Make Your Own Chop

Charles Morgan
Mossworks Studio
77 Moss Street
Victoria, B.C. V8V 4M2
CANADA

Introduction

A special mark used by an artist to identify his/her work is called a chop. The tradition of artists using a chop is very old and seems to have originated in the orient. If done carefully, such marks can add significantly to the aesthetic charm of the artwork.

There are individuals here where I live that will make a traditional oriental chop for you, carved on the end of small, square sectioned marble rod. Such chops are made to be used with a special very sticky, semi-solid red ink generally of Chinese origin. I consulted with one such individual, and he made me a chop using the Chinese characters which phonetically correspond to my name “Charles”. However, the characters were not unique to me, as anyone with the same name would have the same characters. Consequently, I never used that chop.

I had studied oriental brush painting for several years, so I got out my sumi ink, rice paper, and brushes, and just started doodling around. I came up with two original designs that I liked and wanted them made into chops. I cannot help you to design your own chop. But once you have your design, you can always get someone to make a traditional stone chop for you. You can also have a rubber stamp made with your design. There are many folks advertising such services on the internet. Rather than have someone else do it, I decided that I would like to try making my own chops for various purposes.

You can buy a piece of marble, soap stone, or similar material and try your hand at carving your chop in that. If you can find a scrap piece of the counter top material Corian, you can also easily carve that. To do the carving, use small engraving tools or a high speed rotary grinder with appropriate cutters or dental burs.

I was not happy with the results I obtained this way. These hard chops have their limitations. That sticky red Chinese chop ink takes a long time to dry. And the stone chops did not seem to work that well with other inks. And I could not use those stone chops to do blind embossing. So, here are some of the alternatives that I explored.

I. Xerox or Laser Print Transfer

Once you have your design, one of the simplest techniques for marking your prints is to use a xerox or laser print transfer. This method will work well for imprinting your chop on paper that is not already covered with ink or paint. As an example of this method, look at my print “Japanese red maple” in figure 1.

Figure 1: Japanese red Maple

You can start with a large hand drawn version of your design, the larger up to about 8 x 10 inches the better. Use a digital camera or a scanner to transfer the design to your computer. Then use some photo-processing program, like Photoshop, to put in the color that you want and to shrink the design to the size that you want. Starting with a large design and then shrinking it will make the resulting chop appear very sharply defined. Next, use the photo-processing program to make a mirror image of your design and print it out on standard paper. I use a color laser printer. If you use an inkjet printer, you will need to get a color xerox of your print, because the inkjet print will not transfer well.

Cut out around your reversed, colored, printed design, leaving a generous margin. Place your cut-out design, face down, on the artwork where desired. I find it useful

to hold the cut-out in place with a heavy weight, such as an old sad iron, or a brick wrapped in butcher paper. Place the weight on the generous margin, but not covering the area of the design. Use a cotton swab, such as a Q-tip. Dip the swab into acetone and then rub the back of your cut-out with firm pressure, being careful not to move the design in the process. You can carefully lift one edge of the cut-out to see how the transfer is progressing; you may need more acetone. When satisfied, remove the cut-out and you are done. The acetone evaporates quickly from the paper. If the design bleeds a bit, then after it is dry you can use a sharp snap-off blade knife to gently scrape away the bleed, followed by smoothing the surface with the back of your fingernail or a bone folder.

In a xerox machine or laser printer, the toner is actually fine plastic particles carrying pigments. The toner is placed on the paper electrostatically and then fused in place by heat. Acetone simply remelts the plastic, carrying it to the underlying paper. When the acetone evaporates, it leaves the pigmented plastic in place, just like the xerox machine or laser printer.

Acetone is very volatile and highly flammable. It does not seem to be a carcinogen nor a neuro-toxin. But inhalation can cause intoxication, headaches, and other unpleasant effects, and actone can cause skin reactions. So use nitrile gloves and lots of ventilation.There are special felt pens on the market for doing transfers, but to my knowledge, most of them use xylene or other highly toxic materials and should be avoided. Acetone is relatively cheap and should be available in hardware and paint stores.

II. Wood Block or Plexiglass Chops

I used wood carving tools and a high quality wood burning tool to engrave my designs into small pieces of plexiglass. The wood burning tool actually melted the plastic and left raised ridges on the surface. These raised ridges were easily removed with fine sand paper. I then cleaned up the design with a sharp snap-off blade knife. After engraving the design, I glued the piece of plastic to a small piece of wood to make it easier to use. I used a small, bench mounted belt sander to round the edges of the plexiglass and to trim the wood handle to size. If you are using a plexiglass rod rather than sheet, you can of course dispense with the wood handle.

