

# I-14TH SCALE LANCE MISSILE BUILDERS KIT BT-60

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**Additional parts needed to complete your Lance Missile "Builders Kit":**

- 1) BT-60 body tube (Cut to 290.5mm)
- 1) BT-20 motor tube (Cut to 65mm)
- 1) Shock cord 1/4" x 12"-24'
- 1) 18" parachute

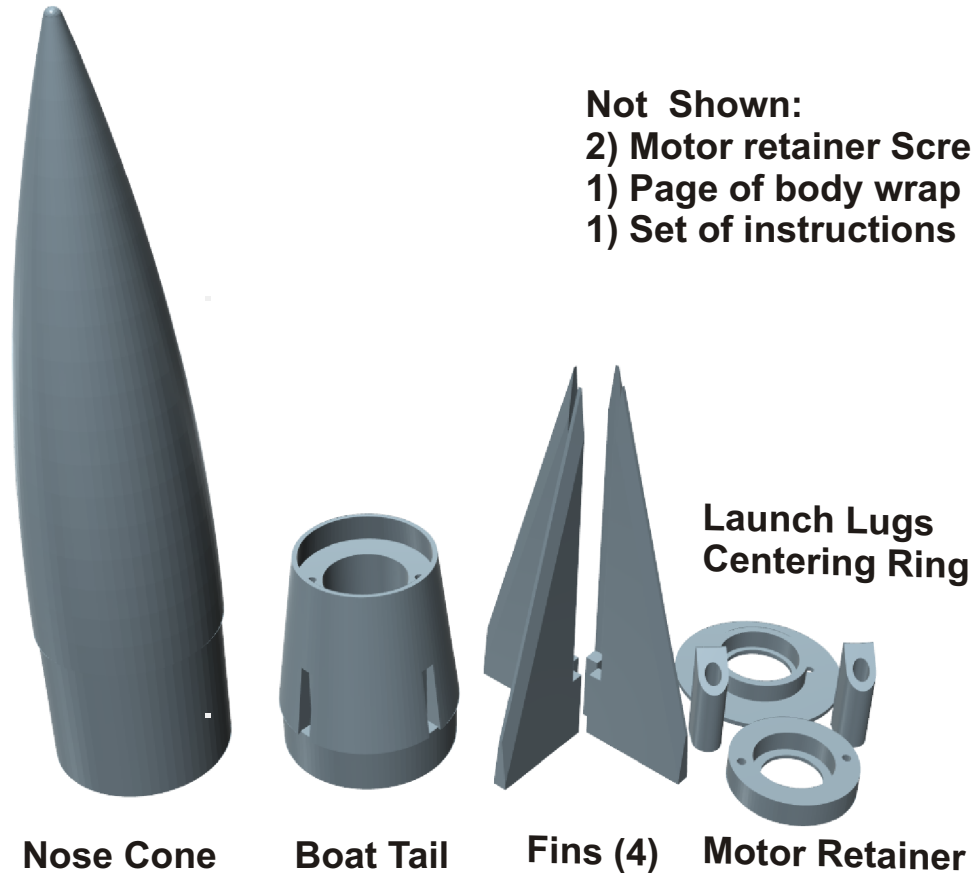
**BOYCE  
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# 1/14th Scale Lance Builders Kit (BT-60)

Thanks for purchasing a Boyce Aerospace Hobbies Lance Missile "Builders Kit". These instructions cover the building and flying of your model. Please read all directions prior to beginning the assembly of your kit. Please visit us at: [boyceaerospacehobbies.com](http://boyceaerospacehobbies.com)

Your Lance Missile "Builders Kit" contains the following parts:



**Not Shown:**

**2) Motor retainer Screws**

**1) Page of body wrap decals**

**1) Set of instructions**

**Launch Lugs  
Centering Ring**

**Additional parts needed to complete your Lance Missile "Builders Kit":**

- 1) BT-60 body tube (Cut to 290.5mm)
- 1) BT-20 motor tube (Cut to 65mm)
- 1) Shock cord 1/4" x 12" to 24'
- 1) 18" parachute

**Additional modeling supplies needed to complete your kit:**

- Super glue (CA) or ABS glue
- 220/400 Grit wet/dry sandpaper
- Sandable automotive primer paint
- Assorted spray paint paints (Olive green and gray)

## 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 or paint on the part shoulders. They are not visible when the model is completed and the primer will make it difficult to glue or slide the shoulders onto their corresponding parts. Painting the completed sub-assemblies of the model is recommended before final assembly.

