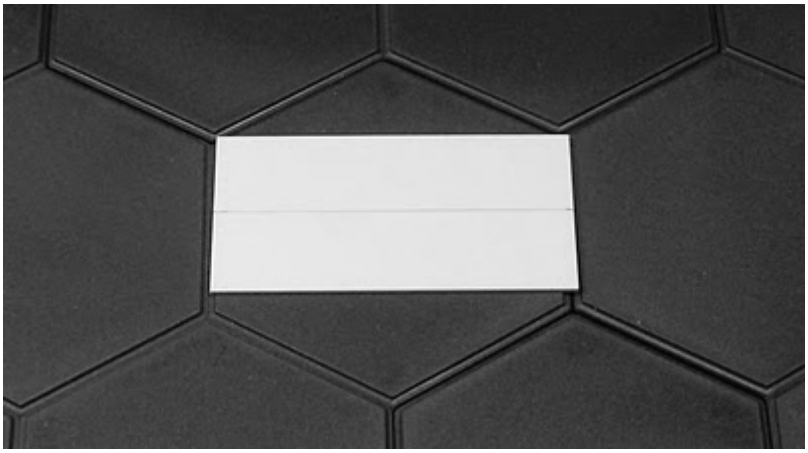
How to build a model Steam River/Coastal Gunboat and model Steam River/Coastal Passenger Ship from scratch

The method I use to build a small model ship with a low freeboard involves building the hull from laminated layers of Plasticard and the then fixing a suitable superstructure to the hull.

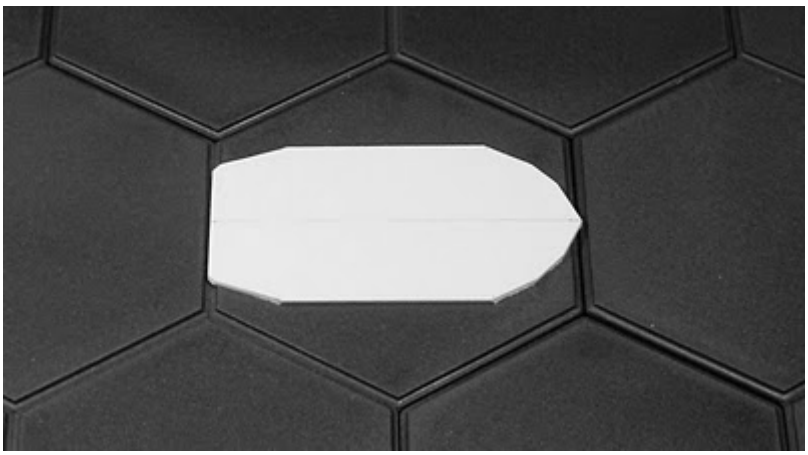
1. Making the hull from laminated layers of Plasticard

The first stage is to cut a piece of Plasticard to the size required.



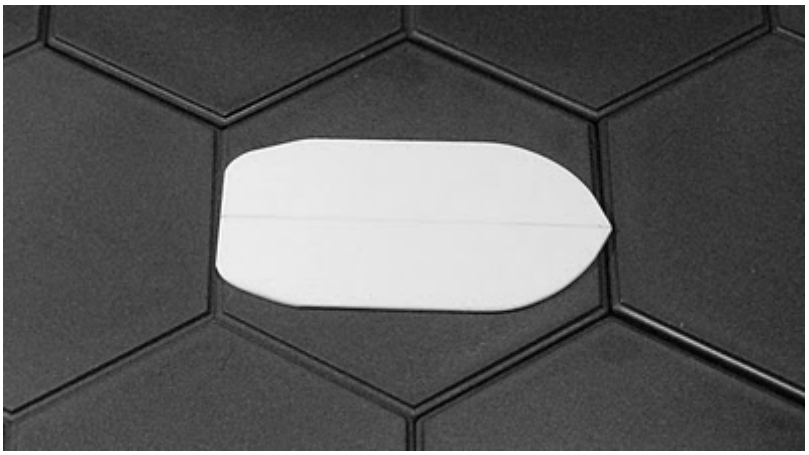
In this instance I wanted the hull to fit into a Hexon II hex, so it is cut to be 4.0"/10.0cm x 2.0"/5.0cm from 0.080"/2.0mm thick Plasticard.

The next stage is to trim the oblong of Plasticard into the shape of the ship's outline. This outline is marked on the oblong in pencil and then the sections of unwanted Plasticard are carefully cut off.