I also carved my chops into a small block of MDF (medium density fibre board). You could use any hard, close grained natural wood, but scraps of MDF are easy to

come by, it is easy to carve, and it stands up well in long use. I tried both straight carving and also using a wood burning tool. I used a carving knife to clean up after the wood burning effort. The results were about the same in both cases. After carving the design, the blocks should be sealed with varnish or shellac.

Wood and plastic chops work well with the Chinese chop ink, very similar to stone chops but with the same limitations ... they do not work well with stamp pads. But they do work well with sealing wax, although the use of sealing wax on works of art is not always appropriate. Figure 2 is an example of plexiglass chops used with sealing wax. In figure 2, both seals were made with the same commercial sealing wax. The wax for the leftmost seal was melted in a spoon with an alcohol lamp. The wax for the rightmost seal was melted using the wick provided; you can see the resulting unsightly black residue. True sealing wax actually has little or no wax in it. It seems that traditionally it was primarily a mixture of shellac, pine rosin, turpentine, and coloring. Check the web for recipes if you want to try making your own.

Figure 2: Wax seals

III. Rubber stamps

Stone, plastic, and wood chops do not work well with stamp pads, at least in my experience. So I wanted to try my designs in standard rubber stamps. Rather than have them made, I decided to make my own. Since home made rubber stamps cost practically nothing, I was able make several variations on my basic designs.

In essence, the technique is very simple: you just cut your design out of rubber material and glue it to a wood base. For the rubber material, you can use old bicycle or automobile inner tubes or you can use a scrap piece of pond liner

material. To cut out the design, I used snap-off blade knives and cuticle scissors. The cuticle scissors were especially useful, as they are designed to cut small pieces of semi-rigid skin, and so work well on rubber sheet.

I made two basic types of stamps. In one type, the design was cut out of the background and the background was glued to the base, showing the design in negative. For this type, I first cut out a paper stencil of the reversed design and used rewettable water based ink (Speedball) to transfer the reversed design to the rubber. After cutting, any remaining ink was just washed away. See figure 3.

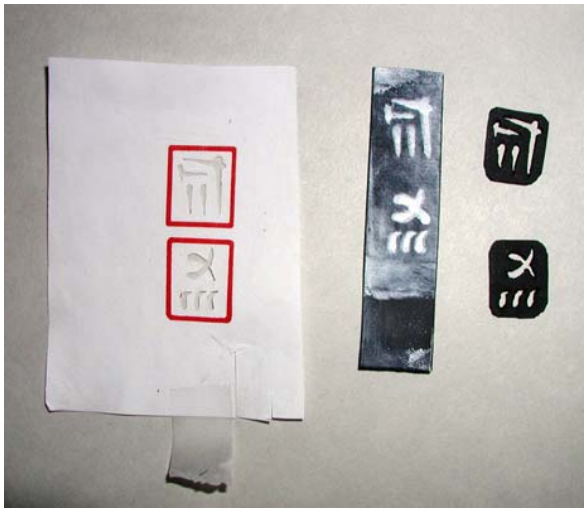

Figure 3: Cutting out stamp type 1

In the other type, the design elements themselves were glued to the base, showing the design in positive. For this type, I glued a paper copy of the design to the rubber sheet using a water soluble glue. I then cut out the design elements. See figure 4.

Figure 4: Cutting out stamp type 2

I then carefully washed the remaining paper off the design elements. Using repositionable glue the design elements were glued to a paper copy of the correctly oriented design; the paper was used to hold the elements in position for gluing to the block. See figure 5.

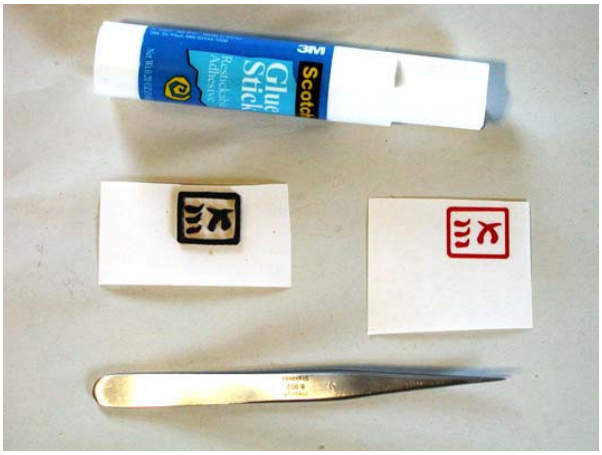

Figure 5: Positioning stamp elements

In both cases, once the rubber bits were shaped, they were glued firmly to the wood base handle. I find Weldbond works well for this application. Use a brush and apply a very liberal amount of glue to the block. Then press the rubber stamp elements onto the glue. If necessary, the rubber can be carefully rearranged while the Weldbond is fresh. Then set everything aside for a day or two to dry. In the case of the second type of stamp above, you will have to carefully peel the paper away from the rubber elements once the elements are firmly glued to the block with the Weldbond; the repositionable glue should release the paper easily. Figure

6 shows some of the stamps and their use with a black stamp pad.

