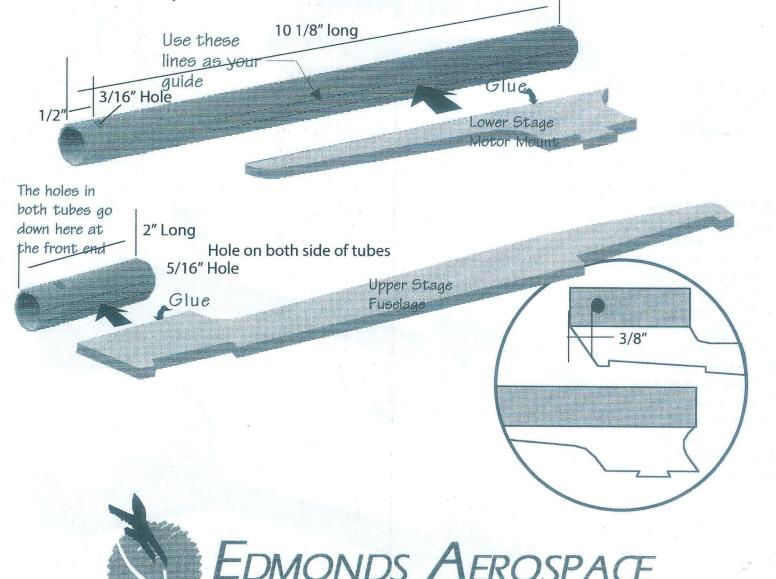


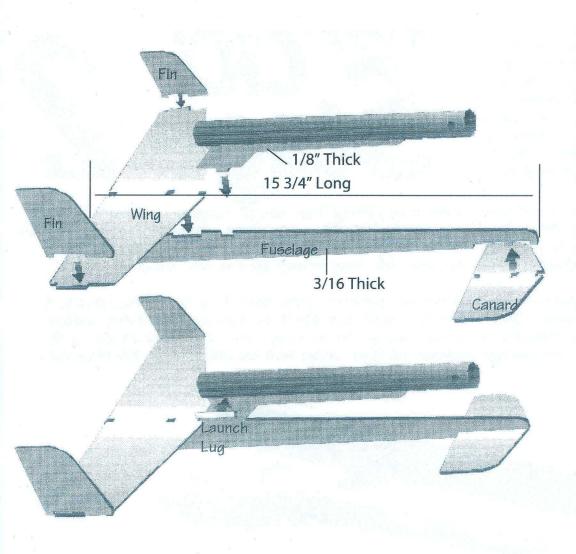
This rocks. It's as simple as that. This set of models takes you back to the golden days of high speed research flying over the deserts of the Great Southwest. You'll light one rocket motor to carry a stack of two aircraft high into the sky, then a second motor will fire to hurl the upper stage to an unbelievable altitude.

EDMONDS CICIO

Are you a young modeler? You'll have a great time putting these aircraft together, and you'll be ready to fly before you know it. Why not get your parents to build and fly along with you? I guarantee they'll have as much fun as you! All you need is a tube of glue and some masking tape. White glue like Elmer's is fine, just make absolutely sure that you wait long enough for it to dry. Ready?

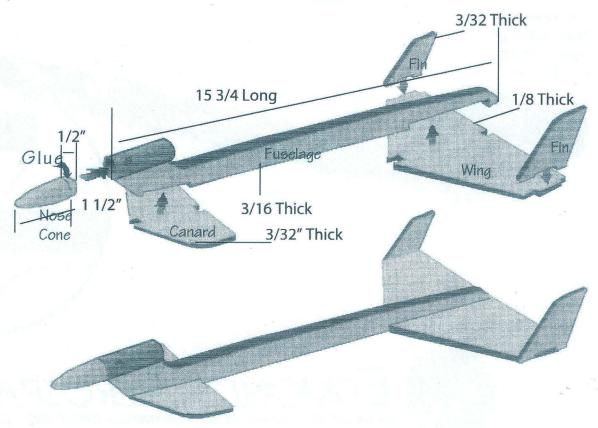
Start by gluing the motor tubes for both aircraft into position. Look carefully at the motor tubes to find the little thin lines on the sides. Use these lines to make sure the motor tubes are absolutely straight. Glue the lower stage motor mount between the lines on the the long tube. Glue the short tube to the upper stage fuselage, with the fuselage between the lines. Make sure the little holes in the tubes are at the front, as in the picture.

