ATTENTION!!!

Since this is a model kit requiring assembly, the manufacturer of this kit has no control over the final assembly or materials used for final assembly. No liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.

IF THE BUYER IS NOT PREPARED TO ACCEPT THE LIABILITY ASSOCIATED WITH THE USE OF THIS PRODUCT, THE BUYER IS ADVISED TO RETURN THIS KIT TO ROKITFLITE IN NEW UNUSED CONDITION FOR A REFUND.

TOOLS NEEDED

To assemble your Odyssey kit you will need the following tools:

· Yellow carpenter's glue
· Thin viscosity Cyanoacrylate (CA) glue
· Medium viscosity Cyanoacrylate (CA) glue
· Tube-type or liquid plastic cement
· 15 minute epoxy (5 minute if you are good and quick with it!)
· Sharp pencil
· Scissors
· Sharp hobby knife
· Sandpaper, 320, 400 and 600 grits recommended
· Ruler or tape measure
· Masking tape
· Sanding sealer & paint brush or whatever you choose to fill balsa grain
· Paint (see section on painting for specific paints used on the photo model)
· Aluminum angle, door jamb or any other way to draw straight lines on body tubes.

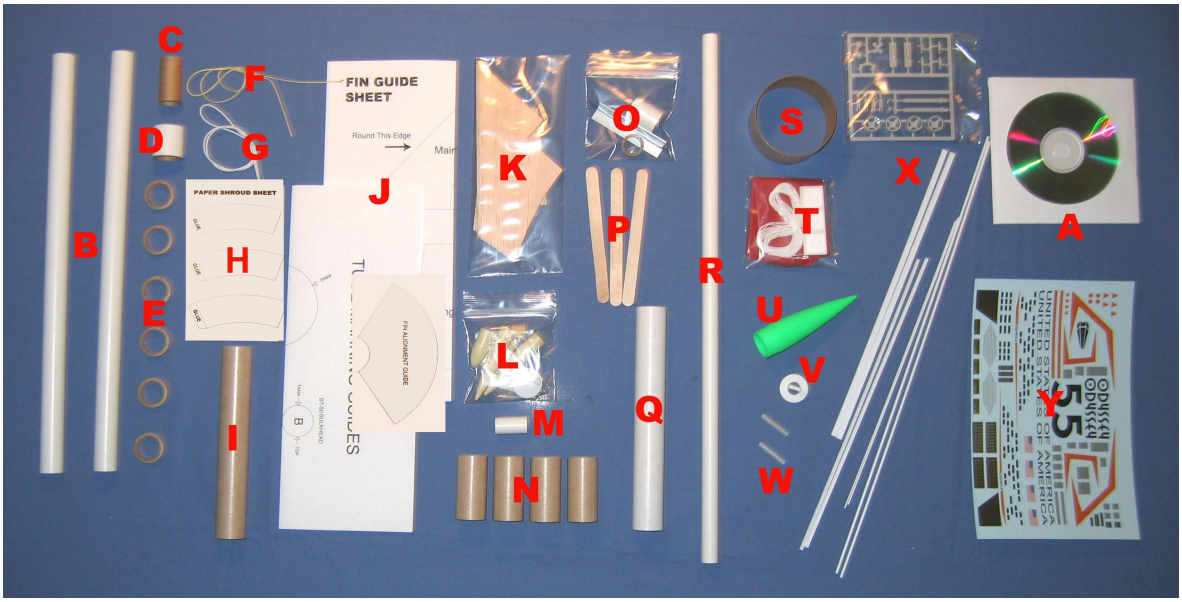
ASSEMBLY INSTRUCTIONS

PLEASE READ EACH STEP THROUGH AND UNDERSTAND WHAT IS BEING ASKED OF YOU BEFORE APPLYING GLUE! SOME OF THESE PARTS, ESPECIALLY THE 20-50 CENTERING RINGS HAVE A SNUG FIT IN AND ON THE TUBES. BE SURE TO TEST FIT AND SAND THESE PIECES AS NEEDED SO THAT THEY SLIDE SMOOTHLY INTO PLACE. IF YOU HAVE TO FORCE PIECES INTO PLACE ONCE GLUE IS APPLIED, YOU RISK DAMAGING THE BODY TUBES.

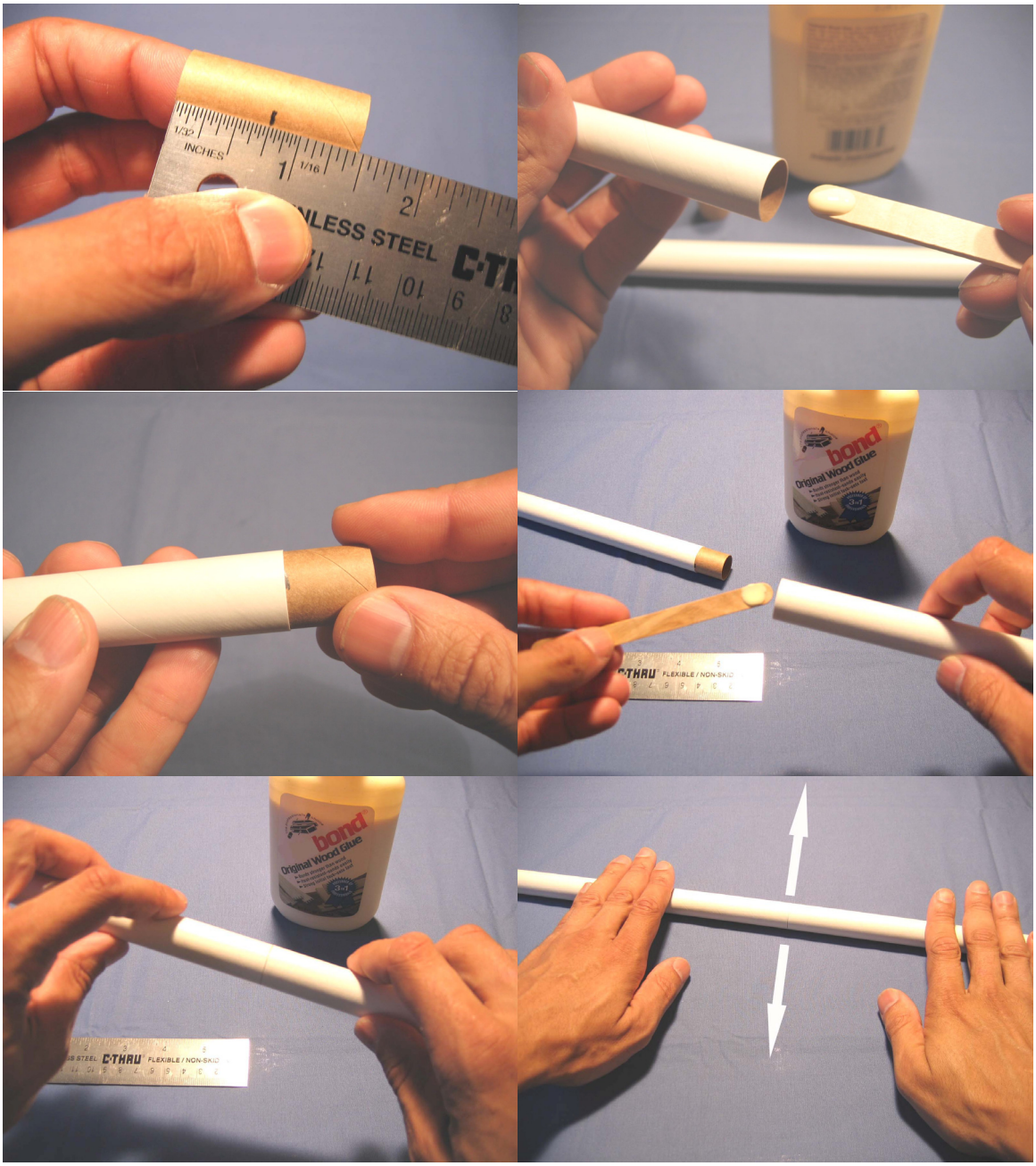
Step 1. On a clear flat working surface, inventory the parts of your new **Odyssey** kit to insure you have all of the items required for assembly. Included in this kit are the following items:

A. 1 - Instruction CD (If you are reading this then you can assume this was there!!!)
B. 2 - 13 ½" sections of WHITE BT-20 (main body assembly) tube
C. 1 - 1 ½" BROWN BT-20 coupler
D. 1 - 1" section of WHITE BT-50 (bulkhead) tube
E. 6 - 20-50 centering rings
F. 1 - 18" length of yellow Kevlar cord
G. 1 - 18" length of white elastic cord
H. 1 - Paper shroud sheet
I. 1 - 6" section of BROWN BT-50 (propulsion section) tube
J. 1 - Tube marking guide sheet, fin guide sheet and fin alignment guide
K. 1 - Laser-cut balsa parts bag containing 2 wings & 1 main fin
L. 1 - Resin parts bag containing 2 long BT-5 cones, 1 short BT-5 cone, 1 BT-5 plug, 1 nose cone base and 1 radar dish parts bag.

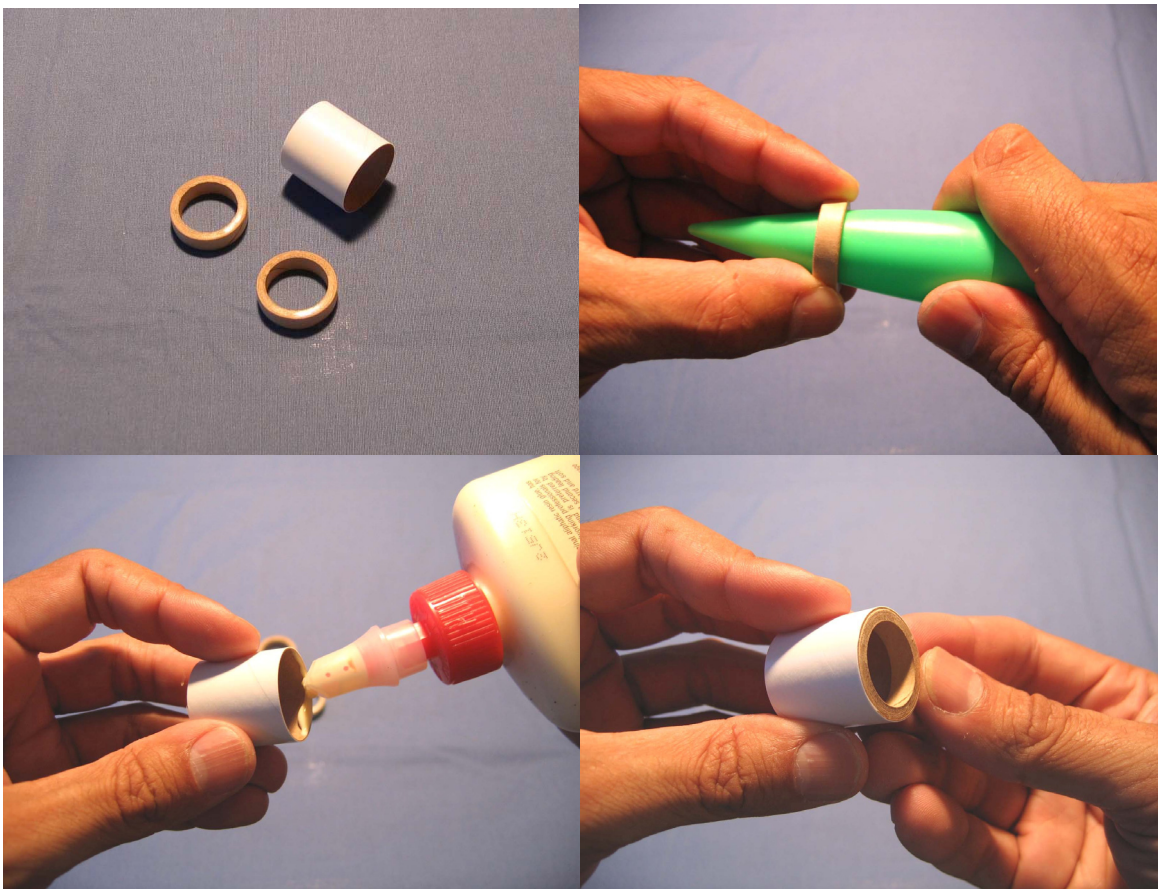
M. 1 – 1 1/8" section of WHITE BT-5 (sensor pod housing) tube
N. 4 - 2" sections of BROWN BT-50 (main drive engines) tube
O. 1 - Motor mount parts bag containing 1 motor clip, 1 motor block, 1 – 1" section of BT-21 tubing and 1 aluminum motor block spacing guide/detail parts alignment tool.
P. 3 - Craft sticks for glue application
Q. 1 - 7" section of WHITE BT-50 (crew section) tube
R. 1 - 17" section of WHITE BT-5 (fuel tank) tube
S. 1 - 1 ½" section of BROWN BT-80 (mechanism ring) tube
T. 1 - 18" parachute kit
U. 1 - BT-50 plastic nose cone (color may vary)
V. 1 - BT-50 plastic nose cone base
W. 2 - 1" launch lugs
X. Assorted plastic detail parts (.040" X 4" x 6" styrene sheet not shown)
Y. 1 - Water-slide decal sheet



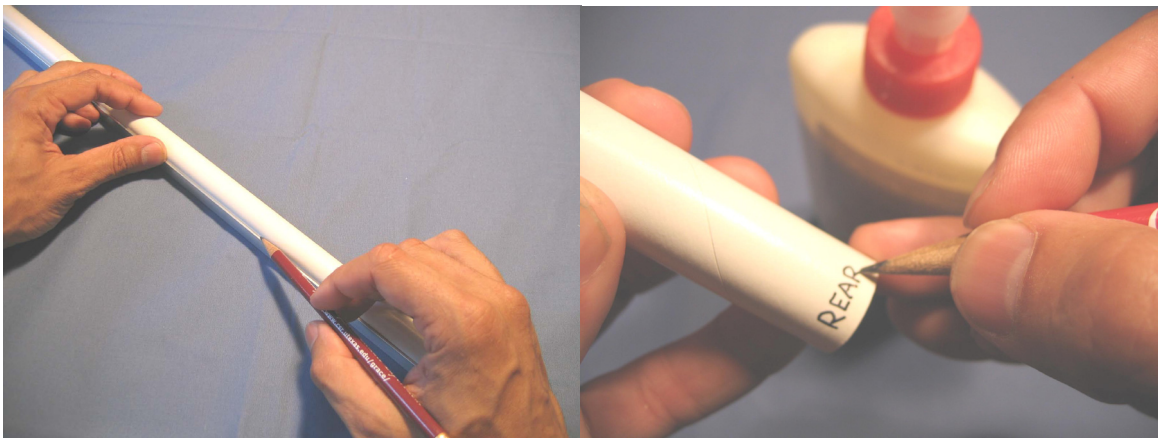
Step 2. Locate the two WHITE 13 ½" BT-20 body tubes and the BROWN 1 ½" BT-20 coupler. Mark the coupler ¾" from one end (at the middle). Spread a thin film of yellow glue inside one end of one of the BT-20 tubes. With a smooth motion, slide the coupler into the end with the glue, up to the mark you made. Let the glue set for a minute. Apply glue to the inside of the other BT-20 tube and slide it onto the other end of the coupler, butting the ends of the two BT-20 tubes together. Wipe off any glue that may have squeezed out of the joint. Working on a FLAT surface, roll this assembly back and forth on the surface to ensure that the tubes are perfectly aligned with one another.



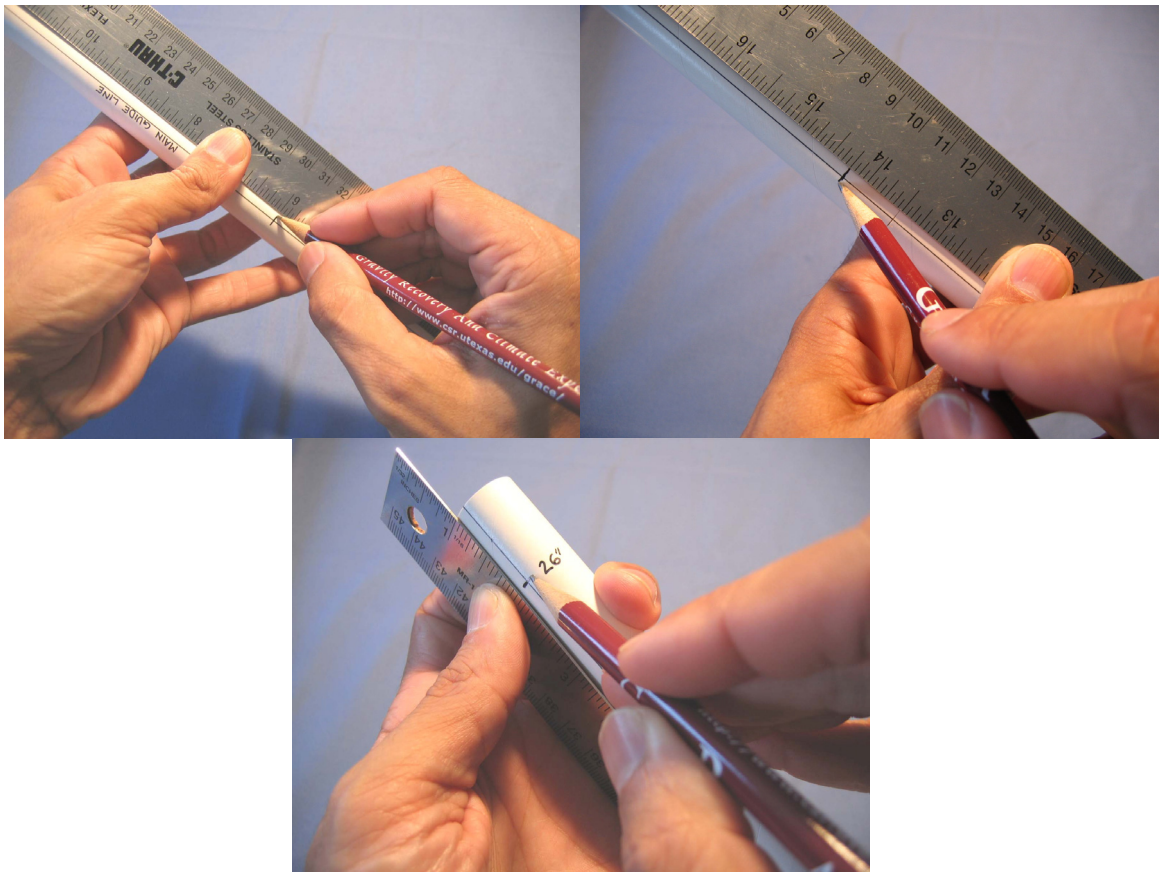
Step 3. Locate the 1" long WHITE BT-50 tube and two of the 20-50 centering rings. ***Note* Test fit all of the 20-50 centering rings before assembly. If the fit is too tight over the BT-20 tubing, use the BT-50 nose cone as a "reamer" to spread the inside edges of the rings out for a better fit.** Spread a small amount of yellow glue around the inside of one end of the BT-50. Press one of the centering rings into the end of the tube with the glue until the end is even with the end of the tube. You may simply press it onto a flat surface to accomplish this. Glue the other centering ring into the other end of the tube in the same manner.



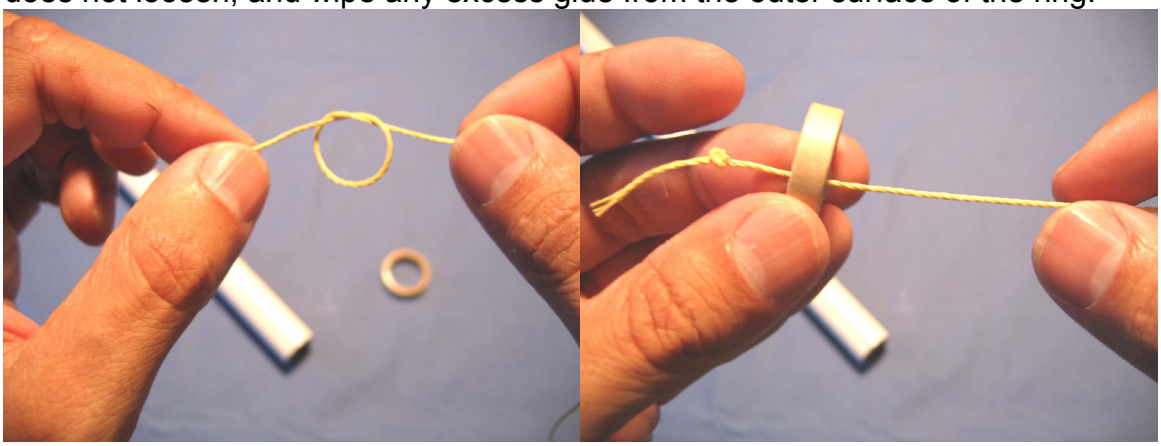
Step 4. Using a door jamb, or section of angle, draw one long straight line along the entire length of the two tubes you joined in step 1. Mark one end of the tube as the REAR.

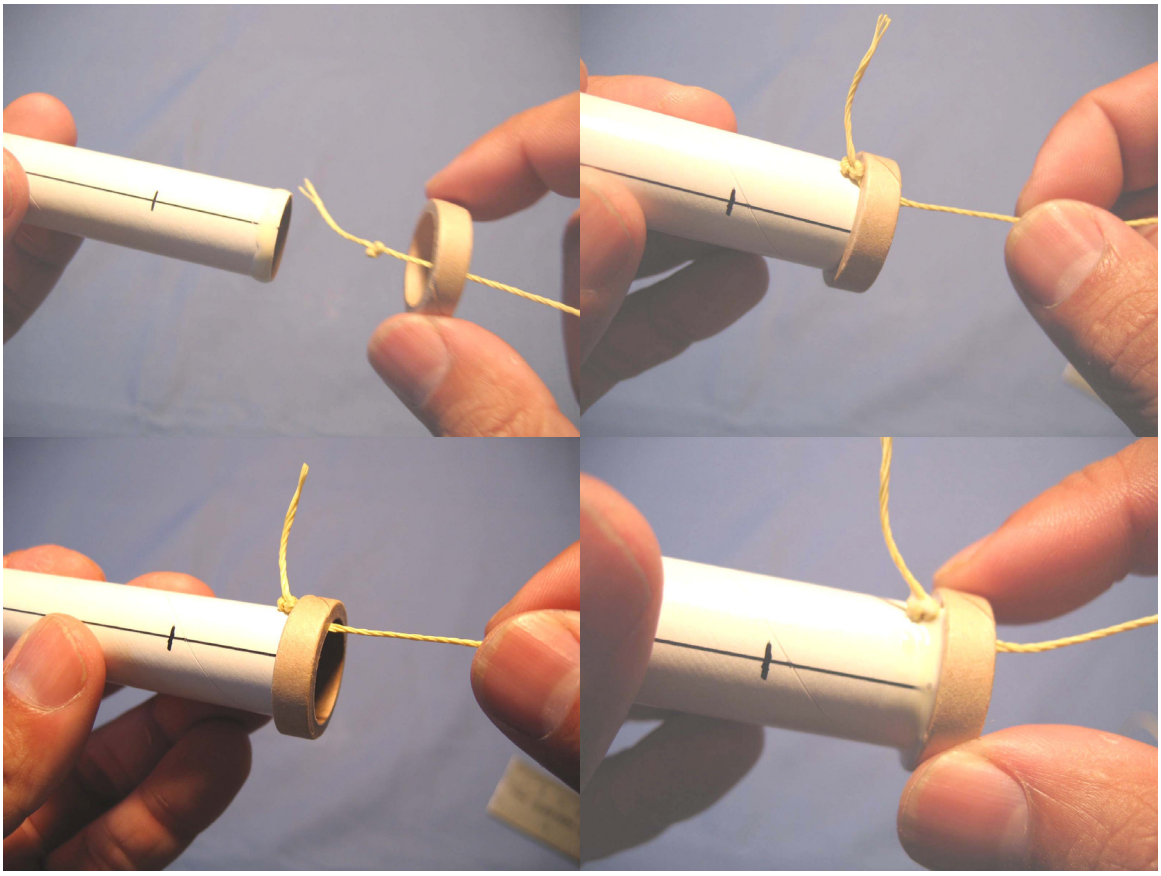


Step 5. From the REAR of the tube measuring forward, mark the tube at 6”, 14 ¼” and 26” along the line you drew in the previous step.