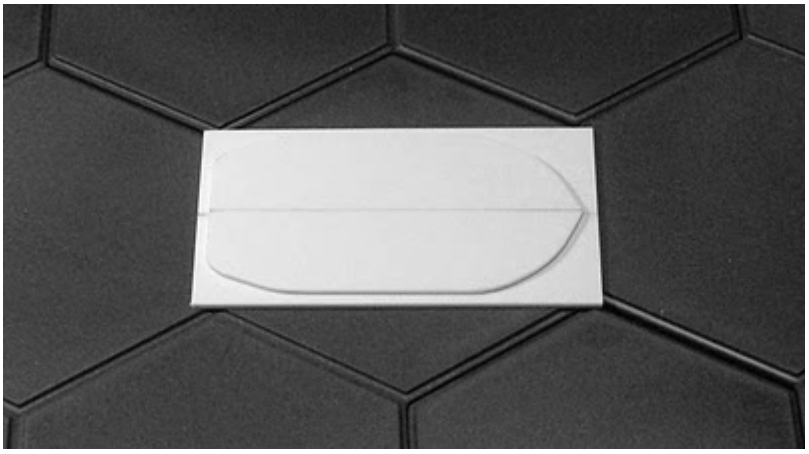


N.B. I use a Stanley knife/box cutter with a sharp blade to do the cutting, and it is done on a special non-slip rubber modelling mat. A ruler with a non-slip surface is used to cut any straight edges. **I strongly recommend that anyone following this method use similar tools at all times when cutting the Plasticard** as it will make the whole process much safer and more accurate.

The basic outline is then sanded so that any edges are rounded off.



A second oblong of Plasticard is then cut out. This should be slightly larger than the original oblong as this will make the laminating process easier.

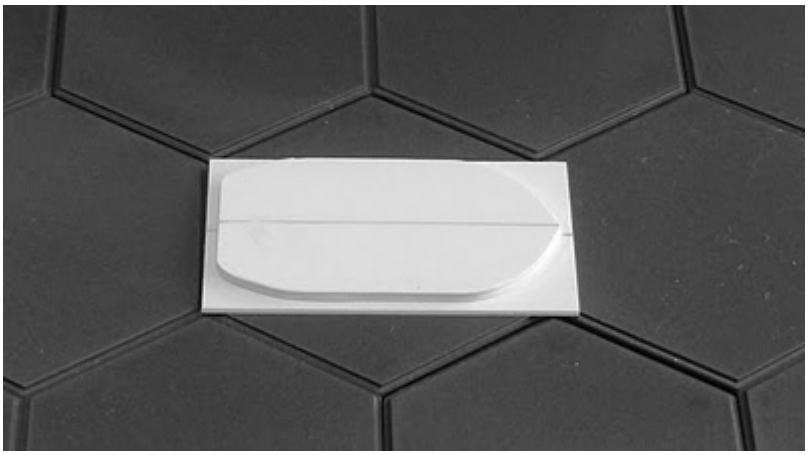


The original ship outline is then glued to the second oblong, and the two are weighted down in order to ensure that the fit is airtight and any surplus glue is squashed out.

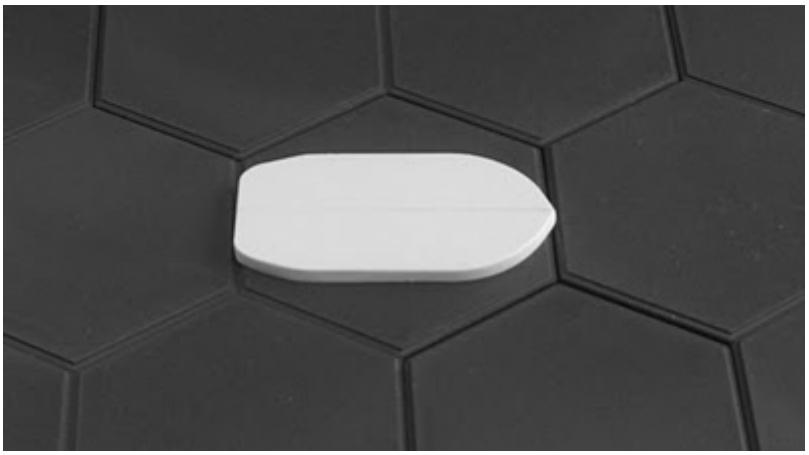
N.B. I use liquid cement to glue the two pieces of Plasticard together. This does produce fumes when it is being used and can irritate the nose and throat if the gluing is not done in a well ventilated room. **It is absolutely vital that any safety instructions are followed and obeyed.**

Because I want the bond between the two pieces of Plasticard to be as strong as possible, I usually leave them under the weights for five to six hours at least (overnight is even better). I then carefully cut around the existing hull shape with my modelling knife, using the edge of the shape to guide my knife. I do not try to cut through the Plasticard at one go (it is far too thick to do that with accuracy), but run the knife slowly around the shape anything up to twenty times, doing a short section at a time. This takes some time to do, but by allowing the weight of the knife to do the work rather than using too much pressure to get the job done quickly, it is possible to do the whole task accurately. This is one of the reasons why I use a Stanley knife/box cutter with a sharp blade to do the cutting and not a modelling scalpel, which has no weight to it and which requires additional hand pressure to make the cut.

