

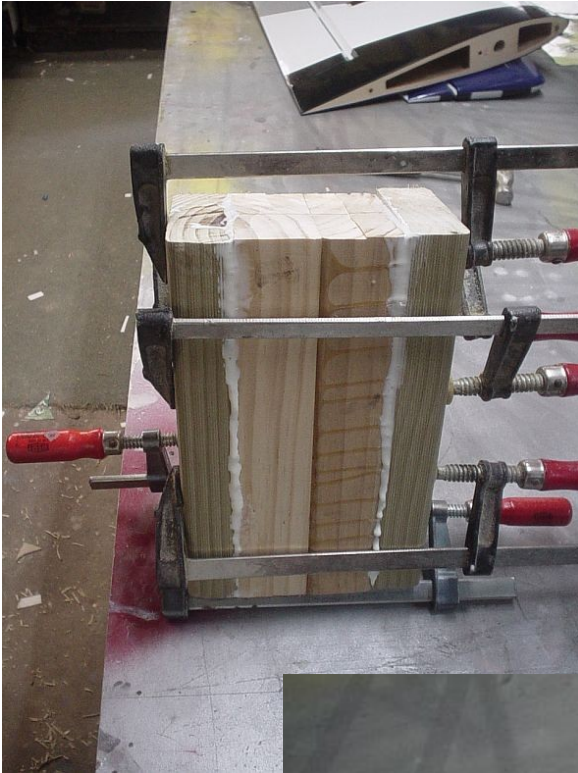
Building a Vailly Aviation Hawker Hurricane....Instalment 11



Canopy and Cockpit Detail

All this building and painting is drawing to a close, it's taken 11 months to get to where we are now and I will soon run out of excuses not to fly the thing but first, canopy and cockpit detail.

The canopy as supplied has non scale, very heavy framing detail so I will cut the back of the canopy off and replace it with a plain moulding with a more scale frame fitted over. I'll cut it on the join line behind the windscreen. While I'm at it I will cut out the front windscreen glass and replace it with a 1.5mm thick **PETG** version to simulate the bullet proof glass fitted to the full size.



I am going to vac form the rear sliding part of the canopy and frame and will need a male plug to do so. The sliding part of the Hurricane canopy is nice and simple in that it has parallel sides and a constant cross section.

The plug is a couple of pieces of low tech **Bun-nings** pine, shaped to form and size then fiber-glassed with 2oz cloth, sprayed with primer and sanded for a glass finish. The plug must be over-size in length and height to enable trimming to the exact size when fitting the canopy and frame to the model.

From the photo you can see I have made up a block from scrap pieces of pine which I will plane down to a reasonably accurate cube.

A reference line is drawn down the centre of the block and cross sections are drawn on both ends. The wood block is now planed down to the shape of the end cross sections and the top radius is shaped with the linisher belt sander.



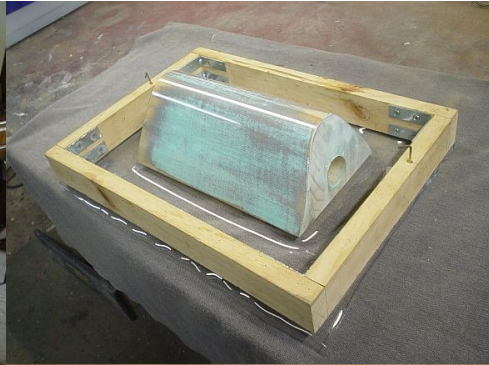
This is the shaped plug with 2oz glass applied.

Note that I have packed the mould off the bench by about 12mm to ensure I don't get a radius along the long edges where the **PETG** sheet would contact the perforated board in the vac former without the spacer.



The above photos are of my hi-tech vac forming box consisting of 1 x **Bunnings** plastic storage box with a piece of perforated masonite screwed and glued to the rim, a seal of 25mm wide sponge rubber strip around the edge, a pipe for the vacuum hose glued and screwed to the outside of the box and a pine frame that will have the **PETG** sheet stapled to it. The vacuum is supplied by a \$50, very second hand vacuum cleaner from **Godfreys**.

