

Making Small Flags for Model Boats

By Lew Zerfas May 21, 2016 (rev. 5/3/2021)

Two things that wrongly stand out in scale model boats are the lack of any figures (in operating boats) and stiff flags. The lack of figures is especially noticeable in open cockpit boats. As for the flags, even in the strongest winds a flag has ripples running through it.

Purpose

This document is for making flags simple and easy, yet showing some semblance to being a scale representation. There are many processes for making flags, from hand painting on aluminum foil, through printing on tissue paper. Here we will use thin printer paper and a color printer.

Flag Basics

Almost every boat and ship has at least one flag flying. The only exception seems to be small craft like rowboats, small power boats, and the like. Larger pleasure craft, tugs, warships, commercial ships, etc. all carry some sort of a flag. (Hereafter I will refer both ships and boats as being “boats.”)

U.S. Military Regulations

Where the flag is flown is important on certain boats especially in those of the U.S. Navy. The U. S. flag on a naval ship is usually called the “National Ensign” or briefly the “Ensign.” The location can vary depending on whether the boat is underway or docked/anchored. Also, the dimensions of the “Ensign” are slightly different from the common American Flag, the ration being 10:19 making it more rectangular/longer. The smaller flag consisting of only the stars portion of the flag (“Canton”) is called the “Union Jack” or briefly the “Jack.”



It is best to check with the U.S. Navy regulations or use a photograph to determine size, where and how a flag is to be displayed on naval boats. Not only is the time of day or whether a boat is moving or docked, the time period is critical as the regulations have changed.

(For other countries, you should check to see if they have any regulations concerning flags.)

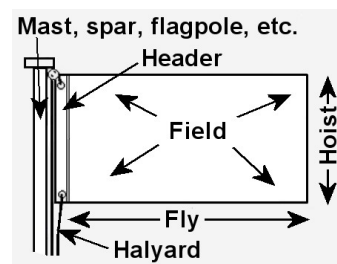
Commercial Ships

Commercial ships with U.S. flags usually (but not always) have the flags on a staff/pole at the stern of the boat.

Flag Basic Information

Sometime you might see references as to the dimensions of flags. The vertical dimension is called the “Hoist” and the horizontal dimension is called the “fly.” (See diagram)

Most modern flags have grommets in the two corners of the header for attaching to the line. (Older flags actually used a “captured header” method. This is where a line runs through a long pocket along the hoist of the flag. The ends of this line may have a loop knot or free end to tie to the mast’s line for the flag.)



The halyard is usually a continuous line with some sort of snap clips to attach to the flag's grommets.

Lew's Way of Making a Model Flag

To make a flag with a true scale look to it (thin, creases, flexible) is nearly impossible especially when trying to have the flag fly correctly on an operating vessel. This would range from being a draping flag for being stopped in no wind through one on a high speed craft or when stationary in strong winds. My "middle of the road" preference (*right*) is displaying a model flag in moderate winds or while cruising.



Steps in Making the Flag

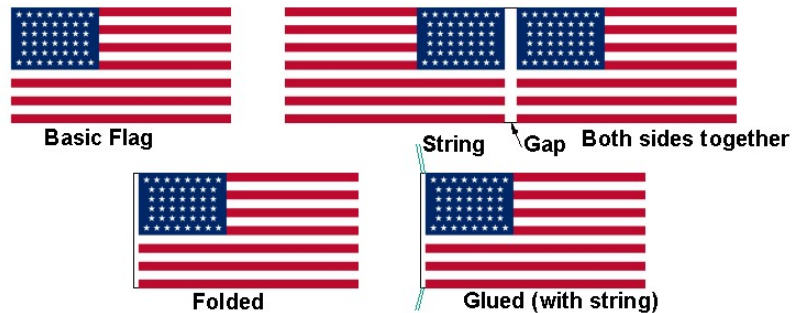
The first step is using the right paper. It is best to use the lightest "weight" paper available. I use 20-pound bright white multipurpose paper in a color inkjet printer. Color laser printers work just as well, often with a better resolution. Another alternative is to use Office Depot or Staples printing services. Stay away from heavy paper (card stock) or photo paper. Both types are too thick.

