



F-22

Indoor / Cul-De-Sac Flyer



F-22 Specifications

Wingspan: 18.4 in.

Length: 25.1 in.

Wing Area: 206 sq. in.

Weight (Ready to Fly): 3.2 – 3.4 oz.

Wing Loading: 2.24 – 2.38 oz. / sq. ft.

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.

Revision History

Date	Revision Notes/Comments
10/23/2009	Production Release

Thank you for purchasing the Mountain Models F-22 Cul-De-Sac Flyer. The F-22 is a super lightweight, highly aerobatic Depron foam jet. Standard aerobatics, rolling circles, and falling leafs are no problem for this nimble jet. High quality laser cut Depron and plywood parts make the assembly of this laser cut model airplane kit a breeze!

We think you'll find this jet to be a lot of fun, being able to be flown in small outdoor spaces and indoor gymnasiums.

Thank you,
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Parts List

Number in Kit	Description of Part
Foam Parts	
9	3mm Depron Parts
3	6mm Depron Parts
1	0.032" x 18" Wire
1	0.019" x 0.118" x 16" Carbon Spar
Bagged Parts	
1	1/16" Plywood Motor Mount
4	1/32" Plywood Motor Mount Parts
2	1/32" Plywood Control Horns
4	Motor Mount Screws

Electronics You Will Need

- 1 ea. 10 gram, 2000 KV Outrunner
- 1 ea. GWS 5x3 3-Blade Prop
- 2S-300 LiPo
- 1 ea. 6 Amp Brushless ESC
- 2 ea. 3.7 to 4 gram servos
- 1 ea. Lightweight (Berg4L, or similar) 4-channel RX
- 1 ea. 4 channel radio minimum (Elevon mixing capability recommended)

