



Joshua Friend

Incorporating a rim of contrasting wood adds flare to turned bowls. I've always loved the dramatic effect of using contrasting woods together, and a bowl is a great application for achieving that look. Adding a rim is relatively simple—if you can turn a bowl, you can turn a rimmed bowl. The main challenge is to create a glue joint that will last. Here's how.

Wood selection

For dramatic effect, I like to use wood species that highly contrast with one another, such as black walnut and maple. I've also had good results combining butternut with walnut, cherry with walnut, and even cherry with pine (though nowadays I prefer hardwoods). Experiment with the woods you like to turn to see which combinations are appealing.

Equally as important as the wood species is the glue joint where the rim meets the bowl. To achieve an imperceptible-to-the-touch seam, you must use wood that is sufficiently dry. If you cut the bowl from green wood (an unseasoned log), the wood must be allowed to dry so that its shrinkage and warping can occur prior to joining with another piece of wood. This kind of wood movement—the reshaping of a rough-turned bowl that occurs during drying—would ruin any glue joint, even if you've prepared the two surfaces to mate perfectly. The other kind of wood movement—sea-

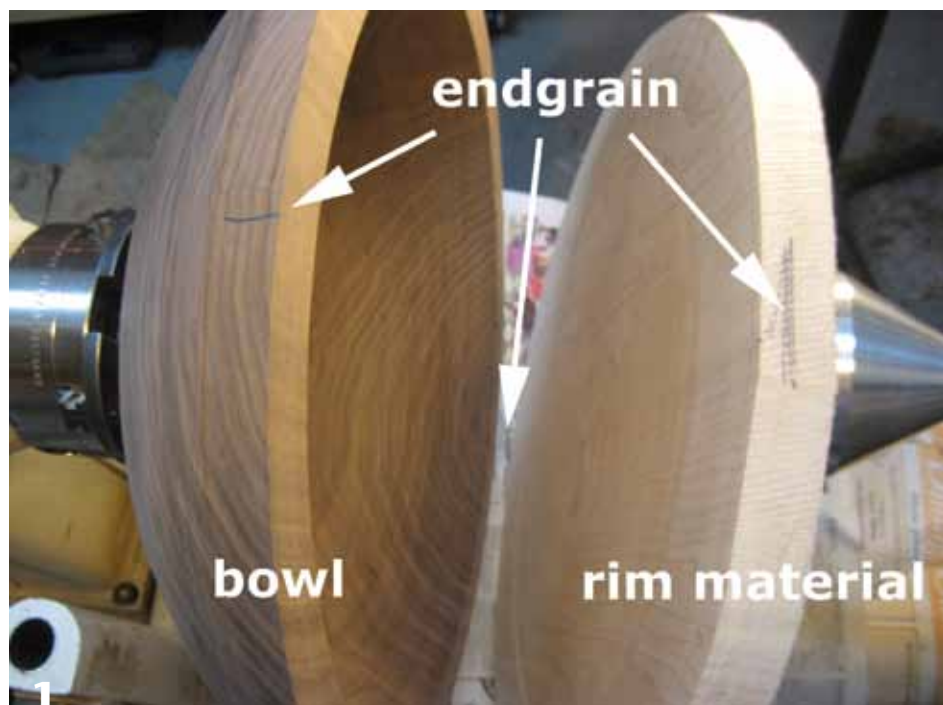
sonal expansion and contraction that comes with changes in humidity—will not damage a well-fitted joint if the grain is oriented properly. I do not use a moisture meter to gauge a bowl's readiness, but rather notice and feel when the wood has stopped shrinking and losing water.

As with the wood for the bowl, the rim material can also be wood that you have rough turned and dried. Store-bought, kiln-dried dimensional lumber is also fine to use as either bowl or rim material, but let it sit in your shop for a few weeks before using it; even kiln-dried wood needs to acclimate to your workshop humidity and may warp and move in the process.

Glue joint basics

A woodworker once told me that “glue is your very good friend,” and this is true, but keep in mind neither extra glue nor extra clamping pressure takes the place of a perfectly fitted joint. When thinking about the bowl-to-rim glue joint, the principles of joining boards edge-to-edge apply. The main difference for bowls is that the bowl-to-rim joint is a lamination (one surface on top of the other), but that distinction makes no difference, as long as you orient the grain of both parts parallel with each other.

Think of a solid-wood bowl as a board with a different shape: Instead of being flat, it has curved sides. You can still identify the direction of the grain in a bowl, just as you



1 Orient two mating surfaces so that the grain runs in the same direction.

can in a flat board. So, before gluing the rim material to the bowl, identify the endgrain of the bowl by finding where the growth rings go around concentrically. Match the bowl's grain direction with that of the rim material (*Photo 1*). When the grain runs in the same direction, both pieces of wood expand and contract similarly. A perpendicular grain orientation would fight against the natural expansion and contraction that occurs in wood and the glue joint will eventually fail.

I use type II or III wood glue for their water resistance and superior wood bonding. With these glues, it is not advisable to rough up the two surfaces for better adhesion (that's a myth). Also, it is sufficient to apply glue to only one of the two surfaces (not both), as long as you spread the glue thoroughly on the surface so there are no dry spots. Finally, it is not necessary to use any kind of spline or fancy glue edges such as rabbets. Well-mated, dead-flat

surfaces will produce a tight, lasting joint.

