F3P model

'Disney'

The Disney is a new radical design for F3P. The Disney was developed in the winter of 2010/2011 and already from the first flights it made a good impression on the pilots and judges.

The Disney is a bit bigger and has got more wing- (and fuselage) area then most models but due to the light weight milled DepronAero parts the model can be build with a weight of 100-110 gram.

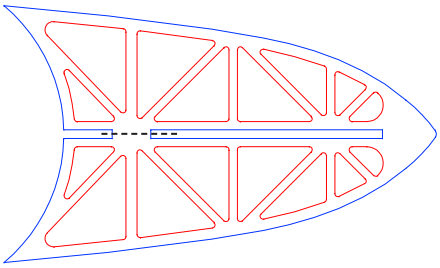
The low weight and large air brakes will allow for a very consistent flying speed.

Warning: Due to the milling the Disney is more fragile then a full-depron model. So it's intended for experienced flyers only!

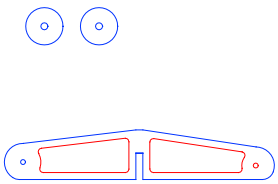
The production plane as shown in the picture is just a bit over 100 gram
The following equipment was used: JR-188 for ailerons, Dymond4.7 for Elevator and Rudder, Glavak 12gram motor, Glavak9 x 3.8 prop, YGE4, Hyperion 160mAh 2S, Spectrum AR6100

Parts List:

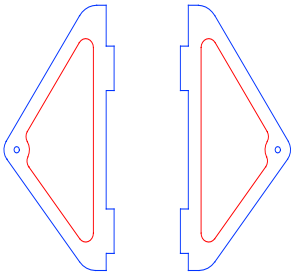
In the box you should have:
- wing centerpiece
- left & right aileron
- tail section
- elevator
- top & bottom fuselage
- rudder
- air brakes (see image)
- aileron support (see image)
- weel pants as weels
- landing gear support (see image)
- side force generatoes (see image)
- paint mask for canopy



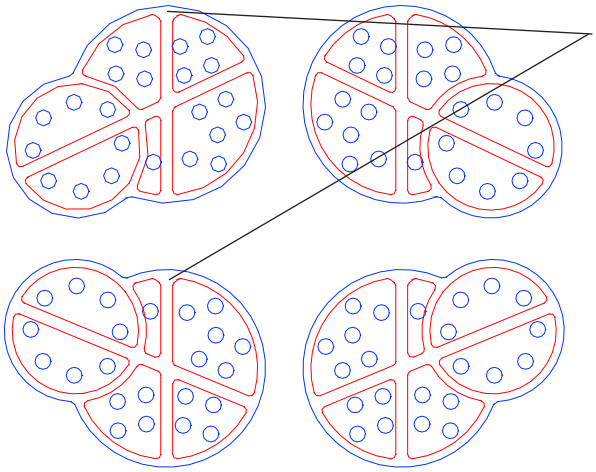
Side Force Generartor:
Please cut at the indicated line, then carefully slide over the wing, allign and glue



Landing gear re-enforcements:
The long piece goes at the bottom of the wing, pocket facing away from the wing. The circels go left and right on the bottom fuselage.



Aileron Support:
Glue at the bottom if the ailerons. Then use carbon rod as can be seen on the pictures on the website.



Airbrakes:
Please note the little 'top' indicator on the pieces. The pockets point to the rear of the plane.
make a undeep cut in the vertical bar so that the 0.7 vertical support is flush with the Depron.

See also the note on the airbrakes in the general building instructions.

more info and pictures at: http://foamtoair.f3ascore.com/

General building instructions for 'Disney'

Prepare:

- You will need a building area of about 80x90cm that is really flat. The most important alignment of the plane building will be build on top of this workbench
- at least one 90cm long very straight ruler is needed. Instead of a ruler also a aluminum profile can be used
- Use very sharp knives and change your blade often.
- Use belizel glue instead of CA for a very light plane. The belizel takes more time to dry but it will reduce up to 5 grams of your plane weight.

1. Use a fresh blade in your hobby knive, cut all the parts loose. Then use some fine sanding paper to completely remove all the tabs.

2. Glue the wing and tail section. Place some thin plastic or backing-paper on the workbench in the area where the glue joint will be made.
   Use a very thin layer of belizell on the joint, place the wing and tail section down, put another piece of plastic on top of the glue joint and then use the long ruler to make sure that all the center holes are alligned. Because the belizel foames up, it will fill any gaps between these two parts.