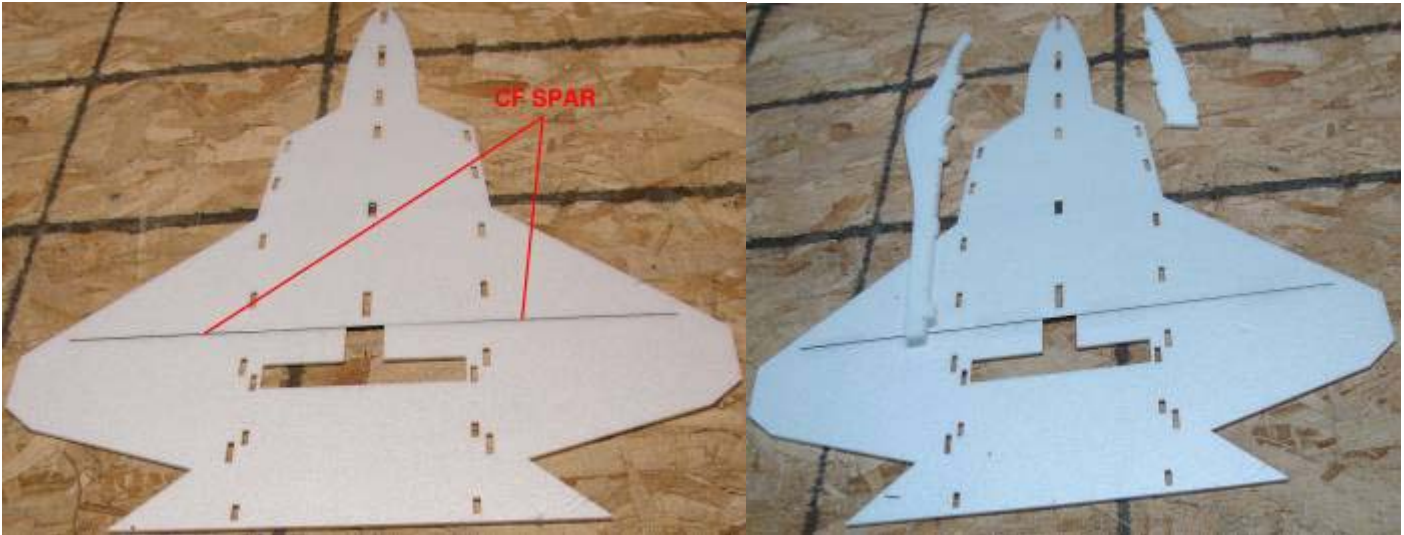
Building Materials You Will Need

- Smooth and flat work surface
- Wax paper or clear plastic wrap to protect the work surface
- Foam safe Cyanoacrylate (CA) glue and accelerator
- Hobby knife with #11 blades
- Needle nose pliers
- Wire cutters
- Screwdrivers
- Sanding block, 320 grit sandpaper

Assembly Instructions

Stage 1: Main Assembly

1. Place some plastic wrap below the wing, so you don't glue it to your table. Glue the carbon spar in place in the slot in the wing. Make sure you glue both sides of the spar to the foam.



2. Get the 6mm Depron fuselage parts, as shown in the above right image. Slide the fuselage top through the wing and the bottom into the wing, as shown below. Make sure they are fully installed, and glue in place with foam safe CA, or your foam glue of choice. You'll notice that the wing slants down slightly near the front of the plane. This gives better performance at lower speeds. Glue the 6mm fuselage rear part in place as shown below. Make sure all the fuselage parts are at 90 degrees to the wing.



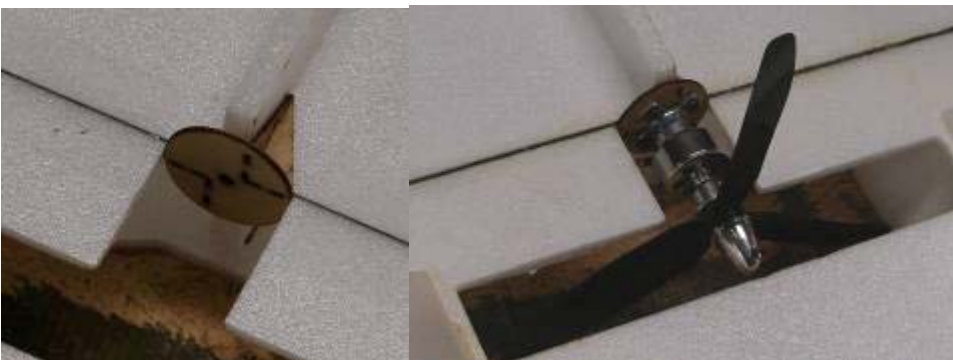
3. Glue the fuselage bottom and fuselage bottom sides in place, as shown below, after making sure all the parts are fully inserted into each other.



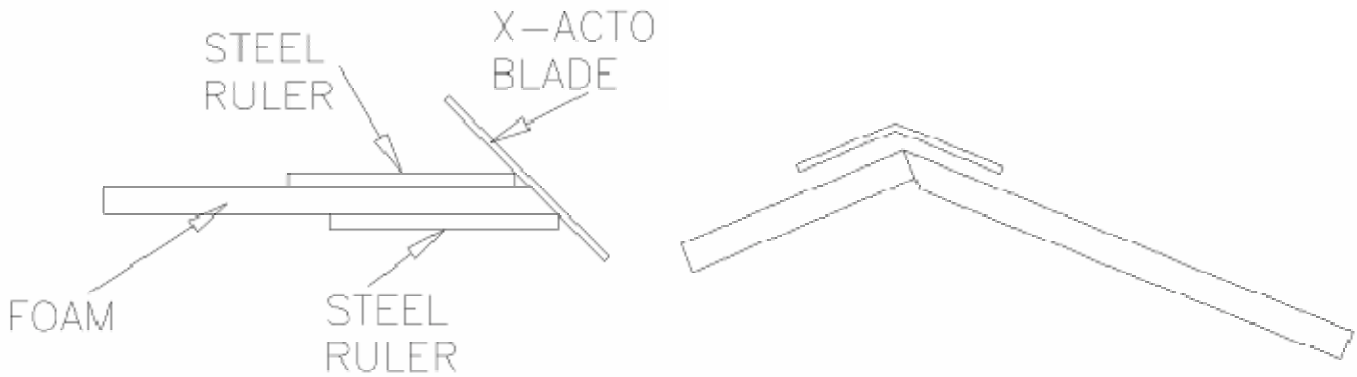
4. Glue the vertical fins in place, at a 60 degree angle to the wing top. (See the right image above) Hold them in place with tape, until the glue is cured. (Newer kits have angle gauges included)
5. Assemble the motor mount, as shown below. Glue the joints with thin CA. Be careful not to glue it to the table or your fingers!



