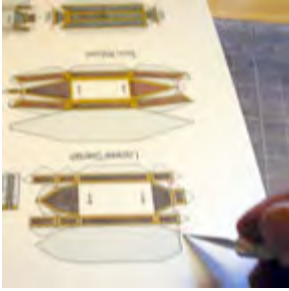# Squirmydad's Ironclad instructions
(and other random commentaries)

Hi all, I've never sat down and written detailed instructions for a model before so it seemed like high time I gave it a try. These instructions are for my new Ironclad paper models that are in approximately 1/600th scale and based loosely on designs of ACW ironclad vessels. Very loosely.

Before you start work on any model project you should make certain you have the tools you need and a good space to work in. This is my kitchen table and occasional design center with my iMac kind of crowding the table at present. In the center I've got a cutting mat (which is essential for extending the life of your blades and your tabletops), a ruler that has both centimeters and inches, an old black ballpoint pen, an x-acto knife and spare blades, scissors, crooked-neck pointy tweezers, gel glue, a felt tip marker for edging, band-aids and coffee. If you have too much coffee while cutting out the model you may need the band-aids. Also pictured (upper right) is my traveling crafts case that holds my tools and projects and Hako-clone model of Gamerra who has decided to observe my progress.
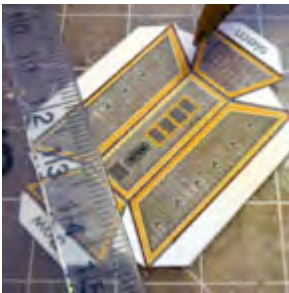
The model I'm assembling in these instructions is the Loowee'Seenah, but the concepts and techniques involved should be applicable to all of the little ships I design.

1) First, cut out all of the model shapes with a sharp blade, dull knives only cut you, so trade out when you have to start pushing too hard. Look for little red lines with arrows, they are "cut here" indicators. Always remember to cut toward you too, it's more efficient and gives better blade control….I know it seems obvious but some people…

2) All of the different ironclads are going to have an oval (or two) on top of their main cabin with a grey line in the middle – cut out the grey line to make a slit in the oval. It's there to shove the smokestack through.

3) Now that everything is cut out you need to score all of the fold lines for ease of folding later. I use a mostly dead black ink ballpoint pen and a straight edge. Black ink because when the pen does occasionally work I don't mind the dark line being created on a fold line.

4) Here's the smokestack I mentioned, it gets scored down that line in the center and across the tops of the triangular tabs at it's base. The two halves fold and glue together but the two tabs won't be glued to each other. I'll repeat this later in case you forget.

5) Okay, everythings been scored, test fold it to make sure you hit all of the fold lines.

6) The crooked-neck pointy tweezers can be very handy for bending small tabs.

7) Now is a good time to make sure that the slit in top of the main cabin is big enough to accommodate the smokestack. Try fitting it through and cut out the hole if needed before you glue things together.

8) I like to do a lot of my edgeing now before glueing things together. Hit all of the white edges that might be seen later with a dark felt-tip marker of some sort.

9) Look, more edgeing! Redundant picture, I know.

10) Time to glue! I like this gel glue here; It's cheap, doesn't run, warps only when used in excess, and makes a nice tacky bond after I press pieces together for about 20 seconds using either my fingers or the tweezers. The glue looks aqua-colored but dries perfectly clear. I don't like white glue anymore, the water content creates warps in the model.

11) Fold over the two sides of the smokestack and glue them together. Remember to exempt the triangular tabs from glueing at this point.

12) Glue the cabin together by folding down the ends onto the tabs and pinching them in place for 20-30 seconds.

13) The cabin should look like this when completed. Those bottom tabs are there to glue the cabin directly to the deck, don't do that yet..

14) Now slide the smokestack through the bottom side of the cabin roof and glue the tabs to the underside. The shaded side goes towards the stern (rear) of the cabin, see next pic.

15) The cabin and smokestack assembly should look like this when completed. Now it'll be easier to pick up the cabin assembly.

16) Now that the cabin is done you can start assembling the hull. I start by folding over the sides of the stern onto the flaps coming down from the deck. Left and right first so that their end-tabs will give you something to attach the aft portion to when you fold it down.
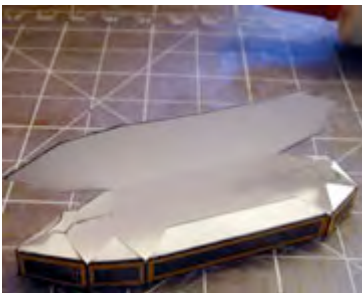
17) Now the stern folds down, the tweezers help to pinch the tabs in place while the glue sets. Squeeze hard for 20-30 seconds.

