1960's STYLE HYDROPLANE.

By Nige Dale.

INTRODUCTION.

Quite often in life, you end up doing something that you didn't really intend doing, or what you intended to do as a small distraction, became a larger project.

Tracing back through the events of the previous four years, I identified the starting point of this project at a time when I purchased a copy of, Models Boats, December issue, 1970, advertising and containing a "free inside; full size plans for a 27 in. three point radio control Hydroplane"; purchased from a second hand book shop. Sometimes from your library of things about boats emerges a project, and this is one of those projects. So four years on and still not finished, sound familiar?

The drawings in themselves were quite simple in the presentation, on tissue to be glued onto plywood then cut out. The drawings were constructed by Vic Smeed, and the title of the drawing is "Zing-Ray". From the drawings within the magazine, I had photo copies made on A3, and stuck them together with tape.

After leaving the photocopies untouched for a couple of years (4), (filed away safely), the relevance and knowledge of their existence fades until the day you find them again when tidying up your library on a rainy afternoon. Having finished the previous boat project as far as I could. I looked at the Zing-Ray drawings one day, and pondered, what would it entail, to put them into CAD Design? Obviously there would be similarities between the Vic Smeed drawings and the CAD repro's, but I would not set out to do an exact copy of the original, due to the limitations of the design package, (and me) that would be used.

In constructing the sections on CAD it indicated to me that I would have to make some changes. Computers are very useful, but they have limitations, usually compounded by the limitations of the operator. So the CAD developments had to encompass my limitations in conjunction with the limitations of the CAD package I was using.

It became obvious quite quickly that the CAD package I had, and my capabilities, required me to remove the fluid curves of the Vic Smeed design, and replace them with straight lines. This will make the model more angular in design, not necessarily a bad thing as it will make the model look more contemporary in shape. Possibly.

The development of the drawings reflected the limitations of the CAD package and the and me combination. But will allow the parts to be cut with non-specialized saws like a Coping saw and a Tenon saw. The original design by Mr. Vic Smeed was called "Zing-Ray" which may rekindle memories of a children's programme of the 1960's of a similar name, with a cast of puppets, and a boat. But for this reconfiguration I have taken the title "Interceptor" for no other reason than to be different to the original.

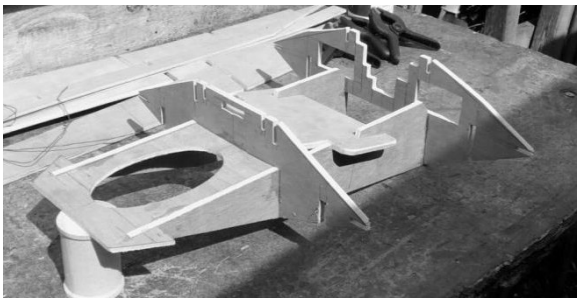
THE INTERCEPTOR BUILD.

The parts for the construction of the boat were cut, and a plan of action for the assembly was considered. Alignment Jigs were made to keep the frame as straight as possible and to assist in the frame assembly. The parts were assembled a few pieces at a time, and these few parts at a time assemblies, are noted here as stages.

STAGE 1.

Stage 1 assembly is quite straight forward. Using clamps, alignment jig and masking tape, the first frame sections were glued together.

Fig 1.



STAGE 2.

Before starting the assembly of Stage 2, checks needed to be made of the paired parts that are part of this stage of the build. In particular the alignment of the slots which allow the frame work to remain square, and the ends of these sections onto which the ends of the boat parts are fixed. Once these criteria are confirmed, then the periphery alignment can be checked.

Once all the paired parts are checked for conformity, then the stage 2 assembly may proceed. Put together the assembly dry (without glue) and hold in place with wire/ tape, and or clamps, and review the assembly and ensure that it all fits before gluing it together.

Fig 2

Fig 2, indicates the assembly is held in position whilst the glue sets, by use of the jig, clamps, elastic bands, and tape.

STAGE 3.

Stage 3, is a relatively simple process as most of the preparation work has been done with checking the paired parts for conformity, and the use of the build jig for alignment.

Fig 3.