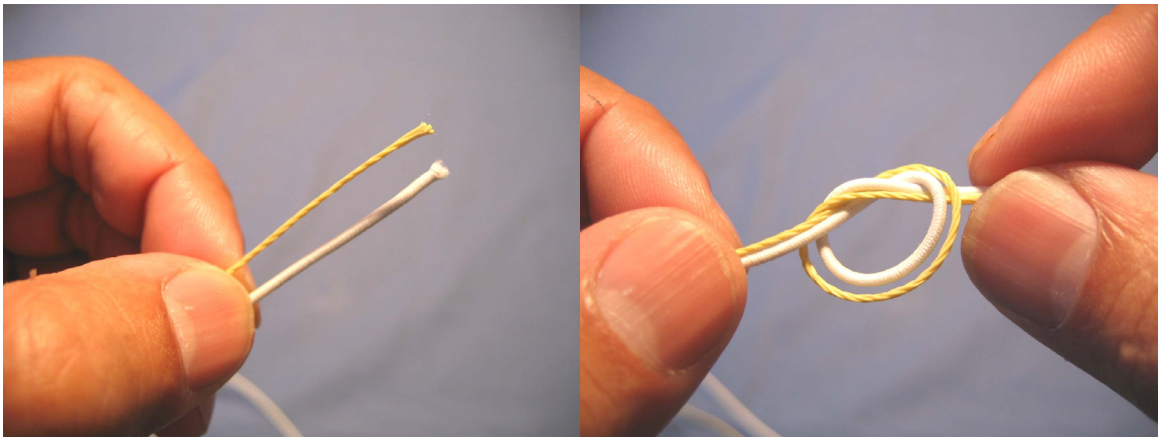


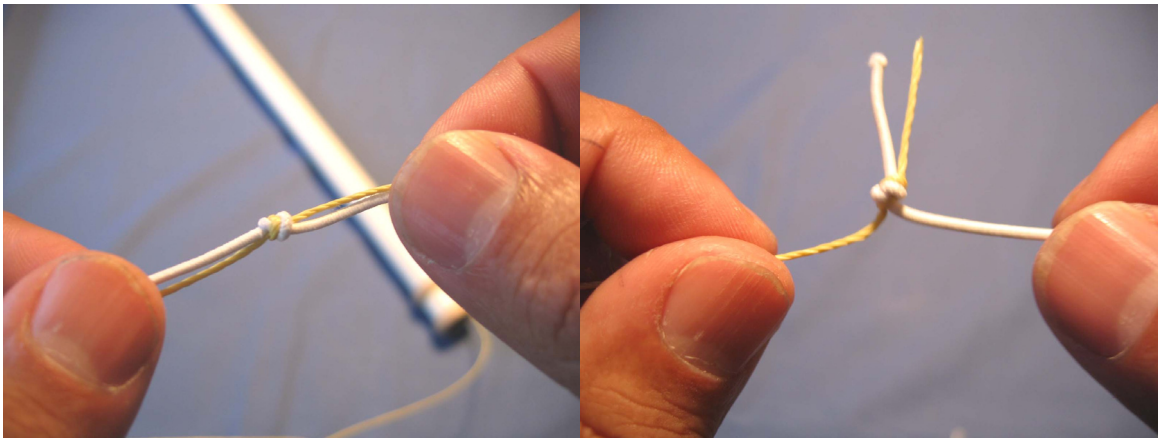
Step 6. Locate the 18” piece of yellow Kevlar cord and one of the 20-50 centering rings. Tie a double or triple knot 1” from one end of the Kevlar cord. Make sure the knots wind up on top of one another. Insert the end of the cord with the knot in it through the 20-50 centering ring. Apply yellow glue around the outside of the very end of the FRONT of the marked BT-20 tube assembly. With the knotted end of the Kevlar facing the REAR of the assembly, slide the centering ring with the cord through it onto the front end of the body tube until it is even with the end of the tube. Pull any excess cord forward so the knot is seated between the centering ring and the BT-20 right up against the rear of the centering ring. If you are not sure if you used enough glue in this step, apply a fillet of glue around the rear end of the centering ring/tube joint. Allow some glue to get on the knot to ensure that it does not loosen, and wipe any excess glue from the outer surface of the ring.



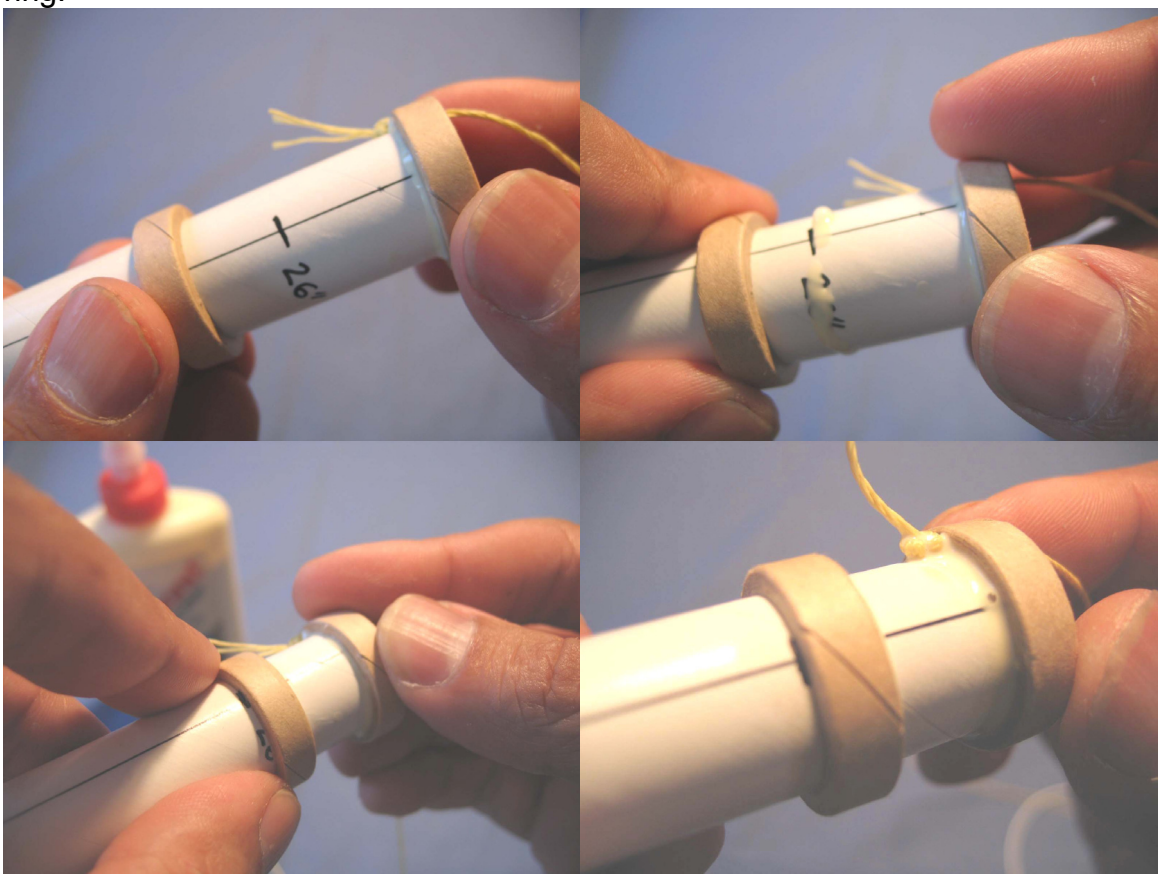


Step 7. Tie the 18” length of white elastic shock cord to the free end of the Kevlar cord from the previous step. Do this by holding the ends of the cords together and tying an overhand knot in both of them at the same time, approximately 1” from the ends of the cords.



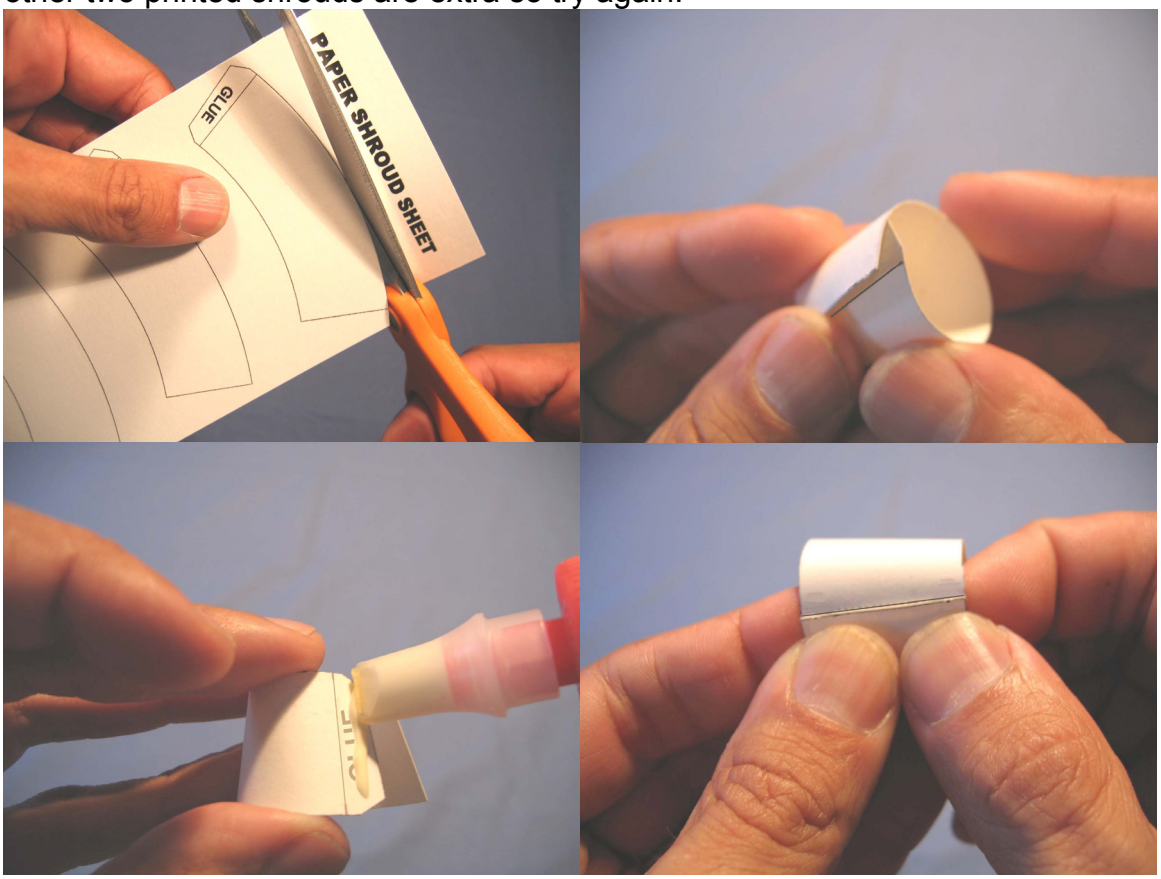


Step 8. Locate another 20-50 centering ring. From the REAR of the BT-20 assembly slide it up towards the front of the assembly, until it is an inch or so behind the 26” mark you made. If the centering ring gets caught at the seam, lightly sand the seam until the centering ring can slide past it. Apply yellow glue in a band around the BT-20 assembly at the 26” mark you made in step 4. Slide the centering ring up the tube into the glue so that the 26” mark just appears to the rear of the ring. Wipe off any glue that gets onto the outer surface of the centering ring.

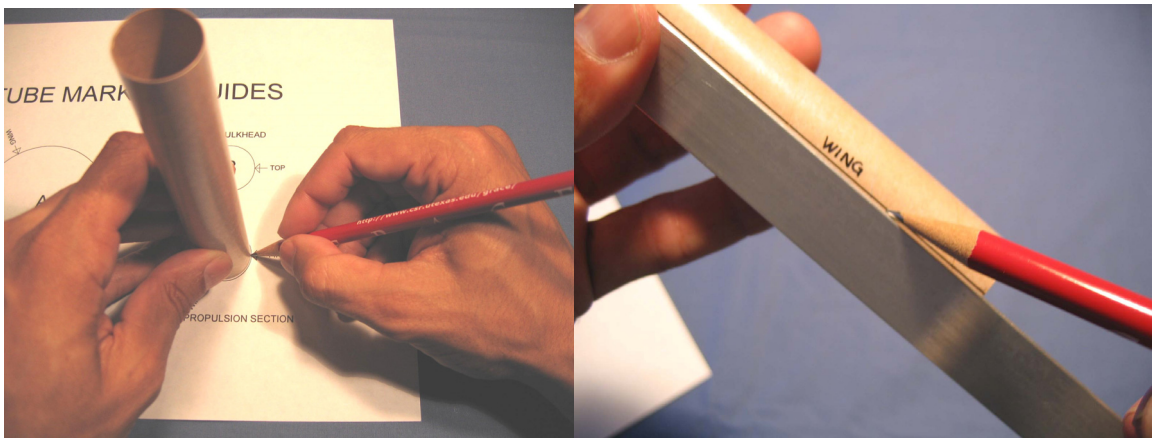


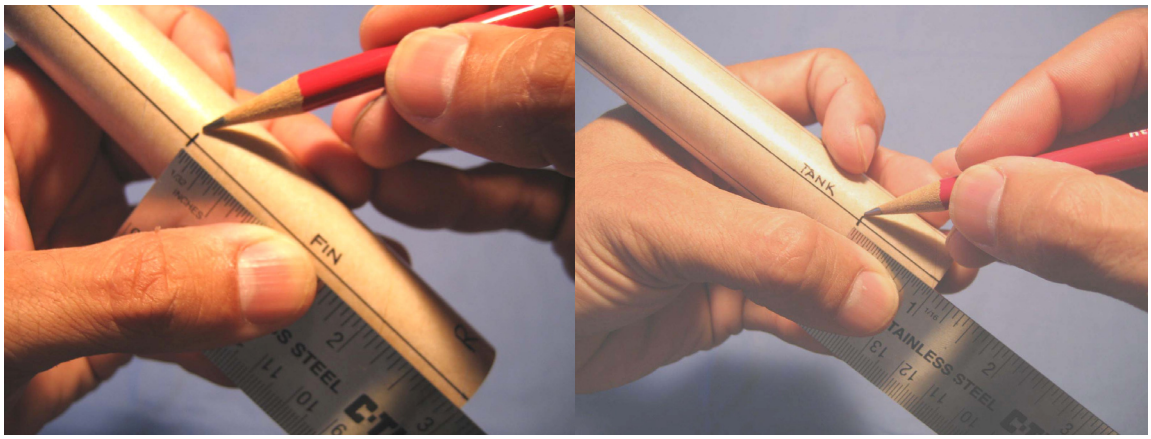
Step 9. Locate the paper shroud sheet and neatly cut one of them out on the outter SOLID lines. DO NOT cut the tab marked “GLUE” off. Gently roll the shroud into a cone shape. Apply a thin film of yellow glue to the section marked “GLUE” on the shroud. Wrap the other end of the shroud around and press it into

the glue even with the glue tab line. Pinch the seam together until the glue sets. And hey, if you make a mistake here or are unhappy with the final product, the other two printed shrouds are extra so try again!

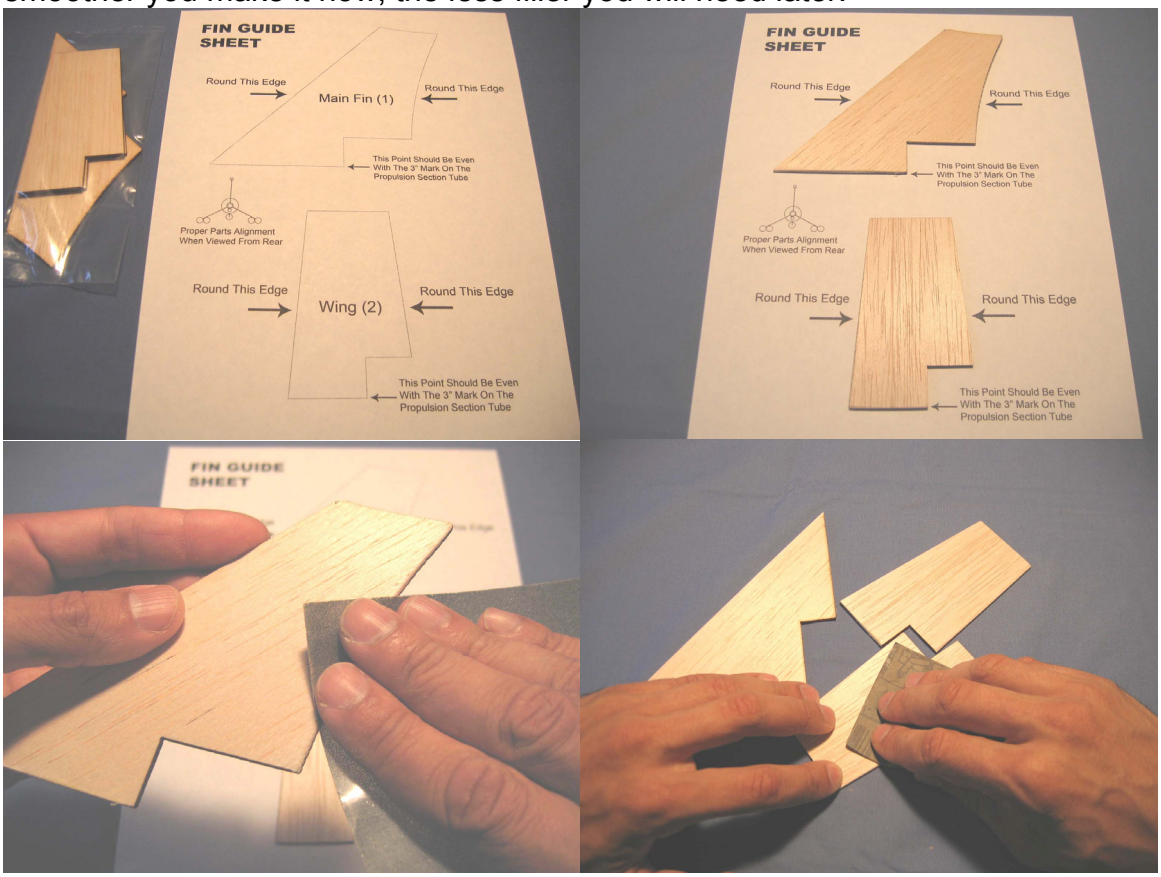


Step 10. Locate the 6" long BROWN section of BT-50 tube. Position the end of the BT-50 over the tube marking guide "C" (BT-50 Propulsion Section) on the TUBE MARKING GUIDES sheet. Make marks at all of the 4 arrow locations (tank, wing, fin, wing). Using a door jamb or section of angle, extend these lines along the full length of the tube. Mark one end of this tube REAR and label each line according to the marking guide, "tank", "wing", "fin" and "wing". Make a mark 3" from the REAR on the "fin" and the two "wing" lines. On the "tank" line make a mark 1" from the REAR.





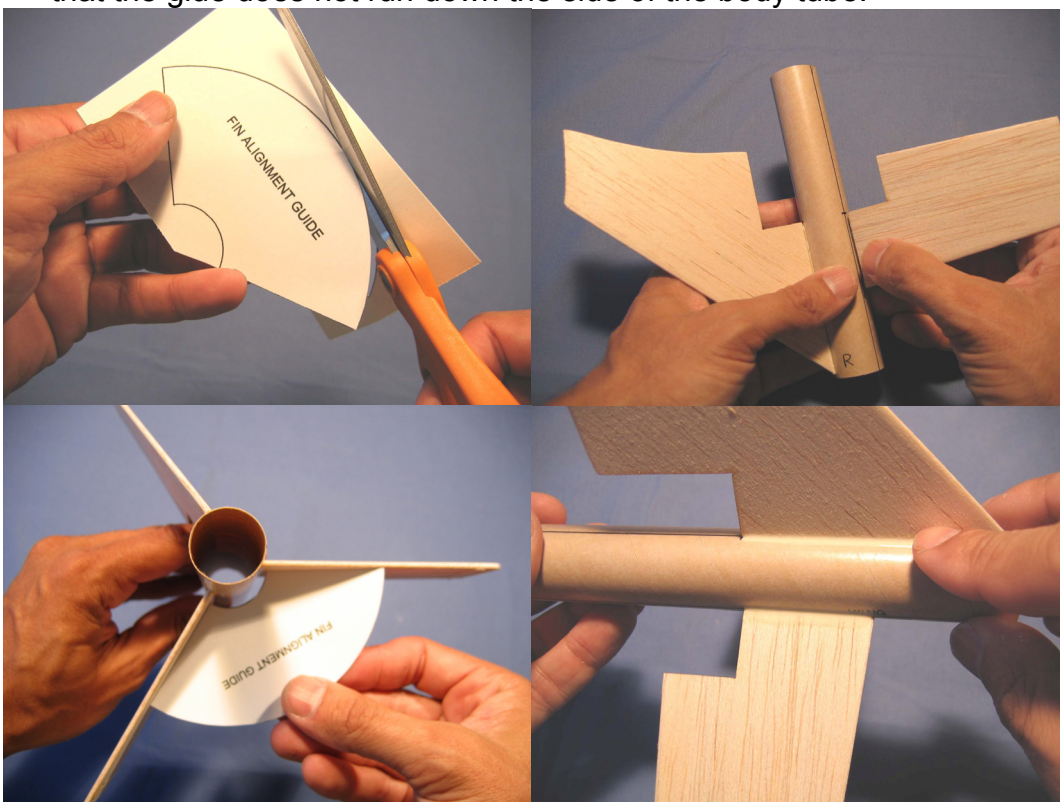
Step 11. Open the plastic bag that contains the three laser-cut balsa parts. Using the fin guide sheet as a reference, gently sand the leading and trailing edges of the two wings and one fin round with #320 grit sandpaper. Once this is done, sand the rounded edges and both sides of these parts with fine #400 grit sandpaper. The smoother you make it now, the less filler you will need later!



