

Building Panel Lamps The Quick Way to Make Lampshades

by Brian McMillan



Brian has been involved in the stained glass industry as an instructor, designer, supplier, studio owner, author, and publisher for 20 years. He and his wife Lucinda have published the popular *Elegant Lamps* series of pattern books under the name Walrus Publications. Their newest release, *Stained Glass, the Easy Way*, combines an instruction manual with a variety of their favorite project patterns.

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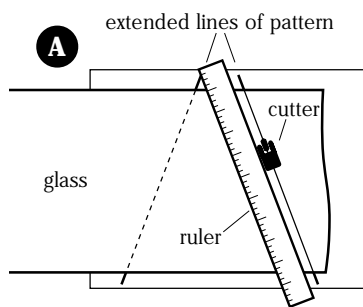
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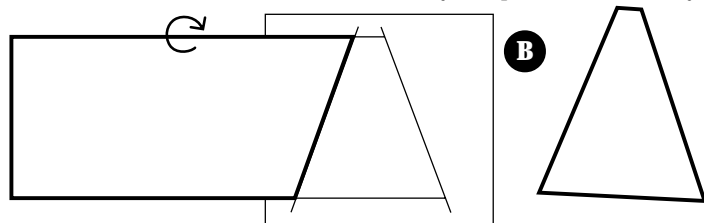
If you have done your homework assignment from our first installment in the last issue of *SGN*, then you are ready to start cutting the glass pieces for your lamp.

I recommend extending all of the straight lines of your pattern two inches longer using a fine tip ink pen. Since I usually use opalescent glass for the body of my lampshades, these lines are necessary to be used as a guide when lining up the ruler. Cutting the glass for a lampshade is the same as for any stained glass project. If you can see through the glass, simply place the glass over your pattern and cut as usual. If your glass isn't too dark or opaque, a light table is great. Or you can cut templates (paper or window glass) for all of the pattern pieces, trace around them on to the glass using a fine tipped marker and then cut the glass along the inside of the pen line.

I prefer to use a ruler (A) to cut all of the long straight lines for my lampshades. Remember to allow for the distance from the edge of your glass cutter body to the wheel. As usual, you score just along the inside edge of your pattern line so that you have the thickness of the pattern line to accommodate the foil.



I use this technique to cut most lamps. Start off with a strip of glass cut from a large stock sheet of glass. If you feel confident in your cutting abilities, have the strip cut the exact height of the panels of the lamp you are making. If you prefer to have a little room for error, have the strip cut $\frac{1}{2}$ " taller than the height of the pattern. I prefer the latter. After cutting your first panel (right and left sides), flip your glass strip over (B) and line it up with the right hand side of your pattern. You only have the left hand

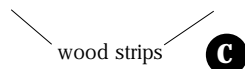


side—and perhaps $\frac{1}{2}$ " off the top—to cut off the rest of your panels. Remember that when you cut the glass in this manner, half of the

pieces are cut on the front of the glass and half are cut on the back. Therefore, it only works with glass that is relatively smooth on both sides.

Grind all pieces carefully to fit your pattern. Don't rush this part of the process. The goal is to see all of the black line of the pattern around the glass but not a lot of white. You need some space between each piece of glass so that you can adjust the glass pieces properly. I use $\frac{7}{32}$ " copper foil (black backed for any glass you can see through) for all my lamps. Occasionally, I will use $\frac{1}{4}$ " foil if the glass is thicker than usual or if the pieces are large and I want a wider seam. Use $\frac{3}{16}$ " if the glass is thin or the pieces are small and you don't want thick solder seams.

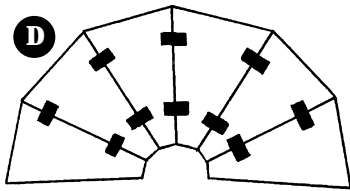
When any panel section of your lampshade has more than one piece of glass in it, solder each section together as you would a small stained glass panel (C).



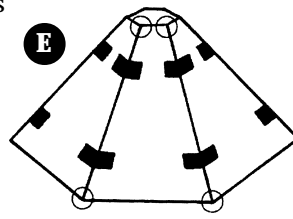
Wash and dry each panel before continuing to assemble the lampshade. Lampshades look best if you build up the copper foil edges on the top of the crown and the bottom of the skirt with solder. I usually do this before I assemble the panels together. To do this, get a drop of solder on the tip of your iron and draw it along the front surface of the copper foil and then the back surface. This is just to colour them silver. Now, hold the end level and apply solder one drip at a time. The goal is to end up with a smooth rounded seam that will add strength to the foiled edge. Remember that if the solder runs away from your iron, then the edge isn't level (horizontal) and you must adjust it accordingly.

