

X-ray Drum Heads

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Intro: X-ray Drum Heads

These bongo drums had rawhide heads which always seemed to sound a little dead, no matter how much I tightened them. They are not real professional drums, for one thing, and aren't built for extreme tension.

With nothing much to lose, I replaced the rawhide heads with a couple of x-ray films the lab in town gave me to play with many years ago. Free material!

The sound was much improved. To hear the new heads, click on the .mp3 file in the last step.



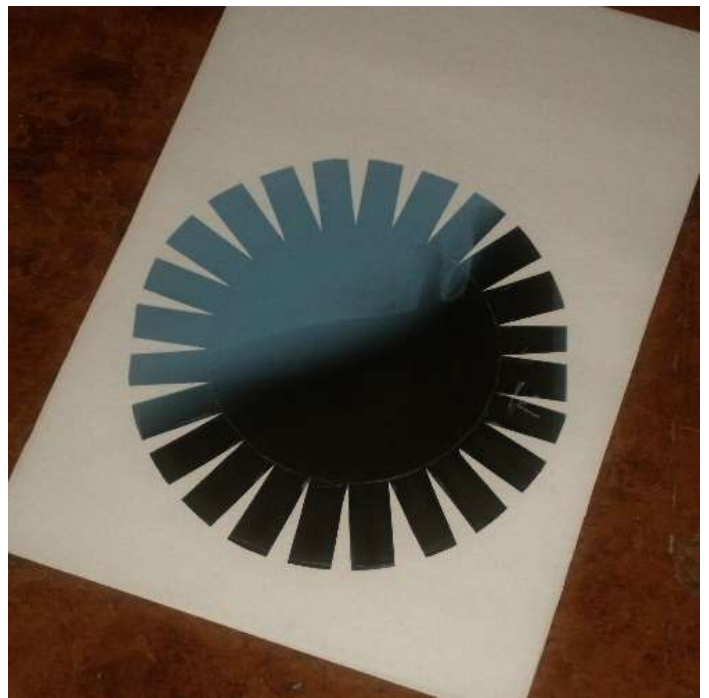
step 1: Cutting the Material

The first X-ray head that I made years ago was precisely laid out on paper first. This time, I just traced the top of the drum directly on the film with a white grease pencil and improvised. The process was faster.

Rawhide stretches. X-ray film does not, so the outside edge needs to be cut to allow sections to fold .

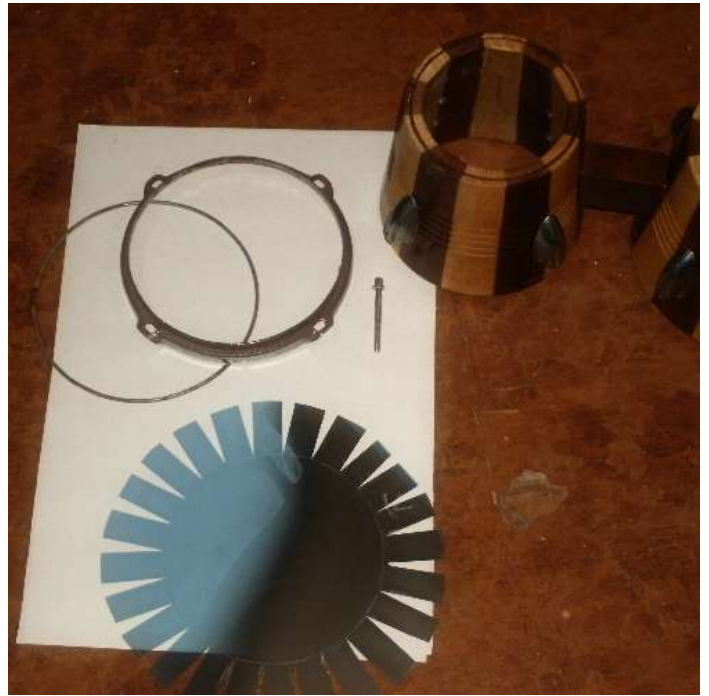
It would have been a little easier with longer tabs on the "sunburst", because the material tends to fight going where you want it to go later, and longer tabs are better than too-short ones. These were cutting it a little close, but worked. I had a larger film to cut for the second drum head, and left longer tabs.

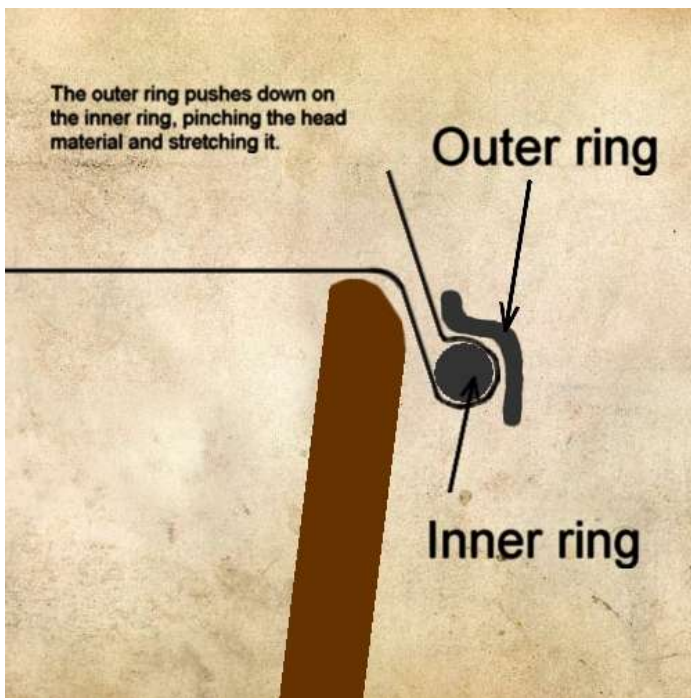
Try to keep the sides of the tabs parallel, or narrowing a bit toward the outside, rather than having them widen. If they get too wide, they will interfere with each other when they are bent into the holding rings.



