

  
Mountain Models  
quality r/c kits

# PeregrinE Micro™

Micro Nostalgic R/C Electric Airplane



## PeregrinE™ Specifications

**Wingspan:** 23.7 in.

**Length:** 18.4 in.

**Wing Area:** 100 sq. in.

**Weight (Ready to Fly):** 1.8 oz.

**Wing Loading:** 2.6 oz. / sq. ft.

Version 1.0, February 16, 2011

## WARRANTY

Mountain Models guarantees this kit to be free from any defects in both material and workmanship at the time of purchase. This warranty does not cover ANY components or parts damaged by use or modification. In no case shall Mountain Model's liability exceed the original cost of the purchased kit. Mountain Models reserves the right to modify or change this warranty without notice.

## LIABILITY RELEASE

In that Mountain Models has no control over the final assembly or material used for final assembly, no liability shall be assumed or 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 the kit immediately in new and unused condition.

**THIS PRODUCT IS NOT INTENDED FOR CHILDREN 12 YEARS OF AGE OR YOUNGER.**

**WARNING:** This product may contain chemicals known to the State of California to cause cancer and or birth defects or other reproductive harm.

## PRODUCT SUPPORT

This product has been designed to function properly and perform as advertised with the SUGGESTED power system, speed control, and servos, as described in advertisements and in this manual. We do NOT support, nor can Mountain Models assist in determining the suitability or use with any other electronics or hardware not recommended by Mountain Models.

For the proper electronics to complete this model, replacement parts, and product assembly questions, please contact Mountain Models online at [www.MountainModels.com](http://www.MountainModels.com)

Thank you for purchasing the Mountain Models PeregrinE™ Micro. The PeregrinE™ is a micro model designed to bring back that nostalgic feeling of yesteryear, in an indoor electric package. Taking inspiration from many different planes of the past, we developed the 23.7 inch PeregrinE™, which resulted in a super easy to fly, lightweight, and nostalgic indoor electric R/C airplane.

The PeregrinE™ was designed using a state of the art 3D CAD package, to allow for exceptional interlocking parts design and fit. 3D design also allows us to provide clearer assembly images, without having to use photos.

The PeregrinE™ is built from self-jigging interlocking laser cut balsa and plywood parts. It's like a 3D jigsaw puzzle with instructions. Although not needed for building, full size plans are included for reference. If the instructions are read before hand and followed during the build, the Little Bogie™ can be built up and ready to fly in only a few evenings.

We think you'll like the PeregrinE™ and look forward to any feedback you might have.

Thank you,  
Brian Eberwein

**Mountain Models**  
2935 N Lynndale Drive  
Appleton, WI 54914  
[www.mountainmodels.com](http://www.mountainmodels.com)

Phone: 920.840.6036

## Before You Begin

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Check to make sure that all of your parts are there and in good shape.

### Parts List

Number in Kit	Description of Part
<b>Bundled Parts</b>	
1	Laser Cut Parts Sheets (6 Sheets)
2	Plan Sheets (11" x 17")
1	These instructions of course!
<b>Metal (on the back of the wood bundle)</b>	
2	0.020" x 18" Wire
1	1/32" x 12" landing gear wire
<b>Bagged Parts</b>	
3	Wheels
1	1/16" x 1" Shrink Tube
1	1/8" x 4" Dowel
6	#16 Rubber Bands

### Building Materials and Tools You Will Need

- Smooth and FLAT work surface
- Wax paper or clear plastic wrap to protect the work surface
- Thin Cyanoacrylate (CA) glue
- Hobby knife with #11 blades
- Needle nose pliers
- Wire cutters
- Sanding block, 320 to 400 grit sandpaper
- Covering Iron

### Finishing Materials You Will Need

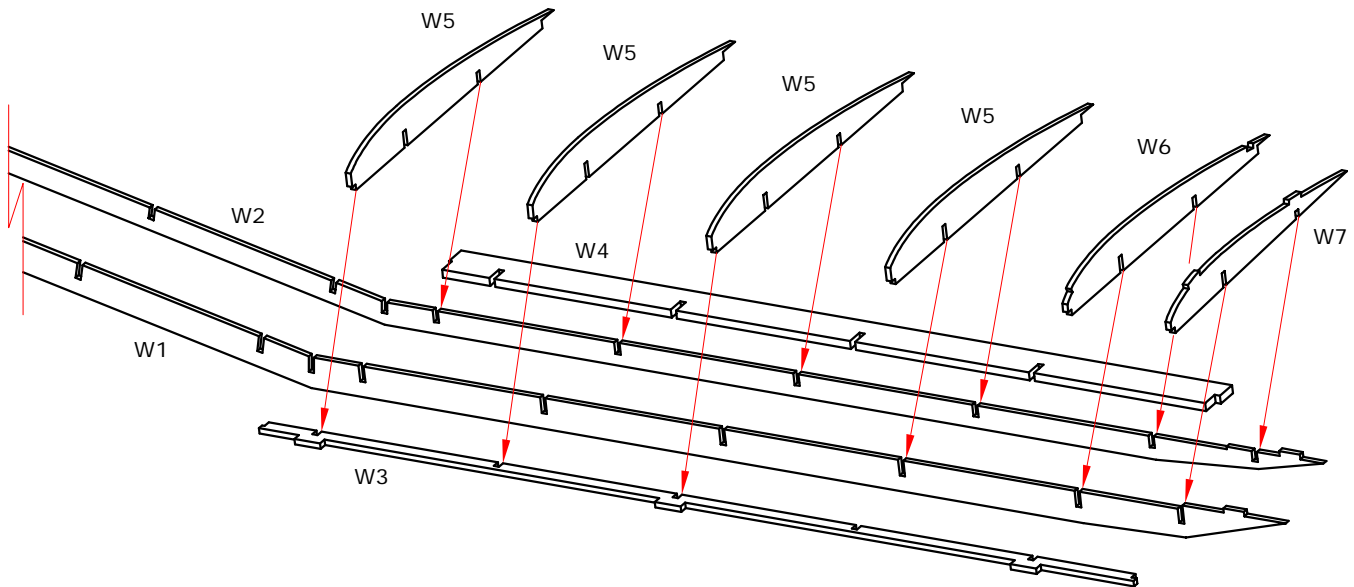
- SoLite Covering (Do NOT use heavier covering!!!!!!!!!!!!!!)  
(You can use a light weight tissue covering instead of SoLite)
- Double-Sided Foam Tape
- Hinge Tape (DuBro or Similar)
- Velcro to Mount Battery

### Electronics You Will Need

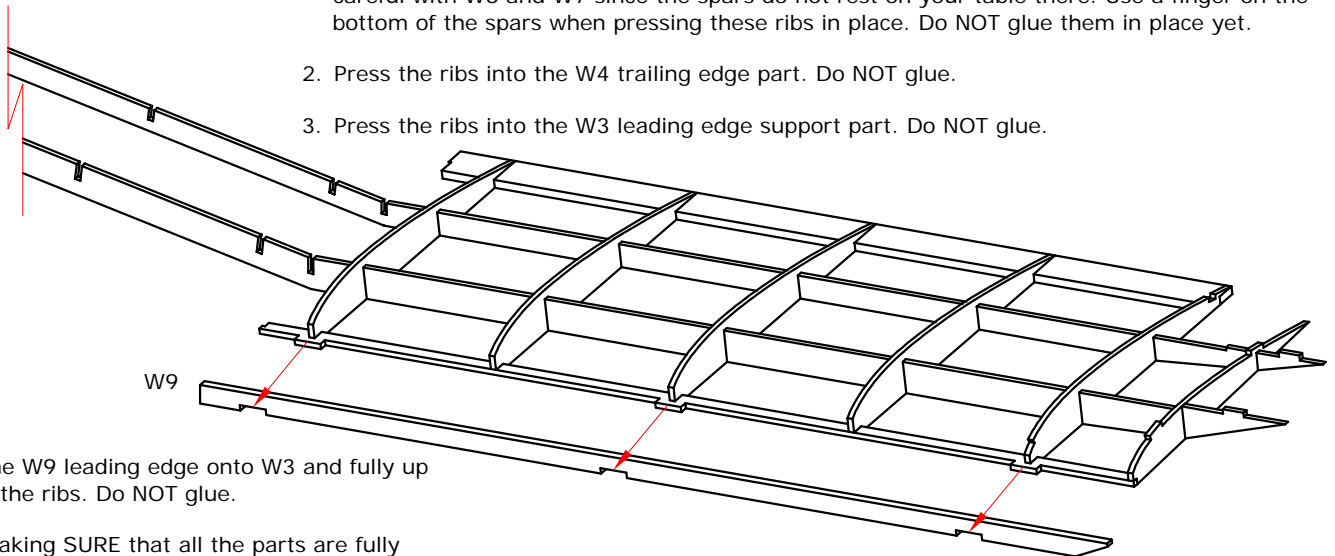
- Power: ParkZone Motor/Gearbox (PKZ3624) for UM P-51/Sukhoi
- Prop: EFL9051 Ultra Micro 130mm x 70mm
- RX/ESC/Servo: ParkZone 'Vapor' PKZ3351 or Spektrum AR6400
- 1S-130 mAh LiPo

## General Building Tips

- **READ THE INSTRUCTIONS** all the way through and study the plans **BEFORE** starting any work on the model.
- **PRE-SANDING: BEFORE** removing any parts from the balsa sheets, use a sanding block with 320 grit sandpaper and lightly sand the back of the balsa sheets. Our balsa suppliers have been sending us wood that is over sized, so sanding the backs of the balsa sheets reduces the thickness just slightly and removes any charring from the laser cutting process.
- Tape the plans to your nice clean work surface and cover it with wax paper or plastic wrap. You want to keep your work surface clean and not glue the parts to the plans, right?
- Balsa is a lightweight and fragile wood, so you do need to be careful with it; however, you will also need to use a little bit of force to make everything fit properly, so don't be too timid.
- Do not remove any pieces from the balsa sheets until they're ready to be used. That way, parts won't get mixed up or disappear.
- Do NOT glue anything until told to do so.
- Join all of your pieces using thin CA (Cyanoacrylate) glue, unless we tell you otherwise. In general, only a small amount of CA is necessary to glue parts together.
- Don't over force your pieces together. If they aren't fitting together properly, make sure you have the right pieces and that they are oriented correctly. If needed, you can lightly sand the part to fit after making sure it is the correct part and oriented correctly. On balsa "tabs", you can "pinch" the wood with your fingers to get them to fit in slots. (The tabs might be tighter some times, due to tolerances in wood thickness)
- If you want to remove the charred edges caused by the laser cutting process, lightly dampen a cloth with bleach and gently rub the affected areas. Removing the char will not increase the strength but will make it look better. It also keeps that dark edge from showing under the lightweight coverings. You can also remove it by LIGHTLY sanding with 400 grit sandpaper.



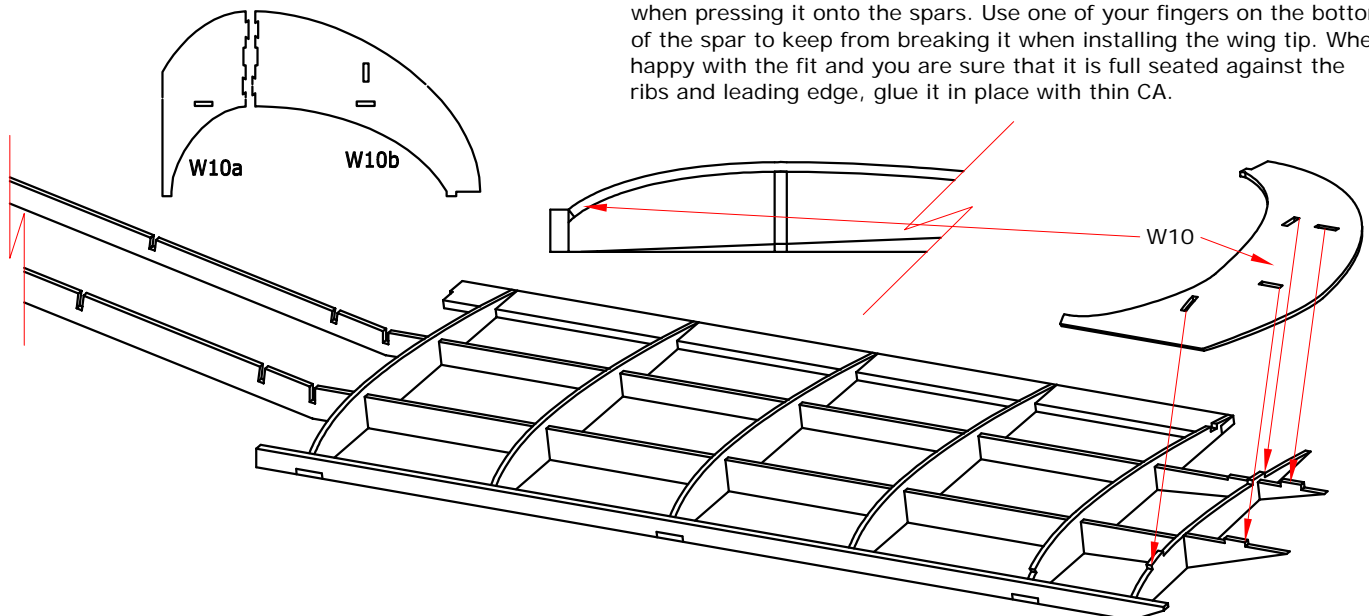
1. Slide the 4 ea. W5 ribs, W6 rib, and W7 rib onto the LEFT side of the spars, W1 and W2. Be careful with W6 and W7 since the spars do not rest on your table there. Use a finger on the bottom of the spars when pressing these ribs in place. Do NOT glue them in place yet.
2. Press the ribs into the W4 trailing edge part. Do NOT glue.
3. Press the ribs into the W3 leading edge support part. Do NOT glue.