Step 12. Using yellow glue, glue each of the balsa pieces to the 6" BROWN BT-50. Make sure the pieces are facing the right direction before gluing them to the tube! The front, bottom edge of each "step" that is cut into the wing and fins should be even with the 3" marks you made earlier on the two wing lines and the one fin line, with the "step" facing the FRONT (see fin guide sheet). The fins are arranged in a typical three-finned rocket configuration with each fin pointing directly away from the tube and each fin being at a 120° angle from the one next to it as

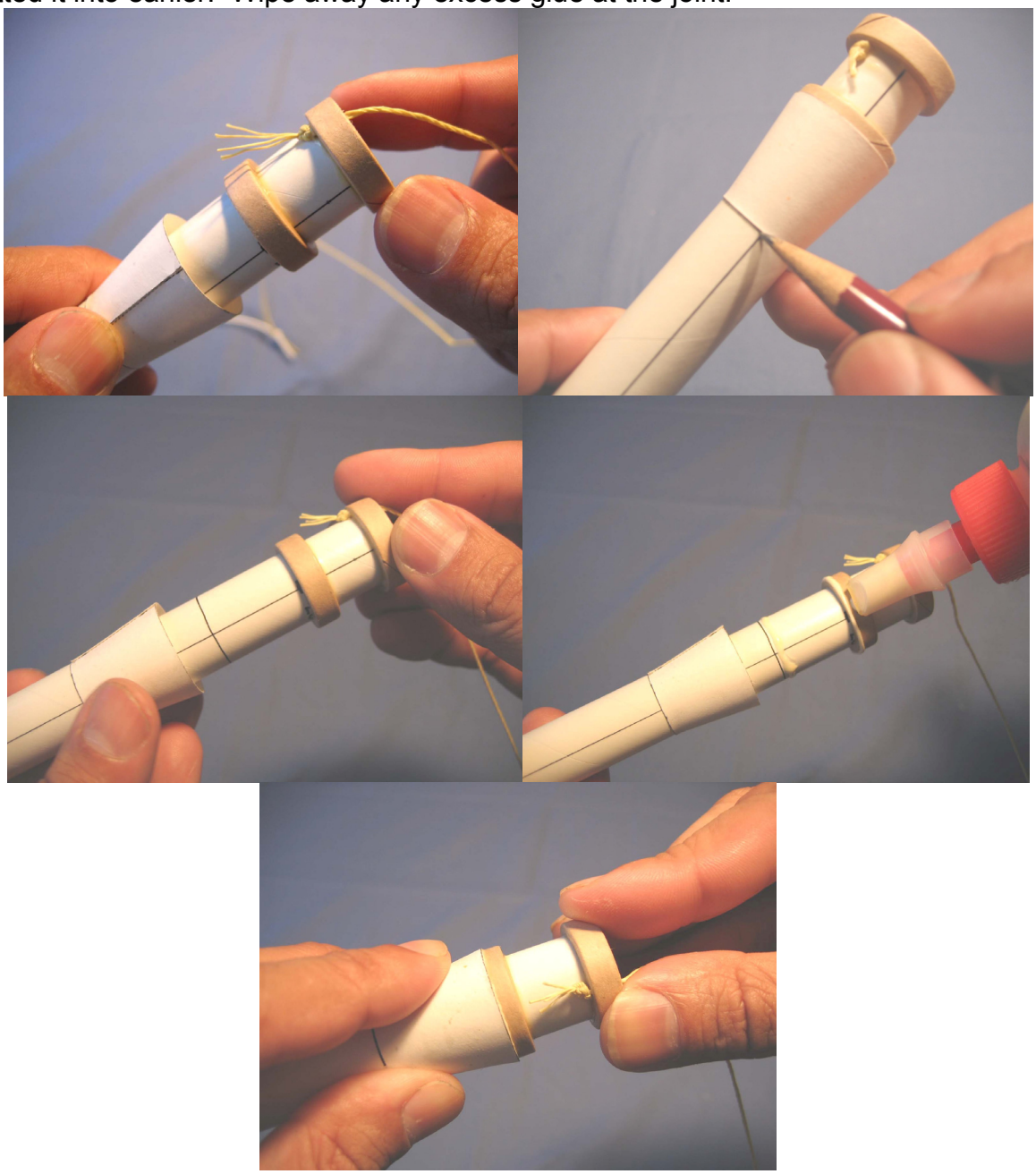
illustrated on the “Fin Guide Sheet”. If you are unsure about your abilities in attaching the fins at the proper angle, use the included fin alignment guide to space the fins correctly. Cut the fin alignment guide out carefully on the lines and place it between each pair of adjacent fins to ensure that you have the correct angle before the glue sets. The tried and true method for gluing fins with yellow glue that I have used for years is as follows:

1. Spread a thin, even film of glue onto the root edge of each fin.
2. While the glue is wet, press the fin onto its position on the body tube.
3. Remove the fin immediately, leaving a film of glue on the fin and the body.
4. Wait several minutes for this glue to get tacky and then press the fin firmly into place again.
5. This will make the fin grab more quickly to the body, eliminating the need to hold it for several minutes while the glue gets tacky.
6. Once this “tack layer” has fully dried, apply a fillet of glue around the base of each fin and allow it to dry in a horizontal position (not resting on the fins) so that the glue does not run down the side of the body tube.



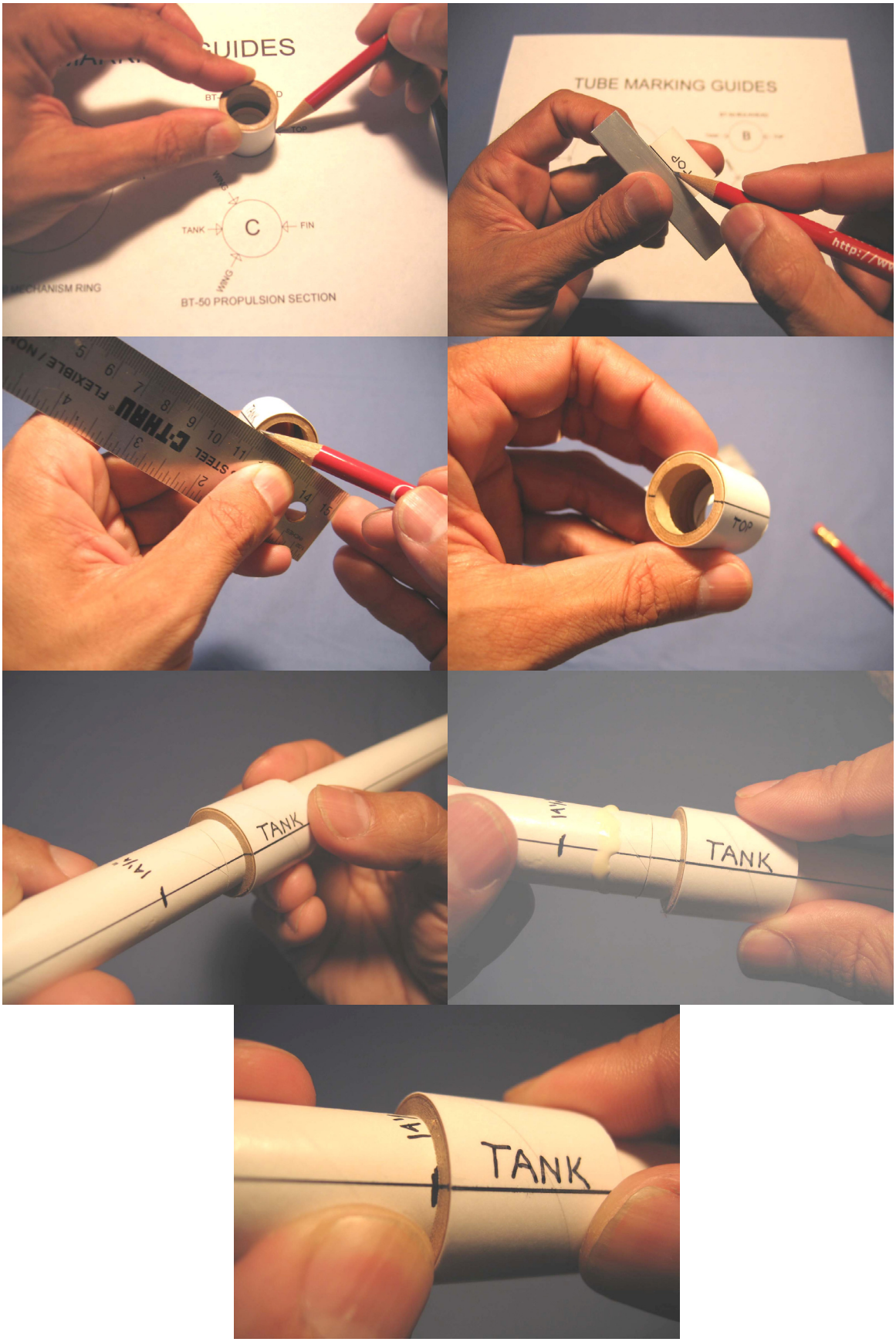
Step 13. By this time the glue on the paper shroud should be fully dry. From the REAR of the BT-20 assembly, slide the shroud up the tube wide end forward and over the rear edge of the 20-50 centering ring you glued on in step 7, DO NOT GLUE. When pressed up against the centering ring the shroud should form a small even lip all the way around the back edge of the centering ring. Where the rear of the shroud contacts the BT-20, while the front is pressed onto the centering ring, draw a line on the BT-20 around the BT-20/shroud seam. Back the shroud off down the BT-20 a few inches. Apply a thin bead of yellow glue to the rear edge of the centering ring where the shroud was making contact earlier, and a thin ring of glue around the BT-20 just FORWARD of the line you drew around the tube a

moment ago. In one smooth movement (as the glue will grab quickly) slide the shroud forward again over the glue and back into the position that you had dry-fitted it into earlier. Wipe away any excess glue at the joint.

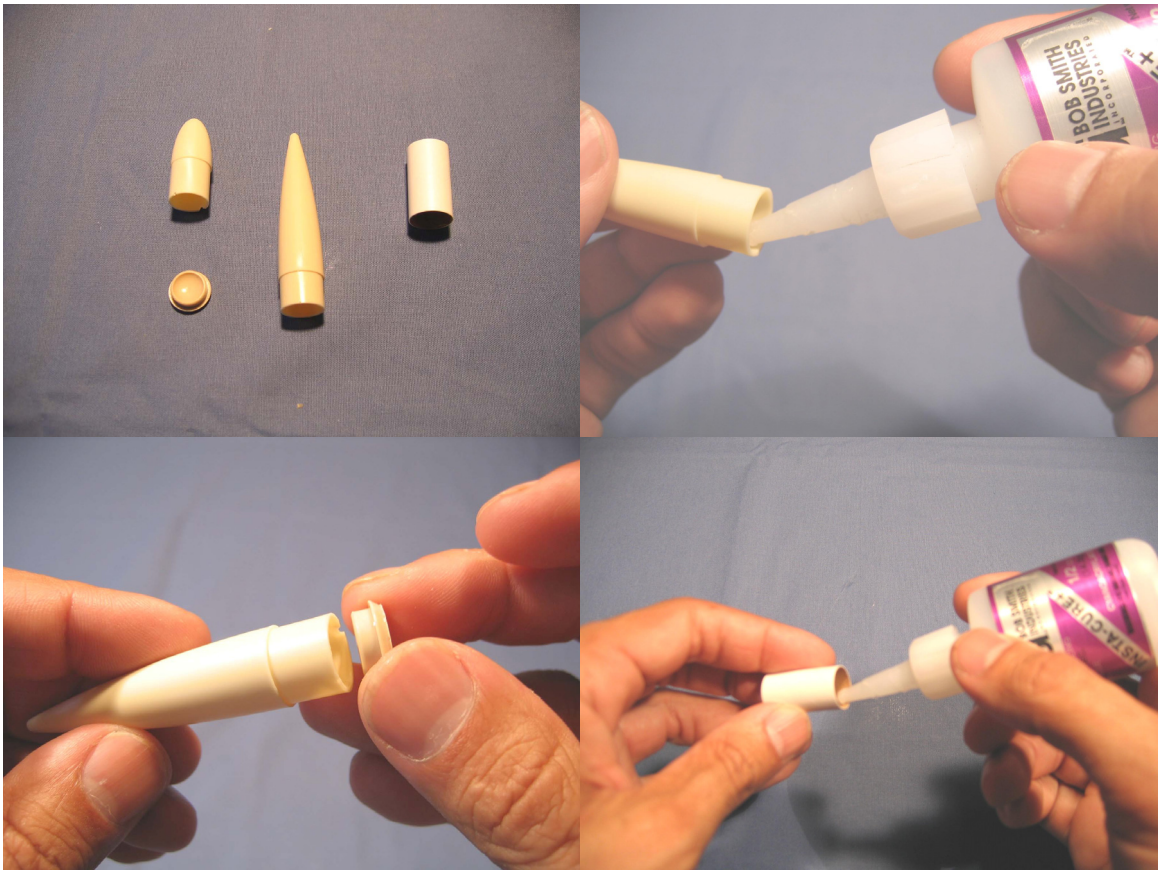


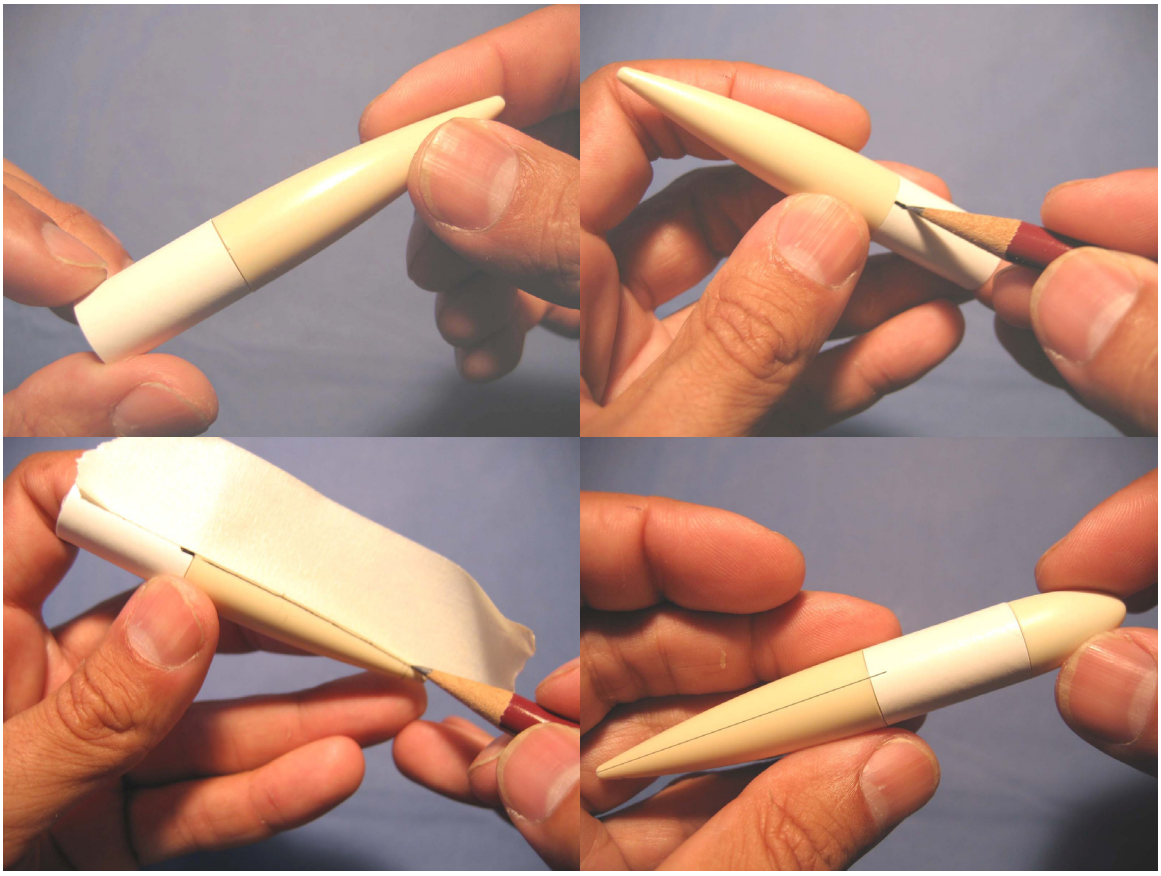
Step 14. Locate the piece you made in step 3 from the two centering rings and the 1" WHITE BT-50. Using the tube marking guide B for the "BT-50 Bulkhead", mark the locations for "tank" and "top". At the locations you marked, draw a line the full length of the BT-50 front to rear (you may use the motor block spacing tool for this). Using a straight edge at the front and rear of the tube, connect the "tank" and "top" lines. You will be drawing a line that divides the part in half along the front and rear of the 20-50 centering rings when you view the ends. Slide this bulkhead assembly a few inches onto the rear of the BT-20 assembly. Align the "tank" line with the long line that extends along the length of the BT-20s. The lines you just drew across the centering rings will help you here. Apply a line of yellow glue in a ring around the BT-20 assembly just to the REAR of the 14 ¼" mark you made in

step 5. Slide the BT-50 bulkhead assembly up the joined BT-20s, through the glue and up to the 14 ¼” mark. Make sure you have kept the “tank” line over the main guide line on the BT-20. Wipe away any excess glue, making a neat fillet along the front of the bulkhead.

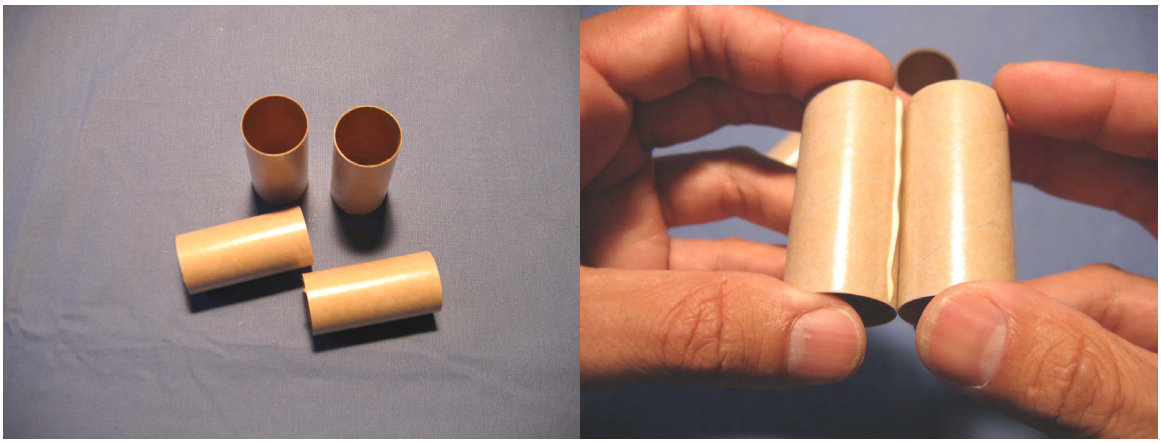


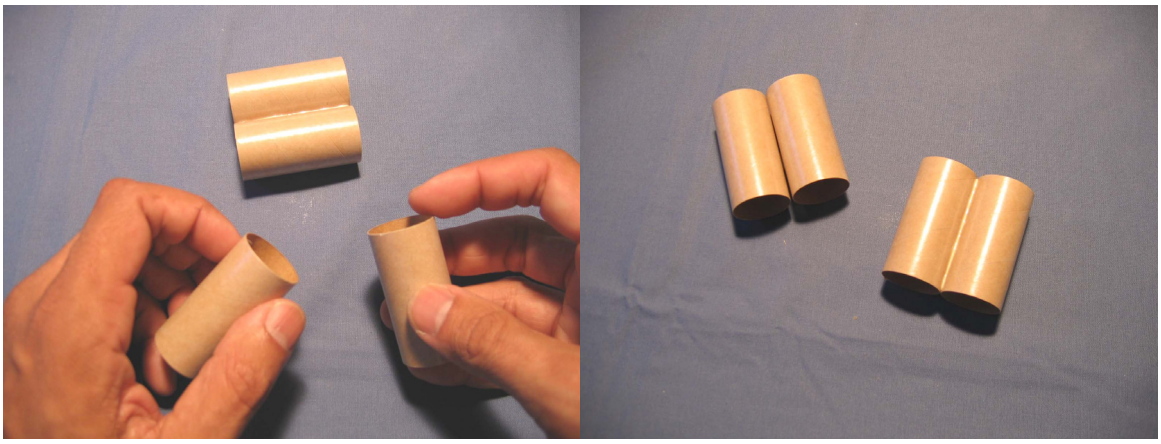
Step 15. There are two long and one short resin cast BT-5 nose cones in the resin parts bag. Locate one of the long cones and the nose cone base along with the 1 $^{1}/_{8}$" long WHITE BT-5 tube. Use medium CA to glue the nose cone base into the end of the long cone. Put a thin ring of medium CA glue just inside one end of the BT-5 tube and slide the long nose cone into the end of the tube with the glue. Make a small mark on the 1 $^{1}/_{8}$" section of BT-5 at the tube/cone joint. Using the edge of a piece of masking tape as a guide, draw a straight line from the tip of the nose cone down to the mark on the tube. Sighting from the tip of the nose cone, ensure that you have made a straight line. It is best to use a pencil here in case you have to erase it and try again! Locate the short nose cone. ***PLEASE NOTE: If your model is equipped with a lighting kit (see front panel) or if you plan on adding one, DO NOT glue the short BT-5 nose cone in place! Follow the instructions in the file named "Lighting Kit" on this CD for its installation.*** If your model is not equipped with a lighting kit, glue the short nose cone into the other end of the BT-5 tube.



