

Bass Drum Set-up and Tuning

Tone is a very important factor in pipe band bass drumming. It is critical to the overall sound of the band. The purpose of this instructional piece is to outline the steps necessary in dampening and tuning the bass drum. It is, by no means, the only way of doing so. There are a wide variety of methods that are in use. It really boils down to a matter of personal preference and style.

Since most manufacturers do not dampen drums from the factory, it is up to the player to get the job done. This particular design is similar that used for the Premier/Hosbilt bass drum series. Once the dampening has been installed, it should not require adjustments when drum heads are removed or replaced.

Dampening

The type of foam used for this type of dampening is a four inch in diameter bolster. It can usually be purchased, or ordered, from an upholstery shop or fabric store. It is sold in three to four foot lengths, and can be ordered precut into halves. Foam comes in different densities. Medium density is your best bet. Purchase enough foam to be able to insert a piece in between each of your tension rods. For example, if your drum has twelve tension rods, you'll need twenty-four pieces. Allow for waste and a couple of bad cuts...having a few spare pieces is a good idea as well. You will also need a hot glue gun and a very sharp kitchen knife, ideally 8 to 10 inches long. An electric carving knife does a very nice job of making clean cuts. It is critical that your cuts are straight and level. The best way to insure this is to use a miter box. If you're handy, you can make your own, otherwise you can purchase an inexpensive plastic model for the job. If the bolsters are not halved, cut your two-inch lengths from the circular piece first, *then* cut them in half.

Remove the heads, hoops and tension rods from the drum using a drum key. If you prefer, a cordless drill with a 7/32" nut driver will cut down on your labor when removing and replacing heads. Drum shops and music stores usually carry drum keys that are designed for drills and powered screwdrivers. When you replace the heads, take care not to over torque when using a drill! Use the drill to get the tension rods started or to remove them after you have taken the tension off of the drum. If your drill has a dialed torque setting, adjust it the lowest torque level to be safe when you are putting the heads back on.

Once the heads have been removed, lightly sand the reinforcement hoops of the bearing edges with a medium to fine grit sandpaper. Take care not to sand the bearing edges. When you have finished, use a damp cloth to clean the inside of the drum thoroughly! Make a pencil mark exactly in between your tension lugs on both side of the drum.

Before you start applying hot glue to the foam, do a bit of measuring. Take one of your pieces and place it on the shell so that the foam extends about one-eighth of an inch beyond the bearing edge of the drum. This is an important measurement. If the foam does not extend past the bearing edge, it will not make contact with the drumhead. If it extends too far beyond it, it will over-dampen the drum. Once you have your foam properly placed, take a fine tipped marker and mark the width of the reinforcement hoop on both sides of the foam. Take a ruler or a straight edge and draw lines across the bottom of the foam to match the width of the reinforcement hoop. Use this piece as a template for the rest of your dampers, and mark all of them the same way. Now take a piece of foam and center it on one of the pencil marks you made on your drum. Mark the shell on both sides of the foam. Do the same for all of the marks.

You are now ready to begin gluing the foam to the drum. A note of caution: hot

glue burns like all hell and sticks to you in the process. I speak from experience! Take care when you press the foam onto the shell, as you can easily burn yourself in the process. You may consider using gloves. Apply the glue liberally in between the lines on the foam. Place the foam directly on the pencil marks and double check the alignment. If you find you have made a mistake, and/or need to remove a piece after it has dried; rip the piece off and remove the dried glue using a hair dryer and a putty knife.

No doubt, this process is very time consuming, however, once you have set your shell up, it is permanently in place every time you need change or remove your drumheads.

Setting The Heads

A.) Start out by cleaning the bearing edges of your drum & make certain that your work area is absolutely clean.

B.) Lightly lubricate the bearing edges with carnuba wax. This helps keep the heads from binding on the bearing edge as you torque them down as well as when you tune and detune them in the future.

C.) Once you place the heads on the bearing edge of the drum, rotate them back and forth a few times to even out the wax.

D.) Apply a bit of white lithium grease to the tension rods for smooth tuning and begin reassembling the drum.

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. 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 that I use to check for even tension around the drum when installing or tuning a head. I use a tenor mallet to tap around the outside diameter of the drum head by each tension rod, listening for variations in pitch. If there are differences, tighten or loosen those lugs until the pitch is uniform 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 gives a more accurate reading.

G.) Once you have fairly even tension on the drum, 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, such as bass and tenors, I keep it simple and carefully work 'around' the drum.

TUNING

One of the handiest labor and lower back 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 or have it on a stand; 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 variations in pitch from side to side. 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 and where you want to set your pitch (Bb, F, etc). Remember; if you make changes to one lug, you should make changes to all of the lugs, otherwise all of labor in step 'A' will have been in vain.

C.) 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.

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

All the best of tone to you!

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

