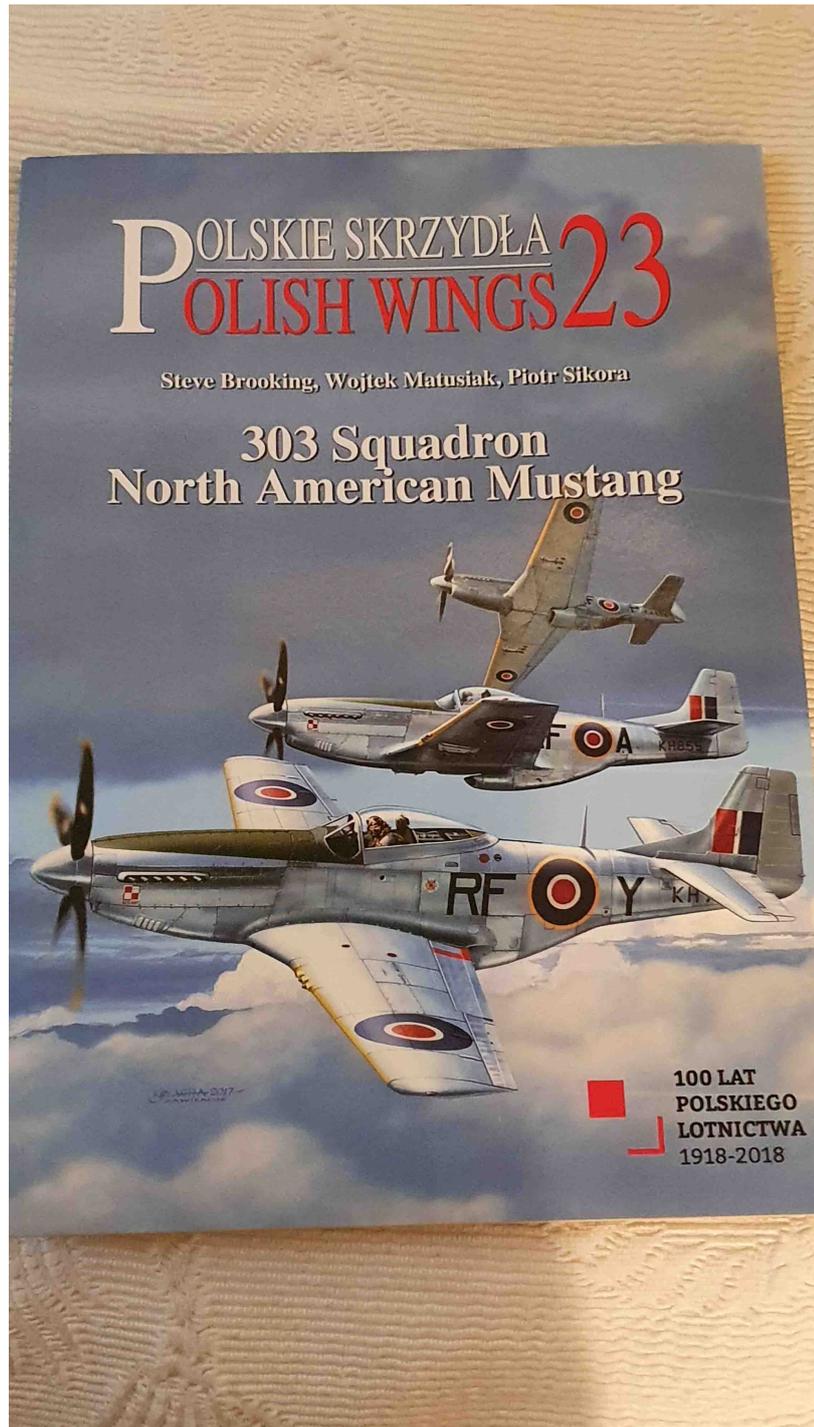


Mustang Build 1 - by Peter Jenkins

In a moment of weakness, I bought an unstarted TopFlite P51D Mustang 18 months ago. The lockdown gave me an ideal opportunity to get it out and build it. In the intervening time, I also bought a used OS 120 FS which seems to have good compression but has yet to run and then went ahead and splashed out on a set of Robart electric retractors for the Mustang! I wanted to have operating main doors on the Mustang and Ron Gray came to the rescue by pointing me at Hobby King who make an ideal door and undercarriage sequencer at a very reasonable price.

