



Woodsmith[®] PLANS

10 RULES FOR CASE ASSEMBLY



10 RULES FOR CASE ASSEMBLY



When it comes to building a case for a project, cutting the joinery is sometimes the easy part. The challenge comes when you get out the glue and clamps for the assembly. So, to take some of the stress out of the job, I follow a few simple rules.

1 THE RIGHT SPACE. You need to give yourself plenty of room to work. The key is to have clear access to all sides of the assembly. So whether you're working on the benchtop or the floor, clear things out of the way and give

yourself room. And be sure to leave space for the clamps you'll need.

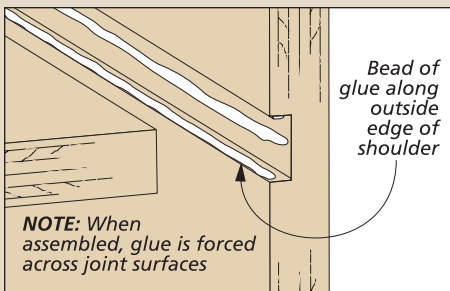
2 A DRY RUN. When cutting the joinery, it's easy to take the fit of some of the joints for granted. You figure if one fits, they all will. But before starting the assembly, it's a good idea to test the fit of all the joints.

One thing to remember is that glue makes wood swell. If a joint is hard to assemble "dry," you'll really have a problem once glue is applied. Shoot for a snug, effortless fit.

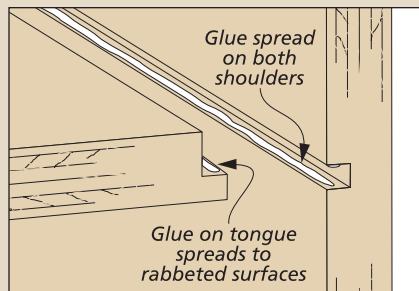
3 CLAMPS AT HAND. Sometimes it's difficult to know how many clamps you'll need for an assembly and where they should go. If this is the case, do a quick run-through of the clamp-up. This gives you a chance to gather the clamps you'll need, adjust them to the right length, and find the best position for them.

4 PADS & CAULS. Clamping pads and cauls are important to a successful assembly. If you don't have pads on the heads of your clamps, thin strips

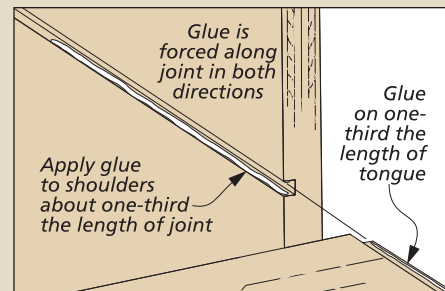
PUTTING GLUE IN THE RIGHT PLACE



Dado. A bead of glue along the shoulders and bottom of the dado will spread throughout the joint with minimum squeezeout.



Tongue and Dado. Put glue along both shoulders, plus a bead along the "rabbeted" side of the tongue.



Adding a Divider. When sliding a divider into a dado, apply glue only to the leading edges of both halves of the joint.

of wood will keep them from damaging the case. Cauls are heavier pieces and actually help distribute the pressure applied by the clamps, as shown in the photo at right.

Whichever you need for the job, have them ready and at arms length. You don't want to be running to the table saw to cut a caul to size as the glue is tacking up.

Here's a time-saving tip you can try: If you tape the strips to the workpiece (lower right photo), you won't have to hold them in place while trying to position a heavy clamp.

5 THE INSIDE STORY. Every once in a while, I'll catch myself starting an assembly before I've taken care of some of the "inside-the-case" details. This can be as simple as a little sanding or something more serious like forgetting to drill holes for shelf pins or hardware. It's better to double-check these details now than have to try to fix the problem later on.

6 IN STAGES. Whenever possible, I tackle large glueups in several stages. This lets you concentrate on assembling just a few joints at one time. It's a lot less hectic and I find that the job turns out better.

7 SLIDE INTO PLACE. And along the same lines, I find it's easier to add interior horizontal dividers last. You can simply slide them into place once the main case has been assembled. Again, it's a good idea to test the fit to make sure the joint doesn't bind before adding glue.

8 THE GLUE. The glue you put in the joints is what holds everything together. So it makes sense to think about where to put the glue and how much to use (the box at the bottom of the previous page offers a few pointers). Consider where glue will do the most good and also where it might cause hassles. Heavy squeezeout on the hidden part of a case isn't a problem, but where it will be seen is a different matter.

9 SQUARE IT UP. After applying the glue and tightening down the clamps, the next thing I do is check for square. And the best way to do this is by comparing opposite corner-to-corner measurements (photo below). If the two measurements are the same, you're assured the assembly is square. If this isn't the case, there are a couple things that I look at. First, see if the assembly is sitting flat. Then check



▲ The stout cauls used for this partial assembly are slightly bowed through the middle. This spreads the force of your clamps across the entire joint.

your clamps. The box below explains how to make adjustments.

10 A ONCE OVER. Finally, it pays to give the assembly one last close look. Check to see that all the joints are pulled up tight and look for glue squeezeout that might need attention. Small beads of glue can be left to dry and then popped off later. But I do like to clean off any major squeezeout at this point.

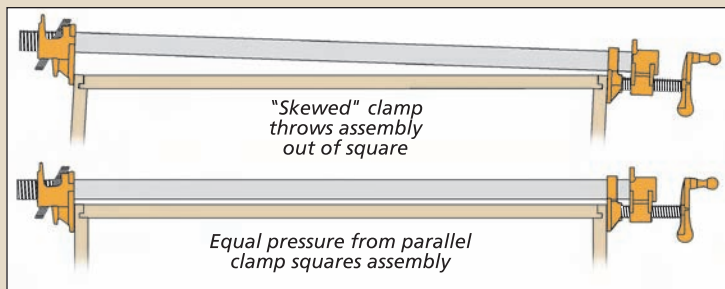
After making sure the assembly isn't disturbed before the glue dries, I know that when the clamps come off, the results are a sure thing. **W**

HOW TO: SQUARE A CASE

When my corner-to-corner measurements (right photo) tell me that a case is out of square, the first thing I do is check the alignment of the clamps. As shown in the drawing below, a clamp that's "skewed" across the case exerts unequal force on the joint and distorts the case.

If you find a clamp that's misaligned, simply adjust its position

so that it's parallel to the case and applying pressure directly over the joint, as shown in the lower drawing. Now take another set of corner-to-corner measurements, and the results should be better. But sometimes, you'll find that after realigning the clamps, the case will need a gentle push on one corner to persuade it into square.



▲ Comparing opposite, corner-to-corner measurements is your best bet when checking a case for square. If the measurements are equal, you know the case is square.