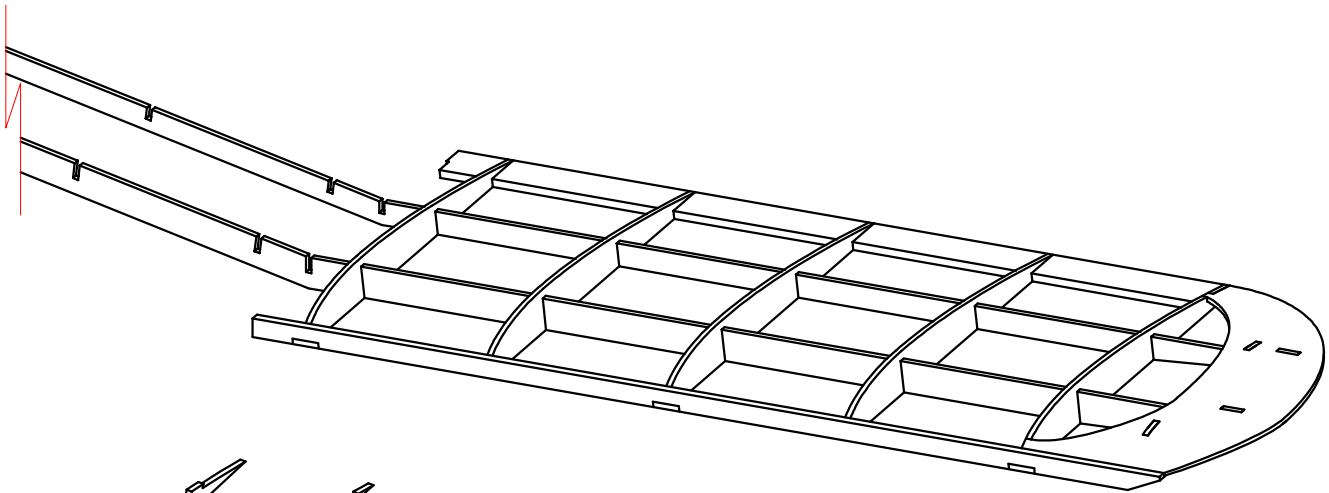


4. Press the W9 leading edge onto W3 and fully up against the ribs. Do NOT glue.
5. After making SURE that all the parts are fully seated against each other and aligned with the plans, and holding the parts down FLAT (small weights are great for this), secure all the joints with thin CA.

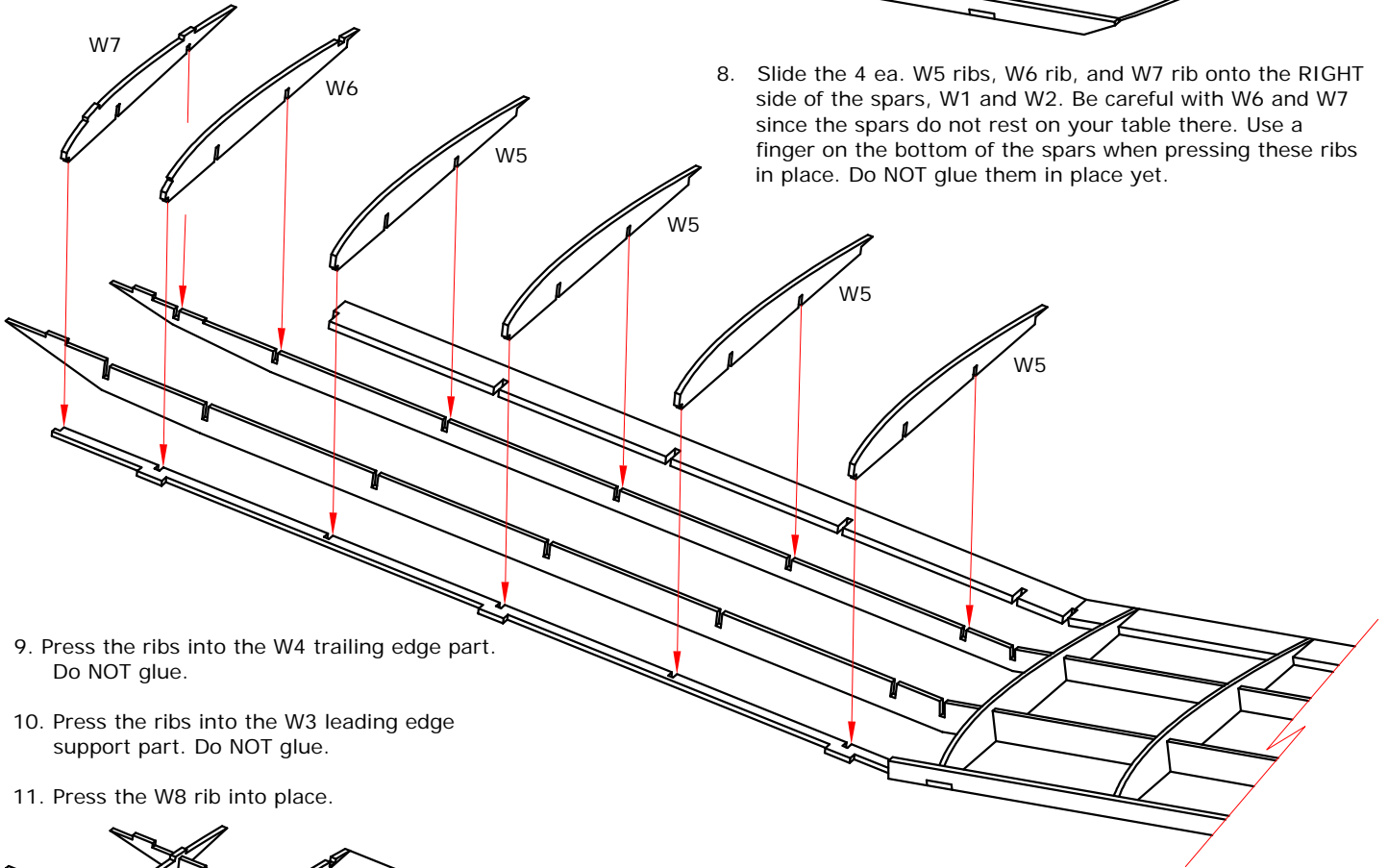
6. Press the wing tip W10a/W10b parts together and glue with thin CA. Do this to make 2 wing tips.

7. Press one W10 part into place on the left side of the wing. Be careful when pressing it onto the spars. Use one of your fingers on the bottom of the spar to keep from breaking it when installing the wing tip. When happy with the fit and you are sure that it is full seated against the ribs and leading edge, glue it in place with thin CA.





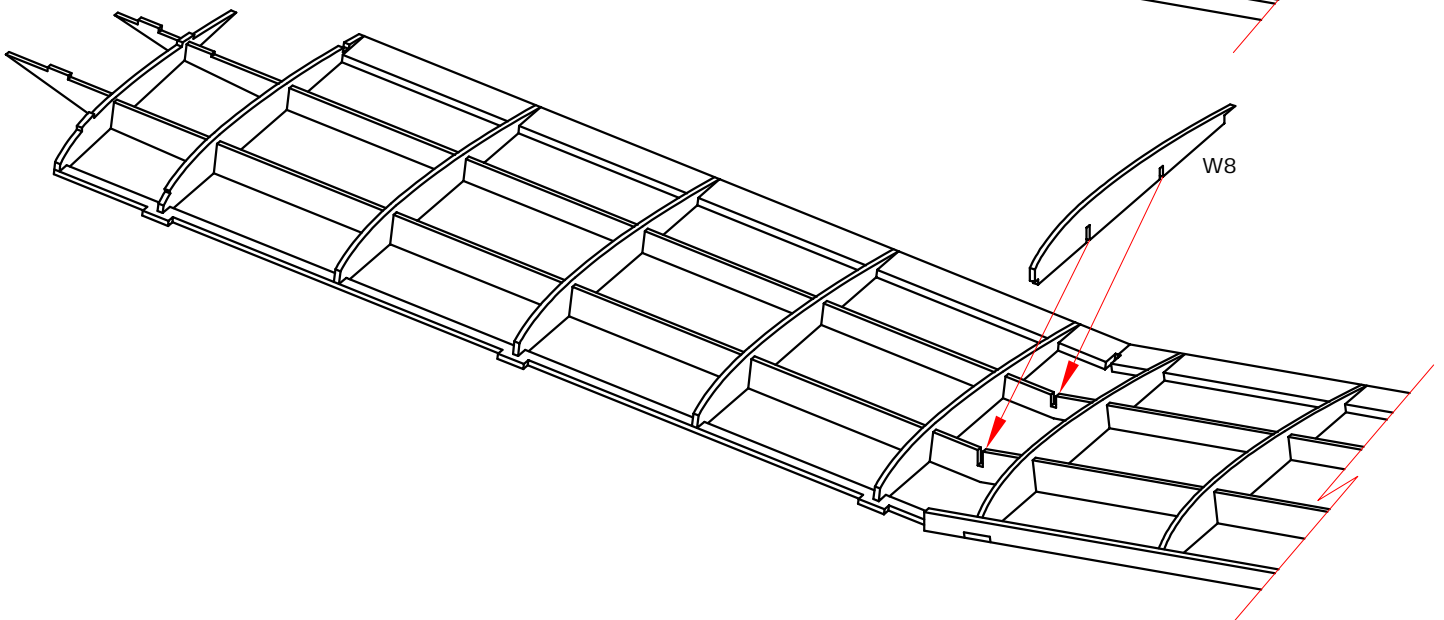
8. Slide the 4 ea. W5 ribs, W6 rib, and W7 rib onto the RIGHT side of the spars, W1 and W2. Be careful with W6 and W7 since the spars do not rest on your table there. Use a finger on the bottom of the spars when pressing these ribs in place. Do NOT glue them in place yet.



9. Press the ribs into the W4 trailing edge part. Do NOT glue.

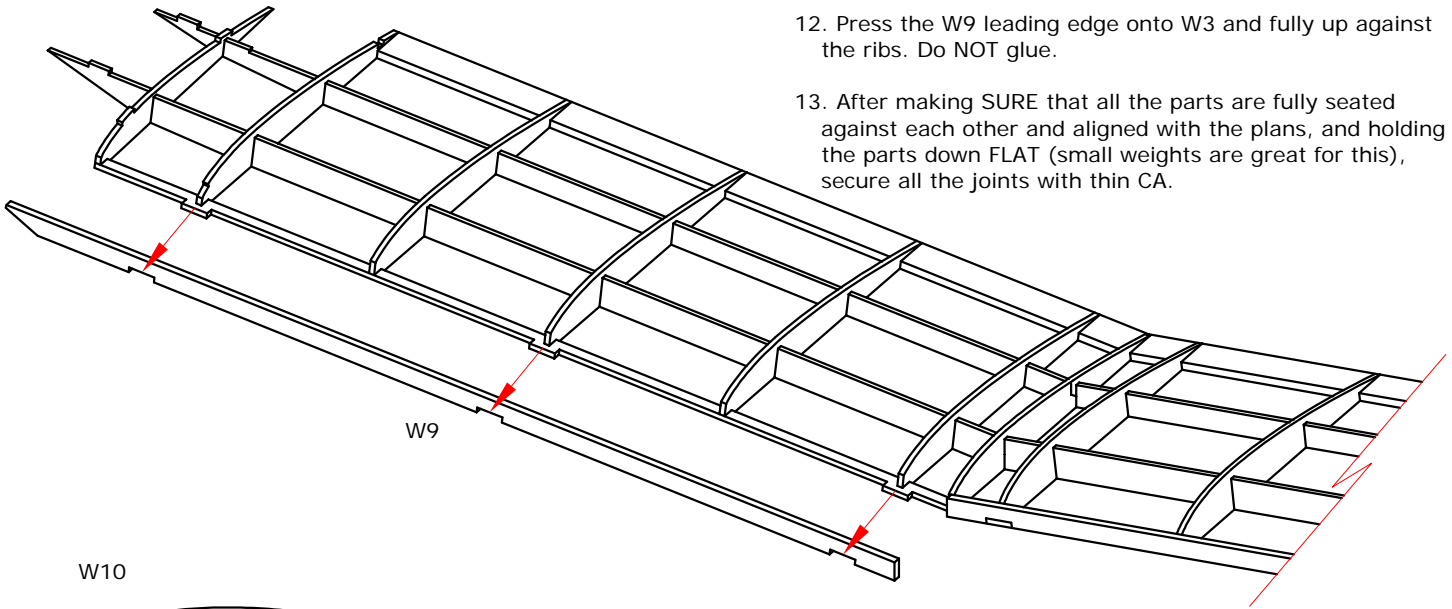
10. Press the ribs into the W3 leading edge support part. Do NOT glue.

