



EDMONDS Ecee

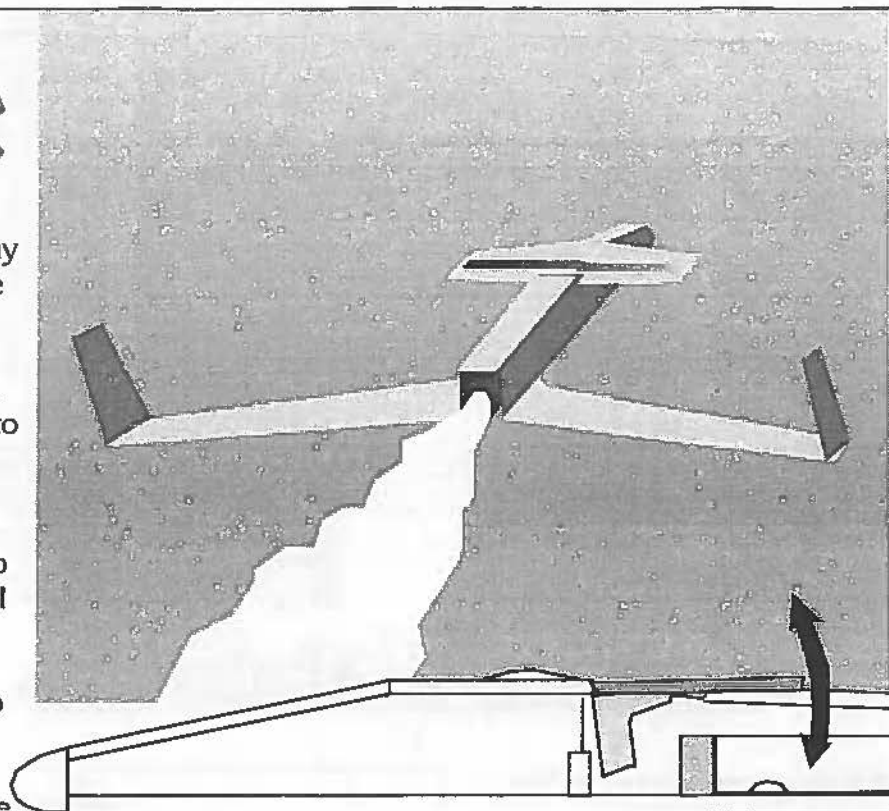
You'll feel special when you build and fly your Ecee. If you're a young modeler, why not go get your parents so they can share the special feeling with you? Ecee is a type of aircraft called a "rocket glider" that goes straight up under rocket power, then flies back like a jet plane coming in to land, with the rocket motor still inside. People used to think rocket gliders were the hardest type of model to design and build, but since then people have come up with ways to make it easy. On this model I use a device that I call the Edmonds Canard. It is designed to let the model produce lift while it is gliding, but to keep it from producing lift while it is headed upward under rocket thrust. A canard looks like a little wing near the front of the model. While the model is going up the hinged elevator on the canard is left free to move. Then the ejection charge from the motor pushes a little plug forward to lock the elevators down so the model can produce lift and glide. It is very important that the elevator be free to move easily during the rocket powered flight, so I want you to be very careful when you make the hinge.

One thing that makes this kit fun to build is the new technology of laser cutting. Your balsa wood parts were actually made by firing a laser through the sheets of wood. The drawings for the pieces were created on a Macintosh computer and sent to the laser cutter directly through electronic mail. I wanted to give you a real "hi tech" experience with this model! I'm sure you'll have a great time!