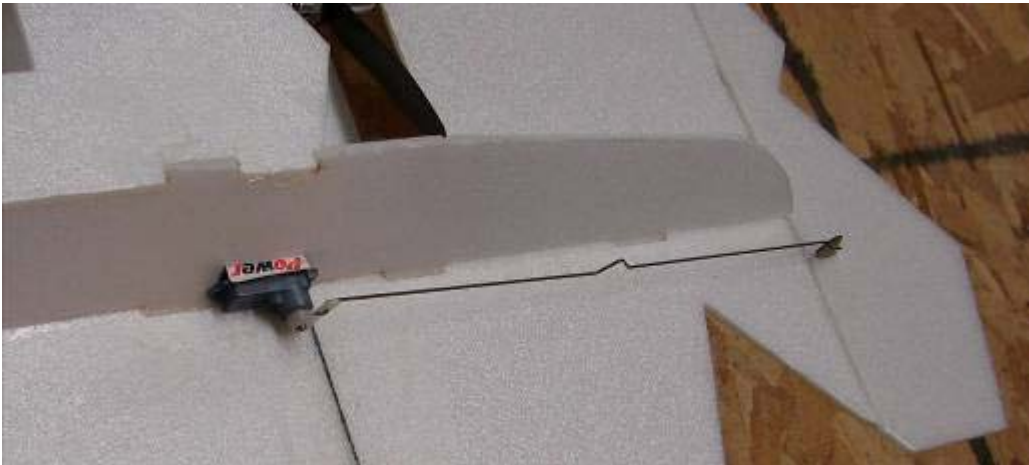
6. Mount the aluminum motor mount that came with your motor to the firewall with small #2 screws. Make sure you get it centered on the plywood motor mount. Glue the plywood motor mount in place on the fuselage, as shown below.



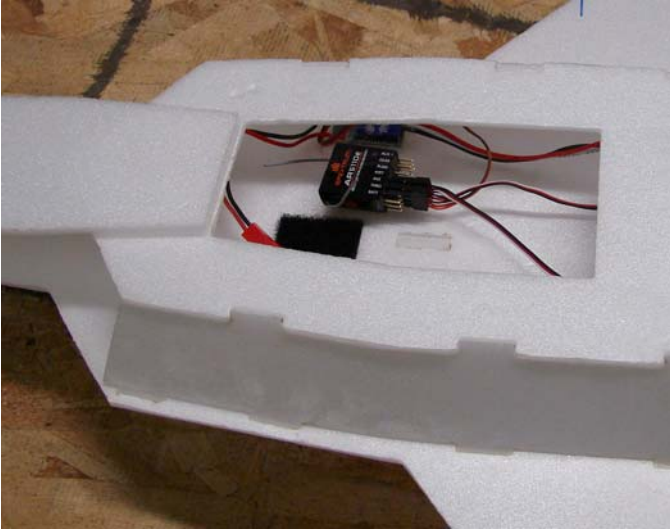
7. Cut a 45 degree bevel in the elevons. An easy way to do this is use a metal ruler, as shown below. Mount the ailevons onto the wing, using 3M Blendederm tape (or clear packing tape) on the top surface (as shown below). Hold the elevons at full deflection while applying the tape to make sure you have full travel on the elevons.