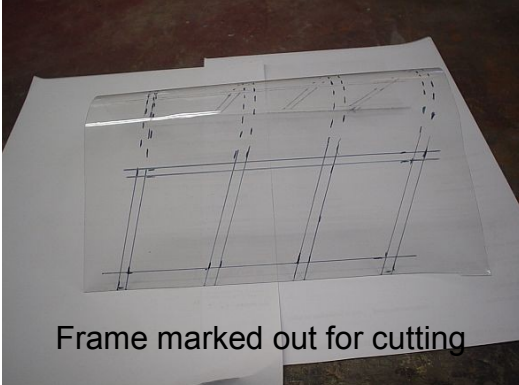
The idea is that I will staple a sheet of 1.2mm thick **PETG** to the vac form box frame then put the frame into an ordinary domestic oven preheated to 190 degrees centigrade for about 2 mins. When the sheet is seen to sag on the frame the frame is removed from the oven, positioned above the plug, pushed down until I have got a seal around the edge then the vacuum is applied. When it has cooled I will cut away the vac frame leaving the formed canopy on the plug. I will then staple the 0.5mm **PETG** sheet to the vac frame and repeat all the above forming another canopy over the 1.2mm one still on the plug. This is the one that I will mark out with the canopy frame design and cut out to form a sharp frame skeleton to be glued to the main canopy after painting. I will use the same sheet **PETG** that I used in Instalment 7 to make wing nav light covers. You can get this stuff from **Mulford Plastics** in Silverwater



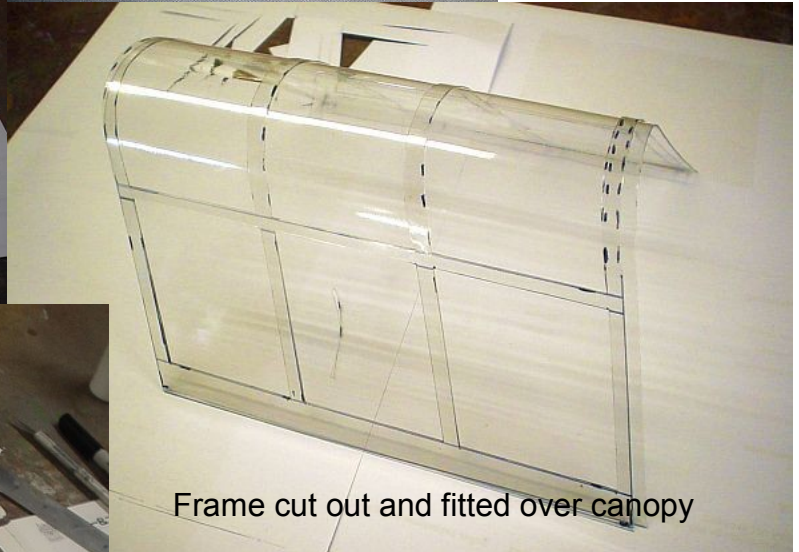
First moulding is 1.2mm thick, second moulding over the first is 0.5mm thick. This is the piece that is cut out into a frame.



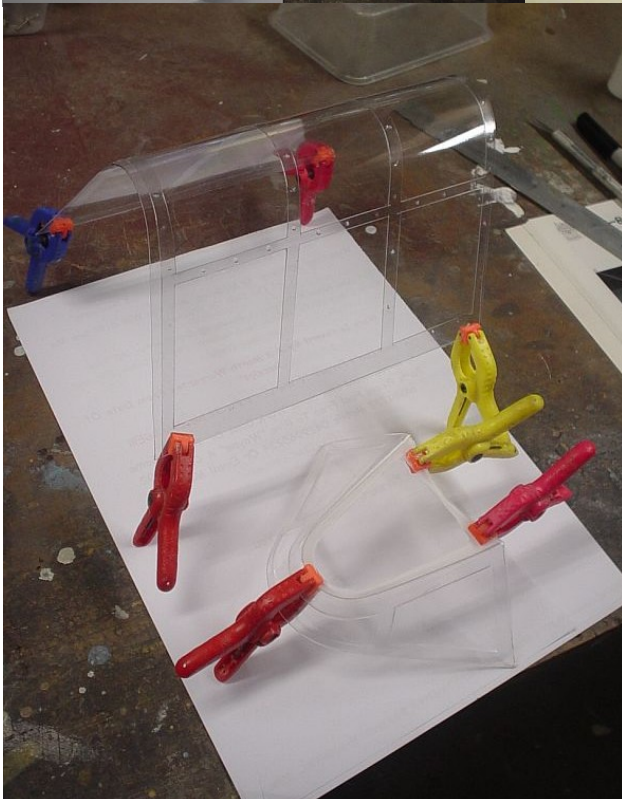
Basic shape off the plug. One will be 1.2mm thick and will form the main part of the canopy and the other 0.5mm thick one will be cut into the frame to go over the first.