Once this is completed I have a thin hull shape that is made from two laminated thicknesses of Plasticard. In this case it is 0.160"/4.0mm thick. Because I want the hull to be somewhat thicker, I repeat the process of cutting out another oblong of Plasticard, gluing the hull shape to it, leaving it under weights for the glue to take affect, and carefully cutting around the shape.



I then end up with a hull shape that is 0.240"/6.0mm thick.



I could continue adding additional layers of Plasticard to make the hull even thicker, but in this case I think that it is thick enough for the model I am making.

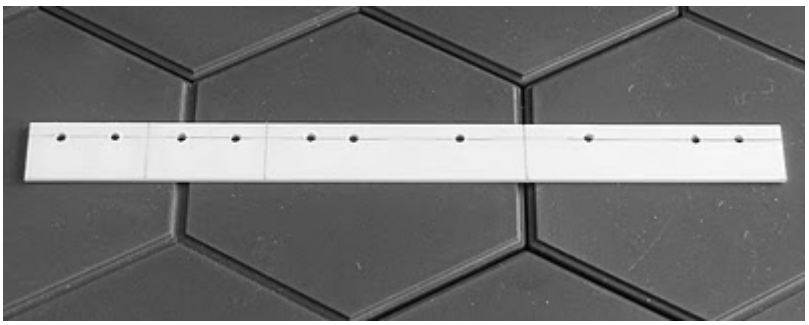
The hull shape is then sanded so that any edges are rounded off. I also use a method that is akin to planing to remove excess Plasticard. The blade of the knife is held so that it is almost vertical to the side of the hull shape, and then it is gently scraped along the edge. This takes off a very thin shaving of Plasticard. This method does require practise, and must be done carefully so that the user does not cut oneself, hence the advice to gently rather than vigorously scrape.

2. Making the superstructure

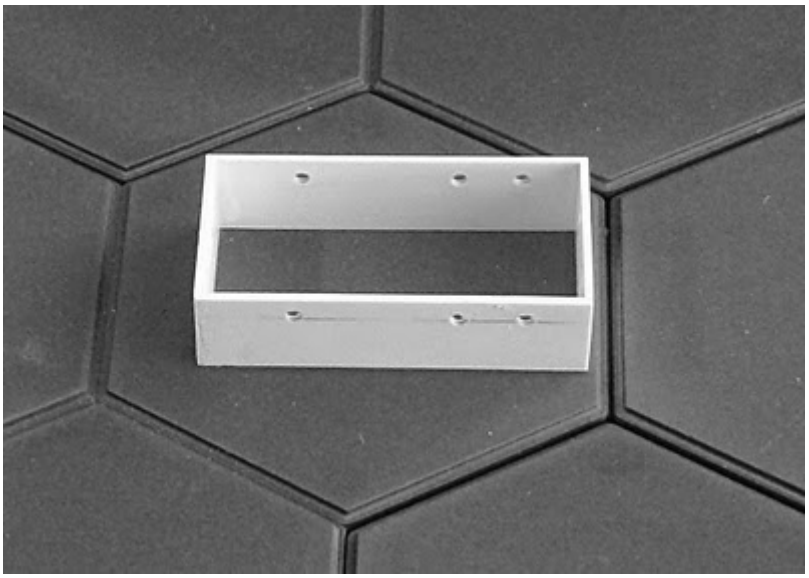
This is by far the easiest part of the modelling process, although care is still required. As the superstructure is made from a series of different-sized boxes, the most important thing (other than using the tools safely!) is to ensure that the corners of the boxes are square when they are assembled.

In this instance the superstructure is made from two 'boxes', one large (the main part of the superstructure) and one small (the ship's bridge. I try to make the boxes in the following manner.

Cut strips of Plasticard (in this instance it is cut from 0.060"/1.5mm Plasticard) that are long enough to form the 'walls' of the box. Drill or cut any openings that are required. In this case a number of portholes were drilled into the Plasticard using a simple hand drill from a very cheap set of screwdrivers.