11. Press the W8 rib into place.



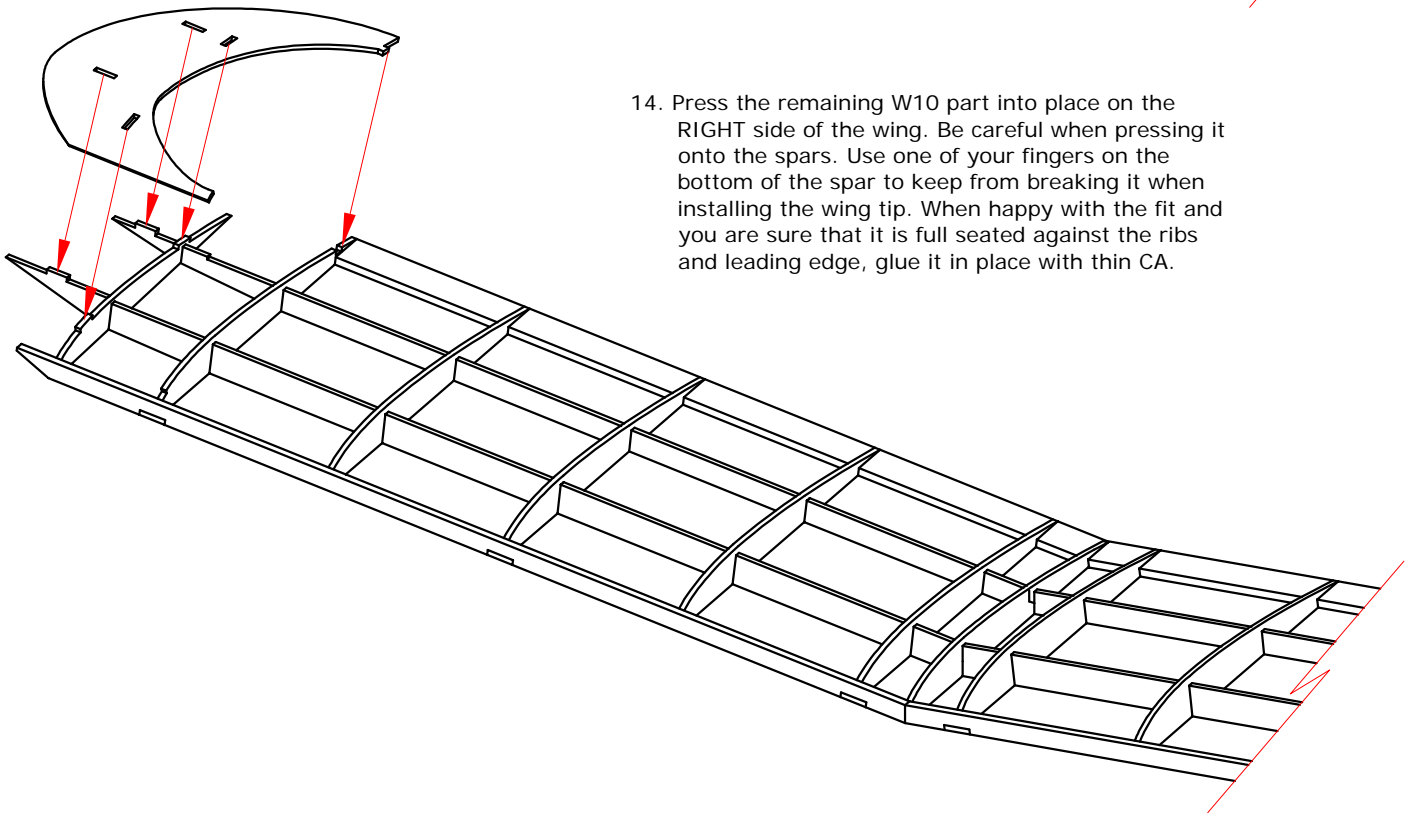
12. Press the W9 leading edge onto W3 and fully up against the ribs. Do NOT glue.

13. After making SURE that all the parts are fully seated against each other and aligned with the plans, and holding the parts down FLAT (small weights are great for this), secure all the joints with thin CA.

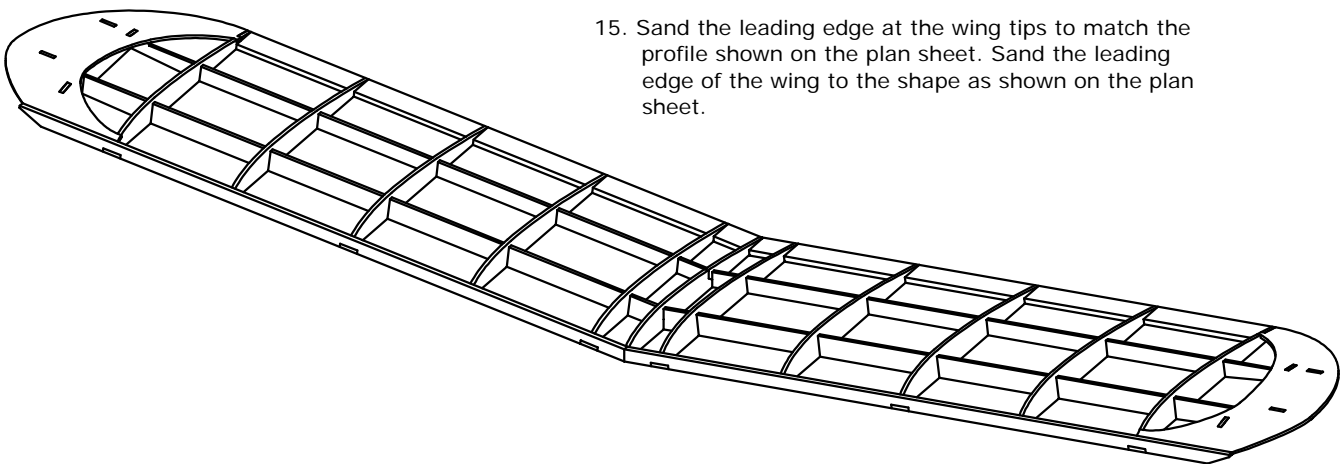


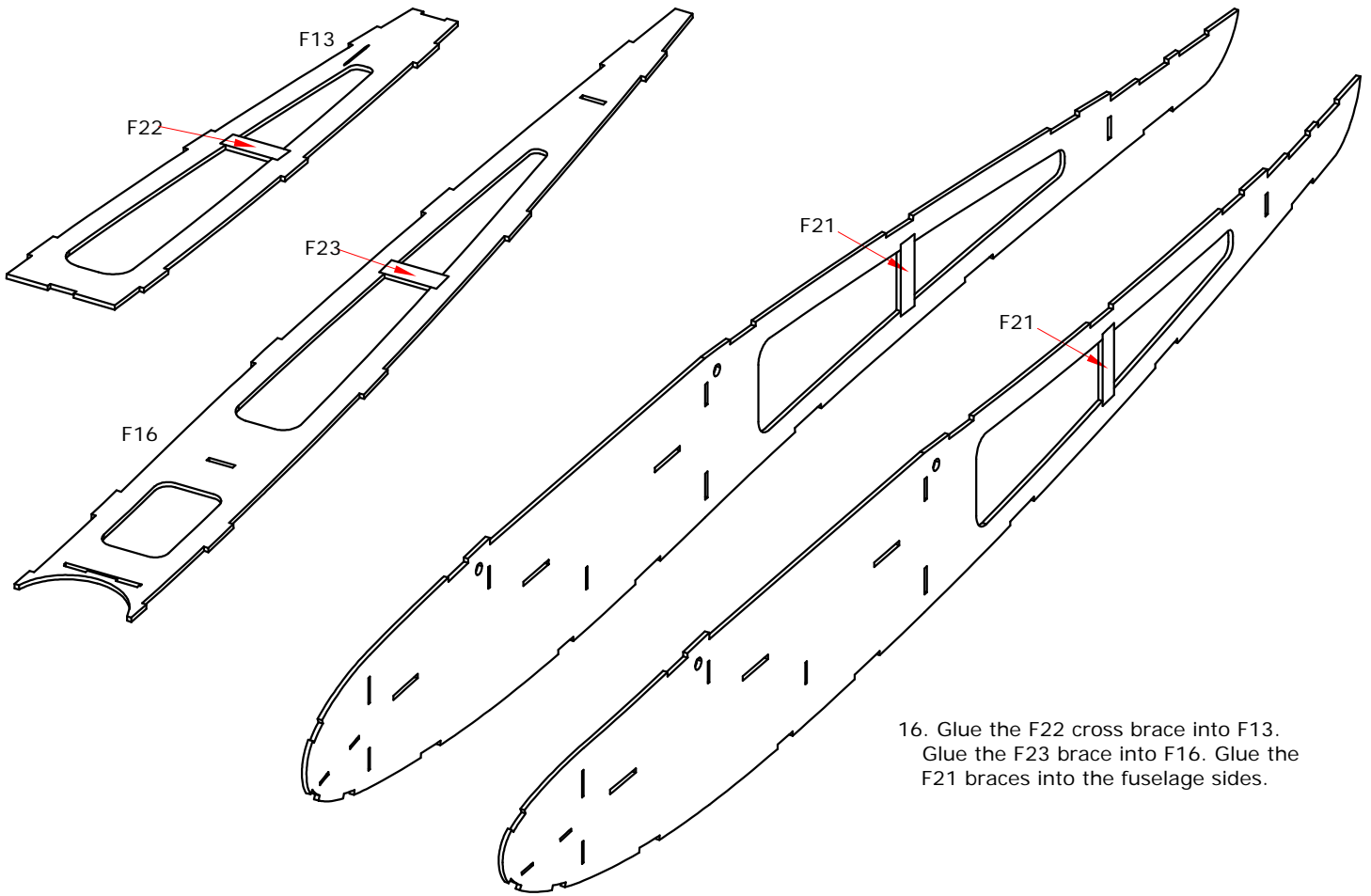
W10

14. Press the remaining W10 part into place on the RIGHT side of the wing. Be careful when pressing it onto the spars. Use one of your fingers on the bottom of the spar to keep from breaking it when installing the wing tip. When happy with the fit and you are sure that it is full seated against the ribs and leading edge, glue it in place with thin CA.



15. Sand the leading edge at the wing tips to match the profile shown on the plan sheet. Sand the leading edge of the wing to the shape as shown on the plan sheet.