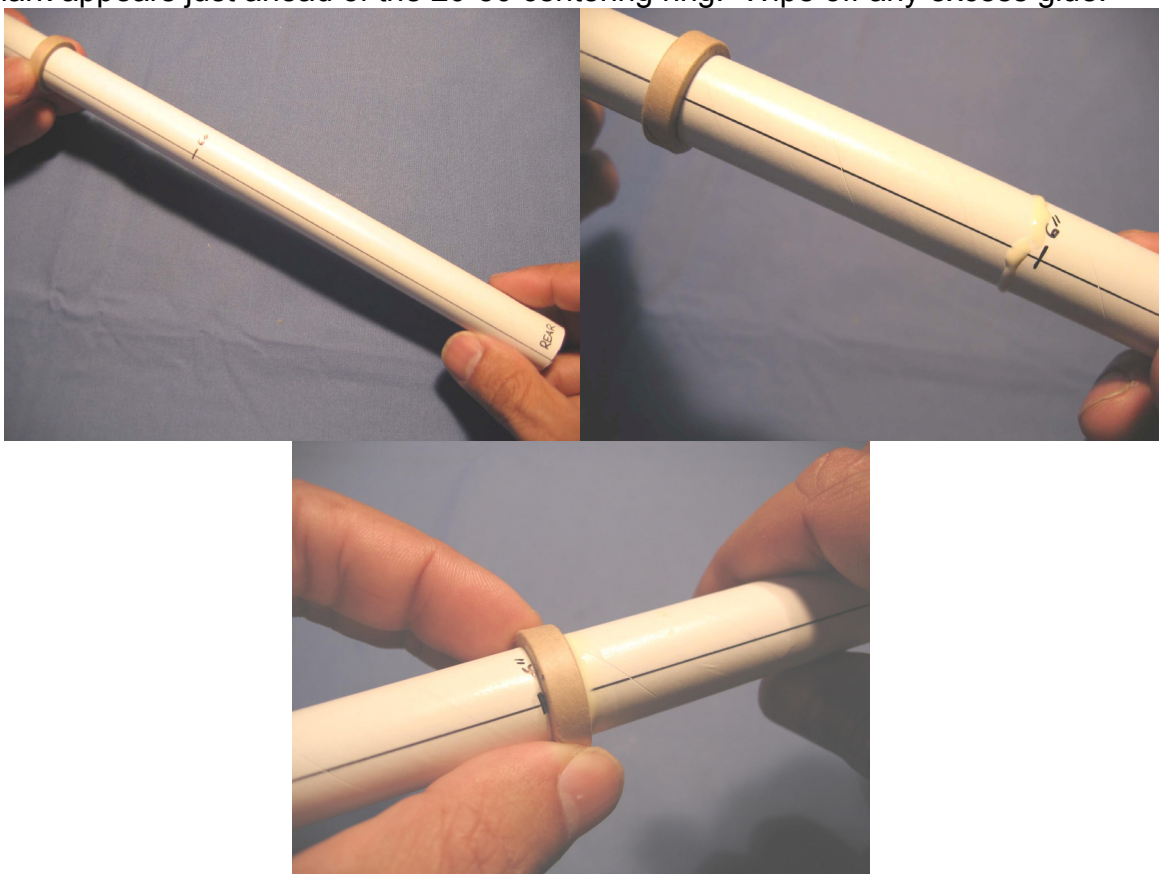


Step 16. Locate all four of the 2” sections of BROWN BT-50 tube. Using a small amount of yellow glue and working on a flat surface, glue two of these tubes together lengthwise. Make sure that the ends of the tubes are even with one another. Set this assembly aside to dry and repeat this process with the remaining two tubes.

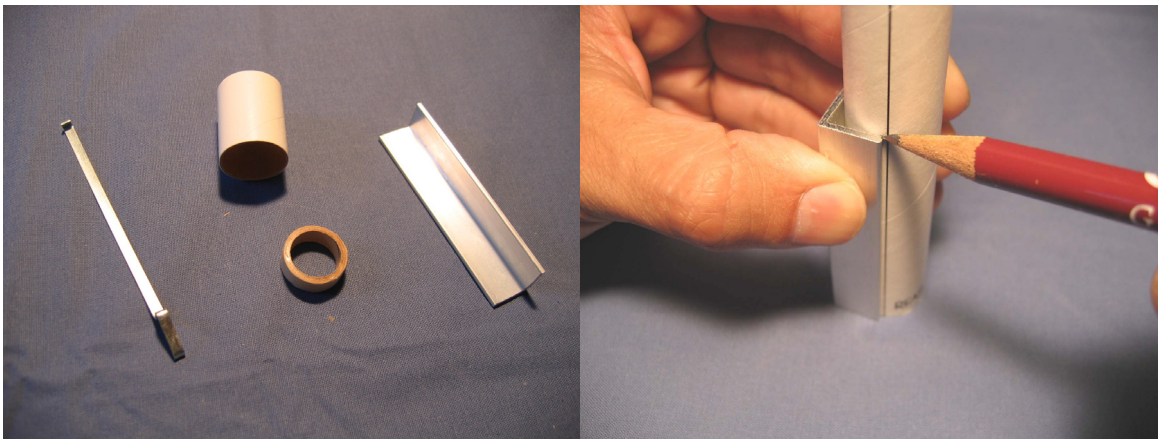




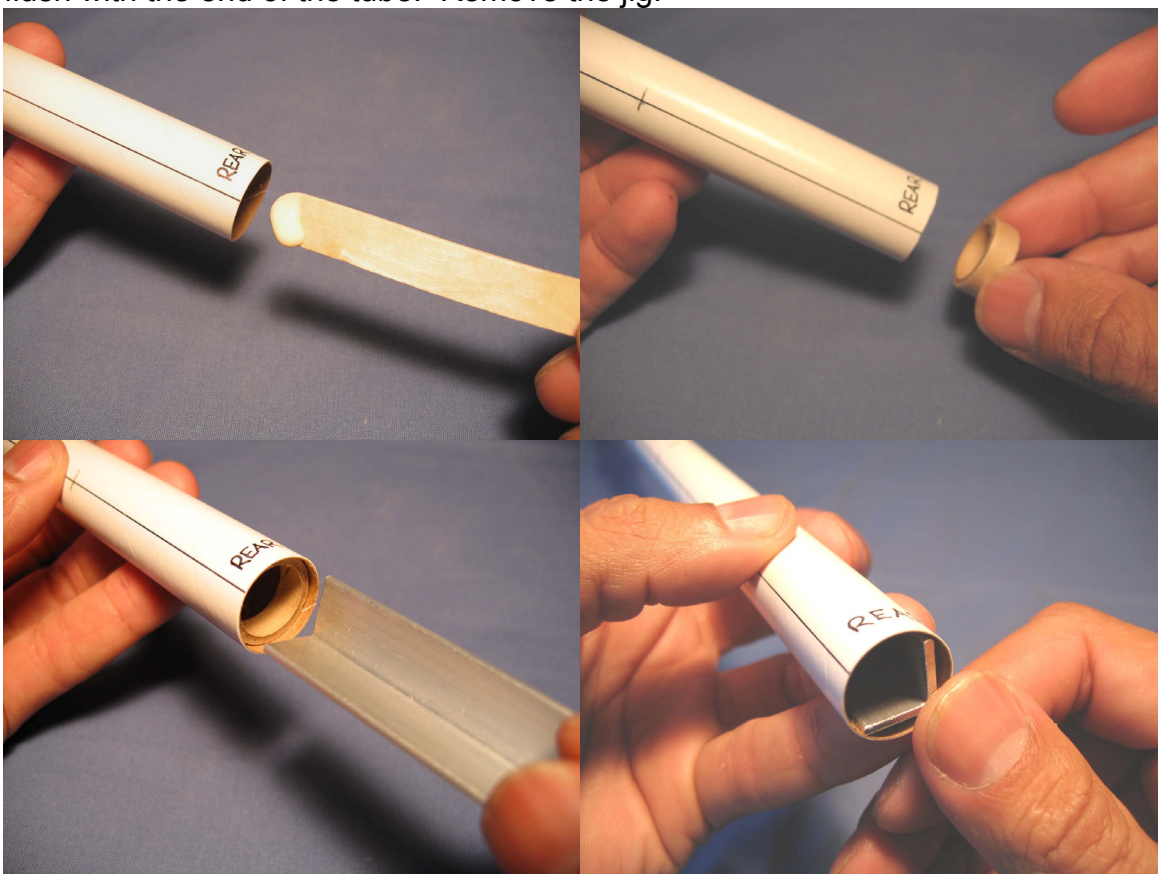
Step 17. Slide one of the two remaining 20-50 centering rings onto the rear of the main body tube assembly until it is a couple of inches above the mark you made 6" from the rear of the tube. Apply a ring of yellow glue around the tube at the 6" mark. Slide the 20-50 centering ring down the tube, through the glue until the 6" mark appears just ahead of the 20-50 centering ring. Wipe off any excess glue.



Step 18. Open the bag containing the motor clip, motor block, the 1" WHITE BT-21 tube and the aluminum motor block spacing jig. Use the jig on the outside of the rear of the main BT-20 tube assembly to mark the location of the top of the motor clip. Rest the end of the main body and the motor block spacing jig flat and upright on your building surface. At the forward end of the jig, make a $^{1}/_{8}$" mark along the line you made in step 4.

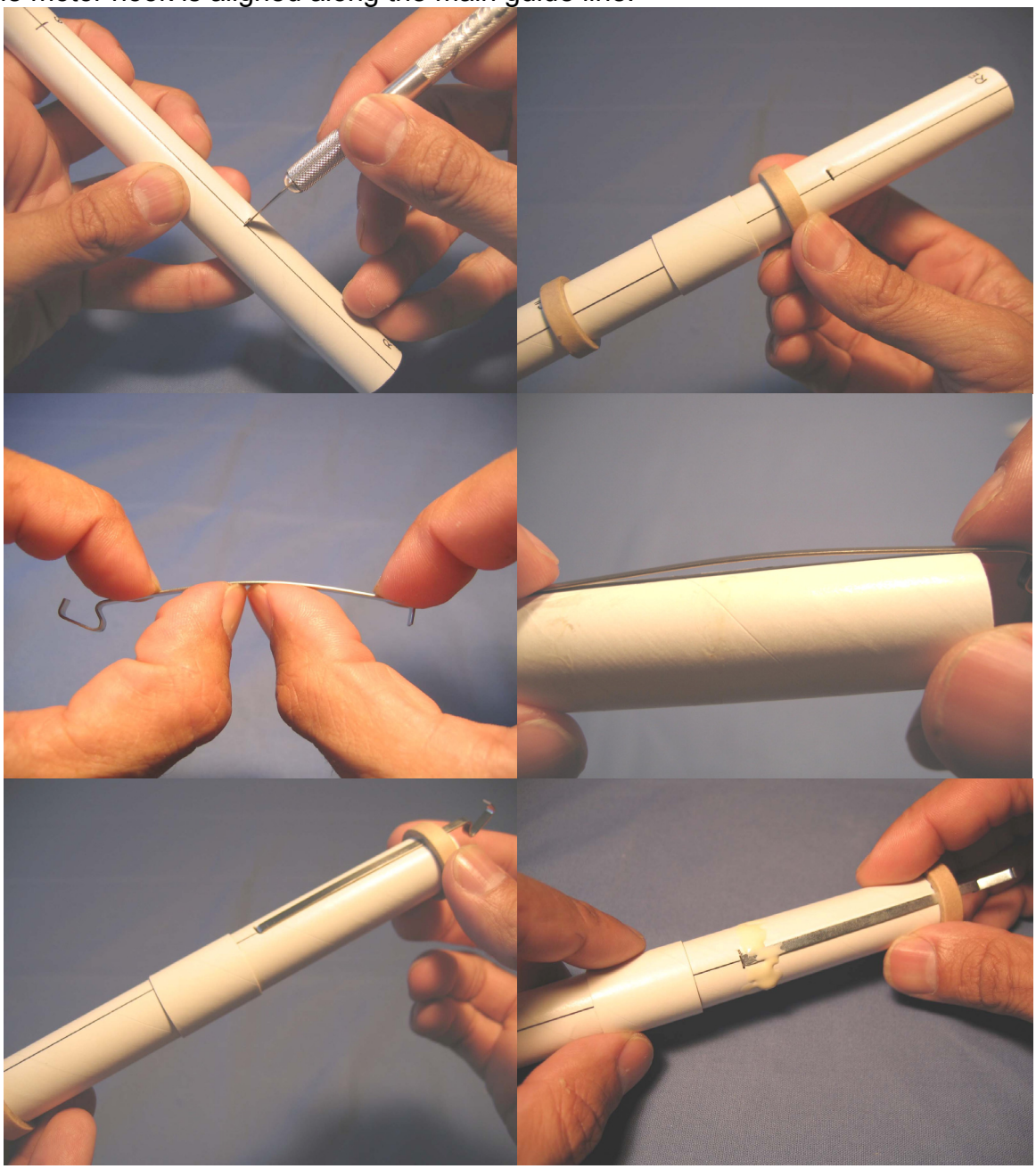


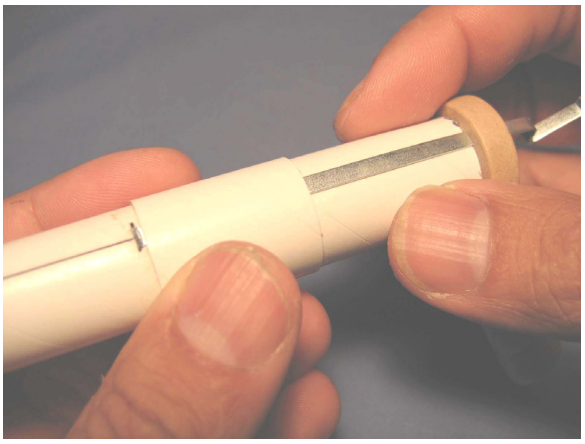
Step 19. Using one of the included craft sticks, apply a ring of glue about 2” inside the rear of the main body assembly. Place the motor block just inside the end of the tube that you just applied glue to. Using the motor block spacing jig, push the block up into the rear of the main body assembly, through the glue until the jig is flush with the end of the tube. Remove the jig.



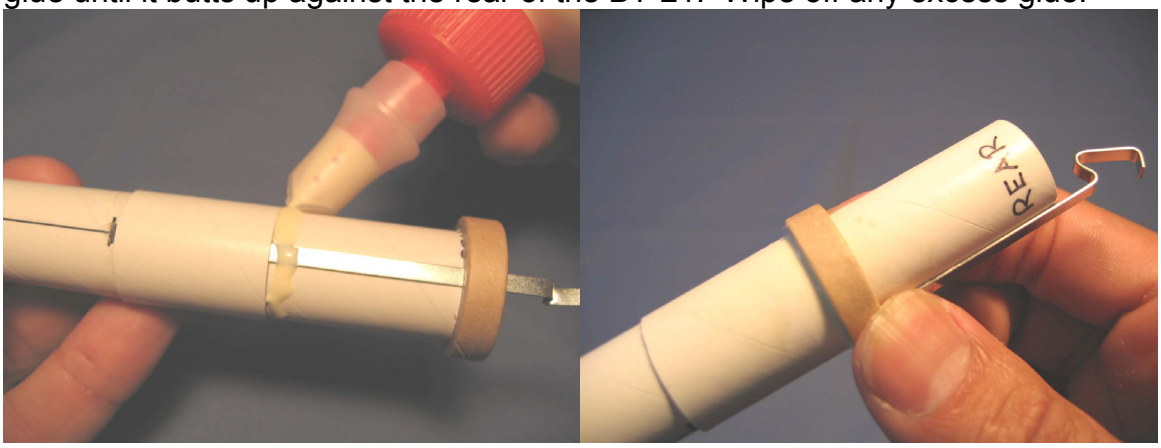
Step 20. Make a $^{1}/_{8}$” slit perpendicular to the main guide line at the mark you made in step 16. If everything was measured and drawn correctly, this slit should be just to the rear of the motor block you just glued in. Slide the 1” long WHITE BT-21 and then the last 20-50 centering ring onto the main body assembly just above the slit. Insert the end of the motor clip with the simple right angle bend into the slit in the tube. If it isn’t slightly bowed already, bow the motor clip gently and slightly so that when inserted in the slot it’s center will sit up off of the body tube

about $^{1}/_{8}$". The end of the clip with the more complex bend in it should hang off of the rear of the tube. Slide the 20-50 centering ring back down the tube over the motor clip, almost to the end of the tube. Apply a ring of yellow glue to the outside of the main assembly around where the motor clip has been inserted into the slit. In a smooth motion, slide the section of BT-21 down through the glue until its forward end is even with the forward end of the motor clip. At this point make sure the motor hook is aligned along the main guide line.

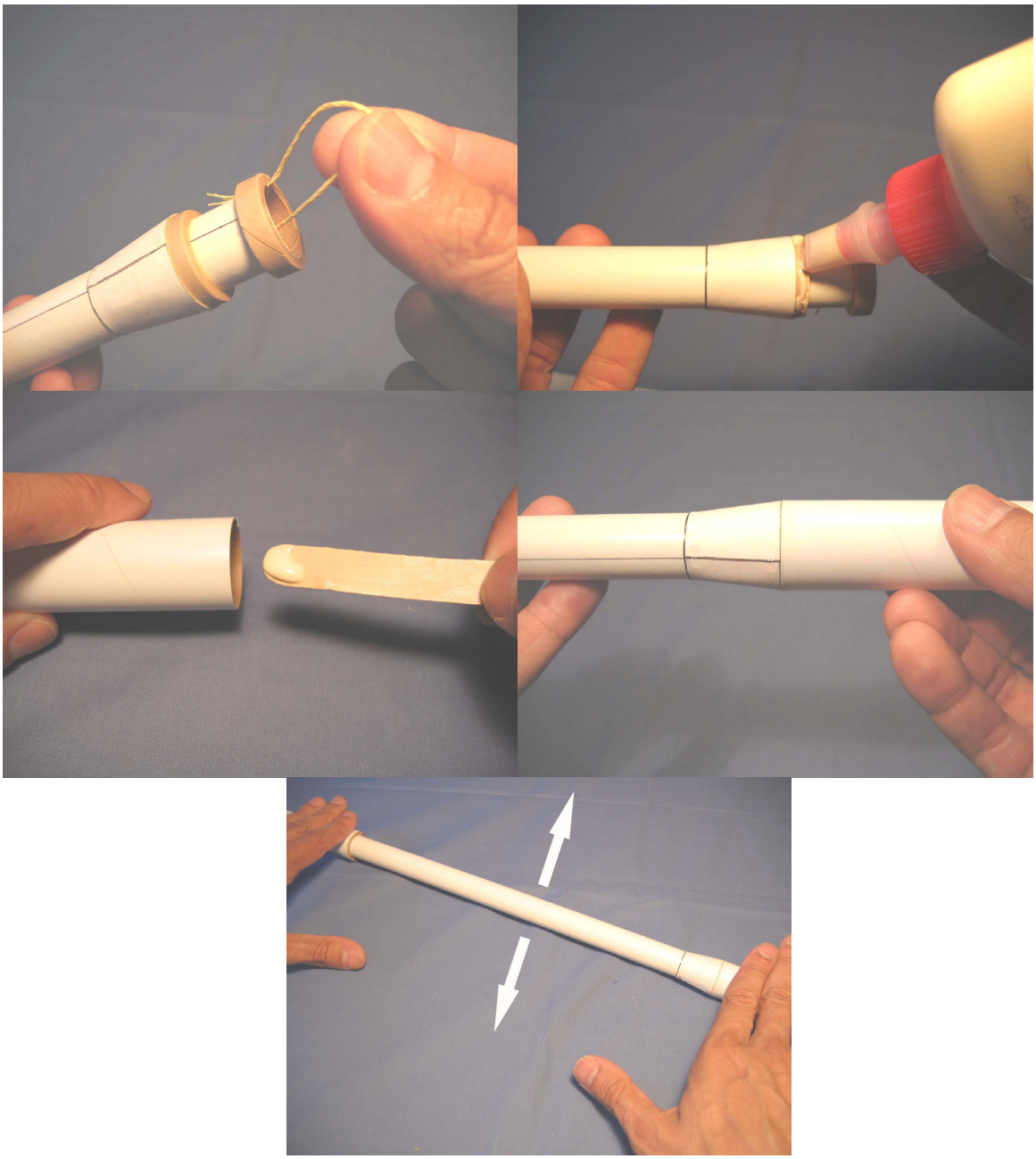




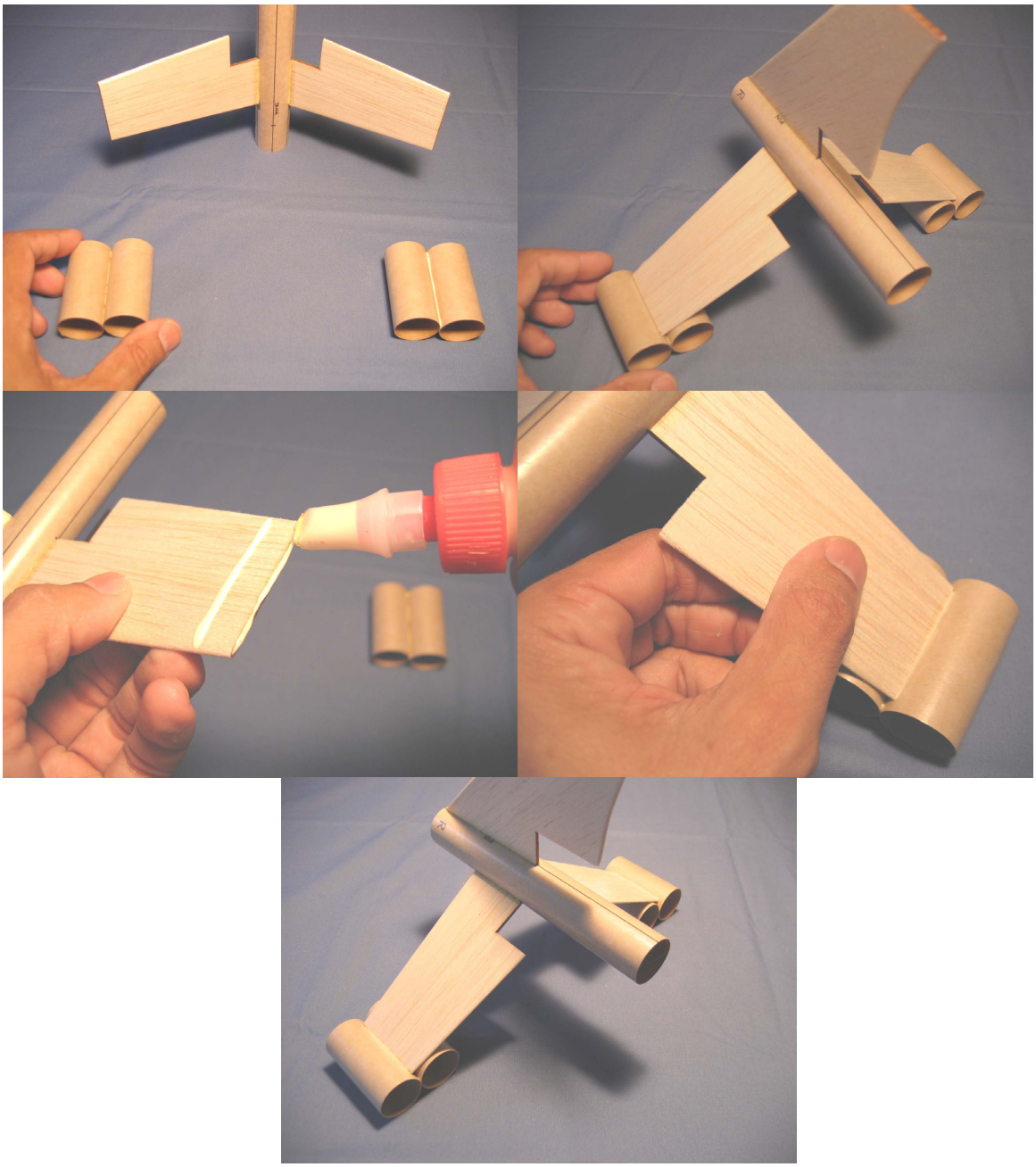
Step 21. Apply a ring of yellow glue around the main body assembly just behind the rear end of the BT-21 you glued in place in the last step. Slide the 20-50 centering ring back up from the rear of the main assembly and forward through the glue until it butts up against the rear of the BT-21. Wipe off any excess glue.