That left the issue of what identity to give the Mustang. I have always felt that the Polish pilots who flew fighters in the RAF, albeit under the control of the Polish Government in Exile, have never really been recognised for their contribution to the war effort. Turned out that 303 Sqn, the most famous of the Polish/RAF squadrons, had operated P51 Ds or rather P51Ks (the K was built in Dallas rather than in Inglewood, California, and the only difference was that it had an Aeroprop prop rather than a Hamilton Standard one.). In the RAF, this was called the Mustang IV. The Sqn re-equipped with Mustang IVs in April 1945 and the finish was plain metal with an olive drab glare panel running from the cockpit to the spinner rather than the standard day fighter scheme on RAF fighters. So, I decided to finish the aircraft as the Sqn Cdr's aircraft – RF D with a tail number of KM112.



So, just to show that I'm not pulling a fast one, here's the photo of the kit right before I started building operations on the 27th March 2020.



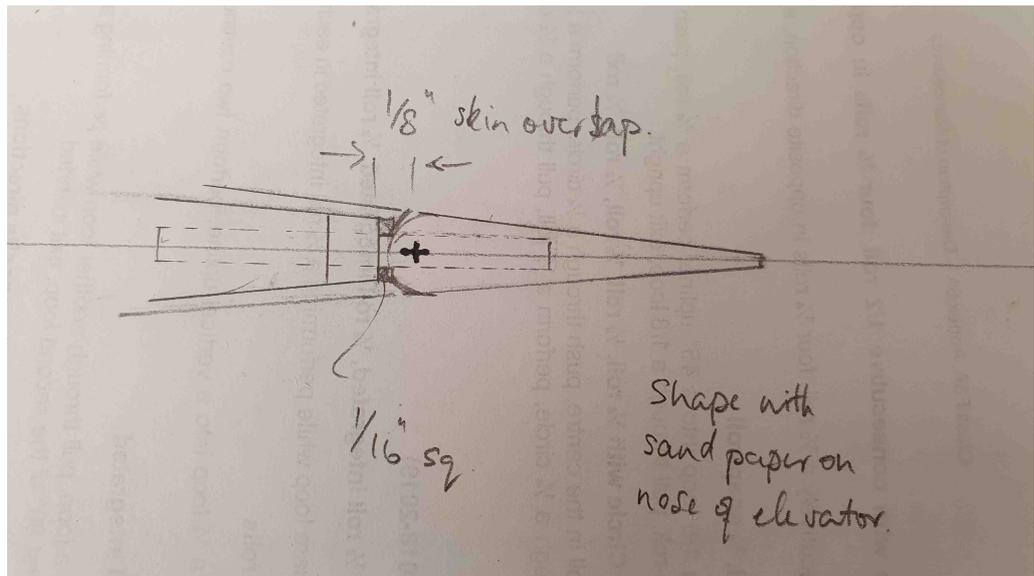
This is a Gold Edition kit but I'm not sure what that means. I did find the die cutting was to a high standard with a little persuasion only needed occasionally to pop out the parts. I decided to extract all the parts, identify and label them and thus check that I did indeed have a full kit of parts! That took me something like 3½ hours!