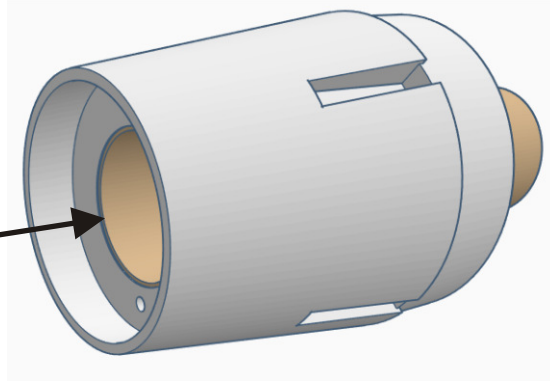
# 1/14th Scale Lance Builders Kit (BT-60)

## Fin Can Assembly

1

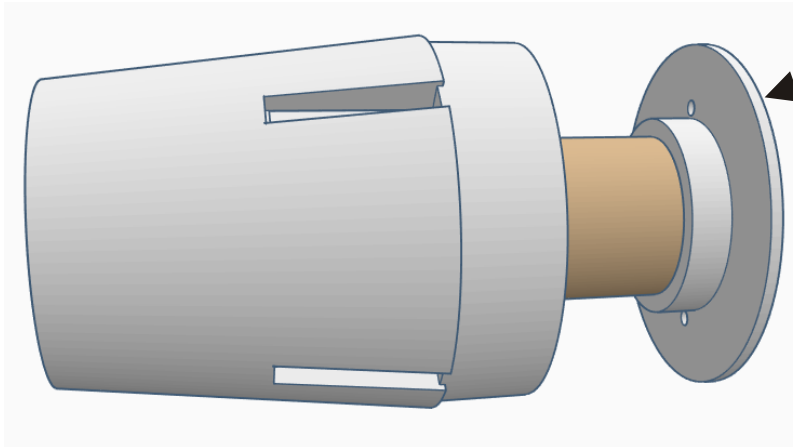
Complete the filling, sanding and painting of the boat tail. It should be painted an olive green that matches the color of the green body wrap decal. When dry assemble the motor mount as shown below.

Glue the 65mm motor tube into boat tail. Sand the hole if needed for a good fit. Make sure the rear end of the motor tube is flush with the inside rear bulkhead,