Prepare the rim material

I like to use a single dry board for the rim material. Depending on the diameter of your bowl, however, it may be necessary to glue boards edge-to-edge to make a rim piece large enough. (If that's the case, you could make the joining look more intentional by inserting a detail in the glue joints.) Place the bowl onto the rim board upside down and mark the circumference of the bowl onto the rim board. Then cut out that shape, being careful to cut about $\frac{1}{2}$ " (13 mm) outside of your line. This extra material will be cut off later at the lathe (*Photos 2, 3*).

Mount the rim material onto the lathe to cut a flat gluing surface. For smaller-diameter pieces, it is sufficient to use a screw chuck for mounting, but larger diameters require a faceplate for better support at the outer edges where the cutting ▶



3 Measure, mark, and then cut the rim material to approximate diameter. Mount the rim material onto the lathe.



6 Prepare the gluing surface of the rim material with whatever method works best for you.



7 Use a straight edge across the entire diameter to test for flatness, not only at the rim area, but also across the entire board. It may be helpful to shine a light from under the straight edge to highlight any gaps.



8 Mount the rough-turned bowl onto the lathe. A jam chuck along with the tailstock for support works well. Turn the tenon and outer walls back into round.



9 Remount the bowl into the 4-jaw chuck and turn the rim dead flat in preparation for gluing on the rim material.



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11 Minor adjustments to the bowl's rim and to the rim material can be made by hand sanding against a surface you know is flat.

will occur. Without proper support, your cutting force can cause deflection of the wood, which will make it more difficult to create a flat surface. You do not need the entire span of the board to be flat—only the outer edges where the bowl's rim will make contact. So, identify the area you need to make flat (allowing a little extra that can be trimmed off later) and slightly undercut the center portion of the board. This will allow you to use a straight edge to get a reading of the flatness of the outer edges.

To fine-tune the surface, I like to either sheer scrape with a bowl gouge turned on its side and/or use a heavy, straight scraper. Another option is to use sandpaper wrapped around a flat block (*Photos 4, 5, 6*).

When testing for flatness, it is not enough to test only one section of the rim material at a time; you may

find that area to be flat, but it also must be flat in relation to the opposing rim across the board's diameter. Therefore, hold the straight edge across the whole piece and seek flatness at both ends. Continue to take small amounts and turn off the lathe to test the rim board until you have achieved flatness in the area that is to be joined to the bowl (*Photo 7*).

Prepare the bowl

If you are using a bowl that you have rough turned and dried from green wood (as opposed to store-bought, kiln-dried wood), first mount it onto the lathe for truing the outside. This step is necessary because the bowl may still have a wax emulsion sealer on it, and the bowl and tenon will have moved out of round during the drying process. To mount a dried, rough-turned bowl, I use a jam chuck

with the tailstock brought up for support (*Photo 8*). The interior of the bowl is placed over a scrap block that has been mounted and turned to an appropriate size and shape of the bowl, but generally a bit smaller than the diameter of the bowl. If your bowl is small enough, sometimes the chuck itself can be used inside the bowl instead of a scrap block.

Use sufficient pressure from the tailstock to trap the bowl securely against the jam chuck. With the bowl in this orientation, true the tenon and the outside of the bowl.

Remove the bowl and remount it by grabbing the trued tenon in a 4-jaw chuck so that the rim and inside of the bowl can be cut. For now, only cut the inside enough to remove the wax sealer and bring the bowl into round. Leave the walls thick enough to final-turn later, after the contrasting rim has been glued on.



12 Various clamping methods can be used.



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If you are using dimensional lumber for the bowl material, the outside truing process is probably not necessary. Simply mount your bowl into the chuck so the rim can be prepared. The object is to cut the rim so that it is dead flat across the entire bowl. As with the rim material, test for absolute flatness with a straight edge held across the diameter of the bowl. Fine-tune the rim surface until you have achieved flatness (Photos 9, 10).

Dry-fit the bowl and rim material by holding them together with the grain running in the same direction (parallel). If adjustments need to be made, now is the time, either on the lathe again or, if your bowl is small enough, by sanding the piece using a full sheet of 80-grit paper against a dead flat surface (Photo 11). When you are satisfied with the dry fit, it's time for glue-up.

Clamping methods

It's been said that the lathe is a very expensive clamp, and indeed it is a great tool for clamping the rim to the bowl. Other clamping methods include applying weight with a heavy object such as a sandbag, clamping across boards, using deep-throated clamps, or using a drillpress by raising the table height to press the pieces together (Photos 12, 13, 14, 15). I've had success with all of these

methods. Remember, though, that you don't need excessive clamping pressure if you have created a well-fitted joint—just enough to get a little glue squeeze-out all the way around the bowl.

Finish-turn the bowl

After the glue has cured (at least 24 hours in most cases), you can begin finish-turning your rimmed bowl. Start by mounting the bowl by its tenon into a 4-jaw chuck. Turn away the center portion of the rim material. I do this with a parting tool, cutting straight in so that the remaining waste disk can be used as rim material for another, smaller bowl (Photo 16). Slow down the lathe's speed as you near the end of this cut so the disk does not fly off when you cut through. In fact, I like to turn the lathe off and pull the disk off by hand (Photo 17).

Finish-turn and sand the bowl as you normally would (Photos 18, 19, 20). Apply the finish of your choice and enjoy your new creation. ■

Joshua Friend, a woodturner and writer, is a member of the Nutmeg Woodturner's League, an AAW chapter that meets in Brookfield, CT. See jfriendwoodworks.com for examples of his work and contact information.



17 A parting tool is perfect for removing the center part of the rim material, which can be used on another, smaller bowl.



20 Finish-turn your bowl.