



To start, thank you all for your kind comments concerning my work, I really appreciate it. In this document I will try to show you all the “secrets” to making a custom razor handle, including how I do inlays. I will detail the step-by-step process and even reveal my favorite suppliers and equipment. If you ever thought, “I’d like to make MY own custom handle and not buy one from Mike”, then here is your chance. I’m not concerned about creating competition, if someone else wants to take up the torch and do this for a living then by all means knock yourself out. I enjoy handle making as a hobby, granted I promote it like a business, but that is only because it is such a small niche market that if I didn’t I would only be making handles for myself and would run out of projects pretty quick.

-Mike-



Equipment:

This includes, but is not limited to:

- Scroll saw – very important, if you want to go the cheaper route, get a coping saw. You need something that can handle curves. Dremel, Delta, Rigid, and Hawk are all excellent choices. Mine is a Rigid (\$180). \$80 - \$400
- Band saw – not necessary, but nice. A 10” is sufficient. \$59 - \$150
- Dremel tool – get one! Besides the scroll saw this is the most important tool you will own. Dremel now has a cordless that is variable speed up to 30,000 RPM. It is awesome. I think it is called the Ion, or something, it has a Lithium Ion battery. I paid \$60 for mine.
- Epoxy – very important. I like the quick setting type that is clear. \$3
- Sandpaper – very important. I have grits from 220 to 1500. \$0.29 - \$0.59 per sheet
- Micro Mesh – important. Micro mesh is a fabric abrasive sheet that is reusable. It has grit ranges from 2000 to 12000. Kind of pricey, for 6 sheets I paid \$20.

- C Clamps – you’ll see why later. \$5 each
- Hammer – got to whack the pins with something \$2 - \$20
- Pins – how else are you going to put your razor together? \$12 at ClassicShaving.com
- Drill press – you can pick up an 8” or 10” for under \$100. Obviously, you don’t need a big one. \$59 - \$100
- Wood – duh... \$20 +
- Celluloid – if you don’t like wood \$24
- Ivory – okay, now were getting nuts \$50 per pair - \$200 per pair
- Carbon fiber – now, just hold it right there mister! (this requires more work and equipment that is not detailed in this document) \$30 for a 12” x 3” piece
- Respirator – a lot of exotic woods cause allergic reactions \$35 @ Sears
- Buffing compound – make sure it is for wood and plastics \$5 @ Sears

So, if you add it up, your start up costs are around \$400+ and that only includes one piece of stabilized wood and one piece of celluloid. Not the most expensive hobby, but like any it can add up if your not careful. I’m more of a stabilized wood junkie than I am razor junkie.

The Process:

Okay, now that you have a general idea what tools you need, lets put them to use. Most of the time you will not start with a slab of wood all ready to put the final shape in. Most of the times you will need to “slab” a block of wood. When I order my blocks, I get 1” x 1” x 6” or 2” x 2” x 7”, but the thickness of the average scale is around 1/8”, so I need to thin it down or slab it. To slab your wood, the easiest it with a band saw, just set your fence so it is cutting 1/8” thick pieces. Personally, I don’t like using a band saw for this because every time the weld in the blade comes around it leaves a deep scratch that will need to be sanded out, so it just makes extra work. What I prefer is to set up a makeshift fence on my scroll saw and slab pieces that way (see pic). The scroll saw uses an up and down movement and will give you a very smooth cut, meaning less work sanding. The wood you see for my “fence” is just some pieces of untreated scrap maple I have.



Be sure when you feed the wood through the blade that you do not allow it to chatter up and down. Hold it securely to the bed and fence. Also, your choice of blade should be a single cut 10 TPI blade. The 10 is a little thicker, so it will not “wander” when you feed

the piece through. Another thing, make sure your blade is tight and run the saw at full speed while you feed slowly.

Okay, you got you slab, now take down the fence and put your blade guard back in place. Find a nice 15 TPI blade and put it in, tighten it down, adjust the guard to the slab thickness and prepare to cut. Oh, wait; did you trace your handle pattern on the slab first?



You did? Good, now get ready to cut. Have a piece of thin scrap or the other slab ready. I forgot, you do have your respirator on don't you? Always wear a respirator, because as I stated before a lot of the exotics are respiratory hazards.



Start at one of the long end and cut one side at a time. Use the other slab or piece of scrap to push it through the last 1/2" or so, pulling from the back rarely works and can cause chatter which will break your slab (trust me I know from experience).



Once you get both scales rough cut, then it is time to sand them to their final shape. I use special sanding strips that fit in the scroll saw, it makes it much faster, and you can use a file or sanding block.



After you have the shape exactly the same for both scales, you are ready to sand the scales. I like to use a C clamp and small scrap piece to hold the scale to the workbench. This will give you more stability and less chance of breaking a scale in half. Start with 220 grit and work out all the saw marks, then move to 320, 400, and 600 respectively.



Now its time to drill the holes for the pivot pin, only the pivot end, DO NOT drill the spacer end yet. Use a 1/16" bit for the normal DOVO pins that Ray sells. Don't forget to put a piece of scrap under the scales so they don't split.



After you have sanded the scales smooth and drilled your pivot hole, then you can use your router, or Dremel with router table attachment, and put a rounded edge on the scales. Dremel makes a router table attachment for about \$30.



Now, even though the scales are smooth and have rounded edges they still need to be finished. Stabilized wood will not accept varnish or finishes, so all I do is get out the Micro Mesh and sand to 12000 which will give you a glass smooth finish.