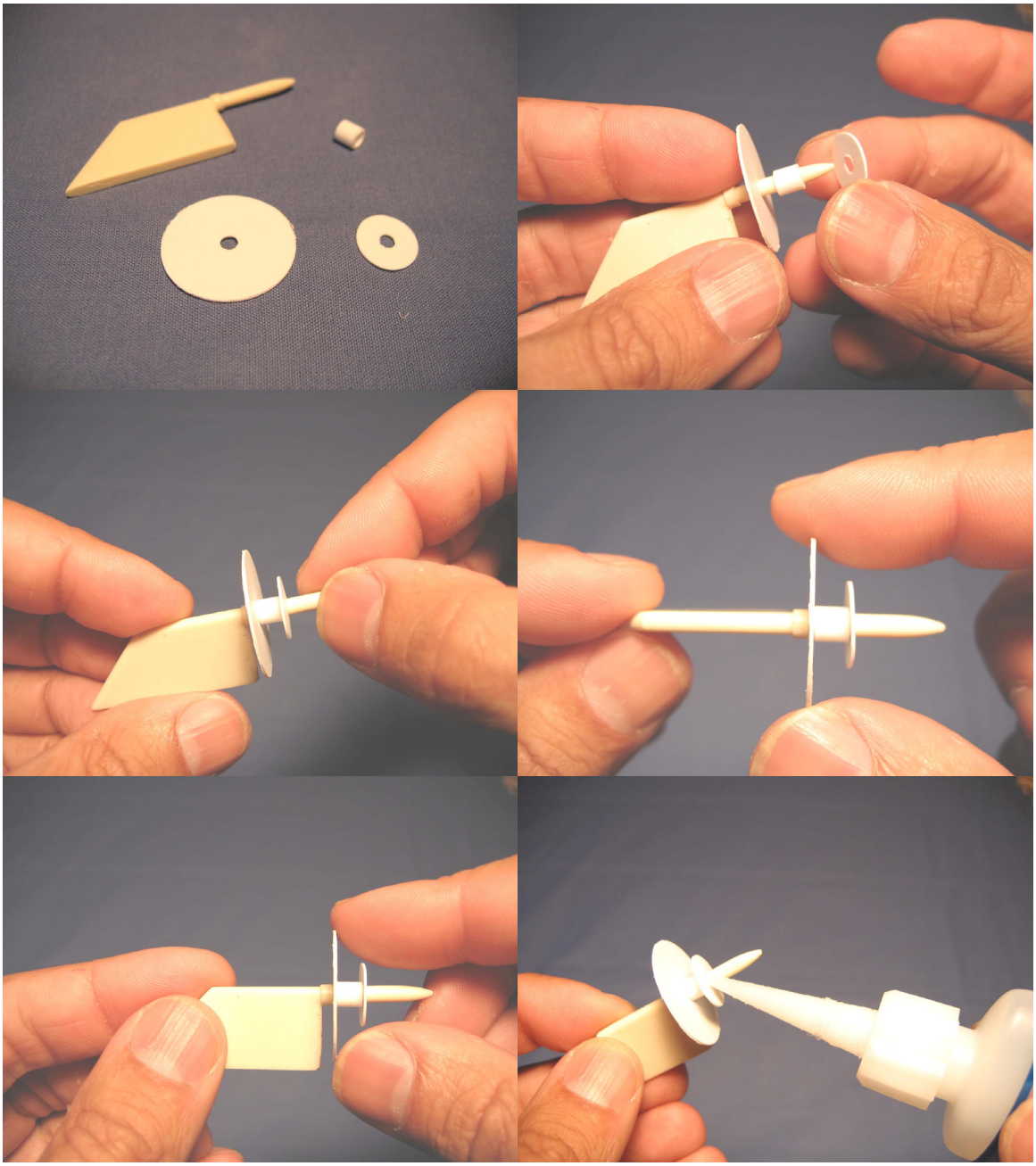
Step 22. Locate the 7" long WHITE section of BT-50 tubing. Tuck the Kevlar and elastic cords that were attached to the front of the main body assembly in steps 6 and 7 into the end of the BT-20 to avoid getting any glue on them in the next step. Apply a thin ring of yellow glue around the outer surface of the 20-50 ring that is in contact with the paper shroud. Using a craft stick spread a band of yellow glue just inside one end of the 7" section of WHITE BT-50 tubing. Slide the end of the BT-50 with the glue in it onto the two forward most 20-50 rings until it stops against the forward edge of the paper shroud. Wipe off any excess glue at the shroud/BT-50 joint and roll the assembly on a flat surface, applying light pressure to the bulkhead and crew section, to ensure that everything is lined up correctly.



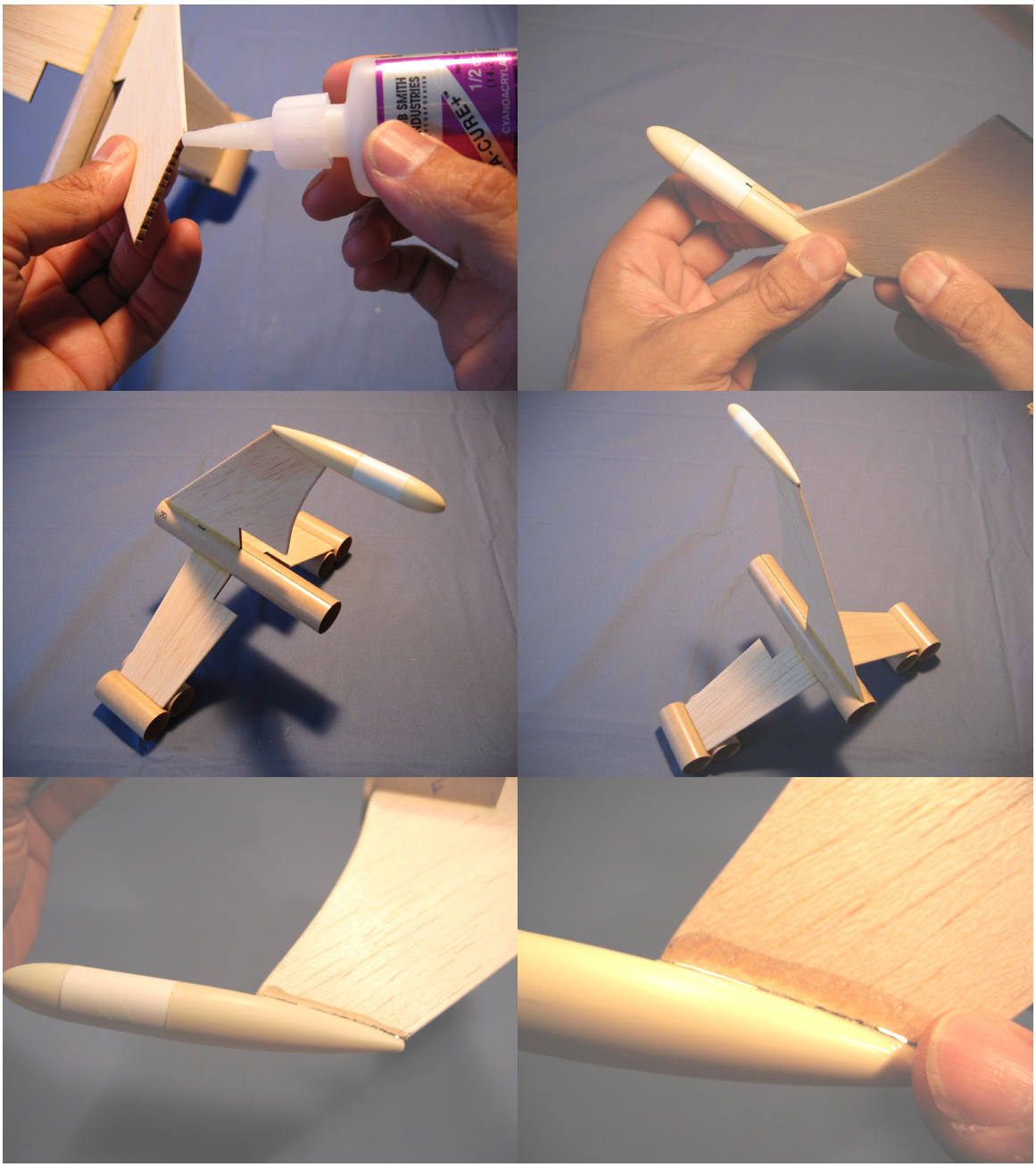
Step 23. You will now join the main drive engine assemblies you made in step 16 to the propulsion section from step 12. Working on a FLAT surface, place the two engine assemblies several inches apart and parallel to one another. With the large main fin pointing straight up, lay the propulsion section down so that the ends of the wings rest centered in the seam between the two tubes on each of the engine assemblies. The propulsion section should balance in this position. Note the points where each of the wings contacts the engine assemblies, the very tips and about $^{3}/_{8}$" in from the tips on the undersides. Remove the propulsion section and put lines of yellow glue on the locations where it contacted the engine assemblies. Set the propulsion section with the glue applied back in place on the engine tubes.



Step 24. Inside the resin parts bag you will find a smaller bag containing all of the parts to the radar dish assembly. Perform any sanding or “cleaning up” of the resin mount with some 400-grit sandpaper. Slide the large, 1” diameter plastic disc over the post until it stops against the molded ring, this should be a somewhat loose fit. Next slide the small plastic spacer tube over the post and up against the large ring. This too should be a loose fit. Lastly slide the small ½” diameter disc onto the post. This disc will have a tighter fit. Press it down firmly against the spacer tube and the 1” disc. When viewed from the top the discs should be perpendicular to the resin mount and parallel to one another. When viewed from the side the leading edge of the resin mount and both of the discs should all be parallel. Gently align the parts as needed. Once you are satisfied with their positioning, apply tiny amounts of thin CA glue to the places where the discs contact the resin mount. The thin CA will “wick” into the seams and permanently hold all of the parts in place.

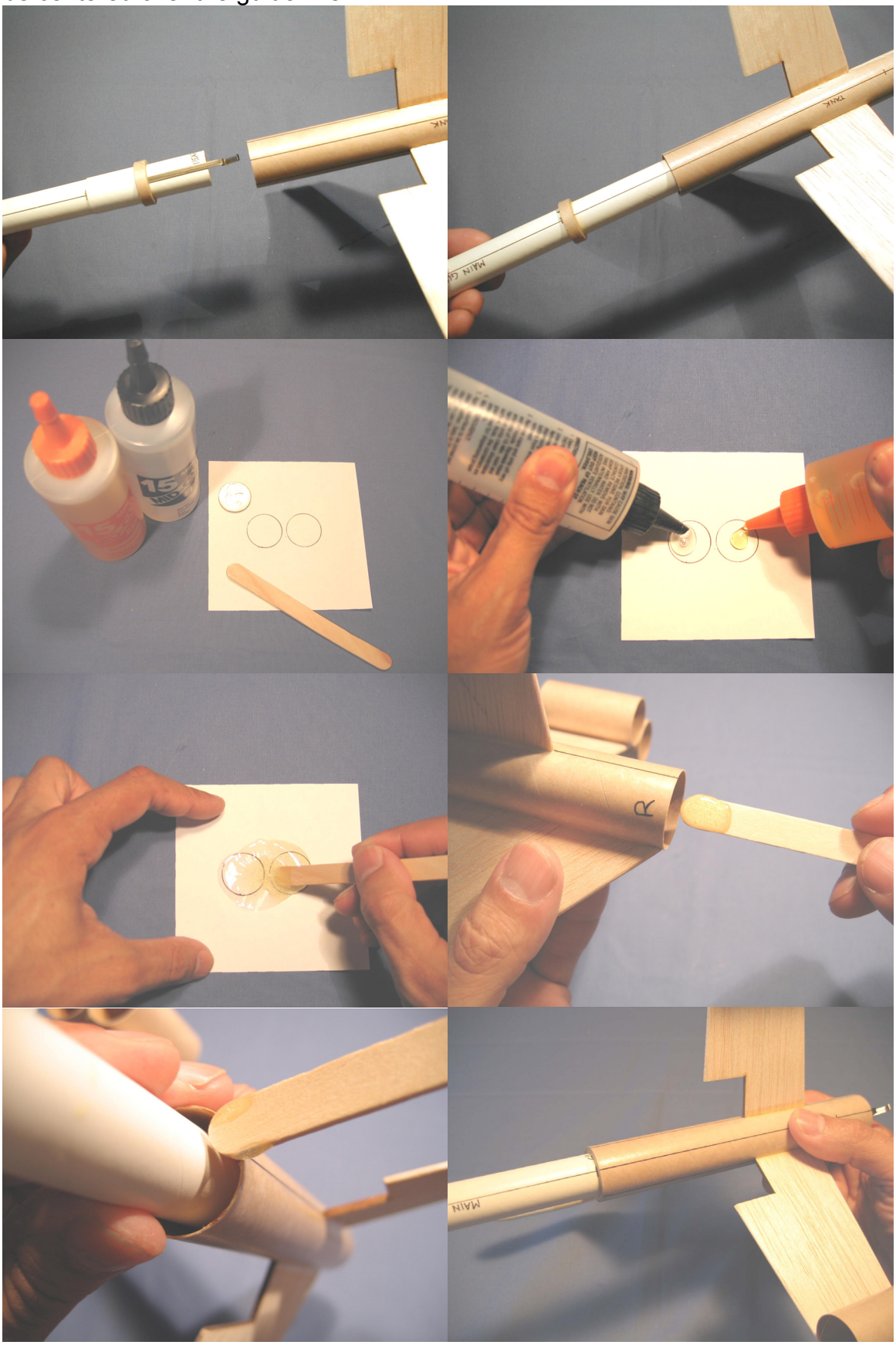


Step 25. Locate the sensor pod you began assembly on in step 15 and the propulsion section from step 23. The curve in the top of the main fin should cradle the nose cone on the sensor pod. Using medium CA and the line you drew on the cone as a guide, glue the sensor pod to the top of the main fin. The tip of the cone should be even with the trailing edge of the fin and the BT-5 tube should be parallel to the BT-50 that the fins are glued to. For a strong attractive fillet on this joint use 15-minute epoxy.

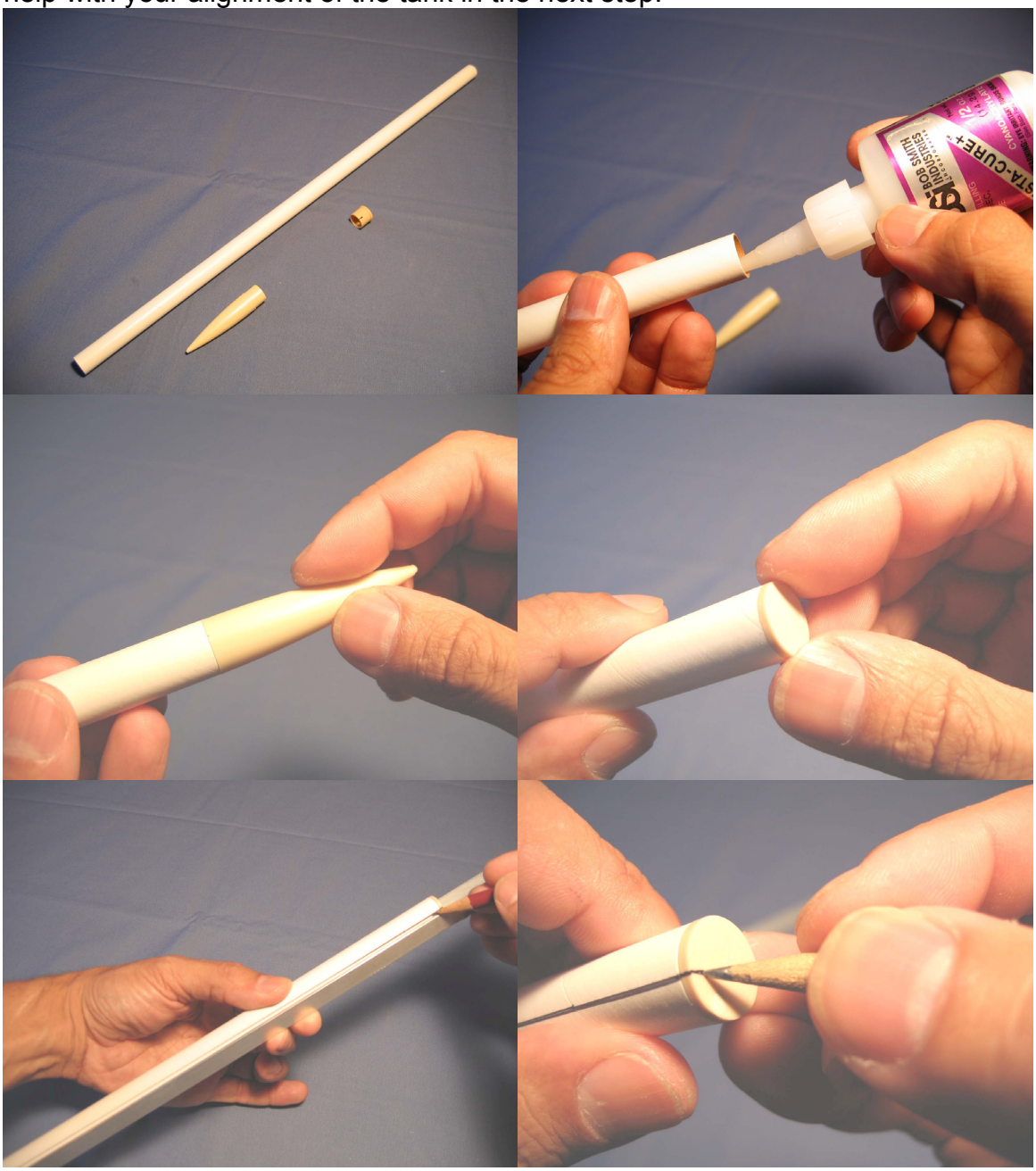


Step 26. You are now ready to glue the propulsion section to the main body. **Use the 15 minute epoxy for this step!!!** The epoxy will give you time to apply glue in all of the right areas and will not “grab” like the yellow glue while you line the part up. Additionally it almost acts like a lubricant against the cardboard until it begins to set. Slide the propulsion section onto the rear of the main body until the front of its BT-50 is about 3” past the lowermost 20-50 centering ring that is over the motor clip. Mix up a small amount of epoxy. If you are using an epoxy that requires 2 equal parts, make two traces of a nickel on your mixing surface. Fill a circle with each part then mix together to give you the right amount for this step. Rotate the propulsion section until the “tank” line is exactly over the guide line on the main body assembly. Using a craft stick, apply a ring of epoxy about 1 ½” inside the rear of the BT-50. Like wiping a paint brush on the inside edge of a bottle to remove excess paint, use a craft stick to wipe epoxy along the inside edge of the front of the BT-50. Once the glue is in place, in one smooth step slide the

propulsion section forward over the next 20-50 centering ring. The front end of the BT-50 should be even with the front of the centering ring, the rear of the BT-50 should be even with the rear of the main body assembly and the “tank” line should be centered over the guide line.

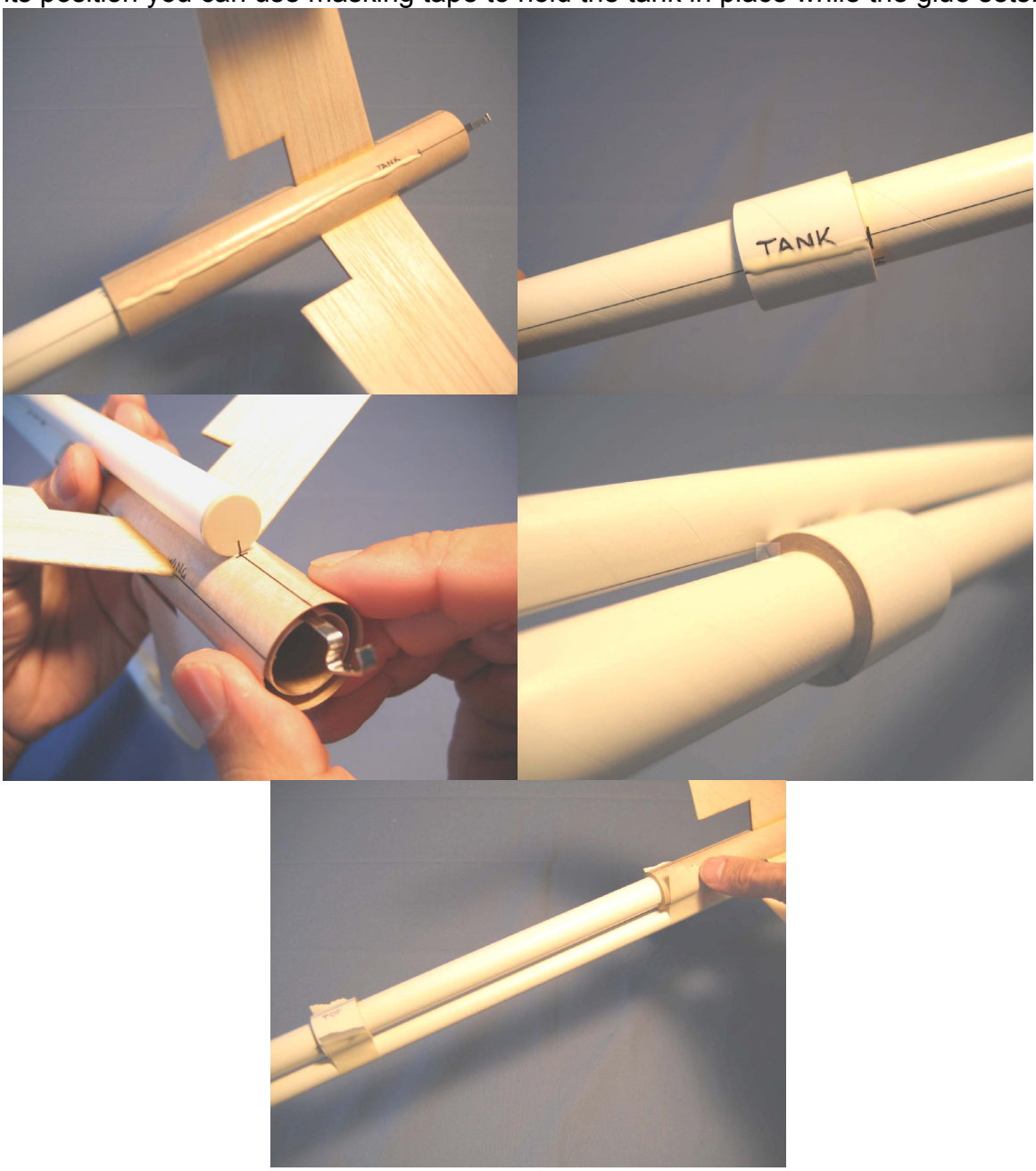


Step 27. Locate the 17” WHITE BT-5 (fuel tank) tube, the BT-5 plug and remaining long BT-5 nose cone. Use medium CA to glue the plug and the nose cone into opposite ends of the tube. Using a door jam or section of angle, draw a long, straight line along the entire length of the tube and the edge of the plug. Continue the line $^{1}/_{8}$” onto the face of the plug (which will be the rear) which will help with your alignment of the tank in the next step.