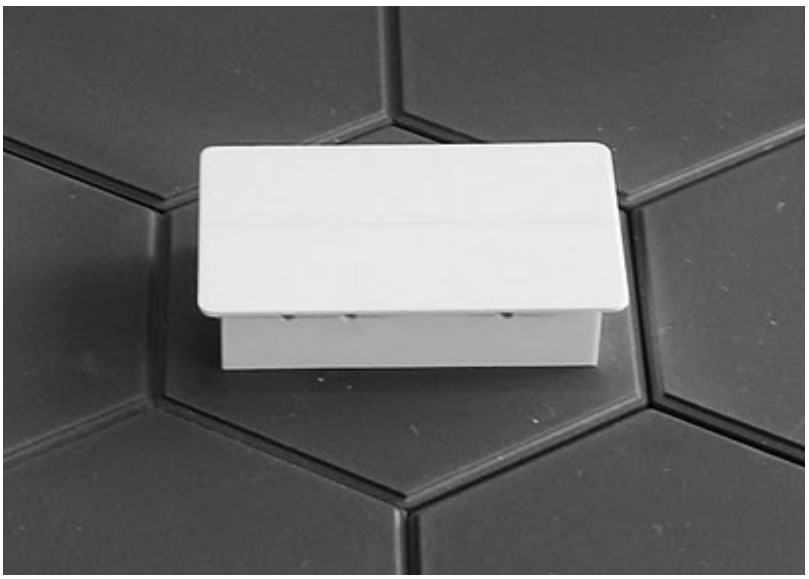


Glue the corners of one long side and one short side of the box together carefully. I use liquid cement that is brushed on to the join (see safety warning above) and the joint is supported whist the glue dries to ensure that the joint is square. I then repeat the process for the other long and short side. The glue takes seconds to dry, but I let it cure for thirty minutes before gluing the two pieces together to form the 'walls' of the box.

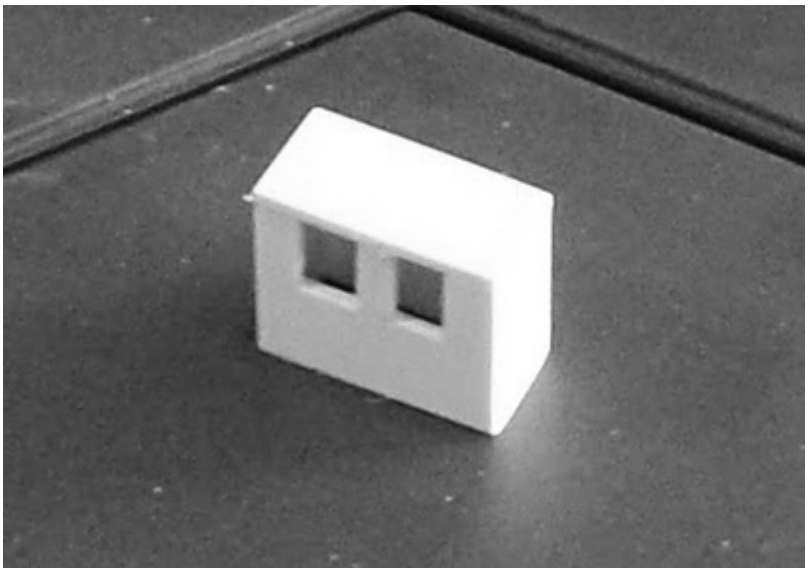


The 'lid' of the box can then be cut and glued in place and gently weighed down whilst the glue cures.

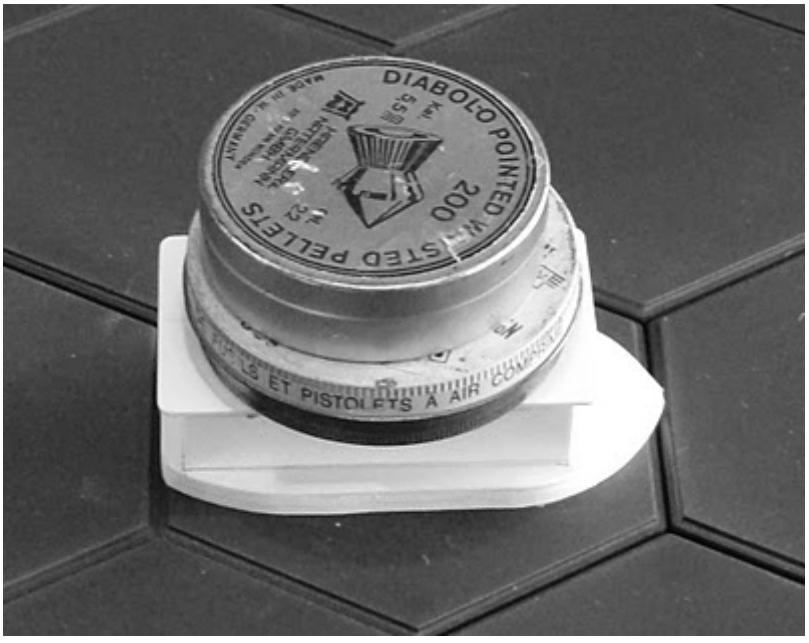
In this instance the 'lid' (which will form the upper deck of the ship) has been cut so that it overlaps the sides of the box so that when it is glued to the deck it gives the appearance of a covered way around the deck.