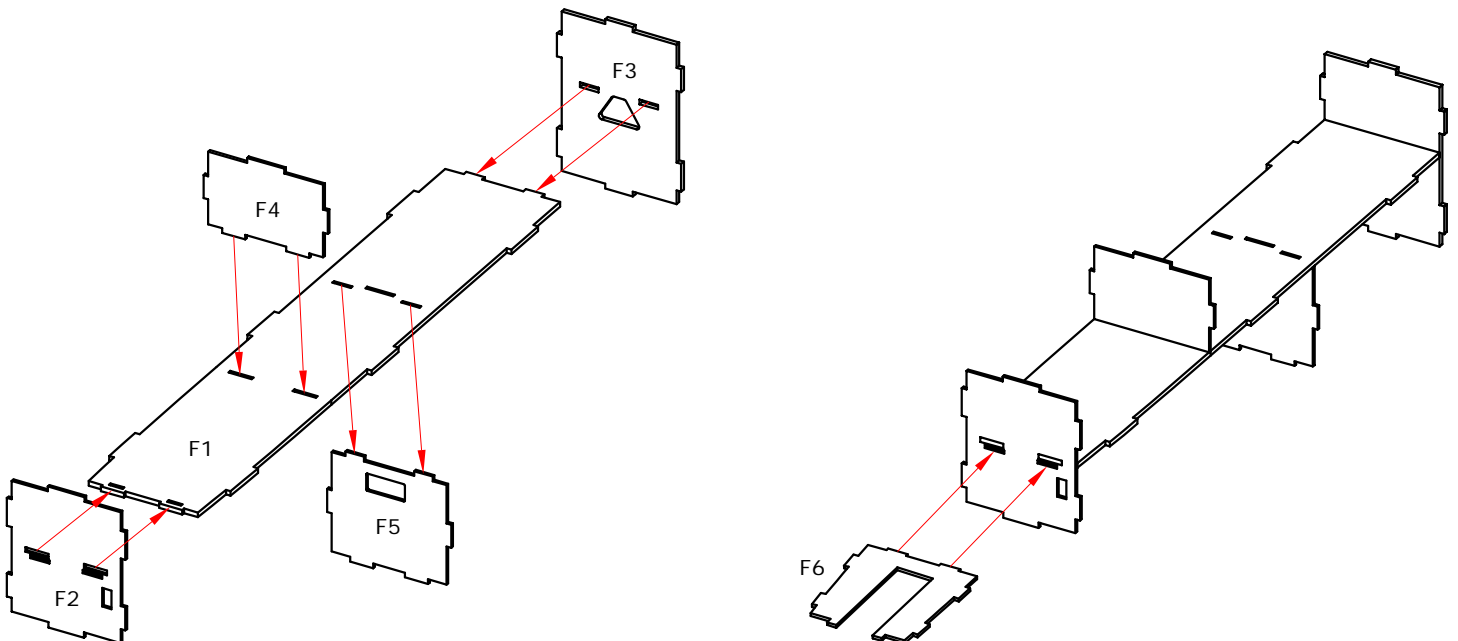




16. Glue the F22 cross brace into F13.  
 Glue the F23 brace into F16. Glue the  
 F21 braces into the fuselage sides.

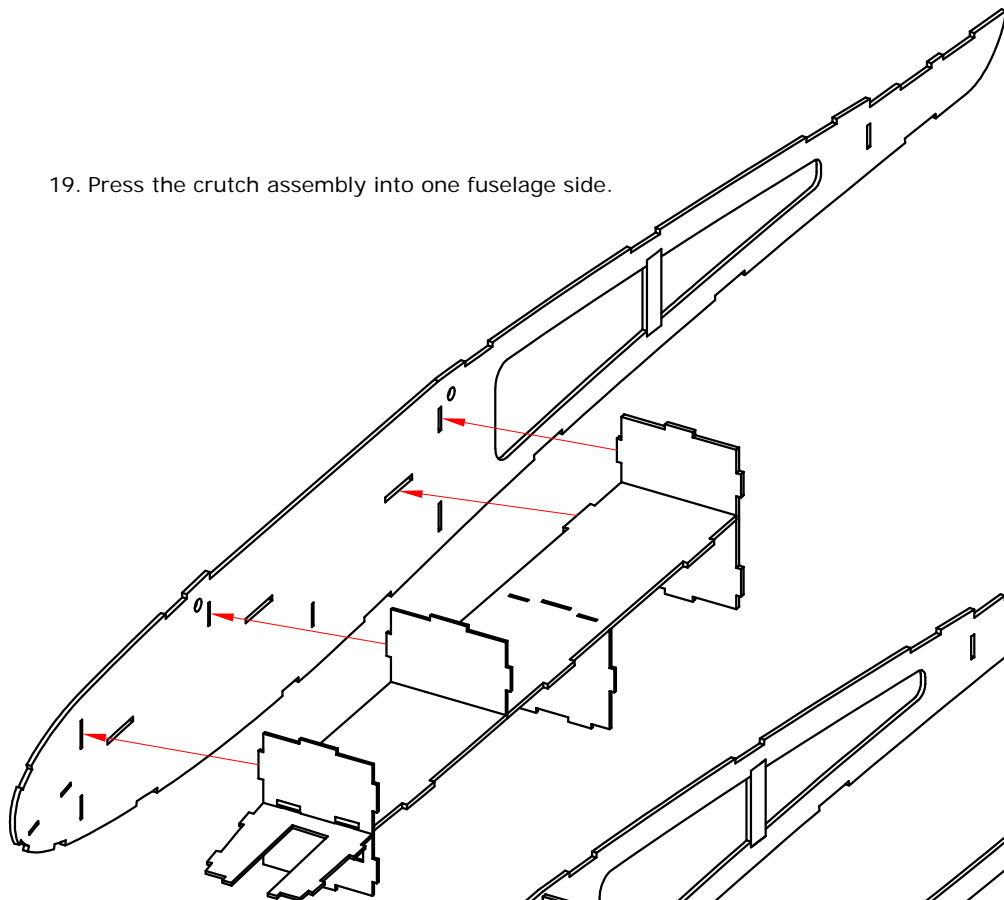
17. Press F1 into the plywood F2 part, making SURE that the text on F2 is facing FORWARD and the text on F1 is facing UP. Press F1 into F3. Press F4 into F1. Press F5 into F1. Do NOT glue them yet.

18. Press the plywood F6 into F2. MAKE SURE that the text on F6 is facing UP. If the text on F6 is NOT facing up, your model is not going to fly properly!

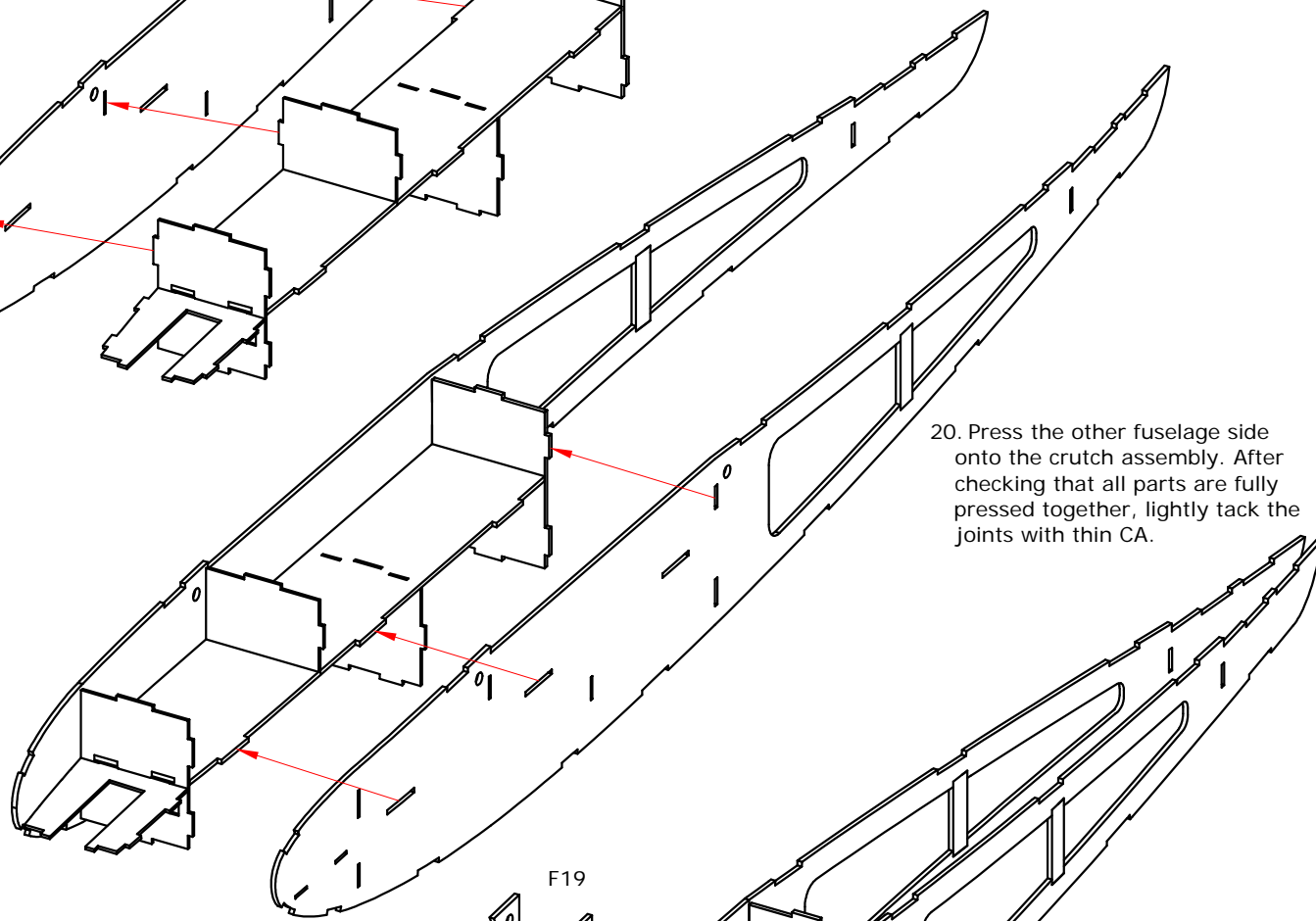




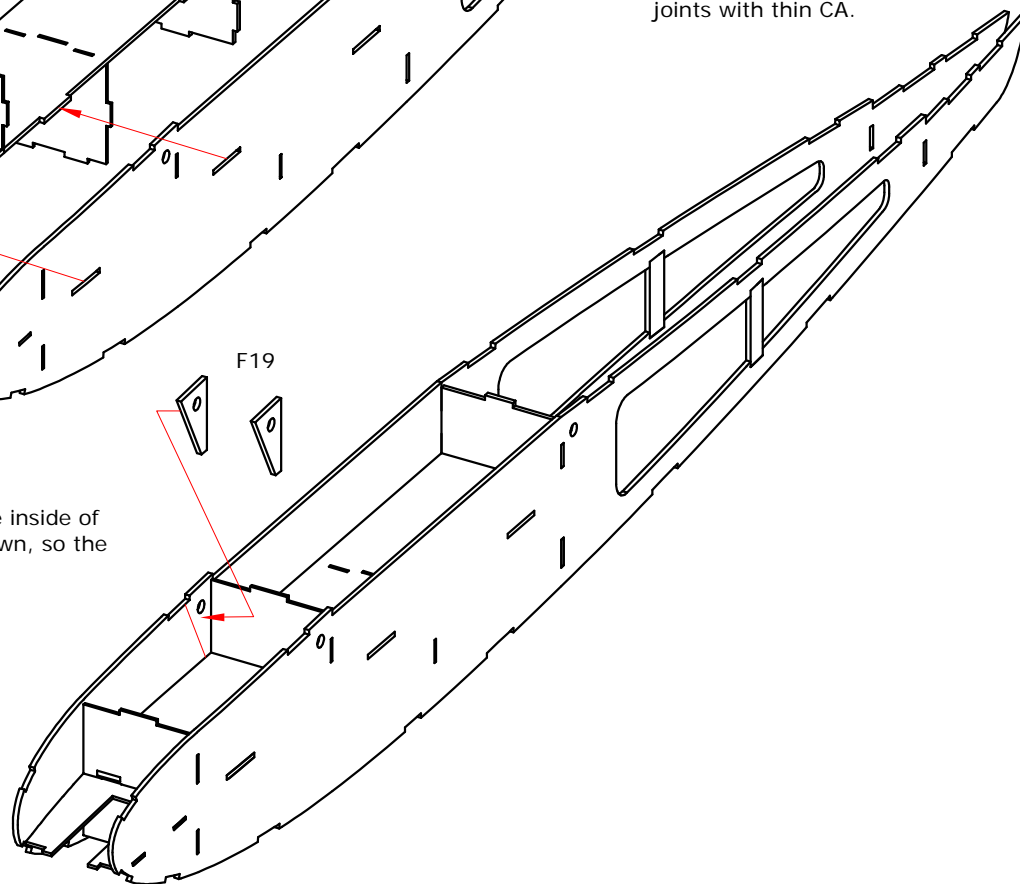
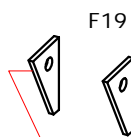
19. Press the crutch assembly into one fuselage side.

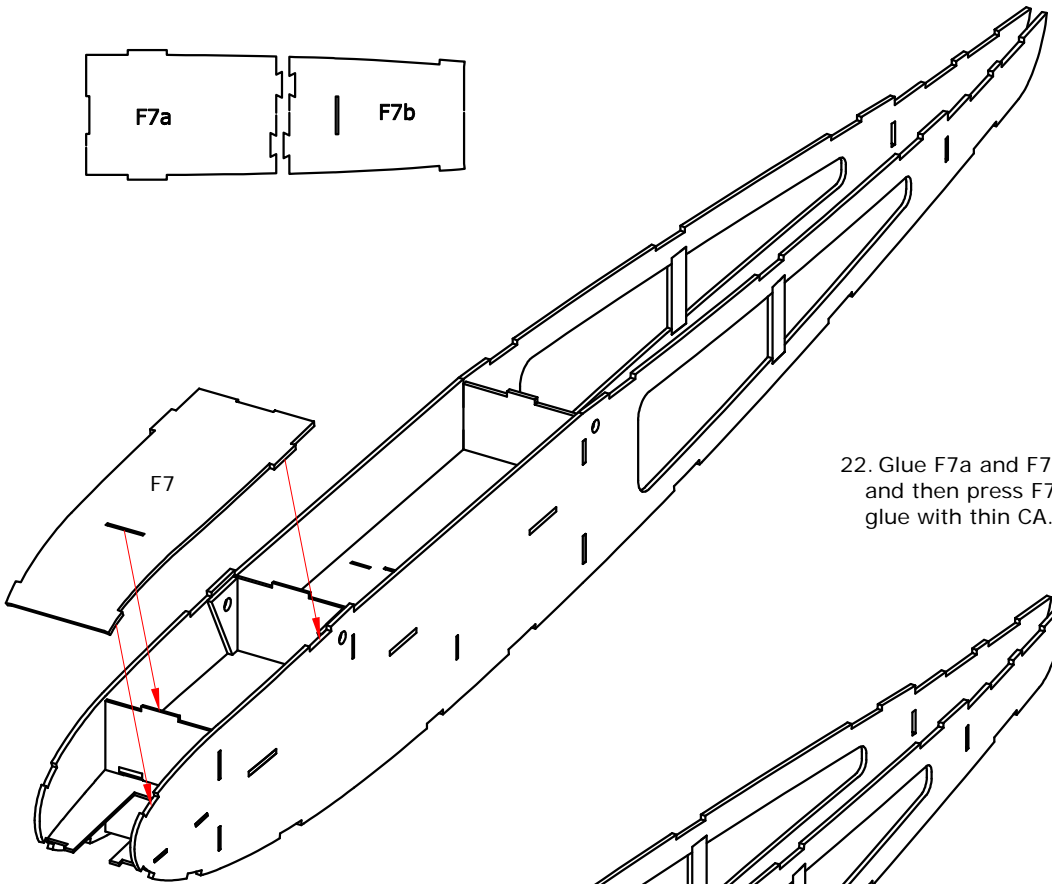
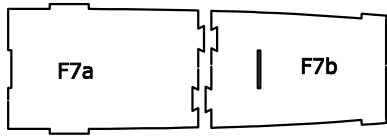


20. Press the other fuselage side onto the crutch assembly. After checking that all parts are fully pressed together, lightly tack the joints with thin CA.

