

## PADDLE BLADE ROUTING JIG

After reading of the love I bear for making paddles by hand, you will no doubt find what I am about to propose somewhat sacrilegious. This is a great example of how “anything goes” in the shop. Making paddles with hand tools is very fun and satisfying, but when I recently needed to finish a large number of them quickly, I turned to additional manpower and machine power as well. Many cabinet makers will attest to the fact that hand-planed work is very well and good, but if you’re trying to make the rent, then you’re cranking out plywood kitchens on the table saw and router table. I want to assert here that this brand of work, although louder and messier, can also be extremely satisfying. Let every man and woman decide what course of work they prefer, say I, without suffering the judgment of the purists.



1. The main obstacle to speedy work here is the carving time and material removal on the blade and spine area. I'll walk you through the development of my technique so you can see how ideas can continue to evolve. I'll undoubtedly think of (or be told by Lee) even more improvements to this method, until I'm satisfied that I have the ideal system for my shop/workers/materials. Since the grain on every paddle runs differently, shaping always involves some trial and error and customization of technique. In order to achieve these steps in a dependably repeatable fashion, I decided to employ a router with a template. Looking at my blank, I thought, “Perfect. I'll design the template to screw right onto the waste material outside my pattern line.” Josh, Thomas, and I scratched our heads and weighed our options, and I decided to go with a half template because of the carved center-spine detail—if I made a full-blade template, that spine would be too weak in the template and bend when the router pressed against it. So, much like the template for the paddle shape itself, I made a half pattern that could be flipped over the centerline to rout out both halves of the blade. Each side of the blade blank has about 1/2" of thickness to remove, so I chose to use 3/4" plywood for my template so that a 3/4"-deep router bit with a flush-cut bearing on top could be made to bear. I laid out the material to be left for hand shaping, cut out the rest of the template, then sanded the bearing surface smooth and fair.



2. I screwed the template to my blank, taking care to locate the screws in the waste area on the corners, and started with shallow passes of 1/8" depth or so. I carefully plunge the spinning bit into the field of material near an edge of the template until I can see that the bearing will securely ride on the template's inner wall, then lock my plunge mechanism and complete a pass at that depth. I then execute subsequent passes, increasing the depth by 1/8" or so, until I have reached my full depth of 1/2". With the opposing grain directions in the red oak, I make my last pass lighter to try and avoid tear out.

3. Once I have done one side, I vacuum all the sawdust and shavings out of the setup for ease and convenience. I then unscrew the jig, flip it over, and place it on the centerline. I screw it down again, using a different set of screw holes, and rout the second side out. It's pretty weird-looking and counterintuitive, with the finished blade appearing as the bottom of a dish that has been created by the excavation of material. I flip over my blank and repeat the process on the other side, so it takes me four rounds with the template to do one paddle.



4. I next take the paddle to the band saw to cut away the waste outside of the original profile line. Since doing so will remove the support on which the paddle is riding, I cut a couple of pillow blocks and stick them in the blade cavities with double-stick tape. This way, when I cut the waste to just a sliver outside of my line, the paddle will still be stable and flat on the saw table.



5. Now I am nearly done, but I have a weird, thin wall of material to remove all around the perimeter of the blade. I clamp the paddle to the table, still using the pillow blocks to support the blade area, and trace the outline of the routed area with a black pen so that when I pare down to the blade's thickness I can still see the accurate pattern line. Using mostly a chisel, I carefully



follow the grain to pare away the thin perimeter wall. See in the photos how when I want to dig in, I use the bevel down; and when I want to pare, I have the bevel up (see the illustration on page 30 in your book). Change direction often and be careful not to chase the grain into the blade area. I pare the waste away only down to the thickness of the routed blade.



6. Using mainly a spokeshave, I then trim the remaining blade waste down to the line I drew. A coarse sanding block also comes in handy around the tip. I then lay out the transition along the top sides of the blade at the throat. I just do this by eye, get it to a place I like, and then repeat it on subsequent paddles.



7. The template worked masterfully, but there remains some handwork to accomplish. My router bit is too large to fit in the top corner of my carved detail, so instead of switching out to a smaller bit I choose to carve those corners and retain a bit of the handmade look. Similarly, I employ a few different gouges and a shoulder plane to bevel and contour the curved details until they look fair and attractive and organic. I taper the center spine from the shaft thickness down to just slightly thicker than the blade.



8. I also draw yet another centerline around the outer edge of the blade and use a block plane and scraper to very lightly taper the blade thickness from the center out to the edge.

9. Now this really is a sacrilege: Using a 1/2" round-over bit to remove a lot of the waste from the shaft saves me some spokeshave time, which is just stupid because *that's my favorite time*. (That's like putting your al dente pasta in a blender to save you the chewing time—the pleasure of masticating is the whole point of that noble noodle form!) Nonetheless, it goes quickly, and I still make a few passes with the shave to correct the ovular shape and to add a slightly faceted feel. Once I'm done, Josh busts out a bit that he and Lee had used on some circular stool edges that was an *ovular round-over*. Bastard. At least it's good to know we can do it quickly and accurately if need be.



This idea worked well, but I felt there was way too much fussy work involved in cleaning up the blade edges. I looked back at my steps and tried to discern how these extra steps could be streamlined. The problem originated with the extra blank material I had left on the blank so I could screw my template down. If I could do away with that, it would save a lot of that persnickety cleanup. So I changed up the technique and made two templates, one for each side of the blade, right and left. By “legging” the templates up at the same height as the blanks thickness, I was able to clamp everything down securely enough to rout safely. This allowed me to cut the paddle out of the blank first, then use the template(s) to rout off the excess, so the edges of the blade were then ready for final tuning rather than requiring those extra steps.

This is working well for us now, but chances are we'll come up with even more of a streamlined process as we continue to make paddles at the shop, especially once I get the sharper noggins of the team involved. As you can infer from this chapter, every project has more than one ideal set of solutions to the problems at hand. If you discern a better way to do this, please enjoy your cleverness but keep it to yourself, as it will only upset me. You can tell Matty. He is even-keeled.