

DIY Plastic Surgery

Or how to carve your own miniature foam pilots

For most people a pilot in the cockpit of their latest model is an option rather than a necessity. It does not help in any way with the flying characteristics and is one of those “I will get around to it one day” sort of jobs. Many people only consider buying a commercial item rather than making their own and sometimes the correct size or style of pilot is not available. Some of the best commercial items that I have seen for small models are the ones offered by Small Scale Services.

Why not try carving your own pilots from foam? It's much easier than you may think, especially if you use the templates in this article as most of the hard work has been done for you. With the correct reference and by following these instructions you can produce a life-like figure that will make people look twice at your model...without laughing. All of my aircraft feature hand carved figures and these become the focal point of the model. Military jobs with dull camouflage schemes really come to life with a realistic pilot or crew.

Materials

I find the best thing to use is foam, there are a few good types around that lend themselves to carving. White modellers foam is my favourite as it is quite dense and carves and sands well, Blue foam (Floormate 200) is also excellent but is slightly softer than white foam. I have even used expanded polystyrene, this is very easy to obtain as it is often used as packaging around electrical goods etc. Polystyrene is tricky to carve as the ‘beads’ tend to break up a bit (I did however make quite a convincing pair of wing walkers a few years ago for a Curtis Jenny from this stuff!)

You could also try very soft balsa block as an alternative, but you may find the grain is a bit of a hindrance.

Reference

Before starting make sure that you have enough photographic reference of the subject matter, my sketches will help but they are basic and more detailed pictures will be required to make the best job. You will be more satisfied with the end product if you know he is wearing roughly the right type of Mae West or flying jacket or his goggles are the correct shape for the era. Most keen modellers will have plenty of books with relevant photographs in them. You will find the job much easier if you also have someone to model the head on (preferably someone with a reasonably conventional head shape, i.e. two eyes, a nose and mouth!)

Pose

This is very important, remember that your pilot should look good from a distance as well as close up. The most common mistake made by people when carving their own pilots is the ‘I’ve just sat on a drawing pin’ look, i.e. bolt upright with arms straight down by their sides and head fixed straight forward. A somewhat more relaxed posture will be required for a believable replica. Study a few pictures of american WW11 naval aircraft for instance. The canopies were often slid back in flight, which helps and you will find some very casual looking pilots. A slightly slumped look is good, remember that the pilot is generally reaching forward, holding the control column. This hunches the shoulders and tends to bring the head forward.

Getting started

You will need a very sharp blade (that's a new one then) some 360 and 800 grade (approx) sandpaper and a block of foam large enough for the basic pilot shape. Using one of the templates provided will take the headache out of drawing your own. For the purposes of this article I will assume you are opting to carve from foam. Transfer the profile onto the foam and cut a full width side view, pastry cutter style. You will have to guess the approximate width (shoulder to shoulder) of your pilot. The width should be about twice the depth (chest to back) see fig.1

Next, cut into the foam to give angular shoulders and head -guess the

width of the head. If he is wearing a life jacket you should also allow for this with a second step a bit wider than the head (fig.2) try to think of the carving as flat planes at this stage.

The figure will start to come to life now as you carve some basic shape into him. Round off the shoulders which should slope down quite a bit -he's not wearing shoulder pads -see Fig.2a. Round off the back, but leave the front fairly flat as his arms are further forward than his chest. (see top view, fig.3). Trim the front of the face to leave the nose central, do not give him any ears or headphones at this stage. I sometimes carve the goggles in from the start as can be seen by the sketches. You may find it easier to omit these and stick them on later.

After initial carving the rest can now be done with sandpaper. Sand the head to an egg shape (pointy bit to the chin), then narrow the temples slightly, remember the head is oval when viewed from above. Carve and sand in slight eye sockets, cut out and fix ears or headphones as required, Fig.4 shows length of nose, height of eyes and ears (same level) etc. Sand in the straps and any wrinkles and creases in his flying overalls (this is really satisfying) Add any appropriate details from foam, oxygen masks and pipes, goggles etc. One really good tip is to make hanging paper flying helmet straps and glue to the side of the head just forward and below the ears Fig.5.

Full Length Pilots

When carving full length pilots the same techniques apply, produce one side view as in Fig.1 but full length instead of head and shoulders and proceed to ‘cut in’ the basic shapes out of this block. Really the best way to find the correct width of the shoulders, hips, etc. is to measure your own proportions and transfer these dimensions to your sculpture (after working out the correct scale of the pilot). You will find that when you get to a certain stage it is easiest to begin to dissect the pilot to get the knife and sandpaper into the nooks and crannies. The arms can be stuck back on in different positions, in fact the whole figure can be hacked up and re-formed, I transformed a basic carved seated pilot into an embryo-like tail gunner for my Heinkel 177!

Painting

The best paint to use is artists oilpaint (in tubes) you can mix these on the sculpture to blend flesh tones, highlights and shadows etc. I've also used enamels, which are fine, acrylics should also be ok although I have no experience of these. You will have to research the exact colours of your chosen pilots garb, quite often by looking at black and white photos you can probably estimate the colour of a flying jacket or shirt.

Flesh tone is mixed by adding a little red and yellow to white, remember to darken this a little in the shadowed areas like the eye sockets and under the nose etc. by adding a small amount of brown or tan. Do not be tempted to use red or pink for the mouth as this will look ridiculous (you don't often see pilots with lipstick). The shadow under the bottom lip is quite important and should be a bit darker than the mouth.

Clothing can be made to look good by darkening slightly in the shadows of the wrinkles, and made lighter where the light catches the folds, again always try to base the painting on a photo and don't try to guess

How long does it take?

About 1-2 hours to carve. It rather depends on the size and type of figure. Remember, be as accurate as possible, try not to guess at something, but look at photos or take measurements instead.