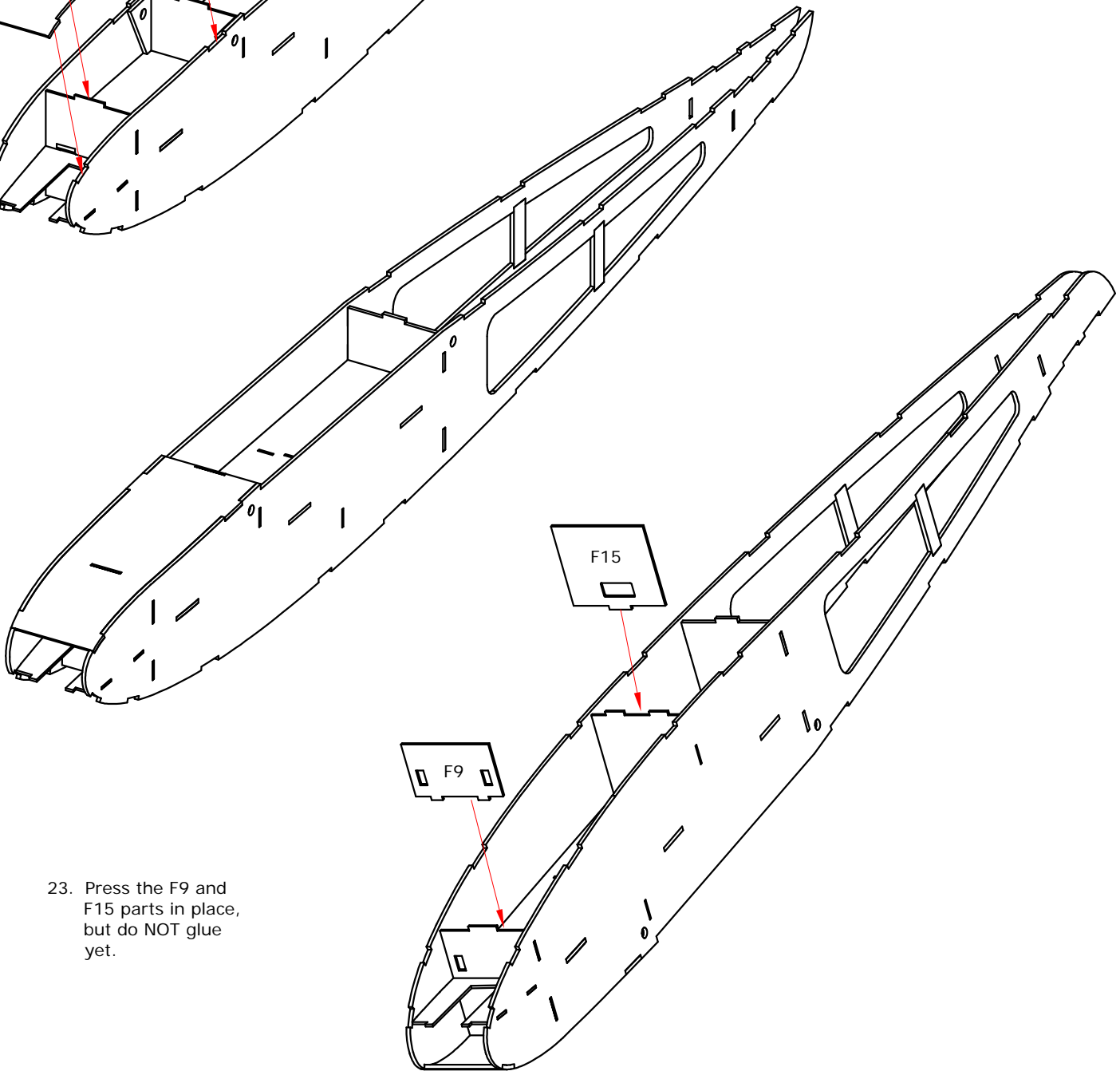


21. Glue the F19 parts to the inside of the fuselage sides, as shown, so the holes line up.

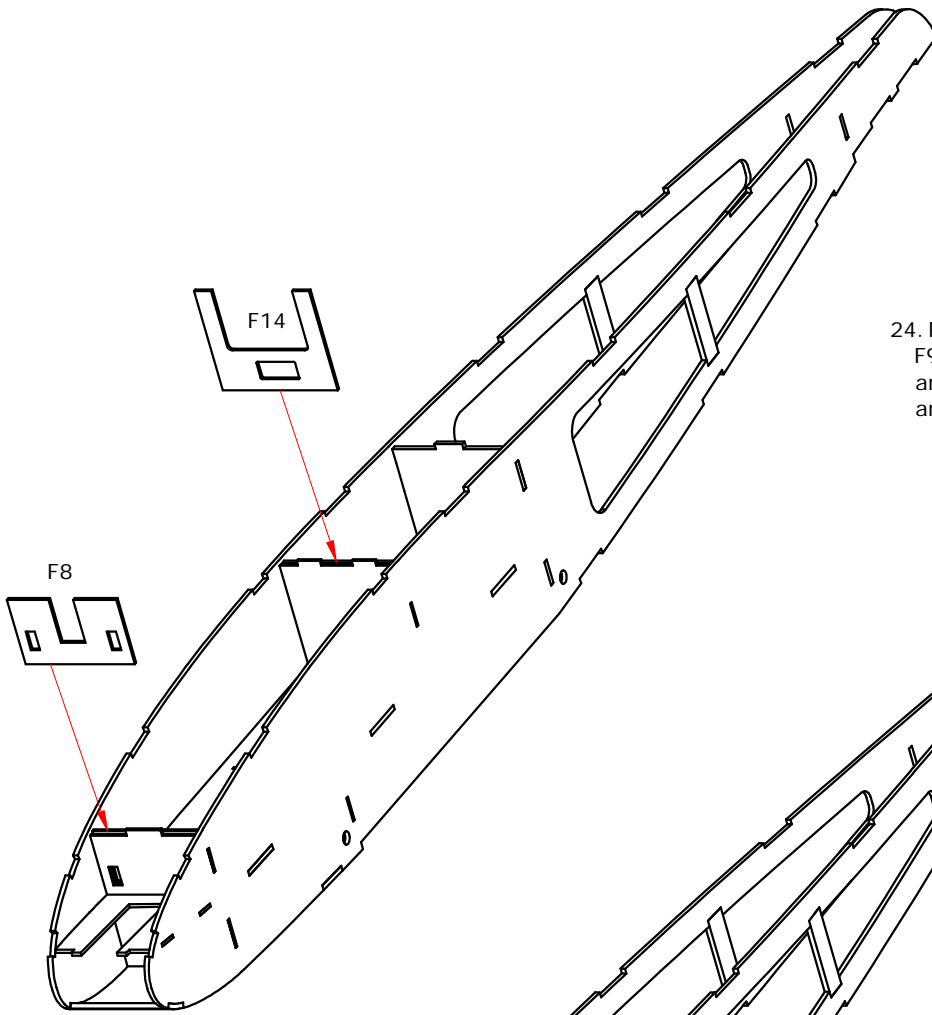




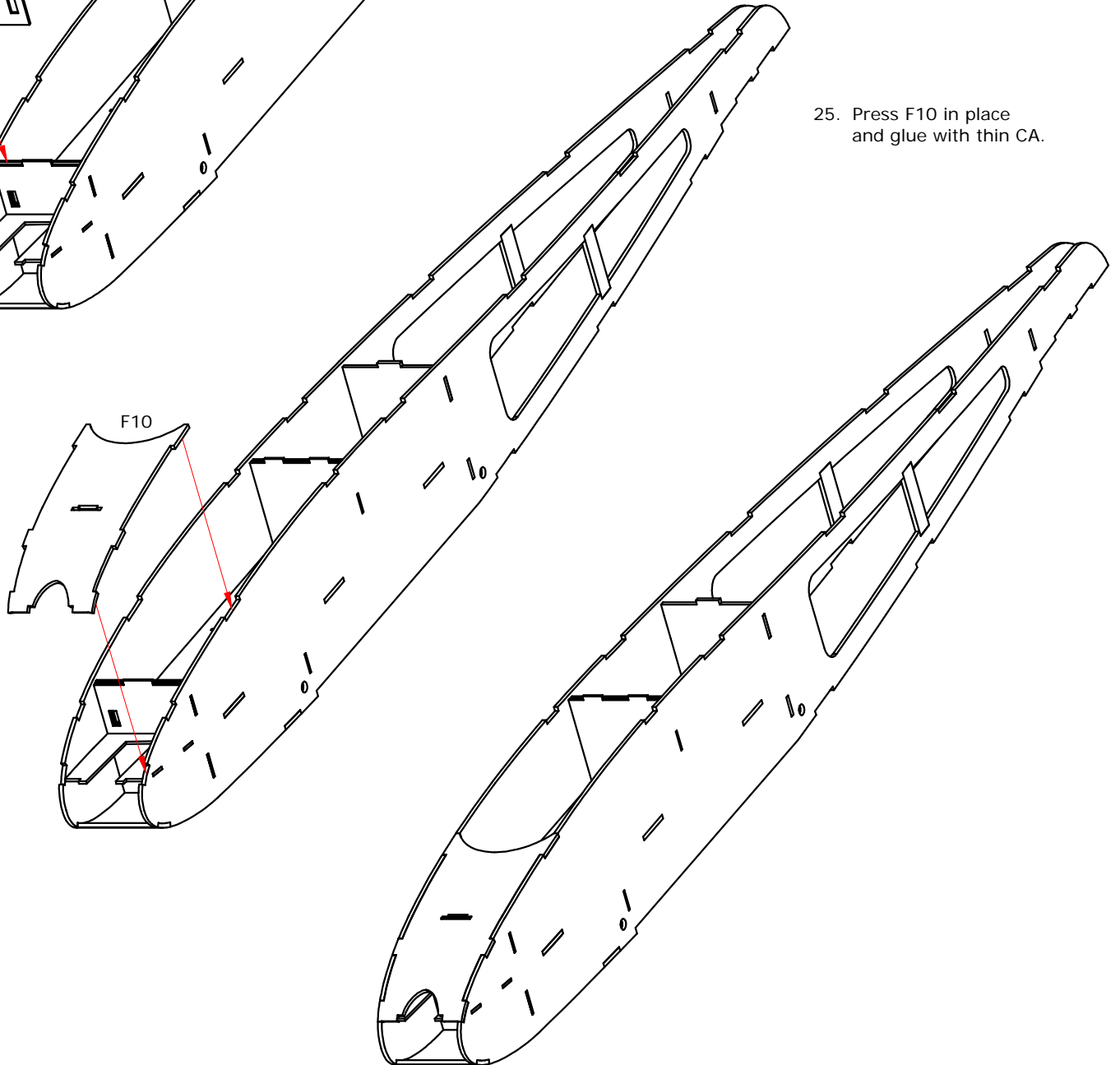
22. Glue F7a and F7b together and then press F7 in place and glue with thin CA.



23. Press the F9 and F15 parts in place, but do NOT glue yet.

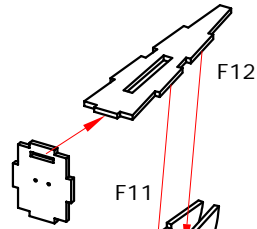


24. Press F8 in place between F2 and F9. Press F14 in place between F5 and F15. Press the parts together and secure with thin CA.