For those of you still awake and wanting more (can't be very many, I'm even half asleep) I will detail how you put an epoxy inlay in (on?) your handle. Notice I said **epoxy** inlay. For general inlays, epoxy inlays are the easiest; if you want something more advanced there are books I can recommend.

Okay, to start you'll need your quick set epoxy and something to color it with. Most of the time I use a special dry colorant, but a lot of times I'll use ivory dust or saw dust. Also, get out your Dremel tool and some engraving bits. I have three that I primarily use. One is a 1/32" bit (Dremel # 105), the smallest Dremel makes, also the 107, which is a round tip, and 110, which is a 5/64" square tip.



Now that you have your tools lined up and ready get out your pattern. Oops, forgot to mention that, you need a pattern. Draw something up, or print it off of your computer.

When you get the pattern ready, cut it out and glue it to the handle with Elmer's white glue, not epoxy.

Now you can fire up the Dremel. Just remember that the engraving bits cut best with their sides not the top, so angle your Dremel as you cut.

Once you get the entire pattern cut out, use some 220 grit sandpaper to remove the rest of the paper and white glue.

Now mix up some epoxy and add your colorant. Use a thin piece or scrap or a toothpick to fill the void you made, make sure to get it in all the cracks and crevices or else you'll have air bubbles. Let it cure for at least an hour, preferably overnight.

After it has had a chance to cure get out the sandpaper and start with 220 to take off all the excess epoxy. I actually like to start with the Dremel with a sanding drum bit, but you have to be extremely careful with the Dremel or you will wreck your scale and will have to start all the way from the beginning. I know, I've done it. Finally you will know when you've sanded enough, and then just go over the whole scale with micro mesh again and you are done with the inlay!

After the inlay is finished and the scales have a nice sheen it is time to put the pivot pin in. Make sure you have some Scotch tape on the blade edge to protect the edge and your hand. Feed the pin through the first scale and place a blade bearing on, then put the razor on the bearing, then the other bearing and scale and finally the collar.



Next, clip the excess pin off or use a Dremel with a cutting wheel (my preferred method). Then place the pinned area on something hard, I use the wrist pin from a Detroit Diesel. Make sure the blade is 90 degrees from the handle (I've found you get more consistent results this way) and begin tapping lightly on the end of the pin that has the collar. Some people like to use a tablespoon, I like a carpenter's hammer, use what you are comfortable with. Stop and check tension periodically. Never whack on the pin hard as this will cause it to bend and tension will be erratic (tight in one spot and loose in another). If the tension is too loose, lightly tap some more until you are happy.

Well, you're getting closer to done. Next, you'll need to install a spacer. First, close the blade into the handle and by feel make sure the scales are perfectly parallel. Find a piece of thin scrap and put it between the scales and trace the part you want to use.

Once you know how much scrap you need, cut off the rest. Now, get out the epoxy, and mix some up. Put a very thin coat on either side of the spacer, place the spacer between the scales, once again check to be sure the scales are parallel, and clamp the scales around the spacer. Now go watch TV for about an hour to let the epoxy set.



Alright, you're almost done. Take the handle out of the clamp and drill the spacer end. Put a pin through the spacer and follow the same instructions as you did for the pivot end (minus the blade bearings). Now, you will probably have some material that needs trimming around the end, so get out your Dremel or files (whichever you are more comfortable with) and trim it up.

Get out a felt wheel for your Dremel and the wood-buffing compound. Put some compound on the wheel touch up the spacer end and edges.

Now you are done, go hone, strop and shave.



Hope you had fun. In the next page or two, I will detail my suppliers. I use only the best (IMHO), so some of these might not be the cheapest around, but they have the highest quality products.

Suppliers:

Stabilized Wood

- **Wood Stabilizing Specialists, Int'l., LLC ("WSSI")**
2940 Fayette Ave
Ionia IA 50645
Toll Free in US 1-800-301-WSSI (9774) or 1-641-435-4746
www.stabilizedwood.com
WSSI is the best stabilizers in the business, I won't use anyone else
- **Arizona Silhouette**
P.O. Box 11170, Yuma AZ 85366-9170
928-329-8039 Mountain Standard Time
Hours of operation:
Weekday evenings 6:00PM to 10PM
Saturday 10AM to 9PM
Effective April 4 we are now in the Pacific time zone
Closed on Sunday
Bill Baumbeck gets his wood stabilized by WSSI, so its done right

Ivory

- **Warther's of Ohio**
PO Box 6
Dover, OH 44622
330-343-1865
www.ivorybuyer.com
David Warther is a 4th generation ivory carver with great prices and product

Other Handle Materials

- **Koval Knives**
www.kovalknives.com
- **Knife and Gun Finishing Supplies**
<http://www.knifeandgun.com/catalog/index.htm>
- **Universal Agencies, Inc.**
4690 South Old Peachtree Rd. Suite C.
Norcross, GA 30071-1517
U.S.A.

Phone: +1 (678) 969-9147
Fax: +1 (678) 969-9169
e-mail: info@uai.org

For new orders, you can call us at: 1 800 864-7824

- **Mother of Pearl Company, Inc.**
293 Belden Circle
P.O. Box 445
Franklin, NC 28734

Phone: (828) 524-6842
Fax: (828) 369-7809

E-mail: mopco@earthlink.net

- **Rockler Woodworking and Hardware**
4365 Willow Drive
Medina, MN 55340

800-279-4441

www.rockler.com

- **Classic Shaving**

For pins and other shaving paraphernalia

www.classicshaving.com

Well, I hope this helps, if anyone has any questions feel free to email me.

Happy Shaving!

-Mike-