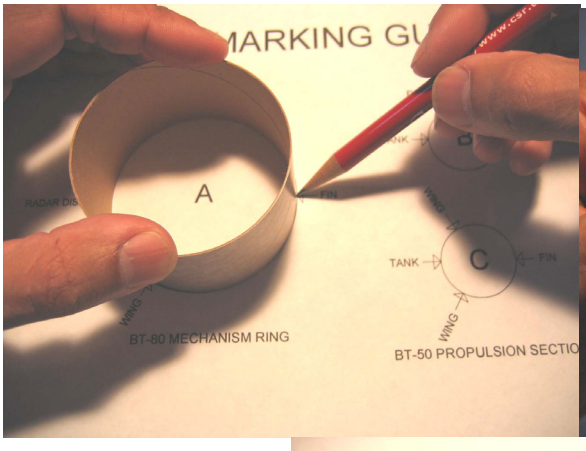


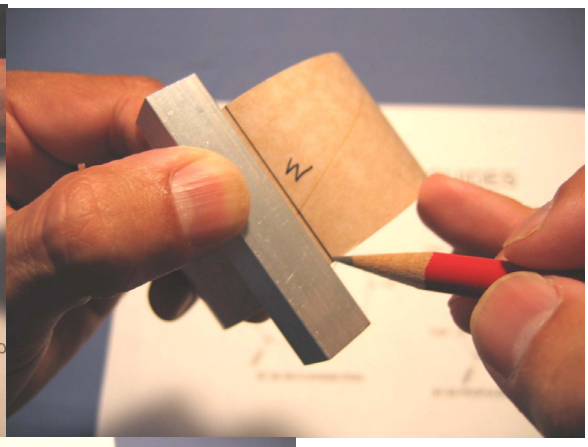
Step 28. Apply a thin line of yellow glue on the “tank” line from the 1” mark, made in step 10, forward to the front edge of the BT-50 propulsion section tube. Apply another line of glue along the “tank” line on the 1” BT-50 main bulkhead. Position the BT-5 tank from the previous step over the “tank” lines with the end of the BT-5 plug on the 1” mark. Use the line you drew on the tank and the BT-5 plug to help line it up in the rear. On the forward end, the line you drew across the front of the

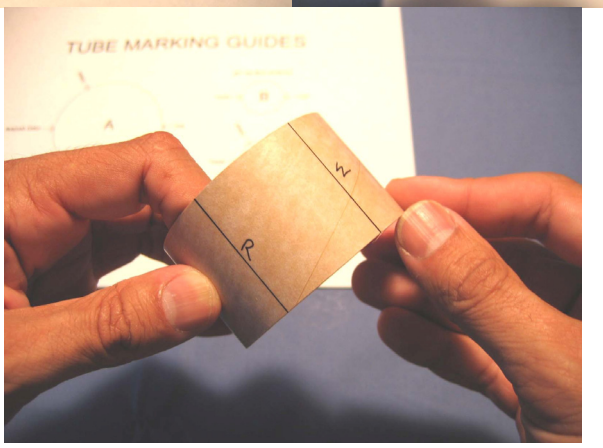
bulkhead's 20-50 ring and the line on the tank should aid in the alignment. Check and recheck the alignment before the glue fully sets. Once you are satisfied with its position you can use masking tape to hold the tank in place while the glue sets.



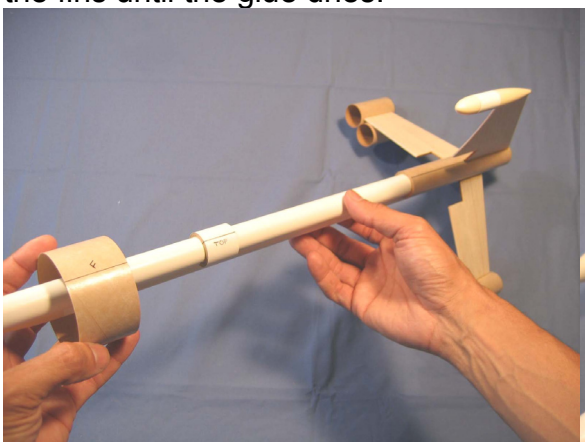
Step 29. Locate the 1 ½" BROWN BT-80 (mechanism ring) tube. Place it over marking guide "A" on the "Tube Marking Guides" sheet. Mark the tube at the "Radar dish", "Wing", "Fin" and "Wing" locations. Using a door jam or angle extend each line the full length of the tube (you may use the motor block spacing tool for this). You should label each line "R", "W", "F" or "W" to help in the next step.

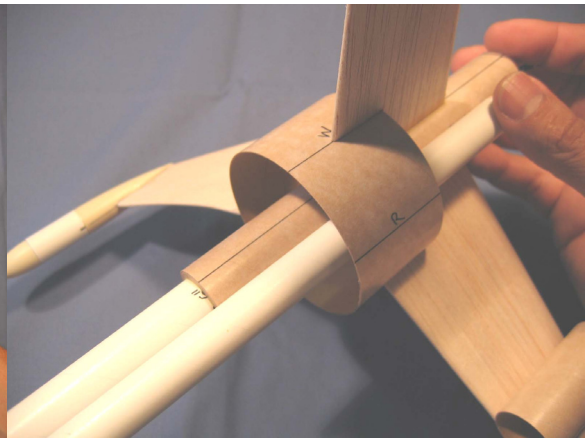


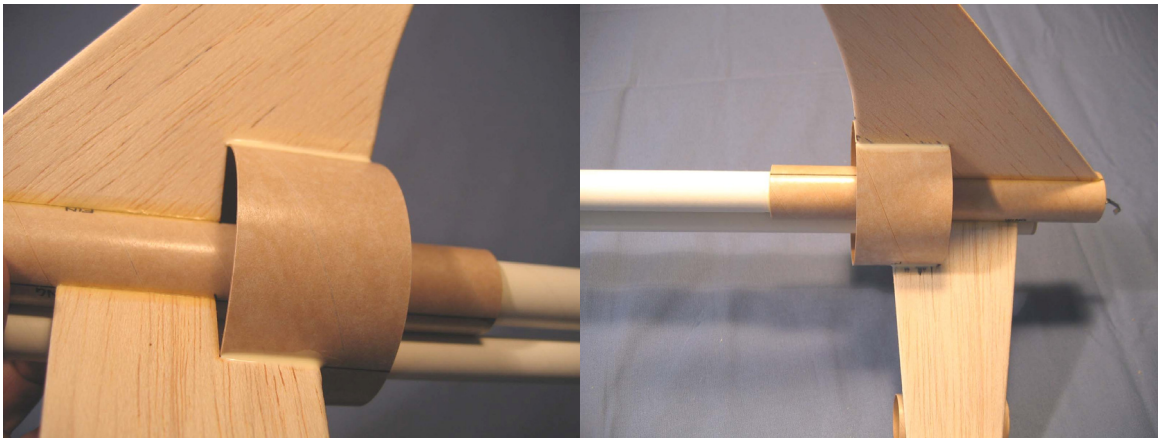




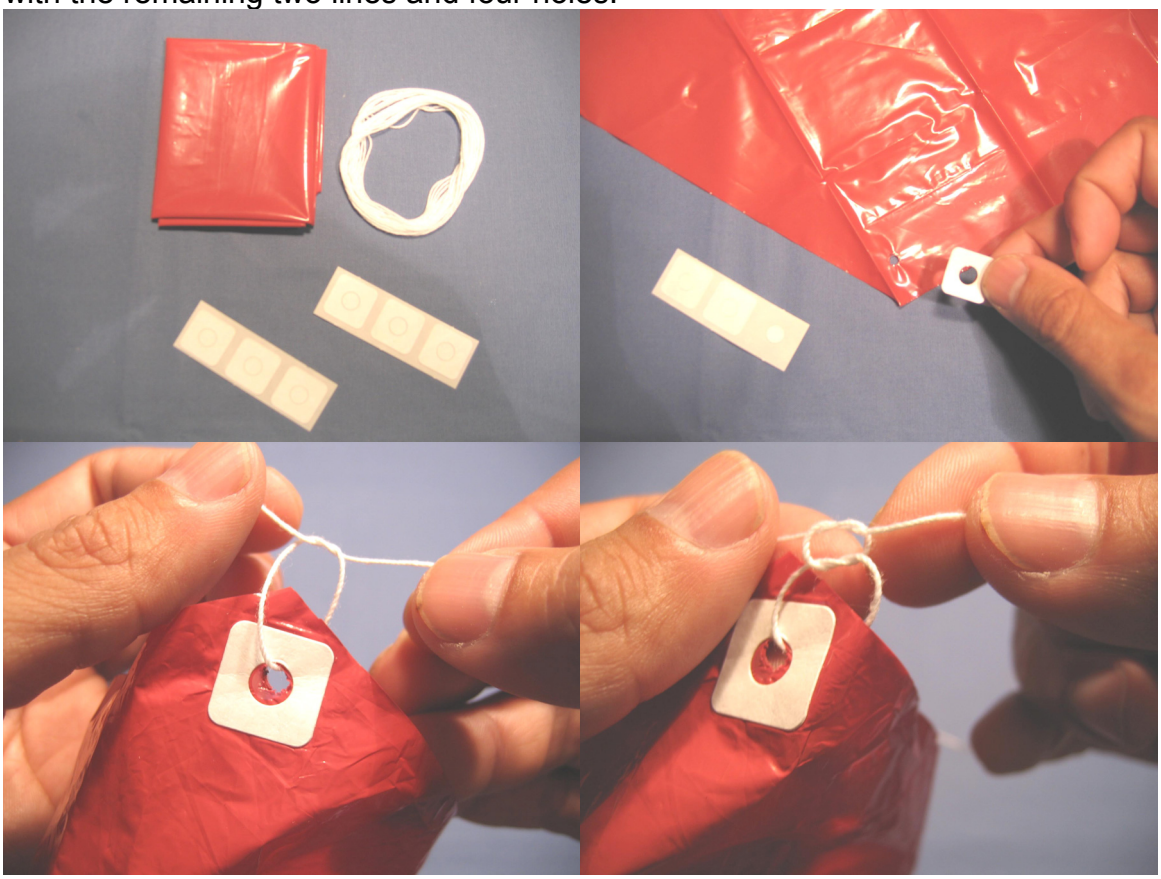
Step 30. From the front of the model, lower the BT-80 ring over the model and into its location between the fins. It should be a snug fit but not so tight that it deforms the BT-80 tube. If need be sand the inside edge of the balsa parts gently and evenly with a sanding block until a proper fit is achieved. Line all of the fins up on their proper lines with the “radar dish” line evenly between the two wings. When you are satisfied with the positioning, use yellow glue and apply fillets to the areas where the fins contact the BT-80. Set the assembly in a horizontal position off of the fins until the glue dries.

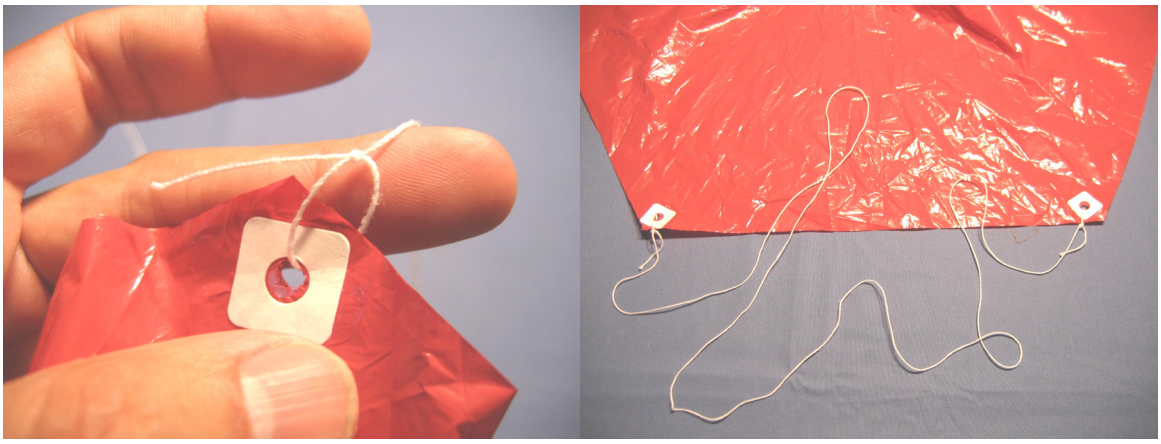




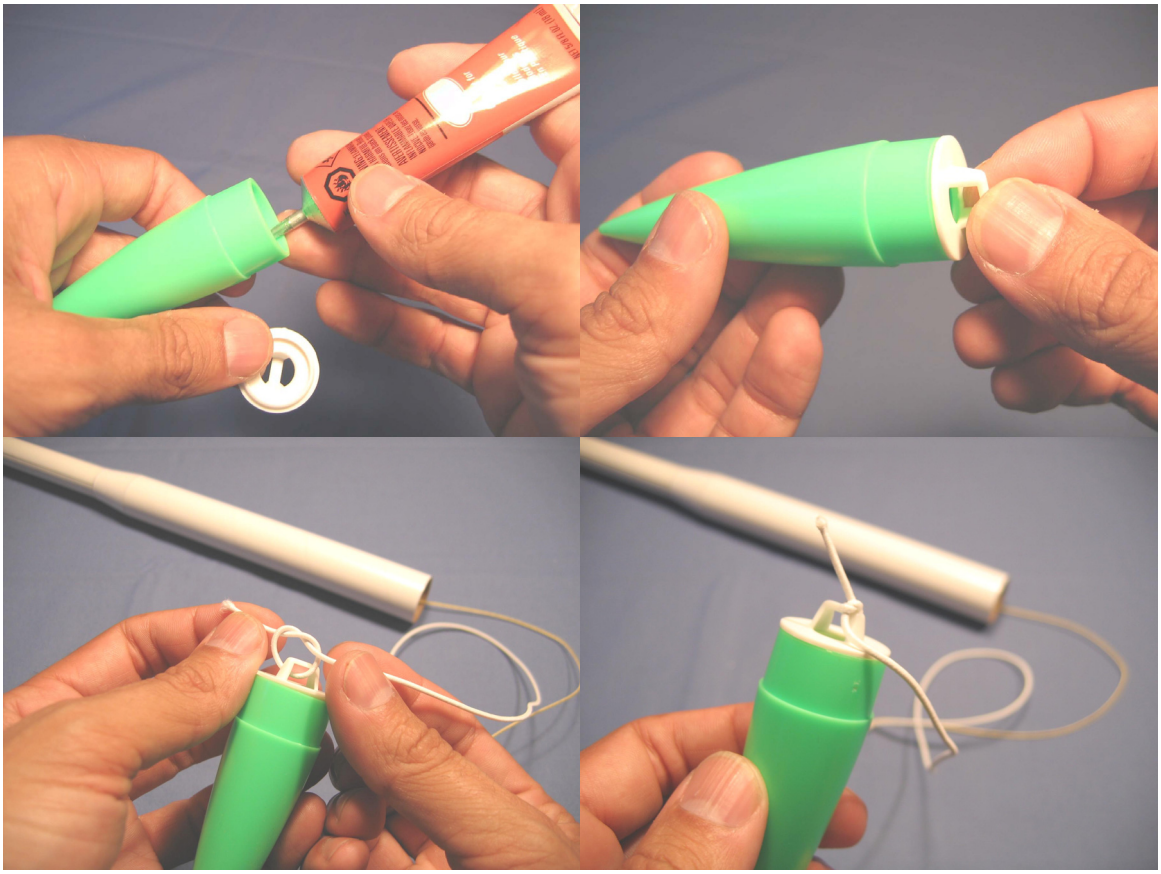


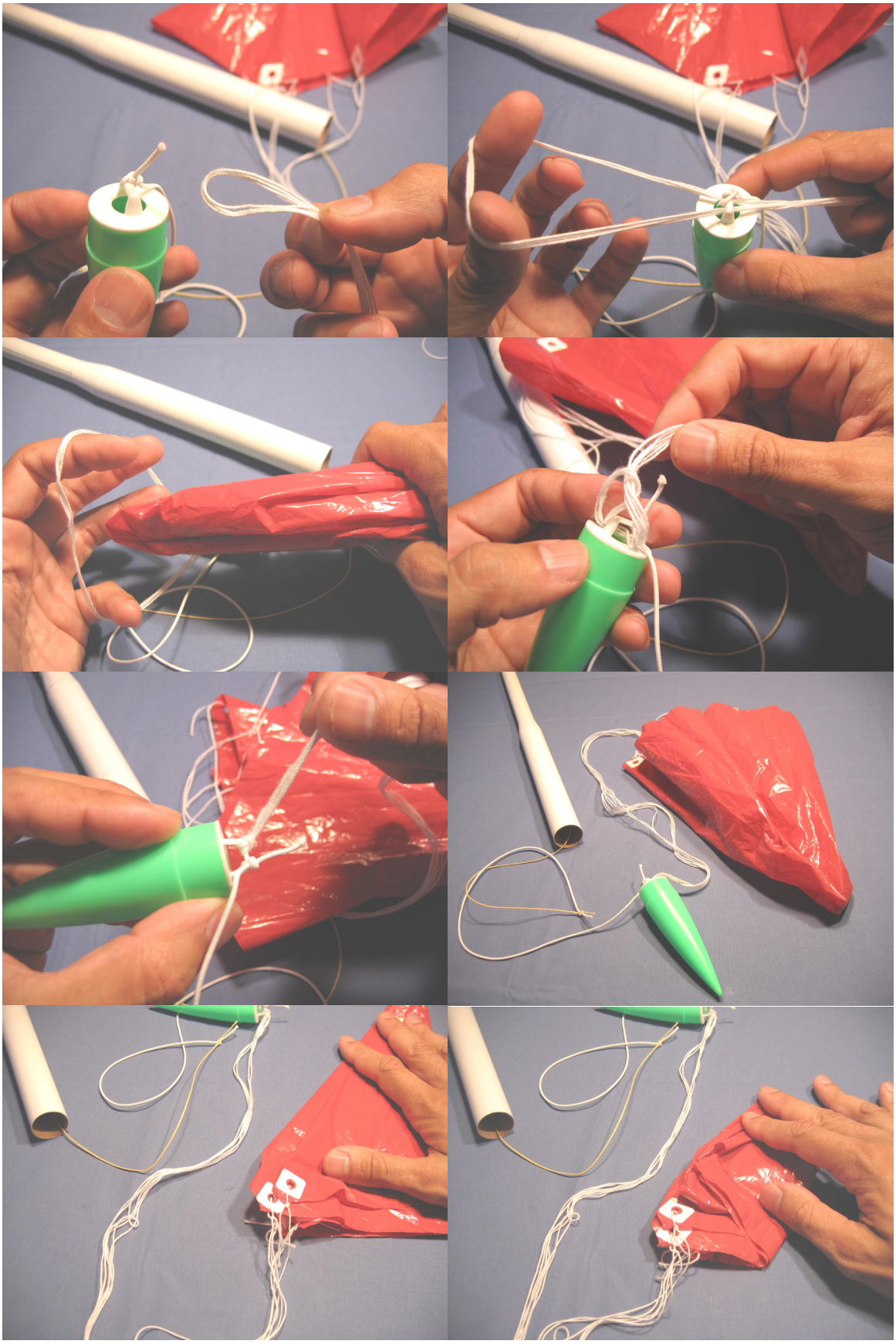
Step 31. Open the bag containing the 18” parachute. Begin assembly by applying a reinforcing sticker over each of the 6 holes at the edges of the pre-cut parachute. Separate the three pre-cut shroud lines and thread the end of one of the lines through one of the holes and reinforcing sticker. Tie a double knot trying to leave only about an inch of extra line after the knot. Rotate the parachute and tie the other end of the line through the very next hole in the same fashion. Repeat this with the remaining two lines and four holes.

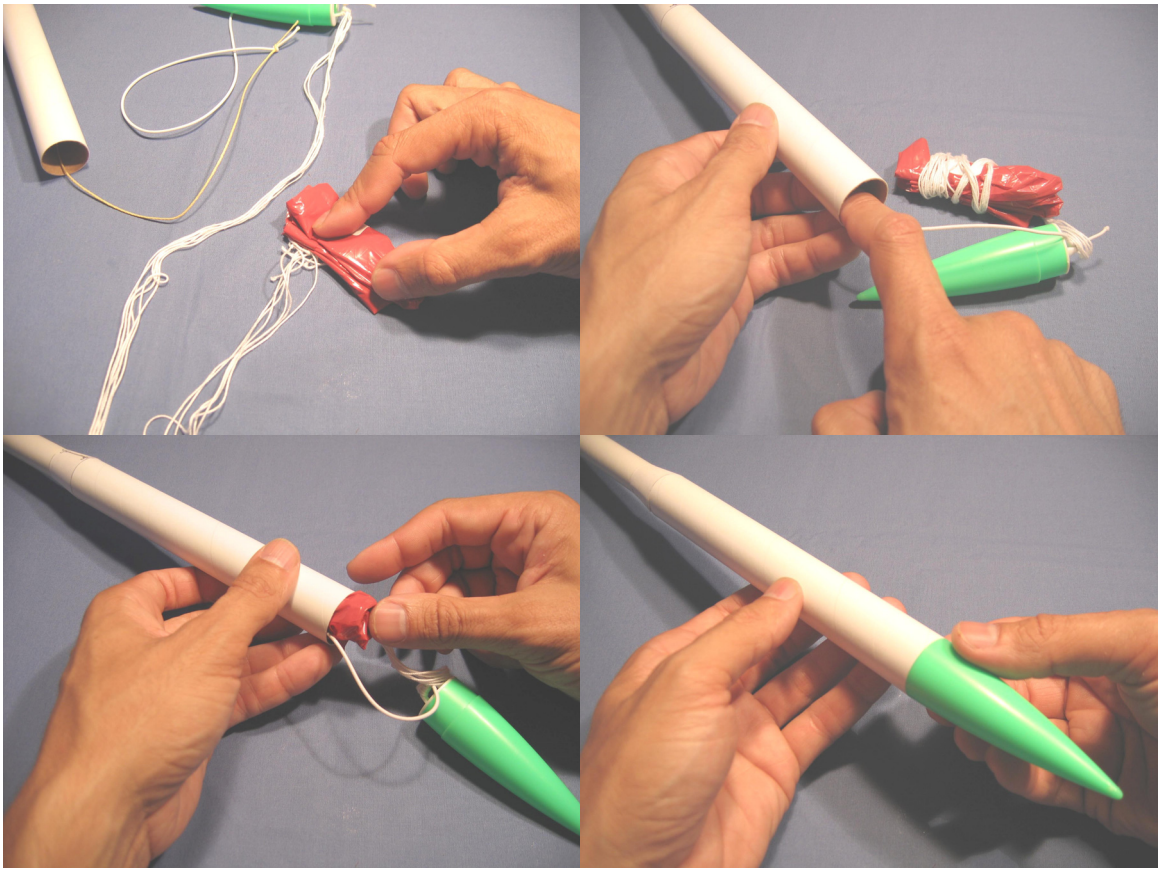




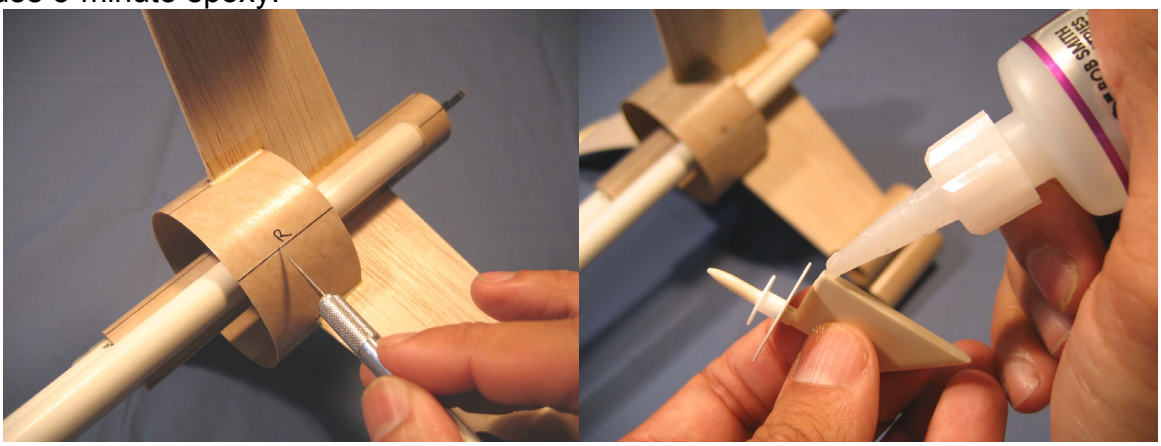
Step 32. Locate the main BT-50 nose cone and BT-50 nose cone base. Using either tube-type or liquid plastic cement, glue the nose cone base into the bottom of the nose cone. Tie the free end of the elastic cord from step 7 to the nose cone base. Attach the parachute by feeding the shroud lines through the base a few inches then pulling it by the tip through the loop in the lines. Pack all of the lines, the chute and the nose cone into the crew section tube.