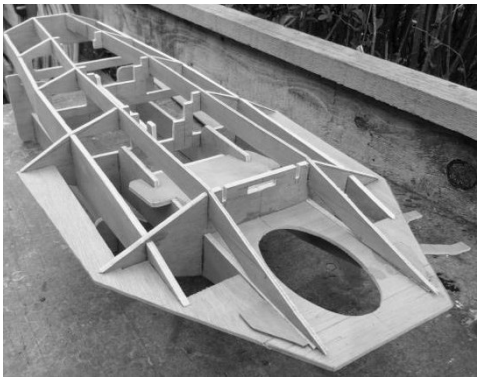
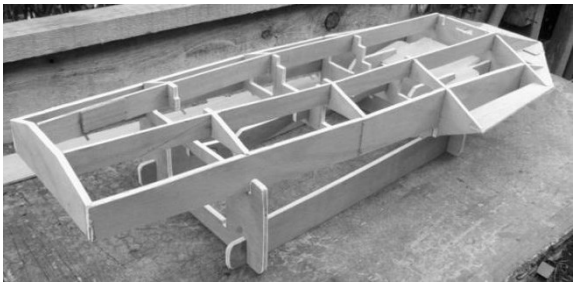


Fig 4, shows that the stand has been made and now supporting the boat.

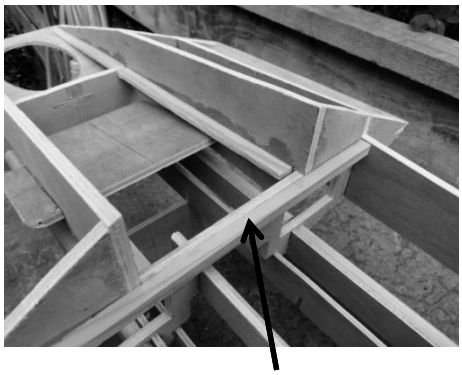
Fig 4.



STAGE 4.

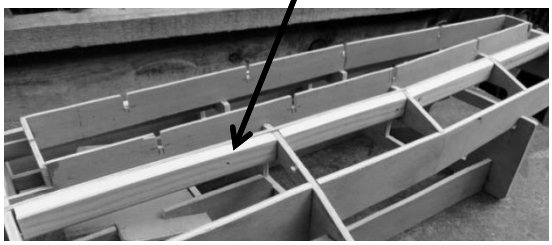
Stage 4, is a straight forward process; the fitment of noggins/ fillets made from timber trim/ off cuts, to offer a place for the hull covering to be glued, and help create a sealed unit. See Fig 5&6.

Fig 5.



NOGGINS

Fig 6.



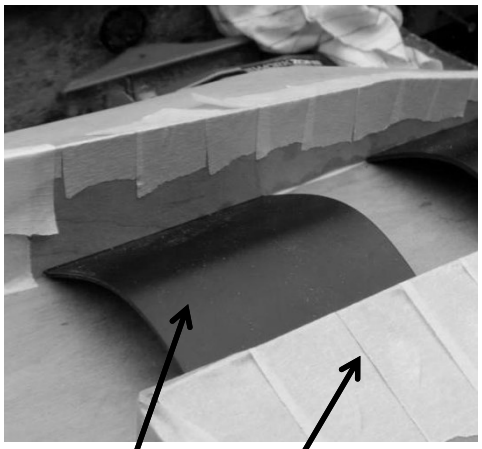
In preparation of starting stage 5, the completed stage 4 required some attention. Where, the some of the frame parts that run length wise needed sanding down to follow the lines of the cross wise sections, and to offer a fluid line of contact points for those sections. These areas for attention are predominantly on the underside of the front section of the boat.

STAGE 5.

Cardboard templates were made of the hull skin sections to confirm the shape of each of the hull skin sections. The templates were made having one or two edges correct for the model, leaving the remaining edges proud of the frame, to be trimmed to suit the frame once the adhesives were dry.

Some sections were very difficult to clamp using proprietary types, or “F” or “G” clamps. So to clamp these sections, I used 1mm Plasticard sheet as a wedge style clamp. The functional gap where this type of clamp was required is 88mm. I made the length of the wedge clamp 95mm, this type of clamp will hold both out, and down. Below (Fig 7) is an illustration of the use of the Plasticard wedge clamps.

Fig 7.



PLASTICARD
WEDGE CLAMPS

MASKING TAPE

When applying the masking tape, start by putting the tape onto the panel you are installing, then pull the tape down onto the part onto which you are attaching the panel. This applies pressure to the joint between the parts and offers a good joint.

Fig 8.