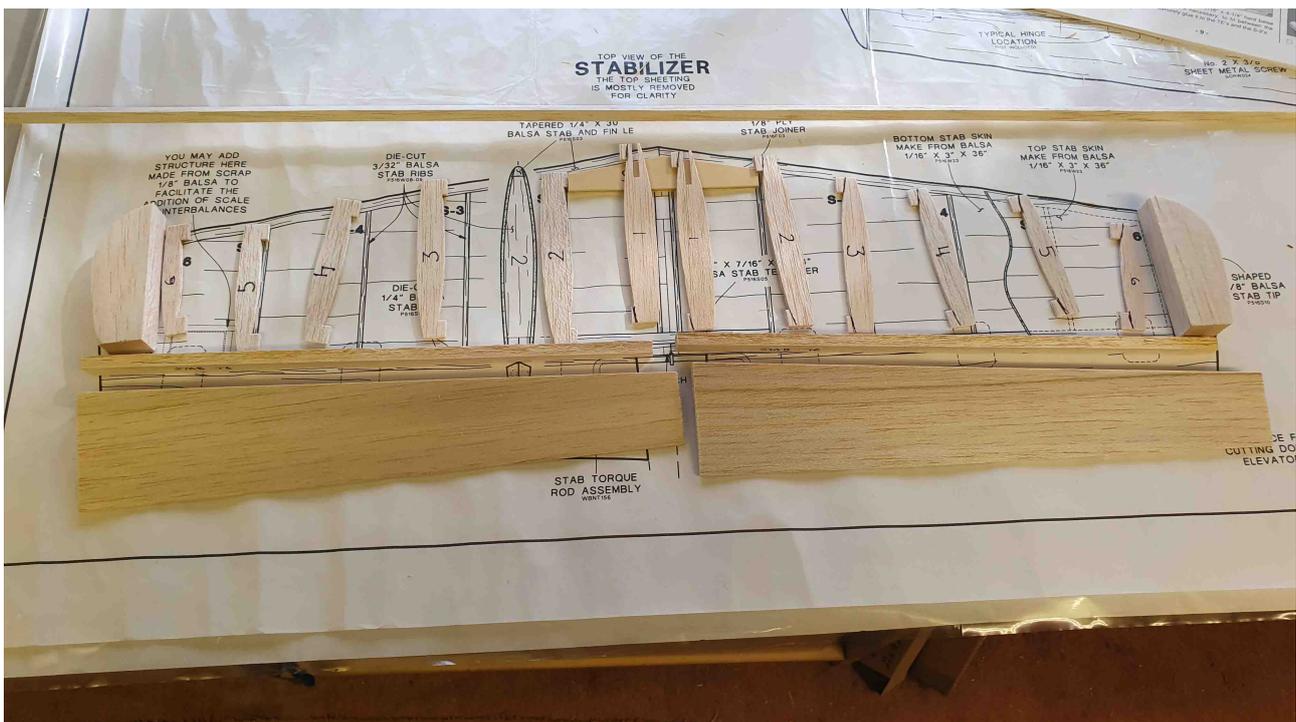
The manual calls for the Tailplane to be built first, so that's where I started. Now, there are some key features to the Mustang that I think are essential if you are to have a model that looks like the real thing – at least from a distance! They are:

- Fully retracting undercarriage – that means inner main doors that work (on extension, open to allow the wheels out and then close and the same on retraction), as well as a retracting tailwheel and doors.
- Balance tabs on the elevator and rudder
- Control surface hinges that are low drag – this requires a round nose to the control surface that is faired into the wing/tail structure – and not just a standard V hinge.

