

Making realistic Navigation lights in 1/48th scale

By Glen Martin

This year while going to model contests, I have come across several examples of aircraft models that had great seam work, a crystal clear canopy as well as an awesome paint job. These models were some of the best on the table, which is until I saw the Navigation lights on the wing tips. The Navigation lights can come in all shapes and sizes. I often replace mine that are right out on the wing tips. They often are shaped like a rounded off triangle.

Navigation lights can make or break a model in competition. I learned early on that Nav lights, as they are commonly referred to, are the little details that often go left unaltered. It is a shame too when one considers that it only takes about an hour to make some really cool and realistic Nav lights. Let me give you an example that has worked for me.

What you need is the following:

- Colored sheet stock
- Super Glue
- Super Glue Accelerator
- A coarse file, about 1200 grit
- Micro Mark polishing pads (2400 - 12,000 grit)
- Very sharp X-acto knife blade, No.11 preferred

Start off by surveying the instructions. If the kit comes with separately molded Nav light parts, detach them from the sprue. Often, the kit will have molded in indentations where the Nav lights are supposed to be, leaving painting and detailing up to the builder with no recourse to use clear lenses that are not supplied with the kit. If the kit does come with clear Nav parts, placing them into the opening will give you an indication of how much plastic to cut off from your colored sheet stock source that you'll use to replace the kit parts. It also gives an impression of how the kit part fits into the opening.

The colored sheet stock sprues can be obtained by going to a model web site hosted by Great Models. Their web site is www.greatmodels.com. You can also visit squadron mail order to find replacement colored sprue. At these web sites, do a search for "Navigation lights". The resulting search will reveal sets that you can order. Most sets will come in Red, Yellow, Green, Orange and Blue. CMK makes several sets by color starting with stock number CMK010 through CMK013 which retails for about \$5.00 US Dollars. You can find a more comprehensive set by visiting www.Squadron.com. That set is stock number CZ4060 and comes with all the colors you need. The lights are pre-shaped and in a wide variety of colors. This set costs about \$12.00

USD. For the example that I used for this illustration, I have a long block of colored sheet stock that I just trim off a triangle shape for the size that I need.

Once you have secured the source of the lights you want to use, you need to prepare your plane wingtips to receive the "chunks" of sheet that you will insert. Do this by taking your X-acto knife and hacking into the wing tip of the plane where the lights would go if not already molded. For my example, I am building the Hasegawa 1/48th scale British Typhoon. I hacked into the Nav light area to give me a sizeable recess to add my sprue. Make sure you make the cuts into the wingtip square by using a flat file to trim out your work. Nothing looks worse than a crooked Nav light.

Take your colored sprue, matching the color red to port and green to starboard and dry fit them into the recess you have just cut out of your wingtip. The parts should fit in the recess with no wiggle room. If you have wiggle room, trim and file to get a good fit. By cutting the colored sprue larger than the diameter of the recess, you'll have plenty of materials to work from in the trimming process.



After you have a good dry fit, take a very liberal amount of Super glue and hit the recess. Don't be a miser with the glue, put it on thick. Take your colored sprue and place the chunk into the recessed opening. It will look messy. That's OK. Then, take your super glue accelerator and brush on an ample amount to the super glue holding the colored part. What you will have is that the super glue will cure instantly. Make sure you do not get the accelerator on the wing outside the area you are working on. This stuff attacks styrene and is a mess to clean up by polishing out. I have tried other liquid adhesives such as M.E.K (Methyl Ethyl Ketone) and Ambroid Pro-Weld. These do not work for some reason. The parts will melt into the wing tip but when you start working with it, the bond is not strong enough. Super glue I feel works best in this situation. For

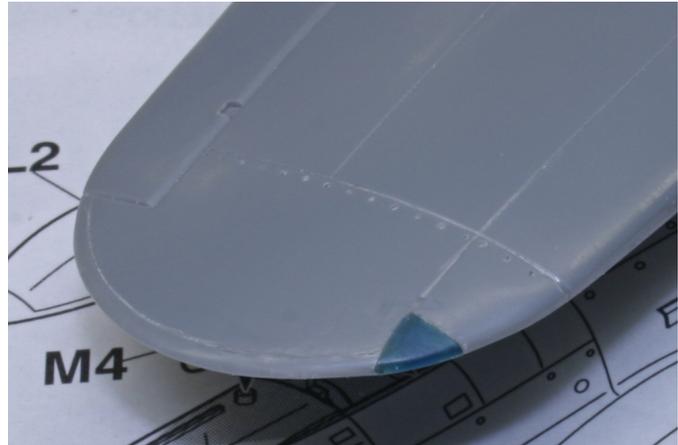
what we are doing, it's ok to "attack" the area we are working on. Let this sit for around 15 minutes to firm up and dry.

Come back about 15 minutes later and take your knife and gently "shape" the hunk of colored sprue by slicing off a little at a time. What you are doing at this point is carving on the part; much like a sculptor does with clay. Carve the lens, getting it down to roughly the contour of the wing tip and put the knife down. Hopefully you have not sliced off a finger in the process.

Here is where you will start the sanding process, removing excess super glue and "sculpted" colored sprue, bring the mounting surface and the lens to the same level. Start by filing the area of the Nav lens, removing any built up dried super glue and excess lens material to bring the two together, making the part fit smoothly. I run the file on both sides of the lens, top and bottom and then around the outside contour of the lens. Remember, you must blend the edges of the part into the wing so you have no edges, nothing to hang a finger nail on. The lens should look like it was molded into the wing when they created the kit.

Take your finger tip and let that be your guide in feeling if you have an open seam to fill with more super glue. If you do, repeat the process of adding super glue and accelerator and then re-filing the part back down, removing excess super glue. Once you have the part worked down to the wing surface, you will move to a flexi-file that has medium grit. Work the outside edge of the lens, ensuring you have no areas on the lens to hang a finger nail. The part must be "one" with the wing. If you have reached this step, take our Micro Mark polishing pads and start with 2400 grit, working in a circular motion. Polish that plastic on the wing and the lens for several minutes. Then move to the 3200 grit, repeating the

process. Repeat this process with all the pads up to the 12000 pad. By the time you reach this stage, you will have a polished Nav light that will stand out on the contest table. If the judges are using pen lights to judge your aircraft, when the light hits that polished lens, it will illuminate like a real light and that will turn a few heads.



Don't be afraid to experiment. This is not hard to do and once you see how easy it is to do this, you will want to replace your Nav lights on all your models where the lights are molded into the wing tip.