

# Orchestra Chimes / Tubular Bells

By: Mark Carson (November, 2008)

Chimes, sometimes known as tubular bells, provide a rich, resonant sound to the percussion section. Unfortunately, they present many maintenance and logistical challenges to the player and music director.



Due to their extreme weight, chimes are very difficult to move. If one is not extremely careful, damage will occur while moving chimes up and down risers or stairs, loading chimes onto a truck, or lifting chimes up and down from a stage. When moving chimes, it is imperative that one avoid twisting the frame or dropping the chimes. Twisting the frame loosens connections and puts stress on both the frame and damper assembly. Using three or four people to move chimes is highly recommended in order to prevent twisting or damaging the frame.

In my first article for Doug Wallace Percussion, ***What's Going On Back There?***, I described the process of testing chime frames for “racking”, which is when the frame is so loose it moves from side to side and does not stay square. When a frame is racking, common use such as moving, playing, and pedaling chimes will cause the racking to worsen quickly, leading to very serious problems.

If, upon inspection, a frame racks from side to side, one can fix this fairly easily and with minimal tools. Musser chimes use ¼” x 20 Allen set screws, and Deagan chimes use the same size thumb bolts. Carefully loosen one setscrew, and ensure that the frame tube is fully inserted into the socket. Make certain the tube is fully inserted by tapping the frame casting with a rubber hammer on the opposite end of the tube. Next, re-tighten the setscrew. It should be snug, but not so tight as to strip the threads or break the casting. Perform this procedure on every connection and setscrew. When finished, your frame should be square and tight.

Next, check the casters. Do the brakes lock? If not, replacement of the caster is usually the most cost effective solution.

**DW Percussion Tip:** Are the set screws in your chimes and bass drum stands always coming loose? Use Threadlocker (Loctite or Permatex brand) in the medium strength (blue) to keep these pesky setscrews from working loose. Make sure to read instructions, and use only medium strength (blue) Threadlocker.

Another common problem is broken chime tube suspension cords or cables. This problem is easy to solve. Both Musser and Deagan have a replacement part with instructions. These parts are usually available at both music stores and online percussion specialty stores.

**Musser part number:**

E4727T Chime cable 10 pack

**Deagan/Yamaha part number:**

W9100092 TONE BAR SUSPENSION CORD 42CM DC9190

W9100093 TEFLON TUBE DC-9190

**Damper Mechanisms:**

Each brand of chimes has a slightly different damper mechanism with its associated problems. The most common problem involves the spring loaded hook disconnecting from the damper arm just under the damper box. The lock often jams, and must be loosened by tapping with a rawhide hammer. Once loosened, reattach the damper pedal pull rod. More serious problems with the damper mechanism are best left to a repair technician.

**Intonation and dead tubes:**

Entire books have been written on the tuning and acoustics of tubes and rods. However, for our purposes, it is best if we understand that chimes are meant to simulate the sound (and somewhat inaccurate tuning) of church bells. Century Mallet Instrument Service in Chicago, IL can perform professional re-tuning if the poor tuning warrants the expense.

<http://www.centurymallet.com>

Dead tubes are more common, and usually caused by small cracks in the tube. These cracks are the result of impact on the playing side of the tube, and usually appear on the audience side of the tube at the top end where the cap is inserted. If a tube sounds dead, check for cracks by dragging your fingernail across the surface of the tube. Cracked tubes can be cut and re-tuned to higher pitches either at Century Mallet Instrument Service or another reputable repair shop. Keep in mind that proper playing technique, appropriate mallets, and not overplaying will prevent this costly replacement.

In conclusion, please remember the following... Proper playing, regular maintenance, and careful moving will guarantee years of service and a great sound from your orchestra chimes.

 **Now that you know a little more about “Orchestra Chimes / Tubular Bells”, please check back soon for the next article in our series “What’s Going on Back There?”.**



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