Figure 6: Sample chop prints

These stamps work fine with colored stamp pads, as well as with the sticky Chinese chop ink. In Figure 7, the leftmost column is the laser printed design for comparison; the second column was made with a red stamp pad, the third column was made with a black stamp pad, and the fourth column was made with Chinese chop ink.

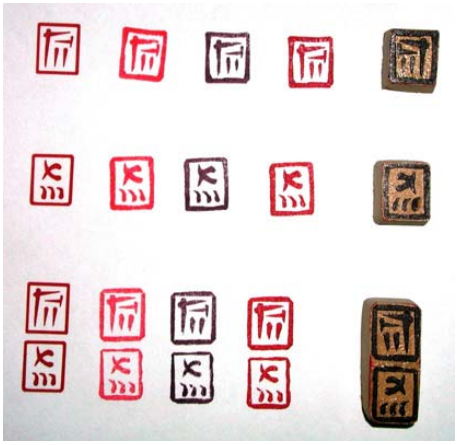

Figure 7: Chops with different inks

These stamps can also be used with standard relief inks. The ink can be carefully applied to the stamp with a thinly inked roller. Or the ink can be rolled out onto an inking slab (glass, plexiglass, butcher paper) and the slab used as a stamp pad to ink the stamp. Figure 8 shows the result of using relief ink to apply my chop to my print “Dark Lily”.

Figure 8: Dark Lily

IV. Embossing Chops

The chops so far discussed are all meant to apply ink to a flat surface. But it is sometimes nice to impress a chop design into the surface of the paper using no ink at all; this process is called blind embossing. No doubt you have seen official seals of this sort used by lawyers and government offices. They are usually of two piece design, one positive, one negative, held in a pliers-like device. In use, the paper is placed between the jaws, and they are squeezed together by hand, impressing the seal into the paper. But machinists and leather workers will be familiar with letter, number, and special symbol stamps that are used to stamp identifying marks into metal or leather by using a hammer. We can use the same idea and make one piece stamps that will impress a chop mark onto paper.

I made the stamps by etching the design into the end of a steel bar. You can use aluminum, but in my experience the etching process on aluminum, although faster, is much more temperamental, giving rougher results.

Before you panic at the thought of strong acids and dangerous chemicals, I will give you the recipe for the etching mordant I used. It is relatively benign, though poisonous if you drink it. It was used centuries ago to etch designs into hard steel, such as sword blades. The initial ingredients are mixed dry:

1. 5 parts of copper sulfate ... sometimes called “blue stone” ... comes as a coarse blue powder ... available in agricultural supply stores and large garden shops ... used in water as a foot bath to prevent hoof rot in sheep, cattle and goats ... also used in water as an anti-fungal spray for fruit trees ...

also available from pottery supply outlets as it is used in some glazes

2. 5 parts of table salt ... ordinary non-iodized table salt

3. 1 part of sodium bisulfate ... available from pool and hot tub supply stores ... used to reduce the ph of water ... one trade name is “ph Down”

Mix these ingredients dry. To etch a couple of stamps, a cup (250 ml) of the dry mixture should be more than enough. Put the powder in two quarts (2 litres) of water and agitate/stir until the water will dissolve no more. I put everything into a glass or clear plastic jug and just shake the bejabbers out of it. The result will be a clear, blue fluid. It will not harm you if you get it on your skin. It will not eat holes in your clothes, but it may stain them. If you drink a cup or so, it will kill you; so mark the container as poison and do not let anyone drink it.

For the steel, I got a two 3 inch lengths of 3/4 inch square steel bar from the scrap box of a local machine shop; I got two pieces because I was making two stamps. Or you can buy square stock or round steel bar at a building supply store. Alternatively, buy or scrounge a large bolt with a flat head and use the head of the bolt. You want plain, mild steel, not stainless steel and not hardened steel. Use a file or a bench mounted belt sander to smooth and polish the end where you want your design. Then use a scrub brush and detergent to remove all traces of oil and grime; try not to touch the end of the bar again with your fingers.

You now need to protect that part of your steel that you do not want to be etched away. I cut a paper stencil of my design and taped it in reverse to the end of the bar. I mixed oil based relief ink with a few drops of cobalt drier and then used a cosmetic sponge to apply the ink; it will need to dry over night. If you do not add the drier, I find the ink just never dries. You can use shellac, which dries more quickly; but you will not be able to see your design unless you add a colorant to the shellac. You might want to try using spray paint and stencil to apply your design. If you are good at mini-paintings, you can try just free hand painting your design in reverse on the end of the bar. In any case, you will also want to coat the sides of the bar to protect them from the mordant. I have not had good success using acrylic paints, as they do not seem to stand up well to this mordant. See figure 9.