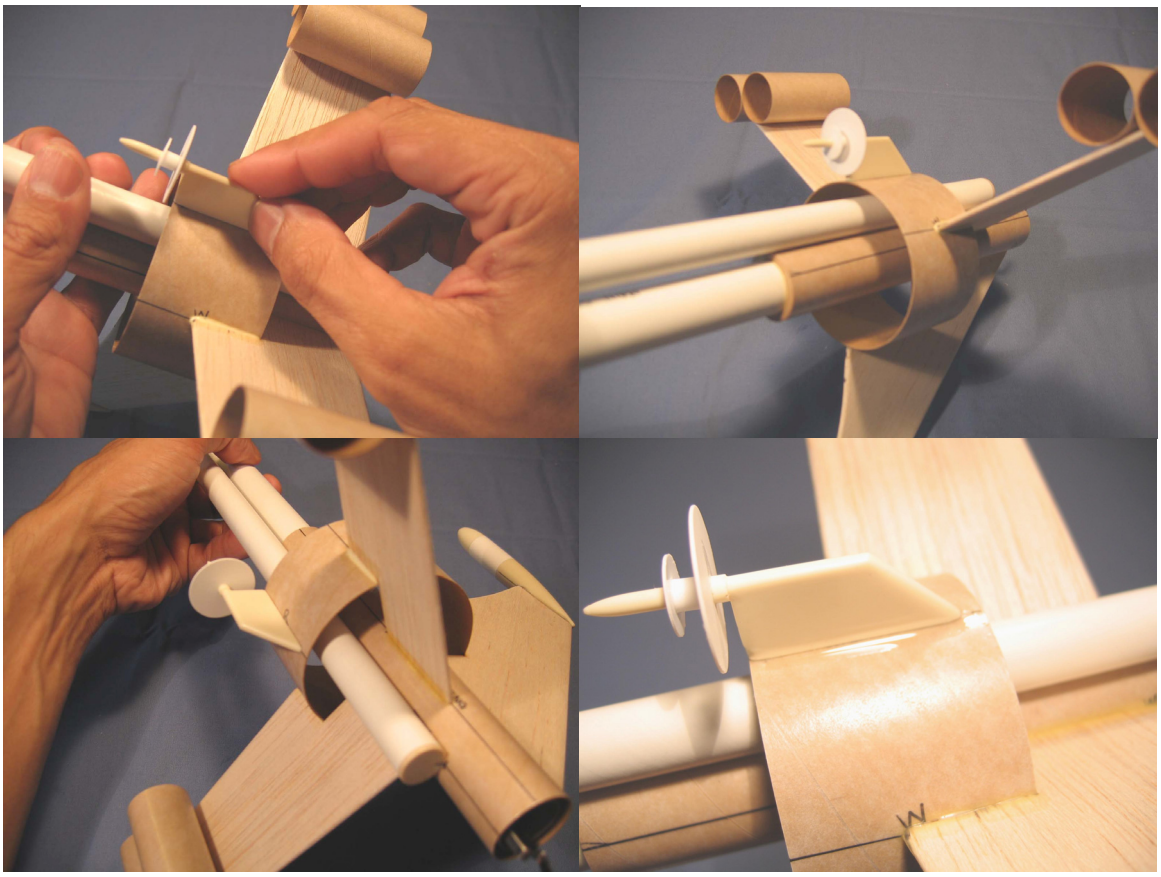




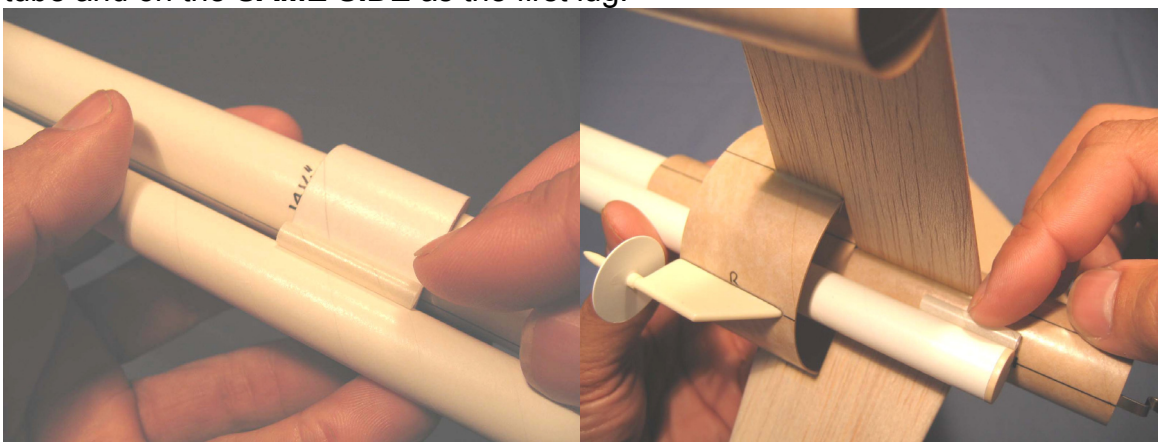


Step 33. Locate the radar dish assembly you completed in step 24. Using medium CA glue, attach the assembly to the BT-80 mechanism ring on its line between the two wings with the discs and post facing the front of the model. If you want a better bond here you may “scuff” up the BT-80 with the tip of a hobby knife where the radar dish assembly will attach to the tube. The front of the resin mount should be even with the front of the BT-80 tube and, when viewed from the rear, should point straight away from the tube. For a strong attractive fillet on this joint, use 5-minute epoxy.

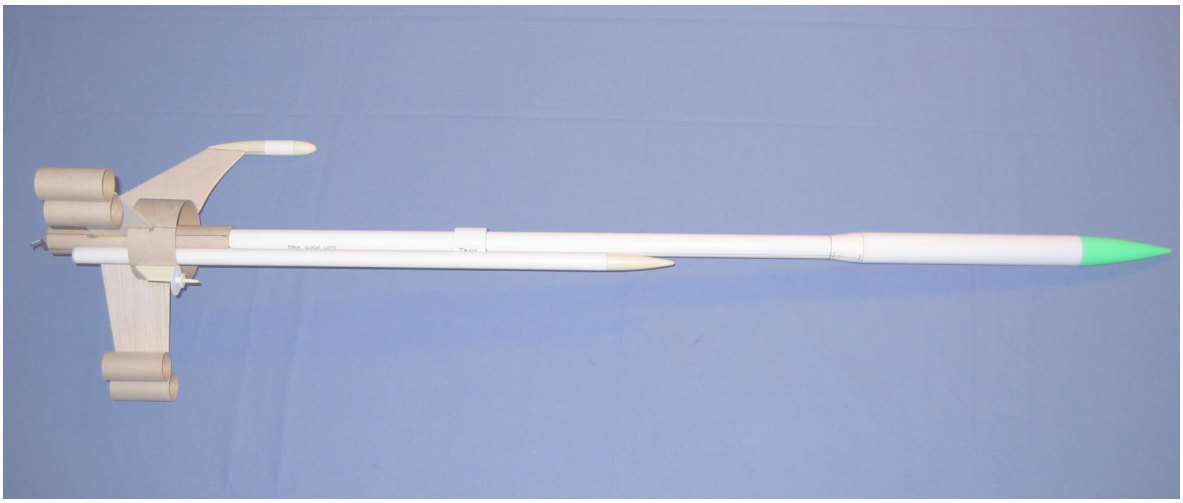




Step 34. Locate the two 1” long launch lugs. Using yellow glue, attach one of the lugs in the joint between the BT-5 tank tube and the BT-50 bulkhead tube. It does not matter which side you put it on, just be sure that the front and rear of the lug are even with the front and rear of the bulkhead tube. Glue the second lug even with the rear of the BT-5 tank tube in its joint with the BT-50 propulsion section tube and on the **SAME SIDE** as the first lug.



Step 35. At this point the main construction of the model is completed. Use whichever method of filling the balsa parts you prefer to prepare them for painting. The most widely used method is to apply several coats of sanding sealer and sanding between coats with a fine grade of sand paper until the grain is filled and the surface is smooth.

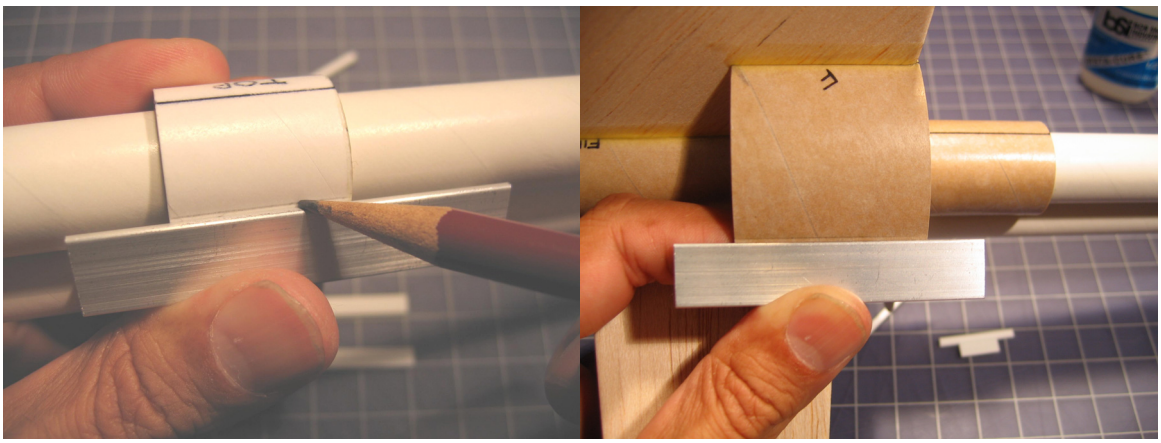


DETAILS

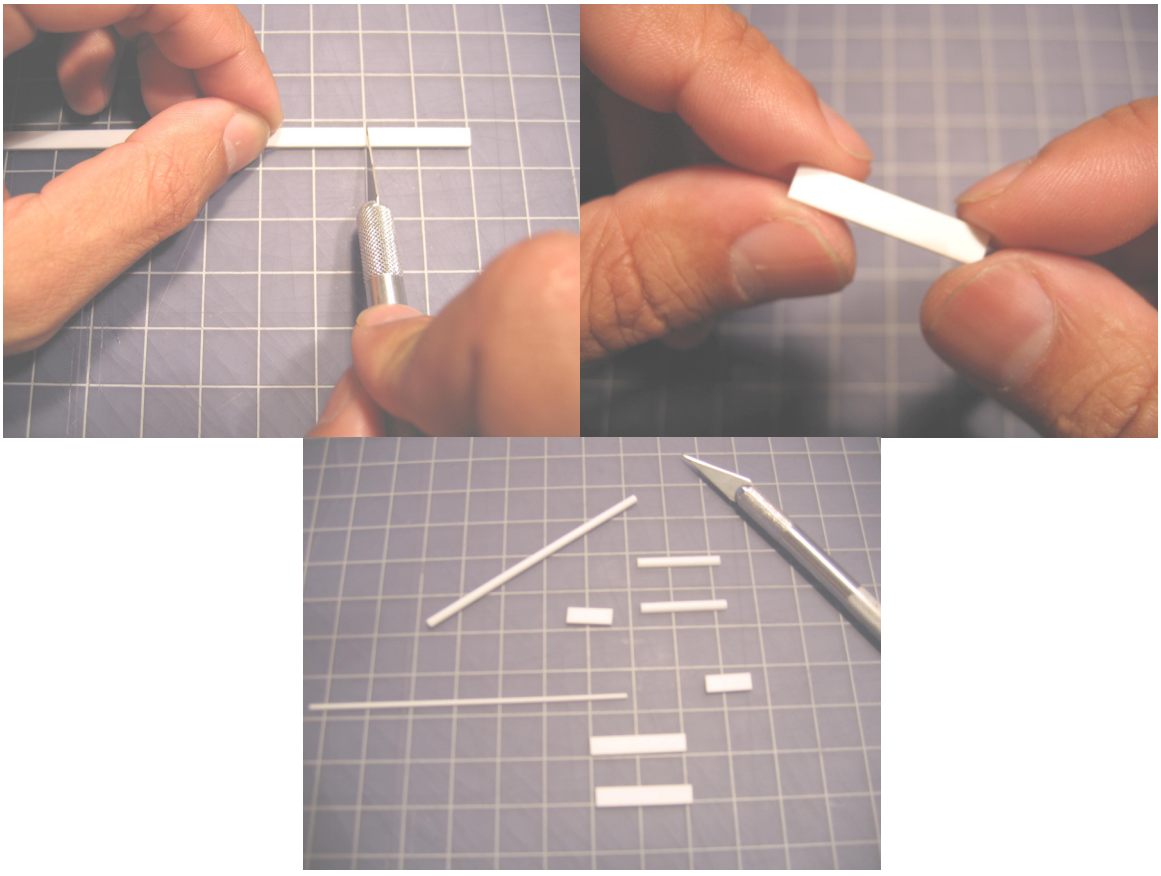
You now have a large, stable, sleek model that you can paint, decal and call it finished. **OR** you can go the extra mile and detail it with the included plastic sheet, rods, strips, half round pieces and detail parts. This is your chance to make all of the custom guns, panels, conduits and antennas you want and to make your **Odyssey** different from everyone else's! The process by which the details were applied to the model in the photos is described below.

1. Decide where you wish to position various plastic parts. The mechanism ring is a nice, large, empty area that is just screaming to be detailed! Take a look at many of the popular sci-fi ships. They have all sorts of little bumps and details on them that really add realism and bring them to life.

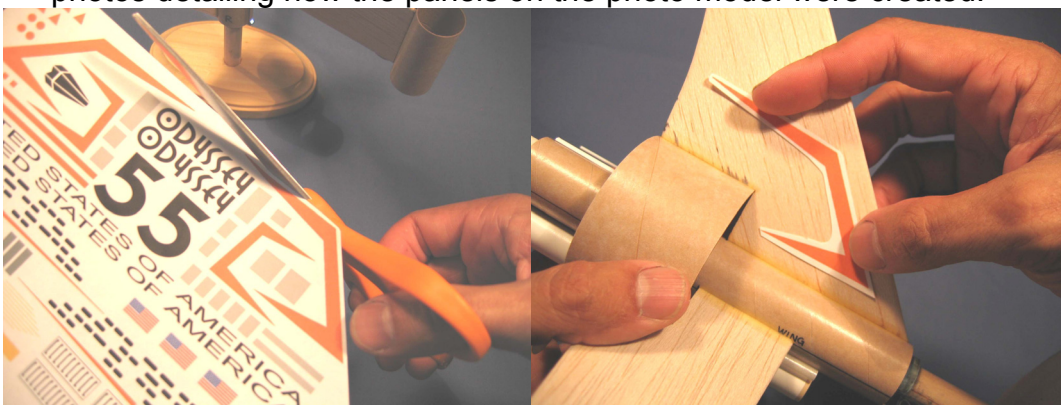
2. Using the aluminum angle that came in the motor mount bag, draw lines along the body tubes and wing surfaces where you would like to add details.

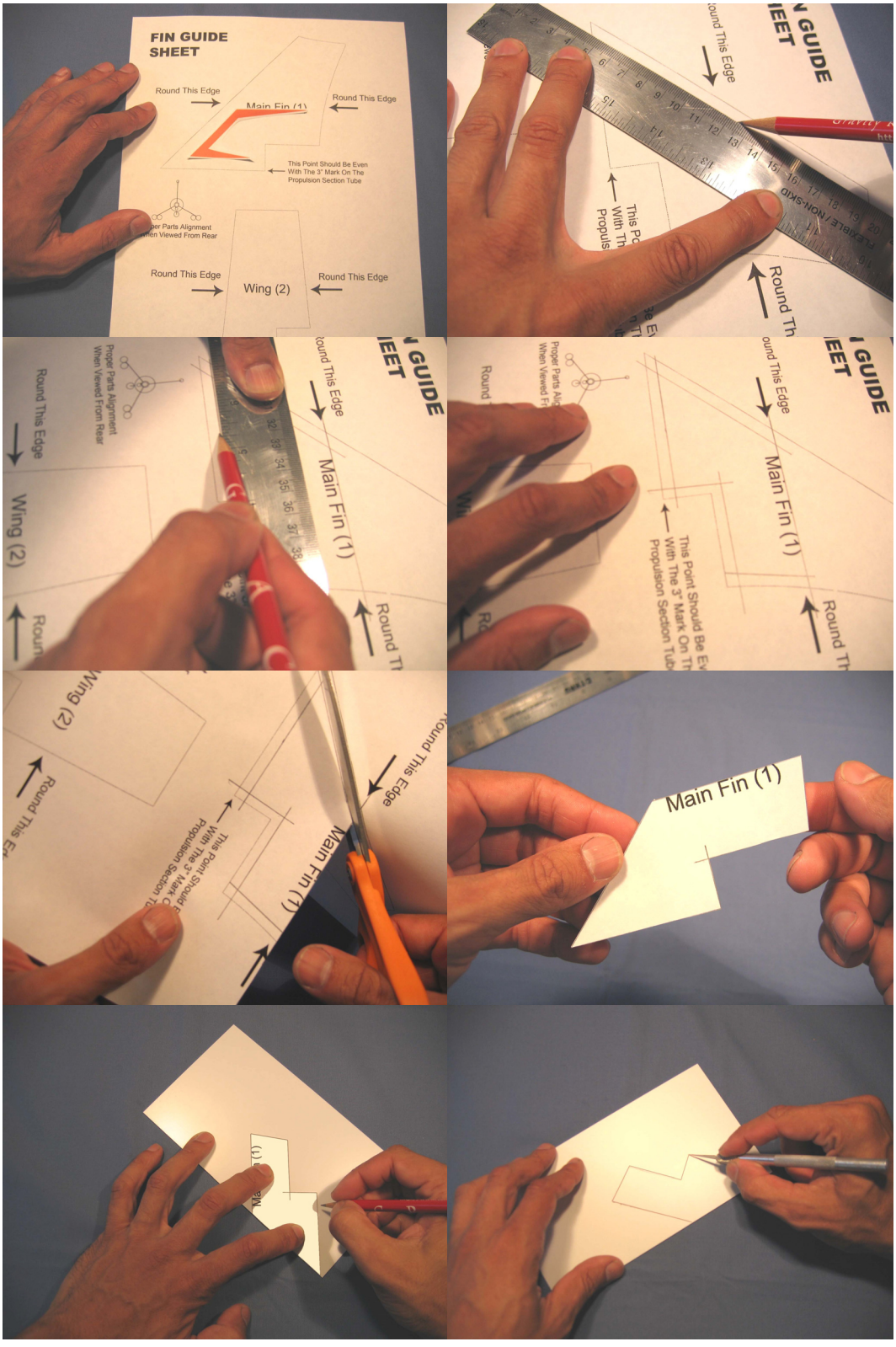


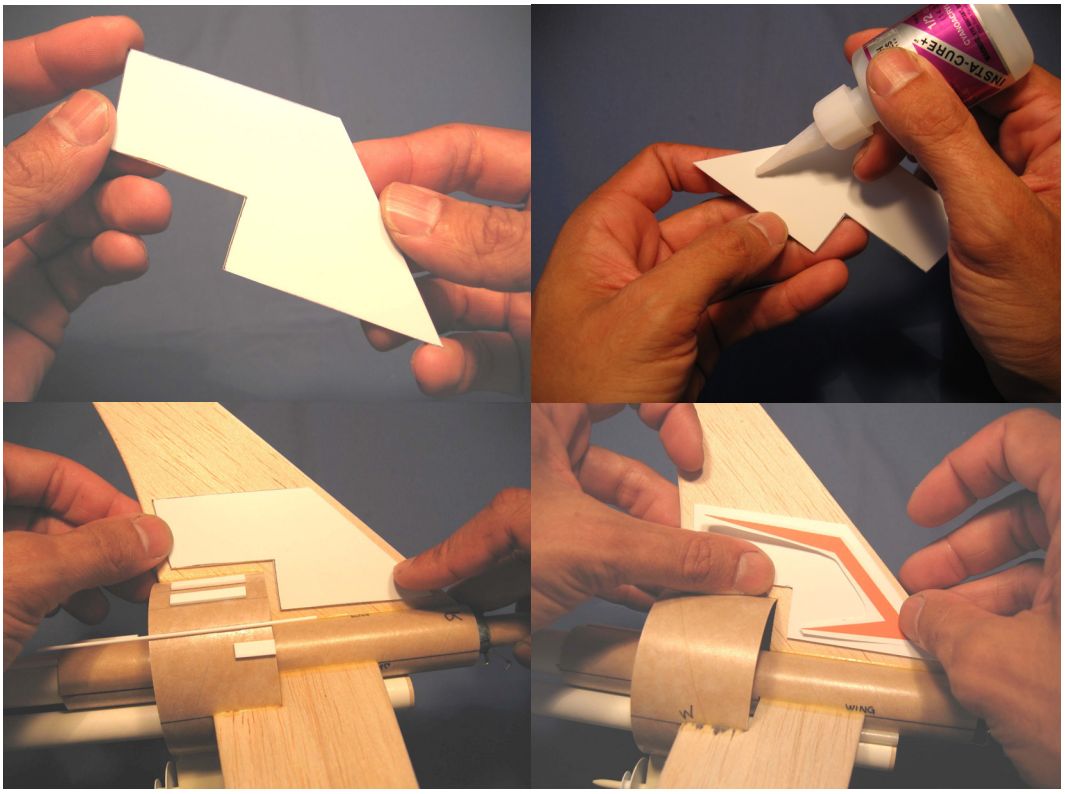
3. Cut various lengths of styrene from the strip stock using your hobby knife. Use the photos in the file named "Photo Model Images" on this CD to help get your creative juices flowing.