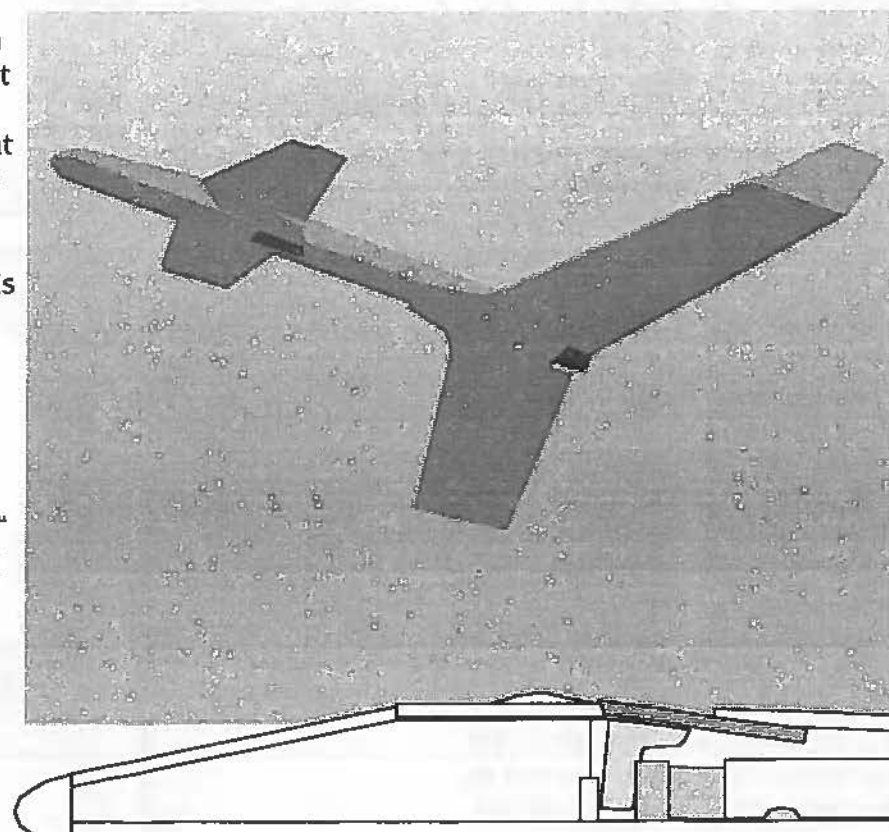


EDMONDS AEROSPACE

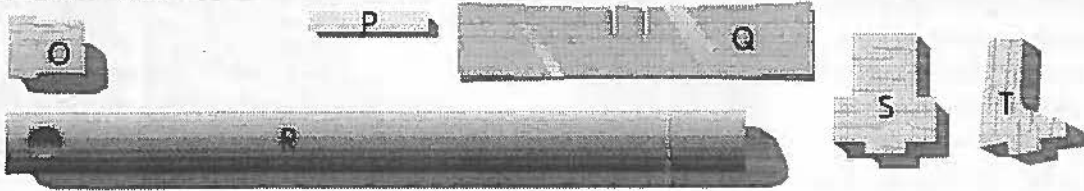
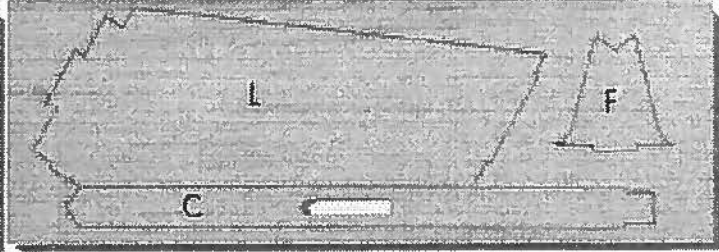
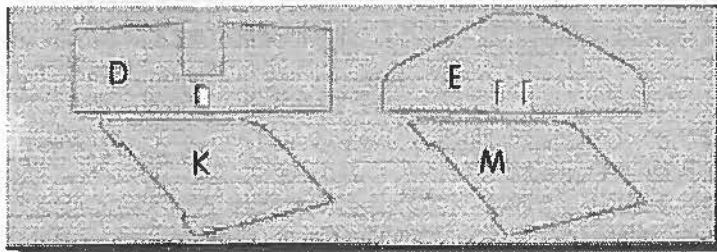
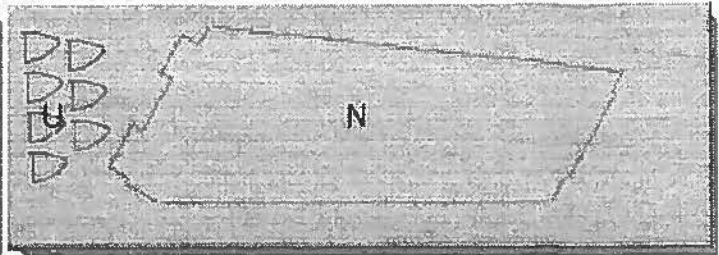
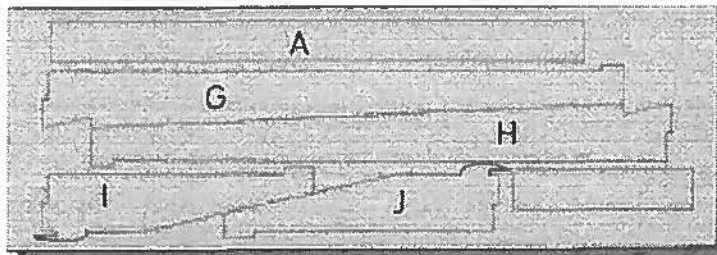
13326 Preuit Place * Herndon, VA 20170-4341
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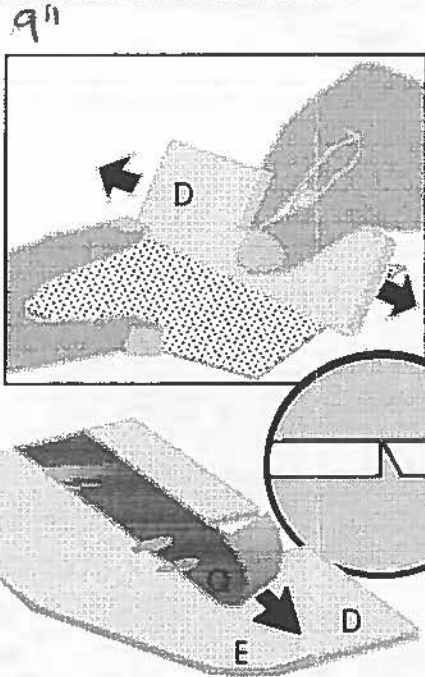
Elevator is free to move under rocket power



