

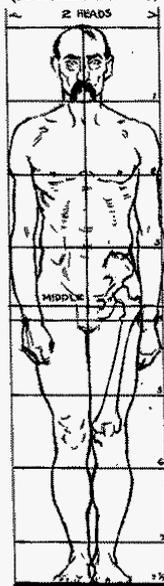
Modeling Scale Figures for Miniature Ship Models and Ships in Bottles

By David Fellingham

Many years ago, I realized that my larger ship-at-sea models were missing important details – sailors at work on deck and aloft – but was too intimidated by the task and by my poor results at drawing people when in school. I recently read Lloyd McCaffery's figure technique in his book "Ships in Miniature, A New Manual for Modelmakers" and decided to try his technique for use in a relatively large-scale (1/96) current project. His technique is to build up artist's acrylic gesso on a wire armature.

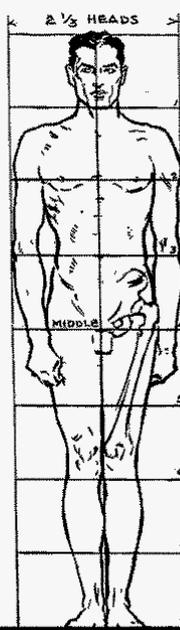
NORMAL 7½ HDS

THE ACADEMIC PROPORTIONS USED IN MOST SCHOOLS. (KATHER DUMPHY)



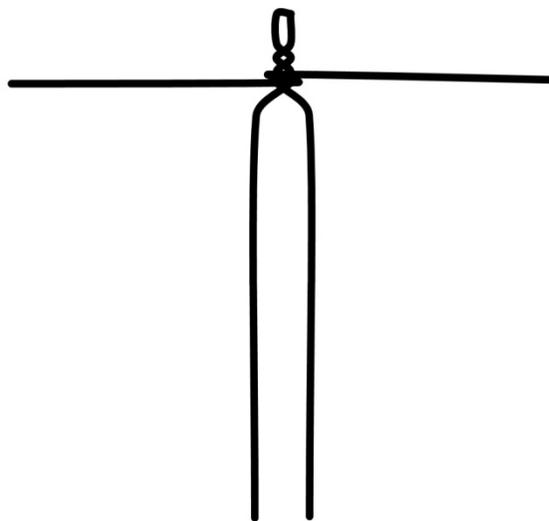
IDEALISTIC, 8 HDS

MOST ARTISTS ACCEPT 8 HEADS AS NORMAL



Start by searching "human figure proportions" on the internet; download and print several for reference. Notice that the unit of measure is the head and this version shows two different builds. Reduce this (or a similar image) to the scale of your model using the idealistic figure for a man 6 feet (1.8 meter) tall then another using the normal figure for a man 5 feet (1.5 meter) tall. These will give you a range of heights and builds for your crew.

Using soft copper or brass wire make your armature. I used 28 gauge for my 1/96 scale figures; use finer wire for smaller scales. Start with wires cut deliberately long. Bend a V and give the head a couple twists to form a neck then bend the wire to form the torso and legs. Take another piece of wire, wrap it snug around the neck and glue it with CA. Lay the armature over the reduced figure, and bend the



shoulders to match the figure and trim the arms to length. Cut pieces of paper for the soles of the shoes (one head long) and glue to the wires. Leave the wire below the feet long for handling.

Now you need to bend the armature to a realistic pose. Try for active poses rather than static. This is the critical point; the armature is your figure's skeleton and will be built up with the gesso. Use the proportion drawings to carefully locate the shoulder, elbow, hip and knee joints and start bending. I used myself in a mirror to model the poses taking careful note of those pivot points and the location of my center of mass over the feet and duplicated those points in the armatures. Take your time with this step; if the armature is out of proportion now it will be out of proportion when finished. Notice that when reaching overhead the shoulder moves up from a pivot point near the neck. There are pivot points at the ankles and wrists if needed and you can bend or twist the torso. Make sure the soles are on the same plane if the figure will be standing on deck.

When you are satisfied with the armature, just paint the acrylic gesso in as many coats as needed. It will span across gaps like the two wires that form the torso. The gesso will tend to fill in V's like the crotch, under the arms and at deeply bent elbows and knees; when it does use the point of a hobby knife to restore the V; it is easier to add later than take it off. The gesso sets up enough for additional coats in 30 - 45 minutes. I found it useful to work on several in rotation. The gesso dries kind of soft and rubbery and can be shaved with a sharp hobby knife to trim some excess but I do not recommend that you try to sculpt it. It does not work well with fine details like facial features smaller than chins and a suggestion of a nose.



Three views of my first attempt after two coats of gesso. I had let the gesso fill in too much at the crotch so his torso looks long and out of proportion.



Same three views after two more coats of gesso. I added the soles of the shoes at this point, but on the rest of my figures I attached the soles as I described in the text. I concealed the long torso with a coattail made from paper wrapped around his hips and used gesso to blend it in. When built up enough some details (like overlapping coat fronts, lapels, rolled up shirt sleeves, cuffs on shirts, coats and pants, even some of the natural folds and wrinkles of the clothing) can be added with the gesso and a finer brush.



The five figures for my project nearly completed with the first one at far right. I omitted the legs on the Indian because they are not visible. The hat was made by cutting off the top of his head and gluing pre-painted discs of paper to it, one in black for the hatband. I will add suspenders cut from narrow strips of pre-painted paper to the two on the left and will give the redhead a cowboy hat with a brim made from paper and a crown built up with gesso. I will trim the leg wires short and drill holes in the deck at installation.

I am very pleased how well these, my first attempts at figures, turned out. The materials and technique were easy and turned this artistic attempt into a simple modeling project. Most importantly, these figures give me the confidence to use figures in my future projects where the scale allows.