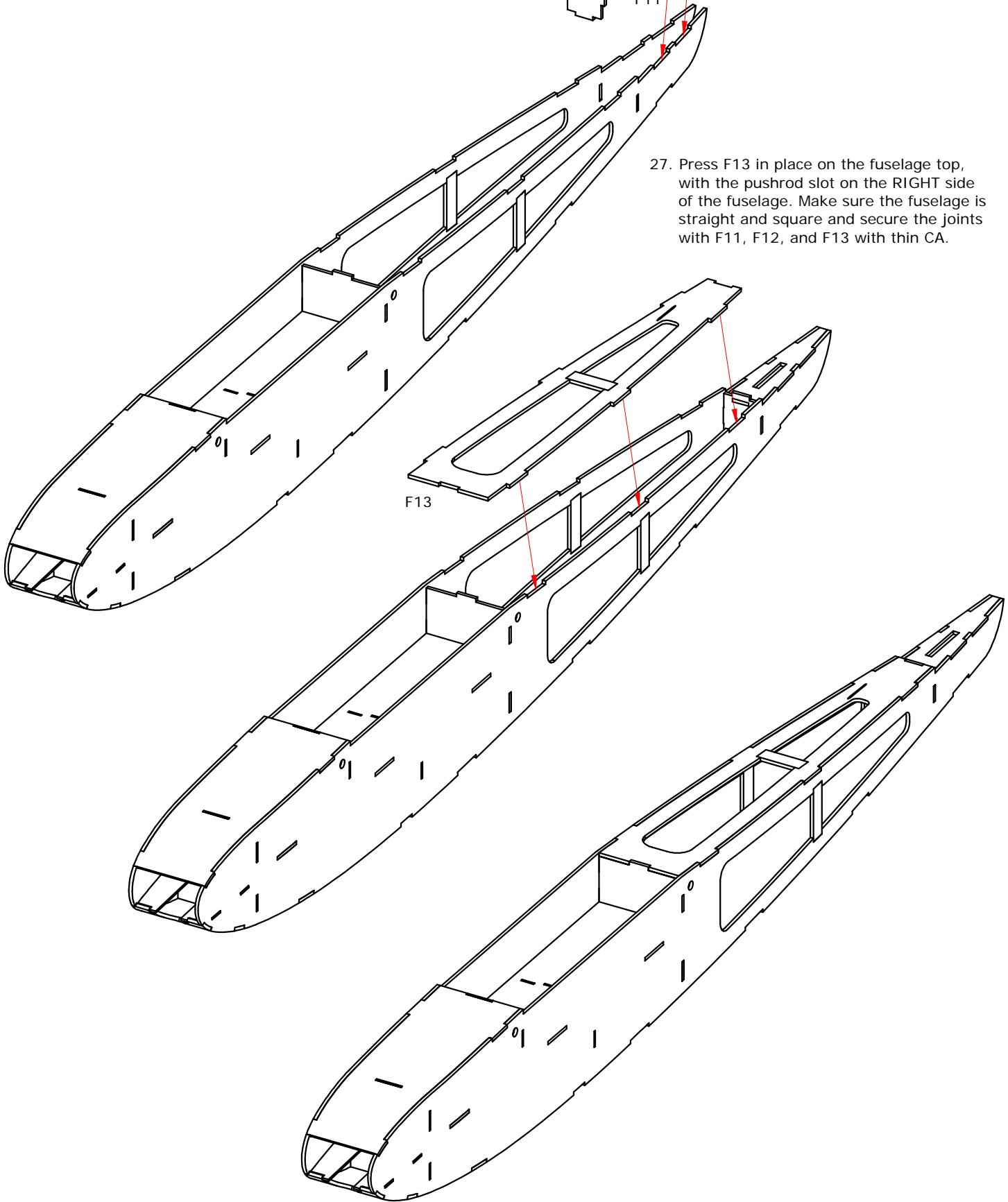


25. Press F10 in place and glue with thin CA.

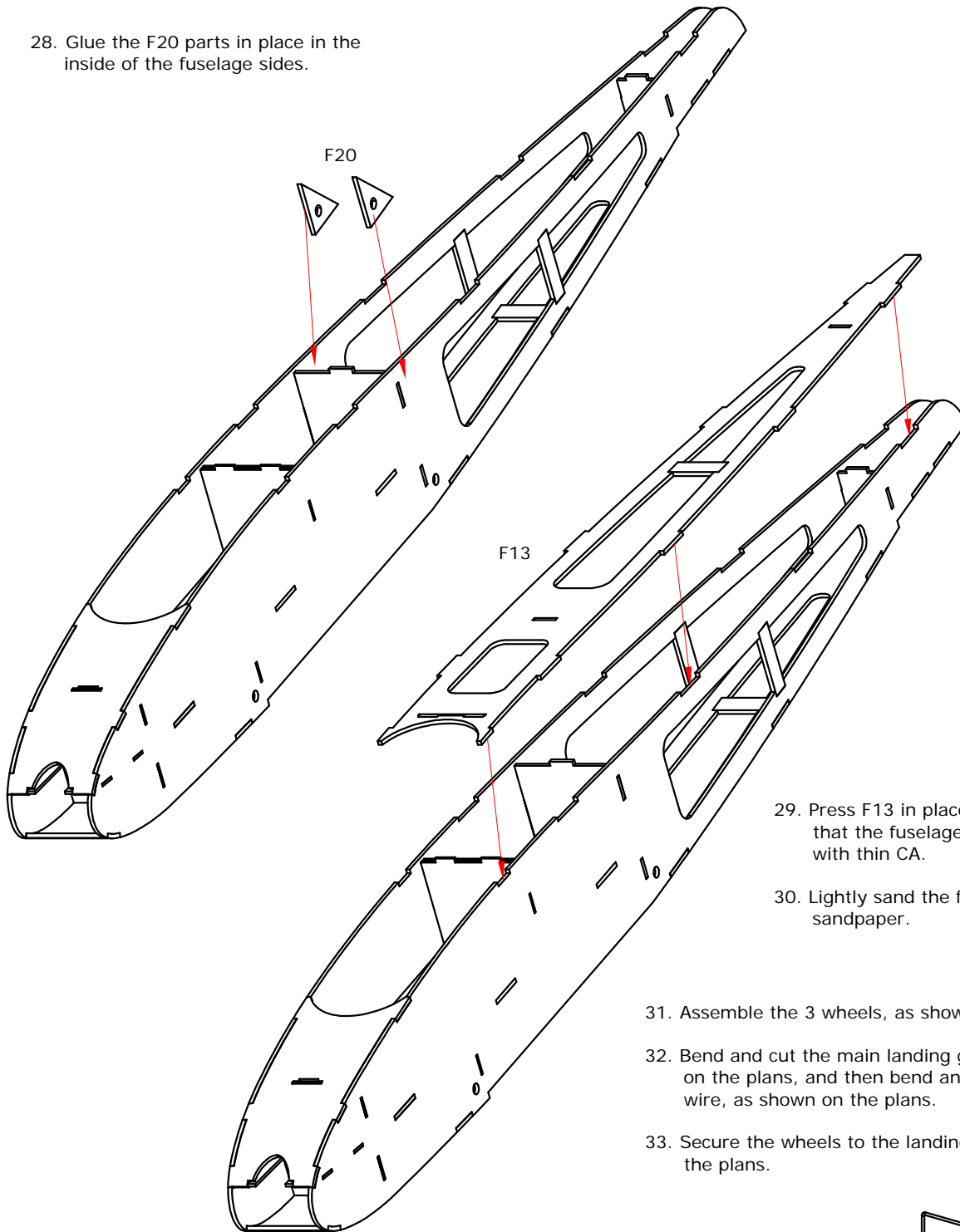
26. Press F12 into F11 and then press in place between the fuselage sides. Do NOT glue it yet.



27. Press F13 in place on the fuselage top, with the pushrod slot on the RIGHT side of the fuselage. Make sure the fuselage is straight and square and secure the joints with F11, F12, and F13 with thin CA.



28. Glue the F20 parts in place in the inside of the fuselage sides.



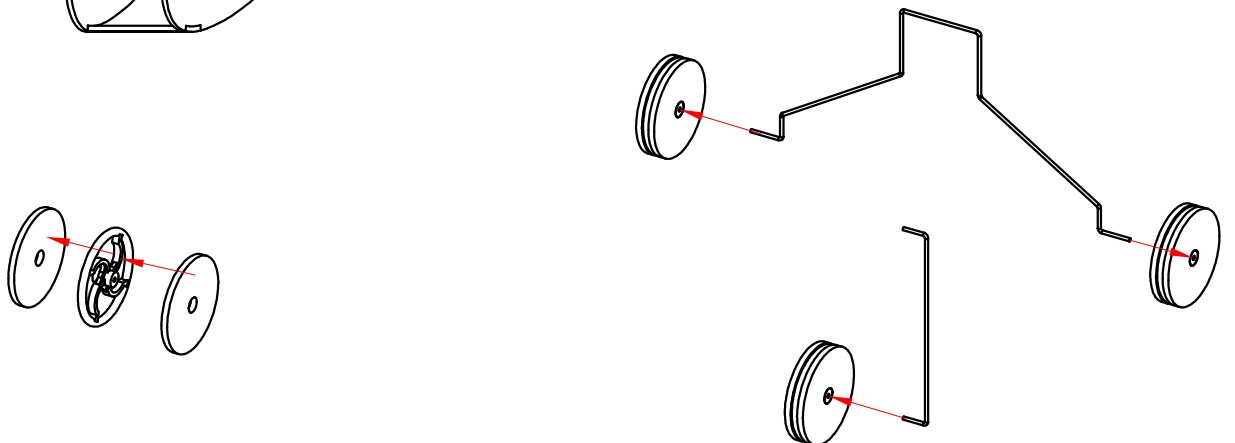
29. Press F13 in place. Once again, ensure that the fuselage is straight and glue with thin CA.

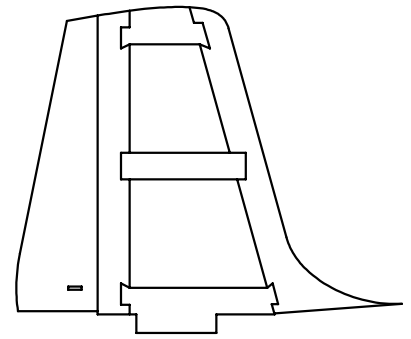
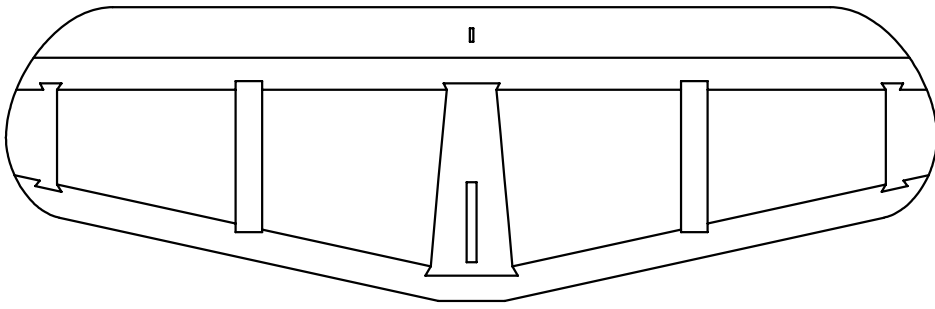
30. Lightly sand the fuselage with 320 grit sandpaper.

31. Assemble the 3 wheels, as shown on the plans.

32. Bend and cut the main landing gear wire, as shown on the plans, and then bend and cut the nose gear wire, as shown on the plans.