Frame marked out for cutting



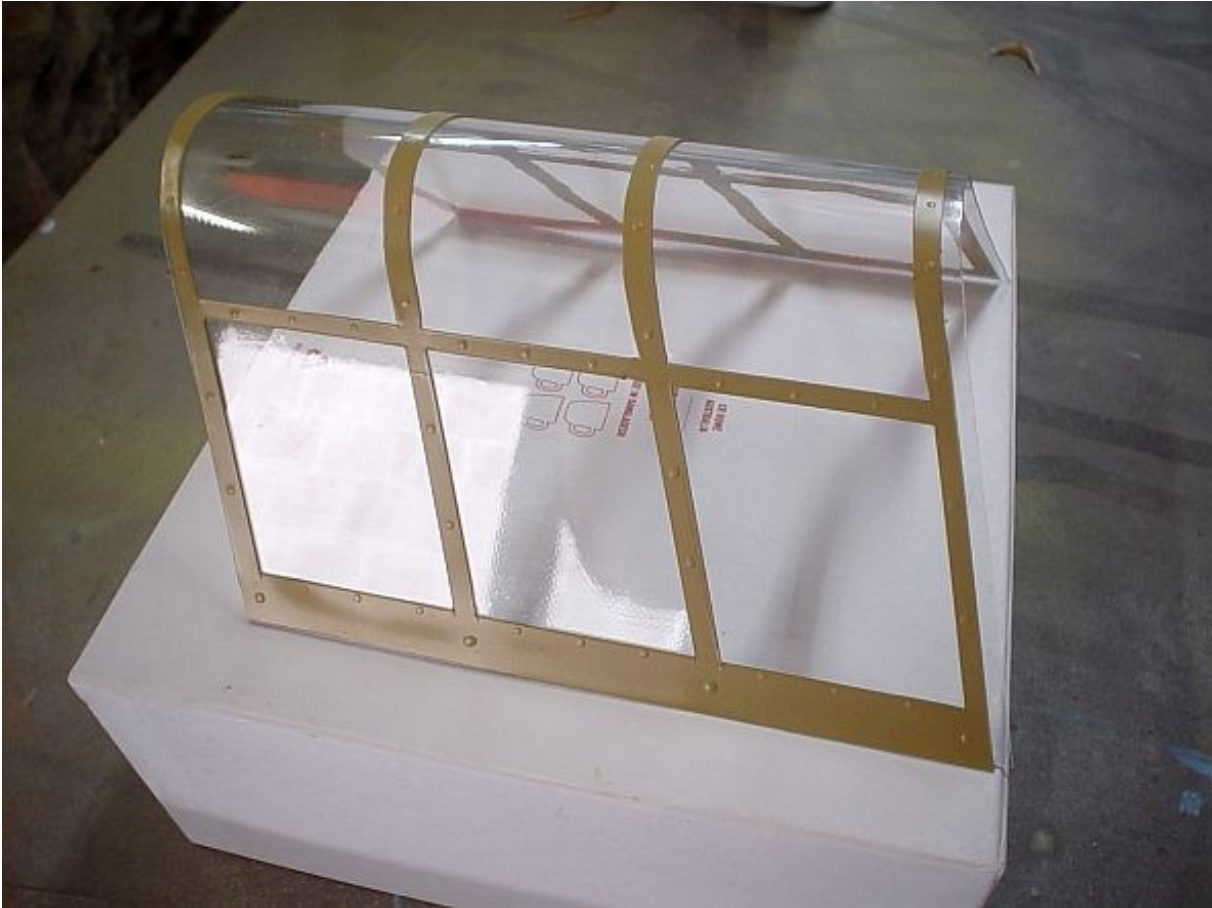
Frame cut out and fitted over canopy



Finished sliding rear canopy with frame. PVA rivets applied.

Windscreen with 1.5mm front glazing.

Frames to be painted with Mid Stone.





Pilot:

On the left is a picture of a **Valleyaviation** 1/5th scale pilot as supplied, its made from a flexible rubber and is nice and light.

I have glued him all together in the pose that I want and enlisted the aid of **Sue Kallas**, an artist friend of mine to paint him. I have used a life jacket, goggles and an oxygen mask from a previous project to dress him up and I think he looks pretty bloody good. He's sitting on



a chair made from 0.6mm ply wrapped around a 12mm balsa seat sprayed silver.