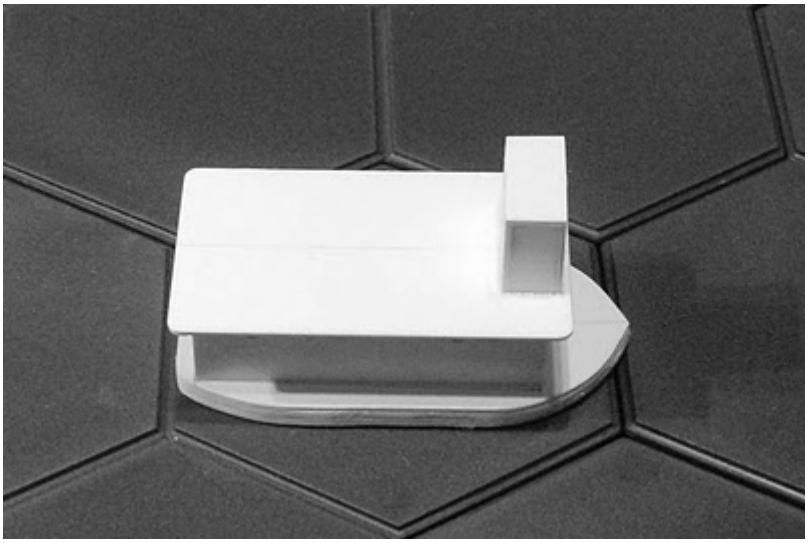
The same method is used to build the ship's bridge.



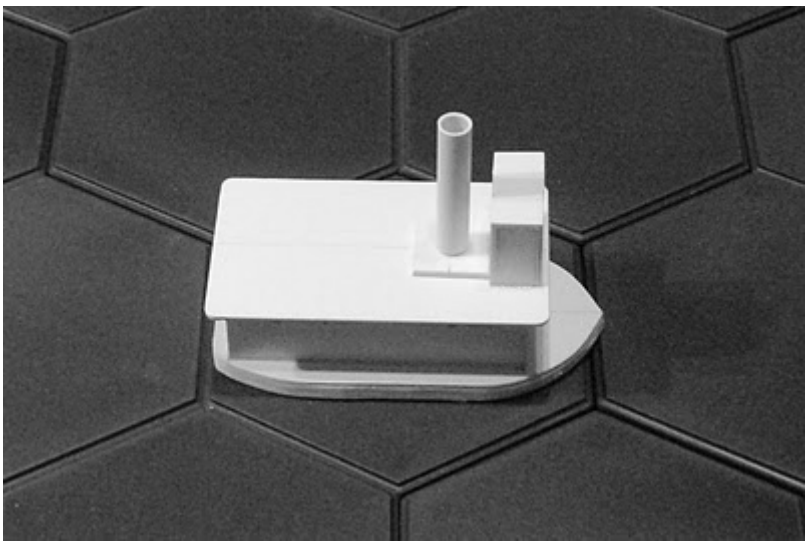
The main part of the superstructure is then glued to the deck ...



... and once the glue is dry the bridge is glued to the main part of the superstructure.



All the model now requires is a funnel, and this is cut from a length of Plasticard tubing and glued in place.



The basic ship model is now complete, and it can be embellished with additional bits and pieces to taste before being painted.