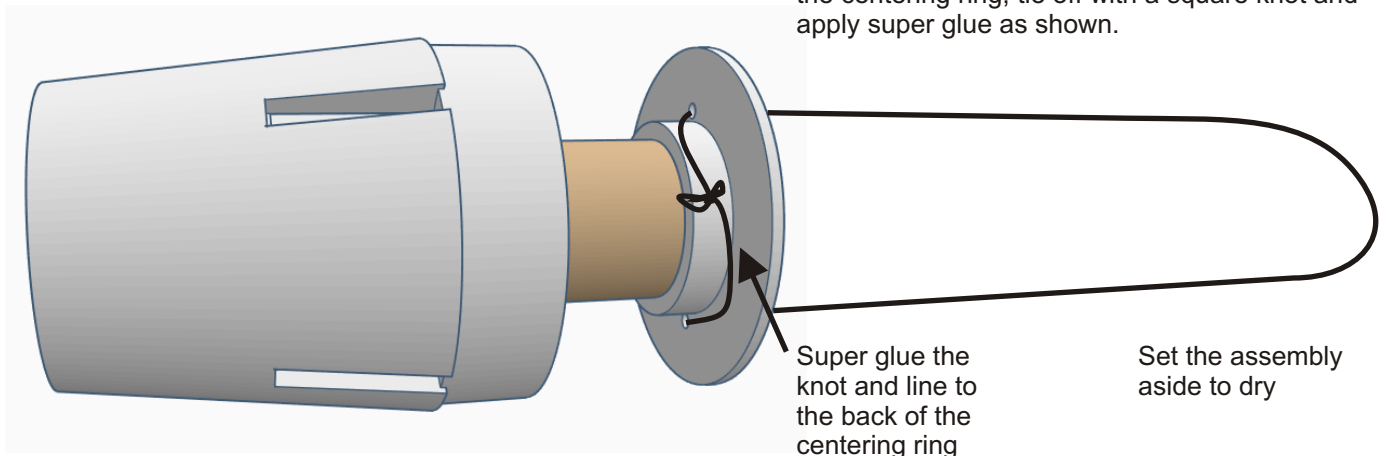
2

Glue the upper combination centering ring/motor block onto the end of the motor tube.



3

Fish the provided Kevlar line through the holes in the centering ring, tie off with a square knot and apply super glue as shown.



Super glue the knot and line to the back of the centering ring

Set the assembly aside to dry

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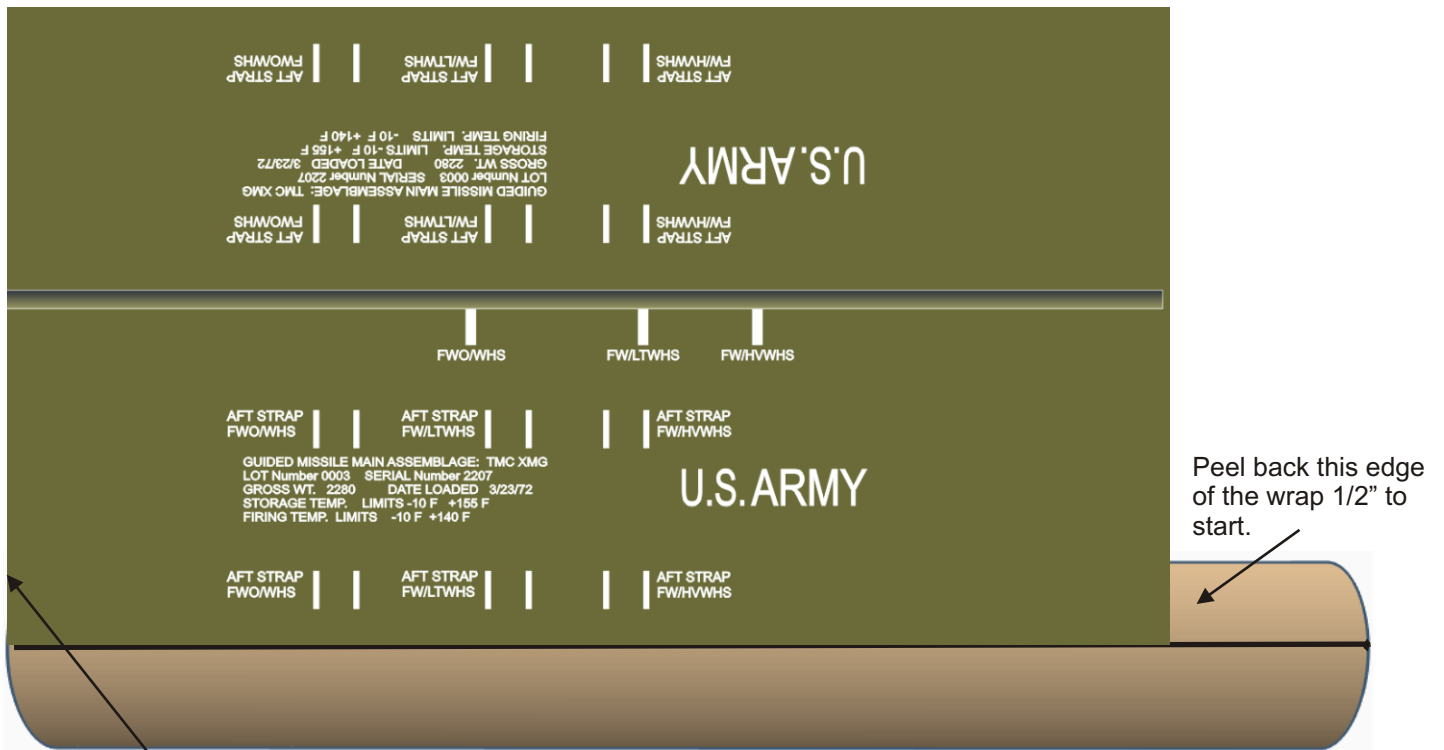
4

Cut a piece of BT-60 body tube to 290.5 mm length. Draw a pencil line parallel with the center of the tube using an angle piece of aluminum or a door jam.