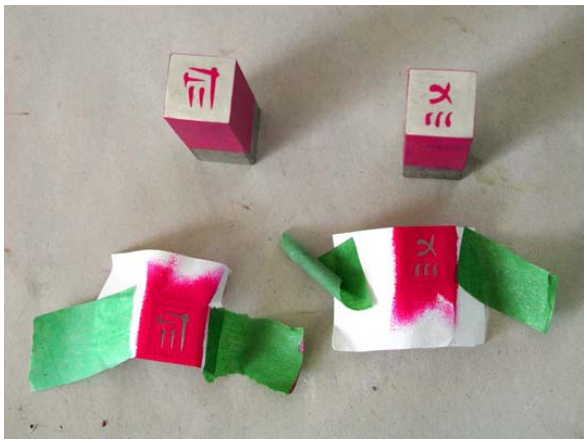

Figure 9: Etching prep

The etching process will take about 4 hours. To do the etching, use a shallow plastic tray, actually made for storing left-overs; of course never again use the tray for food. You want to suspend the steel bar so that only about 1/2 inch of the tip is immersed in the mordant. I taped my bars to a couple of bamboo skewers formed like a cross, resting on the edges of the tray. You want the tip of the bar to be suspended in the mordant, but not resting on the bottom. Once you have it arranged, start timing. Every 15 minutes or so, lift the bar out of the mordant to check the progress. Hold the tip under running water and use a soft brush to remove the materials that are forming there. The reddish brown granules are pure copper; the copper comes out of solution and the iron leaves the bar and goes into solution. Watch carefully for “foul biting”. If your design starts to be etched away, you will have to wash the bar off, reapply your protective paint, ink, or shellac, and let it dry. Then start again. In my case, I found that after two hours I had to redo my design; I just used the same stencil, re-inked, and let it dry. After about 4 hours total, your design should be standing about 1/16 of an inch above the surface. At this point you can use acetone to remove your ink or paint; use alcohol to remove shellac. Basically your chop stamp is done at this point, but you may want to use a bench mounted belt sander or a file to carefully round the edges.

You can save your mordant for future use, although it will be weakened and will take longer the next time. To dispose of it, dilute it severely with lots of water and pour it down the sink or toilet, followed by more plain water. If disposing down the sink, use your basement sink, as the orange scum will make stains that are difficult to get out; the orange scum is composed of insoluble iron hydroxides. Or, to avoid the orange scum, use an old paper coffee filter to filter the solution; the filter will quickly clog, so you will have to use several. Throw the used filters in the garbage.

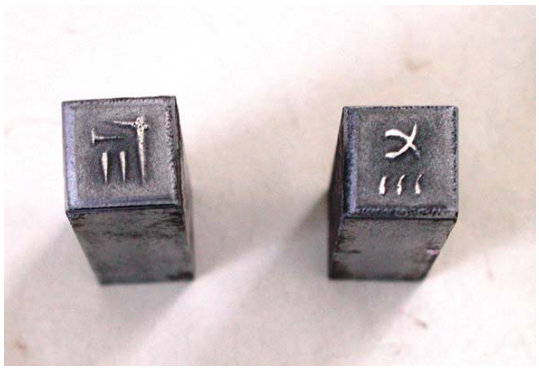

Figure 10: Steel embossing chops

See figure 10 for my finished stamps. You can see that there is a little bit of foul biting in the design, but it has no effect in use. To use the stamp, use a backing of matboard or similar solid card under your paper. Then just position the stamp on the paper where you want the embossing to occur and strike sharply with a hammer. See figure 11 for an example of embossing using my stamps. The embossing shown actually sinks into the paper, although because of an optical effect you may perceive it as standing up. I find the stamp to be much more versatile than the two piece, pliers type. The pliers gizmo is limited as to where you can place it on the paper, but the stamp can be put anywhere.

Figure 11: Embossed chop

Conclusion

If you are not interested in embossing, you can etch your reversed chop design into the end of a steel bar and use it just like the oriental stone chops. Just coat the whole end of the bar with ink, paint, or colored shellac, and let it dry well. Then use a needle to scratch your design through the dried ink or whatever. Then etch as above. The etching time will only need to be about 45 minutes or so, because you

do not need to have such a deep etch. In fact, the first chop I made was done this way.

I have not mentioned lino here. I know many people do very intricate designs in lino, but I personally have not had much success. But by all means give it a try if you are familiar with it. I also know that many people like to carve erasers and similar soft block material. In my experience such material does not stand up to long use. But if your experience is different, then go for it.

Well, that is about it. Making your own chops can be a fun project in itself, as well as having an aesthetically utilitarian value. I now routinely stamp my chops on envelopes and the back of artists trading cards. And those embossing stamps sure do add an element of professional sophistication to the usual art cards.