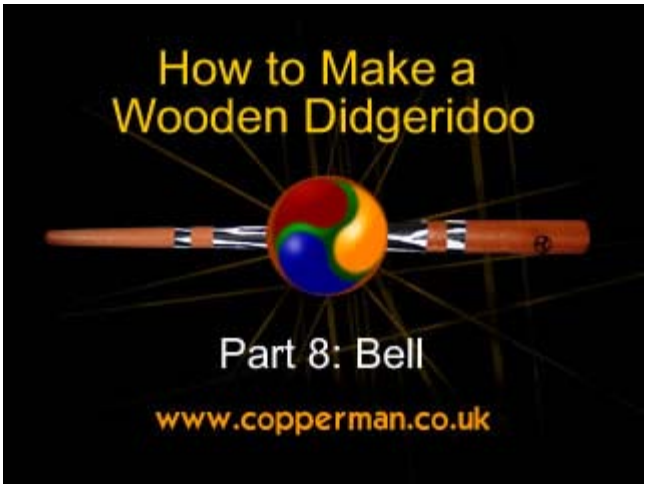
Bell

The size, shape and proportion of the bell affects the sound of a didgeridoo

Resonance, volume and pitch can all be altered by changing the bell. Changing anything has both positive and negative aspects, for example, the larger the bell the louder the didge, however, too large a bell and the mid range tones/frequencies are affected/reduced.

Widening the bore by removing extra wood from the insde walls will alter the pitch by raising it slightly.s

Depending on how the wood was hollowed will determine how much work is needed on the bell. If you are happy with the sound why do anything. When fashioning the bell, I try to get as near as possible to the finished thickness when hollowing with the arbortech. Invariably I will tinker with the bell regardless, if nothing other than sanding it smooth because it looks good and appears professional.



That is not always the case and most didgeridoos will need a little extra wood removed to get the sound to sing. Using a couple of gouges (¼" and ¾") shallow curves, to remove excess material and make the walls thinner at the end. I do this with the didgeridoos firmly secured and clamped in place on the carpenter's horse. Working around the inside of the circumference, I do small sections at one time until I am satisfied.

When working on the bell I try to ensure the finished walls of the didgeridoo are max 1cm (just under 1/2") thick. This is to accomodate clip-on microphones that some professional players use - if the wall is thicker then the microphone will be to small to clip onto the instrument.

Now that the walls are even and of the right thickness, I use a larger sanding drum to smooth the inside of the bore. I will also sand the end down.

The bell also has a coating of epoxy resin applied. This is to afford the bottom of the wood some protection against scuffing on the ground when playing and extra protection against moisture that can gather at the bottom of the didgeridoo when it is played for a long time. The resin goes around the rim of the bell and the first few inches inside. This can affect the sound so be aware of this when considering the tuning of the didgeridoo. I like to think, through practice I have a fair idea of how the sound is affected and apply the resin accordingly.

Since writing this article I no longer put epoxy resin on the bell of all my didges - only when there is a need for it, for example: thin walls; or the instrument will be getting alot of wear and tear.

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