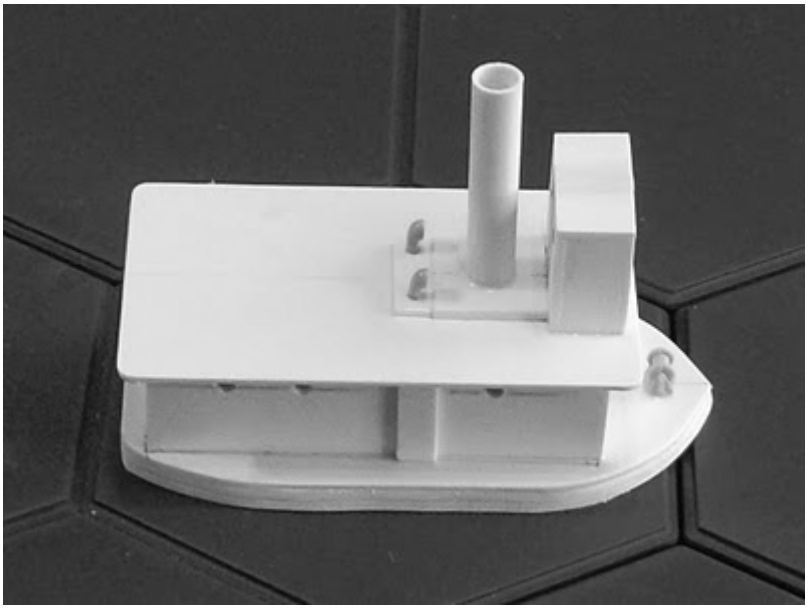
3. Embellishments and additions

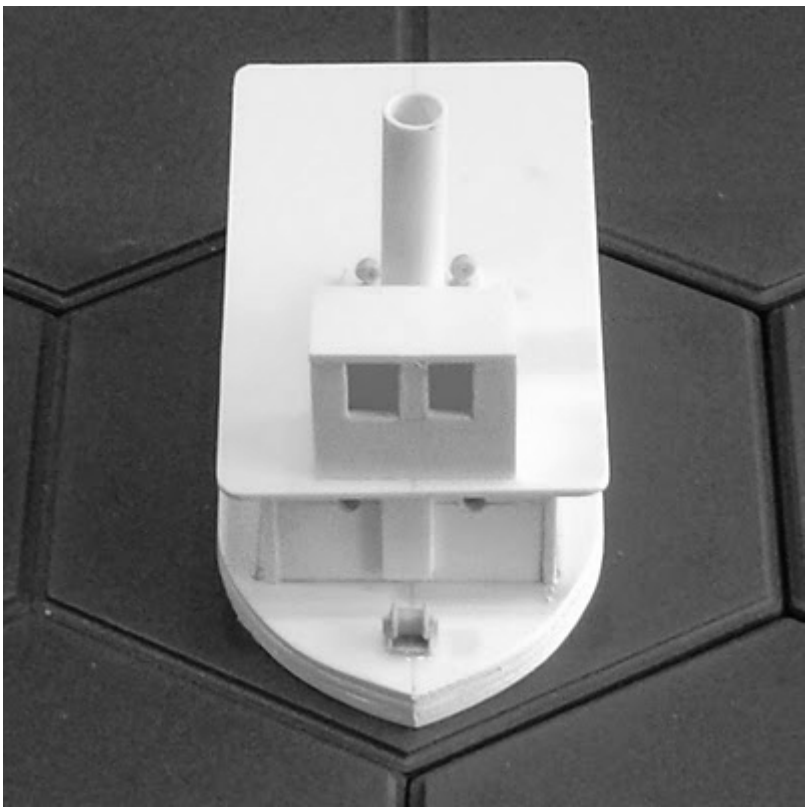
Because these models are to be used in wargames, any embellishments and additions to the models must be robust enough to stand the sort of handling they will get. Things that can be added without too much difficulty are doors and hatches. These are made from suitably-sized pieces of thin Plasticard (e.g. 0.040"/1.0mm thick Plasticard).

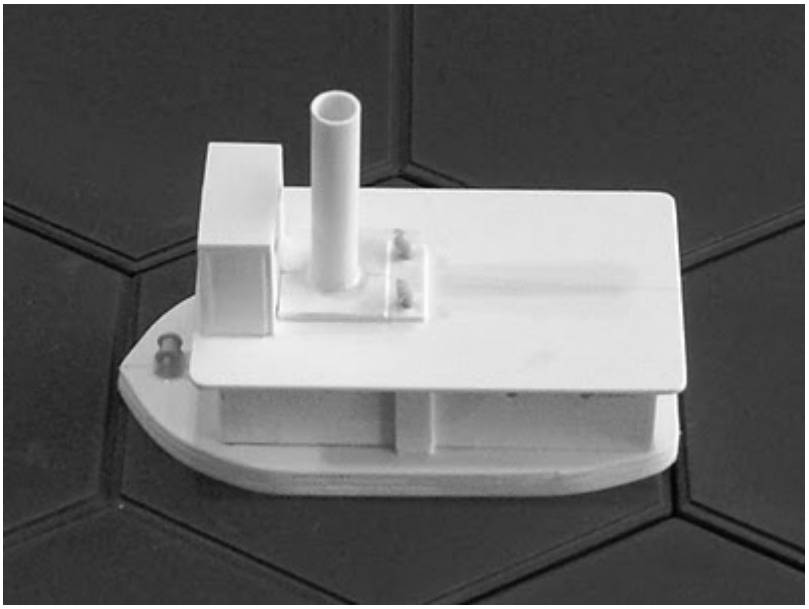
One of the most obvious embellishments that can be added are one or two cowl ventilators. These were often seen on steam ships, and allowed fresh air to be drawn below decks.