5

Apply the body wrap decal as follows. Cut out the olive green decal and peel back the bottom side about 1/2 inch (when oriented as in the image below). Carefully align the peeled edge of the decal and stick it to the line on the body tube while making sure the bottom edge of the decal is aligned with the base of the tube. Test wrap the decal around the tube before peeling the rest of the decal backing off to check alignment. Adjust the decal until alignment is good then peel off the backing and roll the wrap on slowly.



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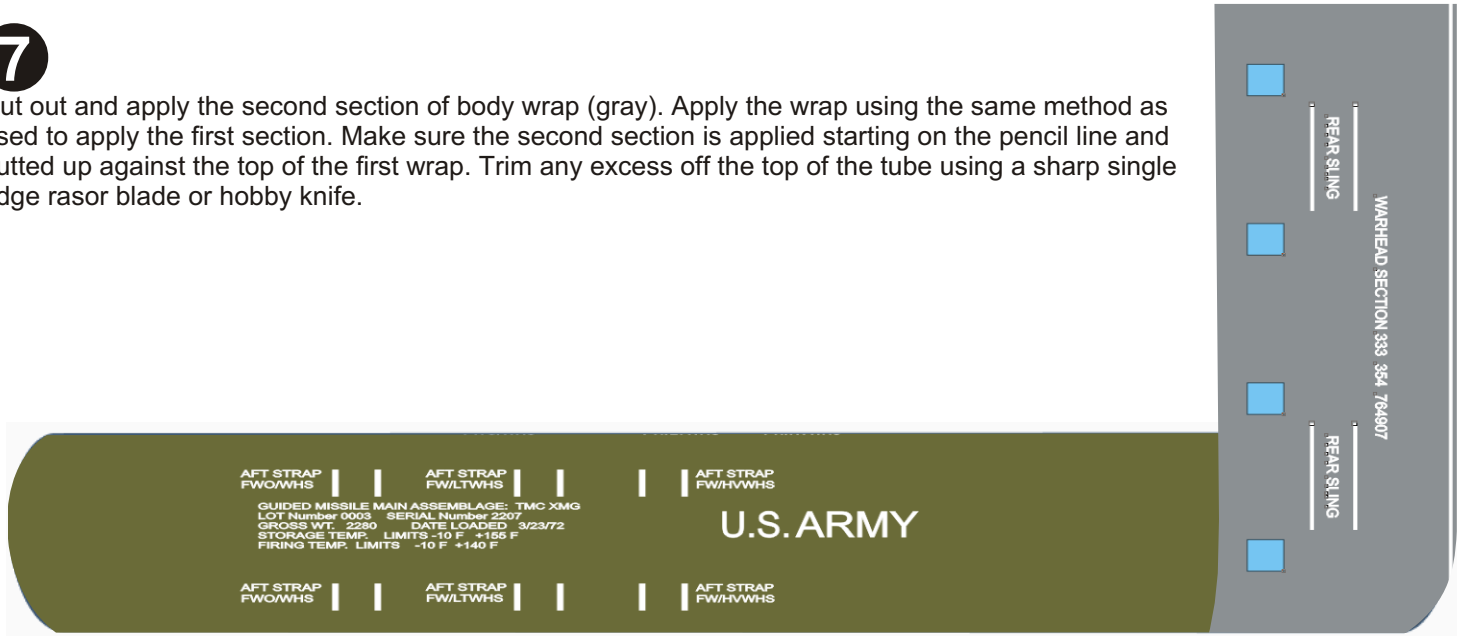
The body tube after the first section is wrapped.



