

Bass Drum Set-up and Tuning Tips

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Tone is a crucial factor in pipe band bass drumming. There are a few manufacturers that do not dampen drums from the factory. This method is designed to help you get the best sound from your drum. Many thanks to Craig Colquhoun (Hoss) for his extensive research and tonal fanaticism.

Section 1 Dampening

A.) If you are going to experiment with dampening, you'll probably spend a good deal of time: taking your drums apart; gluing foam; putting your drum back together, retuning, listening, cussing, and starting over again. Having a capable partner (this excludes most pipers ☺) helps.

B.) Start with 3 to 4 inch wide semi-circular pieces of foam... enough to insert one in between each tension rod. The foam can be purchased at an upholstery shop. It is sold as a 4" diameter bolster (pillows). Use an electric carving knife to halve the bolster, and then cut your pieces from the halves (app 3"). If you cannot get your hands on this type of foam, your local hardware store should have foam insulation strips used for sealing window sashes that have air conditioning units in them. It comes in two sizes, the larger is about 2 inches square, and the other is about 1 1/4. They are packaged in 4 to 5 foot lengths and cost about \$4.00.

I notch out the bottom part of the foam to allow for the 3/8" or so thickness and width of the bearing hoop. This helps to keep the foam flush against the head. If your drum does not have a bearing hoop you can skip this step.

C.) Glue the foam (hot glue works the best and it can be easily removed with a heat gun or a good hair dryer*) to the shell/inside bearing edge so that the foam extends about one-eighth of an inch beyond the edge of the drum (You want the foam making firm and even contact with the head. It's very time consuming, but once you have set the shell up, you won't have to bother gluing foam strips on the heads the next time you buy new ones. This is how Hosbilt drums are shipped, and in my opinion there's no arguing with the results. (*I recommend using a gloves when you are applying hot glue. It burns like hell and, obviously, sticks to your skin in the process.)

If you want to fine tune your drums to your own ear, you might want to start out with less foam, and then add as needed. This means assembling and reassembling the drums numerous times...is it worth it? Yes indeed, because, most shells are different. They vary in shell thickness, material, shell depth, etc., etc. Fine tuning IS worthwhile.

*A cordless drill with a nut driver (7/32") will cut down on your labor. **Take care not to over torque when using a drill!** Use it to get the tension rods started or to remove them. If your drill has a dialed torque setting, adjust it the lowest torque to be safe.*

Section 2

Setting The Heads

- A.) Start out by cleaning the bearing edges of your drum & make sure your work area is absolutely clean and smooth. I have seen drums from a major company ship drums with all sorts of crud on the bearing edges of their drums!
- B.) Lightly lubricate the extreme outside diameter of the heads (where they meet the bearing edge) with a highly refined white grease, like lithium. This helps keep the heads from binding in any spot as you torque them down.
- C.) When you place the head on the bearing edge of the drum, rotate it to even out the lubricant, and then wipe the excess off of the head before you begin attaching the tension hoop and hardware.
- D.) Place your hoops and hardware on the heads and get the tension rods (lightly lubed, of course) started in your lugs.
- E.) Get all of the rods evenly snug (finger tight), and make sure they are in proper alignment with the hoop and lugs to prevent binding later. Look for ripples in the head and gently torque the rods next to ,and/or in between the ripples. From this point your drum head should be just tight enough to produce a discernible pitch. If not, gradually bring it up to where it does.
- F.) There are two methods I use to check for even tension around the drum when installing a head. I use a tenor mallet to tap around outside diameter of the drum head by each tension rod, listening for variations in pitch, and then tightening those lugs where the pitch is low. I keep doing this until there is a uniform pitch around the drum.
- Flip the drum over and repeat the process on the other side.
- You can also use a tension watch to measure the relative differences between lugs as well. I own two, a TAMA and a Hosbilt. I prefer the Hosbilt because it is almost twice the weight of the TAMA and is more accurate.
- G.) Once you have fairly even tension, begin tightening your lugs 1/4 turn at a time, making sure that you remember your starting point. If you're a real purist you can sequence the order (1-5-3-7-4..etc) in a star pattern. For lower tensioned drums I keep it simple and work 'around' the drum.
- H.) For new heads, you will want to over-crank them a step, or so, above the desired pitch help get them settled in. You will probably hear a cracking sound, which is the excess glue on the drum head hoops.

