

STAINED GLASS LAMPS

We have had several questions plus one person that has written to us about making a stained glass lamp. We realized that this type of creation is one we have missed in our internet information.

Have you ever looked at a stained glass lamp and wonder how it was produced? Would you like to make a lamp for yourself or a gift?

Stained Glass Lamps are a beautiful piece of art/décor to your home that will last and shine forever. It is a design that you could be proud of – using your own creativity or a pattern.

You can check out sites like:

Delphiglass.com

Amazon.com

Chantalstainedglass.50megs.com

These are just a few sites that you can find on the internet that offer books with lots of lamp shade ideas. You can also find patterns – just need to search.

There is such a variety of designs – abstract, flowery, geometric. The choice is yours. If you can't find a design that you love- you can always design your own. You can draw freehand – to make one section of the shade to be repeated all around the shade. You can also check out computer programs that will help you design your own patterns- such as: Glasseye 2000. Illustrator that is another program that is good to do some creating.

Items or supplies that you will need:

Pattern of a lamp shade

Glass

Solder, soldering iron

Flux

Copper foil

Cutting and breaking tools

Carbon paper

Pencil, ruler, eraser

Jig materials

10. Masking tape

11. Light box or window

12. Vase cap-and wires for the lamp. Size will be recommended with a lamp pattern.

STEPS TO MAKING THE LAMP SHADE:

This is one form of stained glass that requires accurate cuts.

If you want the pattern and the shape to come together properly then your cuts need to be perfect.

Check out your pattern to make sure the lines are straight and the angles are accurate. Use the original pattern not a photocopy- A photocopy could distort the pattern. This could cause problems with assembly.

The first thing you should do is check your pattern for distortions- trace the pattern on a piece of paper. Fold the paper in $\frac{1}{2}$ and put it up against a light source. Line up the outside lines of the pattern. Do they line up?

If the lines don't line up then take an eraser and –erase the lines, then with a ruler and a pencil, draw a new line- so the lines will match.

You want your pattern to be the same on both sides of the pattern- symmetrical. Note. The outside lines must be the same or the design will not go together accurately.

2nd Step:

Once the pattern is accurate – it is time to break and cut your pattern pieces. It is recommended to trace the pattern pieces with a medium size pen, on a light weight cardboard. Number each pattern piece.

Cut out each cardboard piece with a box cutter or sharp knife or pattern shears.

Once all cut out lay the cardboard pieces on the pattern to make sure they fit properly. As you look at the pattern pieces on the pattern, you should be able to see the lines of the pattern. Being exact is the key.

3rd Step:

Lay your pattern on a wood board larger than the pattern – at least 2 inches on all sides. Put narrow strips of wood around all 4 sides of the pattern- nail down the wood strips. Check to make sure all sides are exact- by measuring each side from top to bottom. Also make sure the top and bottom are parallel you can check this with a level or just by measuring the left top with the left bottom – then measure the top right with the bottom right- to make sure they are the same distance apart. This is very important or your lampshade will not come together properly.

The Morton System is good for this – the layout blocks are already straight so this is good to check your pattern for accuracy.

4th Step:

Now is the time to start cutting the glass pieces. Cut one lamp panel at a time. Once one lamp panel is completely cut, the next step would be to grind, foil, flux and solder.

As you cut each panels and foil each piece- check it in the cardboard/wood template to make sure all the sides touch. Again this is very important for proper fit. So always check each panel before soldering. If the glass pieces don't touch then make the adjustments you need to – to have each side touch- whether it is grinding, or re-cutting.

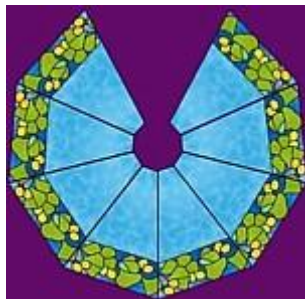
Once all sides are touching then go ahead and solder the inside of the pattern. Do not solder the edges at this time.

Move onto the next panel. When all the pattern panels are cut, soldered- then use soapy water and a cloth to clean both sides of the panels. Let the panels dry completely before moving onto the next step.

5th Step:

Now that all the panels are made it is time to lay them out on a flat surface. The sides should be touching, as mentioned above. The tops and bottoms should be even and forming a portion of a circle –

Since the lamp shade will need to be pulled up- there will be an opening on the flat layout between the first panel and the last panel.



6th Step:

Let's start taping the panels – use the crinkled masking tape.

Tape the top edges evening and the bottom pieces as well. At this time of taping you are forming the shade. Start the tape on the edge of the glass but when you get to the last panel – leave the tap hang over about a 1" - 1-1/2". Overlap the tap, have it go all the way around the lamp shade from panel to panel. This tape will help pull together the panels into the lamp shade.

Note: the crinkled masking tape is the best tape to use. It has the best adhesive to with stand the shape of the lamp shade just in case you don't get to solder at the same time or day.

7th Step:

Now that the lampshade is all taped, put your fingers inside the top of the shade and pull up. Lifting into the shape of the shade.