# 1/14th Scale Lance Builders Kit (BT-60)

7

Cut out and apply the second section of body wrap (gray). Apply the wrap using the same method as used to apply the first section. Make sure the second section is applied starting on the pencil line and butted up against the top of the first wrap. Trim any excess off the top of the tube using a sharp single edge razor blade or hobby knife.



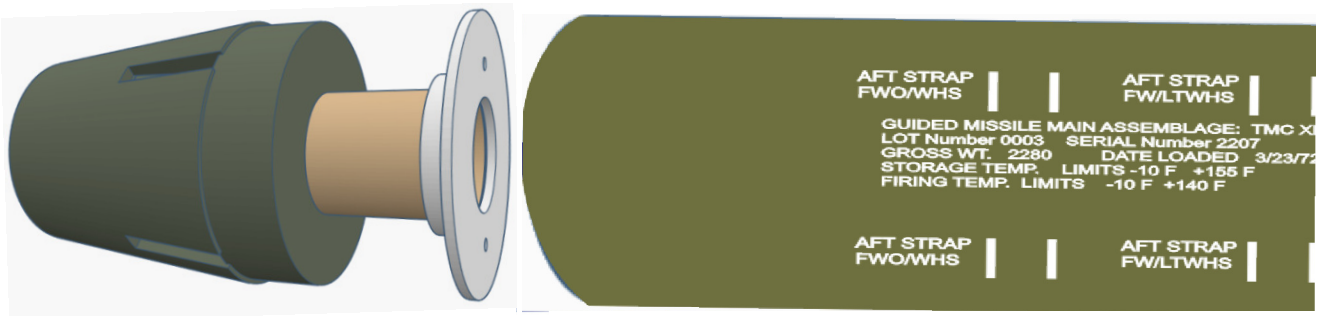
8

The body tube after both sections of body wrap are applied.



9

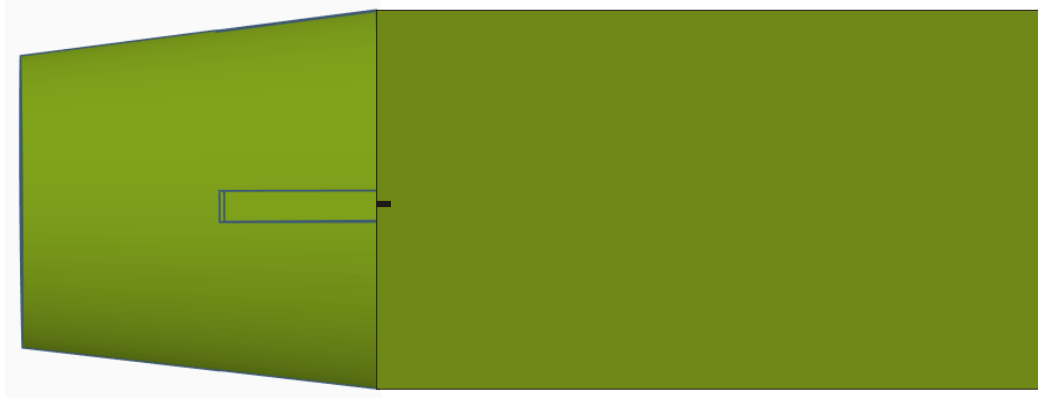
Test fit the boat tail motor mount into the base of the body tube. Sand the boat tail until a smooth slide in fit is achieved.