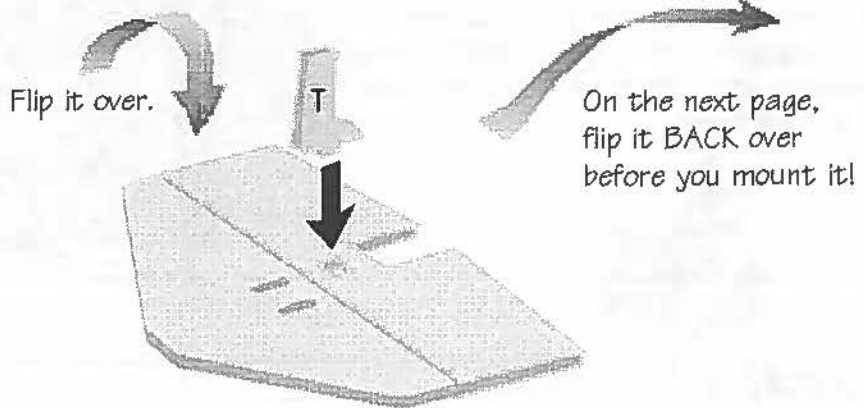
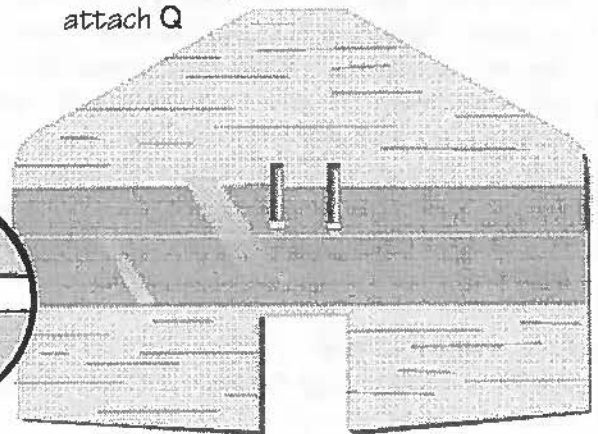
Ejection charge slides the plug to lock the elevator down for glide.



This is where you make that canard with the hinged elevator that we talked about. The only tricky thing here is to make sure the hinge plastic doesn't cover up the little slots in the canard. Take D, the elevator, out of the laser cut sheet. Hold it at an angle and press down while you rub it back and forth on some sandpaper. You are trying to put a "bevel" angle into the edge of the piece, so that it can move when you hinge it to the canard. Now, put pieces D and E next to each other on the table, so that they barely touch. Peel the backing off of the plastic piece Q and stick it down, leaving those two slots uncovered, to hinge D and E together. Test the hinge to make sure it moves freely both ways. Then, flip D and E over and glue T to the bottom of the elevator, with the tab in the square notch. Now, as soon as that glue dries, you'll be all set to glue the canard assembly to the fuselage when it is ready.



Make sure you don't cover those slots when you attach Q



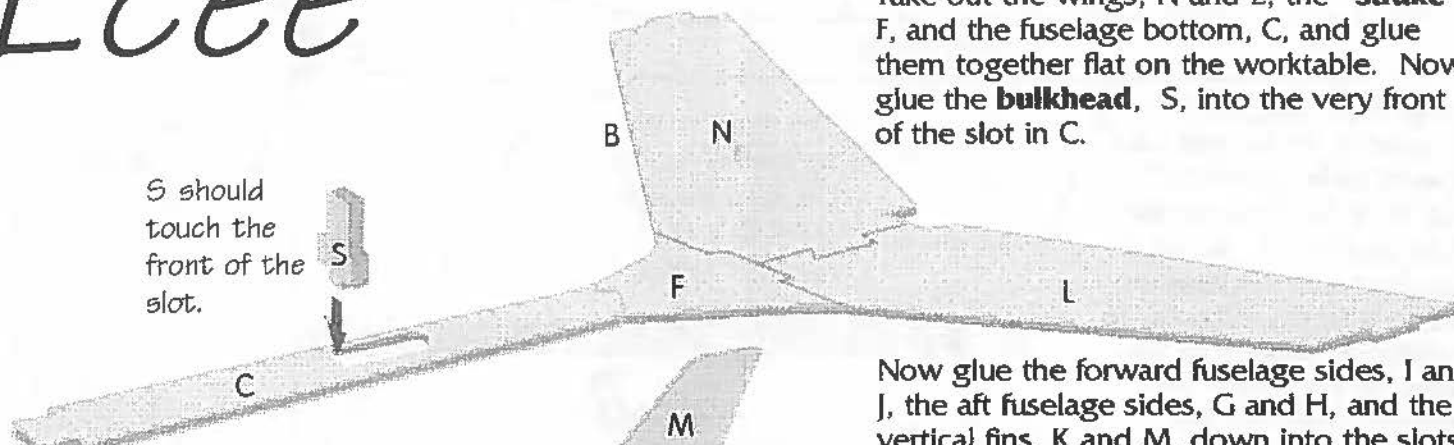
Flip it over.