Search the internet for graphics files (usually "tif" or "png" or "jpg" files) for the flag you want. Try to get the highest resolution (number of pixels) you can find unless your flag is to be very small.

Most flags are the same on both sides, one side being a mirror of the other. Some flags are not the same on both sides of the flags, for instance those with lettering.

The next step is to create the flag file in a graphics program like Paint, etc. You then editing the flag file so you have both sides of the flag with a little space between them. That space (white) becomes the header.

Next, cutout the flag with both sides attached in the middle. Fold the flag making a sharp crease in the middle of the gap area. Trim around the three sides so front to back match.

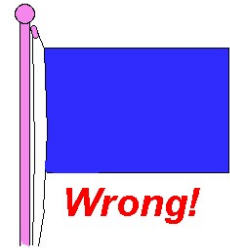


If the line is going through the header, open the flag and place glue and the prepared string on the inside of the flag. Glue on the string prevent the string from coming out. If the flag is large and you want to simulate grommets in the hoist area, omit the string and make holes in the ends of the header to tie to the halyard with "clips" (might have to simulate them if they are small).

Place the inner sides together and compress together until the glue dries. When dry make sure the edges match. As the paper is white you can touch up the edges of the flag with ink pens. For the flag above, use blue along the blue canton edge and red along the red stripe edge (top and bottom) and the end of each stripe. Do not color where the flag is white where being the end of the flag has the white stripes.

Displaying a Model Flag

Unless the flag is draped vertically in no wind, the flag should not look like the one at the right. It should hang completely down (no movement) or straight out with ripples in high wind or boat speed or something in-between.



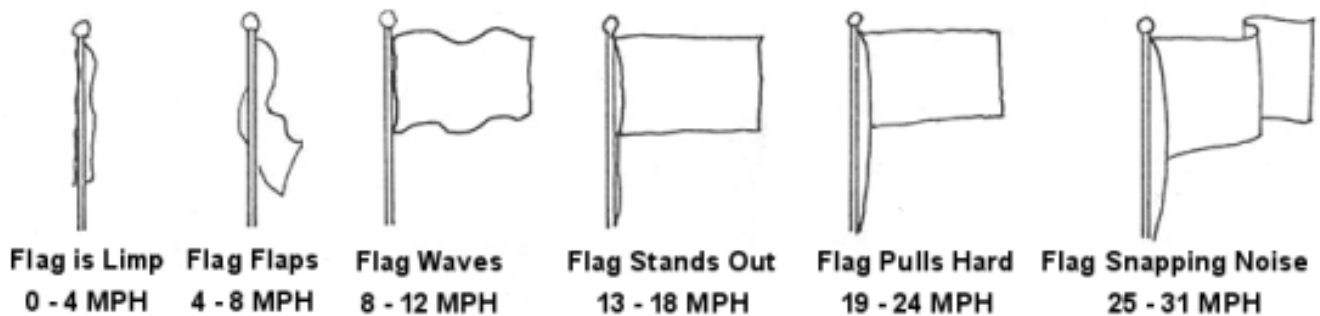
How Should the Flag “Fly” in the Wind

Next we can make the flag look like it is either idle (no wind and the boat is not moving) through simulating the flag is in a high wind and/or the boat is going fast.

The only way a flag will look like a flat rectangle (right) is if the flag was starched, ironed, and hung vertical on a taut line while the boat was not moving and there was absolutely no wind. So stay away from the “flat” look.

So the next step is to determine what you want your flag to look like. First, do you want to depict the flag as on a fast moving boat, slow, still, wind, no wind, etc.? The key to this is how a real flag reacts to wind blowing over it.