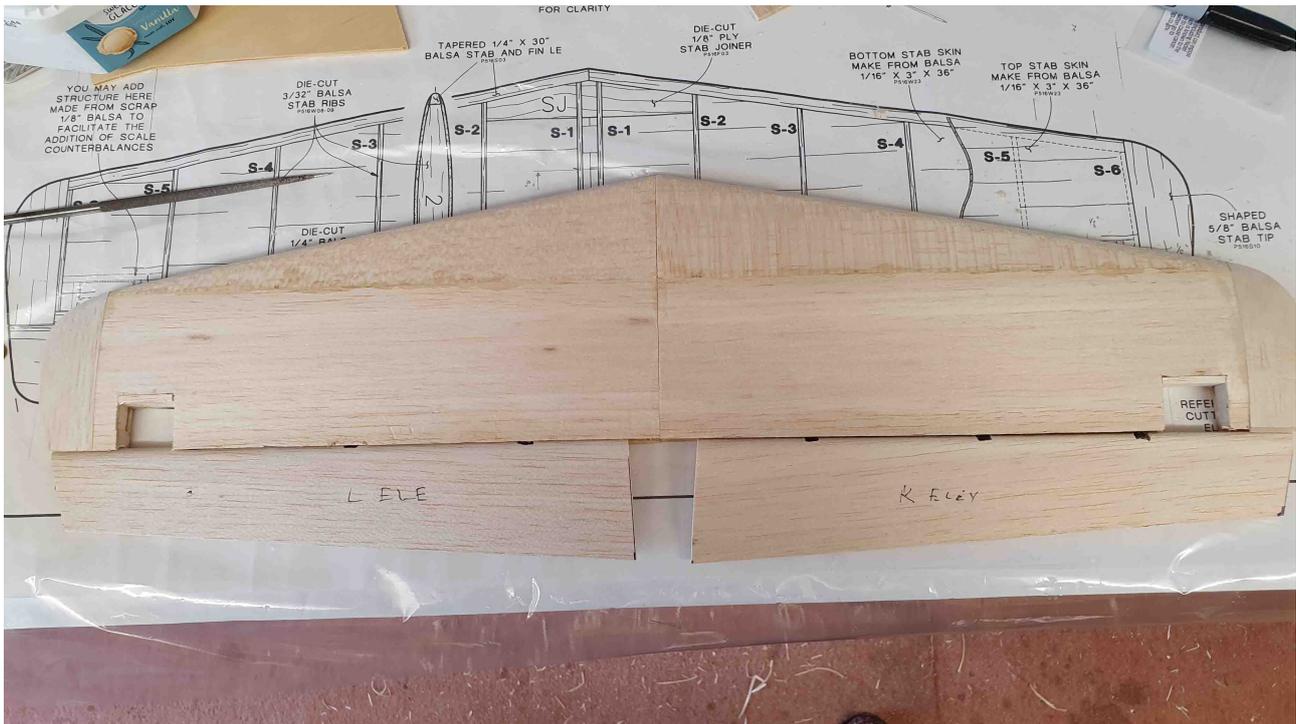
There are clearly other things that you might wish to include but to me these were the main visible features that just have to be there. So, this is what I designed for the hinging using Robart pin hinges.



So, here's the tailplane and elevators laid out before I started applying the glue.

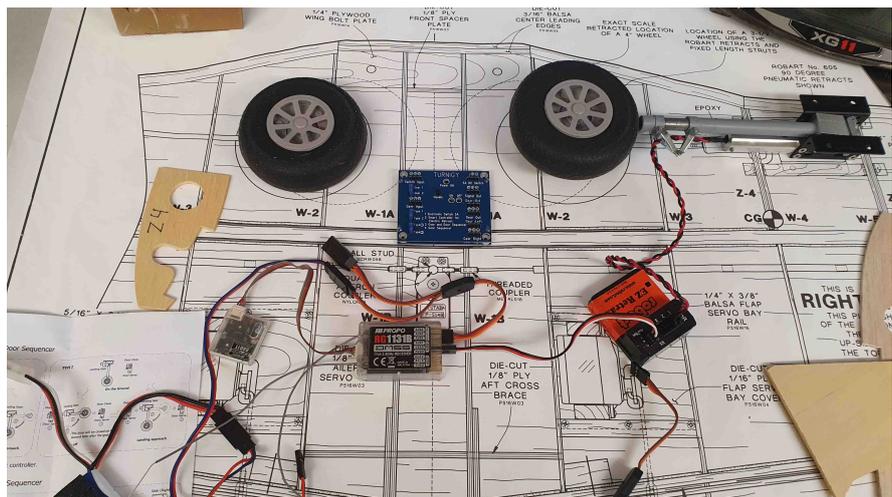


And here's the almost complete tailplane with elevators dry hinged in position. Note the cut out for the balance tab which is still to be fitted to the elevators.