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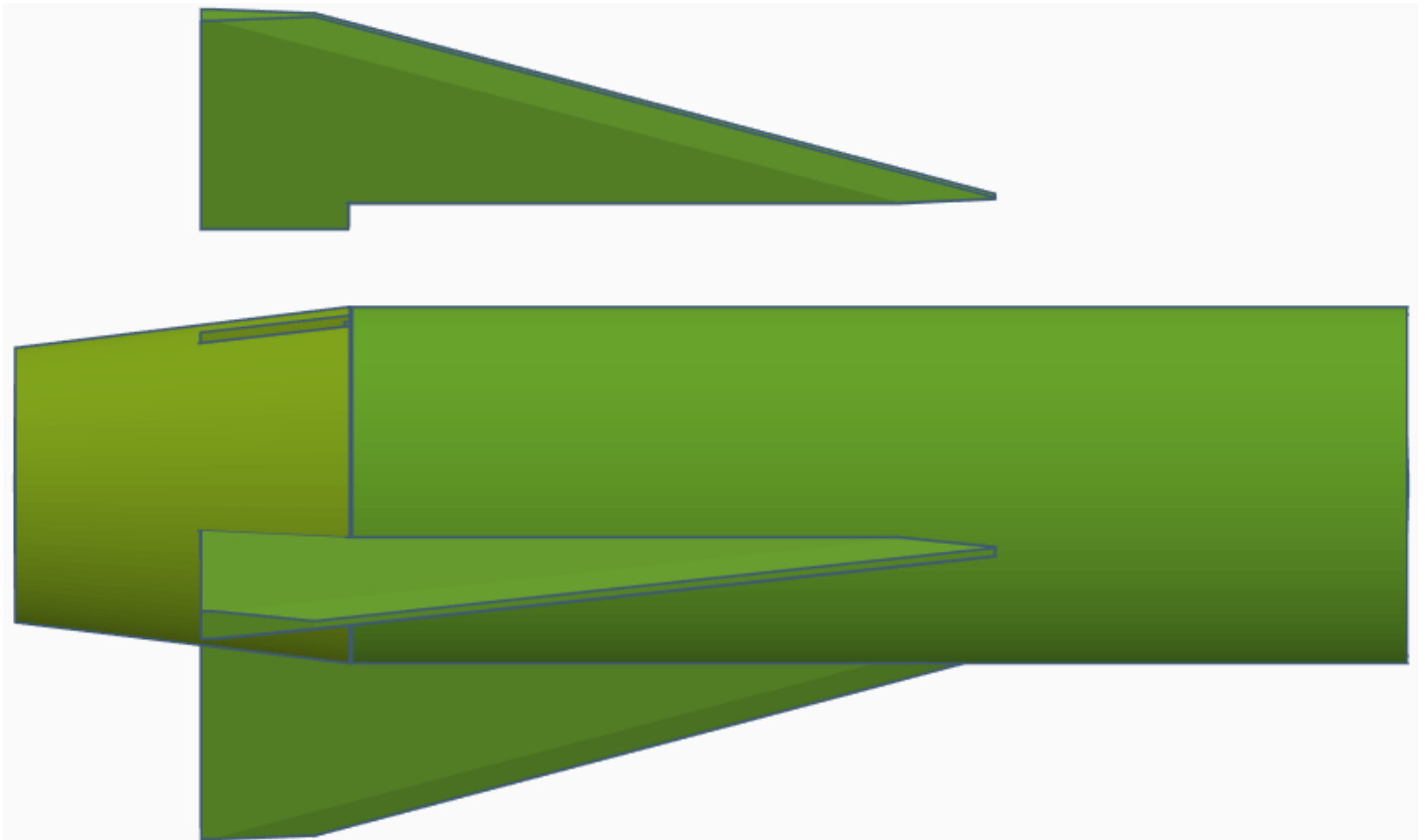
10

The boat tail will be glued in place but must be aligned as shown below. The body wrap has small black lines at the bottom of the tube that need to be lined up with the center of the fin slots on the boat tail.



11

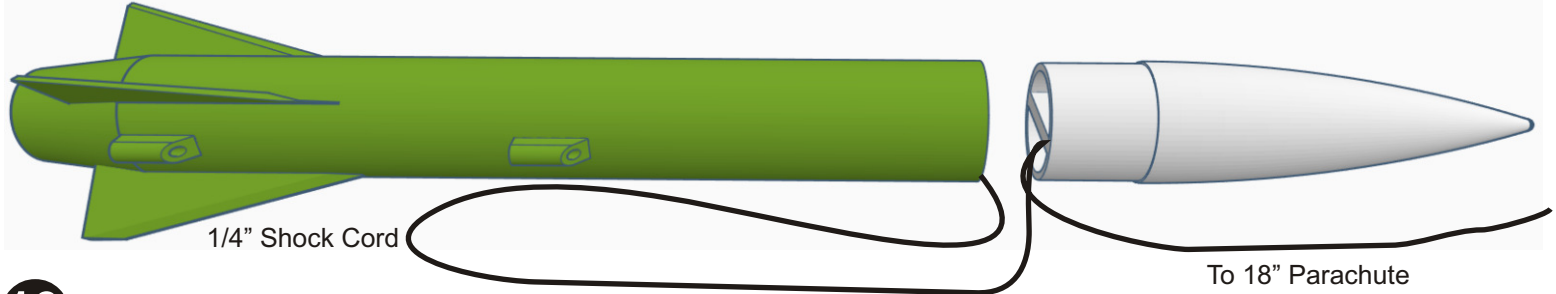
Complete the sanding and priming of the fins. Mask off the root edge of each fin then paint them olive green. When dry test fit each fin then glue each fin in place using CA or super glue gel.