33. Secure the wheels to the landing gear, as shown on the plans.

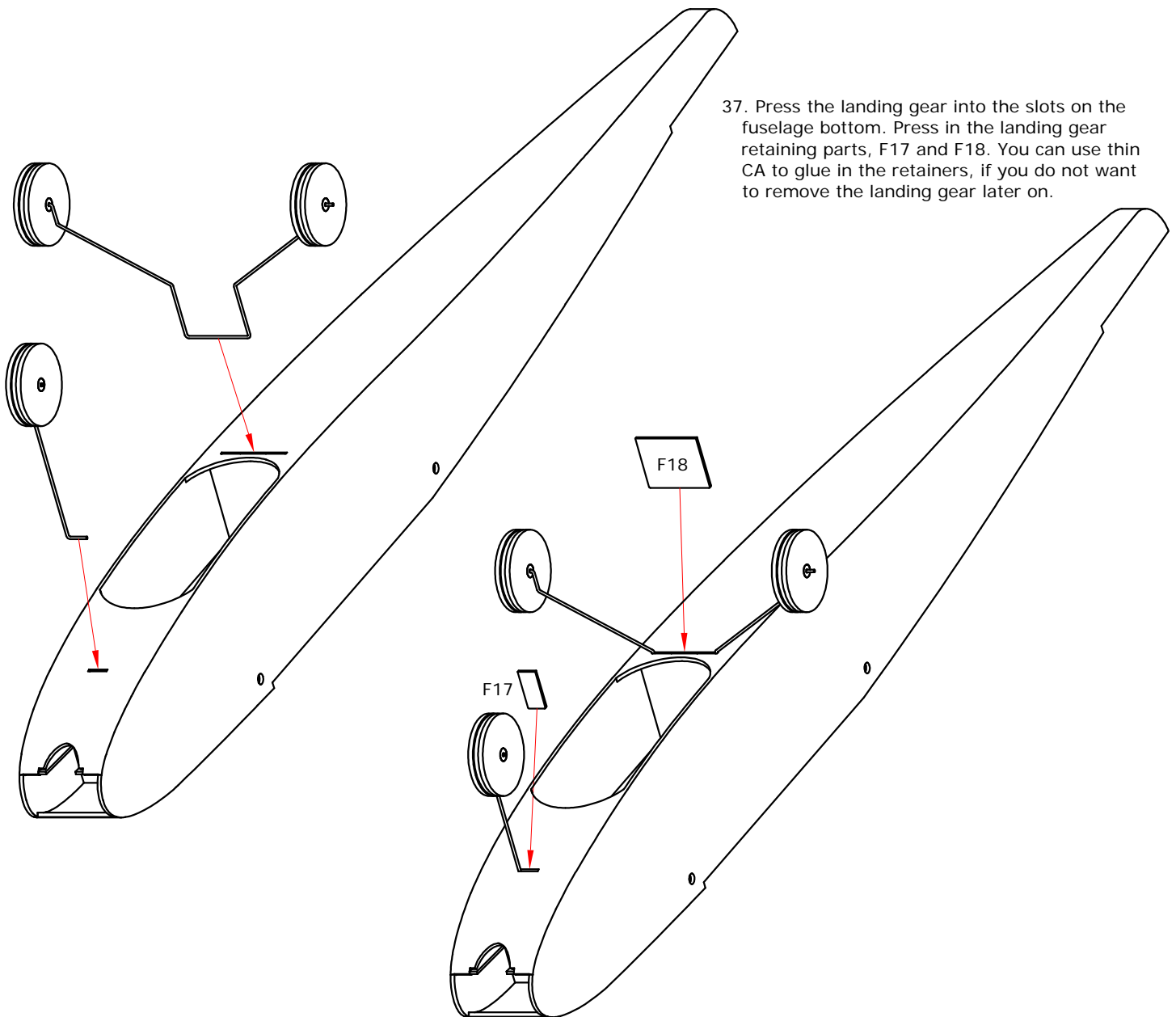




34. Assemble the horizontal stabilizer and vertical fin, as shown on the plans, with thin CA.

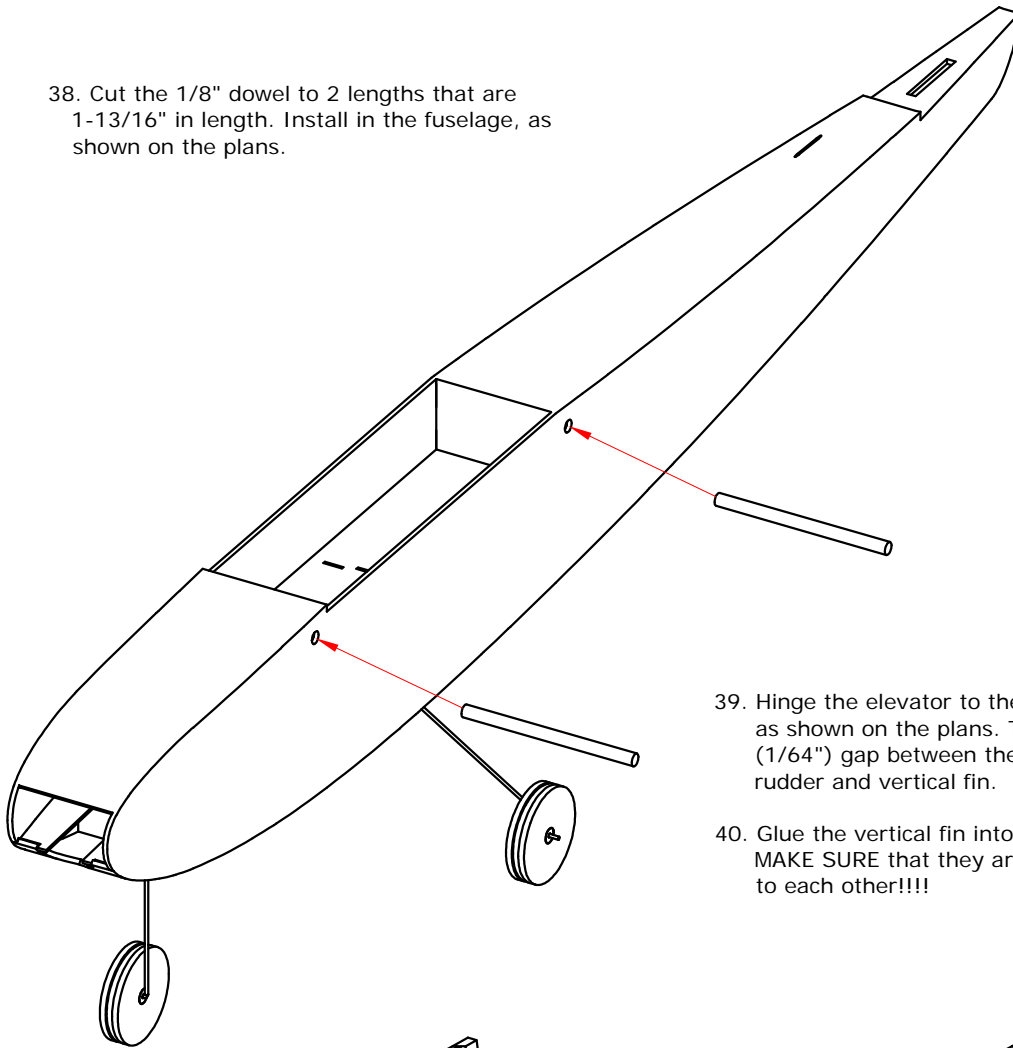
35. Lightly sand the stab, elevator, vertical fin, and rudder with 320 grit sandpaper.

36. Cover your airplane with SoLite, tissue, or silkspan. Do NOT use heavier coverings, as this is a light weight model and heavier coverings can easily damage the structure of the wings and tails.



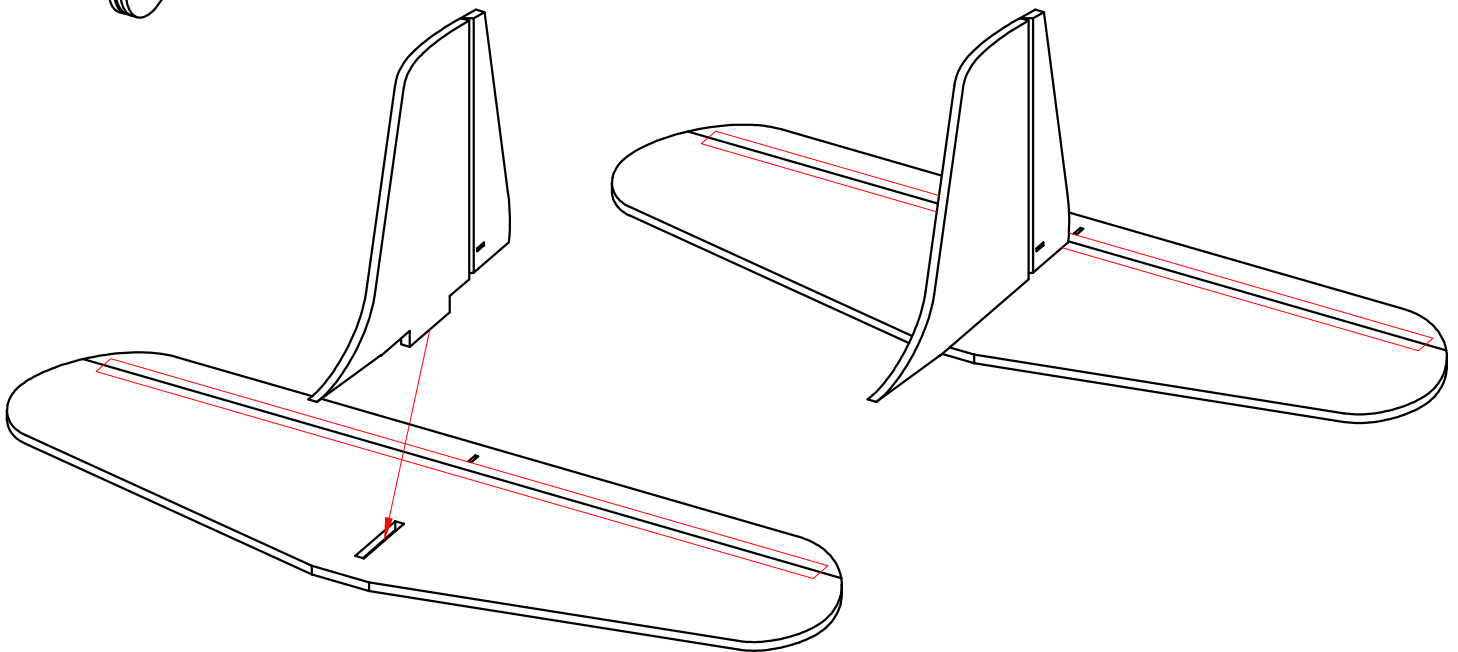
37. Press the landing gear into the slots on the fuselage bottom. Press in the landing gear retaining parts, F17 and F18. You can use thin CA to glue in the retainers, if you do not want to remove the landing gear later on.

38. Cut the 1/8" dowel to 2 lengths that are 1-13/16" in length. Install in the fuselage, as shown on the plans.

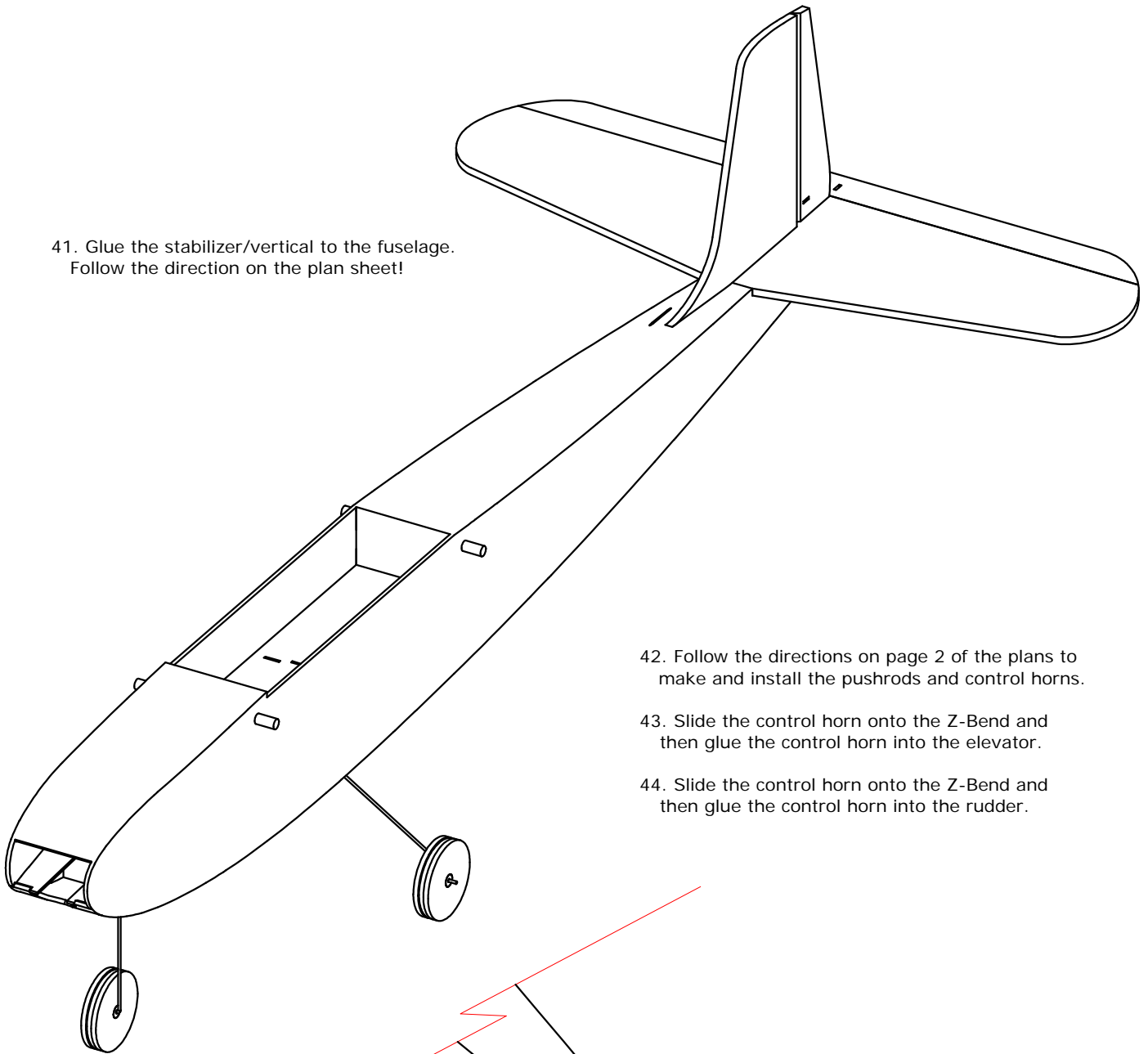


39. Hinge the elevator to the stabilizer using hinge tape, as shown on the plans. There should be a small (1/64") gap between the parts. Do the same for the rudder and vertical fin.