step 2: The Holding Rings

The outer ring pushes down on the inner ring, using bolts to tighten it. The drum head material is pinched between the two rings and is pulled down with them.





step 3: Folding the Tabs Down

As you try to get all the tabs to simultaneously go where they belong between the two rings, you will probably forfeit the wrestling match eventually. To make things easier, you have to first coax the tabs to fold downward around the drum body.

To do that, tape all the tabs down with masking tape and hold them with a rubber band. Use a heat gun to make the material go limp. Since all the tabs are taped down, you won't see it go limp and you have to guess the amount of heating necessary. Experiment with some scrap material first. As soon as you remove the heat, it will cool and rigidify in its new position.

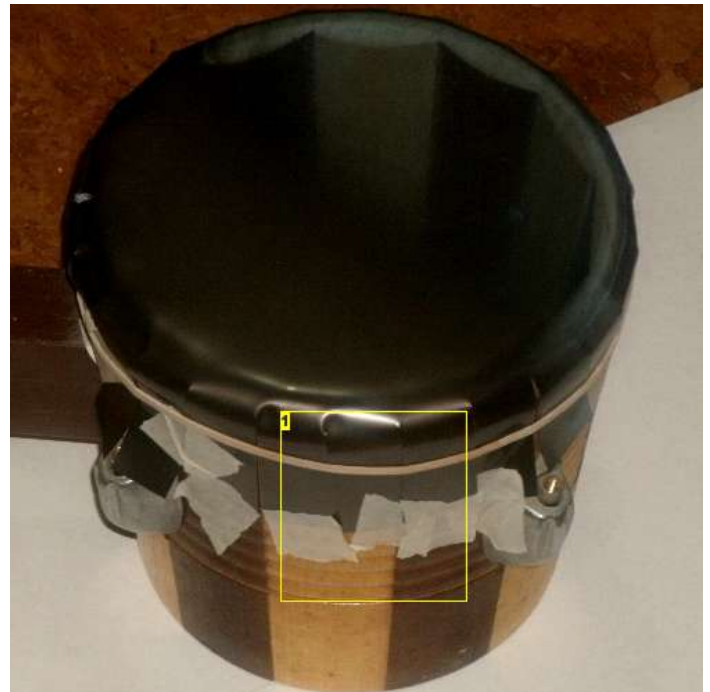


Image Notes

1. Tape the tabs down first with masking tape and then use a rubber band to make sure they stay down.



Image Notes

1. Be careful with the heat gun. It doesn't take much time for the material to go limp. When it cools, it will keep its limp form. Experiment on some scrap material first.



Image Notes

1. After removing the tape and rubber band, the tabs are more cooperative.

step 4: Getting the Head Material between the Rings

This step is a little tricky. You have to bend the tabs up and over the inner ring and then tape the tabs to the top of the drum head. Leave some slack, enough so that the rings will end up lower than the top of the drum body when the head is tensioned. If they stick up above the top of the drum body, you will bang your hands on them when you play.

After you get the outer ring in place and it starts to pull down on the drum head, you can un-tape the tabs, if you wish. The tabs shouldn't pop out, and some may need to be tightened, or allowed to pull out a little for even tension on all tabs.



Image Notes

1. The outer ring pulls everything tight.

step 5: Trim Excess Tab Material

After you set the tension, the tabs are going nowhere and you can trim off the extra tab material. Cut it below the top of the drum body so that your hands never feel it when you are playing.

Unlike rawhide heads, the synthetic heads don't need to have their tension released when the drum is in storage. It may stretch a little, but not much.

If rawhide heads dry out while stored under tension, the heads can tear, which is not a pretty thing to see. The plastic doesn't dry out or shrink.



Image Notes

1. Being careful not to cut anything but the tab ends, use scissors to trim them down below the top of the drum body. Cut them short, so your hand never feels them when you play.

step 6: Hear the Sound

To hear the sound of the new bongo drum heads, click on the thumbnail icon below to open the .mp3 audio file. (It looks like a blank piece of paper with the corner folded over.)

A playing tip: If the drum has a little more ring to the sound than you like, you can deaden it some by stretching a rubber band from one tension bolt to another, across the top of the head.

Enjoy.

File Downloads



BONGO.mp3 (471 KB)

[NOTE: When saving, if you see .tmp as the file ext, rename it to 'BONGO.mp3']

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