With both hands, pull the ends together at the same time pressing down the masking tape you left hanging over at the end of the “last panel”. This will hold the shape of the shade- in place. Press the masking tape to hold the last panel to the first panel.

8th Step:

Turn the lampshade upside down. This lets the shape fall into the natural shape. This is a good time to measure the panels distance.

This is to make sure the distance between the opposite panels are the same. Example: Measure panels 1 and 5, then 2 and 6 – opposite panels. This is the time to make any adjustments, while it is taped to even out the distance- to make sure the same with each panel.

9th Step:

Tack solder - at the bottom of the shade where each panel meets. The lamp shade is still upside down at this time. This is to hold the shade in its shape. This is not the final solder.

Now that the bottom is tack soldered, turn the shade over and tack the top in the same manner.

You have tack soldered the top and the bottom- so now is the time to tack solder in the middle of the panels- to add strength at this time. Do the tack soldering with the shade upright.

10th Step:

It is time to remove the masking tape. Take the tape off at an angle so as not to remove the copper foil at the same time.

11th Step:

Apply wire around the top of the lamp shade. 18 gauge wire is recommended. You can either have a friend help or use clothes pins to hold and bend the wire in place. Needle nose pliers are best to use to bend the wire into shape. Solder the wire in place keeping it centered all the way around. This is a slow and tedious job but needed. Take your time as you solder.

12th Step:

It is time to tin the vase cap. This step is important for several reasons:

It will make a weak joint if only soldered to the shade- There is a protective coating that is on the vase cap that will prevent a strong hold.

If planning on adding a patina and you don't tin the vase cap- the colors will not come out the same color.

Items you need:

Vase cap

Fine steel wool

Flux, paste version works great

Soldering iron

Solder, either 50/50 or 60/40

First Step:

Use the steel wool and “sand” down the vase cap completely- This will remove the coating that the manufactures put on the cap. Make sure you have removed the coating completely.

Second Step:

Take the flux and coat the entire outside of the cap.

Third Step:

Take the soldering iron and put it thru the hole of the cap- leave it there of several minutes to make sure it is hot.

Once it is hot enough- you will see the flux turning to liquid.

With the needle nose pliers- hold the cap and apply solder onto the cap- Do not use a large amount. You want to coat the cap not over power it with solder. As you apply make sure it is going on smoothly. Best to work from the top to the bottom since you are holding the bottom with the needle nose pliers.

Here are a couple things to keep in mind.

Make sure you have applied an ample amount of flux to the cap so that the solder will apply evenly and smoothly.

Keep the vase cap on the solder iron so that the cap does not have time to cool off. If you take it off it may cause the solder to be bumpy. You want a smooth surface.

This is a difficult process so don't lose faith. Keep working on it- It does take time to learn this technique.

If you plan to hang the lampshade where the inside would be seen- then it is recommended to tin the underside of the cap as well and the outside. If the inside of the lamp will not be seen then it is not necessary to tin the underside of the cap.

Fourth and final step of tinning:

Wash with warm soaping water and dry

13th Step:

One final time before soldering: Make sure the lampshade sits level on the work bench.

Put the vase cap on the top of the lampshade. It should sit just on the outside of the edge of the top. Move the cap around until it sits evenly on all sides of the top.

Tack-solder the cap in several places. Tack at the seams of each panel. This again takes time- solder may drip and it is not the easiest process, but keep with it until the solder sticks. You should apply this tacking on opposite sides of the cap- no need to go all the way around at this time.

14th Step:

Now that the cap is tacked on opposite sides, proceed to solder at each seam. The angle may be difficult so if you have a friend to help you hold that is great. If a friend is not available then you can put the shade at an angle to solder the cap to each seam.

15th Step:

Turn the lampshade on its side and solder the inside seams between panels. You can also tin the edge of the inside of the cap at this time.

To solder the seams on the outside of the lampshade- prop the lampshade onto something. This way you will be soldering at a parallel. If nothing is available again a friend would be helpful to hold the shade as you solder.

Turn the shade to solder each seam.

As you solder each seam, solder along the edge of the vase cap to secure completely. This will also tin the outside bottom edge of the cap.

16th Step:

Check the inside of the lampshade to check for any solder that may have run thru the seam as you soldered the outside.

If necessary use a cool damp towel on the inside as you solder to help the solder from running. It will also help the solder dry quicker. You may need to re-solder sections- by touching the hot solder iron to the seams that are not smooth.

17th Step:

Put the lampshade on its top and apply an 18 gauge copper wire around the bottom. This wire should also be tinned before applying. Use the same process as listed above for the cap. To attach the wire you can use the same process you used to attach the wire around the top.

Again this process takes time. It might be best to tack solder in place then go all the way around with a small amount of solder to hold it all in place.

18th Step:

Wash the lampshade. Wash with a brush to clean all seams.

Rinse and dry completely.

19th Step:

If you had planned to add a patina, this is the time to do so.

Then use car wax to polish the entire piece.

20th Step:

Put your lampshade on a stand or hang with a chain and enjoy.

See what you have accomplished? And your new lampshade looks beautiful.

Remember some of the process is difficult and time consuming but it will be well worth it as you see the light shining thru your shade.