



Glue and Clamp

This part of the process can be the trickiest. The better the bond the longer the didge will last, and the less you will see the join.

Too much glue goes everywhere - plus it is very difficult to clean glue inside the bore! Too little glue creates a poor joint as does applying too much pressure. Work out exactly what you are going to do before you start to prevent things going wrong.



How to Make a Wooden Didgeridoo
Part 6 - Glue and Clamp

Checks Before Gluing

Before gluing the halves together, I put them together to see what is any twisting or warping has occurred. The surfaces to be glued are lightly sanded using sandpaper wrapped around a 'straight' rectangular block. This helps to level and make the surfaces flush with each other.

I also do a dry run by placing the halves together and loosely applying the clamps so I can get an idea of any potential difficulties. Dust is removed from the wood with an unused paintbrush (unused for painting that is!).

Now is the time to address anything else inside the bore that may cause future problems such as

naughty knots, i.e. encased knots with bark that may become, or is already loose. I treat these with epoxy resin. I use a two tonne breaking strain resin to bond the surfaces together. Depending on what I am attending to, I may add fine sawdust to help fill gaps. If it is impracticable to 'fix' something like a knot just by bonding, I will remove it and insert a plug from a similar coloured piece of wood and bond that with epoxy resin, the plug should be air tight if made snug and tapped lightly into the hole, however, the resin fixes it in place and gives piece of mind.

Depending on your choice, if any, on what to seal the bore with now may be a good time to do so. If using epoxy resin, or PVA doing this part of the process first gives you more control over the end product. It is a matter of personal choice. I use Danish Oil to coat and seal the bores of my didgeridoo's and I do this after the didgeridoo is constructed.

On with the Gluing

Once the glue is applied I like to have all the clamps on and adjusted to the right pressure as quickly as possible. I have had occasions in hot weather where the glue has started to set and the resulting joint was awful. I have also encountered problems where, again, the glue started to go off because I couldn't find the right size clamp and get it adjusted quickly enough. When applying a clamp to one end, the other end may slide apart sideways, or try to pull apart. Allsorts can happen, so I have learned to be prepared!



I work out how many clamps I will need and line them up by the side of the didgeridoo, then apply the glue using a small strip of wood left over from shaping. Often I will mark where I want the clamps on the wood so that I do not get the different sizes muddled up, for example a didgeridoo with a 6" (150mm) diameter bell may taper down to 2" (50mm) with up to seven different sized clamps along its length. I try to use clamps as near as possible the same size as the part of the wood because the adjustments tightening it up and undoing it are so much quicker.



Once applied, I line the two pieces up and place a jubilee clip to each end and the middle, ensuring that at all times the pieces are level and even with each other. The two end clamps are pre-adjusted so that they just fit over the ends and are tightened just enough to hold the wood in place. Having applied on in the middle and checked alignment, I proceed to apply all the other jubilee clips, so that there is one every 2"-3" (50-75mm). I place extra clamps in places that may be under stress such as the tighter curves in the wood or areas where it may be weaker i.e. the knots. All adjusted to the same torque and fairly loose, I then start

to increase the pressure evenly over the didgeridoo.

If the glue has been applied correctly there should be a bead of glue forced out from the joint. Be careful not to use too much glue, or let it start to set otherwise the joint will be unseemly (pardon the pun), and don't apply too little, otherwise, the joint may be dry which may cause it to split at any time after the didgeridoo has been made.

The right pressure to use is something that you get a feel for. I experimented with different amounts of pressure until I was happy I felt I had it right. At first I used a spanner to tighten the clamps, but this took far too long, so I then speeded it up with a socket ratchet. The process was still slow however so I then started to use a cordless screwdriver with the socket attachment. The powered screwdriver is not only fast (and has two speed settings), but has adjustable torque settings. I apply the clamps on the lightest setting, and then once everything is correctly aligned, I increase the pressure evenly over the wood, in stages, until I am happy I am near the right pressure. When this is so, I will adjust each (again evenly) by hand to ensure the pressure being applied is even and the right amount.

The didgeridoo is then left for 1-2 days depending on the temperature before the clamps are removed. They could be removed earlier, but I like to think that the extra time gives the timber time to settle and with the clamps on it is less likely to warp or split. I don't know if there is any strength in this but I do it anyway.

After the glue has 'gone off' i.e. hardened, it is possible to play the first note of the didge. You should wait until the glue is completely cured, but I can't resist a quick little toot - it always gets me excited hearing the first sound of something I am create.



De-clamping

Having left it for a day or two to cure, I take the clamps off, ensuring I do so evenly. If all is well, you should have a bead of glue running down the length of each side of the didgeridoo, with gaps where the clamps were. I use a sanding disc with a slow speed and very little pressure to remove the excess glue. I use worn out discs from the shaping of the didgeridoo because as they are worn out, they are not so abrasive and remove less wood and therefore will not affect the shape of the didgeridoo. Having removed the excess glue I give the remainder of the surface of the wood a quick skim with the same disc to make it all an even texture. The didgeridoo is now ready for sanding, sealing and finishing.

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