

Making Your Own Metal Bands

Making metal bands for your calls can be done several ways. You can use a tubing cutter, hack saw, metal cut off saw, metal lathe, and as will be shown here, a regular mini lathe with a chuck and bull nose live center.

Metal tubing can be purchased locally, or on line at several different distributors. OnLineMetals.com and McMaster Carr are two sources.

When buying or ordering metal tubing, the standard wall thickness for most game calls is .065. You can use thinner walled tubing, but it has a tendency to get “out of round” using the methods presented here.

A tip when buying your tubing is to try and order in lengths less than 5 feet. Sometimes you do save by purchasing longer lengths, but UPS tacks on a surcharge for packages over 5 feet which in most cases negates the savings.



Raw Aluminum and Brass Tubing

When my tubing comes in, I cut it to 10 to 12 inch lengths. This size seems to work best in the Jet Mini Lathe.

Once cut, the tubing is placed in a chuck on the lathe, and held on the tails stock end with a Bull Nose Live Center. A Bull Nose Live Center is just a large live

center, often with interchangeable inserts. The one I use is from Nova and cost about \$50.00.

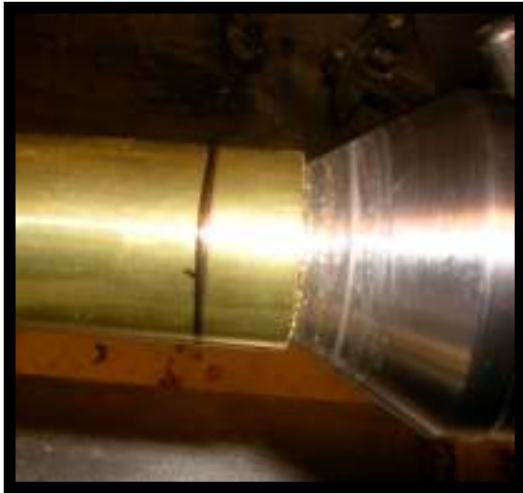


Once I have the metal tubing mounted on the lathe, I use a template cut out of a piece of mylar. A piece cut out of a milk jug works too if you do not have mylar,



One of the nice things about cutting your own bands is that you can use sizes that are not commonly available.

I use a Sharpie to mark the cut line. Make a small mark, then turn on the lathe and touch the Sharpie to your line and you will get a good solid cut line all the way around the tubing.



I use a small hack saw to cut the bands. A blade with 18 Teeth Per Inch seems to work well.



With your lathe running at the slowest speed, cut the tubing with the hack saw,

Try not to let your saw slip out of your cut as it will leave deep scratches in the band that you will have to file out. It will happen, but the fewer you make the easier it is to finish the bands.

Once I have my bands cut out, the next step is to clean up the edges. You can see in the next photo the rough edges.



There are a couple of ways to clean them up. The first is with a belt sander. Start with a 50 to 80 grit belt, and then move to a 120 belt for the final polish. Keep the band moving in a circular motion as you sand it. If you leave it in one place, the sander will make your band uneven by sanding off one side more than the other. By using a circular motion, your band will remain even, though if you apply too much pressure, you can get things out of whack. Use light pressure and let the belt do the work.



My preferred way to clean up the edges though is to do it on my lathe with a chuck set up with Step Jaws.

Before we can put the band on the chuck though, we need to make sure we get any flashing off the inside of the band so the band will fit on the jaws.

I use a piece of 1/2" delrin with a slot cut in one end to hold sand paper, and chuck it up in my lathe and sand the inside of the band. A wooden dowel will also work for this step.



Set your drill press to the lowest speed setting, and slide the band over the dowel and sand the inside edges.



One of the most used tools in my shop is my Oneway Talon Chuck. Set up with a set of Step Jaws, I use to for many different jobs. No matter what chuck you own, or plan on buying, by all means, get a good set of step jaws with it. The Step Jaws for my Oneway cost me about \$32.00 and have paid for themselves hundreds of times over.

Step Jaws are simply a set of jaws that have STEPS that allow you to grip items from the inside at different diameters. I took a file to my set and now I can grip the inside of a 7/8" band with them.



The bands are put on the jaws



You can see how the jaws grip the inside of the band.

I use a two sided file, one side is coarse and the other fine to just hit the edge of the band with the lathe running at the slowest speed.



Once one side is done, turn the band around and do the other side.

Once I knock off the major rough spots on one side, I turn the band around in the jaws. The first step is just to ensure that the band will sit flush against the chuck. Then I start with the coarse side of the file and let the lathe run at the slowest speed while I file the band smooth. I turn the file around and hit the band with the fine side, and then use a piece of sand paper wrapped around the file to finish up.



Before, and After

The next step is to polish the outside of the band.



I use a 1/2" bolt with the head cut off, wrapped with athletic tape as a mandrel.

This makeshift mandrel is chucked up in the step jaws, which close down and allow us to grip items of a much smaller diameter than regular jaws.



By wrapping the tape in a slight taper, we ensure a good snug fit of the band on the mandrel. This is important so the band does not slip in the following processes.

Using the coarse side of the file, smooth out the rough parts and then flip the file over and use the fine side to finish up taking out any deep scratches.



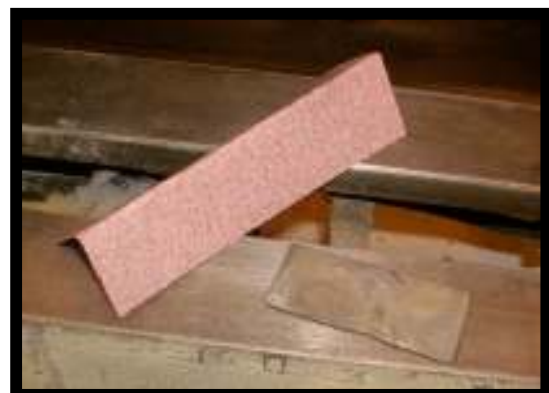
Once the band has been filed, it will need to be polished. I use sandpaper, starting at 100 grit and going to 150, 220, 320, 400, 600, and finally 800 to complete the polishing of the band. However, if I am going to finish the band on the call, I normally do not go above 220.

The easiest way I have found to sand the bands and keep them flat and with sharp edges is to use a piece of plastic as a sanding pad.

I use plastic trowels, the types used to put spackling on walls, and cut them into small pieces about 1 x 2".



I cut my sand paper into 4 by 4 squares, and then cut a piece about 2" wide from one of the squares, and fold it lengthwise.



The sandpaper strip is then wrapped around the plastic sanding pad



Again, with the lathe at the slowest speed, I use the sanding pad to sand the band through the grits.



If the band is to be completely finished on the lathe, the last step after sanding to 800 grit is to use some Brasso to finish polish the band. Instead of sandpaper, I use paper towel wrapped around the sanding pad to put the final polish on the band.



Finish up by wiping and residue off the band with a clean paper towel and you are done.



Your bands should be ready for your calls!

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