40. Glue the vertical fin into the horizontal stabilizer. **MAKE SURE** that they are perpendicular (90 degrees) to each other!!!!



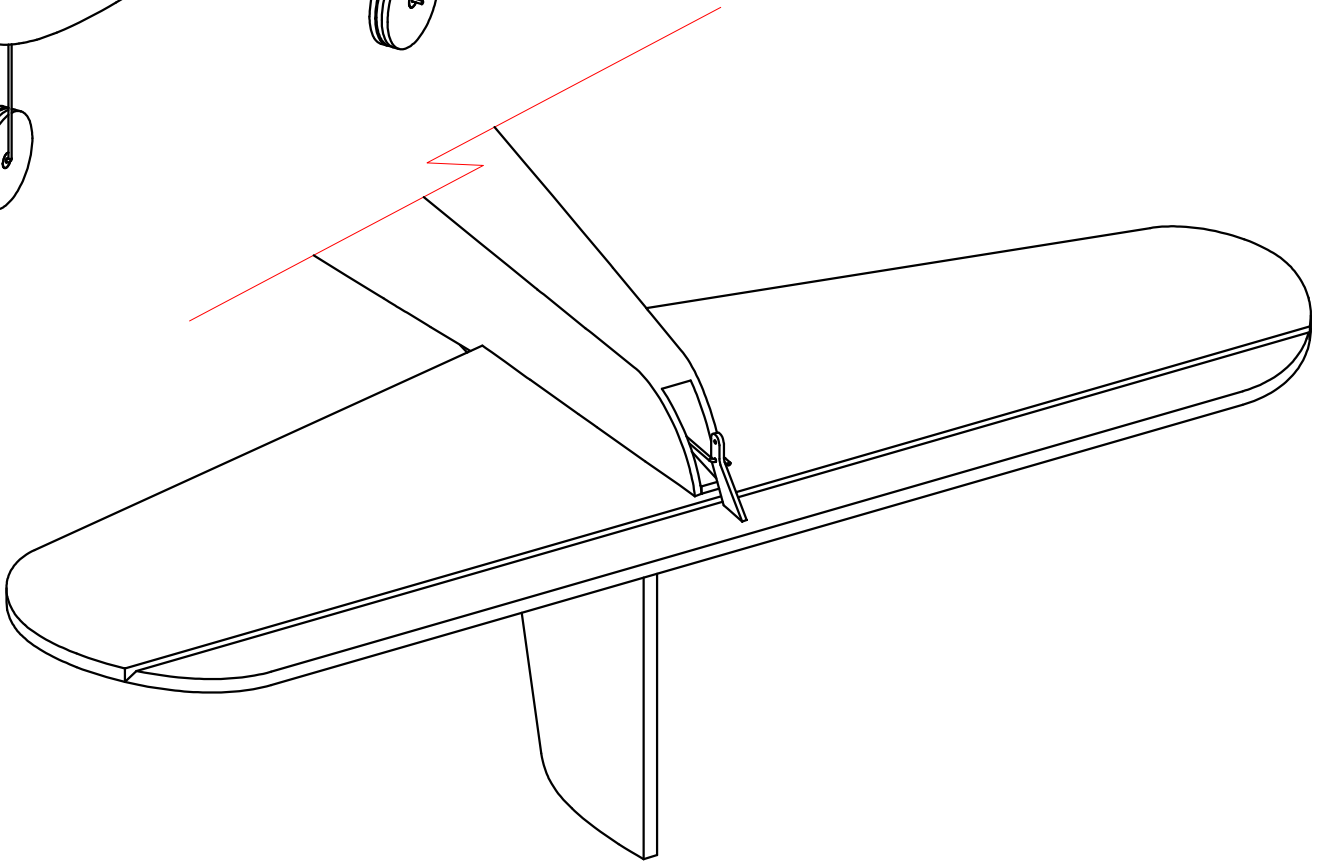
41. Glue the stabilizer/vertical to the fuselage.  
Follow the direction on the plan sheet!



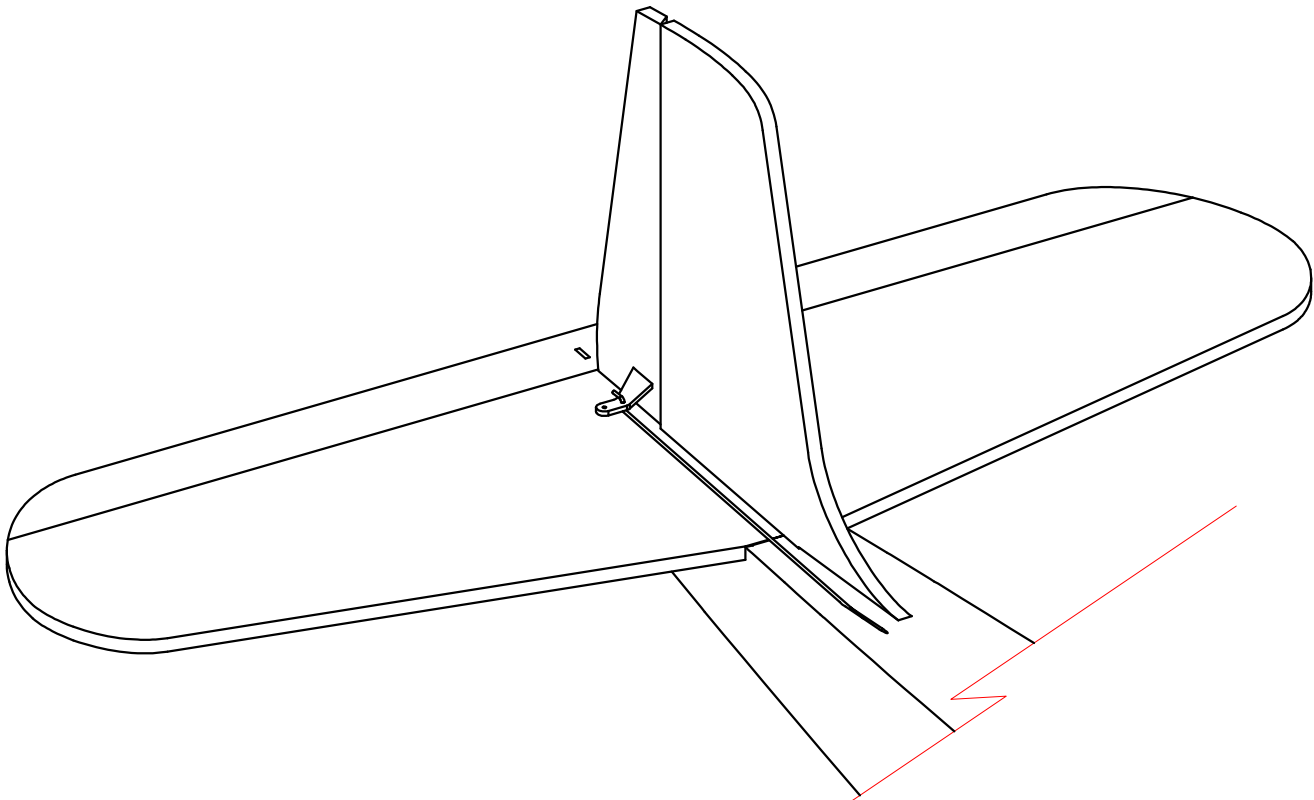
42. Follow the directions on page 2 of the plans to  
make and install the pushrods and control horns.

43. Slide the control horn onto the Z-Bend and  
then glue the control horn into the elevator.

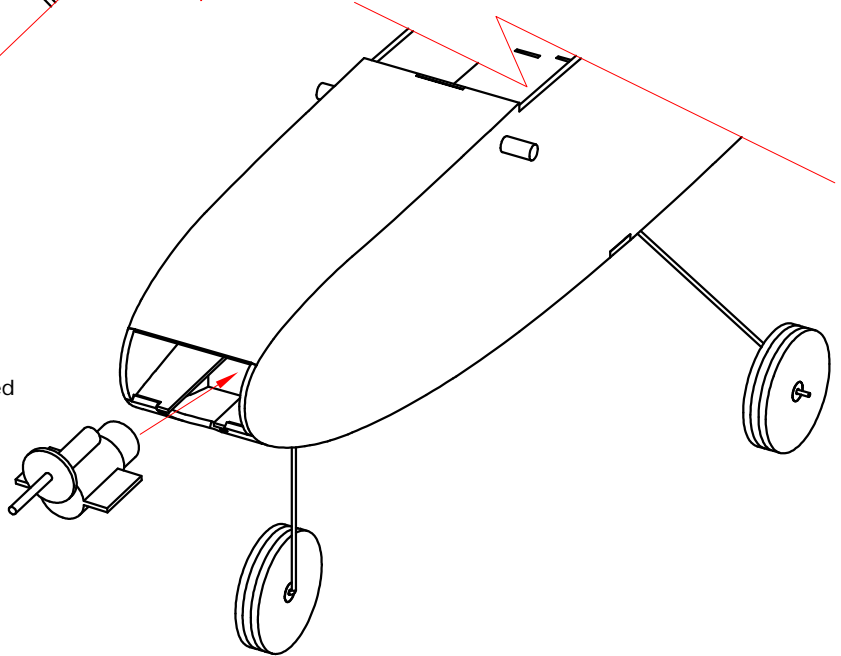
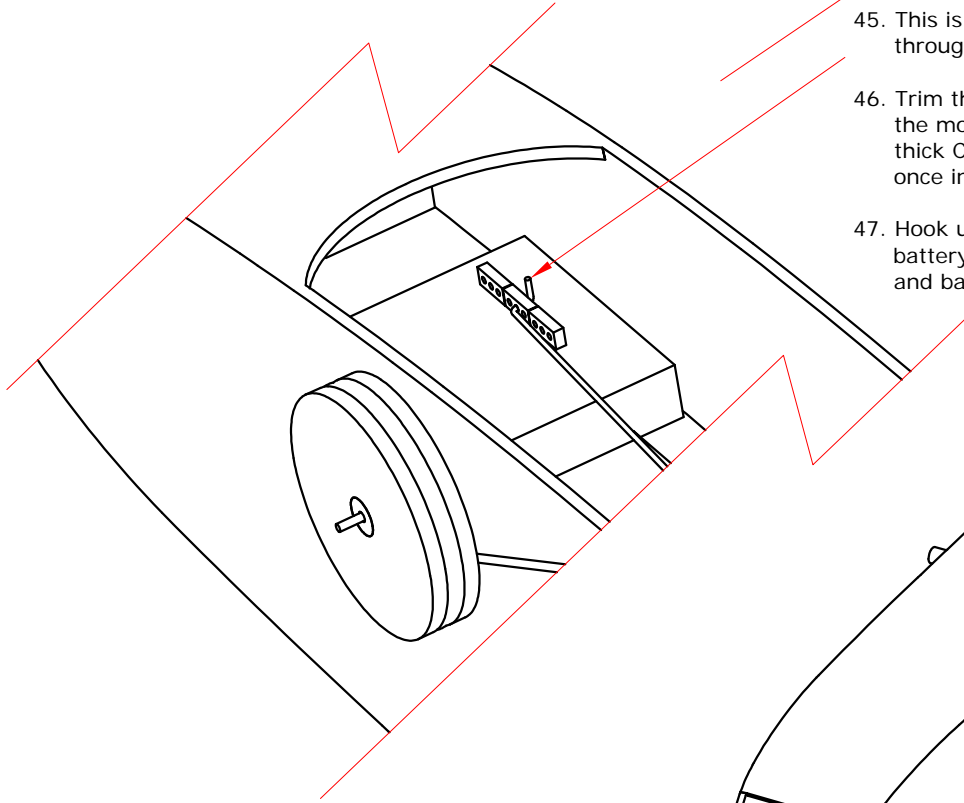
44. Slide the control horn onto the Z-Bend and  
then glue the control horn into the rudder.







- 45. This is a "Lazy-Z" Bend. Notice that after it goes through the servo arm, the wire goes UP.
- 46. Trim the mounting 'posts" off the gearbox and glue the motor/gearbox in place, using a couple drops of thick CA. The motor will have slight RIGHT thrust, once installed.
- 47. Hook up your motor wires to the TX, secure the battery in the fuselage with Velcro, mount the wing, and balance your model where shown on the plans.



45. Enjoy flying your PeregrinE Micro model! If you need help learning how to fly, as around at a local hobby shop or contact the AMA (Academy of Model Aeronautics) at [www.modelaircraft.org](http://www.modelaircraft.org)