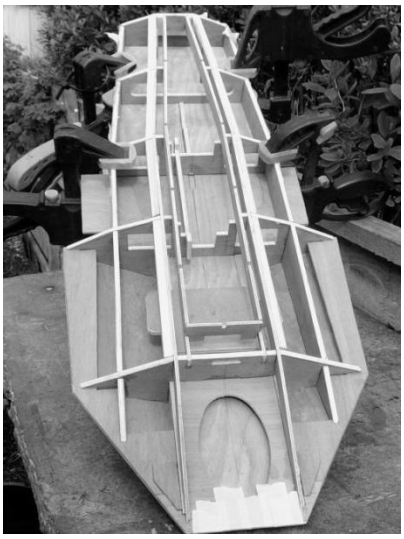


Fig 8, above, illustrates the boat build in progress.

Fig 9.

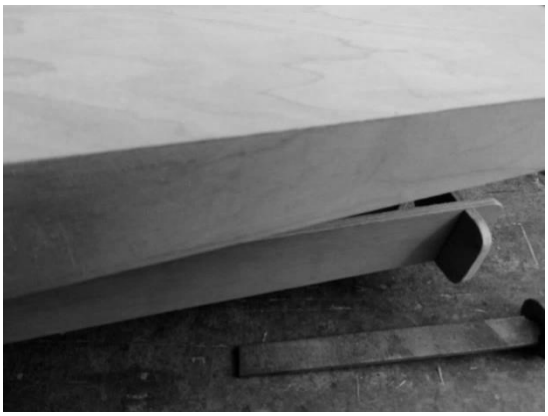


Fig 9, shows the result of fixing the panels, and then trimming the excess. This was achieved by using a small block plane to remove most of the excess, and by using a parallel file (normally used on metal) to finish off the edge to form (in this case) the chine.

STAGE 6.

Stage 6, is the installation of the hull panels for the top of the model. Using the same principles as Stage 5, in making templates and patterns, will allow the boat construction proceed with limited effort.

The fitting of the sections on the top are relatively straight forward.

Fig 10.

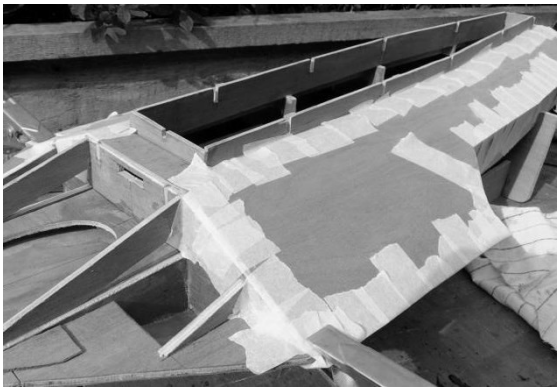


Fig 10, illustrates the fitment of the side panels to the top of the model. The use of so much masking tape to hold the panel whilst the adhesive is curing may look excessive, but it helps to produce a good joint, and ensures a full contact of the mating surfaces.

The final front panel of the stage 6 construction requires care, but is not difficult to make or fit. Making the template first then cutting the pattern once you are satisfied the template makes life easier.

Due to the shape of this front panel section, and not wanting to score, or cut the panel, and wanting to keep the fluid lines, one edge will have to be force clamped to effect the finished assembly. This is done by using a piece of aluminium angle 1" x 1" (25 x 25mm) as a clamp part, although a flat piece of metal will work just as well. Fig 11, & 12, indicates the two clamping styles.

Fig 11.

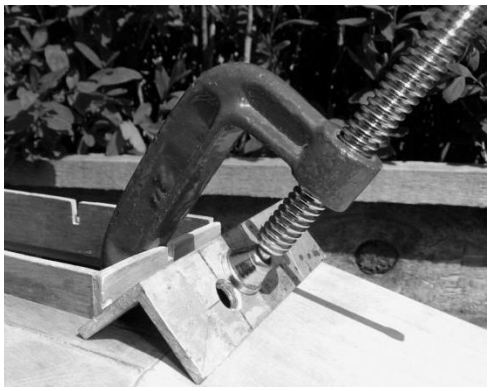
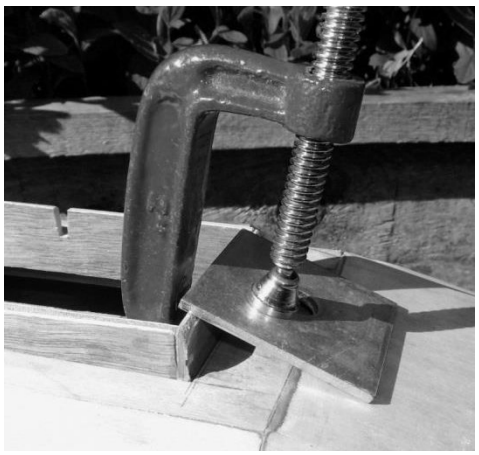


Fig 12.



