



YAMAHA

Educator Series

PERCUSSION



Glen A. Buecker

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Good Bass Drum Tuning Is Not an Impossible Task

By Glen A. Buecker

Proper marching bass drum tuning helps to maintain a drum's resonance and sound. Bass drums take a lot of abuse from unseen obstacles and the constant setting down and lifting up. Proper care combined with proper tuning techniques can ensure that your marching bass drum will have excellent sound quality.

If you plan to replace your bass drum heads, consider a double-ply, smooth white head. This head costs a little more than a single-ply head but is more durable and has a more focused tone.

Before putting the drumheads on, check to make sure all the screws inside the drum are still tight. One of the most troublesome spots are the eyebolts that connect the drum to the carrier, because they have a tendency to loosen if not periodically checked. While you are checking the screws inside, clean out any dirt that might have gotten in through the vent holes. Also, check to make sure that the bearing edge of the shell (where the drum head meets the shell) is still smooth.

Currently, the most popular method of tuning bass drum heads is with foam. Yamaha carries this type of foam, known as the Sound Impact Strips™ (model MA-200) that is sold in fifteen-foot rolls. It uses a pre-applied adhesive, and is applied to either the inside or the outside of the drumhead. When determining how much foam to use, keep in mind that the smaller the drum, the less foam needed. Sound Impact Strips™ come with an instruction manual that helps you to determine the amount of foam for a particular drum size. You can experiment as well – for a drier sound, use more foam; for a resonant sound, use less foam. The same amount of foam should be applied to the same location on both heads of each drum.

If you buy generic weather-stripping type foam, start with medium density. If you are inexperienced or do not know how much foam to apply, you should apply it to the outside of the head after you put the head onto the drum. Once you have the drum tuned the way you like, make a note of how much foam was applied for future head changes. At that time, if you choose, you can apply the foam to the inside of the head before you place it on the drum. This provides a cleaner look to the drumhead and will protect the foam from the player's hand and the environment. If you chose to do this, make sure you leave one to two inches of space between the hoop of the drumhead and the foam. This will allow the drumhead to rest properly on the bearing edge of the drum. You might also want to use a spacer to apply the foam evenly around the head. Always make sure there is good contact between the foam and the drumhead, otherwise it may fall off inside the drum after it has been tuned.

Once the head is placed on the bearing edge, you are ready to set the rim. Some rims have a top and bottom so make sure you are placing the correct side down on the head. Often the paint on the inside edge is lighter than the outside, or the outside edge is curved. If there are any colored strips on the

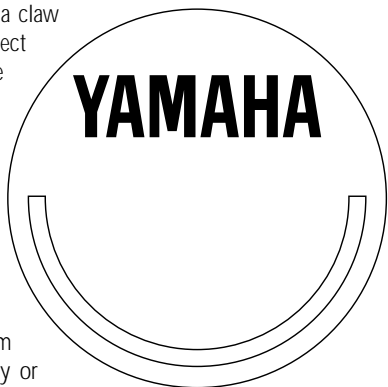


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rim, try to line the seams up under a claw or in an inconspicuous area. Inspect each claw before you put it onto the drum. Replace any bent or splintering claws. There is a great deal of pressure on these when the drum is tuned and if one breaks it could cause serious injury.

Make sure that each of the tension rods is lubricated when you put them on the drum. A little petroleum jelly or white lithium grease works well. Be sure to not apply too much or it will pick up dirt that could get down into the tension casings and freeze up a tension rod. Also, be sure to use any needed washers between the tension rod and the claw. The rod will turn much easier with these in place. Just get the rods started all the way around the head. Once you have this, you will be able to put the drum onto the player and align any logo. Next, finger tighten each of the rods around the drum. At this point, you are ready to use a drum key. Start by using the criss-cross method of tightening the tension rods. Use the same number of turns on each rod. Continue until you reach the desired pitch. (If the other drumhead is currently off the drum, only tune the head up about half way.) Remember, the greater the tension on the head, the smaller the turns you should make. The goal is to have all the rods tuned to the same pitch. When fine tuning the tension rods it is often helpful to place a few fingers in the center of the head to help cut out overtones. When doing this, tap lightly next to each tension rod. Using one rod as a reference point, tune all other rods to the reference. Continue to use the criss-cross method. Repeat this process for the other drumhead. Be sure both heads are tuned exactly the same. If you are replacing both heads together, you should wait until both heads are on the drum before you raise their pitch to the desired playing level.

When selecting intervals, I use the following guideline: a major third for every two inches and a perfect fourth for four inches. A major third allows me to open up the sound of the bass drum section. It provides a smooth flow from the tenor drums down into the lower range of the bass drums. If you choose to use the bottom drum as a "kick" drum, tune it as low as possible while still sounding good with some impact. If you have a young line or a small num-



ber of drums, it is best not to use the "kick" drum concept. At the minimum, you should check the tuning on a weekly basis. Since the player strikes predominately on the right hand head, this side will go out of tune sooner than the left and will require additional attention. This is especially true with new drumheads.

Be aware of any stress on the tension rods or claws that indicate there is too much tension on the drum. Look at the angle of the tension rod as it enters the claw. If that line is different from the line extending from the end of the claw into the casing, there is too much tension on that tension rod. If the end of the claw is bending back (opening up), this is also a sign of too much tension. Check the rim to see if there is any bending outward and examine where the tension casing meets the drum shell. There should be no space between the casing and the shell. All of these point to too much tension being placed on the drum. Many manufacturers supply tuning specifications with their drums. Refer to them if you have any questions concerning the range in which the drum should be tuned.

Spending the needed time with bass drum tuning and maintenance will save you anguish later. A well-tuned bass drum section will help support the low end of your band and provide the needed foundation to your percussion section. The weekly upkeep by you and your students will extend the life of both the drum and the drumheads.



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