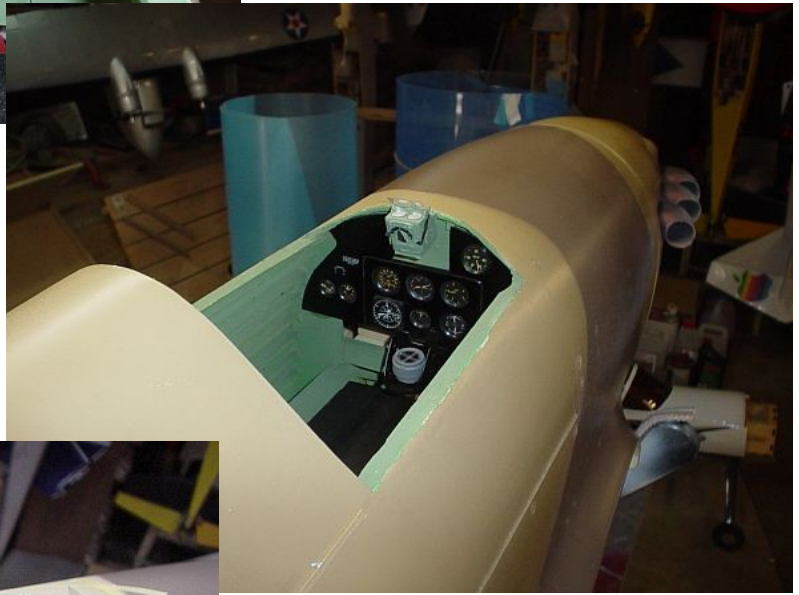
Instrument Panel:



The instrument panel for the Hurricane is a pretty basic unit. I bought a set of WW2 British instruments from **inZpan**, I think they are in the Czech Republic www.inzpan.com and mounted them on a painted 0.6mm ply panel. **inZpan** make a great 1/5th scale gun sight and mag-



netic compass that I couldn't resist so they were purchased as well.





Weathering:

Weathering is the black art of making a plane look used and not shiny and new as if it has just rolled off the production line. It's an application of grime to the flying surfaces and fuselage to replicate, in this case, how the plane looked when parked in its blast pen in Malta in 1942-43.

There are a couple of ways to do this but which ever way you use, **less is best.**



This P40 (long ago gone to god), was before my last one, (also gone to god), and is an example of too much weathering, the aircraft looks just plain dirty

The idea is to replicate engine oil leaks, gun blasts and exhaust grime streaks caused by the airflow over the surfaces, to replicate the fading caused by the plane just sitting in the sun and replicate scratches on the paint work on the various hatches and panels caused by the maintenance crew and the pilot getting in and out of the cockpit.

The streaks can be applied by spraying the surfaces with a dirty brown / black mist and then wiping nearly all of it off with a thinners soaked rag. The wiping is done in the direction of the airflow on all flying surfaces and from top to bottom on the fuselage. A very small amount of this overspray will remain on the rivet heads, hatches and in the panel line trenches thereby highlighting the detail on your model.

I have an aversion to paint and use a different method which I find easier to increase or decrease the effects. I make up a rag pad and cover the rag pad face with brown and black artist chalk. I wipe this dirty rag over the surfaces in the directions as per the paint method to get the same effect. I find this method easier to control and if and when I stuff it up I can wash it all off with soapy water and start again, both methods need practice to get right. The paint method needs a better base surface finish to start with as the thinned paint in the wiping rag will penetrate any surface irregularity.

Less is best, this is a subtle process which is easy to overdo and then spoil the overall impact when viewing the completed model.



Fighter aircraft were relatively well maintained with a group of guys allocated to each aircraft to look after it. The dirtier it was the slower it flew and a pilot of the time would not have liked that at all.



The exhaust stubs were sprayed flat black first then airbrushed with rust colour and finished off with a grey to suggest hot exhaust gasses. The grey was extended along the fuselage for a short distance as well.



Weathering is something you will fiddle with, add to and improve for the rest of the life of the model, just be careful you don't overdo it

Now the entire model is sprayed with a matt clear acrylic lacquer to seal the detail and protect the decals and that's about it.

Next and last instalment will cover balancing, engine run in and tuning and, at last, flying the thing...Cheers and beers, Stan