On the next page, flip it BACK over before you mount it!

Ecee

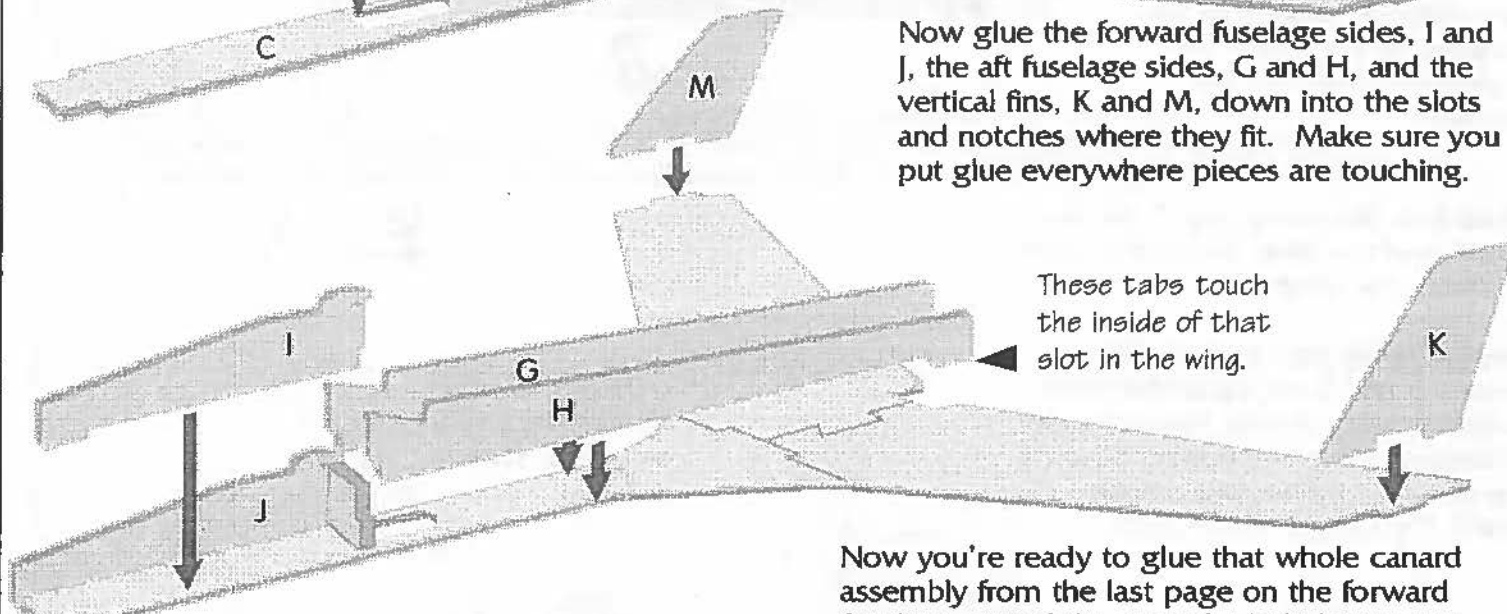
Take out the wings, N and L, the "strake", F, and the fuselage bottom, C, and glue them together flat on the worktable. Now glue the **bulkhead**, S, into the very front of the slot in C.

S should touch the front of the slot.



