Care and Tuning of Your Concert Bass Drum

By: Mark Carson (July, 2008)

The bass drum is the foundation of your concert band or orchestra. In a concert band setting, the bass drum plays a very important rhythmic role in addition to adding color and depth to the sound of your ensemble. Next to the snare drum, it is the most used percussion instrument in your band. In the orchestra, the bass drum plays more of a supportive role, and is the most used instrument after timpani.

In your initial examination of your concert bass drum, look for obvious issues such as damaged heads, missing T-handles or tuning rods, debris inside the drum, and obvious problems with the suspension of the drum in its stand. Next, with an appropriate mallet, give the drum a solid Forte stroke and listen. Does the drum produce and nice deep, dark tone? Are there rattles? One stroke will usually tell you where to look for problems.

Let's start with the stand, assuming most schools will have some type of suspended bass drum stand either Yamaha, Ludwig (hoop or cradle) or perhaps and Alan Abel stand. If your drum rattled when you struck it, the first place to look, or listen for rattles, is in the stand. From general use, moving the drum from rehearsal room to stage, and students leaning on the drum, the stand connections work lose. Each type of stand is slightly different, but the clues are similar. Look for connections that have moved or are not snug, and give the stand a tug to see if it feels secure or wobbly. Next, check the set screws that lock sections together; on older Ludwig and Abel stands these are ¼" x 20 allen set screws, on Yamaha stands they are 6, 8 or 10mm metric cap screws. We'll demystify the whole thread size quandary in a future article. Do not forget to check the casters. Casters, by design, have to be a little loose in order to swivel; however, worn or overly loose casters cause rattles.

Here's a DW Percussion tip - Always lock the casters when playing bass drum. While this will not avoid all caster related rattles, it will solve about 70% of them.

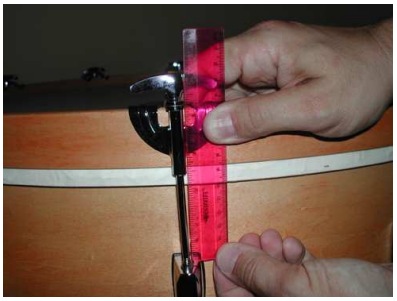
If the problem with your bass drum stand is with the suspension, investigate if there are broken or missing suspension bands. These parts often dry out and break due to exposure to heat and sunlight, and sag or break gradually over time until the drum is precariously hanging by a thread. Usually replacing all of these parts is wise, and while this repair can be done by almost anyone, it's less frustrating for you to hire an experienced percussion repair technician to do it.

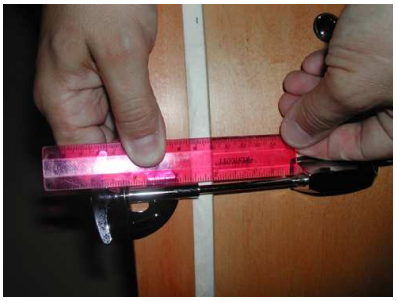
Next, check for any "debris" that has mysteriously found its way inside your bass drum. If debris is found, remove one of the heads, clean out the drum, and wipe away dust and dirt from the bearing edge (edge of the shell where the head contacts the drum), the hoop, and the head itself.

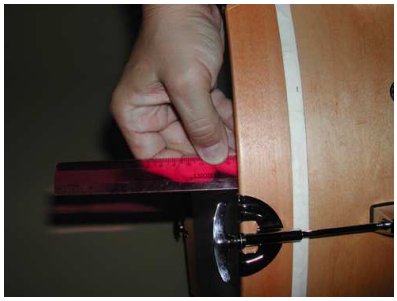
We'll discuss selecting and replacing heads in a future article, so for now let's assume your heads are still in good condition. Loosen the tension rods until they are just making contact. We're going to pull the head down straight onto the drum. Next, turn each tension rod or T-handle 3 to 6 half turns keeping the T-handles or tension rods facing the same direction. Now find a ruler (without sharp edges). We'll use this to ensure we have the head on straight. Smaller drums, like snare drums and tom toms, are somewhat forgiving in that they align the head a little better. Many snare drums even feature "self-aligning" lugs. Bass drums are so large that if the head is pulled unevenly, the head and hoop can corkscrew onto the shell and bind, resulting in uneven tension and very difficult tuning.

There are many places we can measure to ensure the head is pulled down straight, but here's a simple one. At each lug, measure from the top of the lug casing (where the threads on the T-handle screw into the lug) to the bottom of the

head's counter hoop (the aluminum channel the head is glued into). Keep measuring and adjusting the T-handles until the measurement is equal at every lug.







Allow the head to settle or conform to the drum, about an hour is sufficient. Next, use a medium timpani mallet and check the pitch of the head at each lug just to make sure we have a well-mounted, clear head.

Now we're finally ready to tune the head. Please review the previous article on tuning your concert snare drum for the 3 most common tuning scenarios for any drum. Tuning both heads to the same pitch is not suggested for concert bass drums as it tends to produce a pitch center and we want our bass drum to blend with every note on every instrument in the ensemble. Now, loosen the batter head quite low. We're looking for a very low tone, but not so low as to not produce a clear tone. If the head is too lose, the sound will be warbled, and/or look wrinkled. Next, adjust the resonating head to the desired relationship. My personal preference is for the resonating head to be slightly lower than the batter head to produce a deep sound with no specific pitch center. Many prominent players suggest the resonating head be slightly tighter. This tuning assists with the control of the ring of the resonating head, and also works quite well. Experiment and select the tuning that works best in your performance situation.

Hopefully this information will help you achieve a better sound from your concert bass drum.

Now that you know a little more about "Care and Tuning of Your Concert Bass Drum", please check back soon for the next article in our series "What's Going on Back There?".

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