

## How to Attach Handles with Bolsters

# Northgard Method

We use the Northgard Method for mounting scales. It may take a little bit more time due to epoxy drying time but the benefits of this multi step process are well worth the effort. This method allows the knife maker to perfectly position each scale when trying to line up pin holes and get a nice tight seam between the scales and bolsters. Jason Northgard developed this method for mounting scales with bolsters but it worked so well we use it for all out full tang blades.



### Glue and Clamp Side #1

Step one is to cut the scale material to size. For our bolsters the back edge is square. Use a chop saw to cut the scale material to size and approximate angle needed. Both mounting surfaces should be roughed up with sand paper and de greased with an alcohol wipe. Test the fit between the scales and the bolster to make sure it's tight fit with no gaps. Glue one oversized scale side into position. The scale material should be pressed firmly against the bolster prior to clamping.

### Drill pin holes through Side #1

Once dry flip to scale side down, rest it on top of a piece of scrap wood and head over to the drill press. Clamp the knife for safety and drill the pin holes using the pre drilled holes through the knives tang as guides. We are going to use 1/4 inch brass pins so are drilling with a size "F" drill which is just slightly larger than 1/4"

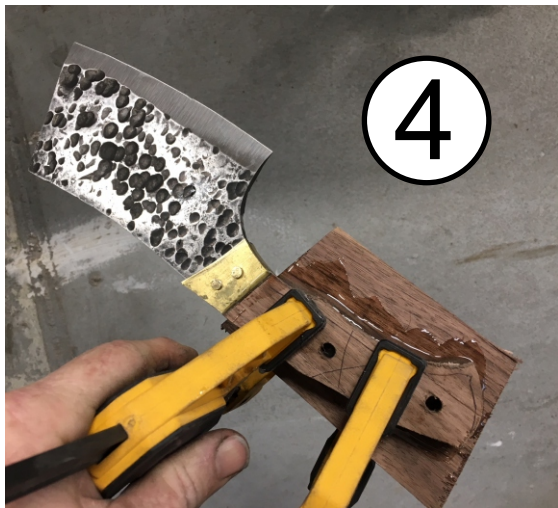


### Trim Side #1

Next step is to rough trim excess material off the scale with either a band saw or pin saw.







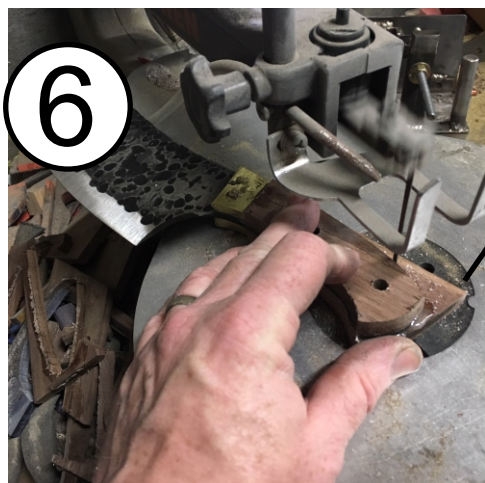
### Glue and Clamp Side #2

Epoxy the second side of scale material into position. Again if bolsters are used press the material firmly against the bolster before clamping and setting aside to dry. If bolsters are not being used align the front edge with side #1 which is already glued into position.



### Drill Pin Holes in Side #2

After the second side dries its back to the drill press. This time the knife is clamped and the drill uses the holes in side #1 as its guide. Be careful to align the holes perfectly prior to turning on the drill press.



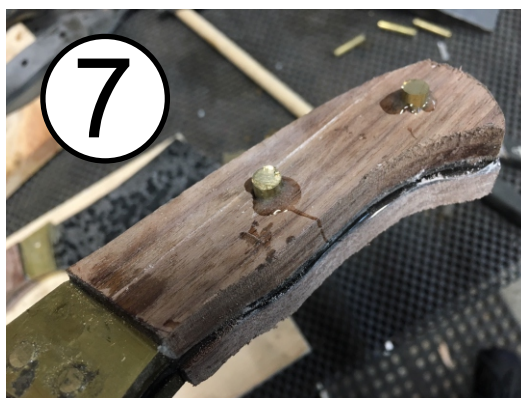
### Trim Side #2

Trim the excess scale material from side #2 with a scroll or band saw.



### Glues Pins

Pins can now be epoxied into place. If scales are wood the pins can be hammer peened. If the handle material is brittle epoxy alone is used.



### Shape and Finish Scales

Once the pin epoxy is dry the scales can be shaped with belt sander, disc grinder and flap sanding wheel, files and sand paper.  
[www.DIYeasycrafts.com](http://www.DIYeasycrafts.com)



Tight Seam