SECTION 3 TUNING

One of the handiest labor saving devices for a bass drummer is a simple portable keyboard stand. It allows you to walk around the drum and perform your tuning tasks with relative ease. I have a very sturdy and lightweight one that cost about \$30 (U.S.). A stand also comes in handy for long practices!

A.) To set the pitch for your drum: put the drum on; place your left hand on the left head and tap the right head with a mallet---reverse the process---place your right hand on the right head and tap the left head with a mallet. Listen for a variation in pitch. Raise or lower the pitched head to match the other. Once completed, your drum is now 'in tune with itself'.

B.) Use your ear or a tuning meter to find out where you are & where want to go (Bb, F, etc). Remember that if you make changes to one lug, you should make changes to all of the lugs, otherwise all of labor in the previous step will have been in vain.

When your drum is exposed to temperature changes; the heads will expand or contract causing it to go out of tune. If you give it a bit of CPR, it will resettle the heads before you tune it.

What I mean by CPR is this:

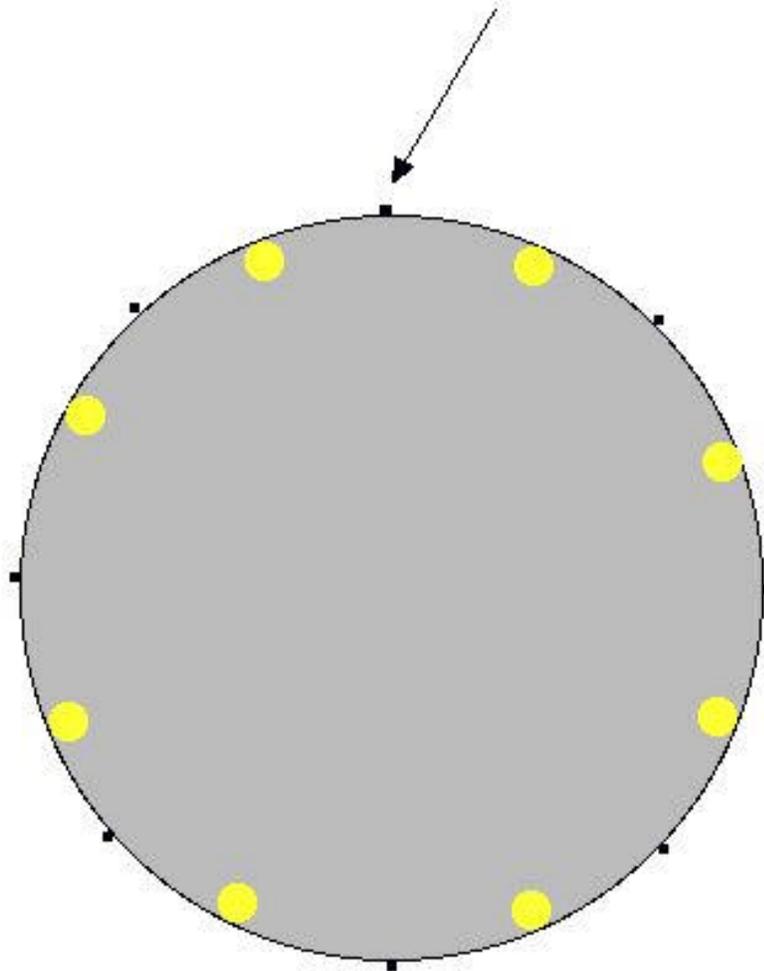
- place the drum on its side
- lean over the drum and place one hand on the center of the head and your other hand on top of the other.
- pretend you are resuscitating the drum by applying a few firm 'pumps'. This will even out the head tension around the bearing edge.
- Repeat the process for the opposite side

I stay away from black (ebony) heads. They require too much labor to keep in tune...especially in the sun!

You can use this guideline, with a few minor modifications, to set up and tune tenor drums as well.

All the best tone to you!

This is a general diagram of dampening (foam) placement. Note that the foam is centered between each tension rod.



Side views