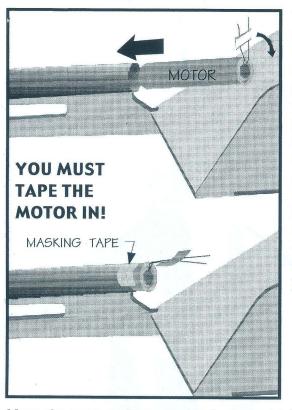




You can start assembling the lower stage as soon as the joint between the long tube and the lower stage motor mount is dry. Glue the fins to the wingtips and the canard to the front of the fuselage, then glue the wing down into the slots on top of the fuselage. Then, glue the motor mount and tube into the slot ahead of the wing. Finally, glue the little white launch lug into the "corner" between the motor tube and the motor mount.

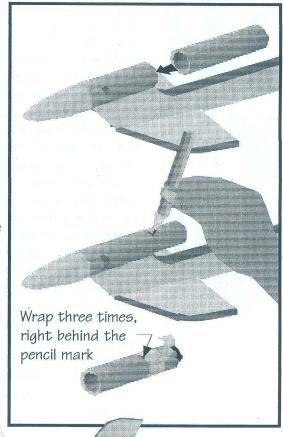
You build the upper stage almost the same way as the lower stage, except that the wings go on the bottom of the fuselage this time. The one extra thing you need to do is glue the nose cone into the front of the motor tube. Then, sit back and let everything dry, for as long as the glue bottle says. That's the kind of patience you need to make aerospace work for you!





The real challenge of this model set is to mount both of the motors correctly to make everything work. The lower stage must always use a motor that ends in "-0". You can use a B6-0 or a C6-0 with this set. When you buy these motors, they should say "lower stage" somewhere on the package. I'd say start with the B6-0 if you have one available, otherwise try the C6-0. Install the ignitor by following the instructions that come with the motor, then slide it into the back end of the lower stage motor tube, leaving about a half inch sticking out the back. Now use masking tape to tape the motor into place. Wrap the end of the tube and the motor with the tape and smash it down tight with your flingers. You really need to keep that motor from moving either forward or backward during the flight. The tape will do this, but only if you smush it down hard on to the motor and tube. Bend the ignitor down parallel to the tube. This will keep the ignitor away from the other aircraft when you stack everything up for launch.

Now the upper stage motor is more tricky to install. It's not that difficult to do, but you absolutely need to do it right! A good motors to use for the top stage would be the 1/2A6-2, A8-3, or B4-4. I'd say start with the 1/2A6-2, you'll be surprised by how high that upper stage climbs. Slip the motor into the upper stage motor tube, making sure that it faces forward with the nozzle end sticking out the back (I've messed that up quite a few times). Make a pencil mark on the motor right behind the back end of the tube. Now take the motor back out and start wrapping it with tape just behind the pencil mark. Wrap it all the way around three times. You are building up a nice thick ring of tape. Why, you ask? Look down below at how the two aircraft are assembled for launch. This ring of tape is made to stop the upper stage motor from sliding down into the lower stage tube after launch. Once you have a nice thick ring of tape around the motor, you can practice sliding the two aircraft together into launch configuration.



Slide the motor into the front of the lower stage tube until the tape ring hits the tube, then slide the upper stage tube on to the front of the motor

These fins sit on top of the lower stage wing in launch configuration.

Now your models are ready to head for the blue, and you're ready to head for the launch pad. I find that the easiest way to There's that tape set up is to slide the lower stage launch lug ring doing its job. down over the launch rod, clip the ignition wires to the ignitor, and then slide the upper stage motor and upper stage on to the front. Other people might like stacking the models first, sliding the whole thing down the launch rod, then reaching in between the wings to hook on the wires. Either way, make sure that the ignition wires can't snag on any parts of the models during launch. Now we can talk a little bit about what you're about to see happen up there once you push the button. This model set uses a technique called "gap staging". You can read about it in G. Harry Stine's Handbook of Model Rocketry. After your countdown you press the button and the lower stage motor hurls the entire stack into the air. When the lower stage motor gets to the end of its burn, it sends a blast of hot gas out the front of the motor, followed by a stream of hot propellant particles. The idea of the little holes in the side of the lower stage motor tube is to let some of that gas out while we're waiting for the propellant particles to come up and ignite the upper stage motor. Once the upper stage lights, it blows the lower stage aircraft backward. The lower stage performs a half loop, then starts gliding back to the ground, while the upper stage speeds away to incredidble speeds and altitudes. Finally, the upper stage runs out of steam and begins gliding back itself. These flights truly are a joy to behold, and I hope you'll truly enjoy what you see! http://members.aol.com/RobEdmonds/Edmonds.html