STAGE 7.

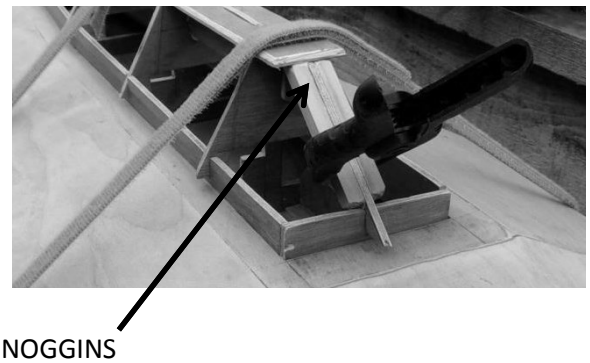
Stage 7, is the assembly of the Cowl framework which has been designed to slot together. To ensure the Cowl fitted the boat hull, the cowl was assembled and held together with elastic bands, then offered to the hull.

Fig 14, indicates the assembly held together with elastic bands and held into position by a plant tie Velcro strip, (cheap and cheerful from a garden centre) this set up will allow you to check the fit of the Cowl frame to the hull.

Fig 14.

The Cowl, when finished, is designed to fit onto the boat with little resistance. The next process was to fit fillets/ noggins to offer a larger contact area for the adhesives for fixing of the Cowl panels. See Fig 15.

Fig 15.



NOGGINS

The cowl frame was placed upon a flat surface and used as a datum from which the panels are positioned. Fig 16, shows the completed cowl assembly.

Fig 16.

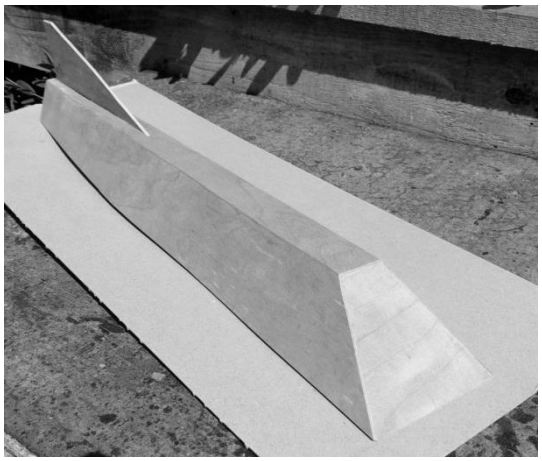


Fig 17. Progress

STAGE 9.

Stage 9, is the stage that completes the model, and makes it ready for the water.

The installation of the Prop Shaft, motor rudder, etc, was completed and checked for function, with some being removed prior to the finishing of the boat hull. I am not much of a painter, but the result was acceptable to me, see Fig 18.

Fig 18.

My limited knowledge of painting.

The paint that was used to finish this model was standard gloss paint. Historically I have used gloss paints that can be used with, and the brushes cleaned with, white spirit. Painting is not my forte, so I am looking to finish a model in the most practical way for me.

Masking tape can let you down, where cheap reels of the tape can “bleed” paint under the tape, causing a rough, or messy edge to the nice line you were trying to achieve. So I advise that you use a good quality masking tape for paint colour segregation.

I will openly admit that I have limited knowledge about painting, other than it satisfies the wife when it is finished. But what I have found is, that you can tidy up the imperfections of the edges of differing colours, where the masking tape has not done what you hoped it would do, and left a rough, or messy edge. And this is how I do it.

a) mask off the areas for painting.

b) paint the area with the gloss paint and allow the paint to dry for about six (6) hours. The paint needs to be tacky not wet.

I mask off the boat in the evening, and paint the boat the next morning, leaving the late afternoon of that day of painting to rectifying any damages, or the bleeding of the paints.

c) carefully remove the masking tape.

d) any “bleeding” of the paint can be rectified by using a cotton bud, and white spirit. I use one cotton bud that is moistened with white spirit to clean the worst, and then use a dry cotton bud to finish. This does not work if the paint is fully dry, so again I advise to plan the painting of the boat to accommodate any possible remedial work that may be required. Paint in the morning leaving late afternoon to finish.