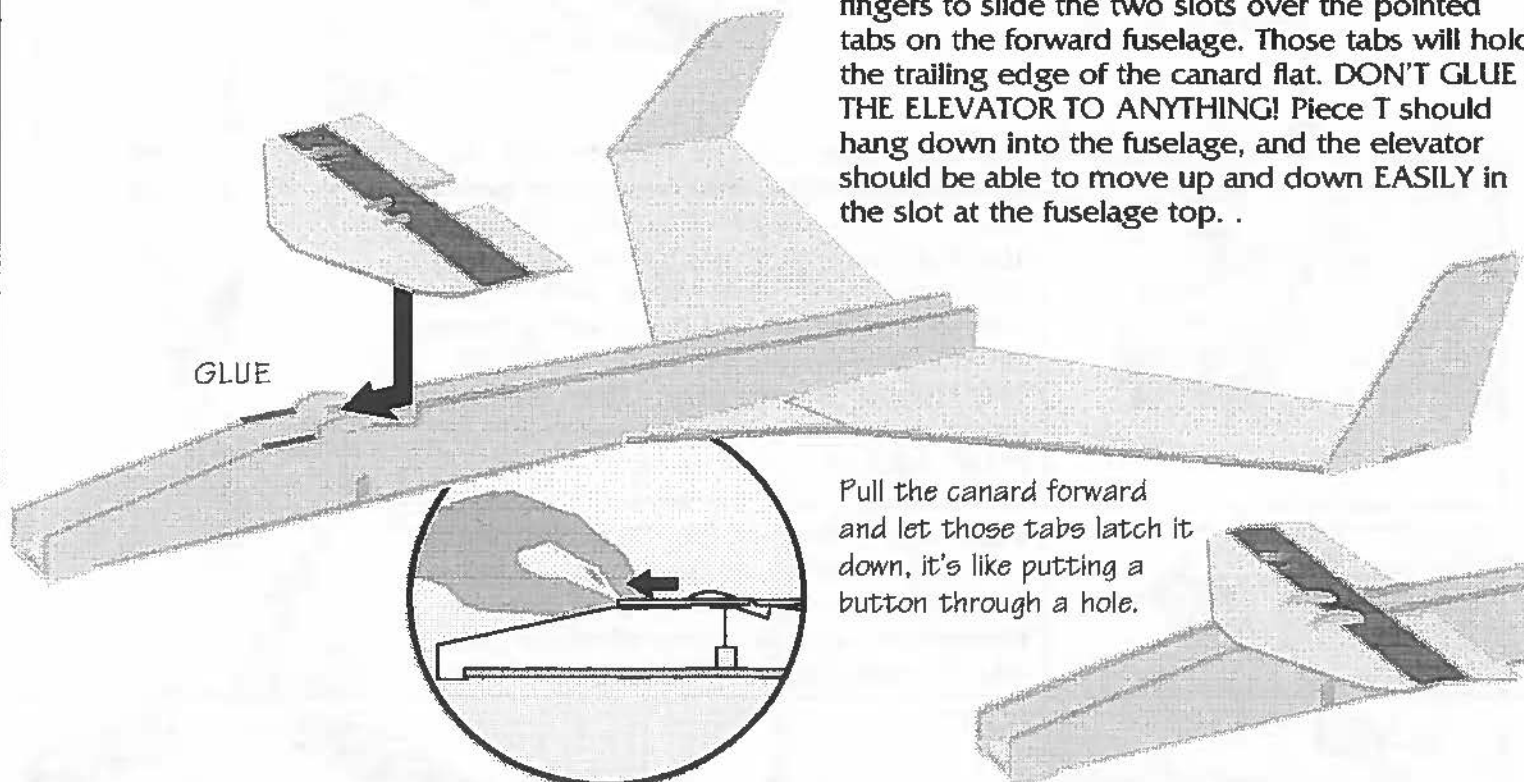
Now glue the forward fuselage sides, I and J, the aft fuselage sides, G and H, and the vertical fins, K and M, down into the slots and notches where they fit. Make sure you put glue everywhere pieces are touching.

These tabs touch the inside of that slot in the wing.



Now you're ready to glue that whole canard assembly from the last page on the forward fuselage. Bend the canard a little bit in your fingers to slide the two slots over the pointed tabs on the forward fuselage. Those tabs will hold the trailing edge of the canard flat. **DON'T GLUE THE ELEVATOR TO ANYTHING!** Piece T should hang down into the fuselage, and the elevator should be able to move up and down **EASILY** in the slot at the fuselage top.

GLUE

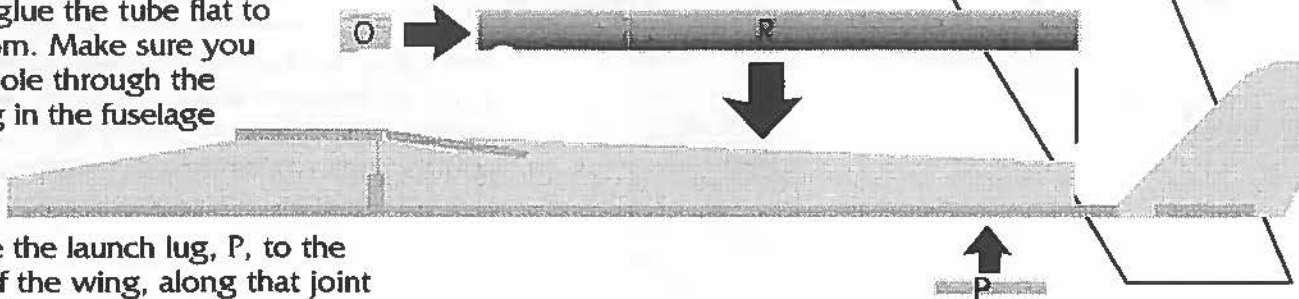


Pull the canard forward and let those tabs latch it down, it's like putting a button through a hole.