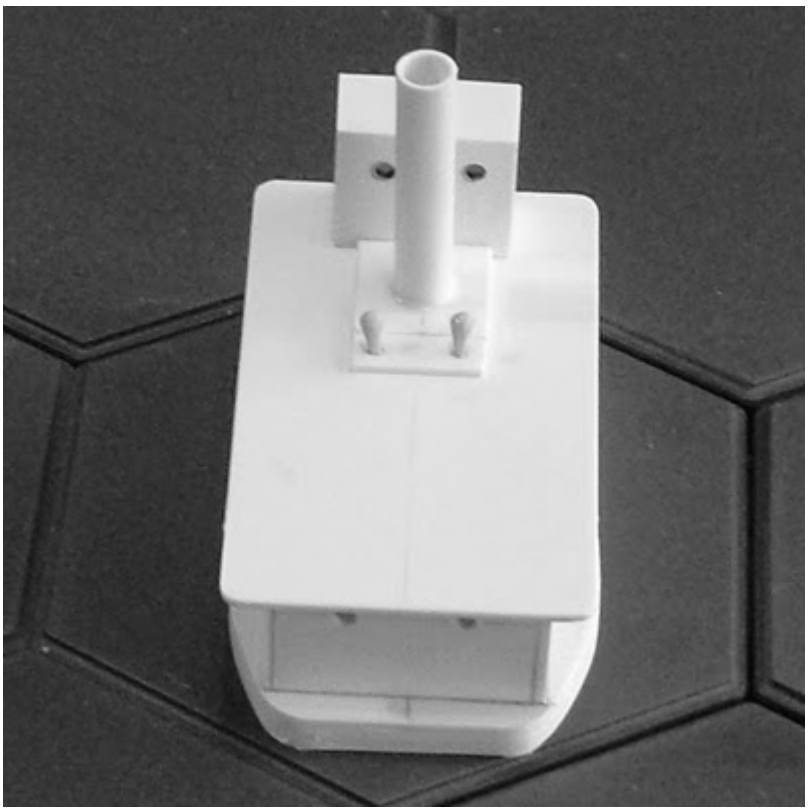
Whilst these are not an essential embellishment for a model, they add period 'feel'. I had several suitable cowl ventilators in my 'spares' box and decided to use some of them.

Winches (such as those used for hauling up anchors) can also be added to the foredeck of model ships. Again, whilst these are not essential, they can add a little aesthetic detail which should not impeded the use of the model in a wargame.