3. Look at the pictures, note where all the additional flat strip of carbon is inserted. Again, use a very sharp knive and make the cuts on these cutting sheets you can buy in office shops. For these carbon inserts, use slow setting foam safe CA. keep the depron parts flat on the building board (do not forget to place plastic or backing paper below each glue line)
   - Do not forget to put carbon strip at the aileron hinge line (on the wing).
   - Think about the way you will mount your motor. This is the moment to cut additional slots in your wing and fuselage parts.

4. If you want to do your painting, then do it now. You can use small needles to join the elevator and ailerons to the wing/tail section. The do the painting as you like it.
   Be carefull: Not all paint is useable on Depron. Also do not use to much paint (for weight) and build up the colors slowly or the depron might twist.

5. Cut 45 degree edges on the elevator and ailerons. Place the wing bottom down on the workbench. Place some small weights over the wing so it's really flat.
   Allign the ailerons to the wing, leave a very small gap between the wing and aileron and place some weights on the ailerons also.
   Use 'glasex' (or another grease remover) to clean the hinge area. Let this dry for some minutes
   Now use clear tape to tape down the ailerons. Then rub the tape down very well. Repeat for the elevator.

   Then fold the ailerons 180 degrees so they touch the top of the wing. Place small pieces of tape in the hinge line. Do this at the root, middle and tip of the aileron.
   Repeat for the elevator.

6. Now place down the wing top-down. Locate the landing gear brace location and the langing gear brace itself. Use belizel to glue this part in place
   In the same time, locate the aileron support triangles, glue these in place also.

7. When the aileron supports are dry, you can add the aileron bracing. Use 0.7x0.3 carbon tube. The bracing will really help to make the ailerons twist free.
   First glue the rods in the ailerons, but do not glue the other ends in the aileron support yet. After the glue has dried in the ailerons you can wiggle the aileron support a little and at some belizel. The belizel will foam up and fill the area.

8. On the lower part of the fuselage, locate the landing gear re-enforcements (circles) and glue them left and right on the fuselage.

9. Try fit the lower fuselage on the wing/tail. It helps to loosen up the gaps in the wing/tail part using some scrap pieces of Depron. Just slide the scrap pieces to these gaps to widen them slightly.

10. When the lower fuselage part is fitting nicely, use a very thin layer of belizel and glue the bottom part on to the wing/tail. Try to keep the glue out of the gaps as much as possible as this will cause problems when placing the top fuselage parts later on. make sure the fuselage bottom is 90 degrees square with the wing.

11. Cut two lengths of 25cm from the 1.5mm carbon tube. These will be used as landing gear. You can also use 2mm if you do not trust your landings skills to much.
    Take a good look at the langing gear brace. You will see that the small holes are offset slightly. One hole is further to the rear of the plane as the other.
    So when inserting the landing gear, make sure you cross them correctly. You will need to apply some force to get the landing gear angle up with the holes. This will compress the depron of the landing gear re-enforcements making an nice and strong glue area.

12. When the landing gear fits in the holes, use some belizel to firs. t glue the landinggear in the wing. When that is dry, you can move the fuselage left/right a bit while placing some belizel on the legs. Again make sure the fuselage is 90degrees square to the wing and let dry.

13. Now also the other wing bracing can be put in place. You can use 1mm carbon tube for the wings and 0.7 carbon tube for the rear of the fuselage bracing. Work slow, take enough time to align and let the glue set completely.

14. When everything is dry you can pick up your Disney from the building board and put it on it's landing gear.

15. Next steps are to add aileron control (servo, horns etc) please use the method of your liking. Take a look at the pictures where the RC-equipment is used.

16. The test production model uses a 12 gram motor , 1 gram controller and 9 gram battery. If your planed motor,controller,lipo is heavier then you can move the servo's a bit further to the rear.

Recomended CG to start with is 235mm from the nose of the plane.

Remark about using the AirBrakes:

You do not need to add the airbrakes to the model. Only of you really want to fly F3P the airbrakes are usefull to slow down the Disney on the downlines. However this braking power comes also with a price. In normal and climbing flight you will have to overcome the brakes air resistance also, this will cost power and reduces flying time.
So you might want to make your first flights without the AirBrakes and add them later on.

Have fun building an flying your Disney

more info and pictures at: http://foamtoair.f3ascore.com/