Flags at Different Speeds



As the wind speed starts from zero up to a high speed the flag starts to lift. (Because there is turbulence in the air, especially on the stern of a boat, the flag will flap or ripple to some extent.) The whole flag doesn't rise as one unit but rather the first part to lift will be the upper outer edge. Like a coiled spring put under tension other parts of the flag will lift to a lesser degree.

Many flag staffs (poles) are not completely vertical and slant sternward somewhat. That means the flag on a “leaning” staff” will have a certain amount of draping away from the staff.



Like mentioned earlier, the flag will have ripples from the wind. To model the flag for a medium or average look there needs to be a mixture of the flag

lifted as well as the ripples or waves. At the right is a flag on a tilting staff with a mild amount of wind blowing.

To the left is a flag flying in a medium or moderate wind. If you look at various photos of flags you will see that even in the same speed wind the flags will take on various different forms.

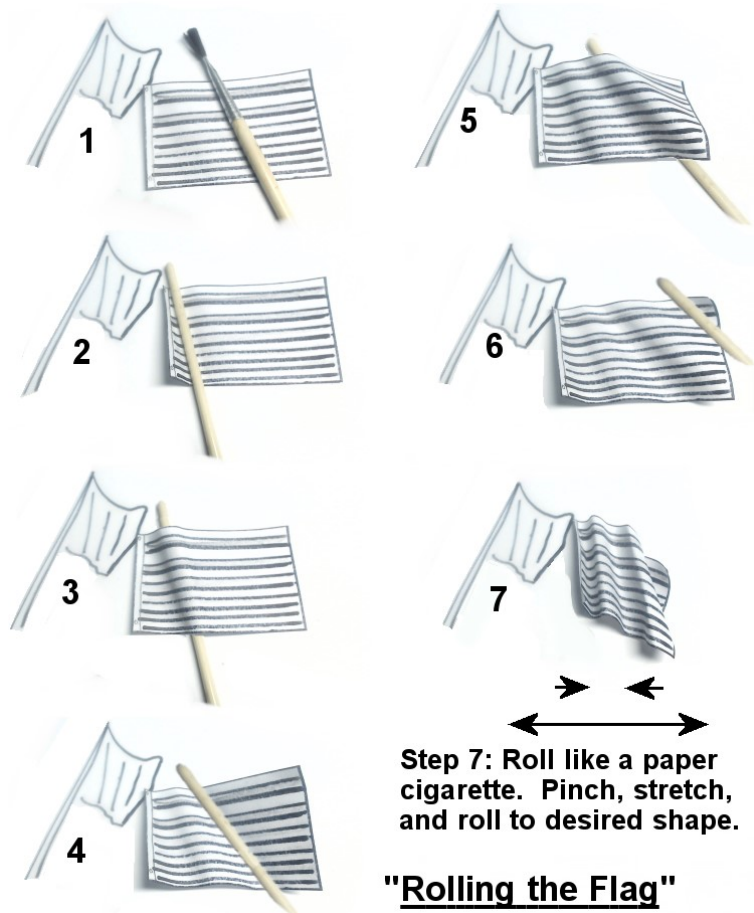


Making the Model Flag with Ripples

Thus when modeling the flag for flying in a moderate wind give it some curls and ripples to where it looks like a typical photo of a flag in the wind.

To accomplish this curl the flag around a piece of round stock, depending on the flag size you can use toothpicks, dowels, tubing, etc, as a mandrel. First, do one side of the flag then move a little and do the other side of the flag, etc. almost like weaving back and forth. The smaller the flag, the smaller the tubing diameter you need to use as a mandrel.

Finally, I like to add a few coats of clear flat enamel just in case water gets on it. I usually use Testors' "Dullcote" letting the paint dry between applications.



Other Methods

Some people use other methods, some involving using a thin fabric. (You can find out more on internet searches.) However, this is a "tried and true" method that I have developed and use on all my boats.

To the right I have several flags on my Schnellboot. ((Not visible is the FDR Germany flag.) This example has a number of signal flags. To get the flags to line up better (which I have not done here) you can apply superglue to the line (thread, etc.) while the flags are held in line.