The instructions then call for the fin and rudder to be constructed but as they are on the 2nd sheet of drawings, I decided to build the wing next as I just had to turn over the sheet I was working on for the wing plan. Before starting the wing, I needed to get my head around how the various parts of the retracting main undercarriage would work. Take a look at the photo below.

The first thing is that the proper size for a mainwheel on a 1/7 scale aircraft is 4 inches. Robart retract "oleos" only have space for a 3 1/4 inch mainwheel so the plan shows the position of a 4 inch and 3 1/2 wheel but not a 3 1/4 in wheel! However, the main thing is to line up the retract pivot point with the plan to get the scale undercarriage position when the gear is down. The 4 inch wheel position (shown by the dotted line) is useful for constructing scale like inner gear doors.

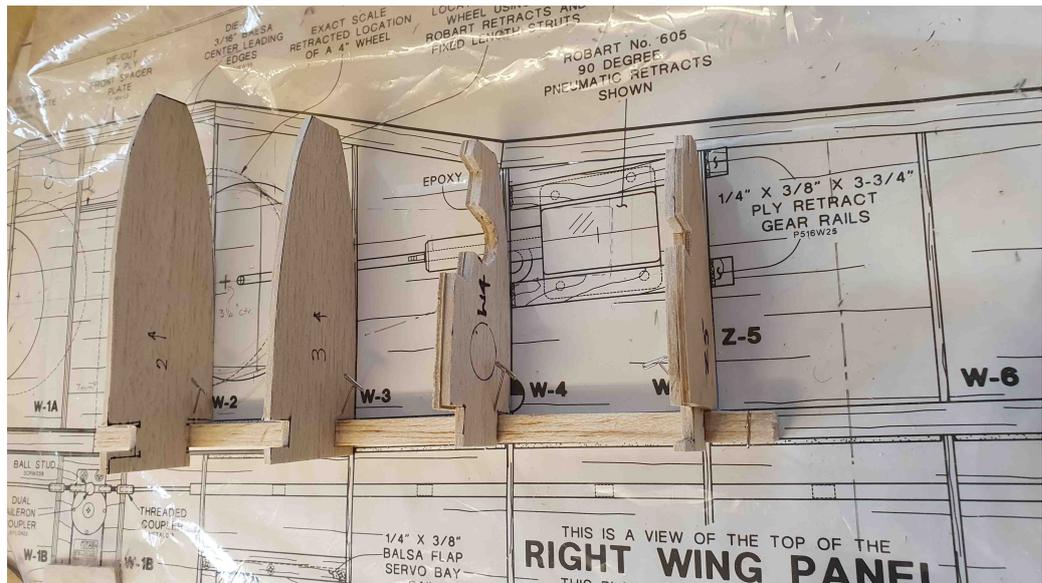


The square blue gizmo between the wheels in the photo is the Hobby King gear and door sequencing controller. The Robart EZ Retract controller has to be used to power and control the retracts. So, after a little pondering, it looked like the solution was to have a Y

lead coming out of the Gear plug on the Rx and connecting the HK sequencer to one lead and connecting the inner door servos to that controller and the other lead going to the Robart controller to move the gear. Both controllers have provision for a separate power supply for which I think I will use a pair of switched 2S LiFe cells of 1500 mah capacity.

The inner gear doors are hinged very close to the wing centre line so that will need some structure there to support them and wing ribs W1A, W2 and W3 will all need some surgery to allow the wheel to retract. I will be building structure close to the inner doors closed position to add strength to the wing as the wing sheeting will need to be removed to cater for the doors.

So, to make sure that the solution I was proposing would work, I decided to build a dummy wing structure to check on door construction and operation with the main gear and it's attached door.



So this photo shows my mock up in construction. I've decided not to cover the top and bottom with 1/16 inch skin so the completed structure, still drying out, is below.