Generally, you start assembling either the main body of the lamp or the uppermost section of a dome. Never start with the crown.

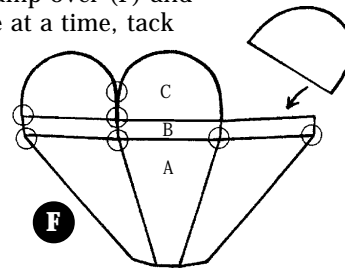
Lay the pieces of this section of the lamp side-by-side on your work table (D) with the outside of the lamp facing up and attach them together with 2" pieces of electrical tape. Electrical tape is best because it will stretch. If your lampshade has less than eight sides, leave a space between each panel of approximately $\frac{1}{8}$ " before taping.



Now, carefully lift the pieces up into a cone shape (E). It usually works best if you lift first from the center and then guide the two ends together and tape them. Tack solder this section together top and bottom as shown by the O's.



Now carefully flip the lamp over (F) and attach section "B" one piece at a time, tack soldering as indicated by the O's. Section "C" is attached next in the same manner. During this process, you will want to support your lamp in a cardboard box filled with crushed paper.



This is the time to install either a spider or a vase cap to your lampshade. I use spiders in lamps which have a crown and vase caps on lamps which don't. Use a vase cap that is ventilated. This allows the heat from the bulbs to escape. Before attaching the vase cap, I always tin it with a thin layer of solder so that it will be the same colour as the solder seams. To perform this operation, first flux your vase cap liberally, then with a very hot iron draw the solder in lines from the top of the cap to the rim. To install the cap, center it on the top of the lamp shade and solder it firmly into three or four solder seams. Place the lampshade on a base so that you can check to make sure that it is properly centered. If the vase cap needs adjustment, cut a 1" strip from an aluminum drink can, place it under the vase cap, hold your iron on the drop of solder until it is molten, slip the aluminum strip between the vase cap and the solder seam and hold it there until the solder hardens, freeing the cap for another try.

To install a spider, first of all center it over the top opening of the lamp with each spider arm lined up with the solder seam it will be attached to. With a felt pen, mark the spot where each arm touches the lamp and then cut each arm 1" past its mark (making it longer than the opening). Bend the arms to the same angle as the top section of the lamp, insert it so that the bent arms extend into the lamp and solder them securely into the solder seam. It is a good idea to solder 14 gauge brass or copper wire around the rim of the lamp for added strength.

Lay the main body of the lamp flat on your work table. Using 50/50 solder, flat solder the two inside seams of the lamp which are horizontal on the table. Rotate the lamp so that two new seams are horizontal and flat solder them, continuing around the lamp until all the inside seams have been soldered. I use 50/50 solder for this step because it melts at a higher temperature than 60/40 solder and it will help prevent the 60/40 solder (used in the next step) from melting through. Repeat the process using 60/40 solder and beading the seams to our desired height. Once the inside is done, prop the lamp in a cardboard box so that the outside solder seam that you wish to work on is horizontal and bead it using 60/40 solder. Remember that if the solder runs away from your iron, your lamp isn't level (horizontal). After soldering the lamp inside and out, add the crown, one piece at a time, and complete soldering.

Often, it is nice to add a decorative element to the edge of a lampshade. Consider soldering chain (such as that used in jewelry boxes), pull chain (those little brass balls that are used to turn lamps on and off), twisted wire or any found material which is solderable to your project's edge.

I always patina my lampshades. My preference is black or copper patina. If you would like to have a lampshade with brass solder seams, you can have it electroplated. Check with your supplier to see if they offer this service. If they don't, look in the phone book under 'Plating' for a contractor near you.

Any good, solid lamp base will do the trick. I recommend taking your completed shade to your local stained glass store so that you can try it on several bases. Look for one that suits the design of the lampshade as well as being the right height.

After 22 years, I still enjoy designing and crafting stained glass lampshades. I hope that this article, as well as the previous one, will inspire you to design and construct your own flat panel lampshades.