Put the little plug, O, into the tube, R, at the end with the **vent hole**, but **DON'T GLUE IT**, it has to slide for this to work! Push the tube down between the fuselage sides to glue the tube flat to the bottom. Make sure you see the hole through the opening in the fuselage bottom!

You must be able to see the hole in the tube through the hole in the fuselage bottom

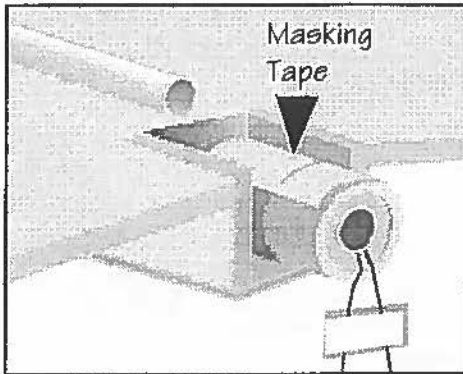
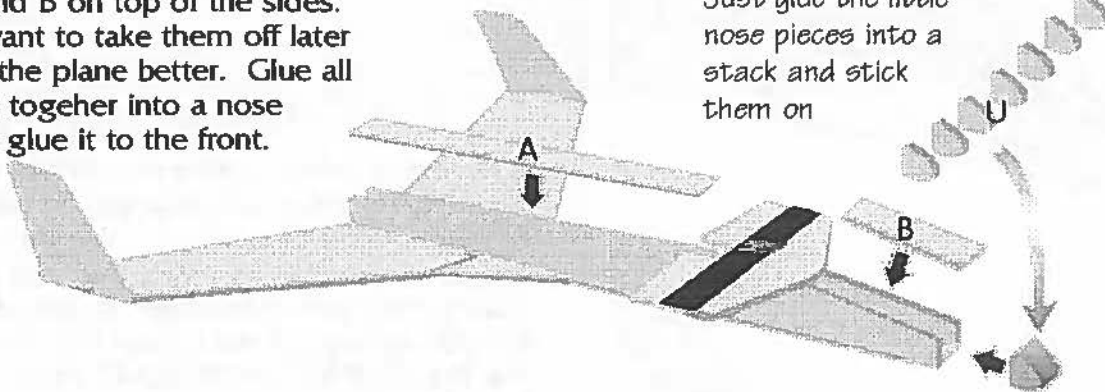
The back of the tube should line up with the back of the fuselage



Then glue the launch lug, P, to the bottom of the wing, along that joint between the wings.

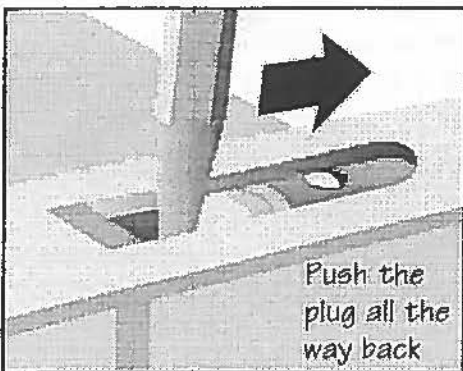
Finally, lightly glue the fuselage top pieces A and B on top of the sides. You may want to take them off later to balance the plane better. Glue all the parts U together into a nose block, then glue it to the front.

