

How to Make a Turkey Trumpet Call

By

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Specail thanks to Marvin “Dogcatcher” on the boards for this excellent tutorial. Marvin is also a Master Predator Call Maker and also supplies call makers with several kinds of Mandrels, Sanding Set Ups and other items for call makers.

From All of Us

Thank You Marvin!

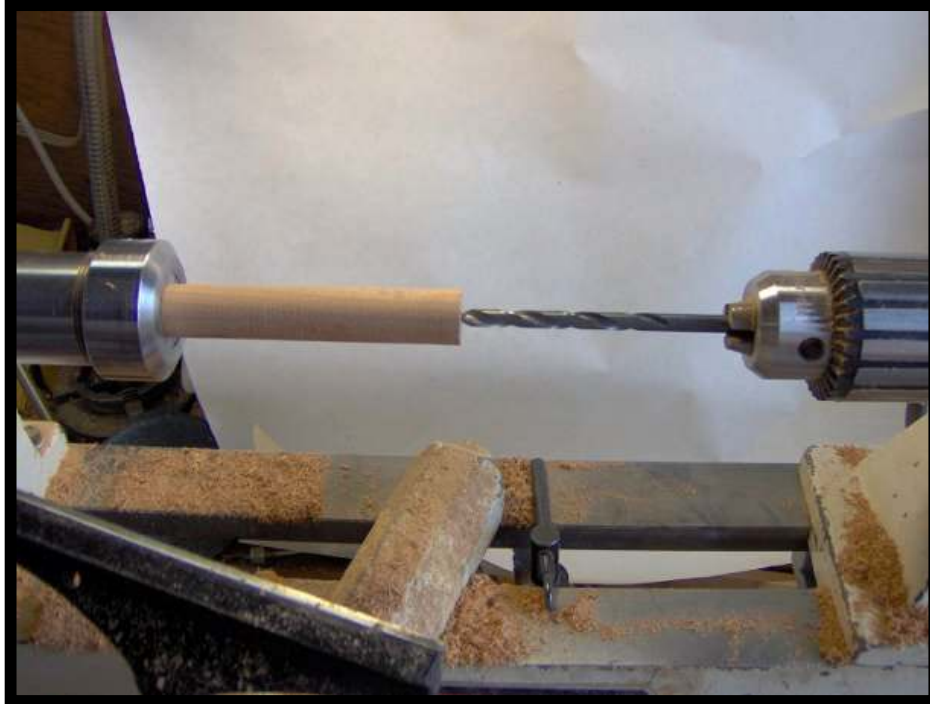
How I make a trumpet. First this is my way, it may not be anybody else's way or it maybe the way everyone does it, I don't know. All of the figures for drilling distances are generalized, and are within the measurements of the trumpets I used as test subjects to come up with my version of the trumpet. You will have to refine them to whatever sound you want. There are a lot of variables, the choice of wood, your finish, all of the lengths that you drill, the thickness of the wood of the barrel, and last but not least the caller.

Taking apart a trumpet, First the barrel, the lengths varied from 4 5/8" to 7" long. Then the inside, from the mouthpiece to the exhaust, they all started out as 1/8" hole, then increased to 1/4" and then flared out to 1/2" to 9/16". The last figure could actually be increased to 1' but I chose to stop before the final 1/4" ending of the flares. This appeared to be more decorative than functional and that was proven by making copies of the some of the trumpets without the additional flare. The greatest differences was in the lengths of the step drilling and the taper. So I did an average of all of them for making this trumpet, then adjusted as I went along.

This is what I come up with, first take a 1x1 blank and turn it between center to make a 3/4" dowel. I used cherry, but any hardwood will do..



Next I started the drilling. I used a collet chuck as it worked the best for me, a 4 jaw chuck should be able to work also, but I did not test it. First drilling from the exhaust end, drill about 3 1/2" with a 1/4" bit. Do not overheat the wood, you will be turning this pretty thin, if you over heat the wood you may get some surprise cracks



Then ream out the 1/4" hole with a 3/8" or a 5/16" bit but ream it only about 2 1/2". This will leave you with a step drill affect.



The next step is to create the taper of the inside of the barrel. After measuring all of my trumpets, I found that a #1MT reamer was the closest to the taper in most of them, 2 were almost perfect fits, the others were within what I would consider close tolerance. Besides a commercial reamer is a lot cheaper than a custom made reamer. Remember to back it out often and not to overheat the wood.



The next step I consider optional, this is the flaring of the exhaust bell, I feel it is more decorative than functional, there are 2 ways to do it, one is to use a chisel to make the flare the other is to use a handheld reamer in the tailstock.





Now do all of the sanding in the bore. This again is mostly cosmetic, but a sloppy sand job also detracts from the call.

Reverse the blank in the collet chuck. You are now ready to drill the mouthpiece end. First drill with a 6" long aircraft drill bit, 1/8" diameter, these have short flutes so you will have to back it out quite often.



The next step is to make a seat for the Delrin mouthpiece. I will be using a 3/8" diameter piece for the mouthpiece. Drill the hole 1/2" deep, the 1/2" deep is so the mandrel will be able get a good seat in the end.



We are now ready to mount the blank on the specialty mandrels. Notice that one of them has a tapered end. This is a close #1MT that will fit into the exhaust bore of the barrel. the other end will fit into a collet chuck on the headstock. The other is a piece of 3/8" steel rod that will fit into the mouthpiece where we drilled the 3/8" hole, it also has a 60 degree center on the ends to fit the live center.



Turn the call to shape, here I am adding a tenon to put a compression nut on the end for a ferrule. A 3/8" compression nut will just let your mouthpiece slide through the hole, a perfect fit. Finish sanding all of the outside of the barrel.



Here are the final pieces of the barrel and the mandrels. This is ready to finish or as I will do, dye it. Again look at the mandrels, these do not have to be metal, make the headstock end out of a piece of hard wood and it will be fine, the other end can be made with a piece of wood also.



Now for the mouthpiece. Mouth pieces were from 2 3/4" long to 3 7/8" long, for this trumpet I chose 3". Using the collet chuck mount a 3" piece of 3/8" Delrin. Start with a 3/32" standard jobbers drill bit, drill as far as you can then switch to an extra long aircraft bit to drill the rest of the way through. Do not over heat the Delrin or stop drilling with the bit inside. Delrin will melt and turn back solid and freeze your bit inside of the Delrin.



Now turn your mouthpiece to shape. All that is left is the lip stop, I made it before the photo so no before photo just an after version. For the lip stop I use EVA foam. It is the material that fishing rod builders use to make rod handles. It doesn't have that awful rubber smell and it is easy to shape using a chisel or a coarse file. Then it can be sanded, works like balsa wood.

And the final product



A few other things I found out, the finish must be a good one, both inside and out, a good finish on the inside makes the sounds lot more crisp, a sorry finish and the sound will be dull and muffled.

Make the call to make the sound you want, it is your trumpet, if no one else likes the sound, then you may have to rethink if you really like that sound that much. Once you get past all of the so called mysteries of the trumpet you will find that there really isn't that big of a mystery. Most of the mystery is really just a myth. Also remember that the drilling distance I used for this trumpet are just guidelines, you will have to adjust them to whatever you need to get the sound that you are looking for.

This is not the only way to make a trumpet, nor is it the easiest or the cheapest, but it is the way I came up with. Tomorrow I may have a completely different way to make a trumpet. The steel mandrels are not necessary, they can be made from wood and will function properly.

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