

## **100" 1940's Jasco Sailwing RC Scratch build**

<http://www.rcgroups.com/forums/showthread.php?t=2101011>

I have started to build a Jasco Sailwing. There is nothing on the internet about this very exotic model apart from good copies of the building plan, and 2 very unclear pictures of somebody who actually built the model in a 100" version.

I am currently having a detailed building thread on a Dutch website, but I would like to share my experiences of building this glider to a larger public, so hopefully, it will challenge other people to build one as well. So, don't bother my poor english as I am translating it from the Dutch thread and don't want to spend too much time on it. Will improve it later on, don't worry.

I've been looking since a long time at this flying wing glider that dates back from the 40s, designed by Mr. Frank Zaic himself . As said, there is little to nothing to be found on models built. Good copies of the drawings plans are available fortunately.

The original has a span of 50 inches , about 125 cm . I wanted to scale-up the design, however, it must also be practical and feasible . Scaling up to 100 inches or more would give a beautiful model, but let's not get overconfident and keep it to 100 inches . Probably I also can keep the strip wood up to a maximum of 1 meter or so.

There are a few things to consider:

- In the original, the wing consists of one whole, at 250 cm this is impractical . So I have to think of a construction to split the wing in 2 halves.

- In the original, the fuselage is, as you may want to call it , only 3 flat plates in the shape of a drop. However, I have to place my RC equipment somewhere. The 2 aileron servo's may be placed in the wing tips themselves, so, no problem for them. The receiver and battery may be places in the wings themselves, but I am thinking of a hollow fuselage in a drop shape to replace the flat one.

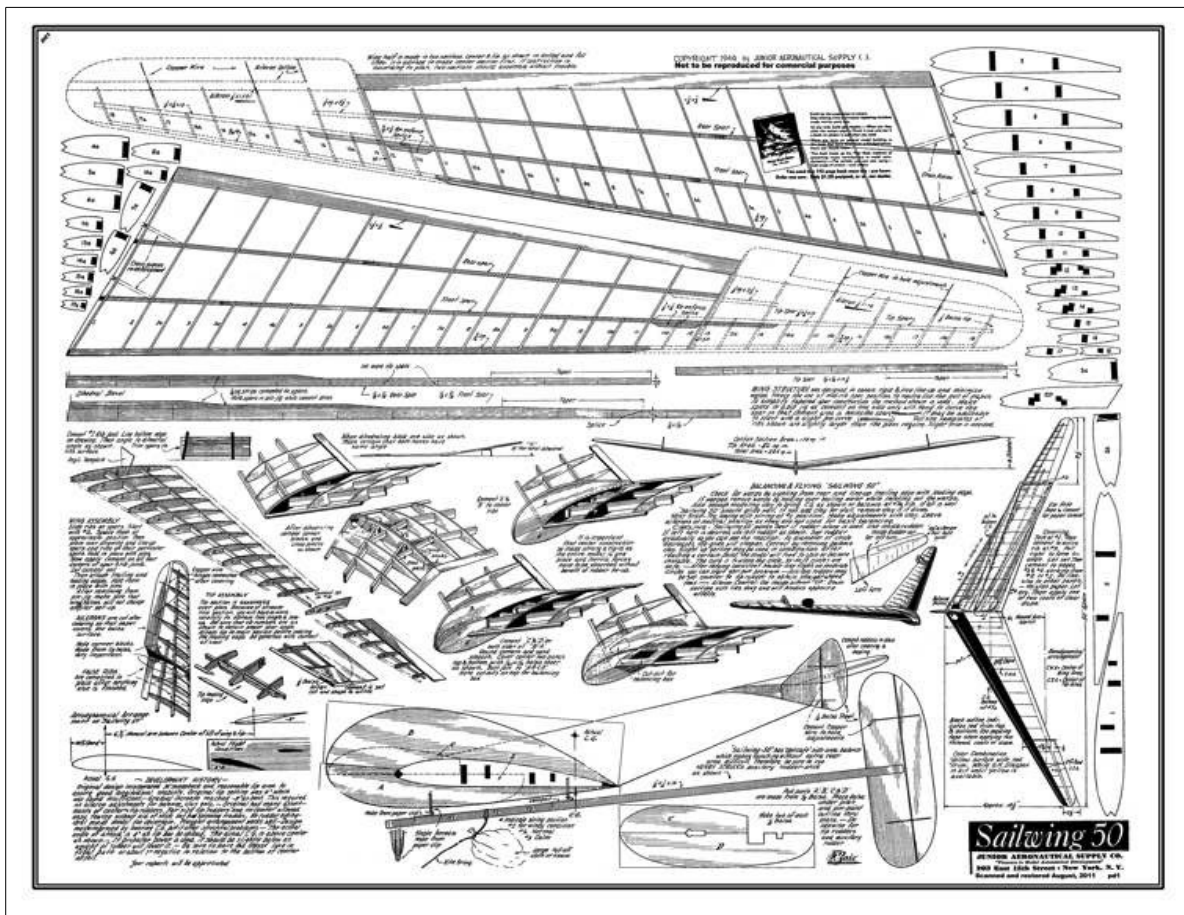
- Then scaling-up , will the height / length ratio of the air foil still be okay ? I think so, so nothing to worry about there?

- I need to combine my elevator function with the ailerons , but I think that should be on my DX6i no problem.