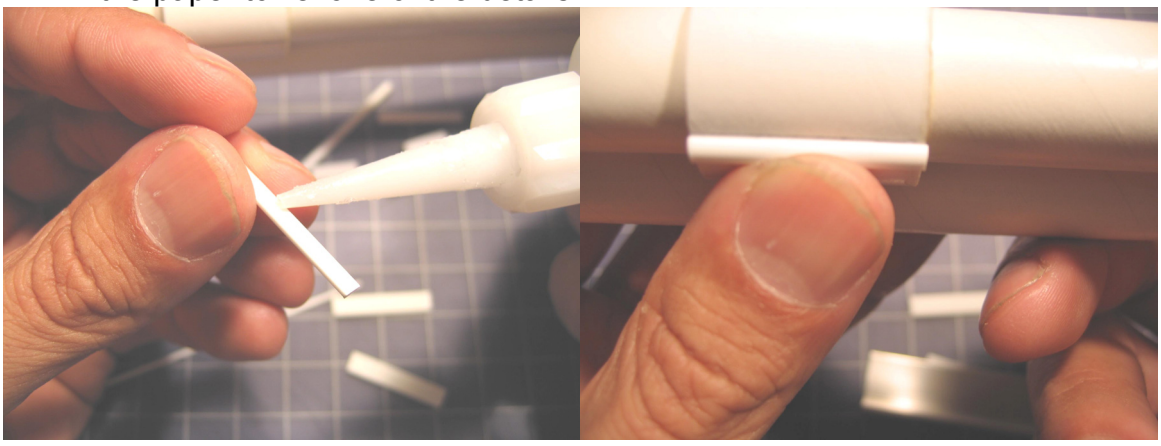
4. On this CD under the folder name “Decals & Fin Guide Sheet” you can print out a copy of the decal sheet and the fin guide sheet onto regular paper. Cut out the various images and use them to get an idea of where you will put the assorted details. On the photo model we made panels on the wings and fin using the sheet styrene and the decals as a guide. Here are some photos detailing how the panels on the photo model were created.

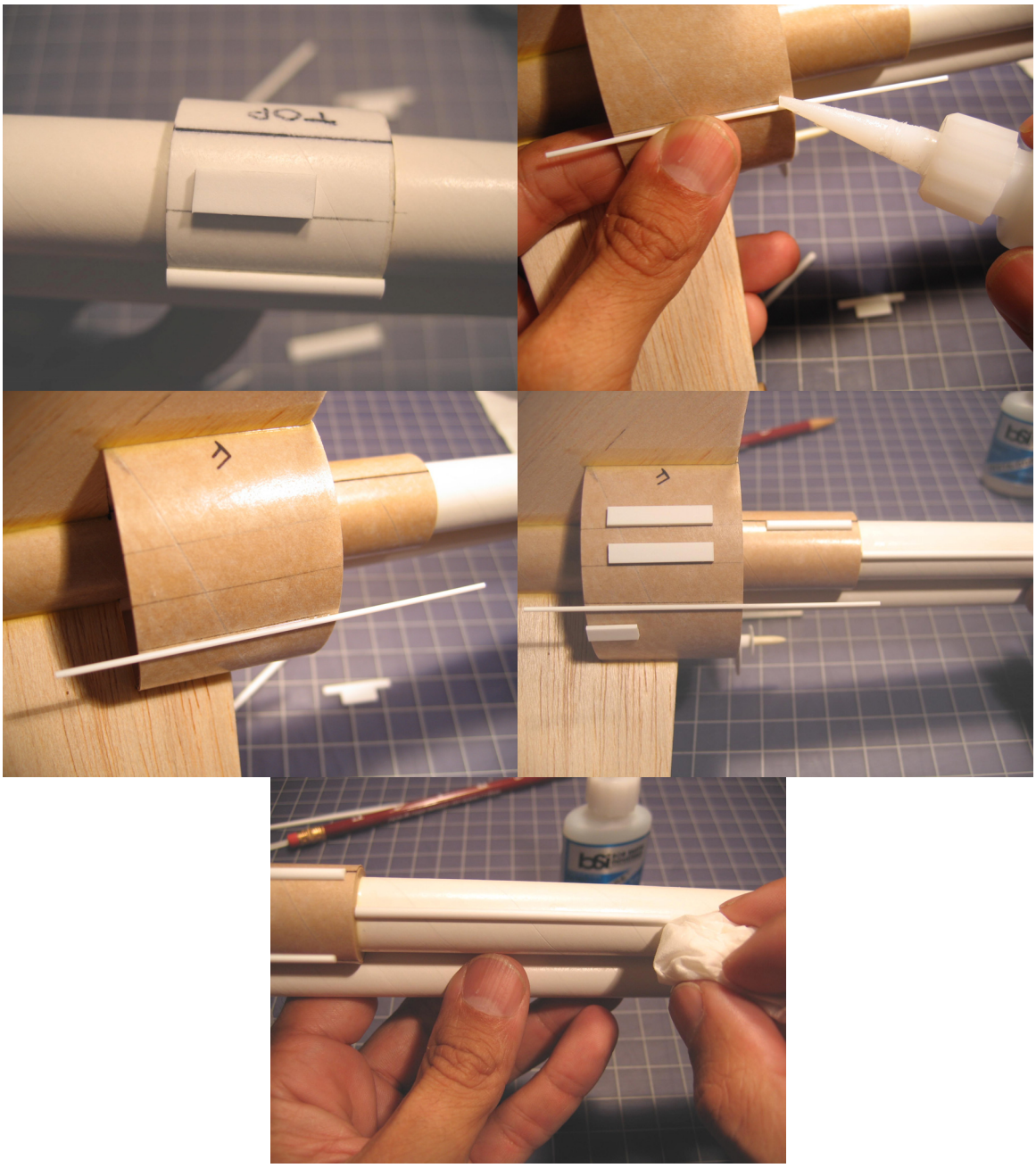



FIN GUIDE SHEET
Round This Edge
Main Fin (1)
Round This Edge
This Point Should Be Even With The 3" Mark On The Propulsion Section Tube
Round This Edge
Wing (2)
Round This Edge
Main Fin (1)

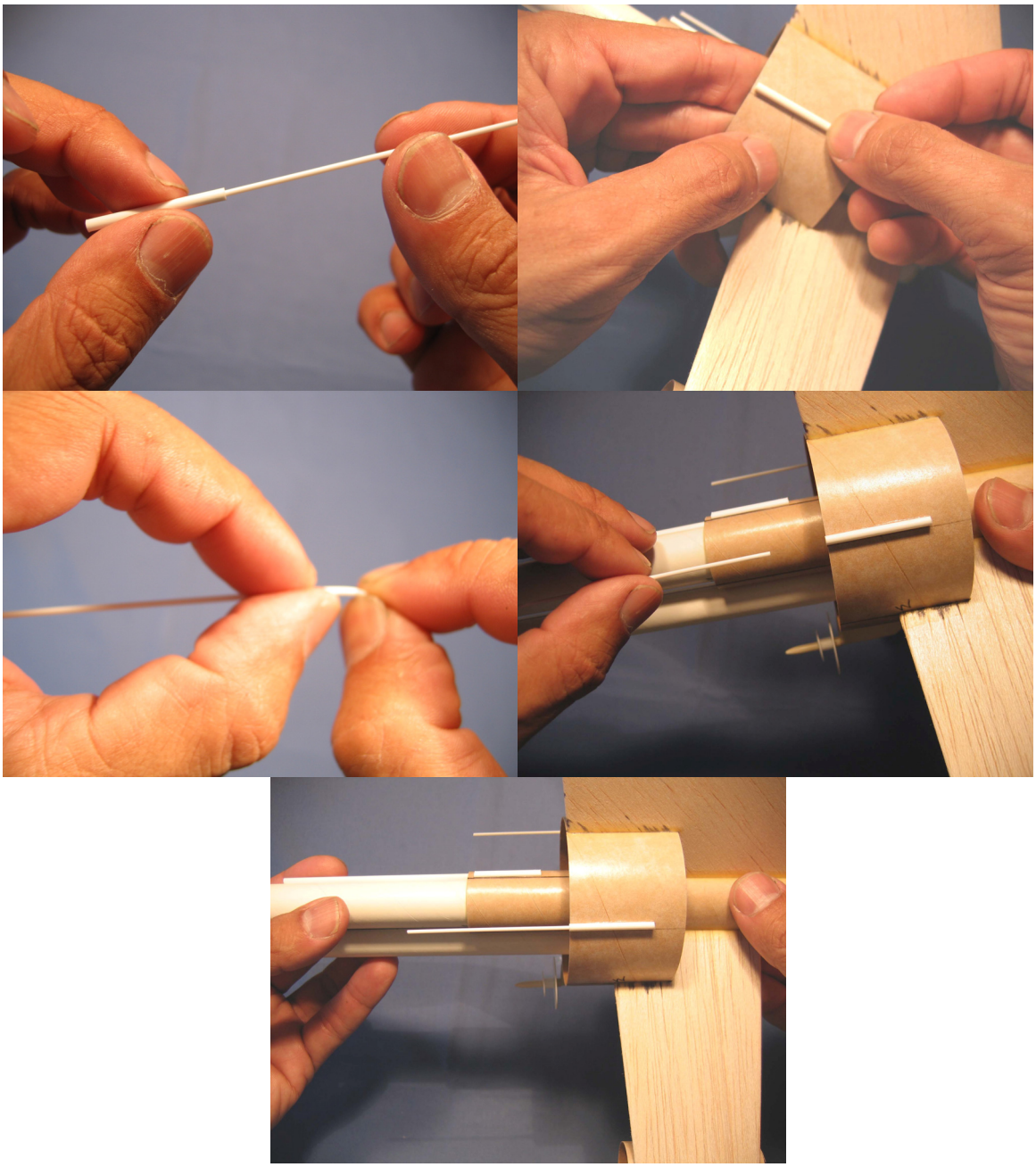


5. Thin CA glue was used to attach all of the strip stock to the body tubes. You may either apply a SMALL amount to the part and put it in place, or hold the piece in place and apply a small drop of glue to the joint. Thin CA will “wick” under the entire part and make a strong bond. Remove any excess glue by touching the edge of a paper towel to it for an instant. Only lightly touch it with the paper towel very quickly to avoid making a piece of the paper towel one of the details!

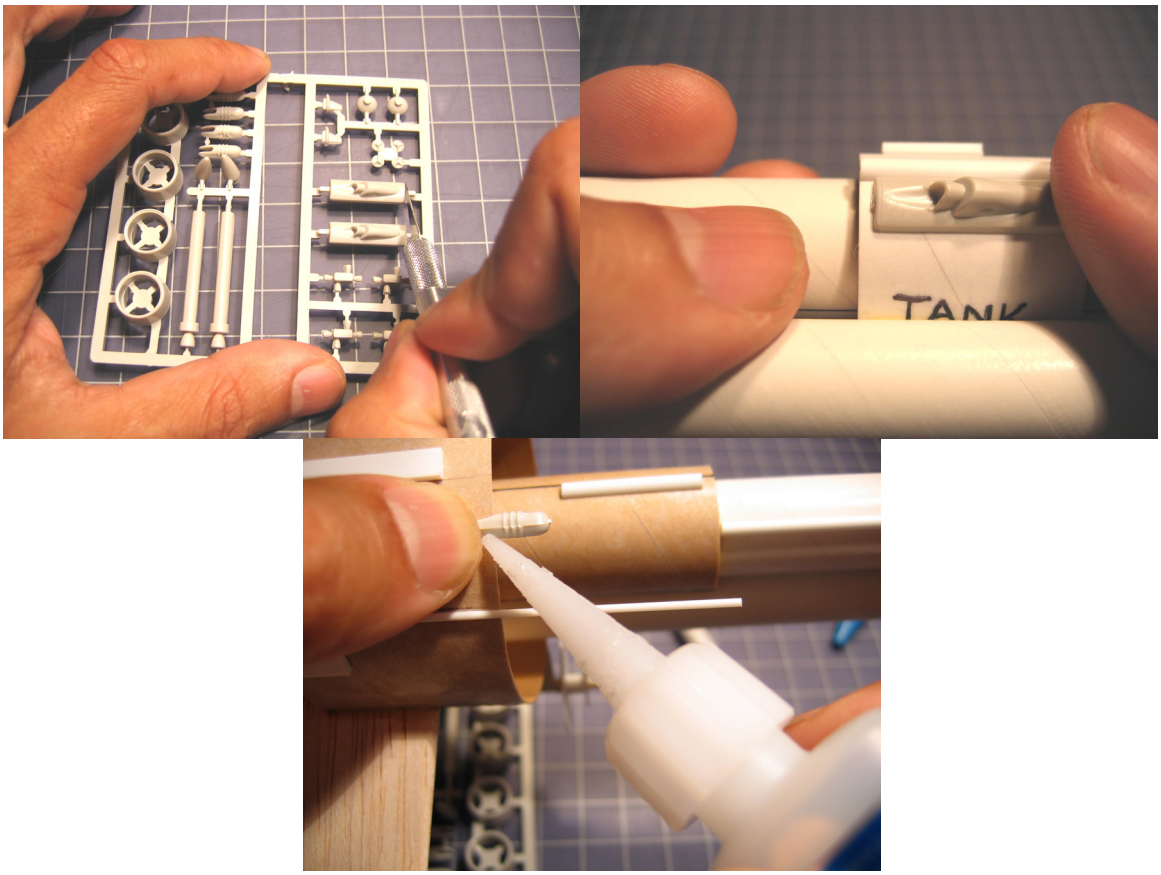




6. When making antennas, one option is to make them removable and replaceable in the event of flight damage. The thin styrene rod stock fits just inside of the tube stock. Glue a section of tubing onto the model where you would like the antenna to protrude from. Cut the antenna from the rod stock and **GENTLY** put a **SLIGHT** bend in the end of the rod. Insert the end with the bend in it into the tube **BUT DO NOT GLUE** (the bend will give the rod a friction fit inside the tube). Now the antenna is easily replaceable if it breaks or gets damaged. If it breaks off inside the tube simply use a pin or another section of rod to push the broken piece out and install a new antenna.



7. Medium CA was used to attach the panels to the fins and parts off of the detail tree to the model. Apply enough glue to hold the piece, but not so much that it oozes out from the edges.



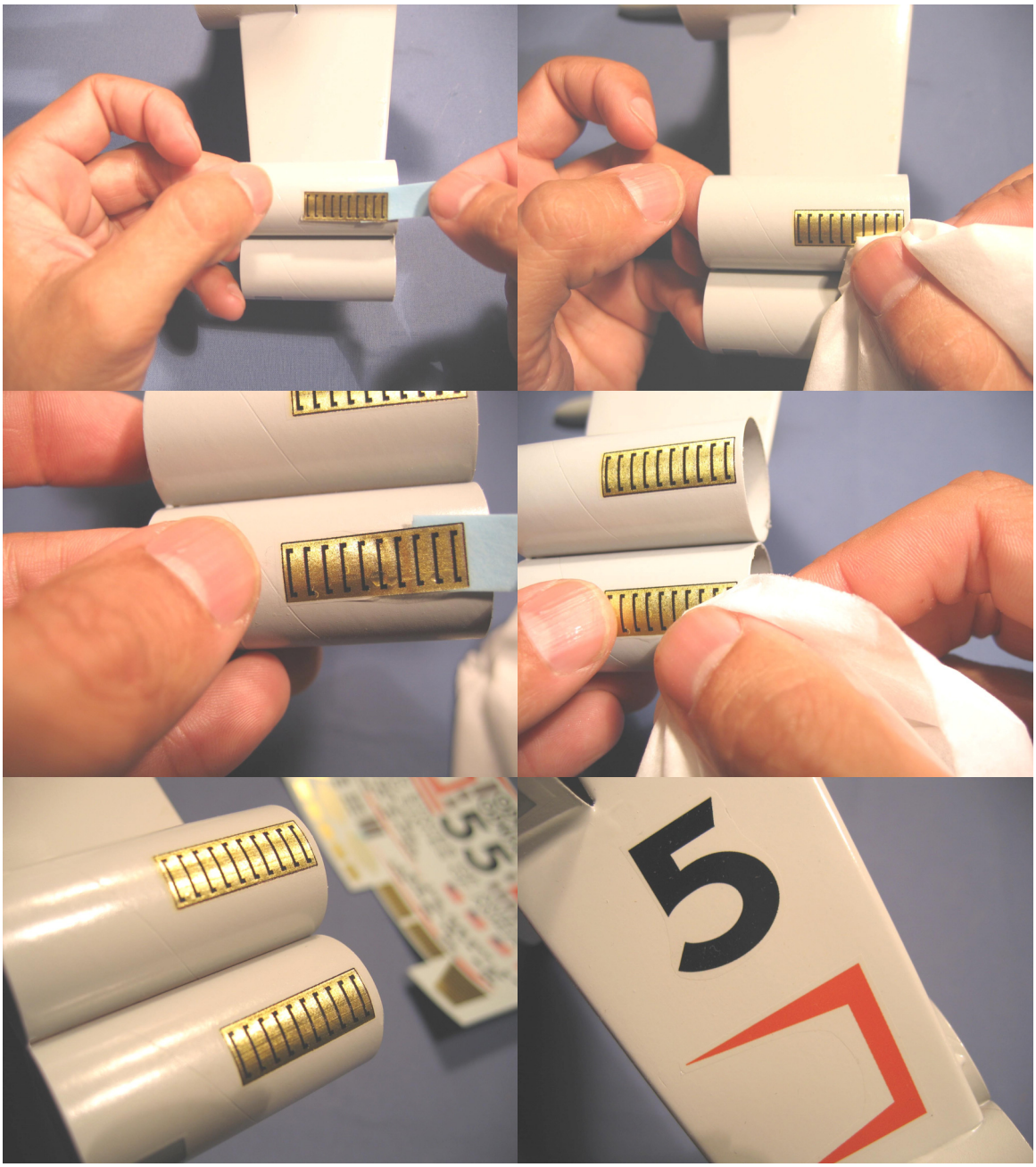
8. Have fun with the details but use common sense. If you have built it correctly the model is VERY stable with its length, large fin area and all of the open tubes at the rear. Do not add details that will act as air dams and cause major changes in the air flow over and through the model. Remember, you assembled this kit and how it flies is YOUR responsibility! Make details that go with the flow of the model and you should be OK.

PAINTING

The model in the photos was painted with a couple coats of Plasti-kote® #466 Gray Spot Filler And Primer, and sanded with 600 grit wet-dry sandpaper. This helps to fill any little areas you might have missed on the fins and will help you to see any other imperfections that may need to be addressed before you apply the final color coats. This is MY favorite primer, but use whatever you are comfortable with. The final color coats were with Krylon® #1606 Pewter Gray Gloss for the main body and Testors® #1151 Copper for the radar dish and some details. The insides of the engine tubes were painted last with a bright orange paint. The red decals on the decal sheet are backed with white so you may choose a darker main color for a more sinister look if you like. If your kit came with a lighting kit make sure you REMOVE IT BEFORE APPLYING ANY PAINT and place something in the open end of the BT-5 pod tube to prevent any paint from getting inside.

DECALS

Here is another opportunity for you to do your own thing. The decal sheet is full of little panels, stripes, vents and shapes for you to position as you see fit. Again, use the many photos on this CD to give you ideas on decal locations. Cut the individual decals apart leaving about $^{1}/_{32}$" of clear material around the image with scissors or a very sharp hobby knife. On the red fin and wing decals try not to make sharp angle cuts on the inside edges to help prevent the decal from tearing while you position it. Dip the decal in warm water for 10-15 seconds. Remove the decal from the water and wait a few more seconds at which point it should slide freely on the blue backing sheet. Wet the area slightly where the decal is to be applied and slide the decal from the backing paper onto the model. If need be, wet your finger and gently coax the decal into the exact position. Once you are satisfied with the location gently pat the decal with a tissue or paper towel to soak up the extra water under and around the decal. You may want to apply some of the gray panels and extra window decals to the model first to get use to the way the decals behave before applying the larger, more intricate ones. Allow the decals to dry on the model for 24 hours before applying a protective clear coat. The decals were printed on an Alps printer. I did compatibility tests with several clear coats to find which ones agreed with the decal material. Testors® Model Master gloss, satin, and especially the lusterless-flat worked well. Future floor wax didn't effect the decals at all, Krylon® crystal clear and Tamiya® spray clear attacked the inks. I applied all of these so heavily that it was dripping off of the decal, it seems the most fragile decals are the gold foil ones. I have included some "scrap" decals that were made the same way as the kit decals. If you plan on using another brand of clear coat you may want to use these to test compatibility and decal application with.



LAUNCHING PROCEEDURES

Please familiarize yourself with the “Model Rocket Safety Code” below **BEFORE** launching your Odyssey kit. Be sure to follow its rules for safe launch procedures.

1. **Materials.** I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.
2. **Motors.** I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.
3. **Ignition System.** I will launch my rockets with an electrical launch system and electrical motor igniters. My launch system will have a safety interlock in

series with the launch switch, and will use a launch switch that returns to the "off" position when released.

4. **Misfires.** If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher's safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.
5. **Launch Safety.** I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 15 feet away when I launch rockets with D motors or smaller, and 30 feet when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance.
6. **Launcher.** I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor's exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch rod is above eye level or will cap the end of the rod when it is not in use.
7. **Size.** My model rocket will not weigh more than 1,500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320 N-sec (71.9 pound-seconds) of total impulse. If my model rocket weighs more than one pound (453 grams) at liftoff or has more than four ounces (113 grams) of propellant, I will check and comply with Federal Aviation Administration regulations before flying.
8. **Flight Safety.** I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.
9. **Launch Site.** I will launch my rocket outdoors, in an open area at least as large as shown in the accompanying table, and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not present risk of grass fires.
10. **Recovery System.** I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.
11. **Recovery Safety.** I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.

LAUNCH SITE DIMENSIONS		
Installed Total Impulse (N-sec)	**Equivalent Motor Type**	**Minimum Site Dimensions (ft.)**
0.00--1.25	1/4A, 1/2A	50
1.26--2.50	A	100
2.51--5.00	B	200
5.01--10.00	C	400
10.01--20.00	D	500
20.01--40.00	E	1,000
40.01--80.00	F	1,000
80.01--160.00	G	1,000
160.01--320.00	Two Gs	1,500

The Odyssey flies on B4-2 (if built light), B6-2 or C6-3 18mm model rocket motors. These are available at many stores that sell hobby products as well as a multitude of online vendors. For the first flight of this model a B6-2 is the best choice. Follow the motor manufacturers directions to the letter.

Remove the nose cone, parachute and shock cord materials form the front of the model. Insert 4-5 loosely crumpled balls of flame retardant recovery wadding (available where you purchased the motors) into the front of the model. Use the back of a pencil or similar object to lightly tamp the wadding to the rear of the crew section so that it is taking up roughly 2-2 ½" in the rear portion of the tube.

The front of this model does not have a great deal of space, so practice folding the parachute neatly! Refer back to step 32 in the assembly instructions as a guide for packing the parachute.

Install the motor with the igniter into the motor mount. Make sure the clip is holding the motor securely. The Odyssey is now ready for flight.

Place the model on any safe launch pad with a 36" long, 1/8" diameter launch rod. Make sure the rod passes through BOTH of the launch lugs.

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