Just glue the little nose pieces into a stack and stick them on



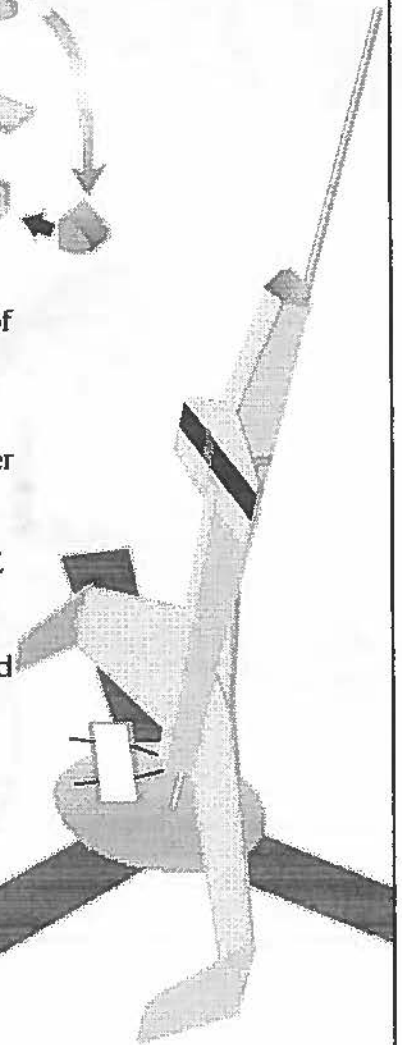
Masking Tape

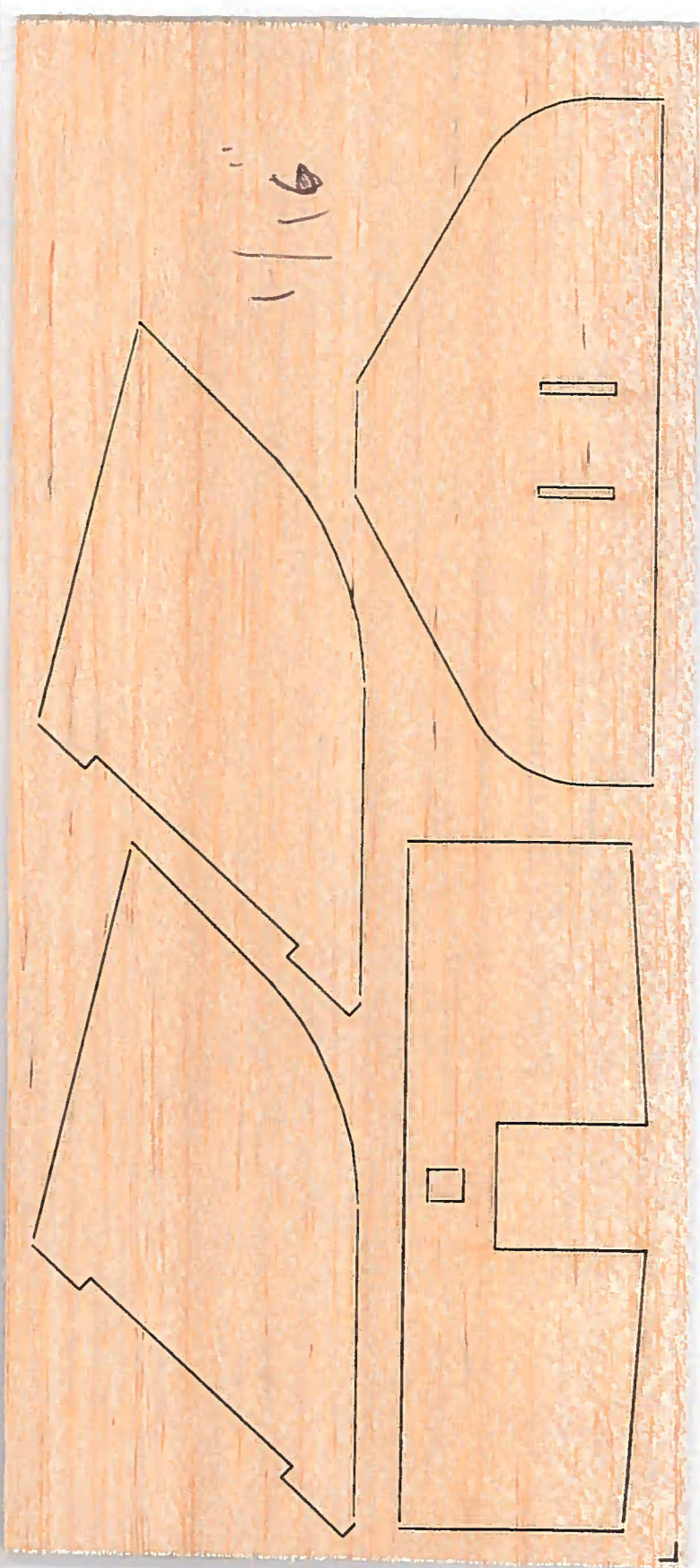
The only other steps are the ones you do before every flight. You need to do both of these or it will crash! First, after you put together the engine and ignitor using the instructions that came with it, slide the engine into the tube so that about a quarter of an inch sticks out the back, and **TAPE THE ENGINE** into the tube. Then use a pencil or a stick to reach in and **PUSH THE PLUG INTO THE TUBE** as far as it goes. Be completely sure the elevators move both ways before you fly. Now, you should be ready to slide it on to the launch rod and send it up for a nice smooth trip through the sky. Be proud when you see what a sophisticated aircraft you've made!



Push the plug all the way back

Robert Edmunds Jr.