18) Now for the bow; do it one section at a time starting with the side that has a tab at it's end. When you fold in the other side it will attach to that end-tab.

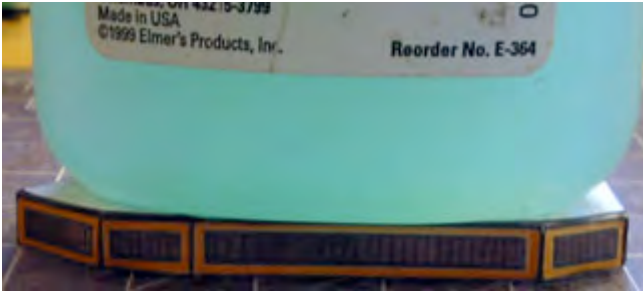19) Other side of bow, umm, I already explained this part in step 18.

20) Okay, all of the sides of the hull are glued. Flip it over so it looks like this. Hey! It's a box with the lid sitting open. Apply glue to all of the tab areas.
   Alternatively, you can skip this step and cut off the model base piece and glue the hull directly to a piece of blue paper that is bigger than the hull to represent water and serve as it's base.
   The Tenn'Ahksee has a beveled base but the same technique applies there as well.

21) Close the lid/base onto the tabs covered (not soaked) with glue. Press down firmly and pinch the hull into shape to make it conform to the base if it isn't lining up correctly.

22) You can put something heavy on it, like a book, to hold all of the tabs in place while the glue really sets up. I usually flip it over so that the tabs are down, this picture does not illustrate that very well.

23) Time for a little coffee break while things are drying.

24) Time to attach the cabin to the hull. Apply glue to the base tabs of the cabin and line it up with the blank space on the deck.
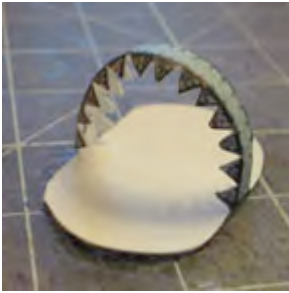
25) Press the cabin firmly down onto the deck and hold in place for about 30 seconds so all four tabs can set strongly.

And that's it! I usually attach the finished model to a piece of blue paper mounted on a black foamcore base, but that's really just so it'll fit into the 'SeaBlades' rules.
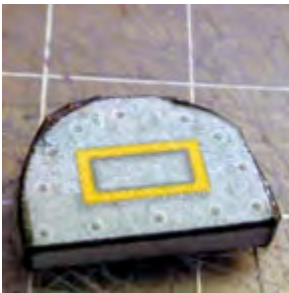
26) The ships hulls, cabins, and smokestacks all go together in much the same way. Paddlewheels, the side-mounted version, are assembled as follows;

Cut out the pieces, score them, edge them, then take the long strip with the tabs and gently wrap it around a cylindrical object (like a pen) to give it a curved shape.

27) Attach one end of the long strip to the tab coming off of the main body of the piece so it looks like this.

28) Fold up the side of the paddlewheels and glue them onto the tabs on the long strips. Then glue the paddlewheels to the sides of the ships where marked, or wherever you please really.

Designer's Notes:

And that is my first attempt detailed instructions. I made these models by designing them in 3D with Vectorworks v.10 on my iMac, then exporting them as dxf files, opening them in Metasequoia on my PC, inverting and creating any faces that got lost in translation, saving them as .mqo files, then opening them with Pepakura to arrange the flaps in a way that suited my workflow. I registered Pepakura this year and it really helps to be able to save the .pdo files and edit them later when you realize you've put every single flap on the wrong face. I then save the development in Pepakura as a .bmp file at 416% (!) size so that when open the file in Photoshop (back on the iMac again) it's easy to rescale it into a 300dpi file at Executive (?) paper size. This way I'm not looking at a blurry 72dpi image to work with. I then play with the clone stamp tools, noise filters, and the layer style feature. When I'm done I reduce the image size to 150dpi so as to not suck bandwidth and file storage space too badly.

Why are they bordered in orange? I think it makes a nice contrast to the metallic textures I've been experimenting with and also so that ACW and other historical players will leave me the f*** alone.

I do hope you enjoy them, but I create models and miniatures because it's fun, not to please anyone else.

Eric R. Brown 09/2005
squirmydad@yahoo.com