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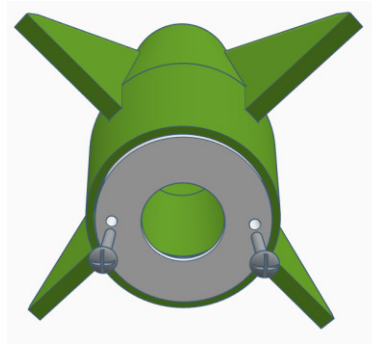
12

Sand, prime and paint the launch lugs olive green. When dry attach the launch lugs to the body tube along the seam line of the body wrap. One should be aligned with the base of the tube and the other to the center of the tube. Make small pin holes in the launch lug attachment locations before gluing for extra strength. Finally, attach the shock cord and parachute as shown..



13

Screw the supplied screws into the motor retainer plate. Align the plate to the holes in the base of the boat tail and screw the retainer screws into place. When done remove the retainer plate and save it for flight.

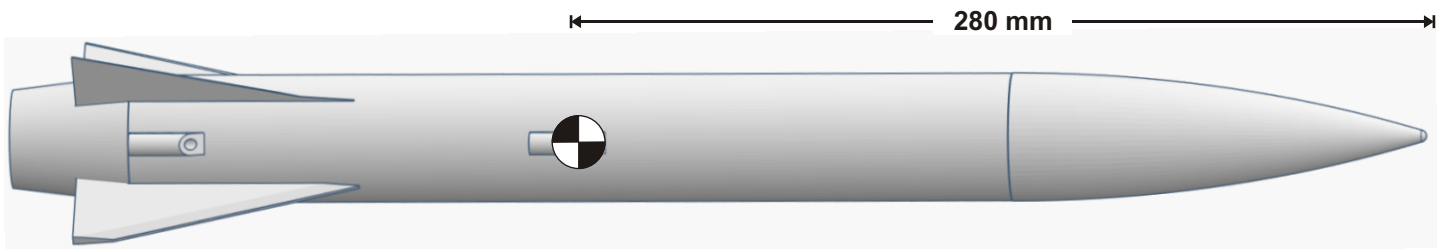


**IMPORTANT!**

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Put a Estes C6-3 rocket motor in the model, add recovery wadding and 18" parachute. Add approximately ½ oz of clay to the inside of the nose cone tip (pack it tightly with a dowel). Put the nose cone on and balance the model to see if it balances at the required C.G. (center of gravity) as shown below. Add or remove clay until the model balances at the required C.G. When the model balances correctly pour a small amount of epoxy over the clay inside the cone to hold it in place.



**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.**



# 1/14th Scale Lance Builders Kit (BT-60)

Estes C6-3, Quest C12-5, Quest D16-5 or Aerotech D10-5 are the recommended flight motors for the Lance Missile "Builders Kit".



Instructions for flight:

- 1) Load a 18 mm motor from the list of recommended flight motors.
- 2) Install the motor retainer.
- 3) Place recovery wadding into the model and fold the chute. Place the chute into the model and install the nose cone.
- 4) Place the model on the launch pad and install the motor ignitor.
- 5) Check for aircraft and proceed to count-down and launch.

Make sure to follow all NAR and local rules and regulations when flying your model. Enjoy flying your Boyce Aerospace Hobbies model rocket.