If you study the model , you can see that the wing tips are positioned at an angle of -8 degrees relative to the main wing. This causes an angle of attack on the main wing, same like a stabiliser does. Furthermore, there are two vertical stabilisers to reduce lateral sliding (slip). The air foil is "plane convex " not " reflex " as with most other wing gliders

The model seems (because of the air foil?) to be quite fast but my feeling says that it will also probably respond fast to steering actions. So good balancing therefore might be very crucial.

And now the pictures :

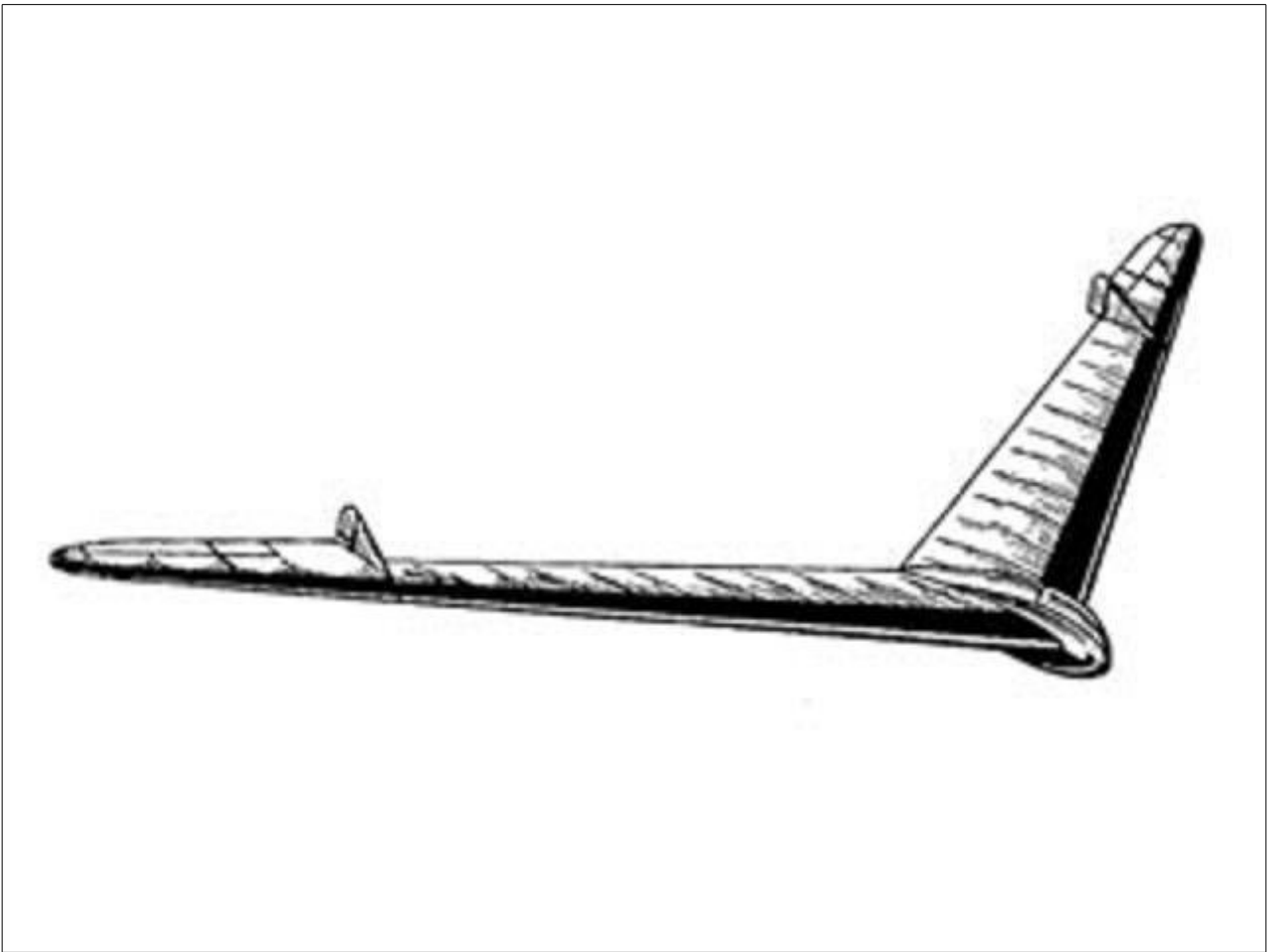


Reduced drawing. On the plan are many notes from Frank Zaic to be found. Also feedback from builders is appreciated it says.



Majority of models in all events were conventional. One exception was this fine flying wing towline glider by Harry Robertson, Phoenix

Not the original Jasco sailwing , but a similar design from the same period I think. The person seemed to become a appreciated aircraft engineer later: <http://nationalaviation.org/robertson-s-harry/>



A sketch of the model where the impression of a 3D fuselage is given.

So, I have scaled up the plan to 200% (page size 181.4cm x 144.07cm) using a very useful website: <http://createpdf.neevia.com/pdfresize/>. I went to a local print shop, but could only be printed in 4 parts. Not such a problem at all.

Well, then just take a good look at it with a cup of coffee how we are going to tackle this project

I don't like the spars going through the middle of the wing ribs as it will be very difficult to get them aligned correctly and precisely, especially when you have to cut them all by hand. I have some other ideas, but that will come later. But we'll see, otherwise there is no challenge.

The oval shape of the fuselage seems very high in relation to the rest of the model, do not know how the body in my model will eventually look like. I think a drop-shaped hollow fuselage might be very nice.