly safe!

Recommended RMS Motors:

Motor Proj.	Altitude (ft/m)
F40-4W	750 / 230
F52-5T	750 / 230
G64-4W	1350 / 410

Recommended SU Motors:

Motor Proj.	Altitude (ft/m)
F50-4T	720 / 220
G38-4FJ	950 / 290
G40-4W	1140 / 410

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Painting and detailing your Honest John kit:

There are quite a number of paint schemes used on the Honest John missile. The two easiest are depicted below which are the operational desert paint scheme and the forest paint scheme. Both operational paint schemes use the white US ARMY vinyl decals that are provided in you kit. Here’s a great set of instructions for applying vinyl graphics:

<https://locprecision.com/iq-content/uploads/LOC-PRECISION-Vinyl-Decal-Application-Instructions.pdf>