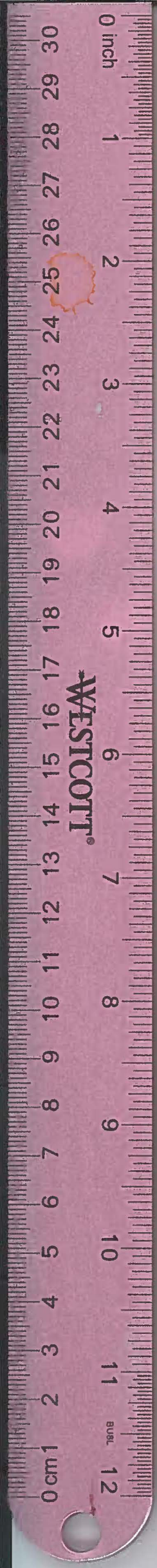




3/16"

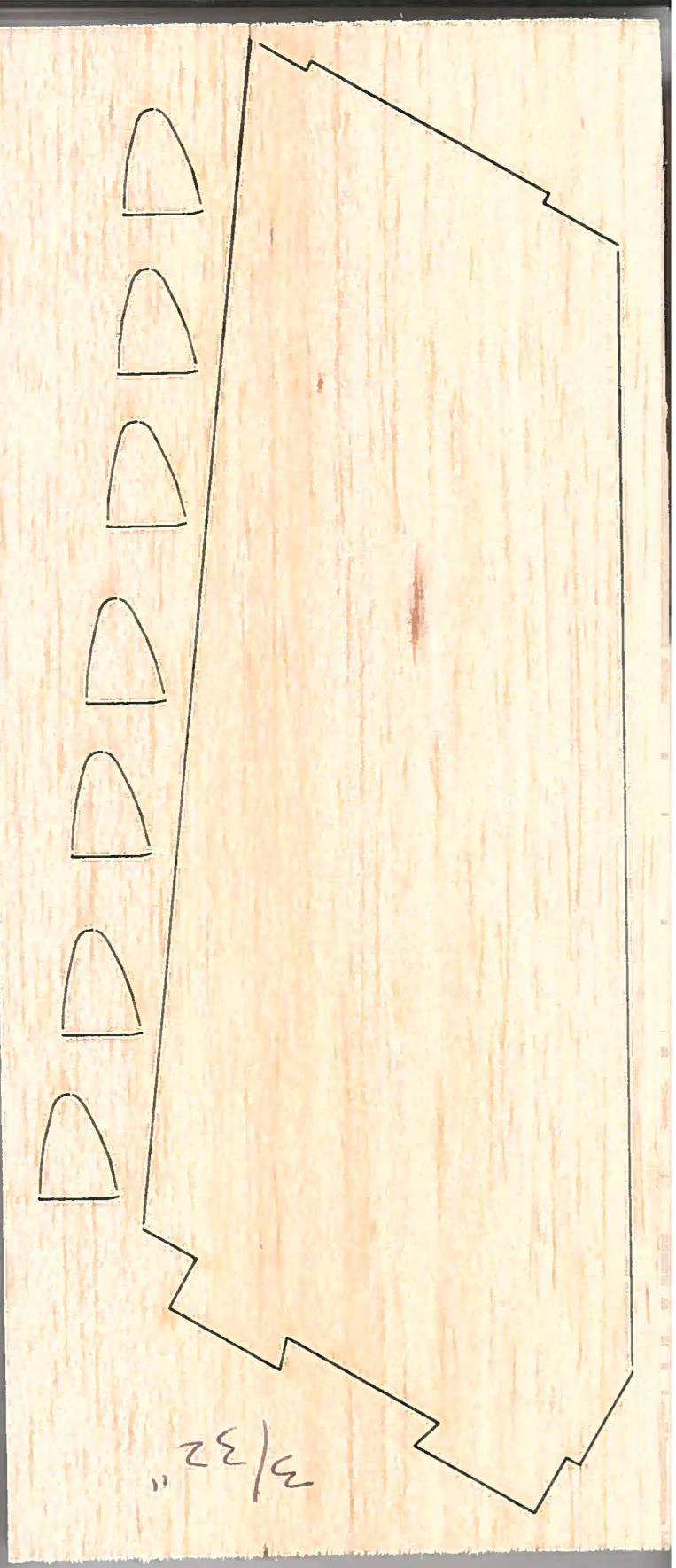
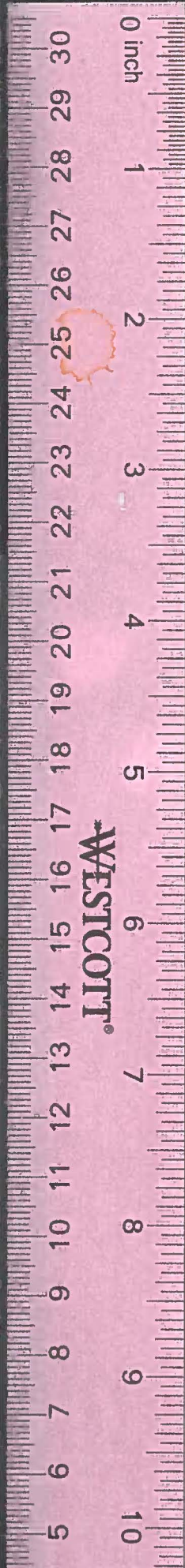
3/16"





3/32"





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