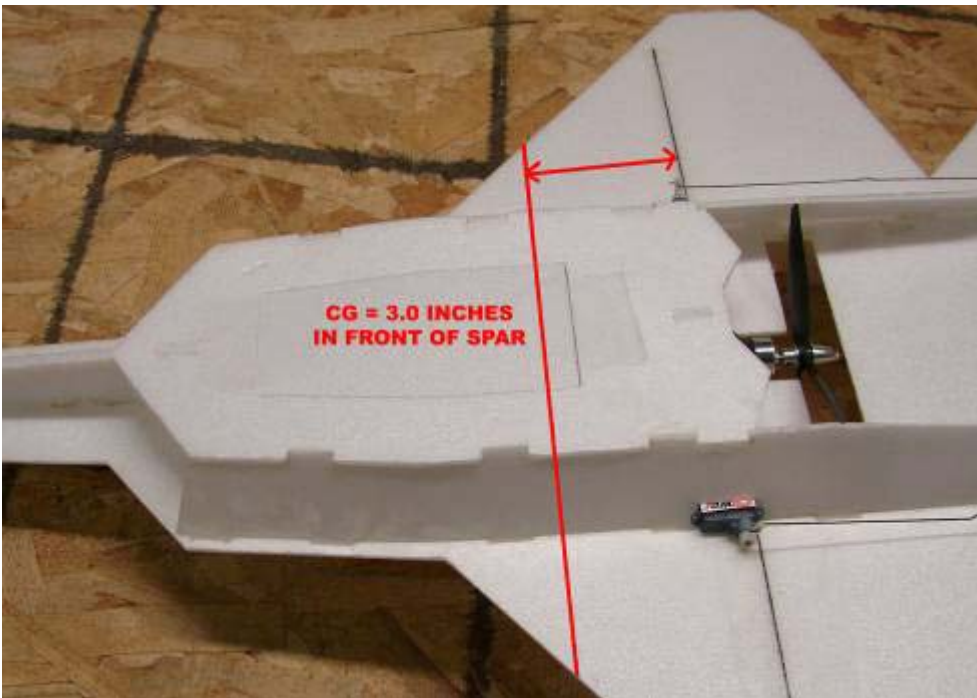
8. Cut openings for the servos, as shown in the images below. The servo should be just in front of the spar. Lightly glue the servos in place with foam safe CA.
9. Cut slots in the elevons for the control horns. The width of an X-Acto blade is enough. Cut the slot so the holes in the control horn are even with the hinge line. Glue the control horns in place.
10. Bend a Z-Bend in the end of the pushrod wire. Place a V-Bend in the wire, half way between the Z-Bend and where it would mount to the servo, as shown below. Hold the wire up to the servo horn and mark the wire where it will go through the horn. Place a Z-Bend there and cut off the extra wire. Repeat to make a pushrod for the other side. Bend the "V" in or out to shorten or lengthen the pushrod, as needed for the elevons to be flush with the wing.



11. Install your ESC and Receiver in the fuselage, as shown below. Mount them fairly far forward in the fuselage. Use Velcro or double sided tape. Secure the hatch in place with clear tape front and back. Fold over part of the tape on the back, so you can remove it easily when changing the battery.



12. Mount your battery where it is needed, to balance the plane at 3.0" in front of the carbon spar, as shown below.



13. Set the control throws for 22 degrees (1.0" each way) on high rates, and about 16 degrees (0.75" each way) on low rates. 50% to 60% expo in nice to have on high rates to smooth out the control near the center.
14. Launch your model by holding onto the fuselage top, just behind the cockpit area, giving it about $\frac{3}{4}$ power and lightly tossing it into the air. As with most jets, you will need a little power for full control in slow and high alpha flight. If control gets mushy, add a burst of power.