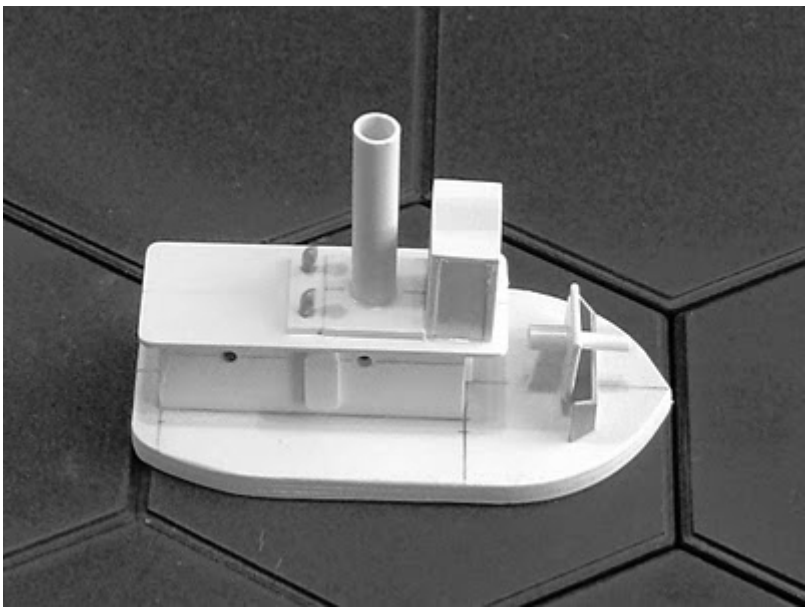


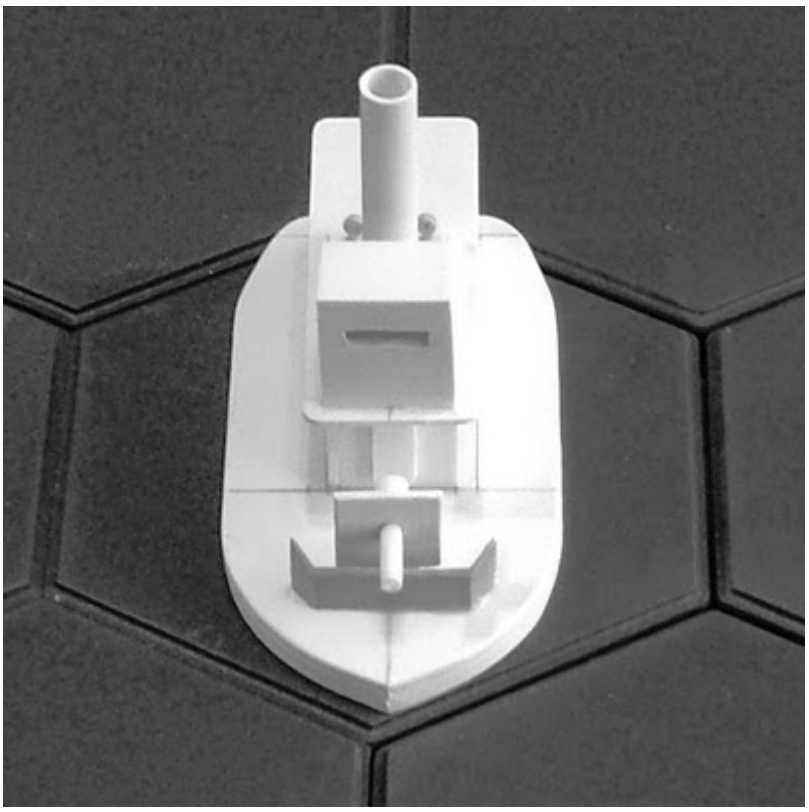


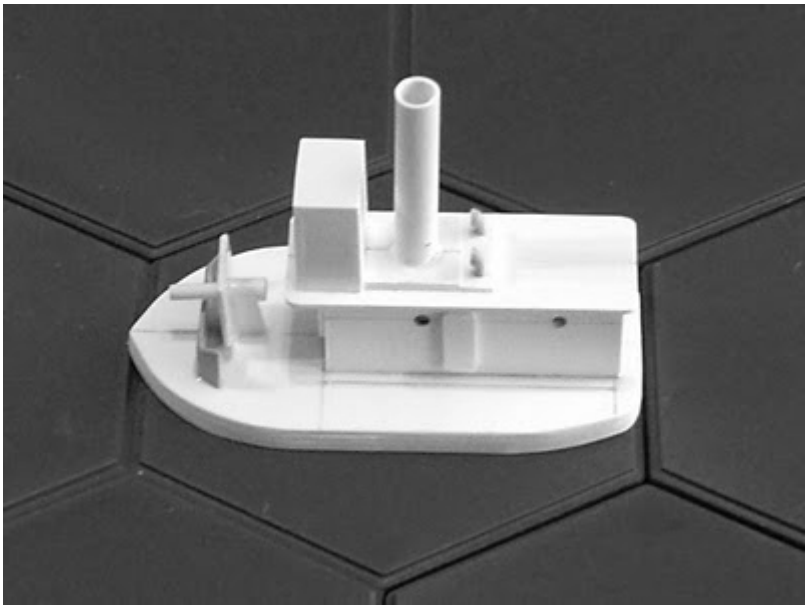
4. Building a River/Coastal Gunboat

The method outlined above can be used to build a River/Coastal Gunboat. These were sometimes converted from River/Coastal Steam Passenger Ships, in which case all that would be needed would be to add a gun or two to the model. Some were built from scratch, and these tended to have smaller superstructures that were optimised to give the ship's armament the best arcs-of-fire possible.

The model that I have built represents a specially built River/Coastal Gunboat. It was constructed using the same procedures as outlined above and a scratch-built gun was added to the open deck area. The bridge does not have conventional windows. It has a slit through which the ship would be conned. River/Coastal Gunboats often operated close to shore and their bridges had to be protected from small arms fire.







The breakwater fitted just in front of the gun was made from one of the mudguards from an Airfix German Armoured Car kit. I found it my 'spares' box and thought that it would improve the 'look' of the Gunboat, especially as many of them were fitted with an armoured redoubt or splinter protection around their armament to protect the gun crew.